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EDUCATION AND CAREER TRANSITION OF ATHLETES: A COMPARATIVE ANALYSIS OF FORMER AND CURRENT ATHLETES IN SLOVAKIA*

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Abstract. The article deals with the issue of athlete's career paths and the challenges associated with their transition to civilian professional life after the end of their sporting career. This is a period that is often accompanied by a loss of identity, a change in social status and the need to redefine both professional and personal goals. The aim of the research is to analyse this process, focusing on the importance of education, the development of digital skills and the use of modern technologies. The research is based on a combination of literature analysis and qualitative interviews with current and former athletes. The findings suggest that education is a key factor in a smooth adaptation to the labour market and at the same time boosts athletes' self-confidence in shaping their future career paths. Digitalisation and information and communication technologies are playing a significant role in modernising and personalising the education process, with online courses, flexible curricula and the use of artificial intelligence becoming an integral part of preparing for career transition. The analysis also confirmed the value of transferable skills such as discipline, perseverance, teamwork and stress resilience, which are universally applicable outside of sport. The article highlights the need for a comprehensive approach that links sport, education and career planning using innovative digital tools. The results not only have academic merit, but also provide practical recommendations for sport organisations, educational institutions and policy makers in building effective dual career support systems for athletes.

Keywords: dual career; education; sports management; athletes; digital skills

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1. Introduction

The transition from a sporting career to civilian professional life is one of the key periods that can significantly influence the quality of athletes' later life. It is a process that is often accompanied by a loss of identity, a change in social status and the need to redefine one's professional and personal goals. During their active careers, athletes are used to functioning in a structured environment with clearly defined goals and the support of coaches and a team, which provides stability and security. However, once a career is over, these supports disappear and athletes must cope with new challenges that require the ability to adapt, self-awareness and effective use of the

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experience already gained. This process may vary depending on individual predispositions, social support or available development opportunities.

One of the main factors that can facilitate the transition from sport to civilian life is education. During an active career, it provides athletes with the opportunity to broaden their knowledge, acquire professional qualifications and prepare for careers outside sport. At the same time, education boosts self-confidence and opens space to develop critical thinking, reasoning skills or an understanding of important societal issues such as ethical standards, fair pay or safety norms. In recent years, therefore, the importance of dual careers, which allow the simultaneous development of both sporting and academic or professional competences, has been increasingly emphasised. However, the question remains to what extent athletes take advantage of these opportunities, how they evaluate their benefits and what differences can be observed between those who are still active in sport and those who have retired from professional activity.

In addition to education, the skills and qualities that athletes acquire during their active careers form an essential basis for a successful transition to civilian life. These include discipline, resilience under stress, teamwork, leadership and effective pressure management. These competences are universal and have high value outside sport, which confirms the interest of employers in former athletes. Nevertheless, athletes may differ in which skills they consider key and how they are able to use them in new professional contexts. Comparing the perceptions of these competencies between current and former athletes provides valuable insights into how sporting experience translates into the civilian environment.

Part of the issue is also the readiness of the athletes themselves for the end of their careers. While some perceive the future with certainty and systematically prepare for its arrival, others approach the topic only at the point when career termination is inevitable, which can lead to difficulties in adaptation. Differences in preparation strategies are therefore an important area of investigation as they may signal not only different levels of self-awareness but also different levels of support from clubs, sports federations or institutional programmes.

Thus, a comprehensive analysis of athletes' preparedness, the importance of education throughout their careers, and the applicability of skills acquired through sport provides not only academic contributions but also practical recommendations for sport organisations, universities and public policy makers. The results of such research can contribute to the design of effective support mechanisms that enable athletes not only to successfully complete their active careers but also to fully realise their potential in other professional and life domains.

2. Theoretical background

The term 'sporting career' is used to explore the life trajectory of an athlete and to analyse different dimensions of their life such as sport, leisure or education (Graham et al., 2006; Roberts et al., 2009; Hughes et al., 2021).

Competitive sport is an important factor shaping the career path of athletes. Intense training, discipline and the long-term challenge of pushing one's own limits contribute to the development of skills that have spill-over beyond the sporting environment. Individual understanding of athletes and support in the transition from a professional career to new roles in life and work are therefore essential. The key is to guide them so that they can effectively capitalise on the knowledge and experience gained during active participation and transfer this to other career areas (Andres, 2023; McKnight et al., 2009).

