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# Personal growth effects for college students of ropes course participation: A systematic review and meta-analysis

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**ABSTRACT**

This systematic review and meta-analysis examines the effects of ropes course participation on personal growth outcomes in college students. Transition to college brings challenges to students', mental health and overall well-being. Ropes courses (RCs) are obstacle courses used to foster personal growth, resilience, and team-building. We reviewed 10 studies involving RC interventions, considering factors like intervention duration, RC type, and control group design. The RCs programs demonstrated overall significant effect on personal growth outcomes (standardized mean difference – Hedges' $g = 0.24$, 95% CI 0.04–0.44, $P = 0.02$), however the magnitude of Hedges' $g$ showed no effect. In summary, the results indicate that RCs programs may have small immediate positive effects for college students on personal growth outcomes, such as self-concept and self-efficacy. However, the effectiveness of these programs is primarily dependent on their duration, with longer interventions demonstrating greater potential for positive effects. It is also essential to consider the limitations of the reviewed studies, including the lack of randomization, the use of self-report measures, and the potential for biases.

**KEYWORDS**

adventure; outdoor education; challenge activities; self-concept; self-efficacy

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## INTRODUCTION

The transition from high school to college or university is a significant period in a student's life, marked by increased independence and higher academic and life demands. This transition can often lead to distress and contribute to mental health issues, including anxiety and depression (Eisenberg et al., 2009). Notably, these challenges can have a detrimental impact on students' academic performance and overall quality of life (Zajacova et al., 2005; Yu et al., 2018). Personal growth encompasses developing various outcomes, such a self-concept, self-efficacy, self-confidence, self-actualization, self-restraint, initiative perseverance, determination, resourcefulness, and locus of control. Developing these outcomes can positively influence an individual's functioning (Cason & Gillis, 1994; Ewert & Garvey, 2007; Hattie et al., 1997).

One method frequently employed to promote the development of these personal growth outcomes is through ropes course participation (RCs), also known as challenge courses (Cason & Gillis, 1994; Hattie et al., 1997). RCs are obstacle courses consisting of ropes, steel cable, wood and other specialized hardware usually attached to trees (Attarian, 1990; Rohnke et al., 2003). These courses are utilized in educational, recreational, and developmental settings, such as summer camps, corporate training centres, schools, and colleges, as part of adventure education courses. Their aim is to foster physical and mental health, team-building, problem-solving skills, and personal growth outcomes (Goldenberg et al., 2000; Rohnke et al., 2003). The popularity and availability of RCs have been increasing (Hatch & McCarthy, 2005) providing an opportunity to leverage these facilities to promote personal growth among college students. Engaging in challenging activities on a ropes course pushes students beyond their comfort zones and assists in the development of resilience, perseverance, and a growth mindset (Ewert, 1986; Neill & Dias, 2001; Chang et al., 2019). Overcoming obstacles and achieving personal goals in a supportive environment can enhance their self-esteem and belief in one's abilities, which are crucial for academic success (Hansen et al., 2014; Haras et al., 2005; Nowell et al., 2020).

While RCs are expected to improve outcomes such as leadership, communication, problem-solving, and personal development, research evidence concerning their effectiveness is mixed (Gillis & Speelman, 2008). Gillis and Speelman (2008) found a moderate overall effect of RCs on these outcomes, but noted that the effects varied based on the type of outcome and study design. They also identified several factors that moderate the effectiveness of ropes courses, including course duration, participant type, and challenge level. However, their meta-analysis primarily focused on diverse populations and lacked a strictly defined intervention program. Additionally, factors such as the design of the ropes course (safety measures, element height), participants' prior experience, staff qualifications and instructions, intervention duration, and weather conditions were discussed as potential influences on the effectiveness of ropes course (Priest & Gass, 2005).

To enable educators, trainers, and program facilitators to effectively utilize RCs programs in college settings, it is essential to have a comprehensive understanding of their potential benefits and limitations. Therefore, the aim of this systematic review and meta-analysis was to synthesize existing literature on the effects of ropes courses on personal growth outcomes in college students.

## METHODS

### Criteria for considering studies for this review

Only studies involving RC programmes and personal growth outcomes were involved. Studies focused on any other wilderness and recreational activities that are not related to ropes courses were not eligible. Studies had to be written in English. Journal articles as well as dissertations were eligible. Only intervention studies with the following design were accepted for further analysis: pretest-post-test (PP) or pretest-post-test-follow up (PPF) with both control (CG) or single group (SGS) design were included in this review. Only college students' participants, no matter gender and age were included. All types of ropes (challenge) courses interventions (low ropes courses, high ropes courses) were included. There were no limitations concerning the duration of the intervention. Studies where the RC program was not the main part of the program were not eligible. Studies involving other activities as a part of warm up (icebreakers, games etc.) were included. Self-perceived individual benefits outcomes such as self-concept, self-esteem, self-efficacy, leadership efficacy, life effectiveness skills, learning goals were included in this review. The results of the study had to be reported in a quantitative form.

Appropriate papers were identified through searches using 1) two electronic databases: EBSCOhost (www.ebscohost.com), ProQuest (www.proquest.com); 2) reference lists of eligible papers and several published reviews were hand-searched for further studies; 3) existing bibliography on challenge course-related articles (Attarian & Holden, 2005) was reviewed. When searching in the databases, academic journals and dissertations (EBSCOhost), scholarly journals and dissertations/theses (ProQuest) were chosen in type of source. The search formula in databases was as follow:

- EBSCOhost: TI challenge course OR TI ropes course OR TI adventure program AND AB (benefits or impact or influence or effect) AND AB (college or university or undergraduates)
- ProQuest: (((title (challenge course) OR title (ropes course) OR title (adventure program) AND abstract (benefit OR impact OR effect OR influence) AND abstract (college OR university OR undergraduates)) AND stype.exact ("Scholarly Journals" OR "Dissertations & Theses")) AND stype.exact ("Scholarly Journals" OR "Dissertations & Theses")) AND stype.exact ("Scholarly Journals" OR "Dissertations & Theses").

### Data collection and analysis

A total of 503 studies were identified by searching EBSCOhost and PROQuest. By manually searching the reference lists, an additional 18 studies were identified. After the removal of the duplicates (n = 64), 457 studies were screened by title and abstract. After the initial screening, 28 studies were assessed for eligibility. Due to different reasons such as unclear intervention, no college students, nor individual outcomes measured in the studies, 18 were excluded. Finally, ten studies were included in the review and six of them were included in the meta-analysis (Figure 1). For a full list of studies and variables included in the analysis see Table 1.

All potential papers were first downloaded in EndNote, and then all duplicates were deleted. After removing all the duplicates, all abstracts were explored to identify

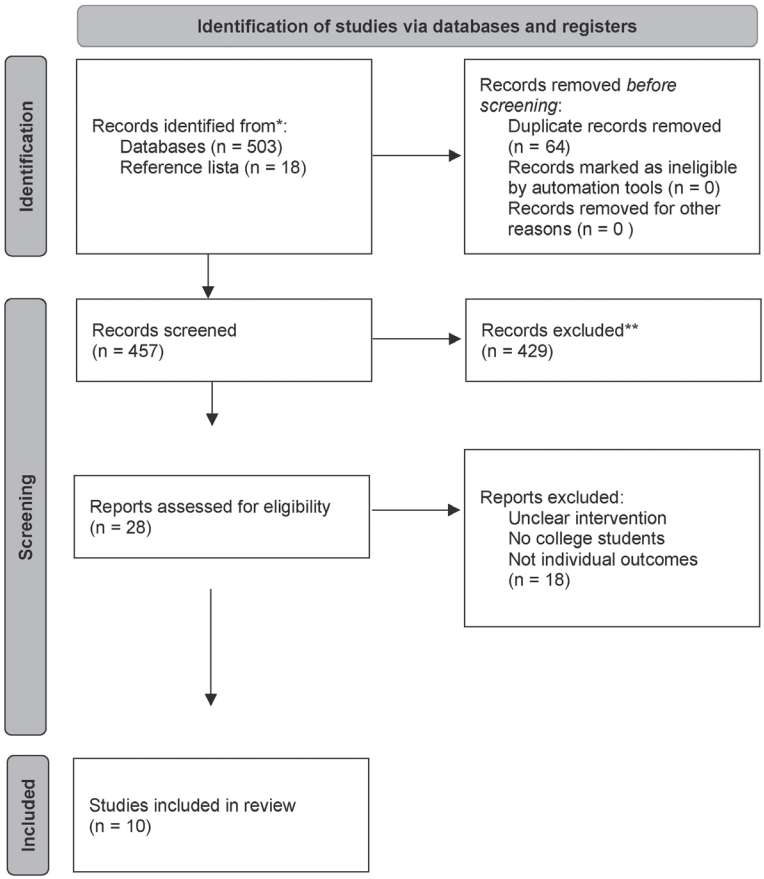


**Figure 1** Prisma flow diagram

relevant papers for subsequent selections. If from the abstract the papers seemed suitable, full texts were examined in detail. Additionally, other papers were identified through the reference lists of papers and reviews gained by the database search.

Measures of treatment effect were calculated using the standardized mean difference for each study, and then the Cochran-Mantel-Haenszel statistical method based on a random-effect model to calculate an effect size (Mantel & Haenszel, 1959). We estimated the heterogeneity using the Cochran Q statistic, $I^2$, $Tau^2$ ($\tau^2$) and $Chi^2$ ($\chi^2$). A rough guide to the interpretation of $I^2$ is as follows: 0 to 40% might not be important, 30% to 60% may represent moderate heterogeneity, 50% to 90% may represent substantial heterogeneity, and 75% to 100% represents considerable heterogeneity. $Tau^2$ ($\tau^2$) estimates the true variance in effect sizes across studies, beyond random sampling error. A higher $Tau^2$ value indicates greater variability in study effects. $Chi^2$ ($\chi^2$) Test assesses whether observed differences between studies exceed what would be expected by chance. A low p-value ($< 0.05$) suggests significant heterogeneity, while a high p-value ($> 0.05$) indicates that variations may be due to random error

**Table 1** Study Characteristics

| Study | Type | Design | Measured outcomes | Time of intervention | Sample (N) | Age (years) |
|---|---|---|---|---|---|---|
| **Cordle (2015)** [#] | T | SGS, PPF | Self-efficacy, Task specific self-efficacy | 4 hours | 52 (26/26) | 20.0 |
| **Finkenberg (1994)** [##] | JA | CG, PP | Self-concept | 40 hours in 16 weeks | 50 (18/32) | 21.0 |
| **Flood et al. (2009)** [#] | JA | SGS, PP | Life effectiveness skills | 8 hours in 2 weeks | 57 | – |
| **Jordan (2013)** [##] | D | CG, PP | Learned resourcefulness | 6.5 hours | 40 (20/20) | 18.0–19.0 |
| **Luna (2018)** [##] | D | CG, PP | Self-concept | 12 hours in 6 weeks | 92 (62/30) | NS |
| **Odello et al. (2008)** [#] | JA | SGS, PPF | Leadership efficacy, work efficacy | 4 hours | 43 | – |
| **Schary et al. (2015)** [#] | JA | SGS, PPF | Learning goals | 4–6 hours | 375*/78** | 21.1*/ 21.99** |
| **Smith (1992)** [##] | T | CCG, PP | Self-concept, Self-efficacy | 10 hours in 10 weeks | 71 | 21.5 |
| **Sturdivant (1991)** [##] | D | CG, PP | Self-concept, Affective behaviour | 8 hours | 26 (12/14) | – |
| **Sung (2004)** [##] | D | CG, PP | Self esteem | 8 hours | 112 (56/56) | 19.0–55.0 |

Type of the study (T – thesis, D – dissertation, JA – journal article), Study design (SGS – single group study, CG – study included control group, CCG – study included control and comparison group, PP – pretest-posttest-test, PPF – pretest-posttest-follow-up), Sample (N experimental group/N control group, * pretest-post test phase, ** follow up phase), [#] Study used in systematic review, [##] Study used in systematic review and meta-analysis

rather than real differences (Higgins et al., 2003). Statistics were carried out using Review Manager 5.4 (The Cochrane Collaboration, 2020).

To calculate the standardized mean difference, in our case Hedges' *g*, the sample size for the experimental and control group and the above-mentioned mean differences (after-before) with standard deviation (SD) for both groups were used. In the case that they were not available, they were calculated using baseline and follow-up means and SD as a simple post-pre difference; we estimated SD as Higgins et al. (2003).

$$SD_{E,change} = \sqrt{SD^2_{E,baseline} + SD^2_{E,final} - \left(2 \times Corr \times SD_{E,baseline} \times SD_{E,final}\right)}$$

(SD – standard deviation, Corr – correlation; E,change – experimental group change; E,baseline – experimental group baseline results; E,final – experimental group final results)

Hedges' *g* of 0.2, 0.5, and 0.8 were interpreted as small, medium, and large effects, respectively (Cohen, 1988; Hedges, 1981).

## RESULTS

### Systematic review

Ten studies were selected for analysis, consisting of four journal articles, four dissertation theses, and two Master's theses. Six of the studies utilized a pretest-post-test design with a control group, while the remaining were single-group studies, with one utilizing a pretest-post-test design and three utilizing a pretest-post-test-follow-up design. Personal growth outcomes were assessed, including self-concept (measured in four studies), self-efficacy (measured in two studies), task-specific efficacy, leadership, work efficacy (measured in three studies), and outcomes such as life effectiveness skills, learned resourcefulness, affective behaviour, self-esteem, and learning goals (measured in one study each).

The RCs programs varied across studies, with six studies utilizing a one-day intervention lasting between four and eight hours, and the remaining studies utilizing regular or irregular multiple sessions lasting between two and sixteen weeks. The interventions also varied in terms of the type of RCs utilized, with two studies utilizing low RCs, one study utilizing high RCs, and six studies utilizing a combination of both. One study did not specify the type of RCs utilized as an intervention.

The results of three one-day intervention studies indicated significant ($P < 0.05$) immediate effects of RCs intervention on self-efficacy, task self-efficacy, leadership and work efficacy and learning goals (Cordle, 2015; Odello et al., 2008; Schary et al.,

**Table 2** Effect of ropes course intervention on different outcomes – overview of all included studies in systematic review

| Study | Intervention | Measured outcomes | WGIE | WGLE |
|---|---|---|---|---|
| **Cordle** | HRC | Self-efficacy,<br>Task specific self-efficacy | ↑<br>↑ | – *<br>– * |
| **Flood** | LHRC | Life effectiveness skills | ↑ | NA |
| **Odello** | LRC | Leadership efficacy<br>Work efficacy | ↑<br>↑ | ↑ **<br>↑ ** |
| **Schary** | LHRC | Learning goals | ↑ | – *** |
| **Study** | Intervention | Measured outcomes | BGIE | BGLE |
| **Finkenberg** | LHRC | Self-concept | ↑ | NA |
| **Jordan** | LHRC | Learned resourcefulness | – | NA |
| **Luna** | LRC | Self-concept | ↑ | NA |
| **Smith** | NS | Self-concept<br>Self-efficacy | –<br>– | NA<br>NA |
| **Sturdivant** | LHRC | Self-concept | – | NA |
| **Sung** | LHRC | Self-esteem | – | NA |

Type of the intervention (LRC – low ropes course, HRC – high ropes course, LHRC – low and high ropes course, NS – not specified), intervention effect (WGIE – Within group immediate after intervention effect, WGLE – Within group long-duration 2–12 weeks after intervention effect – * 2–4 weeks, ** 6 weeks, *** 12 weeks, BGIE – Between group immediate after intervention effect, BGLE – Between group long-duration 2–12 weeks after intervention effect, ↑ significant effect, – non-significant effect, NA – not applicable; Effects reported by the given study)

2015). However, the other three one-day intervention did not find any immediate effect on learned resourcefulness, self-concept and self-esteem ( Jordan, 2013; Sturdivant, 1991; Sung, 2004). It is noteworthy that these three studies involved a control group.

The studies using multiple sessions in two and more weeks with varying total hours of program indicated significant ($P < 0.05$) immediate increases in self-concept and life-effectiveness skills (Finkenberg, 1994; Flood et al., 2009; Luna, 2018). One study has not shown any significant effects on self-concept and self-efficacy (Smith, 1994). Except for one study (Flood et al., 2009), all multiple-session studies involved a control group. While long-term effect was found for leadership and work efficacy in only one single group study (Odello et al. 2008), no long term-duration effect was observed in studies utilizing control group. For a full list of studies included in the systematic review and their effect, see Table 2.

### Meta-analysis

Six studies were included in the meta-analysis. One study was divided into female and male subgroups (Finkenberg, 1994), and one study included two different outcomes, self-concept and self-efficacy (Smith, 1994). Finally, data from 210 participants in experimental (RCs) groups and 192 participants in the control (non-RCs) groups were included in the overall effect of the meta-analysis. The RCs programs demonstrated overall significant effect on personal growth outcomes (Hedges' $g = 0.24$, 95% CI 0.04–0.44, $P = 0.02$), however the magnitude of Hedges' $g$ showed small effect. For a full meta-analysis see Figure 2.

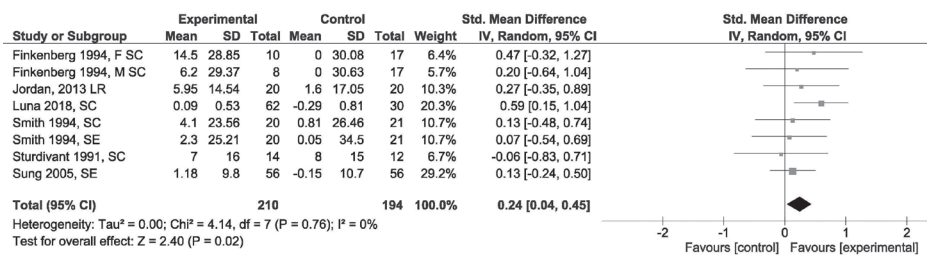


**Figure 2** Meta-analysis
F – female, M – male, SC – self concept, LR – learned resourcefulness, SE – self-efficacy

## DISCUSSION

### Systematic review

The findings of this systematic review indicate several key points regarding the effects of RC on personal growth outcomes in college students. Firstly, studies without control groups generally reported significant immediate positive effects of RC on various outcomes, such as self-concept, self-efficacy, life effectiveness skills, leadership efficacy, work efficacy, and learning goals. However, when studies with control groups were considered, the overall effect of RC on personal growth outcomes was not confirmed.

This lack of significant findings may be attributed to limitations in the design or implementation of the courses, as well as the measurement tools used.

Apart from control group, the following factors may have contributed to affect final results: selection of participants and lack of control over their behavioural changes, researchers' expectancies, the personality and teaching skills of RCs instructors, individual perception of RC challenge and its debriefing after the program, and finally the duration of the program.

The duration of the program appears to be one of the main factors affecting outcome of the RC courses. While one-day programs (≤ 8 hours) demonstrated immediate positive effects on certain individual outcomes, such as self-efficacy (Cordle, 2015), leadership and work efficacy (Odello et al., 2008), learning goals (Schary et al., 2015), the long-term effect was observed on leadership-efficacy and work-efficacy only (Odello et al., 2008). The multiple-session programs with longer duration (> 10 hours) (Finkenberg, 1994; Luna, 2018) demonstrated low to medium immediate effect on self-concept. Moreover, the length of the program when using CG design shows stronger immediate effects for longer than shorter programs. It appears that positive effects with interventions lasting at least 6 weeks with programs ≥ 2 hours a week may provide some benefits, while one-day RC programs or multisession programs lasting up to 10 hours do not provide any substantial effects on personal growth outcomes.

The effectiveness of interventions within adventure education programs is also contingent upon participants' perception of risk and the quality of debriefing provided (Leberman & Martin, 2004; Taniguchi et al., 2005). Six studies (Cordle, 2015; Flood et al., 2009; Luna, 2018; Sturdivant, 1991; Sung, 2004; Schary et al., 2015) claimed experienced and trained RC' leaders. Moreover, apart from two studies (Finkenberg, 1994; Smith, 1992), some kind of debriefing of the program was used. In four studies (Cordle, 2015; Flood et al., 2009; Luna, 2018; Jordan, 2013), the level of challenge was considered. However, it is impossible to assess the direct impact of debriefing and challenge level on the personal growth outcome in the studies involved due the limited level of evidence.

### Meta-analysis

In our study, the overall effect size, regardless of the measured outcome, was Hedges' $g = 0.24$ ($P = 0.02$), which means small effect. In a meta-analysis by Gillis and Speelman (2008), which focused on the impact of challenge courses on university students, the overall effect size was found to be d = 0.18 across 11 studies, with no intervention longer than 10 hours.

Our meta-analysis has shown different Hedges' $g$ effects on self-concept (–0.06–0.59) across 4 studies (5 effect sizes), whereas Gillis and Speelman (2008) found an effect size of d = 0.26 across 20 studies for self-concept and self-esteem. However, our analysis showed no meaningful effects (Hedges' $g = 0.07–0.13$) on self-efficacy among two studies, differing from previous meta-analyses where significant effects were noted (Cohen's d = 0.48 in Gillis and Speelman, 2008; Cohen's d = 0.35 in Thor, 2014; Hedges' $g = 0.4$ in Speelman, 2013). Speelman (2013) also reported an overall effect size of Hedges' $g = 0.29$ for self-esteem and Hedges' $g = 0.5$ for other personal outcomes. The contradictions are likely due to the different population involved and all factors mentioned at the beginning of the discussion. These discrepancies also

highlight the need for cautious interpretation and further research, considering the nuances in outcomes and the influence of specific studies on the overall effect size.

Although this review primarily focused on the effects of RCs programs on personal growth outcomes, it is important to acknowledge the limitations of the reviewed studies. Most studies utilized either single-group designs or quasi-experimental designs with non-randomized control groups. Additionally, self-report measures were commonly employed, which can be subject to biases and inaccuracies. These limitations should be considered when interpreting the findings. It is important to note that the influence of factors such as the height and design of the RCs, participants' prior experience with such obstacles, staff qualifications, instructions and presence of debriefing could not be estimated due to limited evidence. Therefore, further research should be undertaken with stronger experimental design and confounding variable description to better understand the extent and generalizability of the benefits of RC programs, including their long-term effects.

Our main limitation in our study was the small number of studies included in the meta-analysis, that is the reason why various indicators of personal growth were combined. It is possible that the programs may only affect certain indicators. Additionally, the wide range of publication years may introduce a potential generational effect that could influence the results. Curiously, the oldest study included, published in 1991, is about to turn 35, and only a few studies have been published since then.

## CONCLUSION

In summary, this systematic review and meta-analysis indicate that RCs programs may have small immediate positive effects for college students on personal growth outcomes, such as self-concept and self-efficacy. However, the effectiveness of these programs is primarily dependent on their duration, with longer interventions demonstrating greater potential for positive effects.

Based on the findings of this review, it is recommended to implement longer (≥ 6 weeks) and regular (≥ 2 hours a week) RCs programs rather than shorter interventions lasting only a few hours or a single day. This outcome suggests that sustained engagement with RCs activities may be necessary to achieve meaningful and lasting personal growth outcomes. It is also essential to consider the limitations of the reviewed studies, including the lack of randomization, the use of self-report measures, and the potential for biases.

### Disclosure statement

The authors report there are no competing interests to declare.

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# Interweaving the concepts of sport for development and adapted physical activity in a Latin American context

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**ABSTRACT**

Sport for Development (SFD) initiatives have brought about positive societal changes; however, many scholars have recently offered more critical perspectives, emphasizing the need for a broader focus. As a multidisciplinary kinanthropological discipline with a strong special education overlay, adapted physical activities (APA) are strikingly similar to SFD in their use of a physical activity to improve the overall quality of life for individuals with special needs. This article aims to demonstrate that APA and SFD are not two separate fields but complementary approaches by examining the literature on SFD in the Latin American context and linking it terminologically to APA, particularly from the perspective of psychosocial prevention for vulnerable youth, to unify these concepts into a scholarly theme. This literature review draws on 79 peer-reviewed articles published in English, Spanish, and Portuguese over the past two decades on SFD and APA in Latin America, identified through systematic database searches and reference tracking. Using thematic analysis, overlapping goals, ethical tensions, and political dimensions of sport-based interventions were synthesized. Findings indicate that both SFD and APA prioritize promoting social inclusion, psychosocial well-being, and empowerment, particularly among marginalized groups. However, both face challenges, such as implementing universal approaches, meeting expected outcomes from sponsors, and being instrumentalized for political or diplomatic purposes. Aligning SFD and APA through shared ethical principles and emphasis on psychosocial aspects, inclusion, and community embeddedness can enhance their impact and sustainability, especially when tailored to the sociopolitical realities of Latin America.

