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ARTICLE



## Understanding parasport: an analysis of the differences between able-bodied and parasport from a sport policy perspective

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### ABSTRACT

Parasport is a growing field of study with many countries recognising the need to develop organisational structures in order to optimise the development of high-performance sport opportunities for Paralympic athletes. Policy development in this area is currently still under developed and a significant knowledge gap is apparent regarding the development of Paralympic athlete programmes, and the understanding of how to develop long-term athlete pathways. This study hereby aims to address this gap by identifying how elite sport policy approaches differ between able-bodied and parasport. Sixteen international Paralympic experts participated in comprehensive semi-structured interviews guided by the theoretical framework of the Sport Policy Factors Leading to International Sporting Success model. The results of this study suggest that a 'one-size-fits-all approach' does not exist in order to develop an effective parasport system. This study provides a framework illustrating the major differences between the able-bodied and parasport systems. Notably, this influences the way sport policies should be developed in order to generate awareness among sport policymakers and high-performance directors, in aid of helping them to understand parasport as a whole and its intricacies.

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### KEYWORDS

Parasport; elite sport policy; para-athlete pathways; parasport context; parasport policy

### Introduction

Parasport,<sup>1</sup> also known as disability sport, is identified as sport practised by people with physical, visual and intellectual impairments (Vanlandewijck and Thompson, 2011). Parasport is simultaneously used as a synonym for Paralympic sport, which coherently is identified as athletes who compete in the Paralympic Games (PG). Hereby, Paralympic sport and parasport are part of disability sport, but not all disability sports are Paralympic sports.

The genesis of parasport occurred following the World War II. The first official PG was held in Rome in 1960, featuring just over 400 athletes from 23 countries (Brittain 2009, Dehghansai *et al.* 2017). In retrospect, the number of athletes with impairments at every level of competition has grown exponentially, and the PG is now considered the second largest multisport event in the world after the Summer Olympic Games (Weed *et al.* 2012, Le Clair 2013). Similar to the Olympic values and standards, the PG offers elite competitions with Paralympians recognised as elite athletes who require specialised training, perseverance and resources in the pursuit of sporting success (Brittain 2009, Dieffenbach and Statler 2012, Dehghansai *et al.* 2017). Due to the short history the Paralympics presents, it has only been recently that countries have begun to recognise

the need to develop structures to optimise the development of high-performance sport opportunities for talented para-athletes (Radtke and Doll-Tepper 2014).

Despite the increasing interest from sport practitioners, only a few authors have addressed Paralympic sport studies which are specific to its emergence and growth as an expression of excellence, globalisation and competitiveness at the elite level (Depauw 1997, Sherrill 1999, Depauw and Gavron 2005, Brittain 2006, 2009, Thomas and Smith 2008, Vanlandewijck and Thompson 2011, Radtke and Doll-Tepper 2014). Herewith, a significant knowledge gap exists with regards to the development of para-athlete pathways in order to cultivate successful athletes. Second, it is important to investigate how sport policies may be shaped with a different approach but specific to a parasport context (Hutzler *et al.* 2016, Dehghansai *et al.* 2017).

In addition to the lack of research and understanding of a parasport system, the movement altogether faces supplementary monumental challenges including massive variation of integration within mainstream sports, a general lack of disability-specific knowledge (e.g. inclusion strategies in schools, recruiting and developing disability athletes), limited coaching expertise and coach education pathways, higher equipment cost and relatively low levels of awareness and recognition in society (Radtke and Doll-Tepper 2014, Misener and Darcy 2014, Thomas and Guett 2014). The examples presented may correspondingly underpin the reasons as to why the context and more specifically the culture in which parasport operates in is potentially distinct from mainstream sports (Howe 2008a). Lastly, there is a lack of parasport research on the operational development of elite parasport policies, which thus makes it more difficult to understand how elite parasport systems are built and organised in a given context (Fairhurst *et al.* 2017).

Considering the foregoing argumentations, the purpose of this study is to identify how elite sport policy approaches differ between able-bodied and parasport systems. Moreover, this paper addresses the need to develop parasport-specific research on elite sport policy which can contribute to the development of para-athletes' pathways, in aid of helping policymakers improve support services, as well as create programmes that are tailor-made to Paralympic athletes and which accounts for the parasport-specific context.

Given the fact that very few specific parasport policy literature exists, this paper aims to identify differences in the various policy approaches. The narrative literature review section will commence by summarising publications which describe the state of the art from a theoretical and contextual point of view and then objectively reporting the current knowledge on this topic in the able-bodied elite sport policy literature.

### **Mainstream elite sport policy literature**

With the increase of nations vying for international sporting success, governments and national governing bodies have moved towards a more strategic approach to elite athlete development (Houlihan and Green 2008, De Bosscher *et al.* 2015). Consequently, a plethora of mainstream elite sport policy literature has emerged over the past decade (Green and Houlihan 2005, Green 2005b, Digel *et al.* 2006, De Bosscher *et al.* 2008, 2015, Shilbury *et al.* 2008, Andersen *et al.* 2015b). This includes, on the one hand, international comparative studies which analysed the development of sport policy factors influencing elite sport success (e.g. De Bosscher *et al.* 2008, 2015), and conversely studies which describe how elite sport policy is shaped (e.g. Houlihan and Green 2008, Andersen *et al.*, 2015b). An overview of selected comparative elite sport policy studies is provided in Table 1. Although each study took a slightly different approach and presented a different scope, the common issue addressed in these books is the extent to which a broad range of countries with different political, socio-economic and cultural profiles adopt similar policy goals and instruments.

Herewith, a conclusion illustrated in Table 1 is that the common characteristics of elite sport systems of developed nations are based on a similar model of elite sports development with slight variations in the way elite sport policies are implemented (De Bosscher *et al.* 2008, Brouwers *et al.*

**Table 1.** An overview of international comparative elite sport policy studies (Updated from De Bosscher *et al.*, 2015, p39).

