

COACHING EDUCATION

Comparing Sport Coaches' and Administrators' Perceptions of the National Standards for Sport Coaches

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Abstract

The purpose of this study was to examine perceptions of sport coaches and administrators regarding the eight domains and 40 standards contained in the National Standards for Sport Coaches (NSSC). Data were primarily obtained from junior high school, high school, and college-level sport coaches (n = 308) and sport administrators (n = 99) in the United States. The results indicated that sport coaches and administrators believe the 40 standards are important to effective coaches. The results also showed that sport coaches and administrators rank the importance of the eight domains with a high degree of similarity. These results represent a timely, multisample examination of the NSSC, and the results of this research help to ensure that coaching education is aligned with the current perceptions and needs of sport coaches and administrators. The results of this research also can be used as a starting point for upcoming revisions to the NSSC.

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Sport coaching education in the United States is offered by many colleges and universities nationwide and nearly every sport governing body (e.g., U.S. Soccer, USA Baseball, the National Federation of State High School Associations) on a multitude of topics (e.g., how to coach, what to coach in a particular sport, health issues sport coaches face [e.g., concussions, nutrition, performance-enhancing drugs]). Over the last 30 years, through creating, updating, and disseminating the National Standards for Sport Coaches (NSSC; National Association for Sport and Physical Education [NASPE, 2006]), sport and physical education scholars, practitioners, and coaching leaders have put forward a detailed list of topical areas in which sport coaches should be knowledgeable to be effective. Although sport coaches have access to a diverse array of coaching education resources, in each sport and at different levels of coaching, unique guidelines and requirements have led to the creation of independent systems of sport coaching education. For example, U.S. Soccer (n.d.) offers six licenses beginning with an F license and moving to an A license. The course progression aligns with the developmental stages of athletes (F = Under-6 to Under-8 years old, A = Under-19 years old and older). In contrast, in 2015, USA Baseball (2015) first began offering four content-based courses (The Confident Baseball Coach, The Play Ball Parent, Introduction to Umpiring, and Introduction to Pitch Smart) online. Thus, although U.S. Soccer has been offering formal coaching education for more than 2 decades, until recently, baseball coaches had no formal baseball-specific coaching training offered by USA Baseball. The differences between how U.S. Soccer and USA Baseball provide coaching education highlight just a few of the differences between how coaches in different sports are trained in the United States.

Stakeholders and leaders representing over 140 sport organizations at all levels (e.g., youth to adult, Olympic, Paralympic) and types of sports created the NSSC in an attempt to meld, organize, and bring consistency to the multitude of sport coaching education offerings. Although the NSSC lists 40 specific sport coaching standards grouped into eight defined content domains, most sport coaches are unaware that the NSSC even exists. Since the first coaching standards were produced in 1984, approximately every 10 years, the standards have been reviewed and updated. The last update to

the NSSC occurred in 2006, and the introduction of new coaching requirements and issues related to child and athlete protection, health issues sport coaches face (e.g., concussions, nutrition, performance-enhancing drugs), the use of technology and analytics in sport, and enhanced sport training methodologies suggests that the NSSC is ripe for reexamination.

While sport scholars and coaching leaders continue to discover and advance the best practices of sport coaching, education, and training, further examinations and comparisons of how multiple stakeholders perceive current sport coaching education practices is warranted before future updates can be made to the NSSC. Sport coaches (e.g., online educators, international and overseas educators) increasingly have the ability to undertake sport coaching education almost anywhere courses are offered, and the diverse coaching education practices of local, national, and international sport organizations have created unique challenges (i.e., each U.S. state has unique coaching requirements [Gilbert, Côté, & Mallett, 2006], whereas in Canada since 2005, every national sport organization has adopted Canadian Sport for Life and long-term athlete development model principles to govern sport coaches' training and education [Norris, 2010]). For the process of identifying the most important areas and practices of sport coaching education to continue, research must be undertaken that helps coaching educators identify topical areas on which coaching education should focus. Sport coaches cannot invest unlimited resources all at once into their sport coaching education, so knowing and understanding the most important topical areas in which they must be educated and proficient would be extremely helpful to coaches wishing to maximize the effectiveness of their coaching education. After the most important areas of sport coaching education are identified, the sport coaching education process can be improved through the creation of relevant courses and educational modules in the identified areas. Finally, because sport coaches are not the only stakeholders within sport coaching education, examining multiple perspectives will provide a more complete understanding of what the sport coaching education process should include. Educating and developing effective sport coaches must be a high priority for sport organizations and educational institutions (e.g., colleges and universities), because the health and welfare of

athletes in their care should not be put in jeopardy by untrained and/or ineffective sport coaches at all levels of sport.