**KEYWORDS**

critical perspective; kinanthropology; Latin America; psychosocial development

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## INTRODUCTION

What could connect Zlatan Ibrahimović, one of the world's most talented and controversial football players, with Kyle Maynard, a successful wrestler, climber, and inspirational speaker? They both came into the world at a particular disadvantage. Their stories might have ended up unnoticed and marginalized. Instead, through sport, they discovered a path to self-development and social recognition that might otherwise have been unattainable.

This transformative potential of sport is not limited to Europe or North America. Chilean Paralympian, Francisca Mardones, rebuilt her life after a spinal cord injury, moving from wheelchair tennis to athletics and ultimately broke her own world record in the women's F54 shot put at the Tokyo 2020 Paralympic Games. Similarly, Yulimar Rojas, raised in a poor area on the Venezuelan Caribbean coast where she suffered bullying as a child, became the world's leading triple jumper, an Olympic and world champion who also broke barriers as an openly LGBTQ+ athlete.

Together, the stories of Ibrahimović, Maynard, Mardones, and Rojas illustrate sport's capacity for psychosocial transformation. Starting with their stories is not to romanticize overcoming obstacles but to underscore a fundamental truth: sport has the potential to effect profound psychosocial transformation. When approached with the correct values of inclusion, support, and respect for diversity, sports can foster identity, confidence, and a sense of belonging, inspiring hope and optimism.

In this literature review, we focus on Latin America because of its unique combination of vibrant sport cultures, persistent inequalities, and the increasing use of sport as a tool of development. Thus, we examine 79 academic papers published over the last two decades on adapted physical activity (APA) and sport for development (SFD) approaches in the Latin-American context. These papers cover a wide range of topics, including the theoretical foundations of APA and SFD, case studies of successful initiatives, and critiques of the current approaches. Of these, 60 were in English, 11 in Portuguese, and 8 in Spanish language. We explore both the potential and limitations of these approaches, demonstrating that APA and SFD converge as complementary approaches centered on psychosocial well-being, inclusion, and community, particularly within the sociopolitical realities of Latin America.

## THEORETICAL BACKGROUND

Concepts such as *sport*, *development*, *adapted physical activity*, *the psychosocial aspect of health*, and *Latin America* are open to broad interpretation. While we attempt to unify these concepts into a scholarly theme, it is crucial to acknowledge the limitations, omissions, and fragmentation that burden the current literature and practice. Each concept warrants a separate scholarly treatment, but a critical perspective is essential for a comprehensive understanding.

As this paper addresses the above points, we aim to provide more up-to-date, comprehensive, and contextually relevant information. In this spirit, we aim to contribute to the growing body of knowledge on APA and SFD by reviewing the literature on this agenda in the Latin American context.

## Adapted physical activities

Adapted Physical Activities are not just a set of physical activities, programs, and strategies. They represent a comprehensive approach to developing an active lifestyle and improving the quality of life for people with special needs. This approach encompasses mental, physical, and social development, instilling a sense of reassurance and confidence. Traditionally, it has implemented its activities in physical education, sport, physical recreation, and compensatory rehabilitation. It involves working with individuals with disabilities through physical activity as a means of overall development for both the individual and society.

The history of sports for people with disabilities reflects the world's events, highlighting the connection between disability sports and rehabilitation. Although forms of disability sport have existed since the 19th century (DePauw & Gavron, 2005; Cherney et al., 2015), it was not until World War II that a fundamental transformation in societal perceptions of them occurred. Ludwig Guttmann organized the first Stoke Mandeville Games for the Paralyzed in 1948, laying the foundations for the Paralympic movement (Blauwet & Willick, 2012). In the same year, the lesser-known but historically significant Kladruby Games, founded by Vojmír Srdečný, were established in Czechoslovakia. These games combined sport, culture, and community gatherings in the spirit of psychosocial rehabilitation. However, the original inclusive *ethos* of these Games contrasts with today's shift towards a performance model in Paralympic sport (Martínková et al., 2020).

Today, the issue of equal access and participation in sports remains an ongoing concern. Children and adults with disabilities face environmental barriers, a lack of inclusive programs, and persistent stigmas (van der Ploeg et al., 2004; Shields & Synnot, 2016). In Latin America, these challenges take on specific forms, as demonstrated by Camargo Rojas et al. (2023) in their review study. Levels of accessibility, social acceptance, and support structures following participation in sports for people with disabilities vary between countries. In Brazil, there is a lack of qualified professionals; in Colombia, physical activity is perceived as a tool for autonomy but is institutionally limited; in Peru, segregation persists; in Chile, gender inequality persists; and in Paraguay, there is a lack of pedagogical training.

In addition, the underrepresentation of people with disabilities in textbooks and media images of sports contributes to their symbolic marginalization (Hardin, 2007; Botelho-Gomes et al., 2008). Only 1.2% of photographs in physical education textbooks depict people with disabilities, mainly in high-performance contexts (González-Palomares & Rey-Cao, 2020). This critique further develops Cherney et al. (2015), who point out that the media often reproduce two extremes: 'superheroes' who overcome unimaginable limits, or passive victims. Such narratives distract from the everyday realities and structural barriers that affect the participation of people with disabilities in sports. Thus, sports are not neutral, and how we portray them reflects social power structures and gender inequalities (Moya-Mata et al., 2023). Therefore, we should critically analyze materials and media discourse rather than simply reproducing hegemonic patterns that not only fail to reflect the diversity of experiences of people with disabilities but also reproduce normative ideas about physicality and performance, and show the dangers of selective representation.

Similar inspirational stories about Zlatan Ibrahimovic, Kyle Maynard, Francisca Mardones, and Yulimar Rojas, as we mentioned in the introduction to our article, are very tempting. However, as we mentioned, we do not mean to idealize overcoming obstacles but to emphasize that sport can be a powerful tool for psychosocial transformation, provided the professional public grasps it well. Moreover, it is this "grasping of sport" that is key. When competitiveness directly conflicts with the inclusive nature of disability sports, tensions arise.

After all, gaining social connections is one of the most significant benefits of participating in sports (not only) for people with disabilities. Meeting others and feeling integrated into a group helps individuals feel more satisfied overall, and even a simple "trip out of the house" boosts their self-esteem (Lindemann & Cherney, 2008). In short, the stronger the social ties, the more likely a person with a disability is to participate actively in sports. The undeniable benefit is then friendship, whether it is with children (Seymour et al., 2009), adults (Ashton-Shaeffer et al., 2001; Lindemann & Cherney, 2008; Cherney et al., 2015), or retired people (Güths et al., 2017; Silva et al., 2025).

Thus, sport can only be a tool for psychosocial emancipation if we understand it as a space of identity, relationship, and participation rather than an exclusive performance sphere. This approach is central to the conceptualization of both APA and SFD as it highlights the need for inclusive and ethically grounded practices.

## Sport for development

Unlike the APA, sport for development is a relatively young field that has emerged as a powerful paradigm for addressing various social issues worldwide over the past two decades. Founded on the belief that sport has a unique ability to promote positive social change, the field of SFD has quickly gained the attention of academics, policymakers, and practitioners alike. Its formal recognition and structured implementation began with the formulation of the Magglingen Declaration in Switzerland in 2003, after the UN International Conference on Sport and Development. The ambitious, perhaps even paternalistic, aim was to bring together key stakeholders to discuss the best ways to collaborate and work towards a 'better world' through sport.

Since then, the field of SFD has evolved to include organizations in more than 120 countries, resulting in a wealth of primary and secondary literature on its application, strategies, and outcomes (Svensson & Cohen, 2020). Despite its relatively short history, any researcher interested in the topic should not overlook some of the work. Many researchers, including ourselves, recommend Schulenkorf et al.'s (2016) integrated review of the SFD literature as the theoretical pillar of their studies.

Before delving into Latin American material, however, it is worth noting that even in just two decades, scholarship has evolved, and researchers have advanced beyond conceptual issues and superficial empirical studies to incorporate diverse perspectives (Schulenkorf et al., 2016; Whitley et al., 2019). Their work has led to many theoretical and empirical studies across many sports disciplines, including management, sociology, health, public policy, gender studies, education, marketing, media, and conflict and peace studies. Researchers have recently advocated for more capacious perspectives and interdisciplinary collaboration. To achieve a more comprehensive understanding

of the impacts of SFD, they have recommended giving greater attention to areas such as disability, gender, and economic livelihoods. For example, Giulianotti et al. (2019) also highlighted the transnational, methodologically plural, and interdisciplinary nature of the SFD field.

As is often the case with this type of global strategy, attention to SFD in recent literature has shifted from initial enthusiasm and numerous documented successes to adopting a more critical perspective (Cohen et al., 2019). Increasingly, scholars are examining the underlying assumptions and broader impacts of SFD initiatives and questioning their long-term sustainability and effectiveness. For example, Coalter's (2015) 'black box critique' notes that many initiatives fail to adequately explain how and why sport contributes to change. Other critiques, in turn, often highlight the perpetuation of neoliberal agendas (Melo, 2018), the reinforcement of gender norms (Hargreaves & Anderson, 2014; Zipp & Nauright, 2018; Guevara Pérez et al., 2023), the persistence of racism (Venâncio et al., 2024), and the environmental consequences of major sporting events (Millington et al., 2020). These critical perspectives are essential to a comprehensive understanding of SFDs, as they reveal the complexities and challenges that accompany their implementation.

Effective SFD programs must go beyond individual empowerment and target systemic inequalities, as Darnell & Millington (2019) remind us. Hence, current research increasingly turns to a holistic understanding of sport as a physical and, more importantly, psychosocial transformation tool. Due to the many directions SFD is taking today, it is not easy to retrospectively track scientific findings. On the other hand, the field is open to any new perspective. Thus, the intersection of SFD concepts with APA enables for the formulation of new theoretical and practical frameworks for working with marginalized youth in Latin America and beyond.

## Latin American context

Scholars often highlight the ability of sport to inspire, unite, and empower, but its role in development is not nearly as clear. Who defines "self-improvement" or "good" values in sports? Histories of colonialism, inequality, and contested development persist in the Latin American context, and sport is not only a cultural, recreational, or economic phenomenon but also a space fraught with political and social relevance (Bravo et al., 2016). Thus, we join other scholars who have warned against romanticizing the potential of sport without a critical approach.

For these reasons, the broader Latin American region, with its rich sports culture, diverse socioeconomic environments, and politically contested history of 'dependent development' and persistent inequality, provides a unique context for exploring the impacts and implications of SFD and APA initiatives.

Several countries in the region have adopted the concept of development through sport, including at the central government level, to address pressing social issues ranging from youth violence to gender inequality. However, scholars often debate the effectiveness of these programs, and each is limited by factors such as political instability, economic disparities, and cultural barriers.

Given these contexts, it is then pertinent to consider Svensson & Woods' (2017) systematic review, in which out of 3,138 organizational records in SFD databases, they

listed a total of 955 actors involved in grassroots practice, of which "only" 99 were from Latin America, mainly Brazil, Colombia, and Peru. However, authors Añorve & Flores (2021) reported only 79 ad hoc organizations. This relative dearth of research on Latin America is concerning because established models and theories of SFD may not always be applicable to a given context. Particularly because what constitutes the 'global' knowledge base of SFD research comprises a relatively narrow group of researchers (Darnell et al., 2019) with specific geographical and cultural backgrounds and affiliations to the so-called 'Global North'. Fortunately, da Silva Freitas et al. (2022) provide evidence that voices from the 'Global South' are actively producing and writing on the topic. Other academics have also recommended greater inclusion and collaboration between the 'North' and the 'South' in order to capture regional dynamics and achieve more balanced research outcomes (Moura & Šafaříková, 2024; Graeff et al., 2023).

The Latin American region thus offers specific challenges and examples of good practice. The review by Parnell et al. (2018) and the monograph by Jaitman & Scartascini (2017) demonstrate that sport is often successfully used to promote social capital, inclusion, community cohesion, education, and health; however, it is less effective in crime prevention, for example. A notable example from Colombia is an initiative in Ciudad Bolívar, where a community sports program has helped local youth reach international levels, including the Olympic Games (Gadais et al., 2022). However, the study notes that the pressure for elite performance has gradually undermined the program's social mission.

Other research emphasizes the importance of participant engagement, reflexivity, and contextual sensitivity, as shown, for example, by Ponciano Núñez & Carter (2025) in programs in Central America that build on Freire's pedagogy and focus on community empowerment and youth civic engagement. However, they criticize structural barriers such as inadequate funding, gender stereotypes, and vertical decision-making models that limit the transformative potential of sport. We can also mention other SFD initiatives examined in El Salvador (Gadais et al., 2017), Colombia (Oxford, 2017; Hills et al., 2018; Cárdenas, 2019), Barbados and Saint Lucia (Zipp & Nauright, 2018), Belize (Wright et al., 2018), Mexico (Añorve & Flores, 2021), Ecuador (Córdova Paredes et al., 2024), Uruguay (Figueiredo et al., 2024), Guatemala (Mandigo et al., 2018), Nicaragua (Hayhurst et al, 2018), Brazil (Rubio, 2014; Toledo & Silva Bega, 2019; Kravchychyn et al., 2019), Argentina and Chile (Levoratti et al., 2024), or for the Latin American population in the USA (Baker et al., 2018). Given sport's central role in Latin American culture and society, the country's case studies illustrate the importance of a local and culturally sensitive approach.

Sporting activities, with their intrinsic values, can become excellent tools to improve educational outcomes, support livelihood generation, and promote peace, social integration, and development in Latin America (Añorve & Flores, 2021). Nevertheless, their effectiveness depends on context and proper implementation. Government support and local community involvement are key success factors (Gadais & Baptista, 2019), as sport alone cannot solve the structural causes of conflict, inequality, and social isolation (Cárdenas, 2019).

## DISCUSSION

This review of the available literature suggests that SFD and APA approaches share several key features, particularly an emphasis on participation, community embeddedness, and psychosocial benefits. However, their developmental trajectories, institutional embeddedness, and modes of legitimation differ significantly. While APA grows out of academia and its long-standing work with disadvantaged groups, SFD is a globally mobilized movement whose legitimacy is often shaped by the political discourse and development agendas of international organizations.

However, both approaches face similar challenges regarding ethical embeddedness, inclusion, and unique contexts in a world oriented towards measurable outcomes and standardized models. Many studies (Martins et al., 2015; Belizán et al., 2019; Proaño et al., 2023) show that the effectiveness of movement programs increases significantly when they are rooted in community settings, reflect cultural specificities and involve local people already in the planning process. In contrast, one-size-fits-all interventions, lacking local context, often fail in terms of long-term sustainability and do not achieve the expected psychosocial impact. In a systematic review of 71 studies, Ponciano Núñez et al. (2023) highlight that although community sports interventions often show positive outcomes such as improved physical health, mental well-being, and life skills, most lack theoretical grounding and rigorous evaluation methods.

This raises a fundamental question: Can sport be a universal tool for development? Unfortunately, the answer is not yes. If a sport intervention is not firmly anchored in local sociocultural structures, it loses its transformative potential and can become a tool to reproduce already existing inequalities (Giulianotti et al., 2016; Melo, 2018; Vasquez et al., 2020). The loss of community embeddedness, whether due to sponsor pressure, politicization, or professionalization, emerges as a crucial tipping point in several case studies (Watson, 2022; Gadais et al., 2022).

Sport in Latin America has historically served as a tool for identity formation, nation-building, and political legitimacy, often shaped by colonial legacies and state interventions (Bravo et al., 2016). Moreover, the scholars note that although sports promote development and peace, many initiatives lack coordination and local context. They, therefore, call for a regionally embedded approach that better reflects the sociopolitical realities of Latin America. Skepticism towards SFD by academics and practitioners is further confirmed by Darnell et al. (2016) and Welty Peachey et al. (2017), who highlight the need for culturally sensitive and participatory approaches that reflect local conditions. Meanwhile, gender and structural inequalities are evident, for example, in the Colombian women's football league, where female players face insecurity, marginalization, and weak institutional backgrounds (Martínez Mina et al., 2019), in the Mexican women's soccer league where hierarchical structures persist (Añorve, 2019), or in Nicaraguan gender-based violence projects where rigid sponsorship expectations hinder deeper community engagement (Hayhurst et al., 2018). Gender, security, and cultural norms thus fundamentally affect the effectiveness of SFD programs (Vasquez et al., 2020). In this sense, Venâncio et al. (2024) offer practical insights for SFD organizations to achieve sustainability and social change by overcoming structural inequalities, lack of resources, cultural resistance, and limited awareness.

The interconnection between sport and politics also manifests at the state level of representation (Rofe, 2018). For example, the Colombian government utilized football in the Golombiao program as a tool for state legitimation and peace diplomacy (Watson, 2022), so we find it necessary to highlight the transformation of sport into a tool of soft power and international representation (Castilho & Marchi Júnior, 2023). Sports can easily be instrumentalized without firm roots in ethical and community frameworks.

Fortunately, practical examples show that sports based on participatory and culturally sensitive approaches can empower disadvantaged groups. Havelange's approach to informal diplomacy (Gutierrez, 2023), the Afrodescendent Games in Colombia (Cáceres, 2020), and adventure sports for people with disabilities (Cantorani et al., 2023) are examples of the use of movement as a space for psychosocial intervention and cultural expression.

The disability-focused approach overlaps thematically with SFD approaches focused on disadvantaged youth, supporting the idea that 'disadvantage' can take many forms (social, mental, physical) where sport can be a universal means of developing human potential (Araújo et al., 2023).

Thus, we should not view APA and SFD as separate worlds, but rather as complementary approaches. Linking them enables the formulation of new frameworks for interventions that are not based on performance but on relationships, unique identity, and local context. While sport, understood in this way, is not a 'one-size-fits-all' solution, it can be an important tool for working with marginalized groups if it is underpinned by long-term collaboration, trust, and cultural sensitivity (Finck Barboza et al., 2014; Ramos et al., 2023).

Success, in this sense, should not be understood as a measurable outcome but as a process. We view success as developing the ability to act conscientiously and responsibly, establish healthy relationships with others, and feel part of a community. The measure of success, then, is not limited to quantitative indicators of participation but also encompasses transformations in self-worth, relationality, and the ability to co-create a safe and empowering environment (Ariza, 2014; Larsen et al., 2014; Camargo Rojas et al., 2023).

The link between APA and SFD is theoretical and practical – allowing for the development of comprehensive, contextually sensitive, and values-based approaches to working with disadvantaged youth in Latin America. Both fields oppose social inclusion and the improvement of the quality of life for people with disabilities (McKinnon et al., 2022). This creates a space for the development of sport, which is not only a tool but also something that extends beyond the field and continues in the life stories of its participants.

Sport cannot be understood as a neutral tool – its form, effect, and purpose are always shaped by context. Thus, both APA and SFD can be powerful tools for inclusion, emancipation, and participation when they reflect local needs, inequalities, and the potential of individuals and communities. In conclusion, combining these two fields enriches scholarly knowledge and opens new avenues for practical action in the Latin American context and beyond.

## CONCLUSIONS

This literature review has demonstrated that APA and SFD are not two separate fields but complementary approaches that share an emphasis on psychosocial aspects, inclusion, and community embeddedness. This is particularly true in the Latin American context, where sport often holds strong cultural and political significance. It is crucial to reflect on local specificities, the history of inequalities, and the need for participatory approaches. Interventions rooted in local structures and based on community needs are more likely to have a long-term impact than universal models transmitted from above.

We, therefore, recommend an emphasis on ethically and culturally sensitive approaches that develop not only performance but, more importantly, relationships, identity, and psychosocial empowerment of participants. For future research, this implies the need to link existing findings from APA and SFD to encourage research conducted from a Global South perspective, focusing on the long-term impacts of sport.

### Conflict of interest

The authors report no conflict of interest.

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# Between *lex Olympica* and *lex publica*: National Sports Agencies in France and Germany compared

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**ABSTRACT**

While Germany is striving for the creation of a national agency entrusted with the financing of sports, that of France has already been operating for seven years. The proposed German agency is compared with the extant French agency by drawing on the concept of *lex Olympica* as opposed to *lex publica*. In the framework of a comparative analysis of policy and regulation, this article contrasts the historical and legal background of the two national cases; the relationship between state and sport; modes of organisation, regulation and financing; and prospects for measuring performance. Using a mixed legal and economic methodology, the article proposes a combined analysis of the two cases to make inferences about the relationship between *lex Olympica* as opposed to *lex publica*.

**KEYWORDS**

sport policy; autonomy; public policy; financing of sport; elite sport; sport for all; sport agency; France; Germany; olympic medals

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# 1. INTRODUCTION

## 1.1 Problem outline

Because various models exist for financing elite and grassroots sports, including their professional and amateur variants, the task of identifying the 'best' model for supporting sport through public policy depends not only on the underlying understanding of sport, and the objectives pursued by such a policy, but also on the wider legal, institutional and political framework. While all these variables condition the extent to which inferences can be made from concrete cases as to which forms or regulation can be deemed 'good' policy, there certainly is a strong case for comparing policies rooted in national frameworks which can be considered paradigmatically different, if not directly opposite. While sport economists and sport sociologists may apply their specific concepts to frame such discourses, a legal discourse should be grounded in specifically legal concepts, even if drawing on knowledge from other disciplines. In the present paper, the authors have chosen to ground their discussion in the concept of *lex Olympica*, understood as a legal order separate from the common law of society, or *lex publica*, created, applied and defended by the (especially Olympic) sports movement. This is not to say that no other legal concept could have been used, yet *lex Olympica* is a strong analytical tool because of its focus on the juxtaposition of private and public interests, norms and mechanisms.

The paradigmatically (almost) opposite national cases are those of France and Germany, and the specific test case is that of national sports agencies, of which France already created one (2019) while that of Germany is currently (2026) under discussion. We will ask whether the agencies are solely meant to trigger more medals in elite sports or also more participation within the public. We shall identify the most salient aspects of the (extant) French agency and the (still only proposed) German agency, including their links with Olympic bids. While the French agency did mark a break it continuity in many ways, it nevertheless was in line with the French tradition of a sports policy framed by the state.[1] By contrast, the recently proposed sports agency of Germany[2] is more intriguing and – to be understood fully – needs be seen against the backdrop of cumbersome federalist doctrines and institutional arrangements which have hitherto made it difficult for the state, in particular at the national level, to take a leading role in shaping sports policy.[3] Against this backdrop, we will also try to answer the question whether Germany can learn from the French experience.

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1 Note that, while the word 'state' in the French context regularly refers to the (usually executive) authorities at national level (*l'État*), when we use the term to discuss matters pertaining to both cases, we are employing it in the British sense of the term, basically denoting generic state structures. This also marks a difference from American English usage where the word 'state' refers to a specific tier of government; while the US usage is concrete, the UK usage is abstract.

2 For the current legislative proposal (as per 13 May 2026), see Bundestag (2026a). For a stenographic protocol of the plenary debate in first reading held on 22 May 2026, see Bundestag (2026b).

3 For the factual background, see inter alia BMI & DOSB (2023). For the intentions of the federal government, represented by the Federal Ministry of the Interior (BMI), formerly responsible for Sport, see BMI (2024), but also Bundeskanzleramt (2025). For a more pointed contribution from the German Olympic Sports Confederation (DOSB), see DOSB (2024, 2025).

### 1.2 Methodology

In an effort to connect with current debates, we are borrowing the notion of *lex Olympica* from James & Osborn (2023, 2024) which, in discussing findings from our two cases, we shall compare and contrast with the notion *lex publica*. We review the validity of theories from law and economic for a more state-oriented sports system (France) and a (nominally at least) non-profit sports movement (Germany). The situation calls for a comparative, qualitative analysis, since both systems look for strategies and new structures for more sporting success while obviously resorting to different solutions. This orientation and direction seem to be orientated to top level sports and medals in global contexts. This includes World Championships and, particularly, Olympic Games. Using an essentially heuristic approach, our aims are to define the sense, the ways and the consequences of these new types of agencies.

Based on a mixed methodology with input from legal as well as economic and social science sources and theories/models, we aim to ask (some of) the following questions: What are the legal aspects? Are the agencies legally and technically able to make sports specific decisions which probably interfere with the autonomy of the sports movement? Are the agencies intended as policy makers or as warrantor for sporting success? Will they contribute to other aspects in sports, both at elite and grassroot level? To address the research question identified above, we shall start by engaging with relevant sports law literature and move on to an examination of legislation, policy documents, etc., including governmental as well as NGO sources, leading to a qualitative analysis and a discussion of the findings.

Within a comparative European context, France and Germany stand out because they have chosen models for recognising, regulating, promoting and financing sports which are in some respects almost polar opposites. (For a detailed comparison, see e.g. Fischer, Kornbeck, Miège, Stopper, 2024.)

