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AN INVESTIGATION OF COACHES' AND CLASSIFIERS' PERCEPTIONS OF WORKING WITH ATHLETES WITH A DISABILITY

PREPARED FOR
THE ONTARIO PARASPORT COLLECTIVE



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Canadian Disability Participation Project

Le projet canadien sur la participation sociale
des personnes en situation de handicap

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PREFACE

OVERVIEW

This report was prepared for the Ontario Parasport Collective. This project aimed to gain a deeper understanding of Ontario coaches' and classifiers' perceptions of working with athletes with a disability. The survey findings provide a foundation for future research and resource allocation.

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This report will be available online at: www.coachesontario.ca/parasport

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INTRODUCTION

Over the last thirty years, there is increasing support for the notion that sport can provide numerous benefits for people with disabilities (Allan et al., 2017). The importance of examining the sport experiences of people with disabilities is underscored by the fact that sport participation rates among individuals with disabilities remain relatively low in comparison to able-bodied individuals (e.g., Martin Ginis et al., 2010; Sport England, 2017). Given that sport can offer potential benefits, it is crucial for researchers and practitioners to gain a deeper understanding of the features of the sport environment that can influence the quality of athletes' sport experiences.



There is a growing body of literature highlighting the integral role that coaches play in disability sport environments (e.g., Martin & Whalen, 2014). To date, research has examined several aspects of coaches' experiences, including factors at the intrapersonal (e.g., self-perceptions), interpersonal (e.g., coaching behaviours), organizational (e.g., coach training and support) levels (Martin & Whalen, 2014). This research demonstrates that there is an extensive array of factors that can influence coaches' experiences of working with athletes with a disability (AWAD). However, there is a need to further understand these experiences within the Ontario sport context.

"It is crucial for researchers and practitioners to gain a deeper understanding of the features of the sport environment that can influence the quality of athletes' sport experiences."

Coaches' Characteristics

Early efforts exploring coaches of athletes with a disability (CAWAD) focused on the characteristics of those who coach within the disability sport context, including coaches' demographics, training backgrounds, and previous sport experiences. For instance, in their survey of 155 coaches, DePauw and Gavron (1991) demonstrated that CAWAD tended to be college educated persons between 26-40 years of age, with prior sport and coaching experience. Commonly cited reasons for coaching AWAD were previous experience as a coach and volunteerism. A small number of participants reported becoming a coach after competing as an athlete with a disability themselves or because a family member was active in disability sport. In addition to being one of the first studies to solely focus on coaches of athletes of disabilities, the findings of this study offered valuable insight into the profiles of coaches who coach AWAD. Nonetheless, it is important to acknowledge that this study was conducted nearly 30 years ago and thus it would be worthwhile to re-examine the profiles of coaches within the context of the current coaching landscape.

Coaches' Knowledge: Learning and Development Pathways

More recently, efforts have been made to explore the learning and development pathways of coaches who work with AWAD. Previous studies suggest that there is a paucity of coach development programs that adequately address the needs of CAWAD (e.g., Depauw, 1986; McMaster, Culver, & Werthner, 2012).



"Previous studies suggest that there is a paucity of coach development programs that adequately address the needs of CAWAD."

As such, the examination of coaches' learning and development pathways has received increased attention in recent years (Cregan, Bloom, & Reid, 2007; McMaster et al., 2012). Nelson and colleagues (2006) suggest that coaches can learn through three distinct pathways: formal (e.g., coaching courses and certifications sponsored by specific sport organizations or national governing bodies), nonformal (e.g., coaching conferences, clinics, seminars or workshops), and informal (e.g., personal experience, such as trial and error, or social situations, such as interacting with other coaches). Each of these pathways offer distinct benefits and limitations for coach development and for promoting positive sport experiences.

With regards to formal pathways, studies suggest that although coaches perceive such programs to be potentially valuable sources of information, they have expressed concerns regarding the specificity and relevance of these programs for coaching AWAD (e.g., Duarte & Culver, 2014; McMaster et al., 2012; Tawse, Bloom, Sabiston, & Reid, 2012). In a similar vein, coaches reported that although nonformal coach development programs could be potentially helpful, opportunities to participate in such programs were not as abundant for those working with AWAD (Cregan et al., 2007; Duarte & Culver, 2014; McMaster et al., 2012). Finally, previous studies highlight that informal learning pathways may be an important source of knowledge for coaches of AWAD.

"There is minimal research that has described the learning pathways from which coaches would prefer to learn."



Consistent with this contention, coaches have identified numerous sources of informal learning, including interacting with other coaches and communicating with the families of AWAD (e.g., Cregan et al., 2007; Duarte & Culver, 2014; Douglas & Hardin, 2014; Falcão, Bloom, & Loughhead, 2015; Tawse et al., 2012; Taylor, Werthner, & Culver, 2015). Although these studies provide valuable insight into the roles that different pathways may play in coach development, the existing literature has predominantly focused on small samples of coaches describing their own coach development pathways. There is minimal research that has described the learning and development pathways from which coaches would prefer to learn.



Coaches' Thoughts and Beliefs

Studies have also explored coaches' thoughts and beliefs about working with AWAD (e.g., Kozub & Poretta, 1998). For example, Davey (2014) found that novice Canadian coaches of parasailing athletes discussed positive cognitions and feelings towards working with AWAD, but expressed concerns regarding their professional (e.g., technical adaptations for sport-specific skills) and interpersonal (e.g., appropriate language) knowledge and behaviours. Moreover, Davey (2014) revealed that coaches primarily reported acquiring knowledge through informal pathways (e.g., learning on the job through trial and error). Taken together, these findings illustrate the complex relations that exist between coaches' learning and development pathways and their thoughts and beliefs about working with AWAD.



"Results indicated that although coaches were generally supportive of such programs, they did not feel that they were sufficiently trained to coach AWAD."

Coaches' Behaviours

Another integral element to promoting positive sport experiences for AWAD is the behaviours that coaches employ in their interactions with their athletes. In line with this assertion, evidence exists to suggest that the outcomes that athletes acquire through sport are shaped by coach-athlete interactions in sport (e.g., Banack, Sabiston, & Bloom, 2011). For instance, in an examination of a sport program for AWAD and their able-bodied siblings, athletes emphasized how the head coach facilitated positive developmental outcomes by demonstrating an unwavering belief in athletes' potential, guiding the goal setting process, and adopting a person-centered approach (Turnnidge, Vierimaa, & Côté, 2012). These findings are reinforced by previous research (e.g., Banack et al., 2011; Tawse et al., 2012) which consistently highlights the importance of a collaborative and person-centered approach to AWAD, in which both coaches and athletes are actively engaged in the coaching process to foster athletes' development in and out of sport.

CAPABILITY

OPPORTUNITY

MOTIVATION

Given that coaches' behaviours represent a valuable avenue for promoting positive sport experiences, it is important to examine how researchers and practitioners can enable coaches to express effective coaching knowledge, thoughts and beliefs, and behaviours through their interactions with their athletes. One framework that may hold significant potential for enhancing our understanding of how to mobilize coaches' knowledge, thoughts, and beliefs into positive behaviours is the Behaviour Change Wheel (BCW) framework (Michie, Atkins, & West, 2014). The BCW framework has been effectively employed to design and examine a wide range of behaviour change interventions, such as understanding general practitioners' use of cardiovascular risk assessment strategies (Bonner et al., 2013), recycling behaviours (Gainforth, Sheals, Atkins, Jackson, & Michie, 2016), and coaches' transformational leadership behaviours (Turnnidge & Côté, 2017).

A key strength of the BCW is that it outlines the elements of the behaviours that are most relevant to intervention design using the COM-B (Michie, van Stralen, & West, 2011) model. The COM-B model suggests that there are three essential ingredients for changing behaviour: Capability (i.e., the physical or psychological capacity to perform the behaviour), Opportunity (i.e., factors from the physical or social environment that may influence behaviours, such as time, resources, or social support), and Motivation (i.e., the automatic or reflective processes that influence behaviours). The BCW can also provide guidance regarding future interventions (e.g., education, environmental restructuring) that can be used to influence participants' perceptions of capability, opportunity, and motivation. Despite the potential value of this framework, no studies to date have examined these constructs in relation to coaches' perceptions of working with AWAD in sport.

Limitations of the Existing Literature

Collectively, the existing literature highlights that a myriad of factors at the intrapersonal, interpersonal, and organizational levels can influence coaches' perceptions of and experiences with working with AWAD. Although studies indicate that coaches' knowledge, thoughts and beliefs, and behaviours can have significant implications for the quality of athletes' sport experiences, it is important to recognize some important limitations. The first limitation relates to the populations that have been typically studied. Previous studies have tended to focus on current or former coaches of elite level athletes. Studies investigating the experiences of coaches in diverse sport contexts (e.g., recreational, developmental sport, youth sport) would consequently help to supplement the current literature. In addition to more studies examining CAWAD in general, there is a need to better understand potential differences in perceptions and experiences of coaches who currently work with AWAD and those who currently do not.

Research addressing coaching in disability sport tends to focus exclusively on those who have experience coaching AWAD. There are thus numerous questions regarding how coaching AWAD is perceived by those coaches without these previous experiences. The examination of these different viewpoints may be useful for researchers and practitioners seeking to describe and interpret these experiences.

"There is a need to better understand potential differences in perceptions and experiences of coaches who currently work with AWAD and those who currently do not."



Second, studies are needed to examine the potential processes that may underpin the behaviours that coaches employ in their interactions with their athletes. Previous studies have generally focused on assessing athletes' perceptions of effective coaching behaviours. Although this has shed light on important behaviours that coaches can use to promote development, questions remain regarding coaches' perceptions of these behaviours. Studies using behaviour change theories to explicitly examine coaches' perceptions of their capability, opportunity, and motivation may thus provide researchers and practitioners with a richer understanding of coaches' behaviours in disability sport contexts. Furthermore, such investigations may be valuable for informing the design, implementation, and evaluation of future interventions.



Lastly, although coaches play an integral role in shaping the sport environment, there are other important social agents that can contribute to, or detract from, the quality of athletes' sport experiences. One of these social agents is the classifier. To date, very limited research has examined the knowledge, thoughts and beliefs, and behaviours of classifiers and their role within the disability sport environment. Studies examining the perceptions and experiences of classifiers is sorely needed. Indeed, research exploring the characteristics, learning and development pathways, and behaviours of classifiers would be beneficial.

"To date, very limited research has examined the knowledge, thoughts and beliefs, and behaviours of classifiers and their role within the disability sport environment. Studies examining the perceptions and experiences of classifiers is sorely needed."

Purpose

Given that sport may provide a fertile context for promoting positive experiences for people with disabilities, investigations of the features of the sport environment that can contribute to these positive experiences are of critical importance. Previous research underscores the need to identify and understand how real-world coaches and classifiers may influence athletes' sport experiences. The purpose of this exploratory, descriptive survey was to examine coaches' and classifiers' perceptions of working with AWAD. More specifically, this survey sought to address the following objectives:

(a) to explore and typify the demographic characteristics of coaches (with and without experience working with athlete with disabilities) and classifiers

(b) to examine coaches' and classifiers' perceptions of their capability, opportunity, and motivation to work with AWAD

(c) to investigate issues relating to learning and development pathways, thoughts and beliefs, and behaviours among coaches and classifiers currently working with AWAD.

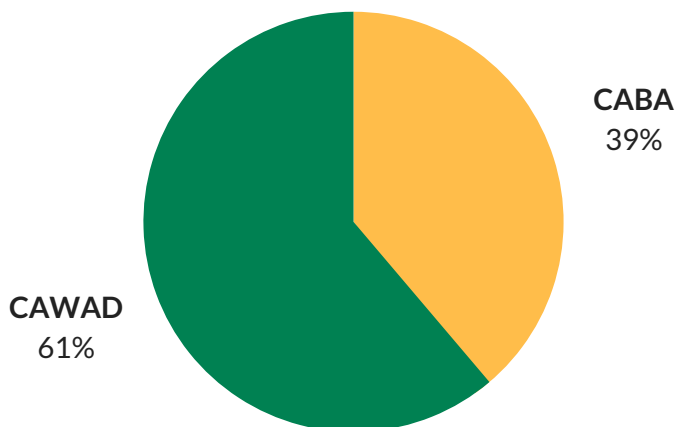


In doing so, this study may help to inform future strategies and programs that can optimize the quality of coaches', classifiers' and athletes' sport experiences.

METHOD

Participants and Sampling

The sample for this report included coaches and classifiers located in Ontario, Canada. Participants included 255 coaches (99 coaches of able-bodied athletes (CABA); 156 CAWAD) and 12 classifiers. Coaches/classifiers were recruited from a variety of sports (i.e. individual and team) and contexts (i.e., recreational and competitive) to enhance the generalizability of the results. Eligibility criteria for the participants included that they (a) were over the age of 18 and (b) currently or formerly coached/classified in Ontario. Criteria (b) was included to ensure that the findings adequately represented the target context (i.e., coaches and classifiers in Ontario).



Participants in this study included 99 (39%) CABA and 156 CAWAD (61%).

Procedure

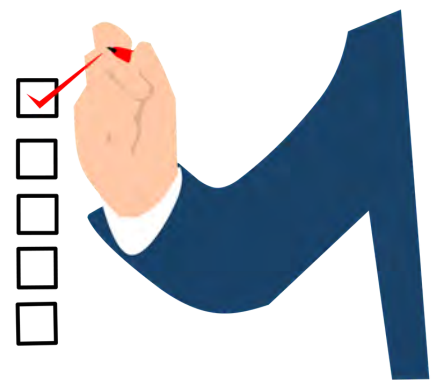
All procedures for this study were approved by the researchers' institutional ethics board before contact with participants. Participants were primarily recruited through e-mails sent to potential participants (and partner organizations) via Coaches Association of Ontario (CAO) listservs. Coaches and classifiers were provided with a letter of information and an online consent form prior to beginning the survey. Data collection occurred completely online on the survey platform Qualtrics through the Queen's University server. The survey was open from January 24th to February 21st, 2018. A consent form which contained information about the procedures, benefits and risk of participating, storage of responses, and contact information of the researchers was provided to all participants at the beginning of the survey. The online questionnaire took approximately 20 minutes to complete. At the beginning of the questionnaire, participants completed a screening survey to assess which questionnaire they would complete (see Appendix). There were three separate surveys, one for coaches who have not worked with AWAD, one for coaches who currently or formerly worked with AWAD (CAWAD) and one for classifiers.

Measures

All groups completed measures assessing their demographics, sport background, and perceptions of their capability, opportunity, and motivation to work with AWAD (see Appendix). All groups were also provided with an opportunity to offer feedback/comments through open-ended questions at the end of the survey. Current or former CAWAD completed additional measures assessing coach motivation and coach learning and development. Classifiers completed a modified version of the questionnaire with wording tailored to the classifier context. The questions were informed by both research (e.g., behaviour change theories) and by consultations and collaboration with the Ontario Parasport Collective Leadership Working Group. All survey questions are listed in the Appendix.

