

# Evidence-Based Strategies for Building Quality Participation in Sport for Children, Youth, and Adults with a Disability



## Overview

This report was developed as a supplement to The Blueprint for Building Quality Participation in Sport for Children, Youth and Adults with a Disability (available from [www.cdpp.ca](http://www.cdpp.ca)). The Blueprint is a practical tool for parasport program builders, including administrators, coaches, and policy makers. It introduces key concepts that underpin quality participation, and provides tools for building quality participation in parasport programs. This document briefly summarizes the evidence supporting the 25 strategies for building quality participation outlined in the Blueprint.

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**Figure 1.** The Blueprint for Building Quality Participation in Sport for Children, Youth, and Adults with a Disability.

## Introduction

To generate an evidence-informed framework of optimal parasport participation and to identify conditions that support these experiences, researchers from the Canadian Disability Participation Project (CDPP; [www.cdpp.ca](http://www.cdpp.ca)) synthesized existing literature and sought stakeholder input. The multi-step process was based upon international standards for developing practice guidelines.



**Figure 2.** Flow chart of the framework development process.

This process began with a review of the participation literature across disability settings, which conceptualized participation in terms of six key elements or “building blocks” (i.e., autonomy, belongingness, challenge, engagement, mastery, and meaning)<sup>1</sup>. Subsequently, a systematic review of qualitative (i.e., narrative-based) and quantitative (i.e., numbers-based) research was performed to identify aspects of adapted physical activity programs that are conducive to generating the six building blocks of quality experiences<sup>2</sup>. In

addition, original qualitative studies were carried out with the goal of understanding the perspectives of individuals with physical disabilities regarding personal meanings of quality parasport participation and the six building blocks of quality experiences<sup>3-4</sup>, as well as the real-world strategies employed by organizations that deliver adapted physical activity experiences to enhance program quality<sup>5</sup>. Finally, input from stakeholders (e.g., CDPP researchers and community partners; external researchers and sports administrators; parasport athletes, coaches, parents) was gathered through multiple online surveys and in-person and online consultations. The research team then integrated stakeholder feedback into the framework<sup>6</sup>. Through this process, The Quality Parasport Participation Framework was developed. Centring on the six building blocks of quality experiences, the hierarchical framework is founded upon 25 evidence-informed strategies designed to foster quality experience which in turn contribute to quality parasport participation.



**Figure 3.** A schematic diagram of the Quality Parasport Participation Framework

**Quality participation** is defined as an athlete’s broad subjective evaluation that their sport involvement is (or has been) satisfying, enjoyable, and generates personally-valued outcomes<sup>6</sup>. Repeated and/or sustained exposure to quality experiences in parasport contribute to an athlete’s perception of quality parasport participation<sup>6</sup>. More specifically, **quality experiences** are a feeling state involving satisfaction and enjoyment, based on an athlete’s ongoing evaluations or whether or not their parasport involvement satisfies one or more of their own sport values or needs<sup>6</sup>. These sport values or needs can be understood using the six **building blocks** of quality

experiences in parasport: autonomy (i.e., having the ability to make choices), belongingness (i.e., being part of a group), challenge (i.e., being challenged), engagement (i.e., feeling involved), mastery (i.e., experiencing success), and meaning (i.e., evoking personal relevance)<sup>3-6</sup>. However, it is important to note that quality experiences are individual and dynamic; the building blocks that are important for one athlete may be different for another athlete, and the importance of specific building blocks for a particular athlete may change over the course of his or her sport career<sup>3-4</sup>.