As will be seen – see infra, sec. 3.1 (France) and 4.1–4.3 (Germany) – the French model relies heavily on recognition of sports organisations by the State, while the German model relies almost exclusively on the concept of autonomy. For the distinction between 'state' (lower case) and 'State' (upper case) – see infra, par. 2.1. Together these differences make the two countries emerge as paradigms of two distinct approaches, ideal for comparisons such as the one undertaken here. The concepts of *lex Olympica* and *lex publica* are used to draw the insights gathered together, with the relevant findings being summarised at the end of each case study, specifically under the heading of *lex Olympica* versus *lex publica* – see infra, par. 3.3 (France), 4.6 (Germany).

## 2. TERMINOLOGY

### 2.1 Units of comparison: 'state' and 'federation'

Terminology being an important aspect of methodology – especially in legal scholarship – the polysemy and case sensitivity of certain terms needed to be addressed, as some terms carry varying notations and connotations depending on the national context discussed.

In the French context, the word 'state' (*État*) refers to the executive branch of government at national level; in the German context it can refer to 'the state' in a generic

sense (i.e. the public sector, but also public authorities) but also sometimes to the subnational level of government, i.e. the 'federated states' (*Länder*) of the Federal Republic of Germany; in UK English, 'the state' is a generic, often abstract notion; while in US English, the word 'state' denotes a particular, subnational level of government. Whenever the word 'state' is used, it is therefore followed by its national equivalent if reference is made to the French or German context, e.g. 'the State' (*État*), 'the states' (*Länder*).

Where the national level of the country, all branches of government confounded (legislative, executive, judiciary) in the French context is simply the Republic (*République*), and while in the German context this can be correctly referred to as the Federal Republic (*Bundesrepublik*), the technical term in constitutional terminology, in particular when distinguishing this level from that of the 'states' (*Länder*), is the 'federation' (*Bund*). Confusingly, this is also the term used both in France and Germany to denote sports federations acting as regulators and umbrellas for all sports clubs operating within a given geographical catchment area, yet although it might feel tempting to write 'the federal government,' this would only capture the executive branch of government at the federal level. For this reason, whenever the need for precision arises in relation to this particular case, we use the term 'federation (*Bund*).' ( Just like the corresponding term for Switzerland is 'confederation' (*confédération* in French, but *Eidgenossenschaft* in German), the German term is entirely different from the Latin-derived English term.)

### 2.2 Analytical tools: *lex Olympica* and *lex publica*

Because they both feature in the title of this article, and because they will be used as analytical tools to make sense of the insights collected from the case studies on France and Germany, the twin concepts of *lex Olympica* and *lex publica* need to be addressed before proceeding further. While the notion of *lex Olympica* was initially coined by James & Osborn (2011), in anticipation of the 2012 London Olympics, as an equally descriptive and pragmatic label with which to capture the dogmatically bewildering ensemble of British legislative efforts to accommodate the expectations of the International Olympic Committee (IOC), the same authors have since then developed it into a deliberate, consistent and coherent theory of transnational law (most recently James, 2024; James & Osborn, 2023, 2024).

While this 'translaw' purports to transcend the dogmatic boundaries between public and private law,[4] we are using *lex publica* more liberally and without referring to any specific body of thought. Rather, the term *lex publica* serves as the logical counterweight to *lex Olympica*, for if *lex Olympica* is the body of rules created by an ecosystem of private organisations, especially but not exclusively the IOC, and if these actors seek to impose their private rules within the ambit of what would otherwise be submitted to requirements enacted under public law, then logically, the option opposed to *lex Olympica* must be that of *lex publica*.

[4] In his study of nation states' implementation of the World Anti-Doping Code (WADC) through national legislation, Diakité (2023) recurrently refers to this French concept (*transdroit*) and to a well-developed body of legal scholarship which cannot be summarised here.

In the writings of James & Osborn, *lex Olympica* is grounded in the *Fundamental Principles of Olympism*, inscribed into the Olympic Charter (IOC, 2025, pp. 6–7, 8–9)[5] although not all requirements adopted vis-à-vis hosting cities and their countries must necessarily comply with the Olympic Charter. The opposite is what James & Osborn (2023, p. 82) suspect, which is why they advise athletes, activists and the general public to use the *Fundamental Principles* as a framework for their contestations. This framework is closely connected with autonomy of the sport and its organisations/institutions; indeed, the success of *lex Olympica* with its expectation of a 'transnational process of legal diffusion, or legal transplantation,' 'resulting in forced law creation' (*ibid.*, p. 32), depends largely on the degree to which autonomy is respected. This nexus, in turn, is rendered more complex by the dual roles of sport organisations as both civil society organisations and private regulators (for a detailed discussion of this tension, see Fischer, Kornbeck, Miège & Stopper, 2024), although this duality manifests itself differently in different national contexts, depending on the concrete emanation of the relationship between state and sport, ranging from very little to very much regulation and oversight. Since writing their 2011 paper, James & Osborn have been struggling with the question of how to define the *de facto* diffusion of private Olympic rules into national legal orders, not limited to private law (as in the case of the sponsors and other business partners involved in the organisation of the Games) but also permeating their public law. The *de facto* enactment, application and enforcement of *lex Olympica,* in particular through Host City Contracts (HCCs), transcends the public/private distinction, as initially observed in the preparations of the United Kingdom for the 2012 Games ( James & Osborn, 2011). More recently, they have observed the phenomenon in the context of postponement of the Tokyo Games due to the worldwide Coronavirus (Covid-19) pandemic, where the fundamental inequality between the IOC and local organising committee revealed itself in the liability of the latter for any losses possibly incurred due to the said postponement (Clause 66 HCC Tokyo). For it seems 'extraordinary that a private entity can exercise such influence over public authorities' ( James & Osborn, 2023, p. 3), although the 'take it or leave it' principle governing the bidding rounds and the wording of the HCCs (*ibid.*, pp. 30, 96) make the process of diffusion rather obvious, actually. James & Osborn trace the application

[5] IOC (2025, pp. 6–7: The Olympic Charter (OC) is the codification of the Fundamental Principles of Olympism, Rules and Bye-laws adopted by the International Olympic Committee (IOC). It governs the organisation, action and operation of the Olympic Movement and sets forth the conditions for the celebration of the Olympic Games. In essence, the Olympic Charter serves three main purposes:

a. The Olympic Charter, as a basic instrument of a constitutional nature, sets forth and recalls the Fundamental Principles and essential values of Olympism.
b. The Olympic Charter also serves as statutes for the International Olympic Committee.
c. In addition, the Olympic Charter defines the main reciprocal rights and obligations of the three main constituents of the Olympic Movement, namely the International Olympic Committee, the International Federations and the National Olympic Committees, as well as the Organising Committees for the Olympic Games, all of which are required to comply with the Olympic Charter.' (emphasis added).

The Fundamental Principles are listed on pp. 8–9.

through rules on income and earnings (Rules 40, 50 Olympic Charter) and, through the examples of IPR protection in relation to ambush marketing and black-market ticketing (*ibid*., p. 46), show how far sovereign states are prepared to go give legal effect to HCC provisions, entered into under *lex Olympica*, within the national legal order, or *lex publica*. They find the 2019 decision of the German Competition Authority (*Bundeskartellamt*) on Rule 40 of the Olympic Charter (Bundeskartellamt, 2017) to be an exemplary case of negotiating the nexus between the two legal orders, one whose importance 'cannot be overestimated' ( James & Osborn, 2023, p. 58), surmising further that the 'unilateral imposition of such restrictions simply paves the way for future challenges' (*ibid*., p. 58).

Yet far from rejecting *lex Olympica,* James & Osborn call for its 'recalibration', taking the Fundamental Principles of Olympism more literally, which would 'not only ensure that the *lex Olympica* protects the athletes that are fundamental to its existence, but that the Fundamental Principles are brought to the forefront of the relationship between the IOC and the rest of the Olympic Movement' (*ibid*., p. 82). Similarly, the case of the present article is not to argue for or against the maintenance of *lex Olympica* but rather to use it, in an archetypical way, as the representation of one sort of rules and expectations regarding the nature of sport, its institutions and the rules governing its financing (the core of this article, as opposed to *lex publica*). Whenever insights are gathered from the case studies on France and Germany, the aim is to attribute these insights to the twin categories of *lex Olympica* and *lex publica*, respectively.

## 3. FINDINGS I: FRANCE

### 3.1 Historical development and public-service mission

In France, sport policies are characterised by a specific trajectory partly due to the central role historically played by the State.[6] The initial structuring of sport public policies goes from 1919 to 1939, with the creation of many French federations, like the French football federation (*Fédération française de football*) (FFF) (1919), the French hockey, rugby or swimming federations (1920) or the French athletic federation (1921). After the 1960 Rome Olympic Games (5 medals, trit 0 gold medal for the French team), however, General de Gaulle, then President of the Republic, asked to Maurice Herzog, alpinist, Member of Parliament, High Commissioner (1958–1963) and State Secretary of Youth and Sports (1963–1966), and the Government to define a new framework for French sports. Three laws were adopted to support the development of sports policy, including facilities and dedicated people (*Conseiller technique*, *Directeur technique national*) who work in each French federation and appropriate training for PE teachers. Then the alpinist and lawyer Pierre Mazeaud (born 1929), President of the Constitutional Council (2004–2007), wrote a law[7] that enshrined the above as well as 3 new

[6] In this section, the word 'State' (written with a capital S) refers to the (usually executive) authorities at national level (*l'État*), in line with French usage.

[7] Loi n° 75-988 du 29 octobre 1975 dite Mazeau relative au développement de l'éducation physique et du sport. JORF, n° 253 du 30 octobre 1975, pp. 11180–11182. https://www.legifrance.gouv.fr/jorf/id/JORFTEXT000000699405.

principles: the recognition of the French national Olympic committee (CNOSF), the introduction of a national policy for the detection of high-level sport and finally the merger of the Ecole Normale Supérieure d'Éducation Physique (ENSEPS) and the Institut National des Sports (INS) into a new higher national institution, the INSEP, responsible for the preparation of high-level athletes, the training of managers and research. This law was a masterpiece of legislation on sport. It was the first comprehensive text to organise the development and practice of sport in France, and subsequent laws have merely confirmed, sometimes amended and supplemented it.

The specifically French public-service mission took some time to take shape, especially with the enactment of the so-called Avice Law[8] (1984), sponsored by Edwige Avice (b. 1945), Delegate Minister for Leisure, Youth and Sports (1981–1984), which introduced two radical changes to the status of French sport: firstly, by legislating on the professional status of certain associations; secondly, by affirming the existence of a public service for physical and sporting activities whose functions were immediately delegated to the sport movement. The delegation of powers, hitherto limited – and only for certain federations – to the awarding of national championships and the management of the French national teams, is now spread to all the activities of all the French federations. The sport movement as a whole is thus moving away from the freedom of association to the delegation of a public service. Its application was accompanied by a major effort to professionalise sports management and control.

Sport policy in France is founded on two principles:

- the delegation of sport management by the State to sport associations;
- and solidarity between professional and grassroots sport within the sport federations.

Since then, these principles have changed somewhat: the delegation of a public service mission is temporary[9]. Each French federation has to sign an agreement with the State for a duration 4 years (like cycle of the Olympiad). Then a decree confirms the delegation of a public service[10]. These federation have 4 important missions: organising competitions leading to the departmental, regional, national and international medals, making the corresponding selections, proposing the federal performance strategy, consisting to a program of sport excellence and progression to high level, and proposing the list of athletes, coaches, referees and judges for yearly selection. With this agreement (= convention of objectives), each federation may receive public financial support by the French sport agency (ANS) subject to producing a shared assessment of the past Olympic period, and a four-year strategy outlining the future orientation, priorities and revenue allocation schemes of the federation. The agreement can be reviewed annually if necessary. The framework for their evaluation is the Programme 'Sport' defined by the Ministry of Sports. Today, the contractual logic

[8] Loi n° 84-610 du 16 juillet 1984 relative à l'organisation et à la promotion des activités physiques et sportives (loi Avice), https://www.legifrance.gouv.fr/loda/id/JORFTEXT000000693187.

[9] Code du sport. Version en vigueur depuis le 26 août 2021, https://www.legifrance.gouv.fr/codes/article_lc/LEGIARTI000043982791.

[10] Arrêté du 18 décembre 2024 portant renouvellement de l'agrément des fédérations sportives, https://www.legifrance.gouv.fr/jorf/id/JORFTEXT000050853450.

entered into by the State (its administrations) and the sports federations has tended to produce a specific model.

With the prospect of the Olympic and Paralympic Games in Paris in 2024, a structural reform of the governance of French sport has been created, marking the end of an interventionist model dating back to the Second World War, in which the State played a central role: The Ministry of Sport used to supervise the sport movement, while the sport legal frame was designed to govern most daily sport organisation. With the new organisation, the sport movement has more autonomy and responsibility.

### 3.2 The National Sports Agency

On 13 September 2017, Paris was designated host city of the 2024 Olympic and Paralympic Games. The Prime Minister then asked the Minister for Sport to initiate a process of trust with the French sports movement by granting them greater autonomy and refocusing the State's action on its missions. The aim is to give greater autonomy to the National Olympic Committee and sport movement, as well as to local authorities, while refocusing State action on specific missions. These include the essential tasks of coordination, regulation and control, particularly with regard to ethics. The Minister for Sport has therefore decided to embark on a process of co-designing a new governance model for sport in France[11]. In November 2017, the steering committee, presided by Minister for Sport Laura Flessel (Olympic champion in fencing) was set up. Participants include various ministries, local authorities, the sports movement (CNOSF and CPSF) and a representative of the business world. The steering committee highlighted the complexity of the current model, the lack of clarity in sports policies and the respective missions of the various players, difficulties between players in managing a shared competence, a scattering of resources, and difficulty in adapting to changing social demands.

In the light of these observations, three scenarios were identified: continuity, transfer of sports organisation to the sports movement, and decentralisation of sports development to local authorities. The steering committee chose the scenario of shared governance with distributed responsibilities and affirmed the desire to create collegial structures for consultation and decision-making at both national and territorial levels. These structures will need to be agile, in the general interest, to enable them to adapt to territorial, national, European and international contexts. This organisation will also define regional P&L that will co-finance regional sports policies co-constructed by sport stakeholders within the collegial structures for consultation at territorial level. In response to the complexity of the organisation of sport at regional level, but also to the need to reinforce the involvement of all players to meet changing social demands, regional sports conferences have been systematised, in the image of sports parliaments. All stakeholders are represented.

[11] Actualité | 16 octobre 2018. Nouvelle gouvernance du sport : le rapport remis à la ministre. https://www.sports.gouv.fr/nouvelle-gouvernance-du-sport-le-rapport-remis-la-ministre-1141.

In this context, the National Sports Agency[12] (ANS) *"Agence nationale der sport"* was established through a collaborative model involving the French government, sports organisations, local authorities, and economic stakeholders, in April 2019. ANS plays a pivotal role in coordinating and promoting sports activities across the country. ANS is a public interest group (*groupement d'intérêt public*) (GIP), i. e., a legal entity under public law created by an agreement, approved by interministerial decree, between the State and legal entities under private law representing the sports movement, local authorities and economic players. It is a legal form suited to the idea of shared governance of French sport, to which this new agency must give substance (Box 1).

The creation of this agency marks the gradual end of the State's predominance in sport policymaking in France. This organisation comprises two hubs: one focuses on high performance while the other focuses on the development of sport. When ANS was created, the focus for high performance was on Paris 2024. Development of sport was sport for all, everywhere and throughout people's life along two lines: federations (and clubs) and the main public policies such as health-sport, corporate sport, sport as social remediation or the fight against discriminations in sport. The agency is also dedicated to supporting the stakeholder-initiated projects across territories. Among stakeholders we find firstly the French government. It holds a central position in the national sports model. It defines overarching objectives, sets legal frameworks, and ensures adherence to the public interest. Then, the sport movement represented by the French national Olympic committee, the local representatives of the international Olympic committee that operates the guidelines of the Olympic charter, and the French national Paralympic committee, that represents all stakeholders involved in providing sports opportunities for people with disabilities. Local authorities are the French administrative structures that take charge of the interest of a particular territory's population like region, department, city... They contribute resources, facilities, and infrastructure to nurture athletes and promote sports at the grassroots level. Their task is to build, operate and make sports facilities available; support local stakeholders (clubs) through subsidies or the organisation of sports events, for instance; supervise sports practices in schools or clubs. Last but not the least, business partners play the role of sports event organisers, investors, advertisers or sponsors. Despite their diversity, three main categories exist: companies providing sports services, companies organising sports events and companies manufacturing and distributing sporting goods (Box 1).

This organisation is very different than before the creation of the ANS, when sport organisation was characterised by the central role historically played by the State. Now, the economic world can influence decisions.

In terms of high performance, ANS developed since 2019 the Blue Ambition (for the record, the French team is called 'the Blue') as the new strategy for French sport. ANS defined the following four principles:

- Better-targeted athletes and coaches.
- Placing athletes and their projects at the heart of solutions.
- Strengthened and enriched expertise with a coaching plan, a 20 million euro 'ultra-high-performance sport' research plan and a 4.3-million-euro sport data hub.

[12] https://www.agencedusport.fr.

- A local approach, with 17 regional performance centres and an overall annual budget of 5 million euros.

This program led to 65 Olympic medals and 75 Paralympic medals in Paris 2024, a record for the French nation.

In terms of sports development, since the beginning and especially since 2021, ANS supports projects that promote access to sport for all, at all ages, and throughout France and overseas. Priority is given to supporting federations' development strategies, as well as to actions aimed at correcting social and territorial inequalities. In 2022, ANS deploys three types of systems to more develop practices: around 150 million Euros for local projects, around 120 million Euros for equipment for construction and renovation of sports facilities, and no more than 52 million Euros for national projects, that is to say, supporting federations in their own development strategy. With these programs, ANS is taking up several major challenges like enabling access to sport for all, promoting sport as social, medical, environmental and ethical values for today and tomorrow, and supporting the transformation and modernisation of sports organisations and new digital technologies. ANS also helps to structure and develop links between sport and economic players (Box 2).

Since the beginning, ANS spent over 1.6 billion Euros to support sport, through more than 115,000 different actions. No less than 31,700 local associations have been helped, and around 5,000 jobs have been supported. ANS has been supported 2,150 top level athletes per year. Over the past five years, the approach was determined and structured (Box 2).[13]

After the Paris 2024 Olympic & Paralympic Games, at the instigation of the Minister for Sport, the Governance elected a new president in the person of Marie-Amélie Le Fur, who was a paralympic athlete and the last president of the French national Paralympic committee. In 2025, ANS was subjected to an external evaluation commissioned by the ministry in charge of sports (Mouvens, 2025[14]). Alongside separate evaluations linked more closely to the 2024 Olympic Games, this exercise encompassed the performance of investments in high performance and sport development, including financial measures as well as non-financial impacts such as customer (i.e., athletes, clubs, federations, members, State) satisfaction, long-term impact for sport development, facilities, legal form of this organisation (public interest group or public institution). The evaluation highlights that while the *Ambition Bleue* strategy gained strong support from federations and technical managers (with over 79% satisfaction), its appropriation by coaches and athletes remains uneven. Many athletes were unaware of the programs available, raising questions about whether deep knowledge of these tools is necessary if needs are met. Communication and visibility of support mechanisms need improvement.

The targeting approach for high-performance athletes is widely approved (90% of technical managers agree), but concerns persist about the clarity and flexibility of criteria, especially for emerging talents. Federations often view *Ambition Bleue* as an

[13] Fact and figures, see ANS (2024) – https://www.agencedusport.fr/presentation-de-lagence#Chiffres_cles.

[14] www.sports.gouv.fr/sites/default/files/2025-05/l-valuation-de-la-strat-gie-ambition-bleue-de-l-agence-nationale-du-sport-46736.pdf.

additional toolbox rather than a long-term national framework, limiting structural transformation. Annual funding cycles and short-term priorities for Paris 2024 did not foster multi-year engagement.

Research and innovation projects, though promising, had limited short-term impact – only 9% were completed before Paris 2024 – suggesting benefits will materialise for Los Angeles 2028. Barriers include poor information flow, misalignment with athletes' needs, and resource constraints.

Key limitations of the evaluation include data gaps, unclear indicator definitions, and coordination issues, which hindered full analysis. Recommendations stress:

- Strengthening communication and awareness among athletes and coaches.
- Clarifying access criteria and ensuring flexibility.
- Moving toward long-term funding and strategic planning.
- Improving governance and coordination between ANS and federations.
- Enhancing research project management and alignment with field needs.

Overall, *Ambition Bleue* is recognised as relevant and impactful but requires deeper integration, better visibility, and sustained commitment to achieve lasting transformation (Box 1). However, ANS will pursue and increase its priorities of developing high performance and accessible sport for all, in all regions. Among the avenues mentioned was the possibility of giving greater responsibility to the regions, while decentralising the management of subsidies more to the prefects for a more flexible allocation adapted to local needs. Actually, local organisations are not a full success. Evaluation must define if this system must be maintained. The Minister reassured that the agency would not be called into question. The ambition is that, by 2030, the Olympic and Paralympic Games – and sport as a philosophy – will have entered into the life of every French person.

**Box 1: ANS: How many institutional (public & nonprofit) members?**

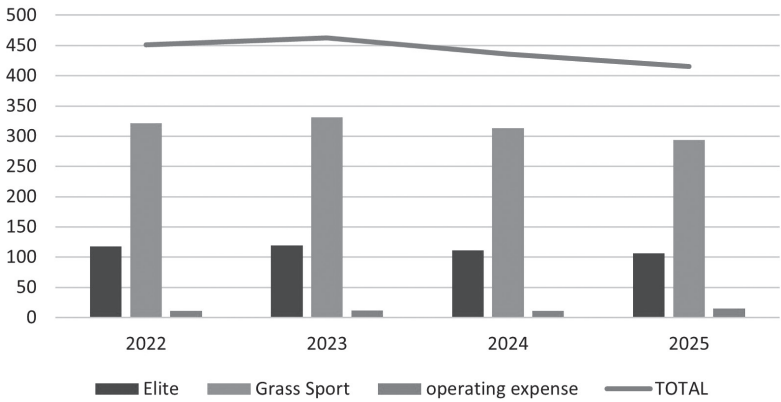
All the members of ANS, through their representatives, in the decisions of the General Assembly and the Board, are being assigned to one of the four colleges of the GIP:

- College of Government with Minister for Sport;
- College of representatives of the sports movement with the French national Olympic committee and the French national Paralympic committee;
- College of associations representing local and regional authorities with 4 associations representing Regions, Departments, cities and the last leading national association of major cities, metropolises, urban communities and conurbations;
- College of representatives of economic players with 5 associations as confederation of small and medium-sized enterprises, Social Council of the Sports Movement (COSMOS), French Business Confederation (MEDEF), Union of local businesses (U2P) and UNION sport and cycle.

The ANS will enable a partnership model to be built between the State, the sports movement, local authorities and their groupings, and economic players, as part of a far-reaching change in the French sports model, while respecting the role of each party. This model is based on the willingness of the parties involved to create collegial consultation mechanisms at both national and regional levels through regional sport conferences, and for

decision-making through funding conferences, making public sports policies clearer and their funding more consistent to improve sporting performance.

- What Money goes to Elite and to Mass Sports?




Source: ANS

**Box 2: ANS: Who pays into the budget?**

The State is paying for the complete budget through 2 major contributions:

– Contribution from the sale of the rights to broadcast sporting events and or competition to finance the grassroot sport and the training of top elite.
– Contribution from the sports lottery operator, determined by the finance law (not fully voted at this time for 2025).

The ANS is subject to economic and financial control by the Ministerial Budgetary and Accounting Controller of the Ministry for Sports.

According to the Cour of Audit (*Cour des Comptes*), ANS, whose resources come almost exclusively from the State in the form of budgetary allocations and earmarked taxes, has benefited since its creation from a very substantial increase in the resources allocated to it to reach 451 million Euros in 2022, well beyond the political objective of a budget of more than 400 million Euros asked by the sports movement and representatives of local authorities (Cour des Comptes, 2022).

This stated objective was achieved mainly through non-permanent public resources derived from measures taken as part of the recovery plan and the health crisis, and in the run-up to the Paris 2024 Games. ANS became *de facto* the only operator able to implement these measures.

On the resources of ANS and the State's budgetary effort, the *Cour des Comptes* issued 2 recommendations:

– Clarify the Agency's budget by distinguishing between permanent and non-permanent funding and expenditure. Adopt, as required by law, an indicative multi-year trajectory for the development of its resources.
– Make an inventory of all the budgetary appropriations earmarked for sport and ensure consistency between State subsidy schemes.

- Are there obliged shares for top level sports?

  Each federation signs an objectives convention to develop grassroot sport and to spread top level sports. However, each federation decides to help few or more athletes through the program "aides personnalisées".
- Does it depend from Mega Sports Events in one year?

  The budget of ANS does not depend in whole from Mega Sports Events organized in France. Indeed, funding for elite sport is aimed at federations and athletes who are going to take part in European or international championships. Los Angeles 2028 is not far from Paris 2024.