Demographic questionnaire

The demographic questionnaire assessed several variables regarding coaches' and classifiers' personal and sport-related characteristics: gender, age, athletic and coaching/classifier experience, and hours per week spent coaching/classifying. These variables were important to assess since they provided insight into the profiles of coaches and classifiers currently working in Ontario.



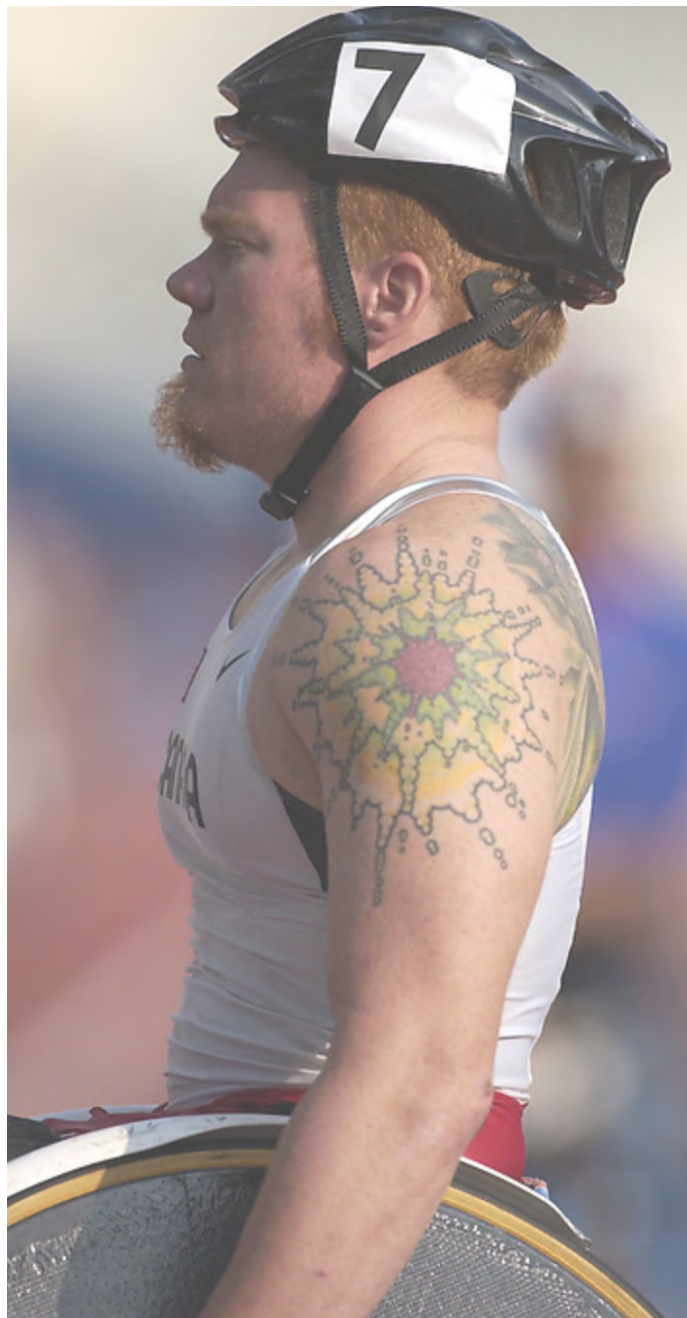
COM-B questionnaire

The three dimensions of the COM-B model (i.e., capability, opportunity, and motivation) were assessed using a questionnaire informed by Michie and colleagues (2014) recommendations for creating COM-B measures, Huijg and colleagues (2014) guidelines for developing questionnaires based on theoretical domains framework, and Azjen's (2002) suggestions for assessing the theory of planned behaviour. Specifically, 11 items (4 items for capability; 5 items for opportunity; 2 items for motivation) were answered on a 7-point-Likert-type scale anchored at the extremes with 1 (Strongly disagree) and 7 (Strongly agree). Example items included "I have the necessary knowledge to coach/classify an athlete with a disability" (capability), "I have the necessary social support from my organization to coach/classify an athlete with a disability" (opportunity), and "I want to coach/classify an athlete with a disability" (motivation). The scale was designed such that the higher scores represented higher perceptions of capability, opportunity, or motivation to coach/classify an athlete with a disability. With regards to capability, coaches also completed a 16-item scale to assess their efficacy in relation to using specific behaviours. The behaviours were informed by recent literature reviews on effective coaching behaviours for working with AWAD (Allan et al., In preparation). Each question was preceded with the statement "I can" and was rated on a 7-point-Likert-type scale anchored by 1 (Not at all confident) to 7 (Completely confident).

Coaches' and classifiers' motivation

Self-determination theory suggests that individuals can have different motives for engaging in particular behaviours or activities (e.g., coaching AWAD) and that these motives can be classified along a continuum ranging from least self-determined to most self-determined (Deci & Ryan, 2000; see Appendix D). To assess current coaches' and classifiers' motivation according to this theory, participants completed the Coach Motivation Questionnaire (CMQ; McLean, Mallett, & Newcombe, 2012). This measure was included to gain a deeper understanding of the motivations of those currently coaching/classifying AWAD. This is important since motivations that are more self-determined in nature are associated with a range of positive outcomes (Deci & Ryan, 2000). The scale consists of six subscales: Intrinsic, Integrated, Identified, Introjected, External, and Motivation, which assess the full-continuum of motivation (i.e., from internally-driven motivation to lack of motivation, see Appendix D). Please see the table below for a more complete description of the constructs assessed using this questionnaire. Each of the 22-items was preceded by the stem: “I coach/classify AWAD. . .” and rated on a 7-point-Likert-type scale, with anchors of 1 (Does not correspond at all) and 7 (Corresponds exactly). After consulting with community partners, one item was added: “I coach/classify AWAD because I have a family member/friend with a disability.”

Construct: Higher Order	Construct: Lower Order	Definition
Amotivation		Lack of motivation to coach AWAD
Extrinsic Regulation	External Regulation	Coaches AWAD because of external forces, such as tangible reward (e.g., money, recognition)
	Introjected Regulation	Coaches AWAD to avoid negative feelings (e.g., guilt) or achieve positive feelings (e.g., pride)
	Identified Regulation	Coaches AWAD because they value and understand the importance of it, but see it as instrumental for an extrinsic goal (e.g., views coaching AWAD as a stepping stone to coaching at the professional level)
	Integrated Regulation	Coaches AWAD because it aligns with their values (e.g., coaching AWAD is personally important for themselves)
Intrinsic Motivation		Coaches freely choose to coach AWAD because they find it interesting and enjoyable



Coaches' and classifiers' sources of knowledge: Learning and development pathways

Coaches and classifiers who currently or formerly worked with AWAD also completed a measure assessing their learning and development pathways. Participants were asked to rank 10 potential sources of knowledge according to their importance to their development as a coach or classifier. The potential sources of knowledge were informed by Nelson and colleagues' (2006) three distinct learning pathways (i.e., formal, nonformal, and informal), Erickson and colleagues' (2007; 2008) previous work on coach learning and development, and the recommendations of community partners and key stakeholders. Each source of knowledge was rated on a 7-point-likert-type scale anchored by 1 (Least important) and 7 (Most important).

Open-ended questions

In order to gain a deeper understanding of coaches' and classifiers' experiences, participants were provided with open-ended questions: (a) perceived challenges regarding coaching/classifying AWAD, (b) suggestions regarding resources that would help to address those challenges, and (c) feedback and recommendations for improving the experiences of coaches and classifiers.

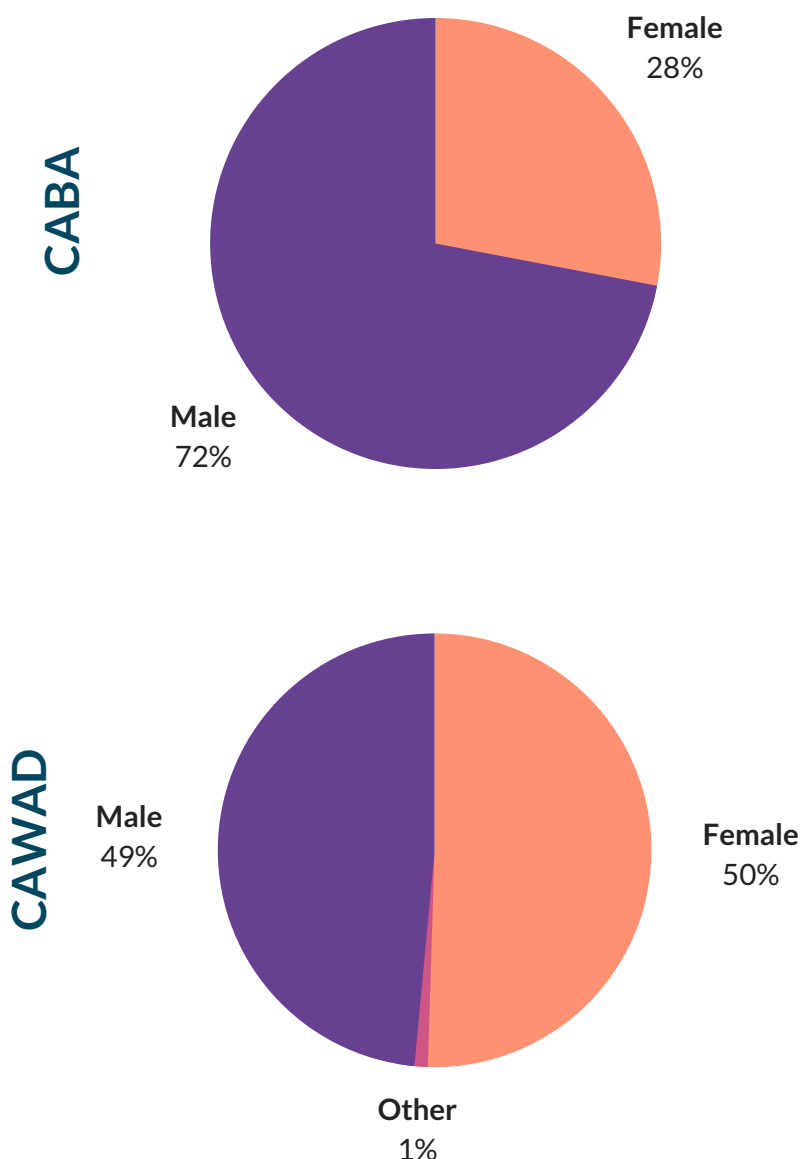
Data Analysis

After all participants were recruited, an excel file with the responses was exported. Descriptive statistics, including frequency distributions, percentages, and ranges were calculated. As appropriate, means and standard deviations were also assessed. All data was analyzed by a researcher using SAS Statistical Software, Version 9.4. The answers to the open-ended questions were analyzed using an inductive-deductive thematic analysis approach (Braun, Clarke, & Weate, 2016), in which themes were first inductively coded, and then deductively mapped onto the COM-B model (Michie et al., 2011) for questions related to challenges and onto Nelson and colleagues' (2006) learning pathways model for questions related to resources.



COACH RESULTS

Descriptive statistics of the coaches' characteristics are presented in Table 1. The majority of coaches were male (57.7%), especially for CABA (71.7% of coaches were male). Conversely, there was a more equal gender distribution among CAWAD (50.6% male; 48.7% female). The differences in gender between coaches of able-bodied athletes and CAWAD was statistically significant ($p=0.0004$). The majority of CAWAD were between 45 and 64 years of age (50.6%). CAWAD reported relatively high levels of post-secondary education, as 67 held university (43.0%) and 38 held post-graduate (24.4%) degrees.

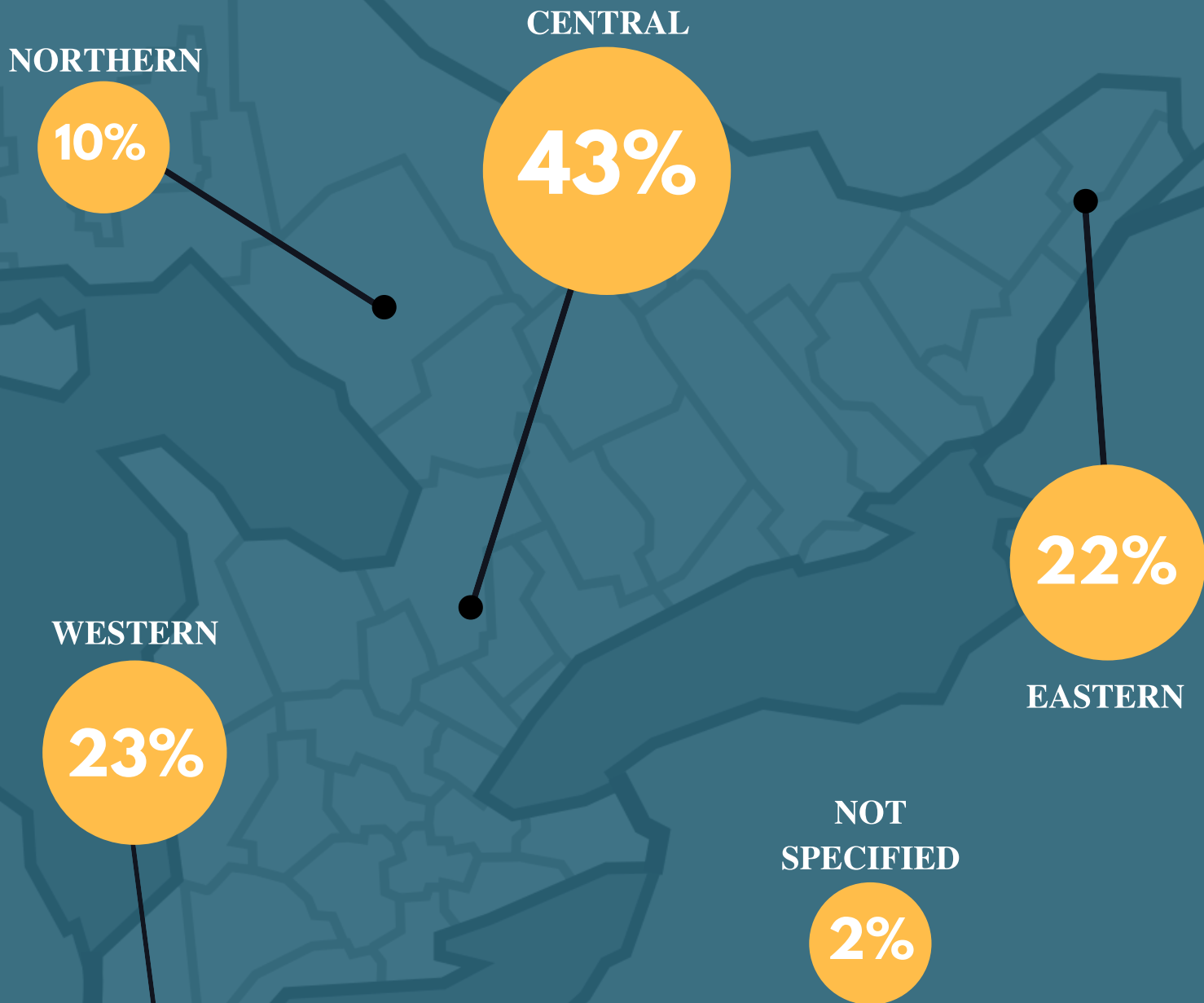


"The majority of coaches were male (57.7%), especially for CABA (71.7% of coaches were male). Conversely, there was a more equal distribution among CAWAD (50.6% male; 48.7% female)."

