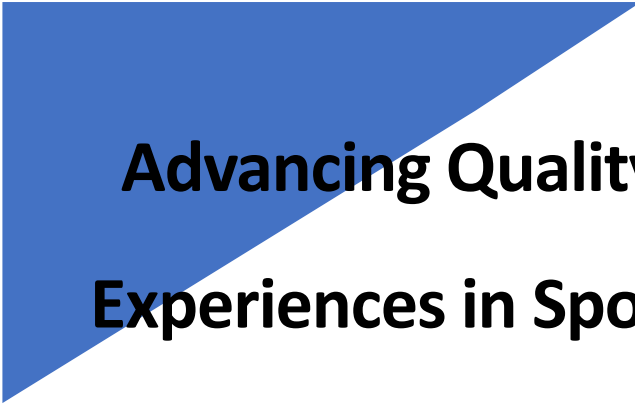




**AUT SPORTS PERFORMANCE
RESEARCH INSTITUTE NEW ZEALAND**

Report

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**Advancing Quality
Experiences in Sport
Participation for People
with Limb Deficiency**

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Executive summary

The aim of this research is to explore elements of quality sport participation for people with limb deficiency, as participant experiences have recently been highlighted as central to fostering participation and achieving desired outcomes in sport. This report provides actionable recommendations for organisations, such as the New Zealand Paralympic Committee, to enhance the quality of sport experiences for people with limb deficiency. It also offers insights for agencies such as Peke Waihanga (New Zealand Artificial Limb Service) regarding access to prosthetic equipment and services.

The recommended strategic framework includes,

- Enhancing the quality of sport experiences for people with limb deficiency by addressing barriers to participation and promoting inclusive practices.
- Improving the management of artificial limb services to ensure equitable access to high-quality prosthetic equipment.
- Fostering collaboration between government agencies, sport providers, and prosthetic service providers to create an integrated support system for people with limb deficiency.

These recommendations help direct efforts to review ways in which disability sport practitioners and managers support quality sport experiences for disabled participants. Predicated on the link between quality experiences and continued engagement in sport, the goal is to offer sport opportunities to disabled participants that promote quality experiences, whilst meeting sport development objectives.

Method

As an exploratory study this research utilised a basic qualitative approach to facilitate depth of understanding inherent in the complexities of disability as the study context. The underpinning research philosophy was a 'constructivist-interpretive paradigm' (see below and Denzin & Lincoln, 2018). A total of 20 semi-structured interviews (10 sport participants and 10 sport providers) and one focus group (4 sport participants and 3 sport providers) were undertaken. Data were analysed using thematic analysis.

Key Findings

Quality Experiences Matter

Quality sport experiences contribute to enhanced mental wellbeing, social connection, and continued engagement in sport. The elements of autonomy, belongingness, challenge, mastery, and meaning are central to achieving quality experiences.

Barriers to Participation

People with limb deficiency face significant barriers to participation, including negative attitudes, funding disparities, and exclusion from classification systems. These barriers undermine the quality of sport experiences and limit opportunities for participation.

Role of Coaches and Providers

Coaches and sport providers play a critical role in shaping the quality of participants' experiences. However, many lack the knowledge and skills to effectively support people with limb deficiency.

Need for Collaboration:

Collaboration among government agencies, sport providers, and prosthetic service providers is essential to creating an inclusive and supportive environment for people with limb deficiency.

Key implications for practice

- Adopting the Quality Parasport Participation Framework (QPPF) to guide programme design and delivery.
- Advocating for equitable funding for prosthetic equipment and policy reforms to support inclusive sport.
- Investing in disability-specific coach education and training.
- Creating inclusive competition categories for non-classifiable athletes.
- Promoting social inclusion through team-building activities and community events.

By implementing these steps, organisations can ensure that people with limb deficiency have the opportunity to thrive in sport and achieve their full potential.

Introduction

Disabled people are often discriminated against, stereotyped, and socially excluded, resulting in reduced access to services (Babik & Gardner, 2021; Patel, 2015; Spaaij et al., 2014). In New Zealand, disabled people are twice as likely to report being discriminated against as non-disabled people (Statistics New Zealand, 2018). Participation in sport has been recognised as a public health and social justice issue (Gill, 2020). Disability sport has been promoted with the potential to empower disabled people and create a sense of community and connectedness (Forber-Pratt, 2018).