Literature Review

Sport coaching has been defined as “a process of guided improvement and development in a single sport and at identifiable stages of athlete development” (International Council for Coaching Excellence, Association of Summer Olympic International Federations, & Leeds Metropolitan University, 2013, p. 14). The effectiveness of a sport coach is judged by internal (e.g., supervisors and coworkers) and external (e.g., parents, fans, and media) stakeholders, and their evaluations are based on quantitative (e.g., numbers of wins, losses, and championships) and qualitative (e.g., perceived personal growth in the maturity of athletes) factors. Quantitative factors have often been the focus of coaching evaluations, but recently scholars have advanced the position that coaches’ effectiveness should be judged on a multitude of integrated factors. Côté and Gilbert (2009) noted this point when they defined coaching effectiveness as “the consistent application of integrated professional, interpersonal, and intrapersonal knowledge to improve athletes’ competence, confidence, connection, and character in specific coaching contexts” (p. 316). In other words, being an effective coach is not just about winning and losing, but rather it consists of improving and mastering a number of skills and abilities that coaches can use to help athletes develop physically, socially, mentally, and emotionally (Coakley, 2015; Gilbert, Nater, Siwik, & Gallimore, 2010). Scholars and practitioners have also proposed multiple strategies that sport coaches can undertake to become effective coaches.

Recently, detailed descriptions of how, where, and from whom sport coaches learn how to be an effective sport coach have emerged from the sport coaching education literature (Côté, 2006; Côté & Gilbert, 2009). In addition to attending and completing traditional coaching education courses at educational institutions, sport coaches can learn how to coach sports from (1) coaching certification programs; (2) clinics and seminars; (3) mentoring; (4) books and videos; (5) interactions with other coaches; (6) Internet resources; and (7) personal experiences based on playing, coaching, and watching sports (Wright, Trudel, & Culver, 2007). Despite the multiple sources for sport education, it is not well understood what coaches

should be studying during their sport coaching education and how coaching education experiences fit together in the process of helping all coaches reach their highest potential (i.e., becoming an effective [expert coach]). Moreover, because of the unique responsibilities and perspectives of those with different roles and responsibilities within a sport organization, there may be disagreements between, for example, sport coaches and sport administrators about the essential areas in which sport coaches should undertake continuing sport coaching education. Because a sport administrator usually has the power to hire and fire the sport coach, but not vice versa, it would be beneficial for sport coaches to understand what areas of sport coaching education are valued by their supervisors.

Since the beginning of competitive sport and the advent of coaching athletes, there has been a spirited debate about what constitutes an effective sport coach (Côté, Young, North, & Duffy, 2007). To answer this question, scholars have examined a multitude of factors, including the ability to teach technical skills, communicate well with athletes and parents, motivate athletes well, make good decisions, handle pressure well, understand and utilize good game strategies and tactics, and build and strengthen an athlete's character (Feltz, Chase, Moritz, & Sullivan, 1999; Park, 2004). To date, three important conceptual models have been developed. Each discusses in detail the factors that make up coaching effectiveness and the relationship that effective coaches have with other important sport coaching outcomes.

Coaching Effectiveness

As mentioned, coaching effectiveness is defined as “the consistent application of integrated professional, interpersonal, and intrapersonal knowledge to improve athletes' competence, confidence, connection, and character in specific coaching contexts” (Côté & Gilbert, 2009, p. 316). Prior to Côté and Gilbert's (2009) research, Côté, Salmela, Trudel, Baria, and Russell (1995) created one of the first coaching effectiveness models. They identified six factors (i.e., competition, training, organizational factors, the coach's personal characteristics, the athlete's personal characteristics and level of development, and contextual factors) that could impact whether a person became an effective coach. Horn (2002) created another

model of coaching effectiveness. This model focused on the effects of sociocultural context, organizational climate, and coaches' personal characteristics that may be mediated through coaches' expectancies, values, beliefs, and goals. Horn posited that situational and individual variables affect coaching effectiveness behaviors. Finally, Côté and Gilbert proposed that coaches' knowledge (i.e., professional, interpersonal, and intrapersonal), athletes' outcomes (i.e., competence, confidence, connection, and character/caring), and coaching contexts (i.e., participant or performance coaching) are important principles that evaluators need to consider when examining and measuring coaching effectiveness. As the coaching effectiveness literature developed, the Society of Health and Physical Educators (formerly known as the American Alliance for Health, Physical Education, Recreation, and Dance) and the National Committee for Accreditation of Coaching Education created the National Standards for Sport Coaches to guide and assist sport coaches, sport administrators, and sport coaching educators in creating educational materials to educate sport coaches at all levels and with different sets of experiences, knowledge, proficiencies, and effectiveness.