Authors Methods and study characteristics	Countries and sports	Factors analysed
Green and Houlihan (2005) Descriptive and comparative; qualitative data collection: interviews and document analysis; ACF to analyse policy changes; aims to identify the degree of similarity in elite sport development models	3 Countries: Australia, UK and Canada 3 Sports: swimming, athletics, sailing/yachting	Support for full-time athletes A hierarchy of competition opportunities centered on preparation for international events Elite facility development Provision of coaching, sports science and sports medicine support services
Digel <i>et al.</i> (2006) Descriptive and comparative; qualitative data collection: interviews and document analysis; questionnaires (3 sport associations – ministries responsible for HP sport, National Olympic Committees, country-specific organisations)	8 Countries: Australia, China, France, Germany, Italy, Russia, UK, USA 3 Sports: Athletics, swimming, volleyball	Resources Politics Education Competition Talent search Science Mass media and sponsorship
Bergsgard <i>et al.</i> (2007) Contextual and historical; descriptive; contributors from each country	4 Countries: Germany, England, Canada, Norway Overall (national) level	Context, cultural background and historical development
Houlihan and Green (2008) Contextual and historical; descriptive; author(s) from each country describe elite sport policies, generally based on literature & document analysis; builds on Green and Houlihan's (2005) ACF	9 Countries: China, Japan, Singapore, Germany, France, Poland, Norway, New Zealand, USA Overall (national) sports level	Historical; politics; education; competition; talent search; science; mass media and sponsorship
Andersen and Ronglan (2012) Contextual and historical; aims to look beyond the designated sport organisations and to capture the more detailed structures as well as intentions and processes behind national elite sports systems; descriptive; contributors from each country Aims to identify how national elite sport systems came about, how they relate to success in individual sports, how they differ in terms of centralisation, responsibilities and roles and how this influences the capacity for successful elite sport development	4 Nordic countries (with similar systems) + success stories of sports: Norway (women's handball), Finland (men's ice hockey), Denmark (track cycling), Sweden (tennis and golf)	Historical sport developments in Nordic countries, in relation to elite versus mass sport; critical decisions; resources; controversies; success stories – different roads to excellence; differences and similarities, policy issues, systematic comparisons; key dimensions in elite sport development Mass sport foundation Facilities Strategies and key factors Team building focus International influence Interaction with national elite sport system
De Bosscher <i>et al.</i> (2008), De Bosscher <i>et al.</i> (2015) – <b>SPLISS</b> Focus on meso-level factors, using SPLISS model and comparing 103 critical success factors; mixed methods research: qualitative + quantitative; stakeholder involvement (athletes, coaches, performance directors); scoring system: to move beyond the descriptive level of comparison	15 Countries: Belgium (Flanders + Wallonia), Denmark, Estonia, Finland, France, The Netherlands, Northern Ireland, Portugal, Spain, Switzerland, South Korea, Japan, Australia, Canada, Brazil Overall (national) sports level	Pillar 1: Financial support Pillar 2: Governance, organisation and structure Pillar 3: Sport participation Pillar 4: Talent identification and development Pillar 5: Athletic and post athletic support Pillar 6: Training facilities Pillar 7: Coach provision and development Pillar 8: (Inter)national competition Pillar 9: Scientific research

ACF: Advocacy coalition framework. Adapted from De Bosscher *et al.* (2015).

2015). In a nutshell, these studies essentially showed similar elements to achieving sporting success. Moreover, several studies analysed elite sport policies or strategic management at a sport-specific level, for instance in athletics (Grix 2009, Truyens *et al.* 2016), canoe (Sotiriadou *et al.* 2014) and tennis (Brouwers *et al.* 2015), all these studies discussed the role of culture and the environment in an interplay with specific policies for a sport. However, none of these studies addressed the development of sport policies in a parasport-specific context. To address this oversight, this paper will use one of the models highlighted in Table 1 as a starting point, namely the SPLISS model (Sport Policy Factors Leading to International Sporting Success) (De Bosscher *et al.* 2006). This model has been described as one of the most inclusive studies of elite sport policy factors with a coherent theoretical model to analyse the relationship between elite sport policies and sporting success that is empirically tested (Shilbury *et al.* 2008, Brouwers *et al.* 2015, Hutzler *et al.* 2016, Truyens *et al.* 2016).

In the SPLISS model, 9 elite sport policies called 'pillars' were identified along with 96 critical success factors (CSF). The pillars and CSF were clustered and empirically tested, first in 6 nations (De Bosscher *et al.* 2006) and later in 15 nations (De Bosscher *et al.* 2015). The nine sport policy dimensions include (1) financial support; (2) governance, organisation and structure; (3) foundation and participation; (4) talent identification and development; (5) athletic and post-career support; (6) training facilities; (7) coaching provision and education; (8) (inter)national competition and (9) scientific research and innovation.

Furthermore, in this paper, we recognised that even though we used this model, this does not mean that the model is without limitations, as some authors have noted challenges such as identifying contextual factors and general sport culture and political background in a given context (Truyens *et al.* 2014, De Bosscher 2016). Regardless, it was determined that the SPLISS model provided an important starting point from which to compare the able-bodied and parasport context and appears to be appropriate for the purpose of this particular study where differences in sport policy are being investigated.

### **The parasport context**

The International Paralympic Committee (IPC) and the growth of the PG in the last decade have helped to encourage and empower people with disabilities through the media, creating a paradigm shift with regard to the capabilities of people with disabilities (Blauwet and Iezzoni 2014), employing advocacy strategies seeking the endorsement of awareness and knowledge of parasports (Blauwet and Willick 2012, Mauerberg-Decastro *et al.* 2016) and promoting attitudes that help build sporting role models for people with a disability (Purdue and Howe 2012). On the other hand, effective policies towards people with disabilities have yet to receive much attention, primarily with regard to policies attempting to transform the attitudes of people in many societal life domains, namely employment, education, health, leisure and participation in sport (Fisher and Purcal 2017).

Despite the fact that currently, the PG has turned into the most influential vehicle for the promotion of elite parasport where athletes with disabilities can attract significant media coverage and commercial sponsorship like most of the able-bodied peers (McPherson *et al.* 2016), some nuances between able-bodied and parasport context are important to consider. Some differences have been addressed in a few studies, for instance, a lack of formal education on parasport presents challenges to gaining disability specific knowledge (Depauw and Gavron 2005, McMaster *et al.* 2012, Fairhurst *et al.* 2017). A common reality exists that elite para-athletes have restricted access to assistive technology and specific sports equipment, when compared to their able-bodied counterparts (Mauerberg-Decastro *et al.* 2016). In light of all of this, the influence of culture and in particular the acceptance of persons with disability is additionally reflected in the amount of research taking up this topic. The lack of acceptance is suggested to result in the death of organised sport programmes, scarce access to coaches, as well as few accessible sports facilities,

and a general barrier for parasport integration and recognition (French and Hainsworth 2001, Depauw and Gavron 2005).