Strategies to facilitate each of these building blocks have been identified through interviews with parasport athletes<sup>4</sup> and organizations<sup>5</sup>, aligning with barriers and facilitators to adapted physical activity participation previously recognized in the literature<sup>7</sup>, as well as the conditions considered to foster quality

sport experiences among other populations (e.g., youth sport<sup>8</sup>). These strategies have been further developed and refined through a rigorous process of stakeholder input<sup>6</sup>. There are three main categories in which strategies to facilitate the building blocks can be implemented: (1) the **physical environment** (e.g., accessibility), (2) the **program environment** (e.g., how sport tasks are designed), and (3) the **social environment** (e.g., coaches, family, peers, volunteers). While all of these strategies may contribute to the creation of quality experiences in parasport, some of these strategies are also necessary for any form of participation to occur (i.e., access and opportunity to participate). In total, 25 evidence-informed strategies have been linked to one or more of the six building blocks of quality experiences. These strategies are the foundation of a quality experience. This supporting evidence is outlined briefly in the pages that follow.

## PHYSICAL ENVIRONMENT

### 1. Accessibility

A minimal level of accessibility in sport facilities and related services is essential in order for participants to access a quality experience. If lacking, a quality experience cannot occur (i.e., some people cannot be accommodated). By addressing accessibility needs above and beyond the basic requirements for access, the quality of sport experiences may be further enhanced (e.g., availability of adequate bathing spaces, ease of access)<sup>6</sup>. Physical accessibility of the environment is a widely recognized barrier to physical activity participation among individuals with disabilities, which has been identified in multiple studies and reviews of the literature<sup>7</sup>. Interviews with parasport athletes indicate that **engagement** maybe negatively impacted when participants have to worry about general issues of accessibility, while **autonomy** is fostered when participants have a level of independence and choice that empowers them to navigate the sport environment on their own<sup>4</sup>. **Belongingness** may also be influenced when participants feel as if they weren't considered in the set-up or arrangement of the sport environment – even if the environment is labelled “accessible” (e.g., there is one accessible washroom or shower at a venue that is hosting a game between two wheelchair sports teams)<sup>3-5</sup>.

### 2. Travel and Access

In addition to the accessibility of parasport facilities and services, the physical proximity of facilities and services must be within a reasonable distance for participants to travel, and/or affordable transportation should be available to ensure both access to and enhancement of sport experiences<sup>6</sup>. For example, when possible, scheduling of sport programming might be aligned with community transportation schedules. As highlighted in the above strategy, existing research demonstrates that **engagement**, **autonomy**, and **belongingness** may be fostered when participants do not have to worry about how they will access the sport setting, when they feel that they have independence and control over their transportation options, and feel included in the program as a result of these considerations<sup>4</sup>.

### 3. Safe Places

When participants feel physically safe in their sport environment, quality sport experiences are more likely to occur. Participants are more likely to feel safe when sport facilities and equipment are routinely inspected and up-to-date, staff are adequately trained and certified, and an appropriate level of supervision is available<sup>4-5</sup>. Perceptions of safety will be dependent

on an individual level of risk and comfort, and have the potential to influence participants' feelings of **engagement** by reducing anxiety or distractions related to safety concerns while participating in sport activities<sup>3-4</sup>. Additionally, participants are more likely to push themselves (i.e., experience **challenge**) in sport settings where they feel safe and able to take comfortable risks, which has also been linked to experiences of **mastery**<sup>2, 4-5</sup>.

#### 4. Access to Equipment

In order to participate in certain sport activities, as well as enhance the quality of sport experiences more generally, participants need to have access to the proper equipment. Such equipment should be

suited to the participant's needs or competitive level, which may mean seeking equipment for community use or providing opportunities for participants to try-out and purchase affordable equipment<sup>6</sup>. There is both qualitative and quantitative research to indicate that having the right equipment is likely to optimize participants' experiences of **challenge** and **mastery**<sup>9-13</sup>. As an example, ill-fitting equipment may be difficult to use and reduce feelings of confidence and competence in relation to sport participation. **Engagement** is also more likely to occur when participants do not need to worry about access to and the safety of sport equipment<sup>4</sup>. Finally, as described in the first two strategies, **autonomy** is likely to result when participants have the independence to navigate the sport environment on their own<sup>4</sup> – which may be facilitated by the proper equipment.