National Standards for Sport Coaches

In 1984, the National Association of Sport and Physical Education (NASPE) published a position paper on the Standards for Youth Sport Coaches (Bodey, Brylinsky, & Kuhlman, 2008). Later in 1995, the National Standards for Athletic Coaches were created through collaboration between more than 140 local, state, and national sport governing bodies in conjunction with NASPE (Brylinsky, 2002). These standards identified the “scientific and practical competencies that administrators, athletes and the public should expect of sport coaches at various levels of experience” (NASPE, 1995, p. 3). In 2006, an expanded group of collaborators and stakeholders renamed the National Standards for Athletic Coaches to the NSSC, edited existing standards, added three new standards, and added new information about benchmarks that coaches should achieve as they progress from novice to expert. Specifically, the NSSC consists of eight domains and 40 standards that explicate the “direction for coaching educators, sport administrators, coaches, athletes and their families, and the public regarding the skills and knowledge that coaches should

possess” (NASPE, 2006, p. 3). Currently, the NSSC is the most complete sport coaching framework for developing sport coaching education criteria in the United States.

The first of eight domains in the NSSC is titled Philosophy and Ethics, and it focuses on creating an athlete-centered coaching philosophy, professional accountability, and fair play by all. Safety and Injury Prevention is the second domain, and it highlights the coach’s responsibility for providing safe conditions, following emergency protocols when necessary, having basic sport medicine knowledge, and creating and maintaining a safe and healthy sport experience for athletes. The third domain, Physical Conditioning, focuses on coaches’ responsibilities in the areas of designing and implementing conditioning programs, understanding overtraining, prevention and recovery from injuries, physiological training, and administering nutrition and drug education. Domain four, Growth and Development, centers on identifying developmental considerations in designing practice and competition to enhance the physical, social, and emotional growth of athletes. This domain is also related to creating an inclusive learning environment that leads athletes to feel welcome and supported and to have experiences that foster leadership skills. The fifth domain, Teaching and Communication, focuses on identifying standards for sound instructional strategies and the interpersonal behavior of the coach, creating a positive coaching style while maximizing learning and enjoyment, and individualizing instruction. Emphasis is also placed on empowered communication and management skills, developing self-motivated and satisfied athletes, and mitigating bullying and harassment on a team. Titled Sport Skills and Tactics, the sixth domain of the NSSC is based on coaches acquiring and applying basic sport knowledge to competitive situations, developing team and individual tactics, and making personnel decisions during practices and games. Coaches are also expected to utilize age-appropriate practice plans that are sequential and progressive and to define expectations for scouting and game analysis. The seventh domain, Organization and Administration, focuses on how coaches expend their resources in the daily operation and management of their sport program, including effectively using human and financial resources while undertaking administrative duties. This domain also includes ensuring that coaches under-

stand their basic risk management responsibilities. The final domain is Evaluation, which highlights the assessment skills necessary to be an effective coach, including personnel selection, evaluating practice effectiveness and an athlete's progress toward defined goals, game management skills, program evaluation, self-reflection activities, and professional growth opportunities. Although a diverse group of leaders, stakeholders, and constituents took part in creating the position paper (1985), the first version (1996), and the second version (2006) of the NSSC, to date there is a lack of research regarding how sport coaches and sport administrators feel about the importance of the eight domains and 40 standards relative to being an effective sport coach.

As a result, the purpose of this research is threefold. First, sport coaches' and sport administrators' opinions about what effective sport coaches need to learn in sport coaching education programs is examined. The 40 standards contained in the NSSC will be used as the basis of the first examination. The standards are the most specific and expansive list of specific competencies that sport coaches in the United States should meet. Second, because of coaches' limited resources (and their inability to study everything all at once), the opinions of sport coaches and sport administrators will be examined regarding which of the eight domains are the highest priority areas for effective sport coaches to study. When resources (e.g., time, energy, money) are scarce, sport coaches need guidance about which topical areas are of highest importance and priority to allocate for their continuing education. In addition, local, state, national, and international sport governing bodies and related groups that produce and publish coaching educational materials would be well served to know the topical areas that are perceived as most important. As a result, education providers of coaching materials could produce appropriate resources needed by sport coaches. The third and final purpose of this research is to compare the results for the 40 standards and eight domains between sport coaches and sport administrators to determine if any significant or important differences exist between the two groups. Because of the fundamental differences in the purposes of their role within the sport organization, sport coaches and sport administrators often do not see eye to eye on a variety of issues (Bowen & Levin, 2003; Shulman & Bowen, 2001).