### 3.3 Interim conclusions: *lex Olympica* versus *lex publica*

Having examined the French case in depth, where does the French agency ANS stand on a scale between *lex Olympica* and *lex publica*? By drawing on the methodology proposed by James & Osborn (see supra, 1.2; James, 2024; James & Osborn, 2011, 2023, 2024), it is easy to recognise strong elements of *lex publica* supremacy over *lex Olympica*, in the sense that the public authorities of the French state (*État*) have reserved the right to determine the law as a last resort, even when its exercise has been delegated to private entities. Or at least this would have been the observation to be made, almost mechanically and by default, up until the roll-out of the ANS which, as we have seen, has actually increased the influence of private sports organisations. While these private organisations remain subject to accreditation by state authorities, suggesting that public authorities are ultimately in charge, it seems to be in the very nature of *lex Olympica*, as understood by James & Osborn, that is precisely by becoming integrated, embedded and indeed enmeshed within state structures that it can unfold its true potential.[15] Understood in this sense, it is precisely by acting within the deliberately hybrid structures defined by the French legislator, operating under the auspices of the French executive and subject to review by the French judiciary that private entities – acting on behalf of the transnational sports ecosystem of which thy are part – may be able to exert a maximum of agency. If we adopt this perspective, then far from being conceptually opposite and mutually excluding, *lex Olympica* and *lex publica* become two sides of the same coin, reinforcing each other more than controlling each other. Alternative interpretations might emphasise, instead, the potential of the state to use its agenda-setting power to impose its norms and/or that of the sports movement to

[15] James Osborn (2011), p. 86: 'The sources of Olympic Law are at present limited to the Olympic Charter and the municipal, regional and national legislation passed in order to facilitate the organisation of an edition of the Olympic Games. The impact of this unique legislation, however, is extremely far reaching and goes far beyond the multinationals at whom, ostensibly, much of it is aimed. The key to its success depends on who defines what a successful outcome is. LOCOG will want to ensure that its revenue streams and the value of the Olympic brand are adequately protected whilst local business and traders will be hoping to cash in on the huge number of people visiting the UK throughout the Games period. Despite concerns over its enforcement, what can be guaranteed is that the UK legislation will be used as a template for future mega-events; the Glasgow Commonwealth Games Act 2008 has received its Royal Assent and is already waiting in the wings.'

fructify its considerable cultural, economic and ultimately political capital within the very same hybrid, public-private structures, to further its own agenda. Either of these perspectives might be pursued further while, for the time being, we shall merely retain the observation that the ANS represent a model of public-private hybridity.

## 4. FINDINGS II: GERMANY

### 4.1 The current situation

Currently, Germany is financing elite sports based on an individual sports potential analysis for each Olympic cycle and individual discussions between each of the sport federations and politics. This is due to two main principles:

- The principle of autonomy of the non-for-profit sports movement, which exists on a worldwide level (with the Olympic Sports Confederation DOSB as umbrella).
- The principle of subsidiary and partnership with the state (responsibility for sport lies with a the department within the Federal Chancellery, headed by a Minister of State for Sport and Volunteering (Bundeskanzleramt)).

The German current financing model for sport is defined by divided competence and shared responsibility, with the federated states (*Länder*) being in charge of amateur sport, including talent-spotting and talent development leading to elite sport roles, as well for non-competitive, recreational sports ('sport for all'), while the federal government (*Bund*) leads, finances and manages top-level elite sports through the Federal Chancellery. This repartition of responsibilities is supposed to guarantee a balanced support for sport, not only nationally but also regionally, in accordance with the federal structure of Germany whose 16 states hold far-reaching powers to regulate and finance culture and sport within their respective geographical areas.

### 4.2 Historical development: the prevalence of private-law arrangements

In its current shape, the German non-profit sport movement is a mass movement counting more members than any other social movement in Germany. It is well documented, both in depth and in breadth, through empirical-representative analyses of sports (local) associations[16] as well as of (umbrella) sports federations (see Karhausen & Winkler, 1985). Such studies have provided evidence of a broad support among the relevant actors for the fundamentals of non-profit organisation,[17] while at the same time, the modern sports movement has experienced several extensions. For while these civil society actors are demonstrably quantitatively successful in their local

[16] Between 2004 and 2022, Christoph Breuer and colleagues have established and edited regular 'sports development reports,' many of which were published by Bundesinstitut für Sportwissenschaft (BISp) in collaboration with Sportverlag Strauss, as well as numerous thematic reports on selected aspects limited to specific sports disciplines, geographical regions or topics. For the most recent national report, see Breuer & Feiler (2019).

[17] Heinemann & Horch (1981), p. 124, define the following 'constitutive variables for sports associations': '(1) voluntary membership, (2) independence from the state, (3) geared towards the interests of their members, (4) democratic decisional structures, (5) involvement of volunteers' ((1) *Freiwillige Mitgliedschaft*, (2) *Unabhängigkeit vom Staat*, (3) *Orientierung an den Interessen der Mitglieder*, (4) *demokratische Entscheidungsstrukturen*, (5) *Ehrenamtliche Mitarbeit*) as well as the 'problems' connected herewith.

networking activities, most of these 'associations' (including federations, foundations as well as non-profit sports organisations not affiliated with the national umbrella organisation DOSB [*Deutscher Olympischer Sportbund*]) are incapable of meeting the infrastructural needs of grassroots as well as of elite sports. Due to the importance of the non-profit sports movement to democratic societies – through memberships, active sports participation, spectatorship, the purchase of sports goods as well as donations made to sports – the representative organs of the state are called upon to ensure optimal conditions, as confirmed by research into the social and health functions of the sports movement which were carried out as early in the 1980s. The offer of obligatory sports lessons within the school curriculum is within the remit of the 16 German states (*Länder*) are called upon, while sports clubs organised locally may receive discretionary support from local authorities (*Gemeinden, Kreise, Kreisfreie Städte*). This duality of clubs and local councils is deeply rooted in tradition, while the German Constitution (*Grundgesetz*) places the duties and rights to support sport primarily with the states, as a corollary of their so-called 'cultural sovereignty' (*Kulturhoheit*), a notion encompassing school sport, clubs as well as academic research into sport (*Sportwissenschaft*). In relation to top-level elite sports as well as the participation of German sports federations in international championships such as the Olympic and Paralympic Games, the federation (*Bund*), rather than the states, is the constitutionally empowered level of government (international representation of the country). Numerous publications address these vertical and constitutional-legal distinctions and delimitations, including their application to the Olympic and Paralympic Games as well as participation in competitions domestically and abroad.

Apart from this, the inclusion of the third, for-profit sport sector (*Sportwirtschaft*) into such academic research – alongside the established first and second sectors of non-profit sport (*gemeinnützige Sportbewegung*) and public sport administration (*Sportverwaltung*) – has proven fruitful. Because of the obvious interest of the population in sport, as well as for a number of other reasons, academic research into sport has reached a level of economic importance, scope and diversity, reflecting the fact that many citizens are somehow involved in sport without practising it actively. Against this background, an analytical 'three-sectors sports model' has emerged which is matched by the label 'sports industry' (*Sportbranche*) (Trosien, 1991, 1994, 2000).

Along the currently c. 100 federations affiliated with DOSB as their national umbrella, 33 federations participate in the Olympics (more or less regularly), with 6 federations representing winter sports and 27 representing summer sports, while an overwhelming majority of DOSB affiliates also participate in the World and European championships of their disciplines. For these reasons, the relevant sports organisations (at national level) already have established contacts and cooperation with the federal government (*Bundesregierung*) whose Federal Chancellery (Bundeskanzleramt) bundles public support for competitive sports at national level (and publishes a sports report every four years).

In the early years of this cooperation between elite sports – represented by the German Sports Confederation (DSB) and the National Olympic Committee (NOK) before their merger (2006) and the creation of today's DOSB – and governmental funding agencies (at that time represented by the Ministery of the Interior (BMI)), criticisms voiced even within the DSB, whose President (1974–1986) Willy Weyer

(1917–1987) was quipped that 'thanks to its financial dependency on the federal government,' the DSB was 'well on its way towards becoming some sort of BMI agency.'[18] The reforms of that time led to the discontinuation of operating grants from BIM to DSB as well to the formulation of new principles for the cooperation, the necessity of which was nevertheless realised by all, of which the most important are autonomy, subsidiarity and partnership. The jump of transition towards the current situation and perceptions is closely linked to the competitiveness of the actors involved in elite sports (individuals as well as organisations), while the DSB/NOK merger and the DOSB foundation did not bring the desired improvements in terms of 'output' (mostly measured in the number of medals gained), as shown below (Figure 1).

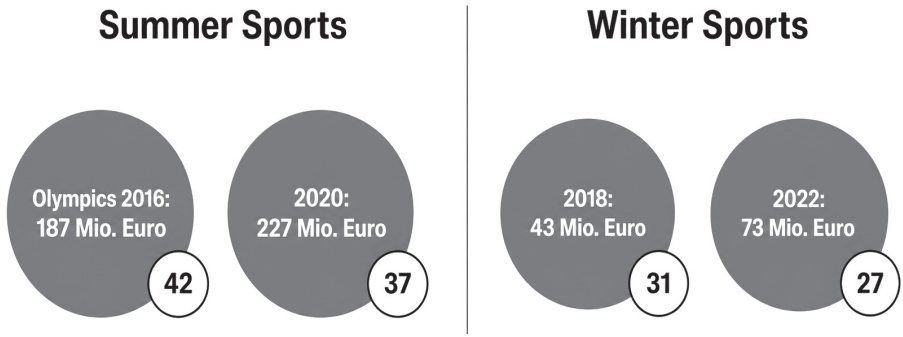



**Figure 1** Germany: Investments made and medals gained
Graphics: Bundesrechnungshof (2023), p. 13; Sources: BMI (subsidies); Internationale Olympic Committee (medals)

If we concentrate on the three sports policy principles referred to earlier – autonomy, subsidiarity and partnership – we might add that numerous mixed systems exist through which elite sports participation may be improved. An early initiative was the creation of an autonomous German Sports Aid Foundation (*Stiftung Deutsche Sporthilfe*) which – without receiving any public funding – succeeded admirably in raising funds for individual elite athletes, while in cooperation with the state (*Länder*), a network of so-called Olympic Training Centres (*Olympiastützpunkte*) and national sport bases was established successively, offering improved training conditions for Olympians and national squad members. Equally important was the decision of the IOC, in the 1980s, to open the Olympics to professional athletes – in 1988, Steffi Graf became the first Golden Slam winner, winning the Olympian tennis gold medal in addition to the Australian Open, the French Open, and Wimbledon, while the German Football Association DFB (*Deutscher Fußball-Bund*) decide to renounce public funding. These polar opposite strategic decisions demonstrate the utterly different degrees of reliance upon, or autonomy from, public funding, depending on the economic model of each discipline, such support being essential in some spirts but not in others.

[18] Karhausen, Winkler (1985), p. 223: '[dass] der DSB durch seine finanzielle Abhängigkeit vom Bund auf dem besten Wege [ist], eine Art nachgeordneter Behörde des BMI zu werden.'

A closer look at the currently complex funding system, representing a grant total of c. €100m p.a., reveals striking imbalances, with the athletics federation DLV (*Deutscher Leichtathletikverband*) attracting more funding than any other umbrella organisation (€10m p.a.), arguably because it achieves numerous medals both in the male and in the female categories. The equally medal-prone cycling association federation BDR (*Bund Deutscher Radfahrer*), with highly satisfying results both on road and track in both categories, received €6m, and even the golf federation DGV (*Deutscher Golfverband*) received roughly €99,000 for its participation in the Olympics 2024 despite being composed exclusively of professional golfers. Among winter sports, the bob and luge federation BSD (*Bob- und Schlittenverband für Deutschland*) and the ski federation DSV (*Deutsche Skiverband*) attracted the highest subsidies, in 2023, at the height of €6.5m and €4.2m, respectively. Based on figures from the Federal Court of Audit (*Bundesrechnungshof*), the detailed breakdown (Figure 2) reveals that direct support for elite sports organisations represented 'only' one-third of the grand total €100m in 2023, half of which was attributed 'independently of potential.' The creation of an 'independent' German sports agency is supposed to streamline what is currently a highly complex and perhaps not always very efficient cooperation.

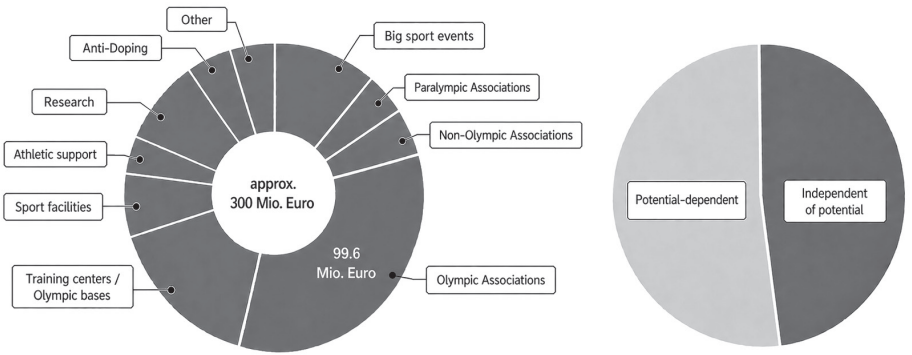



**Figure 2** Germany: Distribution of federal subsidies in 2023
Source: Bundesrechnungshof (2023), p. 9

According to the latest figures, of the total €333 million available to the Federal Chancellery in the 2025 budget for the promotion of elite sport, €138.24 million was allocated to the promotion of these associations. The majority of the funds, €111.17 million, went to Olympic sports associations. Non-Olympic sports associations received €13.94 million, and disabled sports associations received €13.13 million (Bundeskanzleramt, 2025a, p. 32). However, the proportion of the above shown distribution remained more or less the same.

## 4.3 The roles of governmental actors in the current system

### 4.3.1 Role of the states (*Länder*)

Although the German Constitution (*Grundgesetz*) (GG) includes no specific provision for the responsibility of the *Länder* in the field of sport, this responsibility can be extrapolated from their generic 'cultural sovereignty' (*Kulturhoheit der Länder*), the core of which is the primary responsibility to regulate, organise and deliver public education, while important areas such as sport also fall under this notion. This 'cultural sovereignty,' in turn, is a direct result of the constitutional principles of 'state sovereignty' (*Grundsatz der Länderhoheit*) (Article 30 GG)[19], 'state legislative competence' (*Gesetzgebungskompetenz der Länder*) (Article 70 GG)[20] and the power to regulate and organise schools (*Schulwesen*) (Article 7(1) GG).[21] All of these constitutional principles amount to the recognition of states holding primary sovereignty in all areas for which the relevant competence has not, by constitutional provision, been conferred to the federal government (*Bund*), an arrangement strikingly similar to that of the European Union by virtue of its principles of 'conferral' (Article 5(2) TEU),[22] 'subsidiarity' (Article 5(3) TEU)[23] and 'proportionality' (Article 5(4) TEU).[24] Whereas the states hold primary sovereignty for all matters not specifically attributed to the federal government, and although sport is not mentioned specifically in the Constitution, responsibility falls to the states by default since no explicit provision empowers the federal government. The competence of the states to legislate in the field of sport is particularly outspoken in the field of school sport, as education and training, including the organisation of schools, falls under their 'cultural sovereignty' referred to earlier, which in turn can be deducted from a combination of the above-mentioned explicit

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19 Art. 30 GG: 'The exercise of state powers and the performance of state duties shall be a matter for the *Länder*, unless otherwise provided for or permitted by this Constitution.'

20 Art. 70 GG: 'The *Länder* shall have the right to legislate insofar as this Constitution does not confer legislative powers on the Federation.' (*Bund*)

21 Art. 7(1) GG: 'The entire school system is under the supervision of the state.' (here used in a generic sense, not as a reference to the *Länder*)

22 Article 5(2) TEU: 'Under the principle of conferral, the Union shall act only within the limits of the competences conferred upon it by the Member States in the Treaties to attain the objectives set out therein. Competences not conferred upon the Union in the Treaties remain with the Member States.'

23 Article 5(3) TEU: '3. Under the principle of subsidiarity, in areas which do not fall within its exclusive competence, the Union shall act only if and in so far as the objectives of the proposed action cannot be sufficiently achieved by the Member States, either at central level or at regional and local level, but can rather, by reason of the scale or effects of the proposed action, be better achieved at Union level. The institutions of the Union shall apply the principle of subsidiarity as laid down in the Protocol on the application of the principles of subsidiarity and proportionality. National Parliaments ensure compliance with the principle of subsidiarity in accordance with the procedure set out in that Protocol.'

24 Article 5(4) TEU: 'Under the principle of proportionality, the content and form of Union action shall not exceed what is necessary to achieve the objectives of the Treaties. The institutions of the Union shall apply the principle of proportionality as laid down in the Protocol on the application of the principles of subsidiarity and proportionality.'

constitutional provisions in conjunction while being, *strictu sensu*, a widely recognised albeit unwritten constitutional principle.

As the federal government holds no legislative competence for sport (despite the fact that some of its legislative competences may affect sport by way of horizontal application), it is the autonomous decision of the states how to organise, promote and support sport within their territories. This means essentially shaping recreational and competitive sports as well as school sport through state legislation and guidance notes, as well as through various forms of financial support, including the construction and maintenance of infrastructure and facilities, the financing of programmes and activities as well as through operating grants and other grants paid to sports clubs (*Trennung*) and sport federations (*Sportverbände*), all of which are organised under German association law (*Vereinsrecht*). School sport is organised and promoted through curricula as well as providing the resources (human resources, physical infrastructure, financing) needed for their implementation. All of these forms of sport practice are, therefore, regulated and financed by the states, even if the implementation may be in the hands of private organisations (clubs, federations).

### 4.3.2 Role of the federation (*Bund*)

Even in the absence of a primary federal competence to finance sport, as explained earlier, the federal government nevertheless has an important role to play, complementing the policy action of the states. The federal government supports competitive, top-level sport especially nationally (as opposed to locally and regionally) and internationally. Support is provided in particular through financial means provided to Olympic as well as non-Olympic top-tier federations (*Spitzenverbände*) as well as to federal training centres (*Bundesleistungszentren, Olympiastützpunkte*). As part of its role as the promoter of sport in the interest of the entire nation, the federal government provides support to national teams in connection with the Olympic and Paralympic Games, to German applications for the organisation of the Olympics and Paralympics as well as other high-level international sports competitions and events. By recruiting elite athletes into the armed forces (*Bundeswehr*), the federal police (*Bundespolizei*) and the federal customs service (*Zoll*), the federal government provides further layer of in-kind support to German elite sports. The combination of these various policies and instruments allows the federation (*Bund*) to contribute to the financing of competitive sports, to the development of talents and to the promotion of major sports events such as world championships in various disciplines, although this practice is neither regulated by any constitutional provision, nor by any act of parliament or secondary legislation.

### 4.3.3 Sports policy and sports programme cooperation

The states (*Länder*) coordinate their sports policies and sports programmes through the conference of sports ministers (*Sportministerkonferenz*) (SMK). Similar structures exist in the policy area of education, through the conference of ministers of education (*Kultusministerkonferenz*) (KMK), another area where the federation (*Bund*) has next to no competence and the states exercise what is identified, under the terms of the German Constitution, as state 'sovereignty' (*Hoheit*). Because of this general presumption, coordination between the states is needed in ways reminiscent of the workings

between the Member States of the European Union in such areas as, for example, data protection, so that the SMF framework serves to provide coherence between measures decided by the states individually. In addition to the SMK, the sports movement (consisting of bodies organised under private law) ensures coordination through umbrella organisations found at city level (*Stadtsportbünde*) and state level (*Landessportbünde*) who ensure, among other things, a coordinated representation of the interests of sports organisations vis-à-vis public authorities at the various geographical levels.

Within each sporting discipline, sports are organised through specific federations (*Sportfachverbände*) all of which are, in turn, organised within the German Olympic Sports Confederation (*Deutscher Olympischer Sportbund*) (DOSB), the functional equivalent of the CNOSF of France (see above). Besides representing Germany vis-à-vis the International Olympic Committee (IOC) and sending German national teams to the Olympic and Paralympic Games (*Team D*), the mission of the DOSB includes the coordination of the interests of the sports movement at all geographical levels, domestically as well as internationally.[25]

### 4.3.4 Financing of elite-tier competitive sports

Although not grounded in any explicit legal provision, the above-mentioned Federal Challencery now holds executive responsibility for sports policy at the national level and provides the lion's share of public funding to this branch of sport, at a rate of approximately 300 million Euros in 2023 (Bundesrechnungshof, 2023, p. 9). The aim of this *de facto* practice is to ensure the international competitiveness of German athletes and German teams and to ensure that they can compete under optimal conditions. The Federal Chancellery provides funds for top-tier discipline-specific umbrella organisations (*Spitzenfachverbände*), supporting national training centres, research projects as well as the organisation of international competitions on German soil. The DOSB implements this support together with the relevant sport federations in accordance with strategic objectives and priorities developed jointly with the Federal Chancellery as benchmarks against which the performance of each top-tier sports discipline is evaluated. As the aim of this practice is to let support be guided by the potential of each sporting discipline to achieve sporting successes in competitions, the relevant benchmarks are developed by expert committees, with appropriate differentiation to cater for differences between disciplines and sub-disciplines as part of what has become known as a 'potentiality analysis' (*Potenzanalyse*) (*ibid.*, p. 10). The ranking arising from this exercise serves as a basis for 'structurating negotiations' (*Strukturgespräche*) held between the Federal Chancellery and the DOSB, based upon which specific support proposals can be drawn up for each individual discipline, leading to the eventual funding decisions being enacted by the Federal Chancellery. This includes a concept for the 'restructuring of competitive sport and the promotion of elite sport' (BMI & DOSB, 2016, p. 11).

Funding is usually provided for an Olympic cycle on a one-year basis for the respective discipline and a four-year period for personnel. It is tied to rigorous reporting

[25] The German Paralympic Committee for Germany (DBS) is responsible for sending athletes to the Paralympic Games. The DBS is a member of the DOSB.

requirements so as to ensure that all funding received is spent strictly on activities approved for this purpose.

A special funding framework is constituted by the in-kind support provided within the 'sport support groups' (*Sportfördergruppen*) of the armed forces (*Bundeswehr*), the federal police (*Bundespolizei*) and the federal customs service (*Zoll*), through which deserving top-tier competitive athletes are offered non-sporting career perspectives which they can combine with their sporting careers. An internationally known case would be the speedskater Claudia Pechstein who is an officer of the federal police. Such athletes enjoy stable income and flexible working hours which have been coordinated in such a way as to match their training sessions and competitions. The Federal Chancellery provides additional support to other categories of top-level competitive athletes helping them to reconcile their sporting careers with work, academic study or vocational training, including through targeted programmes facilitating the transition into mainstream working life once their sporting careers have ended.

No federal programme provides support to individual athletes, although the privately funded German Sports Aid Foundation (*Deutsche Sporthilfe*) does provide scholarships and prizes connected with specific academic study or vocational training programmes. Such support usually comes with strings attached in the form of performance benchmarks to be met.

Federal support to top-level sports encompasses free access to professional training infrastructures and facilities, support, advise and treatment from medical professionals and sports scientists provided within the currently c. 13 'Olympic training centres' (*Olympiastützpunkte*) and 193 federal training bases (*Bundesstützpunkte*) found and operated across the German territory.

### 4.4 Critical perspectives

In the absence of an explicit legal base, the financing of elite sports takes place through a coordinated planning by the sport federations backed by conversations with formerly the BMI and now the Federal Chancellery. Yet in the absence of a coherent and recognisable allocation and distribution of funds to the various beneficiaries, which criteria are decisive for allocation decisions can be hard to gauge. As funding would often seem to follow popular and/or highly mediatised sports (e. g., football, athletics), other and less visible sports tend to feel at a disadvantage. When allocation is decided at short notice, this leads to uncertainties among (potential) beneficiaries. Some experts further think that funding programmes fail to be grounded in modern managerial and financial principles.

Sports organisations tend to find selection and attribution processes excessively bureaucratic and inefficient, believing instead that funds could be consumed more efficiently if bureaucracy were reduced, as they perceive reporting and documentation requirements as likely to consume too many resources within the beneficiary organisations.

Athletes are not involved in the process of funding allocation and their interests are hardly taken into account while no public funds are earmarked for them. This may be a particularly acute problem in less visible sporting disciplines where athletes often have to manage their careers while leading economically precarious lives.

In spite of a steady, incremental increase in federal funding allocated to top-tier elite sports, the trend in medals won by German athletes and teams in world championships as well as in the Olympic and Paralympic Games has been in constant decline, as shown by the auditors of the *Bundesrechnungshof* (2023), p. 13 (see Figure 1).