Studies in the coaching literature highlighted both similarities and differences between coaching able bodied and parasport (Depauw and Gavron 2005, Cregan *et al.* 2007, Shapiro and Martin 2010, Dieffenbach and Statler 2012), wherein other studies advise that coaching an elite level athlete with an impairment requires some understanding of potential barriers, both physically and mentally (Misener *et al.* 2013, Wareham *et al.* 2017). Acting as a para-coach thus requires a pool of competences which needs to be taken into consideration, such as the nature of the impairment or essential biomechanical adaptations and specific social skills (Depauw and Gavron 2005, Cregan *et al.* 2007, Fairhurst *et al.* 2017). Coaches should take the consequences of these practices into consideration by critically examining the assumptions about coaching an athlete with disabilities (Townsend *et al.* 2015).

Other areas where comparisons have been attempted between the able-bodied and parasport systems include competitive preparation and training modifications (Dieffenbach and Statler 2012, Griggs *et al.* 2017, Houlihan and Chapman 2016). A debate still exists, between whether adaptations of existing able bodied programmes to the Paralympic context are appropriate (Hutzler *et al.* 2016, Dehghansai *et al.* 2017). Similar to the comments made above with regards to a coaching context, huge variances are prevalent in the parasport context, both environmental and individual, which includes the variety of cultural perceptions of disabilities that could result in significant challenges and constraints (Fairhurst *et al.* 2017, Hutzler *et al.* 2016). In conclusion, any adaptations from an able-bodied perspective should be complemented with an understanding of the impairment and sport-specific applied research (Griggs *et al.* 2017).

## Methods

### *Participants*

For the purpose of this qualitative study, 16 semi-structured in-depth interviews were conducted with international Paralympic experts from 8 countries. The participants were purposively selected through a maximum variation strategy, which means that they were selected according to predetermined criteria relevant to a particular research objective (Patton 2002) and to guarantee the representation of a variety of individuals with high levels of expertise in elite Paralympic sport (Sparkes and Smith 2014). The rationale for adopting a purposive strategy was that the researchers assumed a-priori theoretical understanding of the topic being studied herewith having a unique, different and important perspective on the phenomenon being studied (Robinson 2014). The included participants were thus high-performance directors (HPDs) and other Paralympic specialists, including academics.

The experts were selected from countries considered to be successful in Paralympic sports and/or have recognised elite parasport systems. All countries (except one) were ranked in London 2012 and Rio 2016 PG medal table in the Top 20 and Top 15, respectively. An overview is shown in Table 2. In order to protect experts' anonymity, random numbers (e.g. Expert 8) were allocated in the text.

### *Data collection*

Semi-structured, in-depth interviews were chosen, among other qualitative methods for data collection, due to its valuable sources of rich knowledge about expert's experiences (Smith and Sparkes 2016). This approach allowed the researchers to probe interviewees in order to seek further information where uncertainty exists (Skinner and Edwards 2009) and provided the opportunity for additional questions to emerge, consequently, creating new insights (Smith and Sparkes 2016).

**Table 2.** Overview of the participants and sampled countries.

Country	Experts	HPD	Specialist	Rank position London 2012	
				PG medal table	Rank position Rio 2016 PG medal table
Canada	5	3	2	20th	14th
Brazil	4	2	2	7th	8th
The Netherlands	2	2		10th	7th
Spain	1	1		17th	11th
UK	1		1	3rd	2nd
Australia	1		1	5th	5th
USA	1	1		6th	4th
Belgium	1	1		36th	25th

The interview schedule was composed of open-ended questions and consisted of two parts. The first part included questions about general disability contextual factors and additional factors that characterised differences between the able-bodied and parasport systems which may coherently influence sport policy approaches. The second part consisted of questions regarding the differences between able-bodied and parasport with specific reference to a sport policy perspective by systematically focusing on the nine SPLISS pillars (De Bosscher *et al.* 2006). In each area, probes such as 'could you please explain in more detail how that factor is organised in parasport', 'how does this differ from able-bodied sport?' and 'what effect does that factor have on the Paralympic sport context?' were used to understand the phenomenon under investigation and to seek deeper details and clarification (Hanton *et al.* 2005).

In addition, questions were asked to identify other policy dimensions, which were not framed under the SPLISS framework. Even though the nine sport policy dimensions were based on this framework, it is important to stress that, to date, this model has not been applied to the parasport context, nor has any of the other policy factors noted in Table 4. For example, it could be assumed that other policy factors may emerge in parasport that cannot be clustered under one of the nine pillars. Hereby, it was therefore important that sufficient room was left for other specific parasport policy dimensions and contextual factors which could emerge from the interviews.

### Data analysis

Following the interview transcripts, the data were entered into the qualitative data analysis software NVivo 11, which were used to facilitate the organisation of the data. The open questions were organised through paragraph styles and created nodes for each one. Three types of analyses were performed to assist with inductive and deductive reasoning (Hsieh and Shannon 2005). These were as follows: (a) thematic analysis to code the responses under major themes, (b) constant comparisons to develop more specific sub-themes and (c) content analysis to identify the percentage of experts that referred to each of the elite sport policies (Brouwers *et al.* 2015). Data were read and reread in order to become familiar with what they entailed and focusing on the identification of emerging patterns. During thematic analysis, data were first coded under the nine SPLISS a-priori policies in a deductive reasoning process. When a new factor or policy area emerged, a new code was assigned using inductive reasoning, and a description of what the new code meant was added. This was alternately clustered separately as a contextual factor. All quotations which were coded within each policy area or theme were then reread. By constantly comparing the quotations, data were then coded under more specific 1st and 2nd level sub-themes until no further coding was possible (Biddle *et al.* 2001, Braun and Clarke 2006, Flick and Gibbs 2007).