When it comes to the necessary knowledge and skills needed, sport coaches and sport administrators should be on the same page. The results of this research will shed light on perceptions of the NSSC and whether sport coaches and sport administrators similarly perceive the importance of the eight domains and 40 standards to effective coaches. The next section will describe the methods in detail.

Method

Participants

Before this study was undertaken, institutional approval was received. Potential participants were informed of this research through information posted on sport coaching groups' social media web pages (e.g., LinkedIn). Word-of-mouth announcements and information about the research were also provided to those directly affiliated with the authors, and website and e-mail announcements were posted and sent by six professional sport and coaching organizations and high school athletic associations to their membership in a state in the northeastern United States. Participants were offered a chance to win cash gift cards in return for taking the survey.

In total, survey respondents included 308 sport coaches and 99 sport administrators (e.g., athletic directors). For the sport coaches, their median age was 44.0 years old ($SD = 12.0$), 65.3% were male, 91.0% classified themselves as Caucasian, 70.5% were married, and 77.0% had completed graduate-level education. In terms of their sport coaching experiences, 38.6% classified themselves as a full-time coach and 52.6% as a part-time coach; 51.1% primarily coached high school sports, 22.9% middle/junior high school sports, and 7.5% college/university sports. The responding coaches reported that on average during their lifetime, they had spent 21 years as an athlete, 11 years as a head coach, 5 years as an assistant coach, 6 years as a manager or administrator, 5 years as a volunteer, and 1 year as an intern. Finally, the sport coaches reported 895 separate coaching experiences in basketball ($n = 193$), soccer ($n = 126$), softball ($n = 100$), football ($n = 76$), baseball ($n = 67$), track and field ($n = 62$), volleyball ($n = 62$), lacrosse ($n = 56$), and the remaining 153 in sports such as bowling, golf, swimming and diving, tennis, weightlifting, and wrestling.

As for the sport administrators, their average age was slightly higher than the sport coaches' at 48.3 years old ($SD = 12.0$). Their demographics were similar to the sport coaches in that 69.8% were male, 90.4% classified themselves as Caucasian, 66.7% were married, and 86.8% had completed some type of graduate-level education. As for the level at which they were working, 67.6% indicated the senior high school level, 8.1% the college/university level, and 4.1% the middle/junior high school level. The responding administrators and managers reported that on average during their lifetime, they had spent 21 years as an athlete, 13 years as a head coach, 6 years as an assistant coach, 17 years as a manager or administrator, 3 years as a volunteer, and 1 year as an intern. Finally, in terms of the current primary role, 67.6% were an athletic director or director of athletics, with the remaining individuals spanning roles as a type of director, coordinator, manager, or another related administrative position.

Procedures

To survey both sport coaches and administrators, the researchers created two similar online surveys. Both surveys included 10 questions about respondents' playing and working experiences in sports, five questions about their sport education and training, 10 questions about their personal demographics, five questions about the characteristics and level of their organization(s) and team(s), and the items used to represent the eight domains and 40 standards included in the NSSC. For the 40 standards, respondents on both surveys were asked to evaluate the importance of each standard in terms of being an effective sport coach. A 0–10 Likert-type scale was used for all 40 standards, whereby 0 = *a sport coach does not need the standard listed to be an effective sport coach* and 10 = *a sport coach must have the standard listed to be an effective sport coach*. Because of the large number of items, to deter response bias, the researchers included a marker variable and randomly scattered it among the items. For the section on the eight domains, respondents were given the description of each domain listed in the NSSC (NASPE, 2006) and asked to

rank order (1 to 8) the domains in terms of importance to an effective coach, whereby 1 = *the most important sport coaching responsibility for effective coaches* and 8 = *the least important sport coaching responsibility for effective coaches*. Questions about the domains and standards were asked near the end of the survey, and the items measuring respondents' evaluations of the 40 standards were asked prior to items related to the eight domains, which helped to minimize response bias.

Results

The first set of items asked sport coaches and administrators to rate the importance of each of the 40 standards. Table 1 displays the average sport coaches' rating and ranking, average sport administrators' rating and ranking, and the average rating of responses from the coaches and administrators combined. The average ratings from sport coaches and administrators were also compared with independent samples *t* tests. The nonparametric Mann–Whitney U test was also conducted, comparing the normality and distribution of the responses from the sport coaches and sport administrators. Table 1 also shows the *t* value, degrees of freedom, and whether a significant difference is present, as determined from each statistical comparison of the means.