Against this backdrop, it seems hard to recognise any sustainable, coherent strategy aimed at supporting German sports systematically in the long term. While demands for a fairer, more transparent, efficient and flexible funding structure have been made for many years, any past reform efforts seem to have remained largely ineffectual.

In addition, the Federal Court of Auditors (*Bundesrechnungshof*) has questioned the current funding system including 'selected aspects of the reform of elite sports funding' (Bundesrechnungshof, 2023, p. 15). It has criticised the influence of the DOSB and the sport federations on the distribution of tax payers' money – which, usually, strictly belongs to the parliament – harshly. In this point, the conflict between sports autonomy and public legal requirements becomes obvious.

### 4.5 The proposal for a sports promotion act (*Sportfördergesetz*) (SpoFöG)

The federal government had announced plans to reintroduce a revised version of the existing draft legislation on a Sports Promotion Act created by the former Scholz administration. It is committed to introducing a legally regulated system of sports promotion, while emphasising the need for a reorientation. The first step of the government was to appoint a Minister of State for Sport and Volunteering in the Federal Chancellery. Following lengthy negotiations and a revision of the original draft bill, the Federal Chancellery (under Minister of State Christiane Schenderlein) tabled the government bill. The Federal Cabinet formally adopted this bill on 25 March 2026, thereby concluding the government's legislative process.

The aim of the proposed Sports Promotion Act (*Sportfördergesetz*) (SpoFöG) is to respond to the criticism summarised above, first by creating an explicit legal framework for the federal funding of top-level elite sports (for the first time ever) and, second, by introducing clear and predictable rules allowing beneficiaries to plan their budgets while ensuring a more evidence-based style of decision-making, both at the strategic and also at the operational level. To this end, the vision is for an independent elite sports funding agency to be set up as foundation organised under public law (*Stiftung öffentlichen Rechts*) financed by the Government. This construction would ensure a one-stop shop for all sports organisations as well as for athletes. Through a centralisation and simplification of the allocation of funding, the authors of the legislative proposal hoped to enable a fairer, more transparent and swifter allocation of funds as well as additional, novel forms of funding. Unlike the original draft, the bill does not provide for any legal entitlement to funding for sports federations or athletes. The law merely establishes a reliable legal framework to ensure that the allocation of funds is managed in future by the new agency, rather than directly through individual ministerial decisions.

The core of the proposed SpoFöG is constituted by the provisions for the creation of the independent elite sports agency to allocate funds, with elite sports promotion being more clearly aligned with international performance targets and structured in a more potential- and success-oriented manner. Whereas the initial legislative proposal foresaw a more balanced model of governance, the most recent proposal re-

leased by the Federal Government on 13 May 2026 (Bundeskanzleramt, 2025a, 2025b, 2026) foresees a much-reduced role for the sports movement in the relevant governing structures. Although the Parliament (*Bundestag*) may still decide otherwise, the current trend seems to go towards an increasingly State-centric model which would, at least, run counter to what has been the prevailing philosophy in West Germany (1949–1990) and in unified Germany (1990–). The DOSB has criticised the fact that the state is set to retain an absolute controlling majority via the new agency's board of trustees. Sport must not be reduced to merely following orders from politicians. He believes that the constitutionally protected autonomy of sport is undermined when political bodies make direct decisions on sporting criteria and the allocation of funds. He is calling for the full-time board of the new elite sports agency to be able to operate with complete independence and free from political micromanagement. In the current draft, the association sees a risk that ministerial directives will overshadow sporting expertise (DOSB, 2026).

More generally, attribution would be based on transparent and measurable criteria and indicators as opposed to current practices, especially regarding athletes with a potential to achieve sporting success internationally. Under the proposal, currently underrepresented sports and disciplines would cease to receive federal funding. In line with current practice, the future sports agency, too, would be expected to propose programmes aimed at supporting the transition of competitive athletes into mainstream careers after the end of their sporting careers, thereby offering them protection against socio-economic precarity. Therefore, the tasks of the sports agency are further the management and creation of transparency or the individual sporting promotion of particularly successful and promising top athletes.

The sports agency shall determine the maximum number of national squads and the cross-sport requirements for the squad criteria of the national sports federations. It shall be responsible for analysing the structures, successes and potential successes of the federal sports associations; concluding target agreements with the federal sports associations; reviewing the achievement of targets by the federal sports associations; ensuring transparency and providing information on funding decisions; and regularly evaluating the control and funding instruments, including proposals for their further development.

The funding is to be provided over several years, not just on a one-year basis with annual negotiations between the Federal Chanchellery and the sports federation. For each discipline, its potential is assessed individually, as is the amount of funding it should receive based on the funding requirements submitted. Funding can, therefore, be approved on a discipline-specific basis. However, it can also be granted on an interdisciplinary basis in the form of a so-called association budget. Within the framework of the association's budget, the funding amounts determined for the individual disciplines are made available to the federal sports association as a total amount so that it has more flexibility in the use of funds.

To promote the federal squad athletes, a subsidy can be granted to secure their livelihood. The German Sports Aid Foundation passes on the subsidies provided by the Budget Committee of the German Federal Parliament and approved by the federal government to top athletes in accordance with the funding concept previously agreed with the Federal Chancellery (*Bundeskanzleramt*).

In addition to the above funding, a direct funding for particularly successful and promising top athletes with regard to their sporting and other needs shall also be possible under this regulation in future. That is something new and intended to supplement the existing funding system by creating a funding component for individual sporting and other needs that cannot be taken into account, or cannot be taken into account sufficiently, in the existing funding system. Innovative solutions that have not yet been used in the funding system or could not be provided by it are also to be taken into account here.

Further, construction projects at sports facilities, sports research institutions, sports competitions of national and international significance, or other measures to promote the reputation of German sport worldwide should be eligible for funding. It is intended to contribute to the development of environmentally friendly, ecologically sustainable structures alongside innovations, equal opportunities, diversity and inclusion to a higher degree than currently practised. The legislative proposal further aimed at reducing procedural requirements and bureaucracy in the funding application process.

Regarding the structure of the proposed sports agency, the hope of the sport was one of an equal partnership between sports organisations and public authorities, while the jointly staffed agency would be empowered to make decisions autonomously and based on reliable expertise. However, the current proposal foresees a foundation board (*Stiftungsrat*) equipped with the power to decide about the allocation of the funds supported by an advisory board (*Sportfachbeirat*) as the core organs of the independent sports agency. Within the foundation board, 3 members would be appointed from the Federal Chancellery or the ministries and two from the German Bundestag, 3 by the DOSB and 1 by the states (*Länder*). This would give the political representatives an absolute majority.

The Sports Advisory Board, which task is to advise the Foundation Board and the Executive Board on the planning and performance of their duties, would include 15 members, the majority of which from the DOSB, supplemented by representatives from other associations.

The draft bill has caused great consternation in the world of sport in Germany. It sees its influence on sporting matters as extremely limited and fears for its autonomy. The DOSB even speaks of the "nationalisation of sport". In its view, the expertise on how competitive sport can be successful does not lie with the state, but with sport itself. It harshly criticises that the draft bill does not contain any reference to the 'financial responsibility of the federal government' and raises the question of why a key statement on planning security in elite sport, also with regard to the Olympic and Paralympic Games in Germany is missing. The DOSB also reacted with 'surprise' to the fact that the reference to 'the autonomy of sport' had been deleted.[26] Because the draft gives the federal government greater influence over the good governance of associations, the autonomy of associations is directly affected.

The approach of the German Government tries to answer the question how independent an agency can be which would receive all of its funding from the federal trea-

[26] https://de.nachrichten.yahoo.com/sport%2fdosb-kritisiert-verstaatlichung-sports-114602547.html (30/10/2025).

sury. This is in line with the requirements of the Federal Court of Auditors (*Bundesrechnungshof*) which would still be in charge of auditing its activities and, as mentioned above, is on record as regards the funding system, for having consistently criticised what it perceived to be an excessive influence of the DOSB on the use of public funds deriving from general taxation (Bundesrechnungshof, 2023, p. 15).

A still open question remains now whether and how the sport, led by the DOSB, will be in a position to contribute his sporting expertise to discussions with the government in order to ensure that the agency makes appropriate decisions. It will have to compensate for the representative minority with good arguments and clever solutions. In this power game, the final word does not seem to have been spoken yet.

However, another question which remains unanswered concerns the *raison d'être* of public funding for elite sport: more medals of perhaps the fostering of 'national or societal identity, inclusion, the facilitation of a culture of performance as well as fairness, a role model function as well as the promotion of healthy lifestyles'?[27]

### 4.6 Interim conclusions: *lex Olympica* versus *lex publica*

Having examined the German case, and bearing in mind that a Sports Promotion Act is yet to be adopted, where does the proposed future German sport agency stand on a scale between *lex Olympica* and *lex publica*? By drawing on the methodology proposed by James & Osborn (supra, 1.2; James (2024); James, Osborn (2011); James, Osborn (2023); James, Osborn (2024)), it seems fair to observe a situation opposite to that found in the French case study so that, here, there would rather be a supremacy of *lex Olympica* over *lex publica*. Without reiterating the detailed reasoning developed at the end of the French case study (supra, 3.3), we could however turn the argument made their around and surmise that, precisely be integrating themselves within structures dogmatically imputable to the private sports sectors and formally controlled by them, the public authorities of Germany may have gained a golden opportunity to embed and enmesh themselves to expand the scope of *lex publica* and push back that of *lex Olympica*. As with the French case, this perspective as well as the opposite one (surmising a stronger influence of the sports movement) both have their merits and, as these are early days given that the German agency is still a theoretical possibility only, legal and economic analysts should tread carefully, while acknowledging that *lex Olympica* and *lex publica* may not actually be as mutually exclusive as they may seem *prima facie*.

## 5. IMPLICATIONS FOR THE (PERHAPS) FUTURE GERMAN SPORTS AGENCY

### 5.1 Preliminary remarks

At a first glance both agencies shall have the duty to trigger higher top sports rankings for the nations. A further aim is the transformation of the system to promote talented athletes and their sporting success through more efficiency. The question remains, however, whether the administrative structure, the roles and responsibilities of such agencies provide added value in relation to the core business of financing the sports

[27] Reinsch (2024), p. 115: „eine nationale oder gesellschaftliche Identität, Integration, die Vermittlung von Leistungsbereitschaft und Fairness, Vorbildwirkung mit dem Ziel Gesundheitsförderung"?

system. Value and valuation seem to be the most important targets for the development of the sport in the two countries. Next steps would be to review how other nation's structure and finance their top-level Olympic sports beyond the State or the national sport umbrella federations.

Owing to the constraints of the constitutional and legal framework, the Federal Changellery is dutybound to concentrate on the promotion of the top-level sports via DOSB, as discussed (supra, 5.3), because its representation of all non-profit sports organisations, which represent the nation (Germany) – see also Frick, Wagner (1998); Büch (2000); Schellhaaß, Kummer (2007); Emrich, Pierdzioch, Flatau (2011). But also the international perspective (Franck, 1995) – with a focus on the IOC – shows the importance of the position of institutional economic approaches. As emphasised by Schellhaaß & Kummer, the IOC as the international umbrella Olympic institution (the rightsholder) and the national 'top-level sports federations have no own athletes employed for the Olympic Games, but use the members or employed top-level athletes found inside clubs.'[28] This is the most consequent rule in the non-profit sports philosophy, and points out further that the IOC doesn't pay even the successful Olympic victors, but the National Olympic Committees. These indirect payment rules are also used in Germany insofar that payment rules exist from the Sports Aid Foundation. We can see from the theoretical perspective that the Fundamental Principles of Olympism prefer the National Olympic Committees (that are their only member organisations) and not the active sports people. There is the same explanation on the national sports system in Germany: Not the Olympic federations pay their Olympic athletes except they have marketing revenues (on the contrary: from sports to sports there are different payment systems). Every sports federation is free in its payments, except the Sports Aid Foundation. Hence, indeed, the autonomy from state and rules is a challenging situation for many top-level athletes, even at Olympic and Paralympic level (where billion Euros are being spent in the 4-year-circles).

### 5.2 Hybdridity and *lex Olympica*

This may be a new point of discussion when it comes to introducing a sports agency. The relations between non-profit sports organisations and national ministries show different rules and can reach from much regulation until voluntariness. In terms of theoretical developments, the particularities of the sports movement are based on the institutional economy (rules) of sports organisations, sports production and within society. These positions show the importance of the dominance of Olympic law and its execution in the single countries.

To return to the national situation: On the one hand, there are the advantages of self-organisation (and non-profit status), voluntary work and positive esteem in society; on the other hand, there are transaction costs that can make associational action inefficient – precisely because of voluntary work and other disadvantages that Heinemann describes as 'traditionalism', 'costs of decision-making' and 'self-destruction' (Heinemann, 1995). Further, the allocation of funds by the Federal Changellery

[28] Schellhaaß & Kummer (2007), p. 201: 'Spitzensportverbände haben keine eigenen Athleten für die Olympischen Spiele angestellt, sondern greifen auf die Mitglieder oder angestellten Spitzensportler bei den Clubs zurück.'

has advantages, such as subsidiary action and utilisation of the DOSB (following the merging with the National Olympic Committee) in the sense of corporate structures. Nevertheless, there are also inefficiencies here, as public investments made (federal subsidies granted) for the Olympic Games of 2016, 2021 and 2024 have not triggered the expected results. Instead, the numbers of medals earned have been in steady decline with Germany ging from occupying the fifth place over the ninth to the tenth (Fremerey, Iglesias, Schlößer, 2024, p. 2).

## 6. CONCLUSION

### 6.1 Interpretation

How to interpret this new development in Germany? Is it a state intervention, or is it a state encroachment? Is it a corporative cross-over? Or is it a transformation of a co-operation, which did not present sufficient results? What is learned from other countries, for example the French solution? While we know that state regulations are more often present in France than in Germany, how are we to interpret this new German legislative initiative? Until 23 October 2025, an earlier legislative file (Bundeskanzleramt, 2025a) seemed to be following a path which would preserve at least some of the established principles of public sport policy and the relationship between the sport movement and the State, as understood and as practised in West Germany (1949–1990) and in unified Germany (1990–) so far. However, as the amended draft (Bundeskanzleramt, 2026) appears to signal a more State-centric approach, there is a distinct possibility that Germany may be going into a new direction, possibly resembling France more than it has been doing until now. As the governing structures of the ANS actually seem to have given the sports movement more influence, as opposed to what used to characterise the French model in previous decades, this would be a rather ironic outcome – although, to be fair, much can still change if and when the German Parliament (*Bundestag*) decides to add significant amendments to the text.

What we can see is that there is enough money in the top-level sports system, but not in the sense of effective collection and distribution. Money from public and from economic partners on different levels is not used for the common goal: Improvements of looking for more gold medals in Olympic and Paralympic Games and World Championships. Hence, State money is given as subsidiary means to the DOSB, which is distributed. Moreover, we see the German Sports Aid Foundation (*Stiftung Deutsche Sporthilfe*), which collects own money and, with its own money, celebrates and finances successful top-level athletes individually. However, at the level of the national sports federations, which are the producers of top-level athletes, the money from private sponsors is used exclusively by them. Therefore, we shall not only discuss a horizontal relationship between DOSB and Federal Chancellery but will also take into account a vertical relationship – at least on the side of the non-for-profit sports federations. Our recommendation so far is to consider more research.

Although the material drawn upon in this article does not in itself support such assumptions, we assume that the German legislative proposal may be indicative for a broader trend in Europe: away from a 'pure' version of sporting autonomy towards a more mixed and potentially balanced arrangement, where governments expect more in return for their financial and moral support. Such expectations may not be limited to

sporting merit (e. g., Olympic medals) but might encompass good governance, equal opportunities, sustainable development and other non-sporting goals, as evidenced in recent legislative innovations in the French context. Although such findings cannot be extrapolated from the sources discussed in this article, we assume that many current discussions, in several European countries, would have been unthinkable 20 years ago, as they touch the core of a sporting autonomy which used to be treated as sacrosanct in Germany, the UK and Northern Europe, although not in France and the Mediterranean countries. While the pertinence of these policy models will not diminish, countries may adopt policy changes which effectively make them migrate from one 'family' of nations to another, which could indeed happen in Germany if the draft text (Bundestag, 2026) were to pass through the legislative process largely unaltered.

### 6.2 *Lex Olympica* versus *lex publica*

As we hope to have demonstrated to a sufficient degree of persuasiveness while the surrounding circumstances may vary greatly (constitutional, legal and institutional frameworks, cultural and historical factors, various financing models, path dependency), there is much that Germany can learn from the French experience of using a sports agency to steer the financing of sports, although – to be honest – as long as the objectives vary (in particular as long as Germany keeps its narrow focus on elite sports), the merits of a comparison are bound to remain more limited. What the comparison does demonstrate to the highest levels of persuasion, however, is that the creation and use of an agency reveals the tension between *lex Olympica* versus *lex publica* inherent in every such exercise. Speaking of the 2024 Paris Games, James remarked that numerous contentious issues manifesting themselves at every instance of the Games seemed to reiterate the relevance of *lex Olympica* and the more generic (less IOC-specific) *lex sportiva*.[29] It could be argued, however, that the same instances of contestation and negotiation revealed the pertinence of *lex publica* just as much. The issue of female religious headwear prescribed under Islamic law and proscribed under French law reveals as much about the Republic as it does about the IOC.

While the tension between *lex Olympica* and *lex publica* would appear, *prima facie*, to represent a binary choice between particularistic versus universal regimes of regulation, this is only partly true. For although the IOC and its stakeholders aim to uphold *lex Olympica* as an autonomous (and largely impermeable) legal order in its own right – not unlike what the European Court of Justice (ECJ) granted to the then-nascent legal order of the European Communities (today's European Union) in 1963 (*Van Gend en Loos*),[30] thereby sheltering it from those of the Member States – it is

[29] James (2024), p. 81: 'These and other incidents that occurred at the Opening Ceremony, gestures that were made at the end of events, the wearing of, and for French athletes the prohibition from wearing, hijabs, and the political nature of the behaviour of some of the supporters, continue to demonstrate the importance of *lex Olympica* and *lex sportiva* to the organisation and running of sports mega events.'

[30] ECJ, 5 February 1963. NV Algemene Transport- en Expeditie Onderneming van Gend & Loos v Netherlands Inland Revenue Administration. Reference for a preliminary ruling: Tariefcommissie – Netherlands. Case 26–62. ECR 1963 00003, ECLI:EU:C:1963:1, p. 12: 'The conclusion to be drawn from this is that the Community constitutes a new legal order of international law for the benefit of which the states have limited their sovereign rights, albeit within limited

in the nature of *lex Olympica* to insert itself into *lex publica* and exert its effects within national legal orders, relying upon their legitimacy at least as much as upon its own. Thus, Jacques de Werra, in a study of the protection of Olympic rights, notes that 'the implementation of the protection of the Olympic properties still frequently depends on general (i.e. not focused on the protection of the Olympic properties) global or local sources of protection' (Werra, 2025, p. 49).

While Germany[31] and France[32] have both taken specific legislative steps to protect Olympic emblems, this is not the case in all jurisdictions worldwide, and the elasticity of the *lex Olympica* framework may actually be its strength in that, while maintaining clear objectives across jurisdictions, it leaves a margin for national authorities to meet them in accordance with their own legal traditions. Just like it relies on extant global frameworks, such as those of the Internet Corporation for Assigned Names and Numbers (ICANN) and the UN to protect its digital rights,[33] the Olympic movement also relies on national law, *mutatis mutandis*.

While Jan Zglinski recently asked whether only EU competition law could save football from itself (Zglinski, 2023), we too might ask whether the true added value of a German sports agency would rather relate to governance than to sporting merit in any technical sporting sense. Except that this was not the prime reason for proposing an agency which would still seem to be rooted, by and large, in *lex Olympica* more than in *lex publica*. Only time will tell, if and when the agency becomes reality – in which case we shall look forward to its fifth anniversary as an opportunity for an evaluation, in line with what has been provided for the French ANS (see ANS, 2024).

### 6.3 Policy implications in a European context

As stated earlier (supra, 6.1), France and Germany appear so different as to be almost perfect paradigms for comparison within a wider European context, with the French State-centric approach contrasting starkly with the heavy German reliance on autonomy and civil law. While most other European countries appear to be mixed forms of these two approaches (see Camy, et al., 2004, p. 57; Bayle, 2025, p. 121), what our

fields, and the subjects of which comprise not only Member States but also their nationals. Independently of the legislation of Member States, Community law therefore not only imposes obligations on individuals but is also intended to confer upon them rights which become part of their legal heritage. These rights arise not only where they are expressly granted by the Treaty, but also by reason of obligations which the Treaty imposes in a clearly defined way upon individuals as well as upon the Member States and upon the institutions of the Community.' (emphasis added)

31 Gesetz zum Schutz des olympischen Emblems und der olympischen Bezeichnungen (OlympSchG) vom 31. März 2004 (BGBl. I S. 479), i.d.F.v. 10. Oktober 2013 (BGBl. I S. 3799).

32 Article L.141–5 du Code du Sport, Version en vigueur depuis le 04 mars 2022, Modifié par Loi n°2022-296 du 2 mars 2022, https://www.legifrance.gouv.fr/codes/article_lc/LEGIARTI000043982791, art. 45.

33 Werra (2025), p. 4: 'On this basis, the effective protection of the Olympic properties in the digital environment with respect to their potential misuse in Internet domain names relies not only on specific global instruments explicitly aimed at protecting certain Olympic properties (such as the ICANN Regulation) but also on general protection mechanisms that are not specific to the protection of the Olympic properties (such as the UDRP) within which it can be imagined that the special status of the Olympic properties might be taken into account [...].'

case studies have (also) revealed (among many other insights) is that Germany may be moving towards a slightly more State-centric approach, as it already did in relation to anti-doping. In that particular field of regulation, the enactment of a particularly draconian national anti-doping act, in 2015, marked a paradigmatic shift with European implications.

Taking these reflections a bit further, we may wonder whether the organisation, promotion and financing of elite sports while sooner or later be confined to dedicated national sports agencies in most European countries or not, while a balanced assessment of the merits and drawbacks of such an approach would necessitate a detailed mapping of what arrangements actually are observable across Europe. Looking again at the two case studies explored in this article, it seems remarkable that the creation of a national sports agency in France did not weaken the influence of sports organisations and may even have strengthened it, while the question still remains open as to whether a future German national agency would give the State or the sports organisations the upper hand. At this stage, nothing is 'carved in stone' and much remains, quite literally, 'up in the air.' That the national agency of France is not confined narrowly to top-tier elite sports makes it stand out because it represents a more holistic approach than what appears to be currently 'in the pipeline' in Germany. All of these reflections and assumptions will, however, need to be revisited and reappreciated once the German situation has been clarified, at which stage an entirely new analysis might be warranted. Again, however, and as we have shown in this article, Germany may soon be moving into an entirely new direction – a development which would signal the need for new scholarship on the issues discussed in the present article. As such our present analysis represents a snapshot a crucial juncture of a process which may, in retrospect, turn out to have marked an epochal shift in public sports policy orientation.

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# Fostering youth sport: motivation and perceived event image at the children and youth olympics

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**ABSTRACT**

*Objectives*: This study examines how a national multi-sport youth event, the Czech Children and Youth Olympics (CYOG), influences athletes' motivation to continue sport participation beyond the recreational level and how participants and non-participants perceive the event's image.

*Methods*: A questionnaire survey was used for the research. Two respondent groups were surveyed using questionnaires based on established sport-motivation and event-image scales. The first sample included former CYOG participants (n = 567; 2005–2019), while the second consisted of athletes from three sport federations who had not participated in the CYOG (n = 234).

*Results*: Participants rated intrinsic motivators, such as fun, unique experience, and social aspects, higher than achievement-oriented motives. Both groups evaluated the event image positively, although participants expressed significantly higher ratings across all dimensions. The CYOG appears to reinforce youth motivation for further sport involvement and generates a strong positive event image. These insights may guide organisers and policy makers in designing youth-oriented sport events.

**KEYWORDS**

youth sport; motivation; event image; sport participation; sport event management

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## INTRODUCTION

Sport event management is now a distinctly separate part of sport management. How to organise a sporting event to make it attractive to the interested public is a matter of its management. It is a topic related to for-profit (Kunz, 2020), but also to non-profit

organisations (Taylor & Shanka, 2008; Nowy et al., 2015). Of course, it depends on whether the sporting event is local, regional, national or transnational. There are, of course, other criteria for the typology of sporting events. These can be the number of participants, geographical reach, frequency of repetition but also typologies by interest groups (Gammon, 2012; Parent & Chappelet, 2015).