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## PROGRAM ENVIRONMENT

#### 5. Sport Type

Quality sport experiences are created when sport types or activities are ideally suited to the needs or values of each participant. A large body of qualitative literature points to the individual preferences and unique abilities of each participant, which may contribute towards vastly different perspectives on the specific building blocks that are important for quality sport experiences<sup>3-4, 6, 14-16</sup>. Participants often describe a need to “find the right fit” in parasport<sup>3</sup>. As such, the sport type or activity may foster any one (or more than one) of the building blocks of quality sport experiences: **autonomy, belongingness, challenge, engagement, mastery, and/or meaning**.

#### 6. Program Size

To provide opportunities for consistent and/or repeated exposure to quality experiences in sport, which may lead to quality participation over time, sport programs need to be large enough to have a self-sustaining membership<sup>6</sup>. The size of the program may also play a role in the types of involvement offered to participants within the program (e.g., varied sport activities and/or levels of competition; opportunities to participate beyond the traditional ‘athlete’ role: team leaders, sport officials, etc.).

Research suggests that ‘having a role’ in physical activity programming may foster experiences of **belongingness** (e.g., having a ‘place’ in the program) and **meaning** (e.g., a sense of purpose)<sup>4-5</sup>. Thus, by providing various ways for the participant to be involved, sport programs may target these two building blocks of quality sport experiences.

#### 7. Funding and Cost

Financial cost is widely recognized as a significant barrier to physical activity participation among individuals with disabilities<sup>7</sup>. The cost associated with sport programming not only determines whether participation is possible, but may also contribute to the quality of sport experiences<sup>6</sup>. For example, **engagement** may be negatively impacted when participants feel worried or anxious about the cost associated with the program<sup>17</sup>, or correspondingly, needing to make ends meet in other aspects of their lives<sup>18</sup>. Participants who have sufficient financial resources to support their sport involvement, or who are able to access programs that are funded or subsidized, may also experience enhanced **autonomy** (i.e., personal agency or control) over their sport participation<sup>3, 17</sup>.

## 8. Options

To ensure that participants are able to find an appropriate fit between their unique needs or values and the sport types or activities that are available, programs should provide options from which participants can choose among activities of various types and skills levels<sup>6</sup>. Providing participants with options (i.e., the ability to choose) is directly linked to the participant's level of **autonomy**, which has been demonstrated broadly within the sport and exercise literature<sup>19-21</sup>, as well as studies focused on the quality of athletes' experiences in parasport<sup>3-5</sup>. Anecdotally speaking, the type of options that are available may also directly or indirectly influence the other building blocks of quality experiences. For example, options concerning the level of skill, ability, or competition may contribute to experiences of **challenge** and **mastery**, while options related to the type of role an individual takes on within an activity may lead to experiences of **belongingness** and **meaning**<sup>3-5</sup>. The options available may also be associated with the level of involvement, or **engagement**, participants experience within the program.

## 9. Individual Level of Challenge

Sport activities should be individually tailored to the skill level or ability of each participant to provide an appropriate level of challenge. This may require making activities more difficult as skills develop, or making activities easier in cases where skills are diminished (e.g., individuals with degenerative conditions; returning to training after experiencing an injury)<sup>6</sup>. By testing participants at a level of difficulty aligned with their own skills or abilities, several studies have demonstrated that programs may contribute to participants' experiences of **challenge**<sup>3-5, 22-24</sup>. An appropriate level of challenge provides the foundation for two other important building blocks of quality experiences: **mastery** (i.e., participants are able to experience success and build confidence) and **meaning** (i.e., working towards personally relevant goals)<sup>3-5, 22-24</sup>.

## 10. Safe Activities

Sport activities should be safe for participants, meaning that each participant perceives a comfortable level of risk and limited potential for harm<sup>6</sup>. As described in strategy #3 (i.e., participants perceive that the facilities and location are safe), participants are more likely to experience **engagement** (i.e., feel fully involved) when they are not distracted or worried about safety concerns<sup>3-4</sup>. Additionally, research with programs that deliver physical activity programs to individuals with disabilities highlights strategies such as alleviating concerns' and 'discussing fears' in order to push participants out of their comfort zones with the aim of facilitating **challenge**, and subsequently experiences of **mastery**<sup>5</sup>.