The second set of items referred to the eight domains. Table 2 displays the mean scores of the sport coaches' rankings and overall rank, the mean scores of the sport administrators' rankings and overall rank, and the average ranking of the combined sport coaches' and administrators' rankings. The average ratings from sport coaches and administrators were compared with independent samples *t* tests. Again, the nonparametric Mann–Whitney U test was also conducted, comparing the distribution and normality of both data sets; Table 2 also shows the *t* values, degrees of freedom, and whether a significant difference in the mean scores is present, as determined from each statistical comparison of the means.

Table 1

Ratings, Rankings, Averages, and Differences for the 40 Standards Between Sport Coaches and Sport Administrators

Domain	Standard	Coaches' mean rating	Rank for coaches' mean ^a	Admins' mean rating	Rank for admins' mean ^a	Overall mean of the ratings ^b	Rank for the overall mean	Sig. difference? ^c <i>t(df)</i>
Philosophy & Ethics	1. The ability to develop and implement an athlete-centered coaching philosophy.	8.78	#27	8.95	#23	8.82	#26	No <i>t</i> (225) = -.623
	2. The ability to identify, model, and teach positive values learned through sport participation.	9.47	#3	9.49	#5	9.47	#3	No <i>t</i> (225) = -.144
	3. The ability to teach and reinforce responsible personal, social, and ethical behavior of all people involved in the sport program.	9.48	#2	9.53	#3	9.49	#2	No <i>t</i> (225) = -.379
	4. The ability to demonstrate ethical conduct in all facets of the sport program.	9.63	#1	9.75	#1	9.66	#1	No <i>t</i> (225) = -1.059

Table 1 (cont.)

Domain	Standard	Coaches' mean rating	Rank for coaches' mean ^a	Admins' mean rating	Rank for admins' mean ^a	Overall mean of the ratings ^b	Rank for the overall mean	Sig. difference? ^c <i>t(df)</i>
Safety & Injury Prevention	5. The ability to prevent injuries by providing safe facilities.	9.22	#13	9.36	#9	9.25	#12	No <i>t</i> (225) = -.658
	6. The ability to ensure that all necessary protective equipment is available, properly fitted, and used appropriately.	9.31	#9	9.53	#4	9.36	#8	No <i>t</i> (225) = -1.216
	7. The ability to monitor environmental conditions and modify participation as needed to ensure the health and safety of everyone involved.	9.13	#17	9.16	#18	9.14	#18	No <i>t</i> (225) = -.145
	8. The ability to identify physical conditions that predispose athletes to injuries.	8.83	#25	8.85	#25	8.84	#25	No <i>t</i> (225) = -.093
	9. The ability to recognize injuries and provide immediate and appropriate care.	9.33	#8	9.31	#10	9.33	#9	No <i>t</i> (225) = .129
	10. The ability to facilitate a coordinated sports health care program that includes prevention, care, and management of injuries.	8.33	#36	8.36	#34	8.34	#36	No <i>t</i> (225) = -.116
	11. The ability to identify and address the psychological implications of injury.	8.41	#35	8.31	#35	8.39	#35	No <i>t</i> (225) = .393

Table 1 (cont.)

Domain	Standard	Coaches' mean rating	Rank for coaches' mean ^a	Admins' mean rating	Rank for admins' mean ^a	Overall mean of the ratings ^b	Rank for the overall mean	Sig. difference? ^c <i>t(df)</i>
Physical Conditioning	12. The ability to design programs of training, conditioning, and recovery that properly utilize exercise physiology and biomechanical principles.	8.63	#31	8.29	#36	8.55	#32	No <i>t</i> (225) = 1.231
	13. The ability to teach and encourage proper nutrition for optimal physical and mental performance and overall good health.	8.51	#33	8.38	#33	8.48	#33	No <i>t</i> (225) = .470
	14. The ability to be an advocate for drug-free sport participation and provide accurate information about drugs and supplements.	9.25	#11	9.24	#15	9.25	#13	No <i>t</i> (225) = .057
	15. The ability to plan conditioning programs to help athletes return to full participation following injury.	8.50	#34	8.42	#32	8.48	#34	No <i>t</i> (225) = .292
Growth & Development	16. The ability to apply knowledge of how developmental change influences the learning and performance of sport skills.	8.81	#26	8.78	#26	8.80	#27	No <i>t</i> (225) = .117
	17. The ability to facilitate the social and emotional growth of athletes by supporting a positive sport experience and lifelong participation in physical activity.	9.17	#15	9.27	#14	9.19	#16	No <i>t</i> (225) = -.538
	18. The ability to provide athletes with responsibility and leadership opportunities as they mature.	9.20	#14	9.24	#16	9.21	#14	No <i>t</i> (225) = -.172

Table 1 (cont.)