In the field of sport event management, there are many approaches to managing a sporting event and what steps to implement. Authors (Da Silva & Las Casas, 2020; Masterman, 2014; Masteralexis et al., 2015; Parent & Chappelet, 2015; Da Silva & Las Casas, 2020; Parent & Rutsch, 2020; Rutherford Silvers & O'Toole, 2020; Čáslavová, 2020; Greenwell et al., 2024) elaborate the planning of a sporting event, its organisation and coordination, implementation, marketing of the sporting event, as well as its evaluation and implementation.

Although motivation and event-image research in sport is well established internationally, studies focusing on national-scale youth multi-sport events in Central and Eastern Europe remain limited. Little is known about how such events influence long-term sport involvement or how young athletes perceive their image. The Czech Children and Youth Olympics (CYOG), a major national event with significant symbolic value, offers a unique context for examining these questions.

We present the support of children and youth sport through sporting events using the example of a sporting event organised by the Czech Olympic Committee called the Children and Youth Olympics (CYOG), always in cooperation with one of the regions of the Czech Republic. This sporting event has been held since 2003, with a break during the COVID-19 pandemic. The aim of this event is to build youth sport, to combine high sporting performance with entertainment and to offer an Olympic atmosphere for sports fans from the Czech Republic (ČOV, 2023). An integral part of the event is also the return of children to exercise and a healthy lifestyle (Schulenkorf & Siefken, 2019), which is currently a globally discussed topic. After a period of pandemic that challenged the organisation of sporting events (Manoli et al., 2022), the event under study also has a new goal: the return of children to sport across the country.

## Motivation

The first part of the research is devoted to an investigation of motivational factors for sporting action; therefore it is desirable to address the definition of this concept with regard to sport and sporting action. Motivation is an integral part of any sporting event and can be viewed from many perspectives (Aicher et al., 2017; Singh & Pathak, 2017; Kim, 2018). Motivation generally reflects the reasons behind human behaviour and actions. According to Výrost & Slaměník (2008), we develop dispositions to incorporate long-term values into our behaviour and our lives. They divide motivational dispositions into two types:

- innate – this includes primary biological needs,
- acquired – which includes secondary (social) needs, interests, value orientations and attitudes.

Motivation serves as the fundamental psychological engine driving human behaviour and goal-oriented actions. In the context of large-scale sporting events, this phenomenon must be viewed as a multidimensional construct influencing both im-

mediate participation and long-term engagement. While general motivational dispositions can be categorized into innate biological needs and acquired social attitudes, the sporting environment necessitates a more specialized framework where these dispositions manifest as specific sport-related values. For the Children and Youth Olympics (CYOG), understanding this motivational structure is critical, as the event targets a developmental stage where innate needs for movement intersect with acquired social needs for recognition and status. Blažej's (2019) motivational structure provides a useful framework for understanding youth sport motivation, distinguishing primary (e.g., need for movement, playfulness) and secondary needs (e.g., recognition, achievement). Blažej (2019) presents the motivational structure as shown in Figure 1.

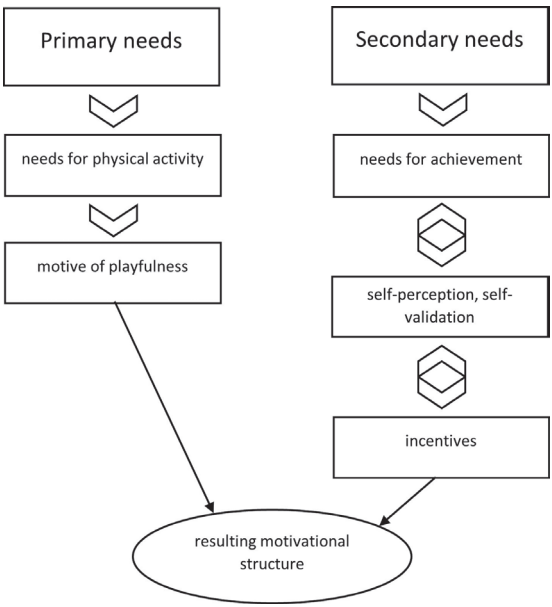


**Figure 1** Basic motivational structure in sport

Source: Blažej (2019)

Motivation in a sporting environment is determined by motivators that drive people to move and train regularly and are the cause of high sporting performance and the basis of competition ( Jansa, 2018). To operationalize these motivational drives, Blažej's (2019) framework provides a bridge between psychological needs and sport-specific outcomes, distinguishing between primary needs (e.g., playfulness, movement) and secondary needs (e.g., achievement, self-validation). This study utilizes this hierarchy to examine how the CYOG environment activates these specific drives. These internal structures are further conditioned by extrinsic incentives, which Jansa (2018) classifies into sensory, economic, and social categories. The incentive can be broken down as follows ( Jansa, 2018):

- Sensory – this includes stimuli associated with the first contact with a particular sport, perception of the atmosphere, the creation of positive or negative experiences, the establishment of interpersonal relationships, the tradition of the sport and the facilities of the sports environment.
- Economic – these incentives include financial rewards, the level of food and accommodation, the quality of sporting goods, tools and equipment.
- Curiosity – which includes attending matches and competitions, and the opportunity to travel in connection with sport.
- Affiliation – the author includes here the creation and maintenance of new relationships.
- Independence, respect and recognition – gaining respect and recognition, e.g. through performance awards in sports news.

Performance motivation is important for gaining sporting success, and alongside training it reinforces the drive to achieve peak sporting performance. Tod et al. (2012) state that performance motivation is built on the premise that people are generally motivated by achieving success, improving performance, mastering tasks, and adequately managing desirable behaviours.

The motivation of children and young people in sport is based on their own internal dispositions and is conditioned mainly by the primary need for exercise (Spray et al., 2006). On the other hand, there is also external motivation from parents through rewards and punishments (Jansa, 2018). If we want children to achieve long-term sporting success, we need to develop their intrinsic motivation. The respondents in the research conducted are assumed, due to their selection, to see sport as part of their lives and display both intrinsic and extrinsic motivation.

**Table 1** Motivational aspects for participating in a sporting event

| Motivational aspects | M | SD |
|---|---|---|
| Challenge yourself | 5.75 | 1.64 |
| Have fun | 5.65 | 1.46 |
| Get fit | 5.18 | 1.77 |
| Improve your performance | 4.94 | 1.82 |
| Prove to myself that I'm up to it | 4.85 | 2.17 |
| Raise money for charity | 4.84 | 1.91 |
| Improve the quality of your time | 4.24 | 2.20 |
| Be with your family/friends | 4.10 | 2.01 |
| To show others that I can do it | 3.20 | 2.13 |
| Meet new people | 3.06 | 1.90 |
| Win prizes | 2.03 | 1.65 |

*Note*: 1 – strongly disagree, 7 – strongly agree

Source: Taylor & Shanka (2008)

The design of this research in the area of motivation to participate in sports events is inspired by the study 'Cause for event: not-for-profit marketing through participant sports events' by Taylor & Shanka (2008). The aim of this study was to determine the motivation for participating in a sporting event, overall satisfaction with the event and athletes' intention to participate in the future. A breakdown of the motivational aspects for participation in a sporting event along with the results according to the authors' study is presented in Table 1. The authors then categorise the aforementioned motivational statements into four groups: achievement, enthusiasm, status and socialisation.

The second study of participant motivation for sporting events is the research 'Participation Motives of Special Olympics Athletes' (Shapiro, 2003). The author Shapiro (2003) used a sport motivation questionnaire for her research, which included 14 motivational statements. The respondent had to compare each motivation reason with the other reasons, therefore each motivation statement was included 13 times in the questionnaire. From the comparison, the author obtained the ranking of each motivational statement, which is shown in Table 2.

**Table 2** Results of the Shapiro (2003) study by gender

| | Men | | | Women | | | Total | | |
|---|---|---|---|---|---|---|---|---|---|
| **Motivational aspects** | ***M*** | ***SD*** | **Rank** | ***M*** | ***SD*** | **Rank** | ***M*** | ***SD*** | **Rank** |
| Win medals | 8.88 | 3.12 | 1 | 9.07 | 3.49 | 1 | 8.96 | 3.28 | 1 |
| Play with others on my team | 8.83 | 2.61 | 2 | 7.94 | 2.55 | 3 | 8.42 | 2.61 | 2 |
| Exercise | 8.31 | 3.03 | 3 | 8.25 | 2.82 | 2 | 8.28 | 2.92 | 3 |
| Do something I'm good at | 7.44 | 2.02 | 4 | 6.88 | 2.27 | 7 | 7.18 | 2.14 | 4 |
| Have fun | 7.16 | 2.03 | 5 | 6.97 | 2.07 | 6 | 7.07 | 2.04 | 5 |
| Visit new places | 6.93 | 2.88 | 6 | 7.01 | 3.79 | 5 | 6.97 | 3.02 | 6 |
| Feel important | 6.65 | 3.13 | 7 | 7.26 | 2.98 | 4 | 6.93 | 3.07 | 7 |
| Improve my skills | 6.48 | 2.82 | 8 | 5.79 | 2.96 | 9 | 6.16 | 2.89 | 8 |
| Laugh | 6.00 | 3.35 | 9 | 6.36 | 2.93 | 8 | 6.16 | 3.16 | 9 |
| Spend time away from home | 5.86 | 2.75 | 10 | 5.36 | 3.13 | 12 | 5.63 | 2.92 | 10 |
| Be popular | 5.07 | 2.83 | 11 | 5.54 | 2.44 | 10 | 5.28 | 2.66 | 11 |
| Do things that make me feel better | 5.19 | 2.37 | 12 | 5.09 | 2.34 | 13 | 5.14 | 2.34 | 12 |
| Try something hard | 4.37 | 2.44 | 13 | 5.38 | 3.37 | 11 | 4.83 | 2.95 | 13 |
| My parents/friends wanted me to play | 3.83 | 2.71 | 14 | 4.04 | 3.13 | 14 | 3.92 | 2.90 | 14 |

Source: Shapiro (2003)

As already mentioned, the CYOG is a large and successful sporting event that aims to motivate children to participate in sport at all levels. In terms of the relationship with a sporting career and if the stages of a sporting career are respected (Svoboda,

2007; Jansa, 2018), the experience of a top-level event such as the CYOG in the Czech Republic can influence their decision to pursue sport at a higher level.

## IMAGE

In the research, respondents also evaluated the image of the event, so it is essential to define this concept. In contemporary marketing, image is part of market psychology and advertising. According to Vysekalová et al. (2020), image is translated as an idea or impression. In marketing, together with the technical parameters of the product, it forms the personality of the product, which decides what the customer will buy and what, on the other hand, will not be noticed. It is therefore clear that it is based on the perceptions of consumers who differ in their opinions, experiences and ideas. The authors divide image into different types. Image can be divided according to its prevalence and scope into (Vysekalová et al., 2020):

- universal – valid without distinction in all countries or power groups of the world;
- specific – reflects the particularities of target groups and places.

The image can be further differentiated into (Vysekalová et al., 2020):

- internal – creating an image of yourself, of your product;
- external – image by which the object is intended to influence the public – this image can be intentional (or wanted) or unwanted (which is created spontaneously in the public);
- real – a real image created in the mind of the public.

The present study is about the image of the CYOG as perceived by participants and non-participants of this sporting event. Thus, according to the definitions, it is a specific image, but at the same time a real image. This means that the intention was to find out how the participants of the CYOG actually perceive the image, not what image the organiser of the event wants to evoke.

From foreign studies focused on sporting event image research, the approach of the authors of Koo et al. (2014), who examined sporting event image, participant satisfaction and behavioural intention, served as a model. These authors found that the indirect effect of sporting event image on participants' behavioural intention through participant satisfaction was statistically significant. This suggests that organisers and promoters of sporting events should strive to build a positive image.

By synthesizing these theoretical perspectives, ranging from general psychological dispositions to specialized youth sport incentives, this study evaluates whether the symbolic and atmospheric elements of the CYOG successfully translate into a positive event image that bolsters long-term athletic aspirations.

## METHODS

The main objective of the research is to evaluate the factors motivating athletes to participate in the Children and Youth Olympics (CYOG), which is organised by the Czech Olympic Committee, and also to evaluate the perceived image of the event. The research involved both athletes – participants of previous years of the CYOG and athletes without direct participation.

Two research files are included in the research. Participants were recruited via purposive and convenience sampling through available databases of the Czech Olympic Committee and selected sport federations. Due to the historical nature of the participant base (2005–2019), true random sampling was not feasible; however, the large sample size ensures a broad representation across different sport disciplines and time periods. Structure of the participants:

a) Athletes who participated in the CYOG between 2005 and 2019. They are divided by the CYOG year in which they competed. Only participants of the 2020 Winter CYOG are not included in the research, as they have not yet had the opportunity to participate in an international Olympic pathway event. This group of participants from each CYOG year directly commented on their motivations for attending the event and also assessed the image of the YOG through the experience of the event.

b) Members of sports associations who did not participate in the CYOG. These are respondents who are members of three selected associations – the Czech Athletic Association (hereinafter ČAS), Czech Floorball (hereinafter ČF) and the Ski Association of the Czech Republic (hereinafter SLČR). This group of respondents is divided according to their affiliation to a given sports association. The reason for the inclusion of this second group of respondents is to gain an external view of the sporting public on the knowledge, following and image of the event.

The resulting research population consists of 567 CYOG participants (ad a) and 234 non-CYOG participants (ad b). The structure of the research population is presented in Table 3.

**Table 3** Structure of the research sample

| | | Age | | |
|---|---|---|---|---|
| | | **14–17** | **18–25** | **26 and older** |
| **CYOG participants** | **Men** (n = 260) | 31.9% | 52.7% | 15.4% |
| (n = 567) | **Women** (n = 307) | 43.0% | 49.5% | 7.5% |
| **CYOG non-participants** | **Men** (n = 107) | 38.0% | 3.3% | 28.7% |
| (n = 234) | **Women** (n = 127) | 43.3% | 39.4% | 17.3% |

Source: own data

The research uses quantitative survey research through different questionnaires for each research set. The questionnaires are based on previous research (Shapiro, 2003; Taylor & Shanka, 2008; Koo et al., 2014). The questionnaires were pilot-tested (n = 15) and evaluated by two subject-matter experts for adaptation to local cultural conditions. Content validity was also ensured through a review by two subject-matter experts specializing in sport management, who evaluated the adaptation of the international scales (Shapiro, 2003; Koo et al., 2014) to the Czech youth sport environment. The experts evaluated the items for clarity, relevance, and developmental appropriateness for the target age groups. Following their recommendations, several

items in the motivation scale were rephrased to better reflect the specific cultural context of the Czech Children and Youth Olympics (CYOG).

The CYOG participant questionnaire (ad a) focused on the dimensions of spontaneous familiarity with the event, organisation and motivation for the event, and image of the sporting event. The questionnaire for athletes without participation in the CYOG (ad b) explores the dimensions of relationship to sport, knowledge of the event, image of the event and follow-up of the event.

To measure the image dimension of a sporting event, a modified semantic differential is used according to the authors Koo et al. (2014) with six items. The dimension of motivation for the event is measured by the modified items according to Shapiro (2003) and Taylor & Shank (2008), with the items from these two questionnaires combined and the addition of a self-reported 'gain from lifetime experience' statement. Data were analyzed using descriptive statistics (means, standard deviations, and frequencies).

## RESULTS – CYOG participants

### Spontaneous knowledge of the action

Spontaneous familiarity with the event was assessed by respondents' association with the event. The most frequent associations were as follows: experience (72 respondents), fun (51 respondents), sport (50 respondents), atmosphere (47 respondents)

**Table 4** Motivational factors for participation in the CYOG

| Motivational factors | Men | | | Women | | | Total | | |
|---|---|---|---|---|---|---|---|---|---|
| | M | SD | Rank | M | SD | Rank | M | SD | Rank |
| Have fun | 6.20 | 1.16 | 1 | 6.43 | 1.01 | 1 | 6.33 | 1.09 | 1 |
| See the experience of a lifetime | 6.02 | 1.44 | 2 | 6.37 | 1.16 | 2 | 6.21 | 1.31 | 2 |
| Be part of the team | 5.78 | 1.52 | 3 | 5.93 | 1.44 | 3 | 5.86 | 1.48 | 3 |
| Improve your performance | 5.72 | 1.43 | 4 | 5.75 | 1.34 | 4 | 5.74 | 1.38 | 4 |
| Prove to myself that I'm up to it | 5.50 | 1.51 | 6 | 5.73 | 1.46 | 5 | 5.62 | 1.48 | 5 |
| Meet new people | 5.45 | 1.57 | 7 | 5.66 | 1.53 | 6 | 5.57 | 1.54 | 6 |
| Challenge yourself | 5.33 | 1.49 | 8 | 5.49 | 1.47 | 7 | 5.41 | 1.48 | 7 |
| To show others that I can do it | 5.18 | 1.71 | 9 | 5.46 | 1.64 | 8 | 5.33 | 1.68 | 8 |
| Win a medal | 5.61 | 1.70 | 5 | 5.02 | 1.90 | 9 | 5.29 | 1.83 | 9 |
| Parents/friends wanted me to attend | 4.03 | 2.20 | 11 | 4.13 | 2.06 | 10 | 4.08 | 2.12 | 10 |
| Feel important | 4.06 | 1.95 | 10 | 3.78 | 1.99 | 11 | 3.91 | 1.98 | 11 |
| Become popular | 3.20 | 1.84 | 12 | 2.82 | 1.78 | 12 | 2.99 | 1.82 | 12 |

*Note*: 1 – completely unimportant, 7 – very important

Source: own data

and experience (31 respondents). The best aspects of the event, according to respondents, are: atmosphere (109 respondents), team (63 respondents), new friendships (50 respondents), winning (31 respondents) and experience (30 respondents).

### Motivation to participate in the CYOG

The results compare 12 motivational factors. The overall results (see Table 4) show that fun, new experiences and belonging to a team are the biggest motivators to participate. Improving one's own performance is only fourth in the rankings. These four motivational factors are the same for both men and women.

The men then want to win a medal, prove to themselves that they have what it takes and meet other people. Women rank the possibility of winning a medal as high as ninth. Otherwise, they also want to prove to themselves that they can do it, meet new people and further challenge themselves. Both groups do not consider motivation from parents or coaches and the motivation to become popular to be important.

A total of 95% of the respondents (CYOG participants) regularly participate in sport twice a week. As part of the evaluation of their experience with the CYOG, it should be noted that youth who already participate in sport and have a certain attitude towards sport already participate in the CYOG. Thus, they do not evaluate the CYOG as an event that would completely change their attitude towards sport. At the same time, the results in Figure 2 confirm that the CYOG motivates youth to participate in sport not only at the recreational level but also at the top level. This is almost half of the respondents who report this attitude. At the same time, it is a very positive fact

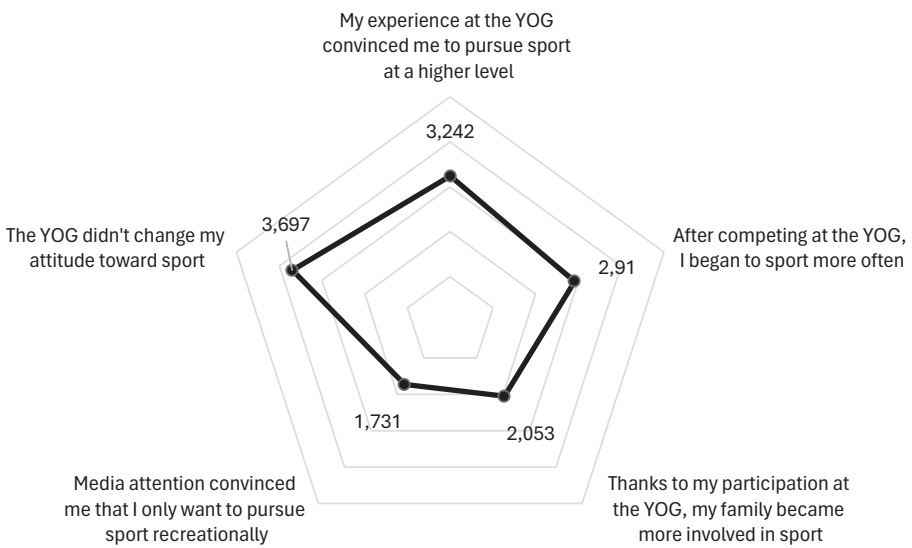


**Figure 2** Evaluation of CYOG experience

*Note*: 1 – strongly disagree, 5 – strongly agree

Source: own data

that the media pressure on children is not so strong that it would convince them to play sports only at the recreational level.

### Image of the CYOG

The image of the CYOG is perceived positively by participants. The image scores highest for the rating of fun event (51% of respondents), followed by motivating (46.2% of respondents) and supportive (39.2% of respondents). Conversely, the lowest values were for relaxed (18.5% of respondents). The average image values from the semantic differential are as follows (see Figure 3): fun (6.3), motivating (6.2), supportive (6.0), excellent (5.9), inspiring (5.8), and relaxed (5.0).

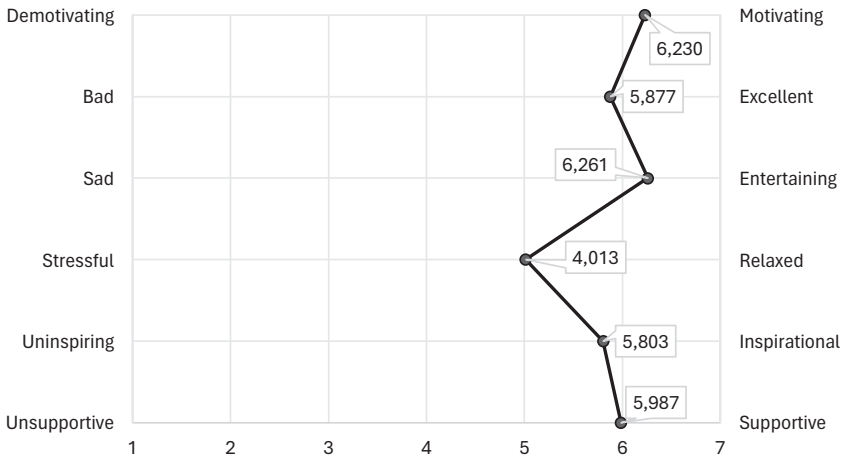


**Figure 3** Perceived image of the CYOG by event participants

Source: own data

Overall, 13% of the respondents participated in the European Youth Olympic Festival, 8% in the Youth Olympic Games and 4% in the Olympic Games by taking part in the Olympic Journey or attending other events under the Olympic rings. Out of a total of 567 respondents, only 8 respondents had completed the full Olympic Journey. More than 80% had not participated in another event.

## RESULTS – CYOG non-participants

### CYOG knowledge and followership

The results show that 93% of non-participants are familiar with CYOG and more than 75% of respondents follow it. When watching, respondents prefer television to Facebook, Instagram and the CYOG website. Facebook and Instagram are followed by the 18–25 age group and the website by the 26+ age group. The CYOG app is followed by 18% of respondents and downloaded by athletes aged 14–17.

### Motivation to play sports

Respondents (members of sports associations, non-participants in the CYOG) most often play sport because they like it or want to compete (88.9%). Other results relate to improving health (34.6%) and the social aspect of sport, which is meeting new people and spending time with them. Only 3% of respondents state that they wish to contribute to the development or preservation of Czech sport.

A total of 32.2% of these respondents want to play sports only on a recreational level. The reasons for playing recreational sport are as follows: 23.2% of respondents wanted to play sport at a higher level but did not get shortlisted. The group of respondents giving reasons in the section 'other motivation' is equally large. This includes reasons such as age (too young or too old), financial demands of the sport, etc. A total of 16.3% of respondents did not want to become a professional athlete and the same number of respondents got injured during their sporting career and continued only at a recreational level.

### Image of the CYOG

According to the mean value of the semantic differential, members of sports associations – non-participants of the CYOG, rated the image of the event as motivating (value 5.7), inspiring (value 5.6), supportive (value 5.5), fun (value 5.5), excellent (value 5.2), and relaxed (value 4.5) – see Figure 4. If the image ratings between participants and non-participants of the event are compared, it is evident that the participants rate the event better. Respondents who have directly experienced the event and have experiences from it, including making new friendships, rate the event 20% more as fun, 15% more as motivating, excellent and supportive, and 9% more as relaxed. Both groups rate the image worst in the stressful/cool category.

