

Original article

From Segregation to Integration: Organizational Capacity and Sustainable Development in Para-Biathlon

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Abstract. The integration of Para sport within mainstream sport organizations is increasingly promoted as a pathway toward inclusion and sustainability of athlete development pathways; however, empirical and conceptual research examining how such integration operates in performance-oriented winter sports remains limited. This study examines the integration of Para-Biathlon programs within existing biathlon club systems from a sport management perspective, with particular attention to organizational capacity, community embeddedness, and athlete development pathways. The study adopts a practice-informed management approach, combining a structured synthesis of peer-reviewed literature on parasport integration with systematic analysis of documented applied practice. Practice-based material was derived from publicly delivered expert presentations and slide decks presented at an international Para-Biathlon conference. These materials were examined for recurring organizational patterns and interpreted through established sport management and parasport integration frameworks. The author's long-term professional experience in parasport system development informed the analytical interpretation but was not treated as an independent data source. The findings indicate that integration into existing biathlon club systems is associated with enhanced organizational capacity through the leveraging of existing infrastructure, governance routines, and volunteer networks. Integrated delivery models were also linked to stronger community engagement, increased organizational legitimacy, and more stable training environments. From an athlete development perspective, integration supported mixed training groups, peer learning, and extended athlete retention,

particularly among athletes entering Para-Biathlon later in life. The study suggests that club-based integration represents a viable and strategically advantageous organizational model for Para-Biathlon development. Rather than functioning as a resource burden, integration can strengthen both inclusion and performance objectives when embedded within community-based sport structures. These findings contribute to sport management scholarship by extending parasport integration research into a winter sport and performance-oriented context, and by highlighting the importance of organizational capacity and community embeddedness in inclusive sport system design.

Keywords: Para-Biathlon; parasport integration; sport management; voluntary sport clubs; organizational capacity; community-based sport; athlete development; inclusive sport systems

Introduction

The integration of Para sport into mainstream sport organizations has increasingly been examined as both a governance challenge and a management opportunity within contemporary sport systems. Early parasport scholarship emphasized structural separation as a means of protection and specialization, yet more recent research has questioned whether segregated models can

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deliver sustainable participation and development outcomes over time (Allan et al., 2017). As a result, integration has come to be framed not merely as an ethical imperative, but as a strategic organizational decision linked to capacity building, legitimacy, and long-term system viability (Cunningham & Warner, 2018).

Within sport management literature, voluntary sport clubs have been identified as particularly influential organizational actors due to their embeddedness in local communities and their ability to mobilize volunteer labor, social networks, and institutional knowledge (Brown & Pappous, 2022). Studies examining post-Paralympic participation legacies indicate that clubs play a decisive role in translating inclusive policy rhetoric into everyday practice, or conversely, in allowing participation gains to dissipate once external funding or political attention declines (Brown & Pappous, 2018). This positions clubs as critical sites for understanding how Para sport integration is operationalized at the delivery level.

Research focusing on participation pathways among athletes with disabilities consistently highlights that sustained engagement is shaped more strongly by organizational and environmental factors than by impairment characteristics. Life-course analyses demonstrate that access to stable participation environments and supportive social contexts underpins continued involvement in sport across different stages of life (Allan et al., 2017). Similar conclusions emerge from studies of adaptive sport participation, which identify environmental accessibility and organizational support as central predictors of long-term engagement (Blauwet et al., 2017).

Coaching environments and program design have also been shown to exert a substantial influence on Para athlete development. Empirical studies indicate that children and youth with physical disabilities are more likely to remain engaged in sport when coaching practices emphasize autonomy support, skill development, and inclusion within existing training groups (Arbour-Nicitopoulos et al., 2018). Research on athlete development trajectories further suggests that Para athletes benefit from training environments that mirror those of able-bodied sport, particularly with respect to performance expectations and social learning opportunities (Dehghansai et al., 2018).

Beyond participation and development, organizational capacity constraints remain a persistent challenge in parasport delivery. Studies examining community-based exercise and sport programs for persons with disabilities identify limited staffing, unstable funding, and insufficient disability-specific

expertise as recurrent barriers to implementation and sustainability (Man et al., 2025). Volunteer management has been highlighted as a particularly fragile component of parasport systems, with program quality and continuity closely tied to volunteer experience and organizational support structures (Man et al., 2020).