Access is considered central to facilitating disability sport participation and may influence participation rates (Jaarsma & Smith, 2018; Poonsiri et al., 2018). Yet, access is not the sole driver of participation (Hubbard & Mannell, 2001). Aside from accessibility, subjective experiences for disabled people have broader effects on motivation and participation (Dijkers, 2010). Therefore, an understanding of the participation experiences of disabled people is central to managing sport and enhancing participation (Sotiriadou & Wicker, 2014), with the aspiration to ratify the right for disabled people to experience ‘full participation’ (United Nations, 2006).

Quality experience in sport represents an emerging area of study that may contribute to both social and sport development objectives. This report is based on the findings from PhD thesis titled " Exploring Elements of Quality Sport Participation for People with Limb Deficiency" by Dr Olivia Baudinet (2023), which explores the elements of quality participation for people with limb deficiency in the context of disability sport. The study highlights the importance of quality experiences in sport for individuals with limb deficiency, focusing on both the subjective experiences of participants and the approaches taken by disability sport providers.

Below, the research approach is explained. After that, the report begins with discussing barriers to quality sport participation, followed by illustrations of how sport participants navigate towards a quality experience and how sport providers may facilitate this process. The report ends with recommendations for New Zealand parasport providers to improve the quality sport experiences for people with limb deficiency.

Study intent

The overarching aim of this study is to explore elements of quality sport participation for people with limb deficiency. In order to draw comparisons between the two participant groups, the experiences of sport participants and the perceptions of sport providers were examined with respect to barriers, facilitators, outcomes, and elements of quality experience.

The research questions consider: 1) how people with limb deficiency and sport providers perceive quality experiences in sport, 2) how people with limb deficiency navigate toward quality experiences in sport, 3) how sport providers support quality sport experiences for people with limb deficiency, and 4) how sport experiences can be enhanced for people with limb deficiency.

Theoretical frameworks

The study applied the Quality Parasport Participation Framework (QPPF) (Evans et al., 2018) to explore the subjective experiences of people with limb deficiency. The QPPF identifies five key elements of quality participation: autonomy, belongingness, challenge, mastery, and meaning.

The study also utilised the Social Relational Model (SRM) (Thomas, 2004) to examine the social and structural barriers that contribute to the experience of disability in sport. This model highlights the role of social oppression and inequality in shaping the experiences of disabled individuals.

Study approach and data collection

A 'constructivist-interpretive paradigm' (Denzin & Lincoln, 2018) is a way of understanding the world that sees knowledge as something people build through their own experiences and perspectives, rather than something fixed or objective. This approach was adopted alongside basic qualitative methods where data were collected from two primary sources. Twenty semi-structured interviews with disabled sport participants and sport providers, as well as a focus group consisting of four sport participants and three sport providers (as illustrated in Figure 1 below).

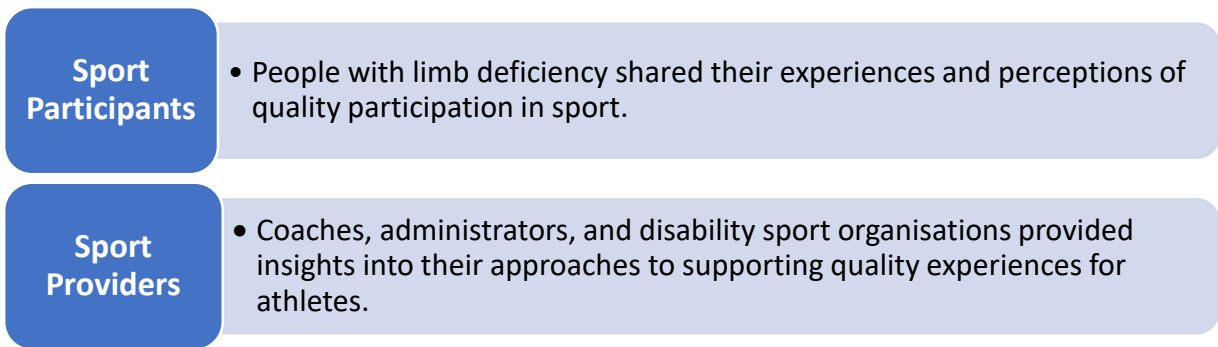


Figure 1: Study Participants

Analysis



The data were analysed via thematic analysis, informed by Braun and Clarke (2012), to identify key influences on participation, outcomes of quality experiences, and approaches to navigating and supporting quality experiences.