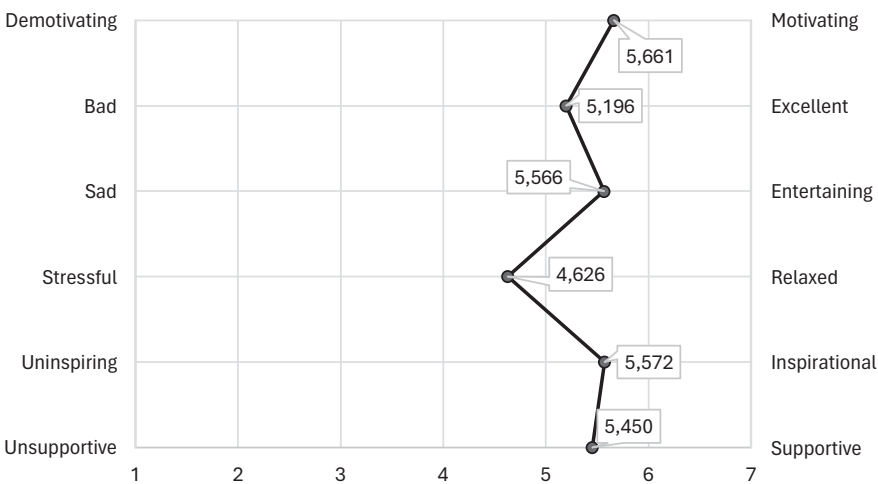


**Figure 4** Perceived image of the CYOG by non-participants

Source: own data

## DISCUSSION

As mentioned in the Methods chapter, the design of the questionnaires is based on foreign studies (Shapiro, 2003; Taylor & Shanka, 2008; Koo et al., 2014). When comparing the individual studies and the present research, it can be noted that the research population comprises more respondents than the aforementioned studies.

When comparing the results of the conducted research with the results of foreign studies in the area of motivational claims, which are used in the design of the research construct of this study, it can be said that they differ from the results of the conducted study.

Taylor & Shanka (2008) categorise motivational statements into four groups, namely: achievement, enthusiasm, status and socialisation. In their results, the international athletes participating in this study reported that they were most often motivated by success and only then by their own enthusiasm or the possible attainment of a certain status. The motive of socialisation does not play a big role for them. On the contrary, the athletes in the conducted survey report statements that can be included in the categories of enthusiasm and socialisation in the first two places. The success factor placed with the specific theme 'to improve my performance' ranks only in fourth place. In the results of another study (Shapiro, 2003), the participants were most motivated by achievement, socialisation and then enthusiasm, and lastly by status gain. Again, these results differ from those in the present research. In the present research, enthusiasm and socialisation dominate, with achievement ranked fourth. The reasons for these results may have numerous causes. When reflecting on incentives ( Jansa, 2018), the respondents of this study are primarily motivated by sensory incentives such as experiencing the atmosphere, fun and experiences, and affiliation incentives, which are mainly presented by establishing and maintaining friendships.

The members of sports associations (non-participants in the CYOG) are mainly recreational athletes, as the love of sport (88.9%) is predominant among them, which can be classified as enthusiasm. However, the opportunity to compete is ranked second by the authors Taylor & Shanka (2008) in the achievement group. In third place is the area of health. Within the breakdown of motivators ( Jansa, 2018), sensory motivators (love of sport and seeing health benefits) and curiosity motivators (the opportunity to compete) are the main motivators for respondents in the research.

Research confirms findings (Vysekalová et al., 2020) that experiencing an atmosphere with a lot of emotions, fun and experiences is an important aspect that has a positive impact on image perception. In this context, "fun" refers to emotional enjoyment and positive affective responses reported by youth during participation, while "enthusiasm" encompasses intrinsic excitement and perceived personal engagement in the event. The personal experience of respondents attending the event influenced the actual perceived image by an average of 0.52 points on the semantic differential (Figures 3 and 4). Conversely, athletes without participation in the CYOG evaluated image based on the organisers' social media communication and their own perceptions, which may or may not reflect reality.

At the same time, it should be mentioned that for image comparison it would be more appropriate to have similar samples (participants and non-participants), not only in size but also in structure. The difference in perceived image can be discussed

in terms of how the perception is acquired or evoked (by participation with own emotional perceptions or marketing communication of the event organisers). Another limitation of the research may appear to be the examination of the phenomenon through only one selected specific sporting event. The cross-sectional nature of the study does not allow causal inferences about long-term sport participation. Future research should utilize longitudinal tracking to monitor the career trajectories of CYOG participants. Furthermore, incorporating qualitative interviews with coaches and parents would provide a more holistic understanding of the event's impact on the youth sport ecosystem.

## CONCLUSION

In conclusion, according to the results obtained, the event appears to be associated with increased motivation to play sport at a higher level. This is confirmed by almost half of the respondents (47.8%) stating that participation in the CYOG motivated them to pursue a future sporting career. The main motivators for participants are not winning or gaining popularity. But for both men and women it is mainly fun, gaining experience, belonging to a team and improving their performance.

Research shows that participants of the Children and Youth Olympics have positive memories of the event. There are often reports in the media that such events, which lead to early specialisation of children and are under media pressure, discourage children from playing sport regularly. But research respondents were more likely to or completely disagree with the statement (82.2%) that media pressure during the event would persuade them to play sport only at a recreational level.

The CYOG is perceived positively by both participants and non-participants, and participation is associated with higher reported motivation for continuing sport involvement. While the event is not a determinant of career choice, it provides a meaningful experience that may encourage further sport engagement.

In terms of the future organisation of events such as CYOG, the positive image identified is put to good use. If the image of a sport event is evaluated positively, its organisation and the intention in possible participation are also perceived positively. A total of 70% of respondents would like to repeat their participation and almost 80% would recommend participation in this event to other athletes. At the same time, the positively perceived image of this event is a motivation for the organisers, and organisers of similar events.

A positive image helps to attract new sponsors and partners to the sporting event. By sponsoring a sporting event, the partners approached can fulfil their marketing, communication and social objectives and the sporting event will receive funds for greater promotion, modernisation and increased comfort for all parties involved.

In conclusion, it can be assumed that the perceived image of the event also has an impact on the work of the coaches who meet and can exchange their experiences. At the same time, the event also has an impact on the relatives of the children playing sport. In the research conducted, 10.2% of the respondents reported that the participant's family started to play more sports.

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# Associations between flexibility, aerobic capacity, and training experience among Algerian bodybuilders

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**ABSTRACT**

This study examined aerobic capacity and flexibility among Algerian bodybuilders and explored their associations with age and training experience. Fifteen male athletes from Batna Province participated in the research. Aerobic capacity was assessed using the Luc Léger 20-m shuttle run test, while trunk flexibility and shoulder mobility were evaluated through the sit-and-reach and back-scratch tests, respectively.

Results showed moderate aerobic capacity and generally low to moderate flexibility across the sample. Correlational analyses revealed no statistically significant relationships between $VO_2$max, flexibility, age, or training duration ($p > 0.05$). Although flexibility displayed a slight tendency to decline with age and to improve with longer training experience, these trends did not reach significance, likely due to the small and homogeneous sample.

These findings underscore the importance of integrating structured flexibility and aerobic training into bodybuilding programs to maintain optimal mobility and performance. Future studies employing larger and more diverse samples are recommended to better clarify the relationships among age, training experience, and physical fitness components in bodybuilding populations.

**KEYWORDS**

flexibility; aerobic capacity; bodybuilding; training experience; age

**DOI**

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## INTRODUCTION

Bodybuilding is a sport primarily focused on developing muscular strength and hypertrophy, with athletes striving to achieve maximal muscle growth and optimal physical

aesthetics. However, this strong emphasis on muscle size and strength often leads to the neglect of other essential physical attributes, particularly flexibility and aerobic capacity – both of which play a crucial role in optimizing movement efficiency, training quality, and injury prevention.

Flexibility, defined as the ability of muscles and joints to move through a full range of motion, is fundamental for maintaining functional mobility and minimizing injury risk (Alter, 2004). Nevertheless, excessive muscle hypertrophy resulting from resistance training may reduce joint mobility, especially when stretching is not systematically incorporated into training programs. Similarly, aerobic capacity constitutes a key component of overall physical fitness, enabling athletes to sustain repeated efforts, recover efficiently between sets, and tolerate prolonged training sessions (Bird et al., 2006). In bodybuilding, where training volume is typically high and metabolically demanding, inadequate aerobic conditioning may impair recovery and increase fatigue.

Despite the recognized importance of these two components, flexibility and aerobic capacity appear to vary considerably among bodybuilders, influenced by several factors, most notably age and training experience (Bompa & Haff, 2009). However, research addressing these relationships within bodybuilding populations – particularly in North Africa – remains scarce.

Although bodybuilding is widely practiced in Algeria, scientific investigations focusing on functional capacities such as joint mobility and aerobic fitness in this athletic group are extremely limited. Existing literature largely emphasizes strength development, muscle hypertrophy, and nutritional strategies, while neglecting critical aspects related to mobility and cardiorespiratory function. This lack of empirical data creates a clear gap in understanding whether conventional bodybuilding training is sufficient to maintain adequate flexibility and aerobic conditioning. Accordingly, providing baseline descriptive data on Algerian bodybuilders contributes valuable insight to an understudied athletic population and highlights areas that require further scientific attention.

In this context, the present study aims to evaluate the levels of flexibility and aerobic capacity among bodybuilding athletes and to examine the extent to which these parameters vary according to age and training experience.

## RESEARCH PURPOSE AND HYPOTHESES

The present study aimed to evaluate the levels of aerobic capacity and flexibility among bodybuilding athletes and to examine their associations with age and training experience. Understanding how these physical attributes vary and interact with key demographic and training variables can provide valuable insights for optimizing performance and preventing functional limitations in bodybuilding practice.

Accordingly, the study formulated the following hypotheses:

1. Bodybuilders would exhibit moderate levels of aerobic capacity.
2. Bodybuilders would demonstrate limited flexibility, particularly in the trunk and shoulder joints.
3. Aerobic capacity and flexibility would show significant relationships with both age and training experience.

## RESEARCH METHODOLOGY

A descriptive cross-sectional design was adopted to quantitatively assess aerobic capacity and flexibility among bodybuilding athletes and to examine their relationships with age and training experience. This design enabled the evaluation of existing physical performance indicators in a natural training context without manipulating any variables.

### Research sample

The study relied on a purposive sample consisting of 15 male bodybuilding athletes registered in local sports clubs in the Batna. This selection was intentional, as the participants possessed the specific physical and training characteristics required to address the study objectives. All participants were actively engaged in bodybuilding practice for at least three years and were free from any musculoskeletal injuries that could affect performance during testing.

**Table 1** Anthropometric and demographic characteristics of the sample

| Variable | Categories | Range | Number | Percentage |
|---|---|---|---|---|
| **Age** | Category 1 | 18–22 years | 9 | 60.00% |
| | Category 2 | 26–29 years | 3 | 20.00% |
| | Category 3 | ≥ 30 years | 3 | 20.00% |
| **Weight** | Category 1 | 60–70 kg | 3 | 20.00% |
| | Category 2 | 70–80 kg | 5 | 33.33% |
| | Category 3 | > 80 kg | 7 | 46.66% |
| **Height** | Category 1 | 1.60–1.70 m | 3 | 20.00% |
| | Category 2 | 1.71–1.80 m | 8 | 53.33% |
| | Category 3 | > 1.80 m | 4 | 26.66% |

Table 1 presents the anthropometric and demographic characteristics of the sample. Most athletes (60%) were between 18 and 22 years old, indicating that the sample primarily represents young adult bodybuilders. In terms of body weight, nearly half of the participants (46.66%) weighed more than 80 kg, reflecting the muscular development typical of bodybuilding practice. Height distribution showed that 53.33% of athletes were between 1.71 m and 1.80 m, while 26.66% exceeded 1.80 m. Overall, the sample demonstrates diverse anthropometric characteristics while maintaining similar training backgrounds.

### Research tools

In this study, a set of standardized physical fitness tests was employed to collect quantitative data related to endurance and flexibility among bodybuilding athletes. The following tools were used:

### *Aerobic capacity assessment – Léger-Boucher (Beep) Test*

Aerobic capacity ($VO_2$max) was estimated using the 20-meter multistage shuttle run test, also known as the Léger-Boucher or "Beep Test" (Léger & Boucher, 1980). Participants ran between two lines 20 meters apart in synchronization with audio signals that increased in frequency each minute. The test ended when an athlete failed to reach the line twice consecutively or voluntarily stopped due to exhaustion.

The last completed level and number of shuttles were used to estimate $VO_2$max using validated predictive equations (Ramsbottom et al., 2001). This protocol is widely recognized for its reliability in trained populations and is appropriate for estimating aerobic capacity in strength athletes.

### *Flexibility assessment – Forward Flexion Test*

The Forward Flexion Test was used to assess trunk and hamstring flexibility. Participants stood upright with knees fully extended and slowly bent forward to reach toward the floor without bouncing. The vertical distance between the fingertips and the floor was measured in centimeters:

- **Positive values:** fingers below floor level
- **Zero:** fingers touching the floor
- **Negative values:** fingers above floor level

This test serves as a valid indicator of posterior chain flexibility.

### *Back-Scratch Test (Rikli & Jones, 1999)*

Shoulder joint mobility was evaluated using the Back-Scratch Test. Participants placed one arm over the shoulder and the other upward behind the back, attempting to touch or overlap the middle fingers. The distance between the fingertips (overlap or gap) was measured in centimeters. Each side was tested, and the best score was recorded. This test is widely used to assess upper-body flexibility and functional range of motion.

## STATISTICAL TOOLS

All statistical analyses were performed using SPSS version 26. Descriptive statistics (means, standard deviations, and percentages) were calculated to summarize the characteristics of the sample and the results of the physical fitness tests. Pearson's correlation coefficient (r) was used to examine the relationships between aerobic capacity ($VO_2$max), flexibility measures, age, and training duration.

Given the small sample size ($n = 15$), the statistical power of the tests was limited, reducing the likelihood of detecting significant associations even when meaningful relationships may exist. For this reason, the correlation results are interpreted cautiously. Confidence intervals for correlation coefficients were not included because the small sample size would produce wide intervals with limited interpretive value; however, the absence of significance ($p > 0.05$) is explicitly reported for all analyses.

All statistical tests were conducted at a significance threshold of $p \leq 0.05$. Due to the exploratory nature of the study and the limited sample size, the analysis focused on identifying general trends rather than making strong inferential claims. Future studies with larger and more diverse samples are needed to validate the observed trends and provide more robust statistical conclusions.

## PRESENTATION, ANALYSIS, AND DISCUSSION OF RESULTS

### Presentation and analysis of results related to the first hypothesis

#### *Aerobic capacity (Luc Léger Test)*

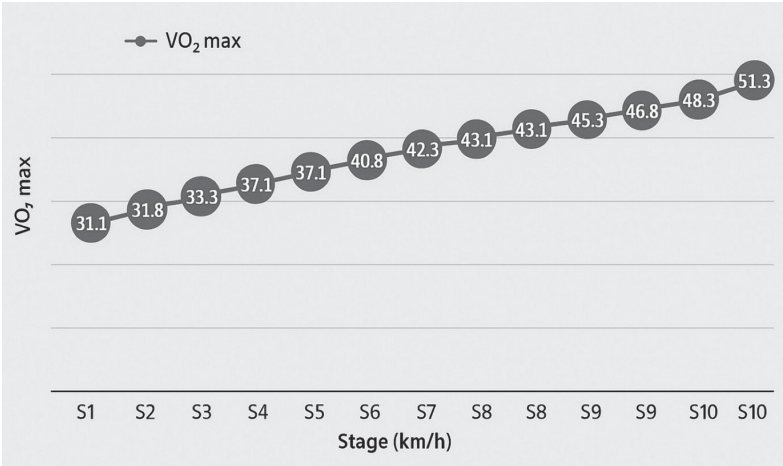


**Figure 1** Curve illustrating the variations in maximal aerobic capacity ($VO_2$max) as a function of speed (km/h).

**Table 2** Results of the maximal aerobic capacity test ($VO_2$max)

| Stage | S1 | S2 | S3 | | S4 | | S5 | S6 | | S7 | | S8 | | S9 | | S10 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **$Vo_2$max** | / | / | 31.1 | 31.8 | 33.3 | 34.8 | 37.1 | 37.8 | 40.8 | 42.3 | 43.1 | 43.8 | 45.3 | 46.8 | 48.3 | 49.1 | 51.3 |

Figure 1 and Table 2 present the progression of maximal aerobic capacity ($VO_2$max) across the stages of the Luc Léger Test. $VO_2$max values increased progressively from 31.1 ml.kg$^{-1}$.min$^{-1}$ at Stage 3 to 51.3 ml.kg$^{-1}$.min$^{-1}$ at Stage 10, following the incremental rise in running speed. The distribution of scores indicates that most participants achieved $VO_2$max values consistent with moderate aerobic fitness levels according to standardized norms.

## Presentation and analysis of results related to the second hypothesis

### *Flexibility (Forward Flexion Test)*

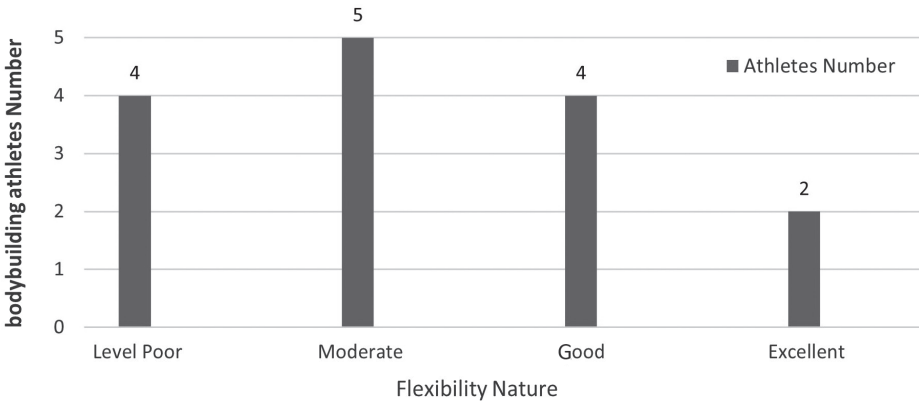


**Figure 2** Results of the forward flexion test (Test Flexion Frontal) among a sample of bodybuilding athletes.

**Table 3** Results of the forward flexion test (Flexion Frontal Test)

| Flexibility | Level poor | Moderate | Good | Excellent |
|---|---|---|---|---|
| Number of athletes | 4 | 5 | 4 | 2 |

Figure 2 and Table 3 present the distribution of trunk and hamstring flexibility levels obtained from the forward flexion test. The findings show that the highest proportion of athletes fell within the moderate flexibility category (33.3%), followed by poor flexibility (26.7%) and good flexibility (26.7%). Only 13.3% of the sample achieved an excellent level of flexibility.

Overall, flexibility scores among the athletes ranged mainly between poor and moderate levels, with a smaller proportion reaching good or excellent performance.

***Shoulder flexibility (Back Scratch Test)***

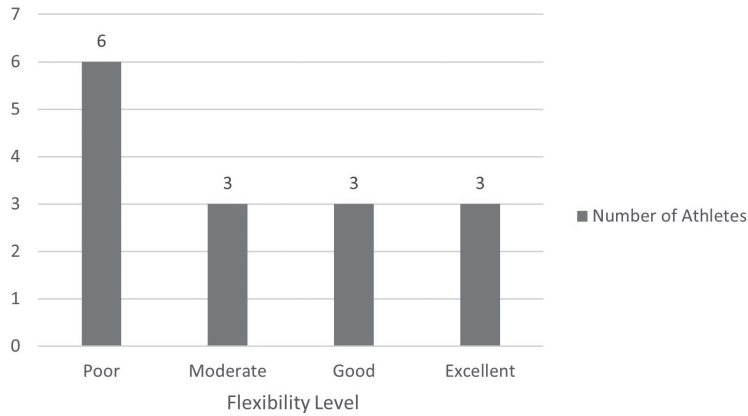


**Figure 3** Distribution of flexibility levels in the Back Scratch Test among a sample of bodybuilders.

**Table 4** Results of the Back Scratch Test among a sample of bodybuilders

| Flexibility level | Poor | Moderate | Good | Excellent |
|---|---|---|---|---|
| **Number of athletes** | 6 | 3 | 3 | 3 |

Figure 3 and Table 4 present the distribution of shoulder flexibility levels based on the Back Scratch Test. Most participants demonstrated poor flexibility (40%), while the remaining athletes were distributed equally across the moderate (20%), good (20%), and excellent (20%) categories.

Overall, the majority of the sample fell within the poor flexibility category, indicating generally limited shoulder mobility among the participants.

## Presentation and analysis of results related to the third hypothesis

There is a significant correlation between endurance and flexibility with the variables of age and training duration among bodybuilders.

**Table 5** Summarizes the correlations between $VO_2$max, flexibility, age, and training duration

| Variables compared | r | p | Relationship | Significance |
|---|---|---|---|---|
| $VO_2$max × Age | 0.114 | 0.724 | positive | not significant |
| $VO_2$max × Training duration | 0.056 | 0.842 | positive | not significant |
| Age × Flexibility | 0.484 | 0.068 | positive | not significant |
| Training duration × Flexibility | 0.353 | 0.197 | positive | not significant |
| Age × Shoulder flexibility | –0.165 | 0.556 | negative | not significant |

Table 5 presents the correlation coefficients examining the relationships between aerobic capacity ($VO_2$max), flexibility, age, and training duration. All correlations were non-significant ($p > 0.05$), indicating that none of the variables showed a statistically measurable association within this sample.

Overall, these findings suggest that age and training duration did not exert a detectable influence on either endurance or flexibility among the participants. Given the small sample size and relative homogeneity of the group, these results should be interpreted cautiously, as limited statistical power may have obscured potential relationships.

More specifically, the correlations between $VO_2$max and both age ($r = 0.114$, $p = 0.724$) and training duration ($r = 0.056$, $p = 0.842$) were weak and positive, showing no meaningful trend. Similarly, flexibility measures demonstrated non-significant associations with age ($r = 0.484$, $p = 0.068$) and training duration ($r = 0.353$, $p = 0.197$), although the moderate positive correlation with age approached significance and may indicate a potential trend worth exploring in larger samples.

Shoulder flexibility showed a weak, negative non-significant relationship with age ($r = -0.165$, $p = 0.556$), suggesting a slight decline in shoulder mobility with increasing age, though the data do not support a definitive conclusion.

### Conclusion

The third hypothesis was not supported. No statistically significant correlations were observed between endurance or flexibility and the variables of age or training duration. Future studies with larger and more diverse samples are recommended to clarify whether meaningful associations may emerge under improved statistical conditions.

## DISCUSSION OF RESULTS IN LIGHT OF THE HYPOTHESES

Although the present study did not reveal statistically significant correlations between aerobic capacity, flexibility, age, and training experience, it provides an important contribution to the limited body of research examining these parameters specifically among bodybuilding athletes. Most existing studies focus on strength, hypertrophy, or body composition, while flexibility and endurance remain understudied within this population. By generating descriptive data on multiple physical fitness components and highlighting variability among athletes with similar training backgrounds, this study establishes a baseline for understanding performance characteristics in bodybuilding. The findings also emphasize the need to integrate aerobic and flexibility training into bodybuilding programs, offering practical implications for coaches and practitioners. Furthermore, the absence of significant associations underscores the methodological challenges of small sample research and points to the necessity of larger-scale investigations, thereby helping shape future research directions in this field.

### Discussion of the results in light of the first hypothesis

The first hypothesis proposed that bodybuilding athletes would exhibit moderate aerobic capacity. The results of the Luc Léger test support this assumption, as participants demonstrated $VO_2$max values consistent with the moderate range, reflecting the hypertrophy-oriented nature of bodybuilding training.

Although studies focusing specifically on bodybuilders are limited, previous work confirms the validity of the Luc Léger test and its strong association with directly measured $VO_2$max in strength-trained individuals (Léger et al., 1988; Campos et al., 2018). Research also shows that aerobic capacity typically declines with age (Hawkins et al., 2001; Fleg & Cooper, 1988) but can be maintained or improved with consistent training and favorable environmental and genetic factors (Bouchard et al., 1999; Léger & Lambert, 1982).

Taken together, these findings confirm the first hypothesis: bodybuilding athletes generally display moderate aerobic capacity compared with endurance athletes. Nevertheless, integrating structured aerobic training may enhance cardiovascular efficiency and improve recovery capacity within bodybuilding programs.

### Discussion of the results in light of the second hypothesis

The second hypothesis proposed that bodybuilders would demonstrate limited flexibility. The results of the forward flexion and back-scratch tests support this assumption, as most participants showed poor to moderate flexibility.

Previous research indicates that forward trunk flexion depends on adequate extensibility of the hamstring, lumbar, and hip musculature, as well as neuromuscular regulation and spinal mobility (Anderson et al., 2005; Magnusson & Renström, 2006; Gajdosik & Tippett, 2000; Behm et al., 2016). Strength-training-induced hypertrophy may shorten muscle-tendon units and reduce joint range of motion, especially when stretching is insufficient (Alter, 2004; Worrell & Perrin, 1992). This trend is consistent with findings that bodybuilders often display reduced mobility compared with athletes in sports emphasizing coordination and joint flexibility.