Table 1. General demographic information for CABA, CAWAD, and all coaches combined.

Characteristic	CABA		CAWAD		Total	
	N	%	N	%	N	%
Total Participants	99	38.8	156	61.2	255	100
Coach AWAD?						
No	61	61.6	0	0.0	61	23.9
No, but interested	38	38.4	0	0.0	38	14.9
Yes	0	0.0	156	100	156	61.2
Age						
18 to 24	7	6.1	8	5.1	15	5.9
25 to 34	9	9.1	29	18.6	38	14.9
35 to 44	19	19.2	26	16.7	45	17.7
45 to 54	30	30.3	44	28.2	74	29.0
55 to 64	19	19.2	35	22.4	54	21.2
65+	15	15.2	14	9.0	29	11.4
Gender						
Female	28	28.3	79	50.6	107	42.0
Male	71	71.7	76	48.7	147	57.7
Other	0	0.0	1	0.6	1	0.4
Education						
High school	9	9.1	14	9.0	23	9.0
College	25	25.3	36	23.1	61	23.9
University	39	39.4	67	43.0	106	41.6
Post graduate	24	24.2	38	24.4	62	24.3
Do not wish to specify	2	2.0	1	0.6	3	1.2
Region in Ontario						
Northern	11	11.1	15	9.6	26	10.2
Eastern	28	28.3	28	18.0	56	22.0
Central	38	38.4	72	46.2	110	43.1
Western	22	22.2	37	23.7	59	23.1
Do not wish to specify	0	0.0	4	2.6	4	1.6
Household income						
0-49,999	13	13.1	26	16.7	39	15.3
50,000-74,999	13	13.1	25	16.0	38	14.9
75,000-99,999	20	20.2	29	18.6	49	19.2
100,000+	36	36.4	57	36.5	93	36.5
Do not wish to specify	17	17.2	19	12.2	36	14.1

REGION IN ONTARIO



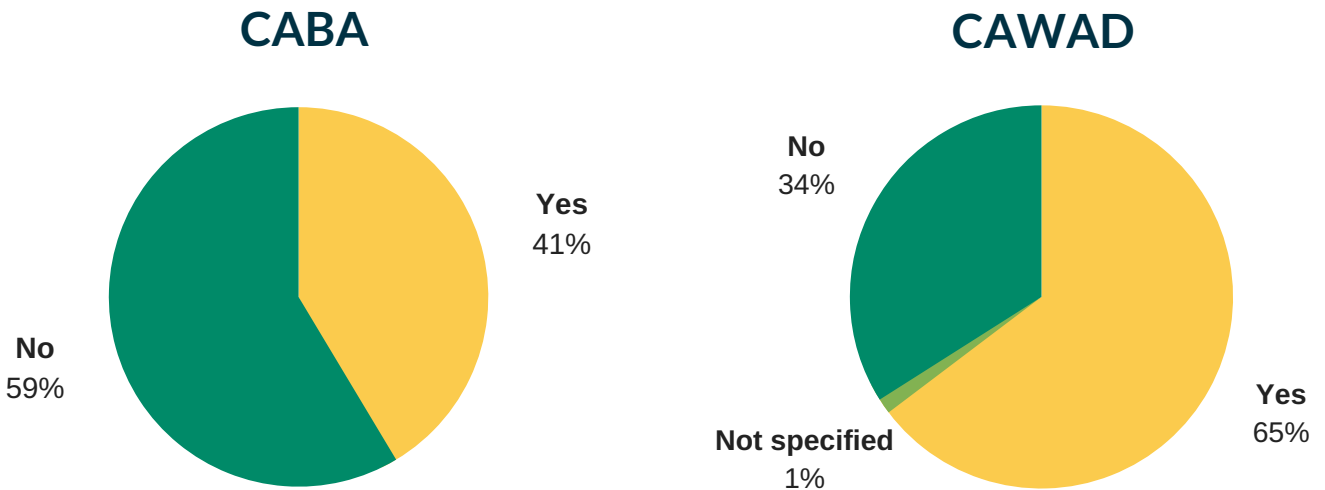
The majority of coaches work in the Central Ontario region.

Disability-Specific Characteristics

Approximately 5% of CABA and nearly 10% of CAWAD reported having a disability, such as having a prosthetic, being visually impaired, having a hearing impairment, or being an amputee. Numerous coaches reported having a friend or family member with a disability (41.4% of coaches and 64.7% of CAWAD). See Table 2.

Table 2. Disability-specific characteristics for CABA, CAWAD, and all coaches combined.

Characteristic	CABA		CAWAD		Total	
	N	%	N	%	N	%
Physical disability						
Yes	5	5.1	15	9.6	20	7.8
No	94	95.0	139	89.1	233	91.4
Do not wish to specify	0	0.0	2	1.3	2	0.8
Friend or family with a physical disability						
Yes	41	41.4	101	64.7	142	55.7
No	58	58.6	53	34.0	111	43.5
Do not wish to specify	0	0.0	2	1.3	2	0.8



CAWAD more commonly reported having a friend or family with a physical disability compared to CABA.

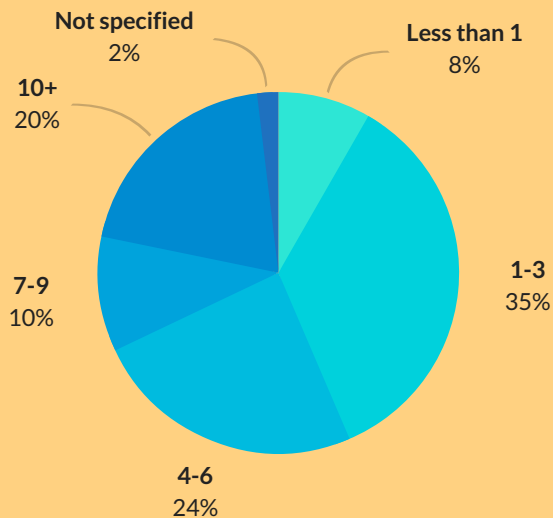
Sport/Coaching Background

An overwhelming majority of the coaches were former or current athletes (235, 92.2%). Coaches represented a wide array of individual and team sports (see Figure 1). The most commonly coached sports were soccer (36), swimming (27), basketball (26), ice hockey (26), curling (24), volleyball (18) and baseball (18).

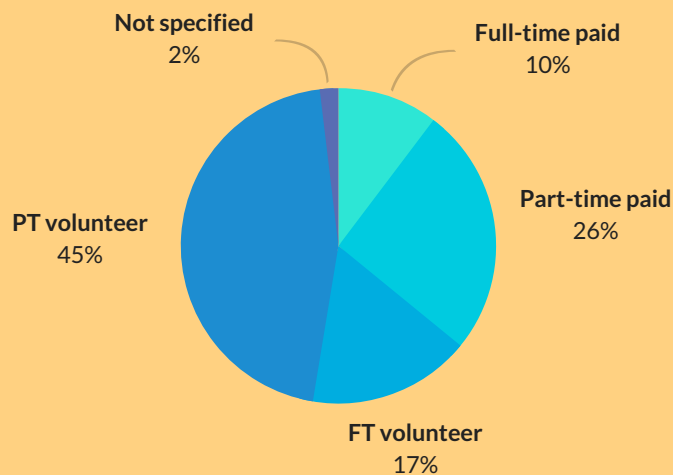
Coaches primarily coached one sport (73.5% CABA and 70.32% CAWAD) and characterized their positions as part-time, volunteer coaches (43.4% coaches and 45.5% CAWAD). Coaches worked with a diverse range of athletes, across genders, ages, and competitive levels. For example, numerous coaches reported coaching athletes from two or more different competitive levels. For CAWAD, over half of the coaches had less than seven years of experiences specifically working with AWAD, 55 had worked between 1-3 years (35.3%) and 38 had worked between 4-6 years (24.4%).

With regards to coaching certifications and qualifications, 22 (22.2%) CABA and 54 CAWAD (34.6%) reported being both NCCP trained and certified. Eighteen coaches (18.2%) and 69 (44.2%) CAWAD reported that they had completed the recently launched CAWAD eLearning module. The difference in completion rate for the module between coaches of able-bodied athletes and CAWAD was statistically significant ($p < 0.0001$). See Table 3 for more information.

CAWAD sport background



Years coached AWAD



Coach position

Number of coaches

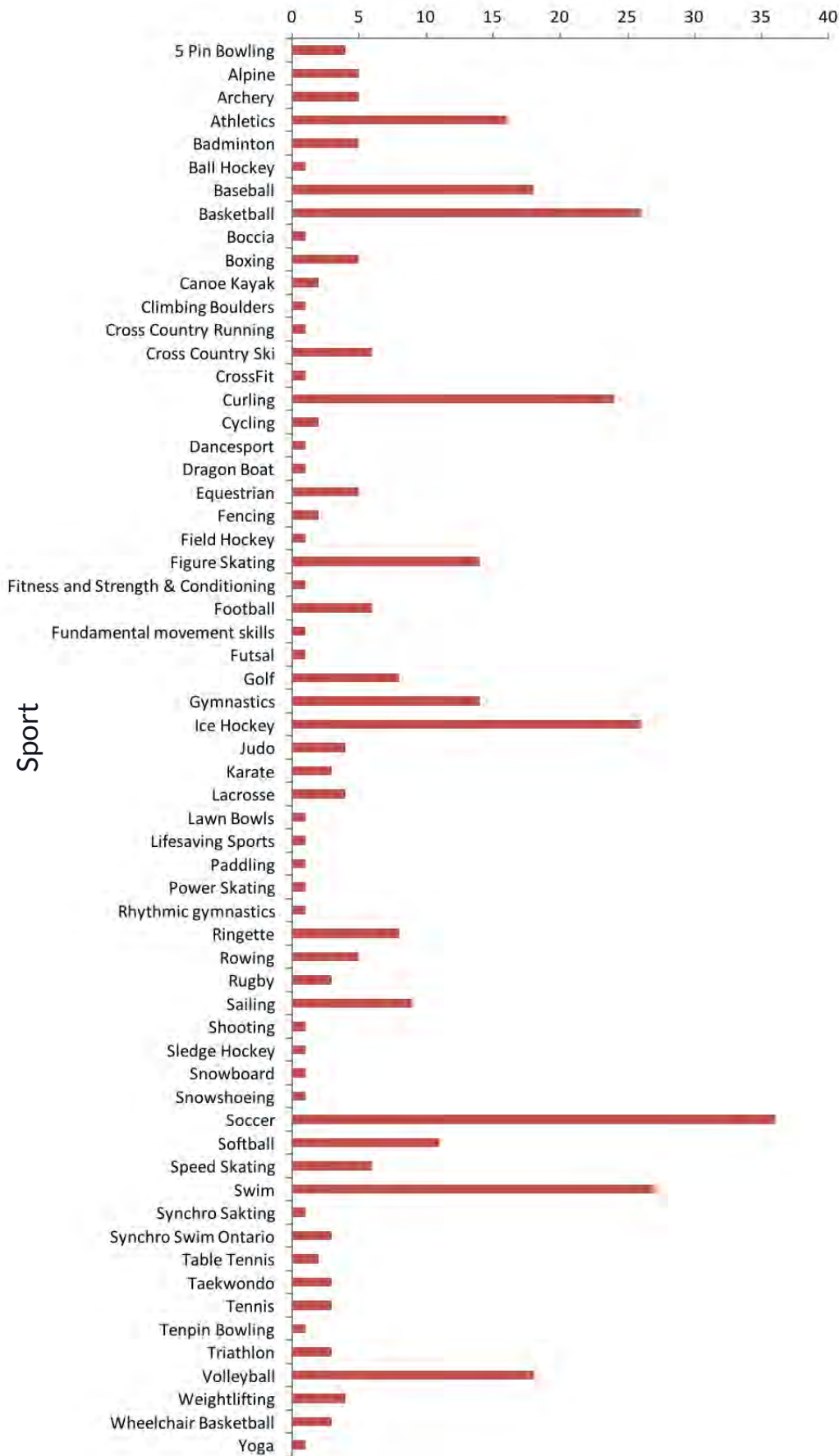


Figure 1. The number of coaches (CABA and CAWAD) by sport type. Please note that some coaches reported coaching multiple sports. The most common sports coached are soccer, swim, basketball, ice hockey, curling, volleyball and baseball.

Table 3. Sport/coaching background characteristics for CABA, CAWAD, and all coaches combined.