Top athletes possess specific characteristics that represent a competitive advantage in the labour market. Among the most prominent are mental resilience, self-confidence and the ability to focus even in challenging situations (Stambulova et al., 2021). Systematically delivering high performance, perseverance and confidence in one's own abilities are universally valued qualities (Richardson & McKenna, 2020). Athletes also bring a winning mentality to the work environment that makes them attractive candidates for employers (Tarricone & Luca, 2022).

Equally important is the ability to collaborate and lead a team, which creates synergy and competitive advantage in the business sphere (Holubcik & Soviar, 2021; Holubcik et al., 2023; Celse et al., 2017). The study by

Kniffin et al. (2015) confirms that sporting activity during studies positively influences future career growth, success rates and earning potential. Athletes are perceived as individuals with strong leadership skills, higher self-confidence and self-esteem, which facilitates their employment outside the sporting environment.

In terms of the career paths of former athletes, it is interesting to observe the diversity of their career paths. Research by Buchholz (2019) shows that they most often choose entrepreneurship or work in small companies, while immediately after their careers are dominated by coaching or sports-media professions. However, over the longer term, the proportion of those working in non-profit organizations or corporations increases. This points to the ability of athletes to adapt to different sectors and to use their experience in a broader professional context.

Education is an essential prerequisite for a successful career transition. It provides not only professional knowledge and qualifications, but also soft skills - reasoning, conflict resolution or networking (Dwyer & Gellock, 2018; Stambulova et al., 2021; Stambulova & Harwood, 2022). Moreover, the business environment shows that investment in education yields increased performance (Kucharčíková et al., 2023), which also applies to athletes. Therefore, dual careers that combine sport and education have been shown to be an effective way to promote post-active employment (Brown et al., 2019; Vitali et al., 2019). This relationship can also be evaluated in terms of the social and cultural capital that athletes acquire through education (Johansen et al., 2024).

Creativity, working with finance and digital technologies are considered important skills needed for the future (Blašková et al., 2022; Klieštík et al., 2022; Koman et al., 2023). Modern approaches, such as the use of big data and artificial intelligence to support learning, can further contribute to athletes becoming adaptive professionals ready for the changing demands of the labour market (Sustarsic et al., 2022). Thus, appropriate preparation for transition from sport involves not only formal education but also long-term planning, reflection on life experiences, networking and soft skills development (Vidal-Vilaplana et al., 2022; Brassard et al., 2023).

A smooth and successful career transition for athletes depends on the ability to identify the value of their strengths and use them effectively in new roles. Self-awareness, emotional resilience and the ability to apply transferable skills form the foundation of their future career path (McKnight et al., 2009). Supporting athletes in this area is therefore important not only for their personal development but also for the wider social and economic context.

Previous studies have highlighted the importance of education, transferable skills and personality traits in athletes' transition to a new career path, but the available literature is still inconsistent and lacks direct comparisons between active and former athletes. This gap makes it difficult to understand how readiness for life after sport changes over time and what differences exist in the perception of education, resilience or usability of skills acquired through sport according to career stage. For this reason, the study aims to compare the views of current and former athletes in Slovakia on their readiness for career transition, the role of education in this process and the transferability of sports experiences to professional life.

Based on the above findings, it is pertinent to explore how perceptions of post-career readiness differ between current and former athletes, to what extent education during the active years influences a smooth transition into civilian working life, and to what extent skills and qualities acquired through sport are universally applicable in professional life. These questions follow naturally from the theoretical background and allow for a better understanding of the factors that promote successful careers for athletes after they have retired from active participation.

3. Research objective and methodology

Primary research was conducted on two samples of respondents, which were former athletes ($n = 14$) and current athletes ($n = 30$). The inclusion criterion for the research was that sport accounted for some part of their income, regardless of the type of sport or the level at which they played it. The former athletes were also assumed to have completed their active career and be in the process of a civilian career, whereas the current athletes were in an active sporting career.

The aim of the research is to compare the experiences of former and current athletes in preparing for the end of a professional sporting career, focusing on the importance of education, perceptions of the conditions for personal and professional development, and the identification of key skills acquired through sport that are applicable in civilian working life.

The specific objectives are:

- a. To analyse how current athletes plan their careers after retiring from active sport and how this process is retrospectively evaluated by former athletes.
- b. To examine the importance of education during the sporting career and its impact on the smoothness of the career transition.
- c. Identify and compare the key skills and qualities that athletes consider transferable to civilian working life.