Additional complexity arises in contexts where Para sport intersects with rehabilitation, military pathways, or late sport entry. Research examining military veterans with physical disabilities demonstrates that transitions into sport are often mediated by non-sport institutions and require flexible, community-based delivery models to support long-term engagement (Shirazipour & Latimer-Cheung, 2020). Related work on university- and charity-based adaptive sport initiatives similarly emphasizes the importance of community anchors in sustaining participation beyond initial rehabilitation phases (Arthur-Banning et al., 2020).

Despite this growing body of literature, significant gaps remain. Most existing research focuses on summer sports or recreational contexts, with limited attention to winter sports and performance-oriented systems. Furthermore, while studies have examined integration in sports such as wheelchair basketball, para-swimming, and para-hockey, there is an absence of peer-reviewed research addressing Para-Biathlon specifically. This gap is notable given the sport's reliance on specialized infrastructure, safety protocols, and classification systems, as well as its recent governance transition to the International Biathlon Union.

Para-Biathlon therefore offers a unique case for examining integration as an organizational strategy. Athletes frequently enter the sport later in life and remain active across extended competitive cycles, creating distinct demands on pathway design and retention strategies (Dehghansai & Baker, 2019). At the same time, research on parasport participation suggests that identity formation and social belonging play a central role in sustaining engagement, particularly in team-based or community-oriented environments (Laidet et al., 2023).

Accordingly, this study adopts a practice-informed management perspective to examine the integration of Para-Biathlon within existing biathlon club systems. By synthesizing peer-reviewed parasport integration literature with documented applied practice, the study seeks to extend sport management scholarship into an underexplored winter sport context while remaining grounded in verifiable academic evidence.

Hypothesis

Based on existing parasport integration literature emphasizing organizational capacity, community embeddedness, and training environment quality as key determinants of sustainable athlete development, the following hypothesis was formulated:

Integration of Para-Biathlon programs within existing biathlon club systems is associated with enhanced organizational capacity, stronger community engagement, and more sustainable athlete development pathways compared with non-integrated or segregated delivery models.

Methods

Study Design

This study adopts a practice-informed management analysis, an approach commonly used in sport management research to examine organizational processes and system-level implementation in contexts where direct experimental or quantitative data are limited. The design combines a structured synthesis of peer-reviewed parasport integration literature with systematic analysis of documented applied practice.

Data sources

Two complementary data sources were used. First, the study's theoretical and evidentiary foundation is derived from a structured literature synthesis conducted using the ELICIT semantic search engine. The synthesis includes 25 peer-reviewed academic sources addressing parasport integration, community-based sport delivery, organizational capacity, athlete retention, and governance models. These sources constitute the exclusive academic reference base for the manuscript.

Second, applied practice material consisted of publicly delivered presentations and accompanying slide decks presented at an international Para-Biathlon conference affiliated with the International Biathlon Union. Contributors included national performance directors, head coaches, and system architects with formal responsibility for Para-Biathlon development. These materials are treated as documented expert practice rather than as qualitative interview data.

Analytical Procedure

The analysis proceeded in two stages. In the first stage, key organisational constructs were identified deductively from the literature, including organisational capacity, governance alignment, community engagement, training group structure, and athlete pathway sustainability. In the second stage, presentation transcripts and slide materials were

reviewed to identify recurring patterns of application relevant to these constructs.

Only observations that could be conceptually aligned with findings from the peer-reviewed literature were retained. Where applied insights extended beyond the existing evidence base, they were reported descriptively and clearly bounded as practice-based observations.

Author's Practice-Based Expertise

In addition to the documentary and literature-based sources, the analytical framing of this study is informed by the author's long-term professional experience in parasport and high-performance sport systems. This experience spans multiple years of direct involvement in program development, governance processes, and applied collaboration with coaches, athletes, and sport organizations operating across community, national, and international levels.

The author's practice-based expertise is not treated as an independent data source and was not subjected to formal qualitative analysis. Rather, it functioned as an interpretive lens that supported the contextualization of documented practice materials and the critical integration of applied observations with findings from the peer-reviewed literature. This approach is consistent with practice-informed research traditions in sport management, where applied expertise is used to enhance analytical sensitivity while maintaining a clear distinction between empirical evidence and experiential knowledge.