Characteristic	CABA		CAWAD		Total	
	N	%	N	%	N	%
Have been or currently an athlete						
Yes	93	93.9	142	91.0	235	92.2
No	6	6.1	14	9.0	20	7.8
Years coaching						
Less than 1	2	2.0	1	0.6	3	1.2
1 to 3	9	9.1	10	6.4	19	7.5
4 to 6	17	17.2	13	8.3	30	11.8
7 to 9	13	13.1	21	13.5	34	13.3
10+	58	58.6	110	70.5	168	65.9
Do not wish to specify	0	0.0	1	0.6	1	0.4
Number of sports coached						
1	72	73.47	109	70.32	181	71.54
2 to 3	22	22.45	38	24.52	60	23.72
4+	4	4.08	8	5.16	12	4.74
Coach position						
Full-time paid coach	5	5.1	16	10.3	21	8.24
Part-time paid coach	27	27.3	40	25.6	67	26.3
Full-time volunteer coach	21	21.2	26	16.7	47	18.4
Part-time volunteer coach	43	43.4	71	45.5	114	44.7
Do not wish to specify	3	3.0	3	1.9	6	2.4
Hours per week coaching						
1 to 3	14	14.1	28	18.0	42	16.5
4 to 9	38	38.4	47	30.1	85	33.3
10 to 19	31	31.3	43	27.6	74	29.0
20 to 29	9	9.1	21	13.5	30	11.8
30 to 39	2	2.0	5	3.2	7	2.8
40+	4	4.0	10	6.4	14	5.5
Do not wish to specify	1	1.0	2	1.3	3	1.2
Gender coached						
Male	19	19.2	10	6.4	29	11.4
Female	33	33.3	17	10.9	50	19.6
Both	44	44.4	124	79.5	168	65.9
Other/ Do not wish to specify	3	3.0	5	3.2	8	3.1
Age coached						
0 to 17	59	59.6	45	28.85	104	40.78
18 to 54	7	7.07	17	10.90	24	9.41
55+	1	1.01	0	0.00	1	0.39
Multiple ages	31	31.31	93	59.62	124	48.63
Do not wish to specify	1	1.01	1	0.64	2	0.78

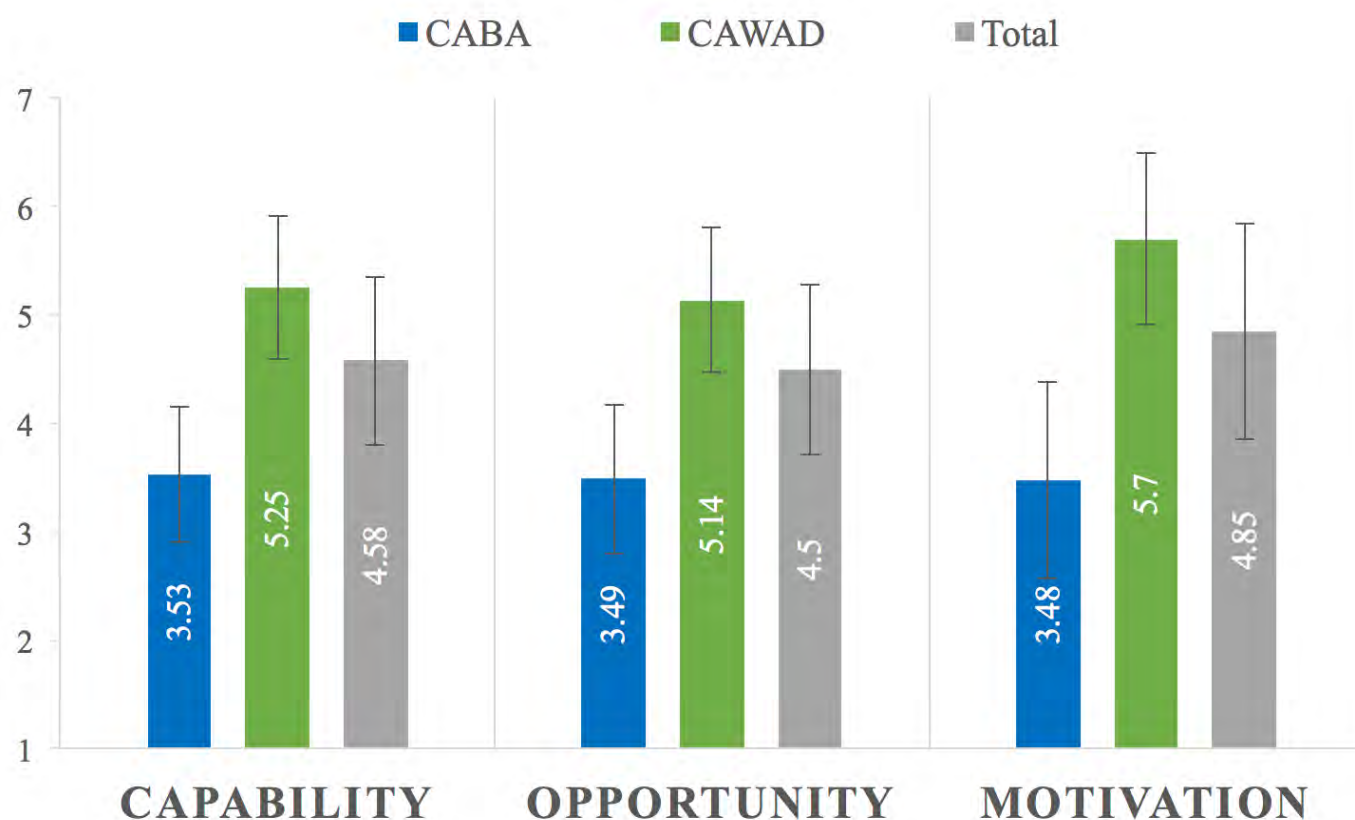
Characteristic		CABA	CAWAD	Total			
Competitive level coached							
	Grassroots/Community	12	12.12	21	13.46	33	12.94
	Developmental/Competitive	43	43.43	29	18.59	72	28.24
	High Performance	10	10.10	9	5.77	19	7.45
	Grassroots/Community, Developmental/Competitive	20	20.20	45	28.85	65	25.49
	Grassroots/Community, High Performance	0	0.00	1	0.64	1	0.39
	Grassroots/Community, Developmental/Competitive, High Performance	3	3.03	38	24.36	41	16.08
	Do not wish to specify	1	1.01	1	0.64	2	0.78
Coaching certifications/ qualifications							
	NCCP Trained	21	21.21	17	10.90	38	14.90
	NCCP Certified	44	44.44	60	38.46	104	40.78
	College/University Degree	1	1.01	3	1.92	4	1.57
	NCCP Trained, NCCP Certified	17	17.17	33	21.15	50	19.61
	NCCP Trained, College/University Degree	1	1.01	3	1.92	4	1.57
	NCCP Certified, College/University Degree	9	9.09	14	8.97	23	9.02
	NCCP Trained, NCCP Certified, College/University Degree	5	5.05	21	13.46	26	10.20
	Other	8	7.48	16	9.30	24	8.60
	Do not wish to specify	1	1.01	5	3.21	6	2.35
Highest level of competition reached							
	High school	4	4.40	6	4.38	10	4.39
	University	25	27.47	14	10.22	39	17.11
	Masters	1	1.10	3	2.19	4	1.75
	Recreational	7	7.69	8	5.84	15	6.58
	Regional	12	13.19	22	16.06	34	14.91
	Provincial	20	21.98	35	25.55	55	24.12
Completed CAWAD eLearning module							
	Yes	18	18.2	69	44.2	87	34.1
	No	80	80.8	84	53.9	164	64.3
	Do not wish to specify	1	1.0	3	1.9	4	1.6
Years coached AWAD							
	Less than 1			13	8.3		
	1 to 3			55	35.3		
	4 to 6			38	24.4		
	7 to 9			16	10.3		
	10+			31	19.9		
	Do not wish to specify			3	1.9		

Coaches' Thoughts, Beliefs, and Behaviours

COM-B Questionnaire

Table 4 provides a summary of coaches' perceptions of their capability, opportunity, and motivation to coach AWAD. Overall, coaches reported similar levels of perceived capability, opportunity, and motivation. CAWAD reported significantly higher levels of perceived capability, opportunity, and motivation compared to CABA.

These differences between CABA and CAWAD were statistically significant ($p < 0.0001$) for all three dimensions. Interestingly, coaches of able-bodied reported that the greatest perceived barriers to coaching AWAD included insufficient (a) training, (b) guidelines, and (c) equipment and facilities. In general, CABA reported low levels of intentions to coach an AWAD within the next two years.



Coaching Efficacy

In general, CAWAD reported higher levels of perceived efficacy to perform evidence-informed effective coaching behaviours. For both groups, coaches reported the highest levels of confidence to model pro-social behaviours and values, and the lowest levels of confidence to prepare AWAD for competitions See Table 5.

Table 4. Thoughts and beliefs questions about working with AWAD for CABA, CAWAD, and all coaches combined.

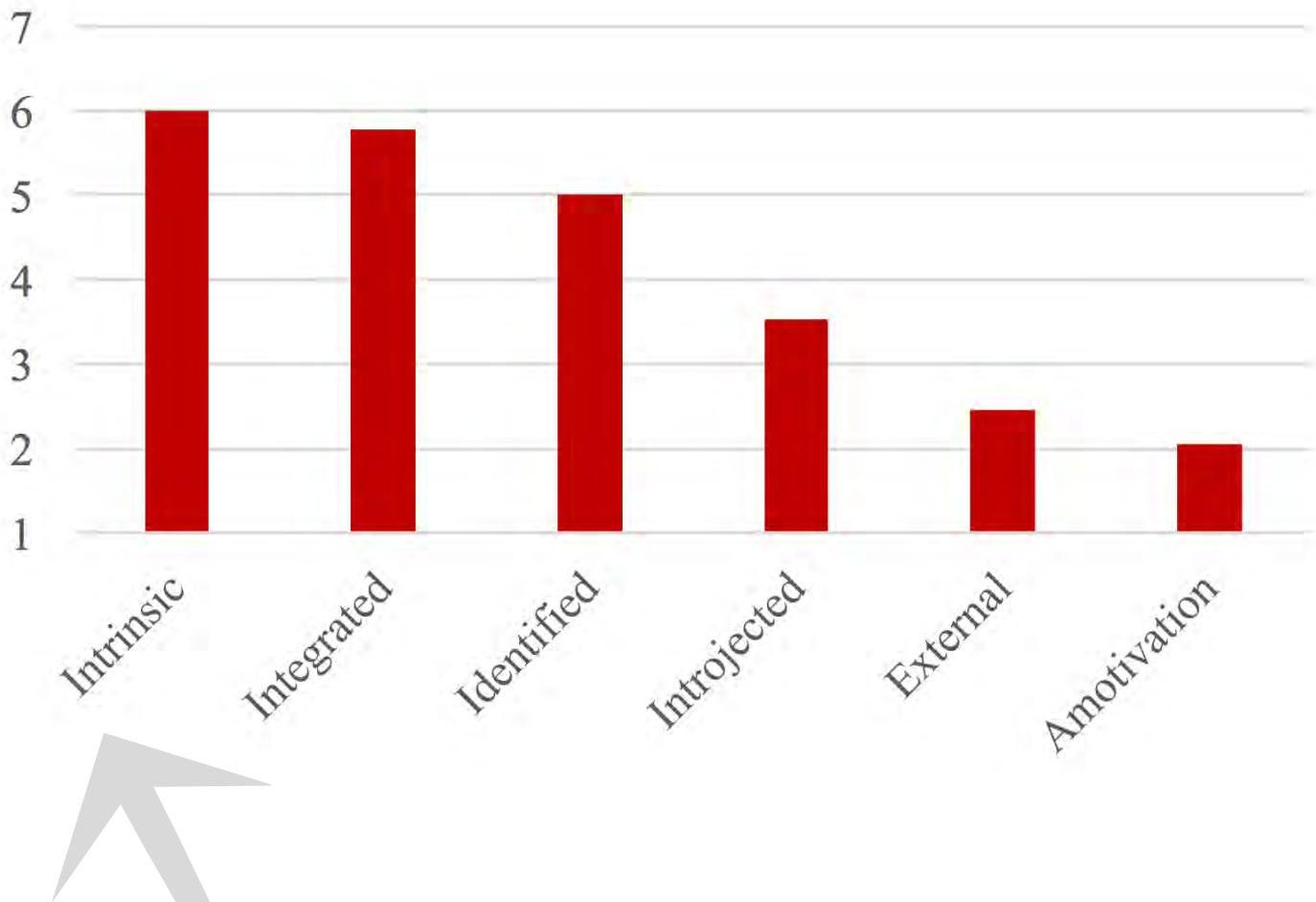
Question	CABA		CAWAD		Total	
	Mean	SD	Mean	SD	Mean	SD
Part C. Coaching AWAD (1=strongly disagree, 7=strongly agree)						
I have the necessary knowledge to coach an athlete with a disability.	3.35	1.59	5.22	1.53	4.49	1.80
I have the necessary technical/tactical skills to coach an athlete with a disability.	3.46	1.63	5.30	1.52	4.59	1.80
I have the necessary interpersonal skills to coach an athlete with a disability.	5.23	1.56	6.09	1.20	5.75	1.41
I have been trained to coach an athlete with a disability.	2.01	1.63	4.36	2.10	3.45	2.25
Capability	3.53	1.26	5.25	1.32	4.58	1.54
I have the necessary time to coach an athlete with a disability.	4.04	1.77	5.32	1.64	4.82	1.80
I have the necessary guidelines to coach an athlete with a disability.	2.66	1.76	4.86	1.79	4.00	2.07
I have the necessary equipment and facilities to coach an athlete with a disability.	2.52	1.74	4.65	1.78	3.82	2.05
I have the necessary social support from my organization to coach an athlete with a disability.	3.84	1.95	5.34	1.79	4.76	1.99
I have the necessary social support from my peers to coach an athlete with a disability.	4.35	1.79	5.66	1.63	5.15	1.81
Opportunity	3.49	1.38	5.14	1.35	4.50	1.58
I intend to coach an athlete with a disability in the next 2 years.	2.78	1.83	5.50	1.94	4.46	2.31
I want to coach an athlete with a disability.	4.14	1.97	5.92	1.44	5.24	1.87
Motivation	3.48	1.82	5.70	1.58	4.85	1.99

Table 5. Coach efficacy questions about working with AWAD for CABA, CAWAD, and all coaches combined.

Question	CABA		CAWAD		Total	
	Mean	SD	Mean	SD	Mean	SD
Part C. I can... (1=not at all confident, 7=completely confident)						
Help athletes with disabilities learn the techniques and tactical strategies of my sport.	4.51	1.62	5.82	1.24	5.31	1.54
Use inclusion strategies to ensure that athletes with disabilities can participate in my program.	4.20	1.78	6.05	1.13	5.33	1.68
Design practices to develop the technical skills of athletes with disabilities.	4.00	1.72	5.77	1.20	5.08	1.67
Prepare athletes with disabilities for competitions.	3.82	1.82	5.54	1.49	4.87	1.83
Adapt my coaching behaviours to suit a diverse range of abilities and needs.	4.98	1.74	5.98	1.16	5.59	1.49
Work collaboratively with athletes with disabilities.	5.07	1.60	6.24	1.01	5.79	1.39
Recognize the accomplishments of athletes with disabilities.	5.73	1.35	6.61	0.79	6.27	1.13
Discuss appropriate goals and expectations with athletes with disabilities.	5.11	1.66	6.16	1.08	5.76	1.42
Model pro-social behaviours and values (e.g., honesty, respect).	6.14	1.28	6.65	0.76	6.45	1.02
Share decision making and leadership responsibilities with athletes with disabilities.	5.71	1.54	6.33	0.91	6.09	1.23
Creatively solve problems.	5.62	1.57	6.36	0.92	6.07	1.26
Develop personal relationships with athletes with disabilities.	5.97	1.27	6.46	0.89	6.27	1.08
Support athletes' development in and out of sport (e.g., school, family).	5.75	1.47	5.92	1.27	5.85	1.35
Build athletes' self-confidence.	6.03	1.08	6.43	0.85	6.27	0.96
Facilitate opportunities for team-building and peer-relationships.	5.72	1.32	6.14	1.06	5.98	1.18
Create a daily training environment that improves fitness, strength, and conditioning.	4.94	1.73	5.66	1.46	5.38	1.61

Coach Motivation (CAWAD only)

Coaches scored highest on intrinsic motivation, appearing to be primarily motivated by self-determined forces. More specifically, mean scores on those subscales representing self-determined motivation (i.e., intrinsic, integrated, and identified) were above the midpoint on each scale. Conversely, mean scores for the three non-self-determined motivation (i.e., introjected, external, amotivation) subscales were lower. CAWAD did not report feeling motivated to coach because they have a family member or friend with a disability.



Coaches scored highest on intrinsic motivation, appearing to be primarily motivated by self-determined forces.