Data collection was conducted using a structured interview technique (Petersson et al., 2022). The interviews were conducted between February and April 2025 in person and through the online platforms Messenger, Instagram and WhatsApp. Respondents answered orally, in writing or via voice recordings depending on the form of communication. The interviews focused on a number of thematic areas: basic demographics (age, gender, type of sport, career length and level, education), proportion of income from sporting activity, reflection on readiness to leave a sporting career, attitudes to learning during their career and areas of further educational interest, learning opportunities and conditions, retrospective insights into what respondents would do differently, and identification of key skills and attributes acquired through a sporting career and their applicability in later life.

Qualitative content analysis was used to process and analyse the data (Graneheim et al., 2017). The interviews were re-read and key meaning units were identified from the interviews, which were then coded and thematically grouped with the support of artificial intelligence. The results were then interpreted and integrated directly into the analytic text, explicitly stating that this was information from the interviews.

Hypotheses and research questions

Based on the available data from interviews with current and former athletes, three hypotheses were formulated, each with two research questions.

H1: *Current athletes declare a higher level of readiness to retire than former athletes.*

This hypothesis was derived from the assumption that current athletes nowadays have more accessible information, wider educational opportunities as well as a greater societal emphasis on pursuing a career after sport. For former athletes who retired from their careers several years ago, systematic preparation for transition was often lacking. Thus, the hypothesis tests whether there is a difference between groups in how they perceive their readiness for career ending and transition to civilian life.

RQ 1.1: *How do current athletes perceive their future career path after retirement compared to former athletes?*

RQ 1.2: *What differences exist in transition preparation strategies between current and former athletes?*

The answer to this hypothesis and questions is to show whether the athletes' approach to future planning has changed and whether the current generation is better prepared in this respect.

H2: *Education during a career is a key factor that influences the smooth transition of athletes into civilian working life.*

Education has traditionally been seen as a tool for social mobility and, in the case of athletes, it represents a safety net after the end of a career (Robnik et al., 2022). We know from the experiences of former athletes that the absence of education makes it difficult to find a job, while its presence eases the transition (Varmus et al., 2025;). In turn, current athletes often have more flexible opportunities to study during their careers (De Maio,

2025; Stambulova & Harwood, 2022; Stambulova et. al. Al., 2021; Dwyer & Gellock, 2018). This hypothesis therefore examines whether there is a clear relationship between education and ease of employment after career exit.

RQ 2.1: *What areas of education during their careers do athletes find most beneficial to their career?*

RQ 2.2: *What is the difference in the assessment of the importance of education between current and former athletes?*

This part of the research aims to show whether education makes a real difference to athletes' adaptation and whether current athletes use it more consciously than their predecessors.

H3: *Athletes perceive key skills and qualities acquired through sport as universally applicable to their professional lives, regardless of whether they are current or former athletes.*

Sport naturally develops qualities such as discipline, perseverance, the ability to work in a team or manage stress (Varmus et al., 2025; Martín-Rodríguez et al., 2024; Eather, 2021; Richardson & McKenna, 2020; Celse et al., 2017). This hypothesis is based on the assumption that these 'soft skills' are valuable outside of sport, and that there will be no fundamental difference in perceptions between former and current athletes. Differences might only occur in the hierarchy of importance (e.g., former athletes might emphasize leadership, whereas current athletes are more likely to emphasize discipline).

RQ 3.1: *Which skills and qualities acquired through sport do athletes consider most important for their professional life?*

RQ 3.2: *Are there differences in the hierarchy of perceived skills between current and former athletes?*

The aim is to show that sport experience has long-term value and creates universal competences that increase employability in the labour market.

The research methodology is coherently summarised in a conceptual model, which is illustrated in the following figure.