Domain	Standard	Coaches' mean rating	Rank for coaches' mean ^a	Admins' mean rating	Rank for admins' mean ^a	Overall mean of the ratings ^b	Rank for the overall mean	Sig. difference? ^c <i>t(df)</i>
Teaching & Communication	19. The ability to provide a positive learning environment that is appropriate to the characteristics of the athletes and goals of the program.	9.38	#7	9.56	#2	9.43	#6	No <i>t</i> (225) = -1.138
	20. The ability to develop and monitor goals and objectives for the athletes and program.	9.01	#20	8.91	#24	8.98	#20	No <i>t</i> (225) = .498
	21. The ability to organize practice based on a seasonal or annual practice plan to maintain motivation, manage fatigue, and allow for peak performance at the appropriate time.	9.24	#12	9.31	#11	9.26	#10	No <i>t</i> (225) = -.360
	22. The ability to plan and implement daily practice activities that maximize time on task and available resources.	9.43	#5	9.42	#7	9.43	#5	No <i>t</i> (225) = .082
	23. The ability to utilize appropriate instructional strategies to facilitate athlete development and performance.	9.28	#10	9.18	#17	9.26	#11	No <i>t</i> (225) = .668
	24. The ability to teach and incorporate mental skills to enhance performance and reduce sport anxiety.	8.78	#28	8.51	#29	8.72	#28	No <i>t</i> (225) = 1.138
	25. The ability to use effective communication skills to enhance individual learning, group success, and enjoyment in the sport experience.	9.45	#4	9.40	#8	9.44	#4	No <i>t</i> (225) = .322
	26. The ability to demonstrate and utilize appropriate and effective motivational techniques to enhance athlete performance and satisfaction.	9.12	#18	9.29	#13	9.16	#17	No <i>t</i> (225) = -.947

Table 1 (cont.)

Domain	Standard	Coaches' mean rating	Rank for coaches' mean ^a	Admins' mean rating	Rank for admins' mean ^a	Overall mean of the ratings ^b	Rank for the overall mean	Sig. difference? ^c <i>t(df)</i>
Skills & Tactics	27. The ability to know the skills, elements of skill combinations, and techniques associated with the sport being coached.	9.42	#6	9.29	#12	9.39	#7	No <i>t</i> (225) = .839
	28. The ability to identify, develop, and apply competitive sport strategies and specific tactics appropriate for the age and skill levels of the participating athletes.	9.14	#16	8.98	#21	9.10	#19	No <i>t</i> (225) = .885
	29. The ability to use scouting methods for planning practices, game preparation, and game analysis.	8.08	#37	8.11	#37	8.08	#37	No <i>t</i> (225) = -.096
Organization & Administration	30. The ability to demonstrate efficiency in contest management.	8.68	#29	8.49	#30	8.63	#29	No <i>t</i> (225) = .809
	31. The ability to be involved in public relation activities for the sport program.	7.99	#39	7.71	#39	7.93	#39	No <i>t</i> (225) = .913
	32. The ability to manage human resources for the program.	8.08	#38	8.00	#38	8.06	#38	No <i>t</i> (225) = .258
	33. The ability to manage fiscal resources for the program.	7.51	#40	7.62	#40	7.54	#40	No <i>t</i> (225) = -.282
	34. The ability to facilitate planning, implementation, and documentation of the emergency action plan.	8.85	#24	8.96	#22	8.88	#24	No <i>t</i> (225) = -.446
	35. The ability to manage all information, documents, and records for the program.	8.64	#30	8.49	#31	8.60	#30	No <i>t</i> (225) = .547
	36. The ability to fulfill all legal responsibilities and risk management procedures associated with coaching.	9.12	#19	9.49	#6	9.21	#15	No <i>t</i> (225) = -1.731

Table 1 (cont.)

Domain	Standard	Coaches' mean rating	Rank for coaches' mean ^a	Admins' mean rating	Rank for admins' mean ^a	Overall mean of the ratings ^b	Rank for the overall mean	Sig. difference? ^c <i>t(df)</i>
Evaluation	37. The ability to implement effective evaluation techniques for team performance in relation to established goals.	8.92	#21	8.76	#27	8.88	#23	No <i>t</i> (225) = .730
	38. The ability to use a variety of strategies to evaluate athlete motivation and individual performance as they relate to season objectives and goals.	8.91	#22	9.09	#19	8.96	#21	No <i>t</i> (225) = -.820
	39. The ability to utilize an effective and objective process for evaluation of athletes in order to assign roles or positions and establish individual goals.	8.88	#23	9.02	#20	8.91	#22	No <i>t</i> (225) = -.619
	40. The ability to utilize an objective and effective process for evaluation of self and staff.	8.62	#32	8.55	#28	8.60	#31	No <i>t</i> (225) = .261

Note. Sig. difference = Significant difference between the rating given by sport coaches and sport administrators.