Coaches' Knowledge: Learning and development pathways

This section of the questionnaire investigated CAWADs' perceptions of the most important sources of knowledge during their learning and development. Table 7 summarizes the results pertaining to the perceived importance of the ten distinct sources of knowledge. Overall, coaches rated informal sources of knowledge (i.e., interacting with other coaches and learning by doing as the most important, in comparison to formal sources of knowledge (i.e., general NCCP training and sport-specific NCCP training) and nonformal sources of knowledge (i.e., other in-person and online courses. Overall, college/university degrees were rated as the least important source of knowledge with regards to their coach development.

CAWAD were also asked to identify their perceptions of the ideal sources of knowledge for learning and development. Sixty-seven participants identified formal sources of knowledge, primarily general and sport-specific NCCP courses, to be an ideal source of coaching knowledge. Sixty-three participants identified informal sources to be an ideal source of coaching knowledge. More specifically, coaches emphasized how fellow coaches can be a preferable source of knowledge, including interacting with other coaches (n = 24) and mentoring (n = 14). Coaches also highlighted the value of experiential learning and building strong social networks with coaches, sport administrators, parents, and athletes.

Table 7. CAWAD's Sources of Knowledge

Part E. Coach Learning (1=least important, 7=most important)	Mean	SD
General NCCP Training (e.g., Multi-sport modules, nutrition).	5.01	1.59
NCCP Training in your Sport (e.g. Sport-specific modules, Technical/Tactical).	5.57	1.56
Other In-person coaching, courses (e.g., HIGH FIVE).	4.95	1.70
Other Online coaching courses (e.g., Respect in Sport, Sport for Life eModules).	4.97	1.72
Coaching materials (e.g., websites, blogs, newsletters, resources).	5.38	1.54
Learning by doing (e.g., trial and error).	6.01	1.21
Observing other coaches (e.g., watching other coaches live or on television).	5.80	1.36
Interacting with other coaches (e.g., seeking advice from other coaches, mentorship).	6.28	1.04
College/University degree.	3.38	2.09
Individual planning (e.g., time spent alone reflecting/developing strategies).	5.35	1.49

Open-Ended Questions

The themes identified from the open-ended questions on potential challenges were situated within the COM-B model (Michie et al., 2011), whereas the themes emerging from the open-ended question on resources were situated within the Nelson and colleagues' (2006) learning pathways. The following sections outline these areas in more detail and provide selected quotes to further illuminate the theme and to enhance the clarity of the results.

Perceived challenges

CABA

CABA were asked to reflect on the aspects of coaching AWAD that they believed would be most challenging.

Capability

Overall, some of the most frequently mentioned concerns related to coaches' perceptions of their capability to (a) make appropriate technical and tactical adaptations, (b) integrate both able-bodied and AWAD in the same sport program, and (c) promote positive developmental outcomes, such as confidence. Coaches also discussed several aspects of their capabilities in relation to developing interpersonal relationships, including using appropriate communication techniques and language, adopting individualized and person-centered approaches, and building supportive peer, parent, and community relationships. Challenges regarding the adoption of individualized and person-centered approaches were illustrated in the quote: "Discovering their real capabilities and being able to adjust to their needs. Especially if this is in an environment where the rest of the athletes do not have the same challenges."

"understanding their [AWAD] specific needs, being supportive, but not overstepping their autonomy, and creating appropriate training programs."

Lastly, several coaches discussed potential challenges in relation to developing disability-specific knowledge, such as developing a better understanding of athletes' capabilities and methods for promoting inclusion and safety. Some of the issues related to capability are illustrated in the following statement regarding perceived challenges: "understanding their [AWAD] specific needs, being supportive, but not overstepping their autonomy, and creating appropriate training programs."

Opportunity

Numerous coaches highlighted perceived challenges that related to the construct of opportunity. Coaches reported key challenges regarding physical opportunity, including (a) equipment, (b) facilities, (c) time, and (d) funding. Coaches believed that addressing these elements would enable coaches to better facilitate positive sport experiences for AWAD. An example of a challenge related to physical opportunity was highlighted in the following extract: “Not having access to the equipment that would be necessary to them being able to fully participate and or train.” Coaches also reported some issues regarding social opportunities and norms, including potential stereotypes regarding working with AWAD and collective norms across different stakeholders (e.g., athletes, coaches, parents, sport organizations).

Motivation

In general, coaches discussed fewer challenges in relation to the construct of motivation. Nonetheless, coaches highlighted some issues related to reflective motivation with regards to how they should plan to promote positive sport experiences for AWAD. Some participants also expressed concerns regarding automatic motivation, including some of the emotions that could be potentially experienced when coaching AWAD (e.g., uncertainty, frustration).

“Not having access to the equipment that would be necessary to them being able to fully participate and or train.”

CAWAD

Capability

Similar to the coaches of able-bodied athletes, CAWAD consistently highlighted challenges they had experienced with regards to their capability to (a) make appropriate technical and tactical adaptations, (b) integrate both able-bodied and AWAD in the same sport program, and (c) promote positive developmental outcomes, such as confidence. Interestingly, CAWAD placed a significant emphasis on difficulties they experienced in promoting positive outcomes, including athlete attitudes, motivation, and continued engagement. CAWAD also highlighted a more diverse range of capability-related issues, including having the necessary knowledge and skills to recruit athletes and appropriately prepare athletes for competitions.



In line with CABA, one of the more dominant themes related to coaches' interpersonal knowledge and behaviours, such as employing individualized and person-centered approaches, using appropriate language, and building strong connections with athletes' larger social networks (e.g., peers in and out of sport, parents/caregivers, support workers, and medical professionals).

Opportunity

CAWAD highlighted that they experienced numerous challenges that fall under the umbrella of physical and social opportunity. In line with coaches of able-bodied athletes, CAWAD consistently discussed issues related to (a) equipment, (b) facilities, (c) time, and (d) funding. CAWAD also commented on unique issues such as insufficient levels of programming, community outreach, and organizational support. Additionally, numerous CAWAD reported issues regarding social norms in relation to attitudes and stereotypes of AWAD. The significance of these stereotypes was underscored by the fact that some of the coaches discussed how these stereotypes may be detrimental to the quality of athletes' sport experiences. One coach expanded upon this in the following quote: :
“Social perceptions are often skewed by misinformation or stereotyping. Para athletes are not made of sugar, they don't melt if they get wet! Most limitations are projected upon them from a misinformed society and not from themselves.” These findings highlight the importance of both physical and social opportunity-related challenges.

Motivation

Consistent with coaches of able-bodied athletes, fewer CAWAD discussed challenges in relation to motivation. Nonetheless, some coaches reported that they experienced some challenges with regards to planning to promote positive developmental outcomes.

Overall

Collectively, participants provided valuable insight into a diverse array of potential challenges that coaches may face when working with AWAD. It is interesting to note, however, that several coaches noted that several of these challenges may be relevant for all sport contexts (e.g., individualized and person-centred approaches and building social relationships) This sentiment is captured by one coach's response to perceived challenges: “Ironically - the same issues arise in generic sport as in coaching athletes with a disability! Parents and athletes with unreasonable expectations and demands.” It may thus be worthwhile to further examine how some of these challenges are experienced across different sport contexts.

“Ironically - the same issues arise in generic sport as in coaching athletes with a disability! Parents and athletes with unreasonable expectations and demands.”

It is also important to acknowledge that one of the most dominant themes that emerged was that coaches perceived that they lacked the necessary evidence-informed education, training, and guidelines to effectively foster positive development for AWAD through sport. As such, it is crucial for researchers and practitioners to gain a deeper understanding of the resources that may help to address these challenges.

Resources

The vast majority of participants suggested that formal sources of knowledge would be eminently valuable in addressing these challenges, including general and sport-specific NCCP courses directly targeting CAWAD. As one coach highlighted: “I believe incorporating information on athletes with disability in all sport programs would be a huge asset to [Coach Development Programs] across the country. More knowledge = better informed coaches = enriched sport environments.” Participants also advocated for several different formats for such courses, including both in-person and online modes of delivery. Further, they highlighted that the addition of visual representations and modelling of coaching behaviours (e.g., demonstrations, videos) may help to enhance the quality of such education and training.



“I believe incorporating information on athletes with disability in all sport programs would be a huge asset to [Coach Development Programs] across the country. More knowledge = better informed coaches = enriched sport environments.”

Another dominant theme that emerged related to more informal sources of knowledge with regards to having opportunities to work with and learn from other coaches (e.g., mentorship programs, communities of practice, interacting with/observing others). For example, one coach commented that a helpful resource would be: “Someone with experience in the particular area that the athlete has challenges with. Someone to discuss ideas and problems solve. What are appropriate expectations, how to include the athlete and to make them feel like part of the team.” Lastly, coaches discussed the importance of learning by doing. This is captured in the following extract: “Learn by doing! You just gotta go do it. Don't be afraid to make mistakes.”

In a similar vein, coaches expressed a desire to enhance the breadth and quality of their social networks. For instance, coaches discussed the benefits of having opportunities to build stronger connections with parents, volunteers, the medical community, and the general public. Coaches provided numerous suggestions for building these social networks, including media campaigns, courses and workshops, and online communities. Coaches also discussed the potential benefits of a centralized resource where they could learn more information about upcoming events, available programs, as well as access evidence-informed resources. Overall, coaches highlighted that a wide variety of resources may be necessary to improve the experiences of CAWAD. This is highlighted in the following statement on desired resources: “Better training in how to work with athletes with disabilities, and support for how to establish programs within existing clubs.

Also access to, and potentially funding support for, the necessary equipment and facilities.” This quote illustrates how resources targeting capability, opportunity, and motivation are crucial for addressing existing challenges for coaches.

In general, coaches highlighted that although coaching AWAD can be challenging and that further resources may be needed, it can be an extremely rewarding experience. As one coach explained: “Coaching people with disabilities is a very rewarding experience. . . It is all about inclusion and letting everyone have the same opportunities. Everyone wins because its all about having fun at our level.” Coaches also emphasized the importance of encouraging others to get involved and reducing the stigma surrounding CAWAD. This is illustrated in the following statement: “Stop making coaching athletes with a disability seem like such a different, or unique thing. Coaching is coaching as each athlete, regardless of ability, will have varying strengths and weaknesses.”

“Coaching people with disabilities is a very rewarding experience. . . It is all about inclusion and letting everyone have the same opportunities. Everyone wins because its all about having fun at our level.”

CLASSIFIER RESULTS

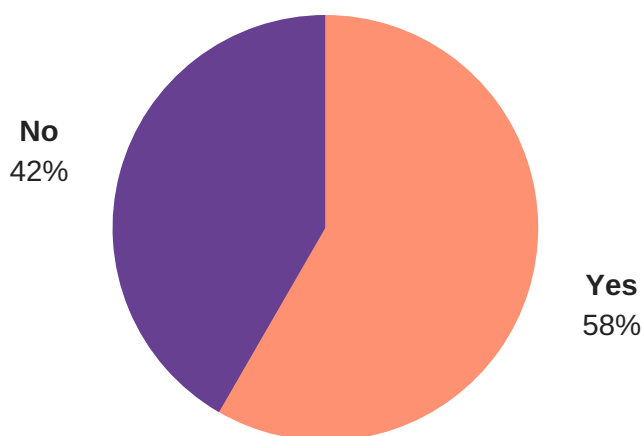
In examining the results of this study, it is important to note that there was a much higher response rate for coaches in comparison to the classifiers. As such, the results in this section will highlight some preliminary results for the classifier participants.

Classifiers' Characteristics

Table 8 provides a summary of the general demographics for classifiers who participated in the survey. Classifiers were primarily between the ages 35-64 (n=10, 83.3%). Only one classifier was between 25-34 years of age and one classifier was over 65 years of age. Nearly all of the classifiers were female (n =11, 91.7%). All classifiers reported having post-secondary education, with six having university degrees and six having post-graduate level degrees. Classifiers were primarily located in the central region of Ontario (n=6), followed by the eastern (n =3) and western (n=3) regions. No classifiers reported residing in the northern region. With regards to the disability-specific characteristics, none of the classifiers reported having a disability themselves. However, seven of the classifiers (58.3%) reported having a friend or family member with a physical disability and ten of the classifiers reported working with individuals with disabilities in other contexts (see Table 9)

Classifiers' Backgrounds

Classifiers had a range of years of experience, with five (41.7%) of the classifiers having over ten years of experience. Participants also represented a range of different levels of classifiers, from provincial to international. All of the classifiers worked with physical impairments, with only one classifier also working with intellectual impairments. They classified both male and female athletes from a variety of sports, ages, and competitive levels. All classifiers characterized their position as part-time volunteers, who classified between 4 and 40+ athletes per year. Half of the classifiers (n= 6) reported classifying between 10-19 athletes per year (see Table 10).



Seven of the classifiers (58.3%) reported having a friend or family member with a physical disability.

Table 8. General demographic information for classifiers.

Characteristic		N	%
Total participants		12	100
Age			
	18 to 24	0	0.00
	25 to 34	1	8.33
	35 to 44	2	16.67
	45 to 54	5	41.67
	55 to 64	3	25.00
	65+	1	8.33
Gender			
	Male	1	8.33
	Female	11	91.67
Education			
	High school	0	0.00
	College	0	0.00
	University	6	50.00
	Post Graduate	6	50.00
Household income			
	75,000-99,999	3	25.00
	100,000+	7	58.33
	Do not wish to specify	2	16.67
Region in Ontario			
	Northern	0	0.00
	Eastern	3	25.00
	Central	6	50.00
	Western	3	25.00

Table 9. Physical disability characteristics for classifiers.

Characteristic		N	%
Physical disability			
	Yes	0	0.00
	No	12	100.00
Friend or family with a physical disability			
	Yes	7	58.33
	No	5	41.67
Work with individuals with physical disabilities in other contexts			
	Yes	10	83.33
	No	2	16.67

Table 10. Sport background characteristics for classifiers.