The study emphasises the importance of defining "quality" in the context of sport participation (see QPPF) (e.g., Martin Ginis et al., 2017). Quality experiences are characterised by elements such as autonomy, belongingness, challenge, mastery, and meaning. These elements contribute to enhanced mental wellbeing, social connection, and continued engagement in sport.

The findings were synthesised into a model of influences: Approaches and Elements of quality experience in sport.

Outcomes of quality sport experience

The outcomes of quality sport experience revolve around two key themes: 1) enhanced mental wellbeing, and 2) continued engagement in sport. See Table 1 below.

Outcomes	Elements	What people said*
 Enhanced Mental Wellbeing	Positive mental health outcomes such as fun, enjoyment, happiness, confidence, self-esteem, competence and social connection.	“It gives you confidence... when you achieve things it can really build your self-esteem”.
 Continued Engagement in Sport	Long-term participation and involvement in sport related to intrinsic motivation and mental wellbeing outcomes.	“Enjoyment, engagement, and wanting to come back”

*This section includes commentary from sport participants and providers on the outcomes of sport experiences

Table 1. The outcomes of quality sport experience

Enhanced mental wellbeing

Three elements of enhancing mental wellbeing are identified that were influenced through quality sport experiences: **1) enjoyment, 2) competence, and 3) social connection.**

Sport participants and providers spoke of several improved aspects of psychological wellbeing as an outcome of quality sport experiences for people with limb deficiency:

Self-fulfilment and worth... you feel better about yourself. Just the wellbeing, the hauora [health and wellbeing], the ability to handle, build your resilience, anti-

depressing... If you can have a quality sport or physical experience, I think that it really helps you with your overall wellbeing, mental state. I know for myself if you're feeling a little low... it just lifts your day (Prov 3).

This comment highlights the relationship between quality sport experiences and multiple aspects of mental wellbeing.

Continued engagement in sport

Our research shows that providers value and prioritise quality experiences in order to retain participants in sport.

Quality sport experiences were found to incite two key contributors of continued engagement: **1) motivation, and 2) immersion.**

Motivation was central to long-term participation in sport, while immersion proposes that total absorption in a task is highly enjoyable and produces intrinsic motivation.

What influences quality participation (Barriers and Facilitators)

Figure 2 below demonstrates the elements that influence quality participation in sport.

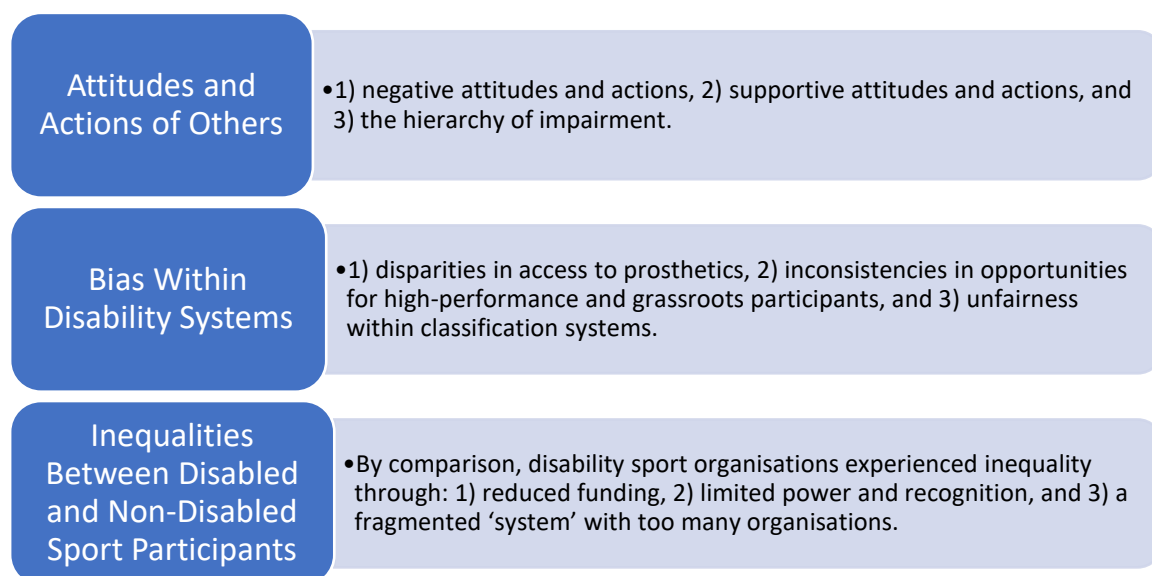


Figure 2. Elements that influence quality participation.