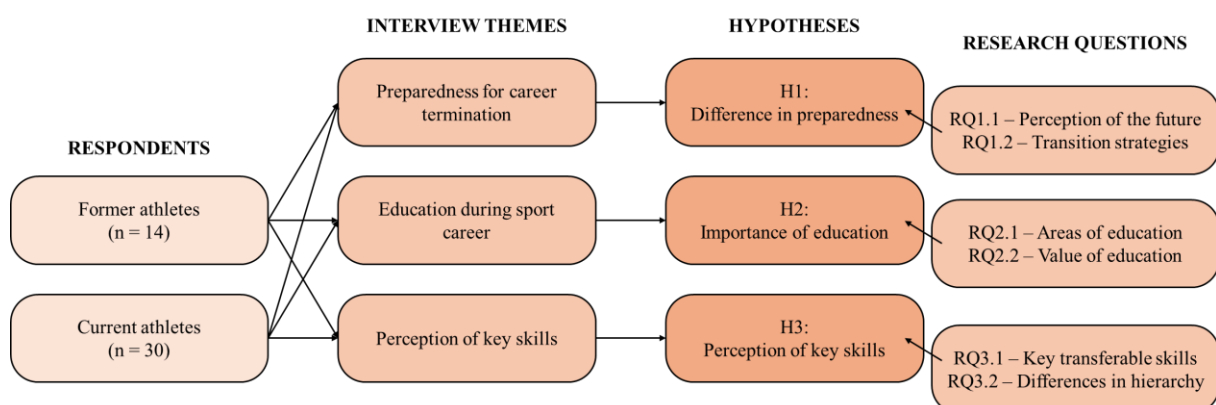


Figure 1. Conceptual Model of the Research

Source: Own elaboration

4. Results

The research sample consisted of 44 respondents who were divided into two groups: former athletes (n = 14) and current athletes (n = 30). The criterion for inclusion in both groups was that sport accounted for some part of their income, regardless of sport discipline or performance level. The age range of respondents ranged from 19 to 45 years. The former athletes were predominantly aged between 30 and 40 years, corresponding to the

phase after the end of their professional career and integration into the civilian profession. Current athletes were mostly younger (19 - 30 years old), active at national or international level. Both groups included athletes from individual and team sports, with football, hockey, athletics, swimming, fitness and combat sports being mainly represented. The average length of sporting careers for the former athlete's group was 12 years, and for the current athletes 8 years, reflecting their different position in the career cycle. The educational background of the respondents varied from high school to university, with a higher proportion of the current athletes studying at university. The profile of the sample makes for a good comparison between athletes who have already made the transition to civilian life and those who are yet to make it. In the following sections, we therefore present the results of the analysis of the interviews, focusing on readiness for retirement, the importance of education and the transferability of sport skills.

The analysis of interviews with 14 former and 30 current athletes revealed several differences but also commonalities in how both groups approach their sporting careers and life after retirement. In terms of readiness for retirement, most of current athletes reported that they were already actively thinking about their future outside of sport. Eighteen of them (60%) explicitly stated that they were preparing for a career transition, mentioning combining studies with sport, gaining work experience or planning to obtain coaching licenses. In contrast, former athletes reflected a rather uncertain situation. Only six of them (42.9%) reported that they had thought about their future during their career, while the majority described the transition as sudden or problematic. They often highlighted uncertainty, the need to supplement their education and the absence of systematic support during the transition. In terms of post-career direction, former athletes were almost evenly split between careers in sport (coaching, club management) and careers outside sport (business, armed forces, education, service). Current athletes were more likely to declare an interest in staying in sport, but a significant proportion also mentioned business, IT or marketing as alternative career paths.