## 11. Classification

The classification process should be designed to permit equal opportunity and fair competition. Classification should also seek to limit chances for alienation so that participants feel that they 'fit' somewhere in the sport system (i.e., participants have an appropriate class in which to pursue advanced sport involvement). Barriers related to the classification process have been associated with limited options for physical activity participation, which may negatively impact participants' experiences of **autonomy**<sup>4</sup>, as well as other building blocks of quality sport experiences (see strategy #8). Classification has also been linked with **belongingness**, such that participants have the ability to connect with other people in their own classification (i.e., with similar life experiences and/or levels of ability) and do not feel 'out of place' (i.e., too able or not able enough) relative to other participants<sup>25-28</sup>. Finally, participants who are classified appropriately are more likely to experience a suitable level of **challenge** in the sport activities they take part in (see strategy #9).

## 12. Diversity

Sport activities may provide integration with able-bodied athletes or with group members of differing abilities, but will nevertheless provide chances for interactions and competitions among participants with similar abilities and experience in order to foster quality experiences<sup>6</sup>. Several studies have indicated

that the nature and composition of the group plays a role in participants' perceptions of **belongingness**<sup>2</sup> – specifically, the importance of segregated groups consisting solely of individuals with related disabilities (as opposed to integrated sport settings) for improving feelings of belongingness and reducing feelings of isolation<sup>28-30</sup>. A systematic review of physical activity interventions for individuals with disabilities also concluded that the nature and composition of the group can influence **mastery**<sup>2</sup>. Amongst similar peers, all dealing with the unique challenges of a specific impairment, individuals give

each other advice and problem-solve together to develop strategies for physical activity and coping in daily life<sup>4, 22, 27</sup>. Seeing peers with similar disabilities participate in physical activity and complete tasks has also been linked to self-efficacy and confidence<sup>26</sup>. Finally, the peer group can play an important role in the **meaning** that participants' experience (e.g., working towards a collective goal or shared vision with group members)<sup>4, 22</sup>.

## SOCIAL ENVIRONMENT

### Social Environment Coach/Instructor

#### 13. Coach/Instructor Knowledge, Skill, and Learning

The existing knowledge and skill of coaches and instructors, as well as the knowledge-seeking behaviours and opportunities for learning fostered among coaches and instructors, are important for creating quality sport experiences. Participants in a variety of qualitative studies described feeling safe in the sport environment when coaches or instructors were knowledgeable in relation to their specific impairments or needs<sup>2, 4, 22, 31-32</sup>. Perceptions of safety subsequently contributed to experiences of **engagement**<sup>4, 31-32</sup> (i.e., participants were more likely to engage in safe tasks), **challenge**<sup>22</sup> (i.e., participants were more likely to **challenge** themselves), and **mastery**<sup>22, 31-32</sup> (i.e., participants were more likely to feel confident in challenges they faced, thereby building skills and competence). Mastery is further facilitated when coaches or instructors have the relevant knowledge to teach or adapt sport skills<sup>4, 33</sup>. Finally, coaches and instructors that are able to foster mastery (i.e., build confidence and competence in sport skills) may empower participants with personal control over their participation, thereby contributing to **autonomy**<sup>34-35</sup>.

#### 14. Coach/Instructor Autonomy Support

Autonomy-supportive leadership, in which the coach or instructor finds ways for the athletes to perceive control over training programs or activities (e.g., providing options, eliciting athlete input), is well-recognized across sport settings as an effective style of coaching or instruction<sup>21</sup>. In adapted physical activity contexts, coaches or instructors who empower participants with choice or control over their participation naturally foster participants' **autonomy**<sup>34-35</sup>. Interviews with injured military veterans who participate in physical activity demonstrate that participants desire coaches who foster their independence (e.g., know when to intervene and when to leave the participant alone)<sup>4</sup>. Additionally, a large-scale study comparing the effects of Paralympic coaches with and without autonomy-supportive training has shown that coaches who are trained to be autonomy-supportive have athletes that score higher on motivation, engagement, functioning, and performance<sup>36</sup> – outcomes that are linked with **engagement** and **mastery**, two building blocks of quality experiences.