Attitude and action of others –

Findings suggest that negative actions of others can pose a significant barrier to participation in sport. Therefore, managing people's attitude, educating sport coaches, sharing experiences and the underpinnings of disability are important towards the quality experience.

In addition, an implicit hierarchy of impairment was highlighted in sporting contexts, which was established and preserved predominantly by the attitudes of non-disabled individuals.

Bias in the disability system –

Biases within the disability system that present as inequalities among disabled sport participants, including: 1) disparities in access to prosthetics, 2) inconsistencies in opportunities for high-performance and grassroots participants, and 3) unfairness within

classification systems. Those with less funding for equipment experience more barriers to sport.

Inequalities between disabled and non-disabled sport participants –

Non-disabled sport participants were seen as having greater access to resources. By comparison, disability sport organisations experienced inequality through: 1) reduced funding, 2) limited power and recognition, and 3) a fragmented ‘system’ with too many organisations. These challenges result in inequalities between disabled and non-disabled sport participants.

Findings from the present study indicate that competitive funding models, a lack of communication, and obscurity in the roles of organisations contribute to a fragmented ‘disability sport system’ in New Zealand.

Figure 3 below is a summary chart of key influences on participation and outcomes of quality experiences.

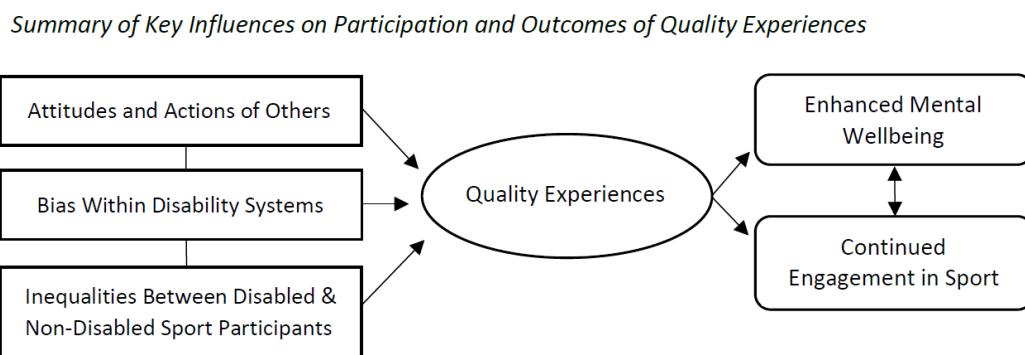


Figure 3. Summary chart of key influences on participation and outcomes of quality experiences

How people with limb deficiency navigate towards quality experience – An insider perspective

Elements that encompass a quality participation experience (Martin Ginis et al., 2017) are used to evaluate participants' experiences:

1. *Autonomy* – having independence, choice or control.
2. *Belongingness* – a sense of belonging or acceptance.
3. *Challenge* – feeling suitably challenged.
4. *Mastery* – experiencing achievement, competence, and self-worth.
5. *Meaning* – contributing towards a personal or socially-meaningful goal.
6. *Engagement* - engaged, focused, and motivated in an activity.

In the present study, the element of *engagement* was found to be an outcome of quality participation, not an element of quality experience. The remaining five elements of quality experience were used by participants to navigate toward quality experiences through four key approaches:

Achievement-based approach

Participants described an achievement-based approach where they either challenged themselves by competing against others or, improved their personal performance by setting and achieving goals.

Maximising ability and minimising disability

Participants sought to minimise their disability and maximise their abilities by seeking support, exercising autonomy, and using sports to feel "normal.":

Connect socially with others

Participants connect with others either casually or as part of a sporting community to satisfy a sense of belonging.

Advocate for disability support and disabled people

Participant advocates for improving access to sport and raising awareness to educate others and challenge stereotypes.