Characteristic	N	%
Years been a classifier		
Less than 1	1	8.33
1 to 3	1	8.33
4 to 6	2	16.67
7 to 9	3	25.00
10+	5	41.67
Level of classifier		
Provincial	1	8.33
National	3	25.00
International	4	33.33
Provincial, National	1	8.33
National, International	1	8.33
Provincial, National, International	2	16.67
Type of classifier		
Physical Impairment	11	91.67
Visual Impairment	0	0.00
Intellectual Impairment	0	0.00
Physical and Intellectual Impairment	1	8.33
Sports classified		
Athletics	2	16.67
Athletics, Boccia	4	33.33
Boccia	1	8.33
Canoe/Kayak	1	8.33
Equestrian	1	8.33
Wheelchair Rugby	1	8.33
Athletics, Swimming, Wheelchair Basketball, Wheelchair Curling, Wheelchair Rugby, Wheelchair Tennis	1	8.33
Archery, Athletics, Cycling, Football 5-a-side, Football 7-a-side, Powerlifting, Rowing, Swimming, Wheelchair Basketball, Wheelchair Rugby	1	8.33
Current position		
Full-time paid	0	0.00
Part-time paid	0	0.00
Full-time volunteer	0	0.00
Part-time volunteer	12	100.00
Number of athletes classified per year		
1 to 3	0	0.00
4 to 9	3	25.00
10 to 19	6	50.00
20 to 29	1	8.33
30 to 39	0	0.00
40+	2	16.67
Gender classified		
Male	0	0.00
Female	0	0.00
Both	12	100.00
Ages classified		
0 to 17	0	0.00
18 to 54	3	25.00
55+	0	0.00
Multiple ages	9	75.00
Level of athletes classified		
Provincial	1	8.33
National	1	8.33
International	0	0.00
Provincial, National	2	16.67
National, International	2	16.67
Provincial, National, International	6	50.00
Location obtained certifications		
In Canada	4	33.33
Outside Canada	1	8.33
Both	7	58.33

Classifiers' Thoughts, Beliefs, and Behaviours

In assessing the COM-B constructs, classifiers reported high levels of perceived capability, opportunity, and motivation to classify AWAD (see Table 11). The highest rated item related to capability: "I have been trained to classify an athlete." Conversely, the lowest rated item related to opportunity: "I have the necessary time to classify an athlete."



Classifiers' Motivation

With regards to the additional measure of motivation, classifiers reported high levels of intrinsic motivation and lower levels of the less self-determined forms of motivation, introjected, external, and amotivation. Classifiers reported low levels of motivation in relation to having a family member or friend with a disability. See Table 13 for results.



Classifiers' Knowledge: Learning and Development Pathways

Additionally, classifiers reported on their perceptions of the most important sources of learning in their development as a classifier. The two highest rated sources of knowledge consisted of one formal source, International Sport Body Training and one informal source, learning by doing. See Table 12 for results.



Open-Ended Questions

Lastly, classifiers discussed some of the aspects of classifying that they found enjoyable and challenging. In general, classifiers expressed how classifying was a rewarding and valuable experience. For example, one classifier stated: “I find it mentally stimulating. I very much enjoy interacting with the athletes, coaches and other classifiers. I feel good about giving my time and effort to wheelchair sports. I find it rewarding and I enjoy the sense of accomplishment.” However, coaches also highlighted a diverse range of challenges. Some of the common challenges discussed by classifiers included “grey areas” of classification, misrepresentation, and working with coaches. This is represented in the following extract: “The most challenging aspect is decision making between the classification team on a borderline athlete. Providing a class to an athlete who is disappointed about the outcome is also very challenging.”

Another classifier elaborated on some of the challenges they experienced: “I sometimes feel undervalued when classification doesn't seem to be a priority at certain events (i.e., designated space isn't available, schedules are inaccurate or made at the last minute, mileage isn't reimbursed, etc) . . . having said that, I do feel things are improving.”

Classifiers offered insight into the types of resources that would help to address these challenges, such as more education for classifiers and coaches, guidelines, and mentorship/peer learning opportunities. For example, one classifier proposed three concrete strategies that would help to address their challenges: “1-continued education of athletes, coaches and public about non eligible impairments and why they are not included, [2]- continued research to either develop new profiles/grades which can allow participation in a fair and equal way to all athletes [and 3] - development of evidence based testing which is more empirical less subjective.” Classifiers also mentioned resources such as a system for recruiting and training new classifiers and a centralized database for tracking and recording classifier activities and opportunities.

“The most challenging aspect is decision making between the classification team on a borderline athlete. Providing a class to an athlete who is disappointed about the outcome is also very challenging.”

Table 11. Thoughts and beliefs questions about working with AWAD for classifiers.

Part C. Classifying Athletes (1=strongly disagree, 7=strongly agree)	Mean	SD
I have the necessary knowledge to classify an athlete.	6.50	0.67
I have the necessary technical skills to classify an athlete.	6.50	0.67
I have the necessary interpersonal skills to classify an athlete.	6.75	0.45
I have been trained to classify an athlete.	6.92	0.29
Capability	6.67	0.42
I have the necessary time to classify an athlete.	5.83	1.11
I have the necessary guidelines to classify an athlete.	6.58	0.67
I have the necessary equipment and facilities to classify an athlete.	6.00	1.10
I have the necessary social support from my organization to classify an athlete.	6.25	1.14
Opportunity	6.16	0.73
I have the necessary social support from my peers to classify an athlete.	6.67	0.89
I intend to act as a classifier in the next 2 years.	6.75	0.87
I want to classify athletes.	6.83	0.58
Motivation	6.60	0.54

Table 12. Classifier learning questions about working with AWAD.

Part E. Classifier Learning (1=least important, 7=most important)	Mean	SD
International Sport Body Training.	6.27	1.10
National Sport Body Training.	5.82	1.25
Medical Training.	5.91	1.58
Other Training.	5.90	1.85
Learning by doing.	6.27	1.27
Classifier Materials (e.g. resources).	6.18	1.25
Observing other classifiers (e.g. watching other classifiers live).	5.91	1.58
Interacting with other classifiers (e.g. seek advice from other classifiers, mentorship).	6.09	1.58
Individuals Planning (e.g. time spent along reflecting/developing strategies).	5.55	1.69

Table 13. Classifier motivation questions about working with AWAD.

Part D. I classify athletes... (1=does not correspond at all, 7=corresponds exactly)	Mean	SD
Because I get a good feeling out of it.	6.08	1.31
Because I enjoy the interactions I have with my athletes.	6.42	1.00
Because I find it stimulating.	6.25	0.97
Because I enjoy the effort I invest.	5.83	1.34
Intrinsic	6.15	0.78
Because classifying is integral to my life.	3.75	2.05
Because it personifies my values and beliefs.	5.25	1.86
Because classifying is fundamental to who I am.	2.92	1.93
Integrated	3.97	1.55
Because it allows me to achieve my personal goals.	3.91	1.87
Because it contributes to my development as a person.	5.67	1.23
Because it is moving me toward my personal goals.	3.67	1.92
Identified	4.50	1.45
Because I don't want to let my athletes down.	4.25	2.14
Because I feel pressure from myself to win.	2.08	1.93
Because I feel responsible for the athletes' to be able to compete at the correct level.	6.08	1.00
Because if I quit, it would mean I'd failed.	1.58	1.73
Introjected	3.50	1.33
To be respected by others.	3.50	1.88
Because I like the extrinsic rewards (i.e., money) associated with classifying.	1.83	1.85
To get recognition from others.	2.17	1.95
Because I want to be appreciated by others.		
External	2.75	1.70
Sometimes I don't know why I classify anymore.	1.58	1.73
Sometimes I question my desire to continue classifying.	2.92	2.68
I often think my classifying efforts are a waste of time.	1.83	1.99
Because I feel the costs outweigh the benefits.	2.33	1.83
Amotivation	2.17	1.78
Because I have a family member/friend with a disability.	1.92	1.73

DISCUSSION

The objective of this project was to develop a better understanding of coaches' and classifiers' perceptions of working with AWAD. The aim of the following section is thus to present a summary of the findings and to discuss practical implications and potential avenues for future research.

With regards to coaches' characteristics, coaches were generally former athletes between the ages of 45 to 54, and worked as part-time volunteer coaches. Coaches represented a diverse range of coaching contexts, including different sports, age-ranges, and competitive levels. Although there were more male coaches among CABA, there was a more equal distribution among CAWAD. This is consistent with DePauw and Gavron's (1991) profile of American CAWAD.

Further, few of the coaches in this study reported having a disability themselves, which aligns with previous studies (e.g., DePauw & Gavron, 1991; Douglas et al., 2018).



These findings provide some initial insight into the characteristics of coaches who are involved in the sport system in Ontario. However, it would be worthwhile for future studies to examine larger samples across the province to assess the generalizability of these results. In addition, it may be beneficial to explore how this profile may evolve over time.

Coaches' Thoughts, Beliefs, and Behaviours

Taking together the COM-B questionnaires and the open-ended responses, it appears that psychological capability, physical and social opportunity, and reflective motivation are important factors that may help to influence coaches' behaviours regarding working with AWAD. By mapping these findings onto the Behaviour Change Wheel Framework (Michie et al., 2014), potentially relevant interventions for improving capability may include education (i.e., increasing knowledge or understanding of technical/tactical adaptations, disability-specific information, and communication strategies), training (i.e., imparting skills to perform effective coaching behaviours), and enablement (i.e., increasing means and reducing barriers to increase capability and opportunity). With regards to opportunity, potential interventions could target training, environmental restructuring (i.e., changing the physical (e.g., facilities) or social (e.g., norms) context, and modelling (i.e., providing appropriate role models to emulate, such as through mentors, demonstrations, or videos). Coaches' reflective motivation could also be targeted through education. It is important to note that these interventions could be implemented in numerous ways.

For example, an intervention aiming to educate individuals about AWAD could be delivered through signage (e.g., communication or marking campaigns), guidelines regarding appropriate coaching behaviours, and by providing services (e.g., formal courses, mentoring sessions, communities of practice) for coaches to enhance their perceptions of capability, opportunity, and motivation. Overall, it is hoped that these findings lend new insights into coaches' perceptions of working with AWAD in sport and can help to guide the design, evaluation, and dissemination of future evidence-informed interventions.

Results from this study indicated that coaches' perceived challenges were often related to adopting individualized, person-centred approaches to coaching. This importance of this finding is underscored by the fact that coaches (e.g., Cregan et al., 2007; Tawse et al., 2012) and athletes (Allan et al., 2017; Turnnidge et al., 2012) have emphasized the benefits of focusing on the person, rather than on the disability. Indeed, Allan and colleagues (2017) propose that athletes may be more likely to experience quality sport experiences if coaches can foster feelings of equality and value in a contextually-appropriate manner. It is thus crucial for researchers and practitioners to consider how future interventions can enable coaches to adopt such individualized and person-centred approaches.

"Overall, it is hoped that these findings lend new insights into coaches' perceptions of working with AWAD in sport and can help to guide the design, evaluation, and dissemination of future evidence-informed interventions."

Coaches' and Classifiers' Knowledge: Learning and Development Pathways

Results indicated that CAWAD rated interacting with other coaches, learning by doing, and sport-specific NCCP courses as the most important sources of knowledge to their learning and development. The results also indicated that there was a strong desire across all participants for more formal (e.g., general and sport-specific NCCP courses) and informal (e.g., mentoring, interacting/observing other coaches) educational opportunities. These findings are supported by research examining both CABA (e.g., Erickson et al., 2008) and CAWAD (e.g., Cregan et al., 2007). The importance of these findings is reinforced by the fact that two of the most highly rated sources of coaching knowledge (i.e., interacting with other coaches and learning by doing) are not explicitly integrated into current coach development programs.

"The results also indicated that there was a strong desire across all participants for more formal (e.g., general and sport-specific NCCP courses) and informal (e.g., mentoring, interacting/observing other coaches) educational opportunities"



Coaches consistently highlighted the value of interacting with other coaches. This finding lends support to the notion that mentorship and communities of practice may hold significant potential for knowledge sharing and coach development (Erickson et al., 2008). With regards to learning by doing, it is possible that an important mechanism by which coaches may gain knowledge may be by reflecting on those experiences (Gilbert & Trudel, 2004). It may thus be worthwhile to consider how interventions grounded in mentorship, communities of practice, and reflective processes may help to supplement formal coach development programs.



It is important to acknowledge that the results and discussion primarily focused on coaches' perceptions of working with AWAD. Given the limited number of classifier participants, it is evident that much more research is needed in this area. More specifically, gaining a richer understanding of classifiers' (a) characteristics, (b) thoughts, beliefs, and behaviours, and (c) knowledge would be extremely beneficial for researchers and practitioners.

Practical Implications/Future Research Directions

The overarching findings of this project have important implications for researchers and practitioners wishing to enhance the quality of coaches' and classifiers' experiences of working with AWAD and ultimately facilitate athletes' positive development in sport. Overall, the results highlight the important role which coaches and classifiers play in shaping the sport environment. These findings may be particularly important given that there is currently a dearth of research examining CAWAD and classifiers. As highlighted in the previous section, the findings from this project may be eminently useful in informing the design, implementation, and evaluation of future interventions. A beneficial avenue for future research would thus be to explore the development process of such initiatives. Research investigating the recommendations of coaches, classifiers, athletes, sport organizations, and other community stakeholders for designing future interventions may also be worthwhile.

In addition to incorporating the findings into evidence-informed interventions, future research should explore potential changes in coaches' and classifiers' characteristics, thoughts, beliefs and behaviours, and sources of knowledge over time. Research in this area would enhance our understanding of how these factors may evolve over the short and long term. Overall, the goal of this project was to gain a deeper understanding of coaches' and classifiers' experiences and perceptions of working with AWAD. It is hoped that this report offers insight into how these findings may be translated into real-world interventions. By enhancing our understanding of these topics, researchers and practitioners may be better able to positively contribute to athlete development in sport.

Goals for future research

-  Explore the development process of future interventions.
-  Explore potential changes in coaches' and classifier' characteristics, thoughts, beliefs and behaviours, and sources of knowledge over time.

REFERENCES

- Allan, V., Gainforth, H., Turnnidge, J., Côté, J., Martin Ginis, K. A., Latimer-Cheung, A. E. (In preparation). Narrative as a Learning Tool for Paraspport Coaches: Using Stories to Translate Research into Practice.
- Allan, V., Smith, B., Côté, J., Martin Ginis, K. A., Latimer-Cheung, A. E. (2017). Narratives of participation among individuals with physical disabilities: A life-course analysis of athletes' experiences and development in parasport. *Psychology of Sport & Exercise*, *18*, 1-10. <http://dx.doi.org/10.1016/j.psychsport.2017.10.004>
- Ajzen, I. (2002). Constructing a TPB questionnaire: Conceptual and methodological considerations. *International Journal of Behavioral Research and Health*, *1*, 1-16.
- Banack, H. R., Sabiston, C. M., & Bloom, G. A. (2011). Coach autonomy support, basic need satisfaction, and intrinsic motivation of Paralympic athletes. *Research Quarterly for Exercise and Sport*, *82*, 722-730. DOI: 10.1080/02701367.2011.10599809
- Bonner, C., Jansen, J., McKinn, S., Irwig, L., Doust, J., Glasziou, P., ... McCaffery, K. (2013). General practitioners' use of different cardiovascular risk assessment strategies: A qualitative study. *Medical Journal of Australia*, *199*, 485-489. <https://doi.org/10.5694/mja13.10133>
- Braun, V., Clarke, V., & Weate, P. (2016). Using thematic analysis in sport and exercise research. *Routledge handbook of qualitative research in sport and exercise*, 191-205.
- Cregan, K., Bloom, G. A., & Reid, G. (2007). Career evolution and knowledge of elite coaches of swimmers with a physical disability. *Research Quarterly for Exercise and Sport*, *78*, 339-350. DOI: 10.1080/02701367.2007.10599431.
- Davey, J. (2014). How do novice para sport coaches develop their knowledge? A look at experiences of para sailing coaches. Retrieved from: <http://www.ruor.uottawa.ca/handle/10393/30647>
- Deci, R. L., & Ryan, R. M. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, *55*, 68-78.