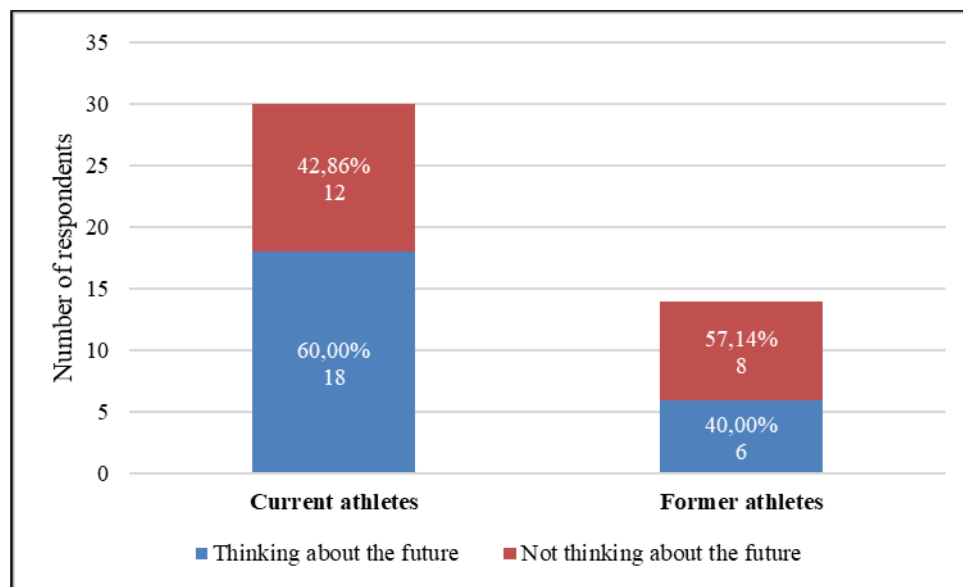


Figure 2. Preparedness for Career Transition – Current vs. Former Athletes

Source: Own elaboration

Education emerged as a key area in both groups. When asked if they had thought about education for future employment during their careers, 42.9% of former and 43.3% of current athletes answered in the affirmative. However, the narrative responses suggest that actual involvement in education was higher, as many described studying or taking courses even without an unequivocal 'yes'. The difference between the groups was more pronounced in the conditions for learning. Only six former athletes (42.9%) said they had favourable opportunities, while this was up to 46.7% among current athletes, highlighting flexible timetables, online courses or individual study plans. Areas of education were varied, but coaching licenses, psychology, physical therapy, management and marketing, IT, healthy eating, and finance came up frequently. In addition,

contemporary athletes placed more emphasis on online learning, digital skills and psychology. When asked what they would change about their preparation, the majority in both groups said nothing. Yet, there were recurring reflections that they should have started planning earlier, focused more on foreign languages, or strengthened financial literacy and entrepreneurial skills. These retrospectives were particularly common among former athletes, who openly described difficulties in entering the labour market.

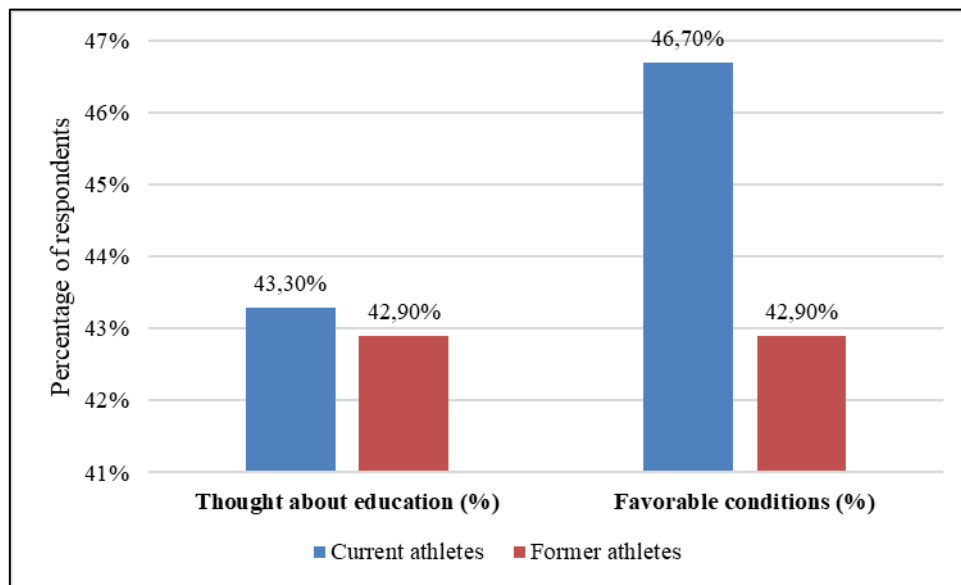


Figure 3. Education during Career – Current vs. Former Athletes

Source: Own elaboration

Transferable skills acquired through sport was another area in which both sets agreed. Respondents clearly perceived sport as a source of competences valuable outside the sporting environment. Teamwork (approximately 28 mentions), discipline (17), perseverance (15), and goal-orientedness (9) were mentioned most frequently. Punctuality and responsibility were also mentioned by several athletes. Differences between the groups were more evident in the hierarchy of importance: former athletes placed more emphasis on teamwork, discipline and self-confidence, whereas current athletes emphasized perseverance, discipline and goal-orientedness. Flexibility, mental resilience, precision, communication or independence also featured less frequently, but nonetheless. There was a consensus in both groups that these skills are fully applicable outside of sport, with differences reflecting career stage rather than differing perceptions of their value.