Below, Figure 4 shows how the participants navigate towards quality experience through these approaches.

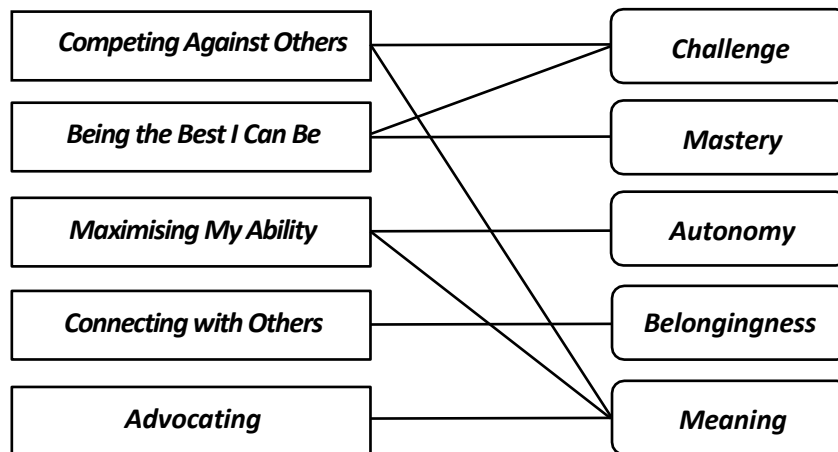


Figure 4. Approaches utilised by participants and the corresponding elements of quality experience.

Actionable steps should include

- Supporting goal setting and encouraging personal performance.
- Creating inclusive and integrated environments where modifications to rules and equipment support participation.
- Facilitating opportunities for connections with peers, coaches, and the broader community.
- Empowering people to advocate for themselves and raise awareness about disability sport.

The providers' perspectives about delivering sport for people with limb deficiency

This section presents the perspectives from disability sport providers, who shared their approaches to delivering sport for people with limb deficiency.

Themes derived from the data analysis process from the providers to support quality participant experiences are:

1. Fostering inclusion
2. Empowering participants
3. Enhance the system through education - a system-level approach
4. Feed the system
5. Using classification to transition participants to parasport

Foster inclusion

Establish safe and welcoming spaces by facilitating social support, undertaking modifications, and promoting equality to build inclusive environments.

Empower participants

Offer guidance and assistance to support participant decision-making, choice, control, and achievement.

Enhance the system through education

Provide training or instruction to groups, coaches, and organisations to improve understandings of disability sport and disabled people.

Grow participant numbers to feed the system

Expand the participant pool and feed performance pathways through targeted approaches that attract participants to sport and provide ongoing opportunities for engagement.

Transition participants to parasport: Classification

A push to ensure participants are eligible to transition from community sport to parasport pathways by offering opportunities for provisional and formal classification.

Actionable steps for providers

- Modifying equipment and adapting rules and activities to improve inclusion in sport and enhance the quality of participant experience. Modification must be done appropriately to foster inclusion, so the participants feel 'normal'.
- Initiating participants into sport, including grouping participants with similarities, and designing safe and welcoming/trusting spaces.
- Offering opportunities for on-going social involvement and engagement, such as peer-to-peer groups, camps, and outings.
- Support each disabled participant to have equal opportunities with non-disabled participants in ways that were meaningful to them
- Provide assistance where needed, including seeking feedback and providing options
- Encouraging participant autonomy and offering opportunities for skill development.
- Educating individuals and organisations: 1) educating coaches, 2) delivering inclusion training, and 3) educating through advocacy.
- Collaborate with providers from other organisations to link participants to organisations and to increase the range of sporting activities available,
- Embark on talent identification.
- Have comprehensive investment strategies and outcomes

Advancing disability sport participation - Strategic recommendations for disability sport providers

Defining quality

To support quality participant experiences, it is important to empower individuals to achieve their personal goals. Providers build confidence by offering help while promoting autonomy, recognising that choice and control are essential. Supporting participants' pathways and skill development is key. For instance, fostering inclusion involves modifying activities, rules, and equipment to enhance access. However, providers may overlook the need for subtle modifications, which can lead to participants feeling burdensome.

Employing disabled people in leadership roles

The study highlights the underrepresentation of disabled people in sport management roles. Employing disabled individuals in leadership positions can enhance the quality of sport experiences by bringing lived experience and a deeper understanding of disability to decision-making processes.