Results and Discussion

The analysis of applied Para-Biathlon practice material reveals a coherent set of organizational patterns associated with integration into existing biathlon club systems. These patterns are consistent across national contexts and align closely with established findings in parasport integration and sport management literature, supporting the proposed hypothesis that integration enhances organizational capacity, community engagement, and athlete development sustainability.

Organizational Capacity and Resource Configuration

A central finding concerns the role of integration in strengthening organizational capacity through the strategic reconfiguration of existing club resources. Practitioners consistently described how clubs provided immediate access to facilities, safety infrastructure, administrative routines, and volunteer labor, thereby reducing reliance on ad hoc or temporary arrangements. This observation is consistent with research indicating that voluntary sport clubs possess

embedded human and infrastructural capital that can be mobilized to support parasport delivery without the need for parallel organizational structures (Brown & Pappous, 2022).

From a management perspective, these findings resonate with resource-based views of organizations, which emphasize the importance of leveraging existing assets to achieve strategic objectives. The applied evidence suggests that integration allows Para-Biathlon programs to capitalize on sunk organizational investments—such as range infrastructure, equipment management systems, and governance routines—rather than duplicating these functions within segregated Para-only systems. Prior parasport research has shown that the absence of such organizational capacity frequently undermines program sustainability, even when policy support for inclusion is formally present (Man et al., 2025).

Importantly, practitioners emphasized that capacity gains were not limited to physical infrastructure. Clubs also provided stable budgeting processes, continuity of staffing, and institutional memory, all of which are recognized in the literature as critical enablers of long-term sport program delivery (Teixeira Matias & Parent, 2018). These findings reinforce the argument that integration should be understood as an organizational strategy rather than merely a participation initiative.

Community Embeddedness and Legitimacy Effects

A second major outcome relates to the effects of integration on community engagement and organizational legitimacy. The study consistently highlighted that inclusive Para-Biathlon programming increased volunteer involvement, strengthened relationships with families, and expanded sponsorship and fundraising opportunities. These observations align with scholarship demonstrating that parasport integration can enhance community identification with sport organizations when inclusion is enacted through routine practices rather than symbolic gestures (Cunningham & Warner, 2018).

From a legitimacy perspective, integration appeared to reposition Para-Biathlon within local sport ecosystems. Rather than being perceived as a marginal or specialist activity, Para-Biathlon was framed as a core component of club identity. Prior studies of post-Paralympic legacy initiatives have similarly shown that voluntary sport clubs are more likely to sustain inclusive programming when such activities are embedded within their everyday operations and value systems (Brown & Pappous, 2018).

The applied evidence also suggests that community value creation was reciprocal. Clubs benefited from increased visibility, diversified funding streams, and enhanced public reputation, while athletes benefited from broader social networks and normalized participation environments. This reciprocal dynamic supports earlier findings that inclusive sport delivery can generate social and organizational returns beyond participation outcomes alone (Cunningham & Warner, 2018).

Training Environments and Athlete Development Pathways

A third key theme concerns the influence of integration on training environments and athlete development. Practitioners consistently emphasized that Para and able-bodied athletes trained together with minimal differentiation beyond equipment adaptation or classification requirements. Mixed training groups were described as central to skill acquisition, peer learning, and performance benchmarking for both para and non-para athletes.

This pattern aligns with parasport research demonstrating that the developmental needs of Para athletes largely mirror those of able-bodied athletes in relation to coaching quality, training structure, and performance culture (Arbour-Nicitopoulos et al., 2018). Studies examining athlete journeys in parasport have similarly highlighted the importance of access to appropriate training groups and consistent coaching environments as determinants of progression (Dehghansai et al., 2018).

From a management standpoint, the evidence applied challenges the assumption that integration necessarily complicates performance delivery. Instead, integration appeared to enhance learning environments by increasing training group density and fostering shared performance norms among para and non-para athletes. These findings support broader sport management scholarship emphasizing the role of social learning and collective practice in athlete development systems (Allan et al., 2017).

Retention, Longevity, and Career Sustainability

The results further indicate that integration into club systems is associated with enhanced athlete retention and extended career longevity. Practitioners repeatedly described athletes remaining engaged across multiple competitive cycles and, in some cases, re-engaging with the sport after temporary retirement. These outcomes were attributed to stable community

affiliation, local support networks, and reduced reliance on centralized relocation models.