^aThe lower the number, the higher the standard was rated (e.g., 1 = the most important standard, 40 = the least important standard). ^bThe average ratings are weighted based on the sample sizes of both respective groups (coaches: $n = 172$, administrators: $n = 55$). ^cThe nonparametric Mann-Whitney U test also used to examine the distribution of both data sets.

Table 2*Rankings, Averages, and Differences for the Eight Domains Between Sport Coaches and Sport Administrators*

Domain	Coaches' mean ranking	Rank for coaches' mean ^a	Admins' mean ranking	Rank for admins' mean ^a	Overall mean of the rankings ^b	Rank for the overall mean	Sig. difference? ^c <i>t(df)</i>
Philosophy & Ethics	4.10	#3	3.85	#3	4.04	#3	No <i>t</i> (225) = .689
Safety & Injury Prevention	3.67	#2	3.25	#1	3.57	#2	No <i>t</i> (225) = 1.172
Physical Conditioning	4.69	#6	4.78	#6	4.71	#6	No <i>t</i> (225) = -.312
Growth & Development	4.31	#4	4.73	#5	4.41	#4	No <i>t</i> (225) = -1.350
Teaching & Communication	3.32	#1	3.40	#2	3.34	#1	No <i>t</i> (225) = -.239
Skills & Tactics	4.35	#5	4.62	#4	4.41	#5	No <i>t</i> (225) = -.871
Organization & Administration	5.84	#8	5.95	#8	5.87	#8	No <i>t</i> (225) = -.296
Evaluation	5.72	#7	5.42	#7	5.65	#7	No <i>t</i> (225) = .937

Note. Sig. difference = Significant difference between the rating given by sport coaches and sport administrators.

^aThe lower the number, the higher the standard was rated (e.g., 1 = the most important domain, 40 = the least important domain). ^bThe average ratings are weighted based on the sample sizes of both respective groups (coaches: $n = 172$, administrators: $n = 55$). ^cThe nonparametric Mann–Whitney U test also used to examine the distribution of both data sets.

Discussion

There are at least six important results of this research that merit discussion. First, based on the overall mean ratings and rankings, Domain 1 (Philosophy and Ethics) has the top three highest ranked standards by sport coaches and administrators; however, Standard 1 (“The ability to develop and implement an athlete-centered coaching philosophy”) is not as highly rated and ranked as Standards 2, 3, and 4. This result reinforces the importance of examining coaching education areas based on standards (competencies) and domains (topical areas), because the results may differ. In addition, differences in the ratings and rankings of the standards within each domain can be seen clearly in other domains. For example, in Domain 3 (Physical Conditioning), although Standards 12, 13, and 15 are rated and ranked relatively low by sport coaches and administrators, Standard 14 (“The ability to be an advocate for drug-free sport participation and provide accurate information about drugs and supplements”) is ranked higher. Recently, due to increasing focus of local, state, national, and international sport organizations and governing bodies on athletes and their use of performance-enhancing drugs and supplements, it is not surprising that this standard stands out as more highly ranked by sport coaches and administrators. Finally, although no statistically significant differences between any standards were found between sport coaches and administrators, scholars could investigate why certain standards are ranked more highly than others.

Second, for the mean scores for sport coaches and administrators regarding the 40 standards, all mean ratings are greater than 7.50 (on a 0–10 scale) for both sample populations. These results suggest that, in the opinion of sport coaches and administrators, all 40 standards represent important knowledge and abilities that effective sport coaches need to have. As the NSSC has evolved over the years into the current version, the authors and contributors have clearly been successful at identifying important knowledge and skills sport coaches need to have. Thus, the future areas for expanding and improving the next version of the NSSC are not currently listed, so research to identify any current gaps in the existing standards.

Table 1 displays the next set of interesting results. After looking at all of the results in this table, the researchers found no statistically

significant differences between the perceptions of sport coaches and administrators. The statistically insignificant differences suggest that sport coaches and administrators in the sample populations have similar perceptions about the importance all 40 standards relative to being an effective sport coach. Because the majority of both sample populations come from the junior high and high school levels, future research should examine if sport coaches and administrators at other levels show the same type of similarities.