Two of the authors coded and analysed the data separately and the findings were compared during meetings while the results were discussed seeking mutual consensus (Patton 2002). The purpose of the aforementioned method was to provide confirmation that the data were analysed

in a coherent manner with the imposed framework and that the process could be reliably duplicated. The development of an appropriate sample and analysis for the purpose of the study was to provide a significant output that could claim to achieve rigour and quality of the study considered (Smith and Mcgannon 2017).

## Results

Although the interviews attempted to focus on the differences in elite sport policy approaches between the able-bodied sport and parasport systems, notably, more than half of the experts emphasised factors related to the culture of parasport and its specific context, reinforcing the perception that parasports are more significantly influenced by macro-level factors than the able-bodied sport system. Important to note is that, even though these contextual factors influence sport policies to a large extent, they are also arguably outside the influence of a policymaker (De Bosscher *et al.* 2009). For this reason, these contextual factors are discussed separately in this section, with Table 3 presenting an overview of the themes and sub-themes. The second part of the Results section reports on the findings based on the sport policy dimension of the SPLISS framework and is additionally presented in Table 4.

### Contextual factors

More than half of the experts interviewed referred to the *classification system* in Paralympic sport as one of the major differences between able-bodied and parasport and the classification being the core as to what makes it unique from the able-bodied system. As stated by some experts, classification in Paralympic sport provides and creates a fair competition and is a basic and foundational feature of parasport. Collectively, it is 'what divides the whole process and creates the competition system' (Expert 3) and 'they [Olympic and Paralympic sport] differ in the existence

**Table 3.** Overview table of contextual themes and sub-themes emerged from the data analysis of the main differences between able-bodied and parasport.

Theme	1st level sub-themes	2nd level sub-themes
Classification system (14)	Unique characteristic of Paralympic sport	Creates complexity in Paralympic sport Creates the competition system and ensure fair disputes Define which athletes are eligible to compete in each sport based on their ability to perform a certain function
Media attention (7)	Parasport has less media coverage than in able-bodied sport	Media attention in parasport is often associated with the issue of disability rather than with performance Athletes with severe impairments have less media coverage than other impairment types
Number of people involved (6)	The cohort of athletes in parasport comes from a considerably smaller number of persons than in able-bodied sport	Few athletes in each sport classification Small number of athletes with severe impairment
Awareness about disability sports (6)	Perception of the position and capabilities of people with disabilities Lack of awareness and interest in parasport by society	Lack of opportunities for people with disabilities to become fully integrated in societal context Awareness of the sponsors, coaches and professionals in general
Equipment (6)	Equipment exclusive for Paralympic sport	Adaptations in sports equipment, use of racing wheelchairs, prostheses and orthotics

Notes: The numbers in brackets in the first column indicate the number of experts who referred to this theme. Some experts referred to more than one theme.





**Table 4.** Overview table of the sport policy factors themes and sub-themes emerged from the data analysis of the main differences between able-bodied and paraspport.

Theme	1st level sub-themes	2nd level sub-themes
Financial support (16)	Elite level Grassroots level Extra cost involved in paraspport	Elite para-athletes receive similar public funding as elite able-bodied athletes Lack of funding for grassroots paraspport Expensive equipment
Governance, structure and organisation (17)	More organisation and structures are involved in paraspport than in able-bodied sport	Additional costs for guides and staff for athletes with high support needs NPCs and IPC act as international federations (IF) for some sports Four types of IF: Olympic sport federation, IPC/NPC sports, federation by impairment group, federations by paraspport
Sport participation (22)	Access to paraspport Acquired impairment	Paraspport has less sport opportunities available in clubs than able-bodied sport Access to sport differs between congenital and acquired impairments People with acquired impairment have access to sport through rehabilitation hospitals
Talent identification and development (9)	Congenital impairment Lack of structured talent ID programmes	Late entry age for people with acquired impairment People with congenital impairment have access to sport through specialised schools, able-bodied sport clubs or disability associations Early entry age for people with congenital impairment There are few talent ID programme developed specifically for paraspport The coaches' expertise is used for talent identification
Athletic and post-career support (10)	Able-bodied sport talented athletes are identified in a younger age when compared to para-athletes Post-career support	Para-athletes are usually identified as a talent in an older age Able-bodied sport talented athletes are identified as a child, at home or at school Lack of post-career support programmes for paraspport
Athlete career pathways (20)	Para-athletes progress through the system faster than able-bodied (short pathways) Pathways' length and development differ between congenital and acquired impairments Sports facilities physical barriers (accessibility)	Para-athletes have often less education opportunities than able-bodied athletes Due to small number of athletes in each sport class, para-athletes achieve elite level faster than able-bodied Sport and impairment-specific pathways
Training facilities (13)	Transportation barriers	Elite able bodied and para-athletes can make use of the same facilities as long as it is accessible Para-athletes with high support needs require a transportation logistic to access the facilities (e.g. someone to drive or some pick-up service)
Coaching provision and education (26)	Coach transition process – from able-bodied to paraspport	There is no need for specific training to coach transition Requirements needed for a para-coach: disability-specific knowledge, paraspport-specific knowledge, social skills
(Inter)national competition (17)	International competitions National competitions	There are enough international competitions opportunities at elite level Some para-athletes are not ready to participate in international competitions Lack of financial resources to participate in international competitions Few national opportunities
Scientific research (12)	Research in paraspport sport is less developed than able-bodied	Few grassroots level competition opportunities Lack of funding for research applied to paraspport Research should be more integrated with practise

Notes: The numbers in brackets in the first column indicate how many times the themes were referred for each question. Some experts referred to more than one theme.

of the classification system, which seeks to give a bit of similarity in the disputes, which does not exist in the Olympic sport, because there is only the categories of age, weight, male and female' (Expert 1). Although it can be confusing for the general public, 'what confuses everybody is the classification system, it is much easier to understand Olympic sport when you are watching it on the television' (Expert 6).

The second most noted theme was *media attention*, as highlighted by one expert 'the media appeal is more associated with the issue of disability rather than with performance' (Expert 6). In this sense, 'people appear to look to the disability context more as in: "how beautiful, he overcame the tragedy", than looking at the absolute result of an athlete' (Expert 15). When comparing to able-bodied sport media attention, Expert 8 noted that 'disability sports has less media coverage and maybe a certain type of media coverage that is not related to the sport performance as we would like it to be'.