This observation is consistent with longitudinal research demonstrating that retention in parasport is strongly associated with consistent participation environments and psychosocial factors such as belonging and identity, rather than with competitive success alone (Weiss et al., 2020). Qualitative studies of parasport participation trajectories similarly emphasize that community-based environments support sustained engagement by providing continuity across life transitions (Allan et al., 2017).

From an organizational perspective, integrated clubs appear to function as retention anchors, particularly for athletes entering Para-Biathlon later in life or transitioning from rehabilitation or military contexts. This finding extends existing literature by illustrating how retention mechanisms operate within performance-oriented winter sport systems, an area that has received limited empirical attention.

Governance Implications and System Sustainability

At the system level, the findings underscore the importance of organizational capacity and governance alignment in determining the success of integration initiatives. Prior research has shown that parasport programs frequently fail at the retention stage due to insufficient organizational capacity, even when recruitment and early participation are successful (Man et al., 2025). The applied evidence suggests that integration mitigates this risk by embedding Para-Biathlon within organizational structures designed for long-term operation, volunteer renewal, and financial sustainability.

These findings reinforce scholarship emphasizing that integration must be accompanied by deliberate capacity-building at the club level. Without investment in coaching education, disability-specific knowledge, and operational support, integration risks remaining superficial or uneven (Blauwet et al., 2017). The present analysis suggests that Para-Biathlon integration is most effective when clubs function as learning organizations capable of incorporating new knowledge into existing routines.

Synthesis and Theoretical Contribution

Taken together, the results provide strong support for the proposed hypothesis. Integration of Para-Biathlon within existing club systems was consistently associated with enhanced organizational capacity, stronger community engagement, and more sustainable athlete development pathways. Crucially, the findings

challenge deficit-oriented narratives that frame Para sport integration as a resource burden. Instead, they position integration as a strategic organizational choice that can strengthen both inclusion and performance outcomes for both para and non-para athletes.

By extending parasport integration scholarship into a winter sport and high-performance context, this study contributes to sport management literature by illustrating how inclusive organizational design operates in practice. The findings suggest that integration should be conceptualized not as a discrete intervention, but as an ongoing management process shaped by organizational learning, community embeddedness, and governance capacity.

Conclusions

This study examined the integration of Para-Biathlon programs within existing biathlon club systems from a sport management perspective, combining a structured synthesis of parasport integration literature with documented applied practice from international contexts. The findings provide convergent evidence that integration, when operationalized through established club structures, is associated with enhanced organizational capacity, strengthened community engagement, and more sustainable athlete development pathways.

Rather than functioning as a supplementary or peripheral activity, integrated Para-Biathlon programs were shown to benefit from the same organizational assets that underpin successful able-bodied sport delivery, including stable infrastructure, volunteer networks, governance routines, and performance-oriented training environments. These findings challenge deficit-oriented assumptions that portray Para sport integration as a resource burden and instead position integration as a strategic organizational choice capable of generating reciprocal value for clubs, athletes, and communities.

From a management standpoint, the results underscore the importance of viewing integration as an ongoing organizational process rather than a discrete policy intervention. Effective integration was not driven by structural alignment alone, but by the capacity of clubs to embed inclusive practices into everyday routines, coaching environments, and governance processes. Clubs that functioned as learning organizations—capable of adapting existing systems, sharing knowledge, and maintaining relational stability—were better positioned to support both inclusion and high-performance objectives.

The study also contributes to parasport and sport management scholarship by extending existing

integration frameworks into a winter sport and performance-oriented context. Para-Biathlon, with its technical, infrastructural, and safety demands, provides a particularly stringent test of integration models. The findings suggest that inclusive organizational design can coexist with, and potentially reinforce, elite performance trajectories when supported by robust community-embedded structures.

Finally, the practice-informed approach adopted in this study highlights the value of bridging academic evidence with applied system knowledge in under-researched sport contexts. While further empirical research is needed to quantify organizational and performance outcomes, the present analysis offers a theoretically grounded and practically relevant contribution to ongoing debates on inclusive sport governance and sustainable sport system design..

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