Evaluating and enhancing the structure of the system

The sport sector may benefit from leaders identifying further opportunities for collaboration, and offering continued support of collaborative projects through funding. Ultimately, collaboration across sport organisations offers benefits to sport providers and participants (Hammond et al., 2019). As part of this, a better organised sport system may enhance connection and lead to better experiences for sport participants. Scope exists to establish a network, to encourage groups to come together in a formal setting, where focus groups could be utilised to grow awareness and understanding of each organisations' role and where there is overlap. Then, certain areas could be targeted, and changes made to strategy which could help to minimise the overlap.

Promoting integrated sport experiences

The study suggests that integrated sport experiences can enhance social inclusion and organisational efficiency. However, it is important to recognise that some people may prefer disability-specific environments.

In conjunction with an existing focus on integrating the delivery of disability sport into NSOs, sport managers could consider the integration of smaller groups of participants in sport development camps, training sessions, or competitions. Integrated sport delivery is considered to enhance organisational efficiency as well as promote social inclusion (Hammond et al., 2019; Jeanes et al., 2019). Findings from the present study suggest that sport providers utilised integration primarily to improve capacity and capability, through the pooling of resources. Therefore, in the future, providers could look for genuine opportunities to encourage social connection through integration. This may involve discussions with disabled sport participants to plan how integrated sport could best serve their social needs.

Education

The third key approach embraced a 'system level' focus, where providers delivered three main types of education to meet sport development objectives and improve participant experiences.

Coach education was utilised to improve the coach-participant relationship as well as to support improvements in participant performance. Organisations could lead this by developing or sourcing educational opportunities to improve coaching skills, disability-specific knowledge, or role-specific skills. Educating coaches with disability-specific content that encompasses aspects such as prosthetics and adaptive equipment, functional movement patterns, and wheelchair use could enhance participant experiences and inclusion. Furthermore, coaches could seek feedback from participants to build trust, promote autonomy, and ensure they are feeling supported as individuals. Then, the feedback could be used to understand which aspects of participation are important to each participant, so delivery can be tailored where possible.

In addition to this, inclusion training was delivered by sport providers to improve awareness and attitudes towards disabled people, and to support inclusive practice and facilitation of quality experiences.

Furthermore, providers advocated for disability sport and disabled people by challenging negative attitudes and raising awareness. For instance, by embedding disabled employees in mainstream sport organisations or engaging ambassadors to educate the public and endorse disability sport.

Access to prosthetics

Managers could consider the disparity in funding for prosthetic equipment between the two major funding schemes (i.e., accident compensation scheme (ACC) and public health system) for people with limb deficiency in New Zealand. Small changes may be possible at the sport management level (i.e., targeted funding and support); however, this long-standing issue is entrenched in health policy. Therefore, this is an issue for consideration at the government level, where detailed policy work is required to minimise the funding gap between the two schemes.

The providers should collaborate with government agencies to address the funding gap between ACC and the public health system. This could involve advocating for policy changes to ensure equitable access to prosthetic equipment for all individuals with limb deficiency, regardless of the cause of their impairment.

Sport organisations should collaborate with prosthetic service providers to enhance the quality of sport experiences for people with limb deficiency. Partnerships with prosthetic service providers are necessary to ensure the participants have access to high-quality, sport-specific prosthetic equipment. This could include organising workshops or clinics where they can receive fittings and adjustments for their prosthetics.

Enhancing collaboration across the disability sport sector

The study identifies fragmentation within the disability sport sector as a barrier to quality participation. Improved collaboration between disability sport organisations, national sport

organisations, and regional sport organisations can enhance the delivery of sport opportunities and improve participant experiences.

Fostering collaboration across the disability sport sector involves organising regular sector meetings, establishing formal networks, and providing funding for collaborative projects. The committee should also work with Sport New Zealand to develop clear pathways for people with limb deficiency, ensuring that they have access to both participation and performance opportunities.

A summary of the strategic recommendations from this study is presented in Figure 5 below to support disability sport participation for people with limb deficiency.