- DePauw, K., & Gavron, S. (1991). Coaches of athletes with disabilities. *The Physical Educator*, 48, 33-40.
- Douglas, S., Falcão, W. R., & Bloom, G. A. (2018) Career development and learning pathways of paralympic coaches with a disability. *Adapted Physical Activity Quarterly*, 35 93-110.
- Douglas, S., & Hardin, B. (2014). Case study of an expert intercollegiate wheelchair basketball coach. *Applied Research in Coaching and Athletics Annual*, 29, 193–212.
- Duarte, T., & Culver, D.M. (2014). Becoming a coach in developmental adaptive sailing: A lifelong learning perspective. *Journal of Applied Sport Psychology*, 26, 441– 456.
- Erickson, K., Bruner, M.W., MacDonald, D.J., & Côté, J. (2008). Gaining insight into actual and preferred sources of coaching knowledge. *International Journal of Sports Science & Coaching*, 3, 527–538.
- Erickson, K., Côté, J., & Fraser-Thomas, J. (2007). Sport experiences, milestones, and educational activities associated with high-performance coaches' development. *The Sport Psychologist*, 21, 302-316.
- Falcão, W.R., Bloom, G.A., & Loughhead, T.M. (2015). Coaches' perceptions of team cohesion in Paralympic sports. *Adapted Physical Activity Quarterly*, 32, 206–222.
- Gainforth, H. L., Sheals, K., Atkins, L., Jackson, R., & Michie, S. (2016) Developing interventions to change recycling behaviors: A case study of applying behavioral science, *Applied Environmental Education & Communication*, 15, 325-339.
<https://doi.org/10.1080/1533015X.2016.1241166>
- Gilbert, W. D., & Trudel, P. (2004). Role of the coach: How model youth team sport coaches frame their roles. *The Sport Psychologist*, 18, 21-43.
- Hagger, M. S., & Chatzisarantis, N. L. D. (Eds.). (2007). *Intrinsic motivation and self-determination in exercise and sport*. Champaign, IL: Human Kinetics.
- Huijg, J. M., Gebhardt, W. A., Crone, M. R., Dusseldorp, E., & Pousseau, J. (2014). Discriminant content validity of a theoretical domains framework questionnaire for use in implementation research. *Implementation Science*, 9, 11.

Kozub, F. M., & Porretta, D. L. (1998). Interscholastic coaches' attitudes toward integration of adolescents with disabilities. *Adapted Physical Activity Quarterly*, 15, 328-344.

Martin, J. J., & Whalen, L. (2014). Effective practices of coaching disability sport. *European Journal of Adapted Physical Activity*, 7, 13-23.

Martin Ginis, K. A., Latimer, A. E., Arbour-Nicitopoulos, K. P., Buchholz, A. C., Bray, S. R., Craven, B. C., ... Wolfe, D. L. (2010). Leisure time physical activity in a populationbased sample of people with spinal cord injury part I: Demographic and injury-related correlates. *Archives of Physical Medicine and Rehabilitation*, 91, 722-728.

McLean, K. N., Mallett, C. J., & Newcombe, P. (2012). Assessing coach motivation: The development of the Coach Motivation Questionnaire (CMQ). *Journal of Sport and Exercise Psychology*, 34, 184-207.

McMaster, S., Culver, K., & Werthner, P. (2012). Coaching of athletes with a physical disability: a look at their learning experiences. *Qualitative Research in Sport, Exercise, and Health*, 4, 226-243. DOI: 10.1080/2159676X.2012.686060

Michie, S., Atkins, L., & West, R. (2014). *The Behaviour Change Wheel: A guide to designing interventions*. London, UK: Silverback Publishing.

Michie, S., van Stralen, M. M., & West, R. (2011). The behaviour change wheel: A new method of characterising and designing behaviour change interventions. *Implementation Science*, 6, 1-11. <https://doi.org/10.1186/1748-5908-6-42>

Nelson, L.J., Cushion, C.J., & Potrac, P. (2006). Formal, non-formal and informal coach learning: A holistic conceptualization. *International Journal of Sports Science & Coaching*, 1, 247-259.

Sport England (2017). Active people interactive [active people survey analysis tool]. Available from: <http://activepeople.sportengland.org>.

Tawse, H., Bloom, G. A., Sabiston, C. M., & Reid, G. (2012). The role of coaches of wheelchair rugby in the development of athletes with a spinal cord injury. *Qualitative Research in Sport, Exercise and Health*, 4, 206-225. DOI: 10.1080/2159676X.2012.685104

Taylor, S., Werthner, P., & Culver, D.M. (2014), A case study of a parasport coach and a life of learning. *International Sport Coaching Journal*, 1, 127-138.

Taylor, S., Werthner, P., & Culver, D.M. (2015). Dynamic, evolving, and social: The learning interactions of parasport coaches. In P. Davis (Ed.), *The psychology of effective coaching and management* (pp. 91–110). Nova Hauppauge, NY: Nova Science.

Turnnidge, J., & Côté, J. (2017). Transformational Coaching Workshop: Applying a Person-Centred Approach to Coach Development Programs. *International Sport Coaching Journal*, 4(3), 314-325.

Turnnidge, J., Vierimaa, M., Côté, J. (2012). An in-depth investigation of a model sport program for athletes with disabilities. *Psychology*, 3, 1131-1141. DOI: 10.4236/psych.2012.312A167

Appendix

Coach survey (Appendix A)

AWAD coach survey (Appendix B)

Classifier survey (Appendix C)

Continuum of self-determination (Appendix D)

Pre-Screening Questionnaire

1. Are you over the age of 18?

Yes

No

2. Are you currently a Classifier in Ontario?

Yes

No

3. Are you a currently a Coach in Ontario?

Yes

No

4. Have you previously or do you currently coach an athlete with a disability?

Yes

No

Interested, but not at this time

Appendix A: Coach Survey (Coaches not currently working with athletes with disabilities)

Please fill out this questionnaire in one sitting and while alone, without consulting with other individuals or any external resources. The following questions are designed to assess your perceptions of your own coaching experiences and your perceptions of working with athletes with disabilities. There are no wrong or right answers, so please give your immediate reaction. Some of the items may seem repetitive, but please answer all questions.

We are now going to ask a series of general questions, which will be used to describe the group of people who participated in this study.

General Survey Part A: General Demographics

Please create your own unique ID by taking the first two letters of your name and the first letter of your mother's name, followed by the day and year of your birth (e.g., mat1585)

ID: _____

1. What is your age?

- 18 to 24 25 to 34 35 to 44 45 to 54 55-64 65 and over Do not wish to specify

2. What is your gender?

- Male Female Do not wish to specify

3. What is the highest level of education you have completed?

- High school College University Post Graduate Other: _____

4. Which of the following best describes your household's total income last year?

- 0-49,999 50,000-74,999 75,000-99,999 100,000+

5. Do you have a physical disability?

- Yes No Do not wish to specify

If yes, there are a few standard questions about the nature of your physical disability, specifically the type of disability. You can skip any questions that you do not feel comfortable responding to.

i. Type: _____

6. When in full-season, approximately how many hours per week do you spend coaching athletes/participants?

- 1-3 4-9 10-19 20-29 30-39 40+

a. What is the gender of the individuals that you currently coach?

- Male Female Co-ed Do not wish to specify

b. What is the age of the individuals that you currently coach?

- 0-4 5-11 12-17 18-54 55+

c. What is the competitive level of the individuals that you currently coach?

- Grassroots/
Community Developmental/
Competitive High Performance Other:

d. Please indicate the number of years of you have been working in this context.

- Less than a
year 1-3 years 4-6 years 7-9 years 10+ years

7. What are your current coaching certifications or qualifications. Please select all that apply.

- NCCP Trained NCCP Certified College/ University
Degree Other: _____

8. Have you completed the National Coaching Certification Program: *Coaching Athletes with a Disability (CAWAD) eLearning module?*

- Yes No

Part C: Coaching Athletes With A Disability

The following questions will ask about your thoughts and beliefs about coaching athletes with a disability. Please indicate your agreement with the following statements: 1 represents “**Strongly disagree**” and 7 represents “**Strongly agree**”

1. I have the necessary knowledge to coach an athlete with a disability.	1	2	3	4	5	6	7
2. I have the necessary technical/tactical skills to coach an athlete with a disability.	1	2	3	4	5	6	7
3. I have the necessary interpersonal skills to coach an athlete with a disability.	1	2	3	4	5	6	7
4. I have been trained to coach an athlete with a disability.	1	2	3	4	5	6	7
5. I have the necessary time to coach an athlete with a disability.	1	2	3	4	5	6	7
6. I have the necessary guidelines to coach an athlete with a disability.	1	2	3	4	5	6	7
7. I have the necessary equipment and facilities to coach an athlete with a disability.	1	2	3	4	5	6	7
8. I have the necessary social support from my organization to coach an athlete with a disability.	1	2	3	4	5	6	7
9. I have the necessary social support from my peers to coach an athlete with a disability.	1	2	3	4	5	6	7
10. I intend to coach an athlete with a disability in the next 2 years.	1	2	3	4	5	6	7
11. I want to coach an athlete with a disability.	1	2	3	4	5	6	7

The next few questions will ask you about your confidence to coach an athlete with a disability. Rate your confidence on each of the items below. 1 represents “Not at all confident” and 7 represents “Completely confident”.

I can . . .

1. Help athletes with disabilities learn the techniques and tactical strategies of my sport	1	2	3	4	5	6	7
2. Use inclusion strategies to ensure that athletes with disabilities can participate in my program	1	2	3	4	5	6	7
3. Design practices to develop the technical skills of athletes with disabilities	1	2	3	4	5	6	7
4. Prepare athletes with disabilities for competitions	1	2	3	4	5	6	7
5. Adapt my coaching behaviours to suit a diverse range of abilities and needs	1	2	3	4	5	6	7
6. Work collaboratively with athletes with disabilities	1	2	3	4	5	6	7
7. Recognize the accomplishments of athletes with disabilities	1	2	3	4	5	6	7
8. Discuss appropriate goals and expectations with athletes with disabilities	1	2	3	4	5	6	7
9. Model pro-social behaviours and values (e.g., honesty, respect)	1	2	3	4	5	6	7
10. Share decision making and leadership responsibilities with athletes with disabilities	1	2	3	4	5	6	7
11. Creatively solve problems	1	2	3	4	5	6	7
12. Develop personal relationships with athletes with disabilities	1	2	3	4	5	6	7
13. Support athletes’ development in and out of sport (e.g., school, family)	1	2	3	4	5	6	7
14. Build athletes’ self-confidence	1	2	3	4	5	6	7
15. Facilitate opportunities for team-building and peer-relationships	1	2	3	4	5	6	7
16. Create a daily training environment that improves fitness, strength, and conditioning	1	2	3	4	5	6	7

Part D: Open Ended

- 1. What are the aspects of coaching athletes with disabilities that you believe would be the most challenging?**
- 2. What resources would help you to address those challenges?**
- 3. Please provide any further feedback and/or recommendations to improve the experiences of coaches.**

Appendix B: Coach Survey (Coaches currently working with athletes with disabilities)

Please fill out this questionnaire in one sitting and while alone, without consulting with other individuals or any external resources. The following questions are designed to assess your perceptions of your own coaching experiences and your perceptions of working with athletes with disabilities. There are no wrong or right answers, so please give your immediate reaction. Some of the items may seem repetitive, but please answer all questions.

We are now going to ask a series of general questions, which will be used to describe the group of people who participated in this study.

General Survey Part A: General Demographics

Please create your own unique ID by taking the first two letters of your name and the first letter of your mother's name, followed by the day and year of your birth (e.g., mat1585)

ID: _____

1. What is your age?

- 18 to 24 25 to 34 35 to 44 45 to 54 55-64 65 and over Do not wish to specify

2. What is your gender?

- Male Female Other/Do not wish to specify

3. What is the highest level of education you have completed?

- High school College University Post Graduate Other: _____

4. Which of the following best describes your household's total income last year?

- 0-49,999 50,000-74,999 75,000-99,999 100,000+

5. Do you have a physical disability?

- Yes No Do not wish to specify

If yes, there are a few standard questions about the nature of your physical disability, specifically the type of disability. You can skip any questions that you do not feel comfortable responding to.

iii. Type: _____

iv. Cause: _____

Area(s) of body affected: _____

6. Do you have a friend or family member who has a physical disability?

- Yes No Do not wish to specify

General Survey Part B: Sport Background

1. In which region of Ontario do you currently reside?

- Northern (includes Muskoka, Nipissing)
Central (includes Simcoe, Dufferin, Peel, Halton, Toronto, and Durham)
Eastern (includes Kawaratha Lakes, Haliburton, North Humberland, Renfrew)
Western (includes Grey, Wellington, Hamilton, Niagara)

2. Have you been, or are you currently an athlete?

- Yes No Do not wish to specify

If yes, please provide some more details on your athletic experience.

- d. Sport _____
e. Years of experience: _____
f. Highest level of competition reached (e.g., Canada Games): _____

3. How many years have you been coaching in total?

- Less than a year 1-3 4-6 7-9 10+

We would like to learn more about your current coaching role. Please answer the following questions with this current coaching context in mind.

4. Which sport (s) are you currently coach? Please select all that apply.

5. How would you characterize your current position as a coach?

- Full-time paid coach Part-time paid coach Full-time volunteer coach Part-time volunteer coach Other: _____

6. When in full-season, approximately how many hours per week do you spend coaching athletes/participants?

- | | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 1-3 | 4-9 | 10-19 | 20-29 | 30-39 | 40+ |

e. What is the gender of the individuals that you currently coach?

- | | | | |
|-----------------------|-----------------------|-----------------------|------------------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Male | Female | Co-ed | Other/Do not wish to specify |

f. What is the age of the individuals that you currently coach?

- | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 0-4 | 5-11 | 12-17 | 18-54 | 55+ |

g. What is the competitive level of the individuals that you currently coach?

- | | | | |
|--------------------------|-------------------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Grassroots/
Community | Developmental/
Competitive | High Performance | Other:
_____ |

h. Please indicate the number of years of you have been working in this context.

- | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Less than a
year | 1-3 years | 4-6 years | 7-9 years | 10+ years |

7. What are your current coaching certifications or qualifications. Please select all that apply.

- | | | | |
|-----------------------|-----------------------|-------------------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| NCCP Trained | NCCP Certified | College/ University
Degree | Other: _____ |

8. Have you completed the National Coaching Certification Program: *Coaching Athletes with a Disability (CAWAD) eLearning module*?