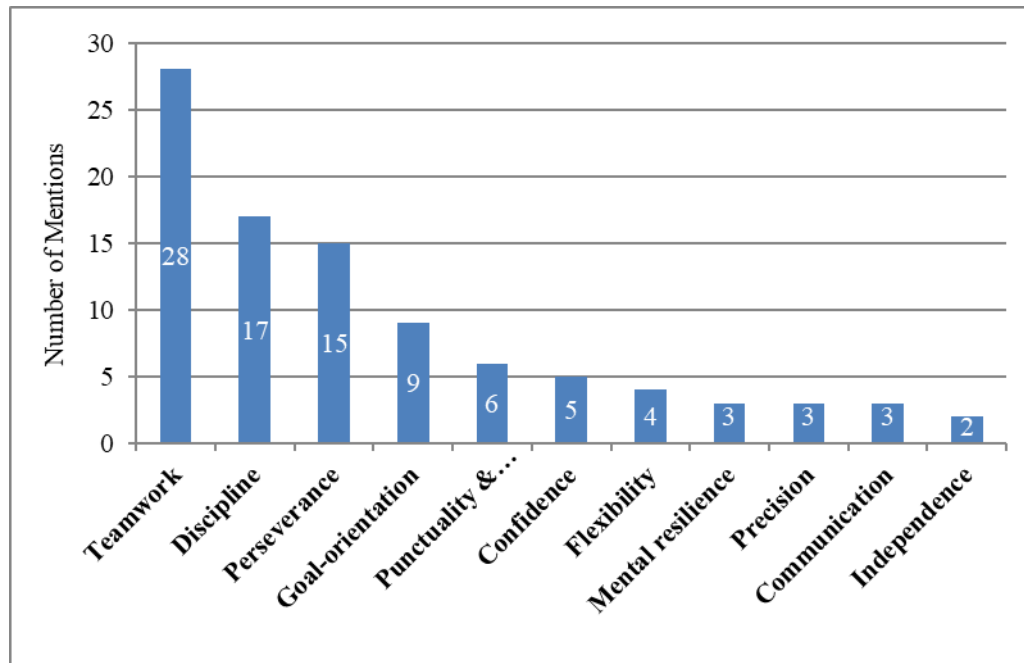


Figure 4. Key Transferable Skills Identified by Athletes

Source: Own elaboration

An additional finding was the share of income from sport. Only a minority of respondents reported it (five former and six current). In this subsample, former athletes achieved a median of 100% of income from sport, while current athletes achieved 85%. This suggests that sport was the main source of livelihood for both groups, underlining the importance of career transition planning and the importance of education in securing a future career.

The research findings show that current athletes are more proactive in terms of preparing for career transition than their predecessors, mainly due to better training conditions and more flexible study options. Conversely, the experiences of former athletes highlight the consequences of under-preparation, and their reflections can serve as a warning for the next generation. However, both groups strongly emphasise the value of the skills acquired through sport and their applicability to future careers. Differences are particularly evident in the ranking they give to each skill. The results thus provide consistent support for the hypotheses formulated, while also providing more subtle insights into how education, preparedness and transferable skills influence each other in shaping athletes' career transitions.

Verification of hypotheses and research questions

Based on the presented results, the individual hypotheses and research questions can be evaluated as follows:

H1: Current athletes declare a higher level of readiness to retire than former athletes.

This hypothesis was confirmed. RQ1.1 showed that current athletes are much more realistic about their future career paths than former athletes, who often reflected unpreparedness. RQ1.2 revealed fundamental differences in strategies; while former athletes addressed the transition after their careers, current athletes plan for it during their careers.

H2: Education during your career is a key factor for a smooth transition to civilian working life.

The hypothesis was confirmed. RQ2.1 showed that the most important areas are coaching licenses, psychology, management, IT and finance. RQ2.2 showed a difference in the importance ratings of training. Former athletes retrospectively see its absence as a barrier; current athletes use it purposefully as an investment in the future.

H3: Athletes perceive key skills acquired through sport as universally applicable to professional life.

The hypothesis was confirmed. RQ3.1 showed that teamwork, discipline, perseverance, and goal-orientedness are the most valued. RQ3.2 confirmed that differences between groups exist only in hierarchy, as former athletes emphasize self-confidence and leadership while current athletes emphasize discipline and goal-orientedness.