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## 15. Interpersonal Skills of Coach/Instructor

Supportive coaches and instructors who foster caring and trusting relationships with participants have been linked to the building blocks of quality sport experiences in both qualitative and quantitative research. **Belongingness** (i.e., linkage to the community) has been found to mediate the relationship between coach interpersonal skills and participant outcomes (e.g., physical activity intentions and behaviours, family integration), meaning that supportive coaches may foster belongingness which in turn shapes the outcomes that participants experience<sup>38</sup>. Qualitative research has also shown that a positive coach-athlete relationship, in which coaches believe in athletes' abilities, guide the goal-setting process, and promote athlete development, are key to the development of **belongingness, challenge, mastery, and meaning**<sup>22</sup>.

comparison with a past performance or standard) or encourage self-monitoring, participants are able to see changes – ideally improvements – in their level of skill or ability. This strategy may enhance the quality of sport experiences by targeting participants' experiences of **challenge** and **mastery**. By seeing personal improvements, participants may feel motivated to engage in new and advanced tasks while also experiencing success in their current endeavours<sup>3-5</sup>. For example, the findings of a qualitative study examining a model sport program for children with disabilities showed that “The athletes highlighted the positive impact of the coach teaching the principles of goal-setting and monitoring their progress...the coach had enhanced both their perceptions of competence and self-confidence”<sup>22</sup>.

## 16. Coach/Instructor Develops Roles

Coaches and instructors have the capacity to create and delegate roles that are important for group functioning and identity development (both personal and social)<sup>37</sup>. By encouraging group members to take on these roles, and ensuring that the contributions of individuals in those roles are recognized, coaches and instructors may foster several building blocks of quality experiences. Interviews with physically active military veterans with a disability have indicated that “having a role” is linked to **belongingness** (i.e., having a ‘place’ in the program), **engagement** (i.e., degree of satisfaction associated with role in the program), and **meaning** (i.e., the role provides a sense of purpose and/or contributes toward socially-meaningful goals)<sup>4</sup>. The strategies used by organizations that deliver adapted physical activity programs reinforce these relationships<sup>5</sup>. Furthermore, coaches and instructors may foster experiences of **mastery** by demonstrating trust and confidence in participants who are taking on new or advanced roles<sup>2</sup>.

## 17. Coach/Instructor Tracking Athlete Improvement

When coaches or instructors assist participants with benchmarking (i.e., evaluating progress based on

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## Peers

### 18. Group Environment

For quality experiences to occur, the group environment should be perceived by individual group members as positive and cohesive. This often means that the group will be striving towards a collective vision or shared goals, and that everyone involved (i.e., coaches, leaders, parents, participants) supports the group environment. A systematic review of physical activity interventions for individuals with disabilities<sup>2</sup> concluded that the nature and composition of the group is likely to influence perceptions of **belongingness**<sup>28-30</sup> and **mastery**<sup>26-27</sup>. Group cohesion was also identified as a key theme related to the quality of physical activity experiences among military veterans with a physical disability, which has been conceptually linked to belongingness<sup>4</sup>. **Engagement** may also be influenced such that having a shared focus with a group may increase feelings of involvement<sup>4</sup>.

### 19. Mentorship or Role Modelling

Participants should have opportunities to mentor others, or to seek and establish relationships with personal mentors (e.g., experienced members educate and form close relationships with newcomers). In a similar vein, participants should be able to contribute to the teaching and learning process, as well as have opportunities to take on additional leadership roles in the sport environment (i.e., beyond being an athlete). In rehabilitation contexts, peer mentorship has been identified as an important component of **mastery** in the areas of physical activity and daily living<sup>39-40</sup>. Mastery has also been linked with effective leadership in adapted physical activities, which could apply to the leadership roles assumed by peers<sup>2</sup>. By taking on important roles in sport programs – as leaders or mentors, for example – participants may experience **belongingness** and attribute **meaning** to their sport participation<sup>3-4</sup>. Moreover, mentees may feel more accepted in a group through the mentorship process<sup>4</sup>.