Age-related declines in flexibility are well-documented (Granacher et al., 2018; Santos & Gomes, 2018; Vieira & Gomes, 2020), and similar tendencies were visible in the present sample. Conversely, prior studies indicate that training experience may exert a modest positive influence on flexibility by promoting soft-tissue adaptation (Costa et al., 2018; Santos et al., 2020; Lee & Kim, 2019; Park & Lee, 2020). These findings highlight the importance of integrating regular stretching and mobility exercises into bodybuilding programs to offset hypertrophy-related stiffness and reduce injury risk.

### Discussion of the results in light of the third hypothesis

The third hypothesis predicted significant relationships between aerobic capacity, flexibility, age, and training duration. However, none of the correlations in the present study reached statistical significance ($p > 0.05$). This suggests that, within this small and relatively homogeneous sample, age and training duration did not exert measurable influence on $VO_2$max or flexibility.

The weak positive relationship between $VO_2$max and age contrasts with long-standing evidence showing age-related declines in aerobic capacity (Fleg & Cooper, 1988; Kemmler & Engelke, 2003; West & Abt, 2017). Meanwhile, the negligible correlation between $VO_2$max and training duration is inconsistent with studies showing that long-term training can improve cardiovascular efficiency (Léger & Lambert, 1982; Santos & Gomes, 2017; Gomes & Santos, 2018).

Similarly, although flexibility typically decreases with age (Granacher et al., 2018; Santos & Gomes, 2018; Vieira & Gomes, 2020), the moderate near-significant correlation observed in this study ($r = 0.484$) suggests that consistent training may preserve mobility in older athletes. The weak-to-moderate correlation between training duration and flexibility aligns with previous reports indicating positive, though modest, adaptability in connective tissues (Costa et al., 2018; Santos et al., 2020).

Overall, the non-significant results should be interpreted in light of the limited sample size, which may have reduced statistical power and masked meaningful associations. Larger, more diverse samples are needed to clarify the true nature of these relationships in bodybuilding populations.

## LIMITATIONS OF THE STUDY

This study presents several limitations that should be considered when interpreting the findings. The most notable limitation is the small sample size ($n = 15$), which substantially reduces statistical power and may have masked meaningful associations between aerobic capacity, flexibility, age, and training experience. The sample was also relatively homogeneous in terms of training background and demographic characteristics, limiting the generalizability of the results to the broader bodybuilding population. Additionally, the study relied on field-based assessments such as the Luc Léger test, forward flexion test, and back-scratch test, which, although valid and widely used, may lack the precision of laboratory-based measurements. The cross-sectional design further restricts the ability to infer causal relationships between training variables and physical fitness outcomes. Future studies would benefit from larger, more diverse samples, longitudinal designs, and the inclusion of laboratory measures to provide a more comprehensive understanding of physiological adaptations in bodybuilding athletes.

## CONCLUSION AND RECOMMENDATIONS

This study aimed to examine the relationship between flexibility, endurance, age, and training experience among bodybuilding athletes. Based on the findings obtained from the Luc Léger Test, Forward Flexion Test, and Back Scratch Test, it was concluded that bodybuilding athletes generally demonstrate moderate levels of aerobic capacity and limited flexibility, particularly in the trunk and shoulder regions.

The results revealed that flexibility tends to decline with advancing age but shows a slight improvement with longer training experience, suggesting that consistent engagement in physical activity may partially counteract age-related declines in joint mobility. Conversely, maximal aerobic capacity ($VO_2$max) was not significantly correlated with either age or training duration, although trends indicated potential improvement with continued training. The absence of statistically significant correlations

is, however, an important finding in itself, indicating that conventional bodybuilding training may not sufficiently stimulate improvements in flexibility or aerobic capacity. These results should be interpreted cautiously due to the limited sample size, which may have reduced statistical power and obscured potential associations.

These findings emphasize the importance of incorporating both flexibility and endurance training into bodybuilding programs. While bodybuilding primarily targets muscular hypertrophy and strength development, neglecting flexibility and aerobic conditioning may lead to muscular imbalances, reduced mobility, and increased injury risk.

### Recommendations

1. Coaches and athletes should adopt integrated training approaches that combine resistance training with structured flexibility and aerobic exercises.
2. Flexibility work – such as static and dynamic stretching' – should be included in both warm-up and cool-down phases.
3. Moderate aerobic activities (e.g., interval running, cycling) should be regularly implemented to enhance cardiovascular efficiency and recovery capacity.
4. Future research should include larger and more diverse samples and explore longitudinal designs to better understand the interplay between age, training experience, and physiological adaptation in bodybuilding athletes.

Overall, maintaining a balance between strength, endurance, and flexibility appears essential for optimizing performance, preventing injuries, and sustaining long-term physical health among bodybuilding practitioners.

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# Development of Adapted Physical Activity at the Faculty of Physical Education and Sport, Charles University (1992–2025)

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**ABSTRACT**
The aim of this paper is to trace the historical development of the field of Adapted Physical Activity (APA) at the Faculty of Physical Education and Sport, Charles University, between 1992 and 2025. The study situates the emergence of the field within its historical and legislative context and traces changes in accreditation, curricula, and student numbers. The paper also incorporates supplementary stakeholder perspectives and situates the programme within the international development of APA. The findings demonstrate a gradual professionalisation and systematisation of the field in response to societal and legislative changes.

**KEYWORDS**
adapted physical activity; higher education; disability; curriculum; inclusion

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## INTRODUCTION

Adapted Physical Activity (APA) is an established interdisciplinary field within kinanthropology focused on promoting meaningful participation in physical activity for persons with disabilities and other specific needs across educational, sport, recreational, and health contexts. It integrates knowledge from physical education, kinesiology, special education, psychology, social and health sciences, with the aim of supporting lifelong engagement in physical activity and enhancing quality of life (Winnick, 1986; Kudláček, 2011, 2013; Faculty of Physical Culture, Palacký University Olomouc, 2024).

APA is grounded in the assumption that physical activity is a universal means of promoting health, social inclusion, and quality of life. As a multidisciplinary field, it encompasses the planning, implementation, and evaluation of movement-based programmes. Contemporary APA is typically structured into four domains: health-enhancing physical activity (HEPA), adapted physical education (APE), recreational activities, and performance-oriented sport, including para sport (Vařeková et al., 2022), all sharing an emphasis on participation, accessibility, and individualised support.

### International context of APA

The broader roots of APA can be traced to ancient traditions of physical culture, including Chinese, Indian, and Greco-Roman systems, and later to European physical education traditions and educational thought (Kudláček, 2006; Strnad et al., 2019; Vařeková et al., 2021). However, these traditions represent historical antecedents rather than APA in its contemporary meaning. As a distinct academic and professional field, APA began to emerge more clearly during the twentieth century, particularly in connection with the development of rehabilitation practices, disability sport, and organised physical activity opportunities for persons with disabilities. Key milestones in this process include the Deaflympics (1924), the Stoke Mandeville Games (1948), the Paralympic Games (1960), and the Special Olympics (1968), which contributed to the gradual institutionalisation and professionalisation of the field (Kudláček, 2006).

In the contemporary international context, APA is recognised as a distinct academic and professional field with defined competencies, professional roles, and educational standards, developed through organisations such as the International Federation of Adapted Physical Activity (IFAPA) and the European Federation of Adapted Physical Activity (EUFAPA), and reflected in the European Standards in Adapted Physical Activity (Kudláček et al., 2010; EUFAPA History, 2024). It has been embedded in higher education in many European countries through specialised study programmes and international joint degrees, including the European Master's Degree in Adapted Physical Activity (EMDAPA) and the Erasmus Mundus Master in Adapted Physical Activity (EMMAPA), with programmes established, for example, in Belgium, Norway, Finland, and France.

Alongside its links to disability sport and rehabilitation, APA has gradually expanded towards broader areas of inclusion, leisure, health promotion, and quality of life. This development has increasingly involved NGOs, community providers, and educational institutions, reflecting changing understandings of disability, participation, and social inclusion, and positioning APA as both an academic discipline and a socially embedded field of practice.

### APA at Czech universities

Higher education training in Adapted Physical Activity (APA) in the Czech Republic developed after 1989 alongside broader social transformation, international cooperation, and legislative change. A pioneering role was played by the Faculty of Physical Culture, Palacký University Olomouc (FTK UP), where the study programme Adapted Physical Education was established in 1991 with key contributions from Hana Válková. The development of the field was subsequently supported by the establishment of the Sport Club APA Olomouc in 1993, co-founded by Ilona Pavlová,

Martin Kudláček, Monika Pavlíková, and Monika Řeháková, by the founding of the Czech Association of Adapted Physical Activity (2009), chaired since its establishment by Ondřej Ješina (Czech Association of Adapted Physical Activity, 2009), and by the launch of the national journal *APA v teorii a praxi* (APA in theory and practice) in 2010. The development of APA at this institution was further shaped by Hana Válková, Martin Kudláček, Ondřej Ješina, Zbyněk Janečka, Julie Wittmannová, Tomáš Vyhlídal, Ladislav Baloun and others, making Olomouc a key centre of the national APA movement.

At the Faculty of Physical Education and Sport, Charles University (FTVS UK) the first study programme in the field of what would later be conceptualised as APA was launched in 1992 under the title Physical and Work Education for Persons with Disabilities. From the outset, it drew on medical expertise from the Department of Health Physical Education and Sports Medicine. Marie Kyralová and Josef Kvapilík, both medical doctors and parents of children with intellectual disabilities, identified the lack of integrated rehabilitation in APA and occupational therapy (which had not yet been established as a separate discipline) and contributed to the preparation of the first curriculum and graduate profile.

The programme was initially not institutionally anchored in a single department but developed through an expert committee led by Staša Bartůňková (Department of Physiology). Members included Marie Kyralová, Josef Kvapilík (teaching medical aspects of physical activity, disability theory, first aid, recovery techniques, and sports massage), and Pavel Strnad (health-oriented physical education). Jaroslav Potměšil (Department of Outdoor Sports), a skiing specialist with personal experience of APA through his son's spinal cord injury, supported the development across sport departments both professionally and personally.

Further contributors included Jan Hruša (Outdoor Sports), Jarmila Segeťová (Athletics), Dagmar Šťastná (Gymnastics), Taťána Bělková (Swimming), Jan Křiček (Sport Games), and others. They also contributed to securing grant funding essential for the early development of the field. The committee addressed both operational and conceptual aspects of programme formation.

Despite the growing relevance of APA in practice, policy, and academia, a systematic historical and theoretical analysis of APA higher education in the Czech context remains limited. This study therefore aims to provide a chronological analysis of the development of the APA study programme at FTVS UK between 1992 and 2025 and to situate it within broader academic, legislative, and international contexts.

## METHODS

### Study design

This paper presents a historical-institutional analysis based on documentary sources and archival material to document the development of the Adapted Physical Activity (APA) study programme at FTVS UK between 1992 and 2025. The analysis combined historical inquiry with thematic document analysis to identify key developmental phases and changes in programme structure, curriculum content, graduate profiles, and student enrolment in relation to broader legislative and societal developments.

### Data sources and analysis

Data collection took place between June 2023 and March 2026. Primary sources included accreditation documents, official study plans, internal faculty records, and annual reports of FTVS UK. Legislative documents and official institutional websites were used to contextualise programme development within broader policy and regulatory frameworks. Documents were selected purposively based on their relevance to programme development and analysed chronologically and thematically across predefined categories: (1) programme structure and accreditation, (2) curriculum content, (3) graduate profiles and professional orientation, and (4) student enrolment trends. Supplementary written recollections and consultations with current and former academic staff and graduates were used to clarify early developmental phases insufficiently documented in archival materials.

## RESULTS

The development of Adapted Physical Activity (APA) at the Faculty of Physical Education and Sport, Charles University, reflects a dynamic process of curricular innovation, institutional restructuring, and changing societal demands. The programme evolved through several key phases characterised by structural and conceptual changes. Table 1 summarises the development of APA study programmes over time, including shifts in accreditation, study formats, and naming conventions within a broader legislative and institutional context. The following text outlines the main developmental phases.

**Table 1** Development of APA Study Programmes at FTVS UK (1992–2025)

| Period | Programme name | Degree structure | Mode | Key characteristics |
|---|---|---|---|---|
| 1992–2002 | Teacher Education – Physical and Work Education for Persons with Disabilities | Bachelor only | PT | Programme established; first cohorts incl. students with disabilities |
| 1994–2003 | Teacher Education – Dance and Artistic Education for Persons with Disabilities | Bachelor only | PT | Dance and Artistic specialisation introduced |
| 1997–2009 | Teacher Education – Physical and Work Education for Persons with Disabilities | Long-cycle Master | PT | Expansion and professionalisation phase |
| 1998–2012 | Physical Education and Sport – Physical and Work Education for Persons with Disabilities | Bachelor + Master | PT | Pre-Bologna and Bologna phase |
| 2006–2015 | Physical Education and Sport in combination with Special Pedagogy | Bachelor + Master | FT | Joint programme (FTVS and Faculty of Education) |
| 2009–2019 | Physical Education and Sport for Persons with Special Needs | Bachelor + Master | FT + PT | Renaming, inclusion paradigm introduced |
| 2014–2025 | Adapted Physical Education and Sport for Persons with Specific Needs | Bachelor + Master | FT + PT | Stabilised modern programme |

*Note*: PT = part time; FT = full time

### Establishment and early phase (1992–1997)

In 1992, the Faculty of Physical Education and Sport at Charles University introduced its first study programme focused on persons with disabilities: Physical and Work Education for Persons with Disabilities (PWEPD). The programme was initially designed as a five-semester part-time bachelor's programme and was later extended to six semesters (three years). From the second year onwards, students could choose a specialisation focused on a specific type of disability: physical, hearing, visual, or intellectual. The first cohort enrolled 80 students, approximately one quarter of whom had disabilities themselves. Applicants included educational and healthcare professionals, as well as workers from the social sector, including those in managerial positions, reflecting broad professional interest in developing competencies in this emerging field.

This early phase was characterised not only by the establishment of the programme but also by a strong emphasis on accessibility and inclusion. The programme represented one of the earliest university-level opportunities for individuals with disabilities to pursue specialised education in this field in the Czech Republic, reflecting broader post-1989 developments towards equal access and inclusion. The first graduates completed their studies in 1995.

In 1994, a specialisation in Dance and Artistic Education for Persons with Disabilities (DAEPD) was introduced, with significant contributions from Jaroslav Mihule, Jana Jebavá, Dagmar Šťastná, and Jan Thorovský, accompanied by international cooperation with the University of Cologne. This specialisation was offered once every two years. The PWEPD and DAEPD programmes continued until 2002 and 2003, respectively.

At the same time, institutional support structures began to emerge, including initiatives aimed at supporting university students with disabilities. In 1996, a Working Group for the Support of Students with Disabilities was established on the initiative of Jaroslav Potměšil from FTVS UK and involved representatives from multiple faculties. The resulting Consultation Centre assisted prospective and current students with disabilities in selecting appropriate study pathways and, where relevant, suitable sport and physical activity opportunities (Bartůňková, 2007).

### Expansion, professionalisation and internationalisation (1995–2010)

The period between the mid-1990s and mid-2000s was characterised by substantial expansion and professionalisation of the programme. A key milestone was the introduction of a follow-up master's programme and, from 1997, a long-cycle five-year master's programme, both aimed at preparing professionals for pedagogical, sport-related, therapeutic, and social care contexts and significantly strengthening the professional profile of graduates in both specialisations (Bartůňková, 2007; Study plans of the Faculty of Physical Education and Sport, 1992–1997). Moreover, between 1997 and 2001, FTVS UK expanded international cooperation, particularly with institutions in Norway, Belgium, and Germany. Students participated in professional placements and exchange programmes in APA-oriented institutions; for example, Dominiek Savio Institute and Catholic University Leuven in Belgium or disability camp in Arendal, Norway (Bartůňková, 2007).

In 2001, accreditation was extended and programme restructuring aligned with the Bologna declaration, including adoption of a two-cycle degree structure and introduction of the credit system (Velebil & Jansa, 2000). The transition from long-cycle master's programmes to a two-cycle structure (bachelor's and follow-up master's degrees) required substantial restructuring of curricula, study organisation, and accreditation frameworks. At the same time, the programme continued to expand in terms of content and professional orientation, incorporating a broader range of disciplines and strengthening its interdisciplinary character. In 2005, an application was submitted to extend the accreditation of the follow-up master's programme under the new designation Physical Education and Sport of Persons with Disabilities.

Concurrently, efforts were made to establish a separate bachelor's programme in Art Therapy; however, this programme was ultimately not implemented (Bartůňková, 2007).

During this period (2007–2010), it was also possible to study a specialisation Physical Education and Sport as a part of the study programme Physical Education and Sport. However, this specialisation did not attract many students and was subsequently cancelled.

Another important initiative aimed at integrating physical education teacher education with Adapted Physical Activity (APA) was the possibility to study a combined programme of Physical Education and Sport at the Faculty of Physical Education and Sport (FTVS) together with Special Education at the Faculty of Education, Charles University. This pathway included a three-year bachelor's programme offered between 2006 and 2013, with a total of 55 enrolled students, of whom 30 graduated, and a two-year follow-up master's programme available between 2009 and 2015, with 21 enrolled students and 17 graduates.

### Programme renaming and conceptual shift (2011–2018)

From 2011 onwards, the programme underwent significant conceptual and terminological changes, reflected in its renaming from Physical Education and Sport for Persons with Special Needs to Adapted Physical Education and Sport for Persons with Specific Needs (since 2014). These changes corresponded with updated graduate profiles, revised curricula, and more inclusive admission policies (Faculty of Physical Education and Sport, Charles University, 2012b). Curricular development emphasised adapted movement programmes, diagnostics, inclusive pedagogy, and interdisciplinary cooperation, with new subject areas including compensatory exercise, music therapy, ethics in helping professions, and sport for individuals with disabilities.

Although the number of graduates temporarily decreased, the period represents an important qualitative shift, aligning the programme more closely with contemporary international frameworks in APA. Moreover, the introduction of both full-time and part-time study modes within an independent APA programme – contrasting with the predominantly part-time formats of earlier programmes – contributed to a substantial enhancement of students' competencies, broadened their professional opportunities, and strengthened the visibility and recognition of APA as a distinct field.

### Current phase (2018 – Present)

The most recent phase, beginning in 2018, can be characterised as a period of stabilisation and consolidation. In 2018, a new accreditation was approved, valid until 2028, covering bachelor's and follow-up master's programmes in both full-time and part-time formats. The programme emphasises APA, diagnostics, inclusive pedagogy, and interdisciplinary cooperation. Graduate profiles highlight competencies in designing and leading physical activity programmes for persons with specific needs across educational, community, and sport contexts (Hojka et al., 2020, 2021; FTVS UK, 2018).

Between 2018 and 2025, a range of day camps, sporting events, and educational seminars focused on inclusion and adapted physical activity were also organised. These activities were initially supported by the project *Movement for Inclusion*; subsequently, their organisation was assumed by the Department of Health Physical Education and Sports Medicine and the APA section within the University Sports Club (USC).

FTVS UK continues to collaborate with key partner organisations, including Czech Paralympic Committee (Český paralympijský výbor), Centrum Paraple, Sport Club of Jedlička Institute (Sportovní club Jedličkova ústavu), the APA section of USC Prague, and the Prague Wheelchair Sports Club (Sportovní klub vozíčkářů Praha), Czech Adaptive Sports, Paraswimming (Paraplavání ČR) among others.

Student enrolment has stabilised at approximately 60–80 students across cohorts (20–30 in bachelor's degree full time and 20–25 in master's degree both full time and part time), reflecting a mature and sustainable programme structure.

### Application and societal impact of APA at FTVS UK

The programme has contributed not only to professional preparation but also to the development of elite sport careers of persons with disabilities, including Czech Paralympic athletes in cycling (Tereza Dieplodová), swimming (Kateřina Komárková, Dominika Míčková, Vít Šašek), and table tennis (David Půlpán).

In line with the university's third mission – alongside teaching and research, focused on societal engagement, knowledge transfer, and community outreach – APA at FTVS UK has developed as a practice-oriented field embedded in education, public sector cooperation, lifelong learning, and regional development. It functions both as an academic discipline and as a tool supporting inclusive practice in education and community settings.

A key example is the Centre for Sports Activities of Students with Disabilities, established in 2004 by the Rector's Board of Charles University. It provided inclusive sport opportunities for students with disabilities, particularly beginners, supported by trained instructors and student guides. Activities coordinated by Jan Hruša and Karel Kovařovic included methodological development, counselling on adaptive equipment, and regular sport programmes based at the Regata Boathouse in Prague-Podolí and the Tyrš House pool. The Centre organised winter and summer courses (skiing, canoeing, sailing, windsurfing), as well as swimming and cycling activities, integrating APA into university life (Faculty of Physical Education and Sport, 2012a; 2016; 2017).

Further implementation of the third mission is illustrated by the EU-funded project Movement for Inclusion (2018–2020), which strengthened inclusive physical educa-

tion in Prague primary schools. APA consultants supported teachers in inclusive PE, pupil participation in sport courses, methodological guidance, and school-based training activities, while also organising inclusive day sport camps for children with special educational needs and their peers, continuing beyond the project period (Faculty of Physical Education and Sport, 2019; 2020; 2021). The project built on similar initiatives at the Faculty of Physical Culture, Palacký University Olomouc (FTK UP), thereby fostering contemporary cooperation between APA-related fields at both universities.

The third mission is further realised through lifelong learning activities of the Department of Health Physical Education and Sports Medicine, including specialised courses on sport assistance for persons with special needs in summer and winter sport events, as well as conferences, workshops, and continuing education programmes supporting professional development and knowledge exchange.

## DISCUSSION

The findings provide insight into the long-term institutional development of APA at FTVS UK and its interpretation within broader international and conceptual frameworks.

### Institutional development and structural dynamics

The results show that APA at FTVS UK developed through overlapping phases of expansion and restructuring rather than a linear trajectory, reflecting responses to changing educational policies and societal demands. The initial phase in the early 1990s was shaped by post-socialist transformation, which enabled the emergence of new forms of higher education in disability-related fields. At the same time, the programme addressed a significant lack of specialised training in APA and represented one of the first opportunities in the Czech Republic for university-level study in this area.

The subsequent expansion phase (mid-1990s to late 2000s) was characterised by increasing enrolment, the development of structured study pathways including long-cycle master's programmes, and the gradual institutionalisation of the field. This period was also marked by growing international cooperation, which supported alignment with emerging European developments in APA. The Bologna reform represented a major structural transition, leading to a temporary decline in enrolment and graduate numbers. This change is best interpreted as an effect of institutional restructuring rather than reduced interest in the field, a pattern consistent with broader transformations in European higher education systems.

### Conceptual development of APA

The evolution of APA at FTVS UK also reflects a broader conceptual shift from a predominantly rehabilitation-oriented perspective towards approaches emphasising participation and inclusion. This development corresponds with the transition from a biomedical model of disability to the biopsychosocial framework of the International Classification of Functioning, Disability and Health (ICF) (Kostanjsek, 2011).

These changes are reflected in curricular innovations, particularly the increased emphasis on inclusive pedagogy, diagnostics, and interdisciplinary approaches. Overall,

APA has progressively developed as an interdisciplinary field linking education, sport, and health sciences, which prepares graduates for diverse professional contexts within both institutional and community-based settings.

### Methodological considerations and limitations

This study has several limitations. It relies on aggregated institutional data that may contain minor inaccuracies due to overlapping enrolments, changes in programme accreditation, and incomplete archival records, particularly in earlier periods. In addition, the categorisation of development phases is interpretative rather than strictly chronological, as phases overlap and cannot be clearly delineated. Despite these limitations, the study provides an overview of long-term trends and structural developments in APA-related higher education.

### Implications for future development

The findings suggest that future development of APA at FTVS UK should prioritise strengthening its research profile, international integration, and clearer definition of professional roles. At the same time, inclusion, participation, and quality of life remain central principles. Adapted physical activity is increasingly understood not only as therapy but as a means of social participation and personal development, with documented benefits for physical health, psychological well-being, and social integration (Diaz et al., 2019), supporting autonomy and independent living (Winnick, 1986; Kudláček, 2011, 2013). As such, APA functions at the intersection of education, healthcare, and social services, requiring interdisciplinary competencies and specialised professional preparation (Ghezzi et al., 2025).

Overall, the development of APA at FTVS UK reflects broader international trends, while further strengthening of its scientific and professional profile remains a key future direction.

## CONCLUSION

This study provides a historical overview of Adapted Physical Activity at FTVS UK within its broader academic and societal context. The findings demonstrate a transformation from narrowly defined health-oriented physical education towards an inclusive, interdisciplinary APA framework reflected international standards. The field continues to respond to evolving societal needs and remains an important component of Czech kinanthropology and inclusive practice. The case of FTVS UK illustrates broader post-socialist transformations in disability inclusion, professionalisation of APA, and the institutional diversification of kinanthropology in Central Europe.

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