*Awareness* about both parasport and the disability itself according to the experts also plays a substantial role in the development of parasports, with reference to the awareness about disability by people with disabilities themselves and by society in general, which was highlighted by some experts as a key difference between the two systems. 'Awareness plays a huge role in Paralympic sports. It has always been present. I don't think that a single able-bodied person does not know the sports that are available for them to practise, and this situation happens very often in Paralympic sports' (Expert 4). Furthermore, 'there is a lack of awareness of the families of the children with disabilities. They should start directing the children with disabilities to practice sports much earlier' (Expert 13).

Finally, the use of *equipment* in parasport emerged from the interviews and was noted by some experts as one of the main general differences between the two systems. In parasport, the need for adaptations in sports equipment is remarkable, such as the use of wheelchairs and prostheses. As stressed by Expert 9, 'the first thing that came to my mind when I thought about the differences is the equipment used in Paralympic sport that we won't find in mainstream sports'.

### **Sport policy factors**

The sport policy dimensions as presented by the interviews were clustered according to the nine pillars of SPLISS as a starting framework. It needs to be noted that the purpose of this study, however, was not to develop a parasport policy model but rather that it be used as an applicable framework to help cluster Parasport factors where appropriate into the various policy dimensions.

Table 4 provides an overview of the policy themes and their 1st and 2nd level sub-themes according to the coding and the content analysis from the open questions asked for each policy dimension. To note, room was left for other policy dimensions apart from the previously mentioned contextual factors; nonetheless, no new policy factors emerged when clustering the differences between able-bodied and parasport. Accordingly, after thematic coding and comparisons of data from the open questions, it appears that all differences in elite sport policy approaches between able-bodied and parasport could be clustered under one of the nine dimensions of the SPLISS framework.

With relation to *financial support*, it is worth repeating that the sample was composed of individuals from countries considered to be successful in medal table in Summer Paralympic sport. Most interviewees agreed that concerning national elite level in Paralympic sport, elite para-athletes nowadays receive similar public funding when compared to elite able-bodied athletes. According to Expert 16, 'Paralympic sport is growing more and more at the elite level and so are the resources applied to it'. As noted by Expert 5, 'there is funding available for elite Paralympic athletes and I would say, if you compare the number of people that participate in Paralympic sport, it is equivalent.' Expert 2 stated 'at the national team what goes to the Paralympic athletes is exactly the same funding as the Olympic athletes are getting'. On the other hand, as noticed by

Expert 16, 'when it comes to sponsorships, you can find a difference when comparing the resources given to an Olympic athlete, which is always a bigger amount'.

Regarding funding to the parasport grassroots system, some experts stated that there is still a big gap when compared to the funding that elite para-athletes receive, as noted in the following expert opinion:

We have a large amount of money concentrated at the top of the pyramid and the [national] Paralympic committee makes the transfer of this money to the elite sport federations. But, if you look to the grassroots sports, there is a very big gap due to the small amount of money that is designated for it. (Expert 3)

The experts also emphasised the higher costs involved with parasport when compared to mainstream sport. Examples included racing wheelchairs, prostheses, orthotics, the need for athlete-guides for athletes with visual impairments and additional staff needed for athletes with high support needs. Expert 2 highlighted an example of this:

Sometimes they don't consider the extra cost involved for a Paralympic athlete in regard to the equipment needed. For example, for the visual impairment skier, everything is high costs and there are also the costs of the guide. So, the costs are doubled when there is a guide involved, despite the funding being sometimes exactly the same as what an amputee athlete would get, and there are very different expenses.

Unique opinions arose from the expert's interviews when comparing the *governance, structure and organisation* in parasport and able-bodied sport. The 1st level sub-theme from the data in this category was related to the inherent complexity within the Paralympic movement. Expert 5 noted that 'it is difficult to describe how parasport is organised, because it does not concern just one sport, you have also the disability side of it, so you get quite a broad range of things involved'. For most of the sample, the main difference between the organisation of parasport and mainstream sport was mirrored by Expert 14 who commented that 'the [national] Paralympic committee plays the role of confederation' for some sports, a model that is not found in able-bodied sport. Explaining why parasport might not follow the Olympic organisation model, Expert 10 highlighted:

This happens also because there are different types of disabilities, which require another structure and organization; further subdivisions are necessary for the organization and cannot simple follow or reproduce the Olympic model, because of the nature of disability sport, it requires another organizational model.

Another difference that emerged was related to the number of organisations involved in parasport. As stated by Expert 4, 'in my opinion, there are too many organisations involved, too many different interests, too much overlap and a lot of misunderstandings of what each organisation should be doing'.

In relation to *sports participation*, the main issue raised was that the limited access to parasport and the few opportunities available when compared to able-bodied sport, as stressed by Expert 16:

...The access is a big challenge and is different from able-bodied, because everywhere you can find a club for non-disabled people, but you cannot find as many clubs available to welcome a person with impairment. Still, the participation in parasport in general is very low when compared to able-bodied.

Regarding the differences concerning access to sport, the experts' opinions were focused on how the attraction to the sport may happen, as noted by Expert 1. 'In able-bodied sport, people mostly start in clubs or in mainstream schools while in disability sports, you have the special schools and the rehabilitation centres'. Expert 8 also stressed that 'the access to sport can be really different because on the one hand have someone with congenital disability and on the other hand someone with an acquired disability and that can really influence in how they access the sport'. Consequently, parasport generally has two main entrances to its system; one where 'people with acquired disability have access during the rehabilitation process, normally through the rehabilitation hospitals' (Expert 12) and, for people with a congenital disability, 'kids who were born with some disability can start in the special schools – the special education schools for disabled, like the case of blind people' (Expert 11).

Differences regarding the entry age to sport were also noted by some experts, which is considered late in parasport when compared to able-bodied peers. According to Expert 7, 'regarding the age, in general, the Paralympic athlete starts too late in comparison with able-bodied athletes, even when it is a congenital or acquired disability'.