## Family

### 20. Educating Family Members

Family members (e.g., parents, siblings, spouses) often play an important role in shaping the sport involvement of someone with a disability. For children with disabilities, parents are often relied on for instrumental (e.g., transportation, finances) and emotional (e.g., relieving stress, encouragement) support, which directly affects access to sport experiences and may also contribute to the strength of social connections in the sport environment<sup>22</sup>. Among adults with disabilities, opportunities to participate in sport alongside family members have been associated with **belongingness** and **engagement**<sup>4-5</sup>. As such, organizations that provide roles for family members within sport programming may facilitate these two building blocks of quality experiences. Family integration in the sport environment also has the potential to contribute to **meaning** by enabling a sense of normalcy and healing post-injury for individuals with acquired physical disabilities<sup>3-4</sup>.

### 21. Familial Support and Integration

Building on strategy #20, organizations that provide education on the topic of adapted sport participation for family members of individuals with disabilities may foster opportunities for family integration and participation in the sport environment. **Belongingness** may be experienced as bonds between families (e.g., participants and their parents, spouses, or children) that in turn strengthen the relationships between program participants by breaking down pre-existing barriers, such as the formation of cliques based on differences in disability-type<sup>5,41</sup>. While family participation is often beneficial, it is important that family members do not stop participants from challenging themselves (i.e., overprotective). Alternatively, **engagement** and **meaning** are promoted when individuals participate in an activity alongside family members (e.g., as training partners)<sup>5,41</sup>. Sport provides an opportunity for families to bond and grow, as opposed to an impediment to families spending time together.

## General

### 22. Harassment

Athletes have the right to participate in sport that is free from harassment and discrimination in all social interactions. As a fundamental human freedom, this is not merely a strategy for quality participation, but a basic condition for all forms of participation<sup>42</sup>. Participants are more likely to experience **engagement** (i.e., feel fully involved) in an environment that is free from harassment and discrimination, which may imply a lack of physical or psychological safety. Additionally, **belongingness** is more likely to occur when participants feel valued and accepted in the sport environment<sup>3-4, 14</sup>.

### 23. Sport-Related Attitudes

Above and beyond protection from harassment and discrimination, the quality of sport participation is likely to be enhanced when participants perceive positive societal attitudes toward their sport participation, particularly from members of sport organizations. Negative societal attitudes are frequently cited as a barrier to sport participation among people with disabilities<sup>7</sup>; thus, positive attitudes may represent an important facilitator for participation more generally. In relation to the building blocks of quality experiences, public response to injury has been linked to **belongingness** (i.e., social acceptance) in the physical activity domain<sup>4</sup>.

### 24. Status of Disability

For individuals with disabilities who feel equal and valued when they participate in sport, particularly in relation to their able-bodied peers, the building blocks of quality experiences present in their sport involvement may be amplified<sup>3</sup>. Athletes with disabilities frequently highlight a desire to be taken seriously in the sport domain, meaning that that are treated with the same respect and dignity as any other athlete<sup>3-4, 14</sup>. Specific building blocks that are likely to be targeted by this strategy include **belongingness**<sup>4</sup> and **meaning**<sup>3</sup>.

### 25. Unique Pathways

There are a variety of contexts in which people with disabilities may participate in sport, ranging from recreational sport involvement (e.g., grassroots clubs, informal sport activities) to elite-level competition (e.g., national teams, world championships, Paralympic games) and everything in between<sup>3</sup>. Upon getting involved in sport, participants should be supported along whichever pathway they choose, and should not feel pressured into a particular type of involvement (e.g., pushed to pursue high performance sport). This strategy aligns with the need for participants to “find the right fit” among the sport types and activities that they try. Depending on the needs and values of each individual athlete, the pathway that a particular athlete follows may influence any one of the building blocks of quality sport experiences: **autonomy, belongingness, challenge, engagement, mastery, and/or meaning**<sup>3</sup>.

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