Next, the results displayed in Table 2 are examined. The rankings indicate which domain is most highly prioritized by sport coaches and administrators. The two highest ranked domains by sport coaches and administrators are Domain 5 (Teaching and Communication) and Domain 2 (Safety and Injury Prevention). The two domains that are ranked lowest are Domain 8 (Evaluation) and Domain 7 (Organization and Administration). To a large extent, these results likely reflect the most important and/or frequent tasks that sport coaches feel they do and administrators perceive coaches (should) do. Future research could further examine why sport coaches and administrators ranked each domain as they did.

Similar to the results in Table 1, the results in Table 2 are consistent between the two respondent groups. Sport coaches and administrators ranked Domains 1, 3, 7, and 8 the same, whereas the results for Domains 2 and 5 and Domains 4 and 6 are simply switched. Further, the researchers found no significant differences between sport coaches' or administrators' rankings for any of the eight domains. Additional research could refine and expand the domains and the descriptions and content of each domain.

When specifically examining which standards from which domains in Table 1 were most highly rated compared to the rankings displayed in Table 2, the researchers found interesting contrasts. In Table 1, Domain 1 had three of four standards ranked as the top three standards; however, in Table 2, Domain 1 was ranked as the third most important domain behind Domain 5 and Domain 2, respectively. Along similar lines, in Table 1, Standards 8, 10, and 11 in Domain 2 are rated low, whereas in Table 2, the overall ranking was the second highest. As discussed, there may be refinements and improvements to the descriptions and contents of the domains that may more fully explain and encompass all of the relevant and important content sport coaches need to have to be effective.

Finally, as detailed in the next section, one additional area of future research is of great importance. The authors of the NSSC discuss and briefly describe how the standards could be applied to coaches at various levels of competency and experience (e.g., novice to expert coaches). Future research and revisions to the NSSC should continue to examine and expand on this area. For example, Delphi studies of sport coaching experts could be conducted about the domains and standards that sport coaches need to focus on early in their career (and continuing coaching education programs later in their career) could be better identified and implemented.

Conclusion and Limitations

Several important conclusions can be drawn from the results of this research. First, it is encouraging to see that sport coaches and administrators highly rated all 40 standards in the NSSC. When sport coaching educators at local, state, national, or international organizations need a list of topics and abilities that sport coaches should know and understand, the NSSC would be a good starting point, as the evidence in this research suggests. After examining the results for sport coaches and administrators side by side, the researchers found it reassuring that the results from both groups are similar. In many sport organizations, sport coaches and administrators have an adversarial relationship (Massengale & Sage, 1995). One area in which sport coaches and administrators need to see eye to eye is the necessary coaching knowledge needed to be effective. Even if their perspectives do not completely overlap, it is still important that sport coaches and administrators understand each other and their respective roles, responsibilities, and abilities. Additional research that validates and corroborates what sport coaches and administrators believe about effective coaching is also needed. This research can include opinions and feedback from student athletes and parents at all levels. This leads to another potential interesting area of inquiry that would allow for enhanced understanding between coaches and administrators: sport coaches' opinions about the important abilities and experiences of effective sport administrators.

In terms of the limitations of this research, the respondents (and their demographics) are a large issue that may have affected the findings of this research. For research with national implications, sampling is an important issue that many researchers face. To

collect the data for this research, the authors worked closely with numerous state-level sport organizations. Within most U.S. states, sport organizations are usually centered on the public and private education and athletic systems (e.g., elementary, junior, and senior high schools). Therefore, despite the researchers' attempts to recruit the most broad sample possible, respondents still may not reflect the true diversity of a more national or international sample of sport coaches and administrators.

Another important limitation is that one of the newest areas of sport coaching education revolves around the notion that sport coaches are all at different stages and levels in their coaching career. Some sport coaches may be full-time coaches for more than 30 years and be considered an expert coach, whereas other sport coaches may be volunteers who have only been coaching on an as-needed basis. The most recent version of the NSSC contains basic information about how sport coaches may be at different stages in their career (e.g., novice, expert); however, the NSSC includes little information that suggests which domains and standards novice coaches should undertake and which areas expert coaches should pay attention to so that they have the most current and up-to-date knowledge. In this research, the results from coaches and administrators with different roles and at different stages in their career are combined together, instead of, for example, segmenting them based on their job title or level of expertise. It is expected that expert coaches are more likely to be proficient in areas such as Philosophy and Ethics, whereas in areas such as Safety and Injury Prevention new discoveries are constantly being made, so modern and up-to-date information must be continually learned and studied.

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