Figure 5. Summary of Agenda for Advancing Disability Sport Participation

Conclusion

The report highlights the importance of defining and prioritising quality experiences in sport, addressing barriers to participation, and ensuring equitable access to prosthetic equipment. It also emphasises the need for collaboration between government agencies, sport providers, and prosthetic service providers to create an inclusive and supportive environment for people with limb deficiency across all levels of sport.

Regarding the elements of quality experience, individualised programmes could be set with input from the participant (*autonomy*). Goal setting could take place between coach and participant (*mastery*). Providers may like to consider the achievement motivation of the participant and whether they are more interested in competing against themselves (*meaning: personal*), or others (*challenge*). Providers could facilitate organic social gatherings before and after games (*belongingness*). Finally, opportunities may be offered to participants to become involved in non-physical roles such as volunteering or coaching (*meaning: social*).

Although there are still challenges regarding perceptions in a disability sport context, for instance, a focus on promoting performance subsequently undermines the quality of a participant's experience, the recommendations outlined in this report provide a roadmap for the agencies to improve the quality of sport experiences and ensure equitable access to prosthetic services for people who participate in sports.

By adopting a quality participation lens, this report concludes with a summary chart illustrating how the model used in this study demonstrates how participants in parasports negotiate and navigate their way toward quality sports and how positive outcomes can be achieved for people with limb deficiencies.

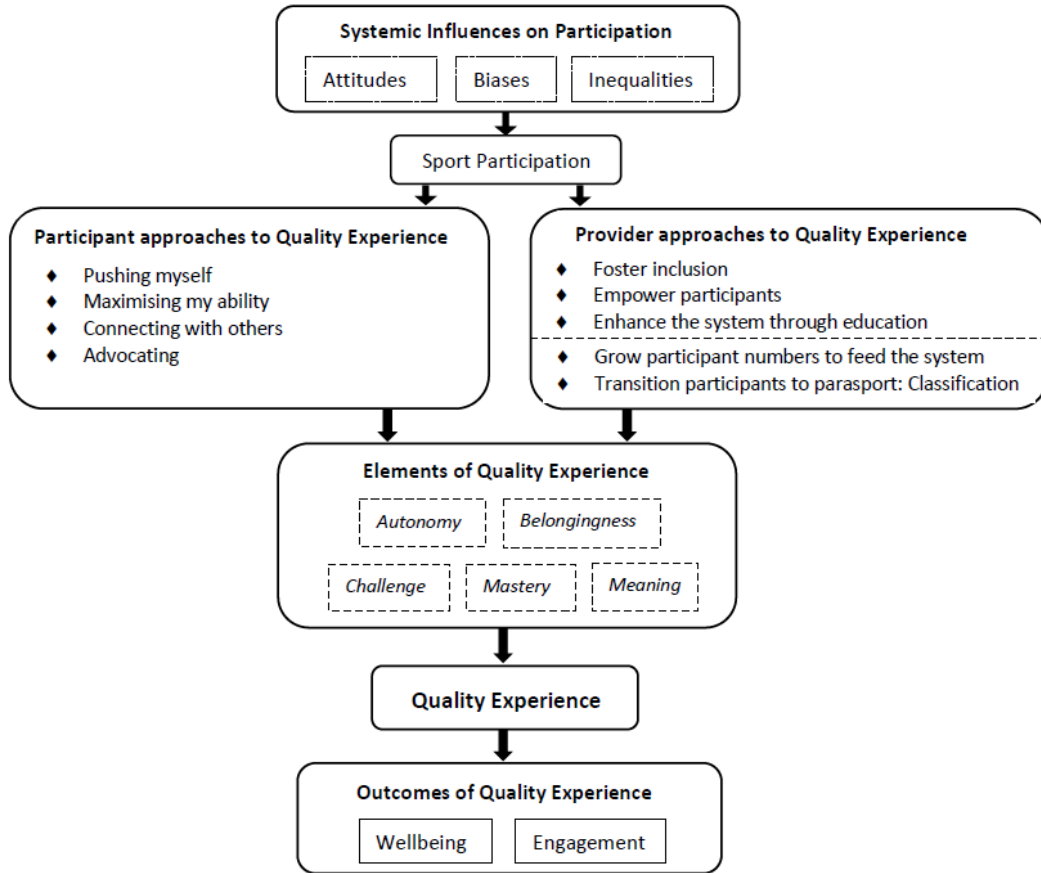


Figure 6. A summary chart of the Model presented in this report.

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