O
Yes

O
No

Part C: Coaching Athletes With A Disability

The following questions will ask about your thoughts and beliefs about coaching athletes with a disability. Please indicate your agreement with the following statements: 1 represents “**Strongly disagree**” and 7 represents “**Strongly agree**”

1. I have the necessary knowledge to coach an athlete with a disability.	1	2	3	4	5	6	7
2. I have the necessary technical/tactical skills to coach an athlete with a disability.	1	2	3	4	5	6	7
3. I have the necessary interpersonal skills to coach an athlete with a disability.	1	2	3	4	5	6	7
4. I have been trained to coach an athlete with a disability.	1	2	3	4	5	6	7
5. I have the necessary time to coach an athlete with a disability.	1	2	3	4	5	6	7
6. I have the necessary guidelines to coach an athlete with a disability.	1	2	3	4	5	6	7
7. I have the necessary equipment and facilities to coach an athlete with a disability.	1	2	3	4	5	6	7
8. I have the necessary social support from my organization to coach an athlete with a disability.	1	2	3	4	5	6	7
9. I have the necessary social support from my peers to coach an athlete with a disability.	1	2	3	4	5	6	7
10. I intend to coach an athlete with a disability in the next 2 years.	1	2	3	4	5	6	7
11. I want to coach an athlete with a disability.	1	2	3	4	5	6	7

The next few questions will ask you about your confidence to coach an athlete with a disability. Rate your confidence on each of the items below. 1 represents “Not at all confident” and 7 represents “Completely confident”.

I can . . .

1. Help athletes with disabilities learn the techniques and tactical strategies of my sport	1	2	3	4	5	6	7
2. Use inclusion strategies to ensure that athletes with disabilities can participate in my program	1	2	3	4	5	6	7
3. Design practices to develop the technical skills of athletes with disabilities	1	2	3	4	5	6	7
4. Prepare athletes with disabilities for competitions	1	2	3	4	5	6	7
5. Adapt my coaching behaviours to suit a diverse range of abilities and needs	1	2	3	4	5	6	7
6. Work collaboratively with athletes with disabilities	1	2	3	4	5	6	7
7. Recognize the accomplishments of athletes with disabilities	1	2	3	4	5	6	7
8. Discuss appropriate goals and expectations with athletes with disabilities	1	2	3	4	5	6	7
9. Model pro-social behaviours and values (e.g., honesty, respect)	1	2	3	4	5	6	7
10. Share decision making and leadership responsibilities with athletes with disabilities	1	2	3	4	5	6	7
11. Creatively solve problems	1	2	3	4	5	6	7
12. Develop personal relationships with athletes with disabilities	1	2	3	4	5	6	7
13. Support athletes’ development in and out of sport (e.g., school, family)	1	2	3	4	5	6	7
14. Build athletes’ self-confidence	1	2	3	4	5	6	7
15. Facilitate opportunities for team-building and peer-relationships	1	2	3	4	5	6	7
16. Create a daily training environment that improves fitness, strength, and conditioning	1	2	3	4	5	6	7

Part D: Coach Motivation

We'd also like to learn more about why you are involved with coaching athletes with disabilities. Using the scale below, please indicate to what extent each of the following items correspond to the reasons why you currently coach athletes with disabilities. 1 represents **“Does not correspond at all”**, 4 represents **“Corresponds moderately”** and 7 represents **“Corresponds exactly”**

I coach athletes with disabilities . . .

Because coaching is integral to my life	1	2	3	4	5	6	7
Because it allows me to achieve my personal goals	1	2	3	4	5	6	7
Because I get a good feeling out of it	1	2	3	4	5	6	7
To be respected by others	1	2	3	4	5	6	7
Because I enjoy the interactions I have with my athletes	1	2	3	4	5	6	7
Because I like the extrinsic rewards (i.e., money) associated with winning	1	2	3	4	5	6	7
Because it personifies my values and beliefs	1	2	3	4	5	6	7
Because it contributes to my development as a person	1	2	3	4	5	6	7
Because I don't want to let my athletes down	1	2	3	4	5	6	7
Because I feel pressure from myself to win	1	2	3	4	5	6	7
Because I feel responsible for the athletes' performance	1	2	3	4	5	6	7
Sometimes I don't know why I coach anymore	1	2	3	4	5	6	7
To get recognition from others	1	2	3	4	5	6	7
Sometimes I question my desire to continue coaching	1	2	3	4	5	6	7
Because if I quit, it would mean I'd failed	1	2	3	4	5	6	7
I often think my coaching efforts are a waste of time	1	2	3	4	5	6	7
Because I find it stimulating	1	2	3	4	5	6	7
Sometimes I feel the costs outweigh the benefits	1	2	3	4	5	6	7
Because I enjoy the effort I invest	1	2	3	4	5	6	7
Because I want to be appreciated by others	1	2	3	4	5	6	7
Because coaching is fundamental to who I am	1	2	3	4	5	6	7
Because it is moving me toward my personal goals	1	2	3	4	5	6	7
Because I have a family member/friend with a disability	1	2	3	4	5	6	7

Part E: Coach Learning

Lastly, we'd like to learn more your development as a coach for athletes with disabilities. Please rank the following potential sources of knowledge according to their importance to your development as a coach of athletes with a disability (1 = least important; 7 = most important).

Multi-Sport National Coaching Certification Program Training (in-person or at home; e.g. Coaching Athletes with a Disability eModule, Fundamental Movement Skills, Psychology of Performance, etc.)	1	2	3	4	5	6	7
Sport-Specific National Coaching Certification Program Training (in-person or at home)	1	2	3	4	5	6	7
Other In-person coaching courses	1	2	3	4	5	6	7
Other Online coaching courses	1	2	3	4	5	6	7
Coaching materials (e.g., websites, blogs, newsletters, resources)	1	2	3	4	5	6	7
Learning by doing (e.g., trial and error)	1	2	3	4	5	6	7
Observing other coaches (e.g., watching other coaches live or on television)	1	2	3	4	5	6	7
Interacting with other coaches (e.g., seeking advice from other coaches)	1	2	3	4	5	6	7
College/University degree	1	2	3	4	5	6	7
Individual planning (e.g., time spent alone reflecting/developing strategies)	1	2	3	4	5	6	7

1. In an ideal world, what should be the top 3 sources of information for coaches working with athletes with a disability (please use the examples above for reference)?

1. _____

2. _____

3. _____

Part G: Open Ended

1. What are the aspects of coaching athletes with disabilities that you find most challenging?
2. What resources would help you to address those challenges?
3. Please provide any further feedback and/or recommendations to improve the experiences of coaches of athletes with disabilities.

Appendix C: Classifier Survey

Please fill out this questionnaire in one sitting and while alone, without consulting with other individuals or any external resources. The following questions are designed to assess your perceptions of your own experiences as a classifier and your perceptions of working with athletes with disabilities. There are no wrong or right answers, so please give your immediate reaction. Some of the items may seem repetitive, but please answer all questions.

We are now going to ask a series of general questions, which will be used to describe the group of people who participated in this study.

General Survey Part A: General Demographics

Please create your own unique ID by taking the first two letters of your name and the first letter of your mother's name, followed by the day and year of your birth (e.g., mat1585)

ID: _____

7. What is your age?

- 18 to 24 25 to 34 35 to 44 45 to 54 55-64 65 and over Do not wish to specify

8. What is your gender?

- Male Female Other/Do not wish to specify

9. What is the highest level of education you have completed?

- High school College University Post Graduate Other: _____

10. Which of the following best describes your household's total income last year?

- 0-49,999 50,000-74,999 75,000-99,999 100,000+

11. Do you have a physical disability?

- Yes No Do not wish to specify

If yes, there are a few standard questions about the nature of your physical disability, specifically the type of disability. You can skip any questions that you do not feel comfortable responding to.

v. Type: _____

vi. Cause: _____

Area(s) of body affected: _____

12. Do you have a friend or family member who has a physical disability?

Yes No Do not wish to
specify

13. Do you work with individual with disabilities in other contexts (e.g., outside sport, work, etc)?

Yes No

If yes, please specify _____

General Survey Part B: Sport Background

1. In which region of Ontario do you currently reside?

Northern (includes Muskoka, Nipissing)
Central (includes Simcoe, Dufferin, Peel, Halton, Toronto, and Durham)
Eastern (includes Kawaratha Lakes, Haliburton, North Humberland, Renfrew)
Western (includes Grey, Wellington, Hamilton, Niagara)

2. Have you been, or are you currently an athlete?

Yes No Do not wish to specify

If yes, please provide some more details on your athletic experience.

g. Sport _____
h. Years of experience: _____
i. Highest level of competition reached (e.g., Canada Games): _____

3. Have you been, or are you currently a coach?

Yes No Do not wish to specify

If yes, please provide some more details on your athletic experience.

j. Sport _____
k. Years of experience: _____
l. Highest level of competition reached (e.g., Canada Games): _____

4. How many years have you been classifier in total?

- | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Less than a
year | 1-3 | 4-6 | 7-9 | 10+ |

We would like to learn more about your current role as a classifier. Please answer the following questions with this current context in mind.

5. Which sport (s) are you currently a classifier for? Please select all that apply.

6. How would you characterize your current position as a classifier?

- | | | | | |
|------------------------------|------------------------------|--------------------------------------|--------------------------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Full-time paid
classifier | Part-time paid
classifier | Full-time
volunteer
classifier | Part-time
volunteer
classifier | Other: _____ |

7. Approximately how many athletes do you classify a season?

- | | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 1-3 | 4-9 | 10-19 | 20-29 | 30-39 | 40+ |

i. What is the gender of the individuals that you currently classify? Select all that apply.

- | | | | |
|-----------------------|-----------------------|-----------------------|---------------------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Male | Female | Both | Other/Do not wish to
specify |

j. What is the age of the individuals that you currently classify? Select all that apply.

- | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 0-4 | 5-11 | 12-17 | 18-54 | 55+ |

k. What is the competitive level of the individuals that you currently classify? Select all that apply.

- | | | | |
|--------------------------|-------------------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Grassroots/
Community | Developmental/
Competitive | High Performance | Other |

8. What are your current classifier certifications or qualifications? Please select all that apply.

- Professional Degree _____
- International Sport Federation Certification
- College/ University Degree
- Other: _____

9. Where did you obtain your certifications?

- In Canada
- Outside Canada

- a. If in Canada, which province: Drop down menu
- b. If outside Canada, which country: Drop down menu

10. Have you completed the National Coaching Certification Program: *Coaching Athletes with a Disability (CAWAD) eLearning module*?

- Yes
- No

Part C: Classifying Athletes With A Disability

The following questions will ask about your thoughts and beliefs about classifying athletes with a disability. Please indicate your agreement with the following statements: 1 represents “**Strongly disagree**” and 7 represents “**Strongly agree**”

1. I have the necessary knowledge to classify an athlete with a disability.	1	2	3	4	5	6	7
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3. I have the necessary interpersonal skills to classify an athlete with a disability.	1	2	3	4	5	6	7
4. I have been trained to classify an athlete with a disability.	1	2	3	4	5	6	7
5. I have the necessary time to classify an athlete with a disability.	1	2	3	4	5	6	7
6. I have the necessary guidelines to classify an athlete with a disability.	1	2	3	4	5	6	7
7. I have the necessary equipment and facilities to classify an athlete with a disability.	1	2	3	4	5	6	7
8. I have the necessary social support from my organization to classify an athlete with a disability.	1	2	3	4	5	6	7
9. I have the necessary social support from my peers to classify an athlete with a disability.	1	2	3	4	5	6	7
10. I intend to act as a classifier in the next 2 years.	1	2	3	4	5	6	7
11. I want to classify athlete with a disabilities.	1	2	3	4	5	6	7

Part D: Classifier Motivation

We'd also like to learn more about why you are involved with classifying athletes with disabilities. Using the scale below, please indicate to what extent each of the following items correspond to the reasons why you currently classify athletes with disabilities. 1 represents **“Does not correspond at all”**, 4 represents **“Corresponds moderately”** and 7 represents **“Corresponds exactly”**

I coach athletes with disabilities . . .

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Because I get a good feeling out of it	1	2	3	4	5	6	7
To be respected by others	1	2	3	4	5	6	7
Because I enjoy the interactions I have with athletes	1	2	3	4	5	6	7
Because I like the extrinsic rewards (i.e., money) associated with classifying	1	2	3	4	5	6	7
Because it personifies my values and beliefs	1	2	3	4	5	6	7
Because it contributes to my development as a person	1	2	3	4	5	6	7
Because I don't want to let athletes down	1	2	3	4	5	6	7
Because I feel pressure from myself	1	2	3	4	5	6	7
Because I feel responsible for the athletes' performance	1	2	3	4	5	6	7
Sometimes I don't know why I classify anymore	1	2	3	4	5	6	7
To get recognition form others	1	2	3	4	5	6	7
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I often think my classifying efforts are a waste of time	1	2	3	4	5	6	7
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Sometimes I feel the costs outweigh the benefits	1	2	3	4	5	6	7
Because I enjoy the effort I invest	1	2	3	4	5	6	7
Because I want to be appreciated by others	1	2	3	4	5	6	7
Because classifying is fundamental to who I am	1	2	3	4	5	6	7
Because it is moving me toward my personal goals	1	2	3	4	5	6	7
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College/University degree	1	2	3	4	5	6	7
Individual planning (e.g., time spent alone reflecting/developing strategies)	1	2	3	4	5	6	7

2. In an ideal world, what should be the top 3 sources of information for classifiers working with athletes with a disability (please use the examples above for reference)?

1. _____

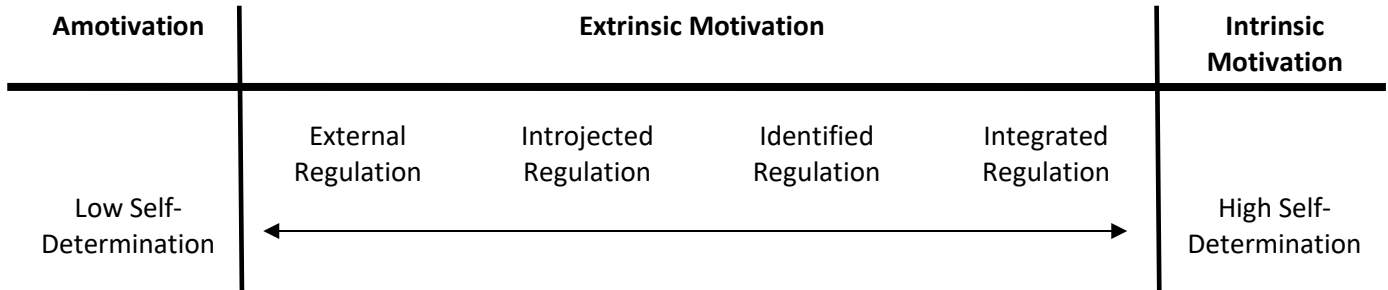
2. _____

3. _____

Part F: Open Ended

1. **What are the aspects of classifying athletes with disabilities that you find most challenging?**
2. **What resources would help you to address those challenges?**
3. **Please provide any further feedback and/or recommendations to improve the experiences of classifiers of athletes with disabilities.**

Appendix D: Continuum of self-determination



Continuum of self-determination (adapted from Hagger & Chatzisarantis, 2007, p. 8)