With regard to *talent identification and development*, the findings show that more than half of the interviewees agreed that for parasport, there is a lack of structured talent identification programmes. The most frequent strategy used is based on the eye of the coach, otherwise referred to as the 'coaches' expertise':

We're now going much by the technical expertise of our coaches through an unsystematic field observation. So, we rely on the talent of our coaches to identify athletic talents, because we do not have a metric or empirical identification process. (Expert 3)

In the case of Paralympic sports, talent identification is done by coaches of both national teams and clubs, but it is more a singular thing, it is like being at the right place at the right time. The coach observes an athlete running and thinks 'this boy may be a potential'. But it is still based on guesses. (Expert 10)

When compared to able-bodied sport, most experts also suggest that the process of talent identification in able-bodied sport comes more naturally since 'it [able-bodied sports] has several other opportunities to identify a talent in his youth, through the clubs, physical education classes at school or even their parents at home' (Expert 15).

Regarding athletic career, interestingly, no expert reported any differences between parasport and the able-bodied sport systems. For the subheading, *post-career support*, it was noted by the experts that there was indeed a lack of post-career programmes for para-athletes, possibly making the career transition more difficult than for able bodied athletes. As stated by Expert 1,

today it becomes a concern, because we have now a significant number of athletes that are leaving sport and I believe that this transition is kind of a shock to them. When they quit sport and need to face a regular job, they often are not adequately prepared, both financially and psychologically to think about their career after sport.

The experts also expressed concerns about the lack of education opportunities that seem to be commonly present in the disability context 'because people with disabilities did not always have the opportunity to study or to have some financial resources during their career to support their post-sport phase' (Expert 12).

Furthermore, a unique element of parasport that emerged from the findings of this study was the athletes' career pathways and its phases of development, which encompass and cover three policy dimensions, namely *participation*, *talent identification and development* and *athletic and post-career support*. More than half of the experts suggested that Paralympic athlete's pathways are typically shorter than in able-bodied elite athletes. For example, Expert 2 mentioned that

the difference in my opinion is that there are far smaller groups of people involved in parasport and the athlete progresses faster through the system, so sometimes an athlete can go from being part the grassroots community to being a Paralympian in two years

Many other experts had similar views when explaining why these pathways appeared to be shorter. Based on a few experts' opinion, this is linked to the fact that parasport athletes do not have an efficient pathway of learning, opportunities for improvement and training when compared to their able-bodied peers. For example, two experts stated the following:

They [Paralympic athletes] compete and win in any regional competition and if they have little more skills than others, they can go forward to a bigger competition and, even without technical and adequate training conditions, they can perform in a national team and participate in international competitions. They do not often go through a pathway to achieve high performance. (Expert 10)

Sometimes their pathways are really fast, also because they [the countries] don't have enough athletes to compete, so they find some athlete and just put him to go forward. (Expert 9)

The use of the same *training facilities* for both, Olympic and Paralympic athletes, was frequently mentioned during the expert's interviews. As noted by Expert 13,

we don't think we need exclusive facilities, we just need that they are accessible; and we do want our tennis players to be training together with the able-bodied peers, we want our swimmers to be training in the same pool as the other athletes, so we want this for every sport.

Another important factor that emerged consistently during the interviews was accessibility of the sports facilities, which is crucial in the Paralympic context and enables participation of athletes with disabilities. Here, two main issues were raised; one was related to physical barriers of the facilities and another, linked to transportation barriers, as noted by Expert 7:

The challenge is to get to the facility, which is the transportation issue. Most of the times, someone needs to drive them [disabled athlete] there, and then once they get at the door [of the training facility] they have the issue of accessibility, where they have to take the wheels off the wheelchair to get into the gym each time to go through.

The *coaching provision and education* section resulted in interesting and, at times, conflicting findings. Nine experts thought that there was no need for a specific coach education module to coach athletes with disabilities while seven thought otherwise. For example, Expert 8 stated that 'if they are a good coach, they are a good coach. There are more similarities than differences. I think most of the coaches just don't know that'. Expert 2, meanwhile, highlighted that 'they [the coach] must think outside of the box a bit, because one programme may not work for everyone' and Expert 6 suggested 'one additional complexity is that the coaches need to be creative, they have to know about equipment, how it works, all of this are additional pieces of knowledge that the para-coaches need to have'. In the intervening time, when asked about the criteria to be a good para-coach, many experts had mixed opinions about whether disability specific knowledge played an important role:

They [coaches] need to have abilities to work much closer to the athlete, even more than they are used to in able-bodied sports and understand what they [the athletes with disabilities] can and cannot do, because there will be some limitations regarding the impairment and they need to know what they can do to achieve the best performance of an athlete. (Expert 11)

In relation to *(inter)national competition*, when asked to compare opportunities between parasport and able-bodied sports, almost half of the experts agreed that 'today, it is possible to find plenty of competition opportunities at international level for elite athletes, the same for both Olympic and Paralympic' (Expert 10). However, some experts noted that

the problem is that for the Paralympics, the athletes are often not ready to compete in international competitions, even though the coach ends up taking them anyway. This does not happen in the Olympics, that whoever reaches the international level is because they have indeed the level to be there. (Expert 14)

On the other hand, at the national level, a large part of the sample highlighted that 'we have only a few national opportunities, either by the lack of a sufficient number of athletes or even because of the structure of the sport nationally' (Expert 1).

Finally, the experts were asked if there was sufficient *scientific research* concerning Paralympic Sport compared to able-bodied sport. Most of the experts stated that this is still an undeveloped area, as noted by Expert 3:

Researches are being developed, but in Paralympic sport we are still in a very embryonic stage, when compared to the Olympic sport and the number of evidence we have about the Paralympic athlete in relation to the performance level is still very low. I did a very simple [Google] search recently where I used the keywords 'training and Olympic' and more than 900 results appeared. When I switched to 'training and Paralympic', only 100 results were found. It is still a very low number! (Expert 3)

## Discussion

The findings of this study provide an understanding of how parasport differs when compared to able-bodied sport and what this means for sport policy. A caveat to this is that the sampled experts came from developed nations with reasonably professional (elite) sport systems. This was explained by the purposeful sampling method, as this study only focused on the most successful countries, which are also more developed countries (Buts *et al.* 2013).

Although parasport is a growing field of study and more elite Paralympic athletes receive similar support as their able-bodied peers, this study contends that there are still significant differences between both systems that influence the way sport policies should be developed. In light of such arguments, from a theoretical perspective, the main contribution of this paper is that it offers a comprehensive framework for understanding the differences between able-bodied and parasport. From a sport practitioners point of view, this framework can help sport policymakers and HPDs to better understand the specific character of parasport, and the support services that are needed for Paralympic athletes. Furthermore, the framework can be a helpful tool for NGBs of mainstream sports, who also support paralympic athletes of their sport. Moreover, parasport is being developed within mainstream sports federations; herewith, it is important to create awareness among policy-makers and HPDs of its uniquenesses and commonalities.

The results from this study suggest that there is no one-size-fits-all approach to developing parasport systems. This conclusion, in particular, lends theoretical credibility to the need to examine the sport policy factors that contribute to athlete development pathways and the characteristics of support programmes on a sport-specific and impairment-specific level.

The remainder of the discussion section is built around two parts. The first will discuss in what way the *classification system* makes Paralympic sports idiosyncratic and appears to be an essential contextual difference that has many implications for sport policies. The latter part will reflect on a selection of major policy differences that were identified in this study, acknowledging the broader context in which Paralympic sport is situated (Dowling *et al.* 2017).

Several other studies have recognised that the classification system is a crucial difference between able-bodied and parasport (Vanlandewijck and Chappel 1996, Jones and Howe 2005, Howe 2008b, Tweedy and Vanlandewijck 2011). A classification system attempts to provide fairness in competition and is used to distribute participants not only by sex or weight as commonly done in able-bodied sport but also in categorising by degrees of functional ability. The reasoning behind addressing the classification system in isolation is due to the overtly complex process which might confuse the general public, thus impacting media coverage, as well as affecting an efficient organisation of competitions (Thomas and Smith 2008, Howe 2008b). The complexity is created, in part, because each classification differs substantially, not only by sport but impairment group as well. This is not a new dispute, since its inception the classification system has been a matter of debate in all discussions regarding future directions of parasport development at the elite level. The challenge revealed is that it is difficult to simplify.

In relation to elite sport policy, particular differences were also distinguished in the policy dimensions of the SPLISS model between able-bodied and parasport in all the nine sport policies dimensions. In this second part of the discussion, special attention will be given to three major dimensions: (1) athlete pathways (*sports participation, talent identification and development, athletic and post-career support*); (2) *governance, structure and organisation of elite sport* and (3) *coaching provision and education*.

In relation to the first dimension, different frameworks in the talent development literature have described the process of athlete development pathways in able-bodied sports. An athlete pathway can be defined as three stages, namely attraction/recruitment, retention/transition and nurturing in the sport (Green 2005a, Sotiriadou *et al.* 2008). From a micro-level perspective (e.g. the individual athlete in able-bodied sport), there is a range of studies that describe these pathways as athlete's transitions into several stages of athlete development, such as the long-term athlete development

model (LTAD) (Balyi and Hamilton 2004), transition model (Bloom and Sosniak 1985), development model of sport participation (Côté and Fraser-Thomas 2007) and development model on transitions (Wylleman and Lavalée 2004). Most of these athlete development frameworks are sport generic and none thus far has attempted to outline Paralympic athlete development neither has attention been paid to the differences in pathway development by impairment groups. The only exception is the LTAD model developed in Canada that extends the model to para-athletes development, whereby there are two additional stages, namely 'awareness' and 'first involvement'. This was also apparent in the findings of this study in relation to the transitions from sports participation to talent identification and athletic and post-career development that were adopted from the SPLISS framework. The major difference as ascertained from the experts identified appears to be that the ways in which para-athletes can access the sport vary depending on the impairment group, and how and when a talented para-athlete will be identified and developed in a specific sport.

In relation to the first phase of athletes' pathways, when athletes enter the sport, namely *sport participation* (Pillar 3 in the SPLISS model), the literature commonly recognises the barriers involved (Shields and Synnot 2015), such as lack of accessibility to the sport facilities and lack of adapted sports programmes and a small pool of athletes participants in each sport (Jaarsma *et al.* 2014). These were frequently highlighted by the experts in this study and are an essential difference in the sport policy development to increase sports participation in parasport. The issue of less disabled people doing sport results from a number of complex barriers including a far smaller pool of potential athletes to start with who spread over an increasing number of possible sports to take part in who are then spread even thinner by the need for a classification system to ensure fair competition. In addition, findings from this study indicated that those entering the parasport system can range from children with congenital disabilities to adults who acquired their disability through trauma or illness and learned about parasport in rehabilitation centres (Finch *et al.* 2001, Radtke and Doll-Tepper 2014). As a result, parasport has unique demographics where athletes are often much older than their able-bodied peers (Radtke and Doll-Tepper 2014), which can then have a direct influence on the process of talent identification and development in parasport.

Consequently, this study revealed the complex nature of entering the parasport system and the challenges associated with identifying talented athletes at later ages. The experts in this study identified that there are only a few, if any, systematically structured programmes for *talent identification* and *development*. This appears to be a major difference when compared to able-bodied sport, where the age of talent identification and support of young and talented athletes is an essential ingredient of long-term success (De Bosscher *et al.* 2006). It is also known from the able-bodied sport literature that the early identification and the appropriate support of developing athletes are essential to these talented individuals fulfilling their potential. There are a plethora of studies that have shown the importance of structured high-performance sport programmes of talent development and its use to predict elite success (Abbott and Collins 2002, Green and Houlihan 2005, De Bosscher *et al.* 2006, Brouwers *et al.* 2012). In parasport, researchers are only now starting to recognise those factors and the need for structured talent identification and development programmes. Therefore, insights gained by research in the able-bodied sport system may be applied to disability sport, but likely only to a limited point because of the need for an impairment-specific approach (Depauw and Doll-Tepper 2000, Radtke and Doll-Tepper 2014, Dehghansai *et al.* 2017).

Remarkably, the last phase of an athlete pathway, *athletic* and *post-career support* was mentioned less frequently by the experts. A possible explanation for this limited attention paid to post-career support could be that parasport policies are more focused on the success that athletes can achieve during their career and less on athletes' lives beyond their careers, as well as the lack of education opportunities throughout their athletic careers (Wheeler *et al.* 1996, 1999). Findings from the study of Wheeler and colleagues (1999) on disability sport careers suggested that athletes with disability quite often expressed concerns regarding a lack of institutional support before and after retirement. These findings, however, did not differ from those in able-bodied sport policies studies

(De Bosscher *et al.* 2015). In light of such arguments, more policies aiming to engage into the issue of disability identities beyond the sports career should ensure the athletes' well-being during transitions out of sport (Bundon *et al.* 2016). This may even be more pertinent as recent literature in this regard suggests that social oppression could increase damage to well-being after retirement from competitive sport, turning it into a traumatic experience (Smith *et al.* 2016). Nevertheless, the reality is that at the parasport level, this policy dimension is still in an embryonic stage and the results in the present study support such findings and reiterate that post-career support could be a policy area to be improved at the general parasport level. This would arguably then provide better services to the athletes that will face such transitions in parasport. It is widely found in the able-bodied sport literature that athletes' pathways are recognised as complex and require a multilevel approach (Shilbury *et al.* 2008, Sotiriadou *et al.* 2008, Andersen *et al.* 2015a). The results of this study corroborate these findings and reiterate that this seems to be even more substantial in a parasport context.

The second major difference between able-bodied and parasport found in this study relates to the *governance, structure and organisation* of elite sport. Sport opportunities for people with disabilities worldwide have usually been organised by impairment instead of by sport (Legg *et al.* 2003). Therefore, most of the experts interviewed emphasised that there are several organisations involved in disability sport governance and consequently, parasport policies are organised on a vastly different basis when compared to the able-bodied system. Unlike able-bodied sports that are organised by able-bodied international sport federations, alternatively, elite parasport is nowadays organised under the IPC umbrella or a number of other international governing options. The IPC is the international governing body for the policy development of both summer and winter Paralympic sports. Compounding the complexity of the organisation and structure of parasport, there is a mixture of other sport and disability-specific federations, with some sports developing their own international sports federation, such as wheelchair basketball and wheelchair rugby. Furthermore, there exist federations by disabilities, at the international level also known as International Organizations of Sports for the Disabled (IOSD), which oversee some sports for a particular disability group (e.g. International Blind Sport Association, Cerebral Palsy International Sport and Recreation Association, International Wheelchair and Amputee Sports Federation, International Sports Federation for people with an Intellectual Disability). In addition, the IOSDs are also responsible for the development pathway for athletes from specific impairment groups below the Paralympic level. Finally, there are sports that are part of able-bodied sport federations, which is the case of tennis, cycling, among others (Depauw and Gavron 2005, Wilson and Clayton 2010).

Lastly, with regard to the third dimension, *coaching provision and education* is presented in the literature as the most important factor of sporting success and deserves attention in any development plan for elite sport policy in able-bodied sport (De Bosscher *et al.* 2006, Digel *et al.* 2006). The results of this study corroborate this in a parasport context, showing that coaching provision and education is also an important policy factor. However, there was no consensus among the experts' opinions as to whether there is a need for specific training to coach athletes with disabilities. This study endorses the contradictory findings in the literature regarding coaching in parasport, where on the one hand some authors suggest that coaching an elite able-bodied athlete is similar to coaching an elite athlete with a disability (Depauw and Gavron 2005, Cregan *et al.* 2007), and most of the same skills and previous technical and tactical experiences are needed. The contradiction as noted by Wareham and colleagues (2017) is that coaches who had previously been involved only in mainstream sport indicated that they had very little prior knowledge of what the experience of coaching disabled athletes would require (Wareham *et al.* 2017). Even though some researchers have identified similarities concerning coaching disabled and non-disabled athletes, several considerations regarding specific training for coaching athletes with disabilities have been indicated, as well as that different background experiences and pathways that influence coaches' development (Bush and Silk 2012, McMaster *et al.* 2012, Taylor *et al.* 2015, Fairhurst *et al.* 2017). Some other



studies also suggest that the specific contextual factors related to coaching athletes in parasport are important and necessary (Falcão *et al.* 2015, Fairhurst *et al.* 2017), notably the way they position themselves and the inferences that disability has for practise (Townsend *et al.* 2015).

Finally, this study acknowledges that there is still a lack of awareness and interest about parasport. Some studies recognise this as a barrier to parasport development, coupled with unique aspects of parasport being associated with negative societal behaviour towards the persons with a disability, lack of specific programmes and trained staff and the involvement and support of family and peers (Jaarsma *et al.* 2014, Shields and Synnot 2015). However, the study design was restricted and it did not allow for an in-depth analysis of these factors. It is therefore recommended that future research could build on these preliminary findings to investigate these particular factors more deeply within a parasport-specific context.

## Conclusion

This study has presented an overview of how elite sport policy approaches differ between able-bodied and parasport contexts by providing a framework of major differences in order to generate awareness among sport policymakers and HPDs, helping them understand parasport and its intricacies. This occurred primarily in how they should approach para-athletes and understand the specific context where they live and train in. Even though the SPLISS model was used as a suitable framework to cluster the factors into policy dimensions, this study illustrated that the contextual factors and culture of disability sports need to be taken into consideration when examining factors that influence parasport policy development. In addition, while the SPLISS framework treats the different phases of athlete development as independent pillars in an able-bodied sport system, this paper reveals that these phases in parasport are interrelated, with fluid movement from one stage to another. An example of this is the different access points to parasport ranging from athletes with acquired impairments starting in rehabilitation centres to those with congenital impairments accessing sport through specialised schools, able-bodied sport clubs or disability associations. Therefore, these findings demonstrate that athlete pathways in parasport are not only sport specific but also potentially impairment specific.

While there is no sport policy model specifically created for parasports, the findings of this study will also generate a better understanding of the different approaches that are required to organise and structure parasport, which can lead to the creation of a new theoretical model. This will certainly not be an easy task but the results of this study may provide some initial theoretical contributions.

Additionally, the results of this research reaffirm the need for special attention to the culture within which the para-athlete lives and how it may influence the way policies can be implemented in a parasport context. This must take into consideration not only achieving international sporting success but also in how people with disabilities are treated, and similarly, what kind of support is offered to them in order to promote a platform to improve the lives of all people with disabilities worldwide.

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## Note

1. Throughout this paper, the term 'parasport' and its synonym 'disability sport' will be used and it is defined by the International Paralympic Committee (IPC) as 'All sport for athletes with an impairment whether they feature on the Paralympic programme or not. These terms are used for all other sports events outside of the Paralympic Games' (International Paralympic Committee, 2003).

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## Disclosure statement

No potential conflict of interest was reported by the authors.

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