5. Discussion

These findings support Hypothesis H3 about the universal value of sport skills but also show that their use and perception changes with career stage.

Hypothesis H1, positing a greater readiness of current athletes to exit their careers, was supported on multiple levels. Six out of fourteen former athletes reported thinking about the future during their careers, compared to eighteen out of thirty current athletes. In addition to the quantitative difference, qualitative aspects also emerged. Younger athletes are actively planning, combining sport with studies, preparing alternative scenarios (coaching, business, IT). Former athletes were more likely to describe transition as a reaction to career termination, rather than as a pre-directed process. Thus, research highlights the importance of early planning, investment in education and digital competencies that can mitigate the stress associated with transitioning to a new professional role (McKnight et al., 2009; Andres, 2023). The research confirmed several theoretical assumptions regarding sport careers and the transition to civilian life. As suggested by career path models, athletes may follow a linear, convergent, or parallel career path. In the research conducted, these trajectories were clearly reflected. In most cases, former athletes had a linear profile, and thus sport was the dominant activity, and they only addressed the issues of education or further professional future after their active careers were over. They often described the transition to the civilian profession as abrupt, associated with uncertainty and the need for additional education. Conversely, current athletes more often showed signs of a convergent and parallel path. Studying alongside sport, obtaining coaching licenses, taking online courses, or working odd jobs were common strategies that allowed them to think about the future while still active. This difference is consistent with trends highlighting the importance of dual careers and broader social and cultural capital (Brown et al., 2019; Johansen et al., 2024).

The results also show that most of athletes consider education to be crucial not only during their active years but also after their careers have ended, being fully aware of its benefits when entering the labour market (Asensio Castañeda et al., 2023). This view supports hypothesis H2, which confirms that education is a significant factor for a smooth career transition. Almost the same proportion of former (42.9%) and current athletes (43.3%) reported that they thought about education during their careers, with the younger group having better conditions, i.e., availability of individual plans, online education, or greater tolerance of sports organizations towards learning. The fields of study were varied: coaching, psychology, management, IT, finance or healthy lifestyle.

One of the main challenges in the current preparation of athletes is the mastery of information and communication technology (ICT), which plays a key role not only in the professional environment, but also in education itself (Štaffenová & Kucharčíková, 2023; Štaffenová et al., 2025). The introduction of digital tools has been shown to modernise and improve the learning process (Sulym et al., 2023; Tsarova, 2023). Today's athletes, who have better access to technology, are more likely to use online platforms, cloud-based solutions and mobile applications. Approaches such as the application of Big Data and Artificial Intelligence (AI) offer opportunities for personalised learning, increased training efficiency and better adaptation to changing demands (Miciak et al., 2025; Zhao, 2025). AI-driven chatbots, virtual reality or data analytics are becoming other important tools that allow athletes to gain knowledge and train skills flexibly (Zhao, 2025). These findings extend theoretical assumptions (Sustarsic et al., 2022; Kucharčíková et al., 2023) and suggest that the ability to work with modern technologies is becoming an integral part of athletes' dual careers.

Interesting differences also emerged in the perception of transferable skills. Consistent with theory (Stambulova et al., 2021; Richardson & McKenna, 2020), respondents in both groups viewed sport as a source of valuable competencies such as teamwork, discipline, perseverance and goal-orientation. However, analysis of the interviews revealed different emphases. Former athletes emphasized leadership, teamwork and self-confidence, which is probably related to their current work environment and experience in leading people. Current athletes

placed more emphasis on goal-orientation, discipline, and mental toughness, qualities that help them perform well in their active careers.

The results show that education, planning and digital readiness are interlinked and form the basis of a successful career transition. Better learning conditions, openness to parallel pathways and the ability to work with modern technologies allow today's athletes to respond more flexibly to the challenges of the labour market. The experiences of former athletes, on the other hand, remind us of the need for targeted support and learning strategies that enable them to better assess their specific competences in new environments.

Conclusions

The article presents a comprehensive view on the issue of sports career, dual career and transition to civilian life after the end of active sports activity. The results highlight that education, its flexible forms and the use of information and communication technologies play a key role in preparing athletes for future careers. The work thus responds to the need to combine sporting, educational and technological approaches, while also highlighting the trend towards a wider diversification of career paths that go beyond the traditional fields of sport and coaching. This approach is relevant not only for athletes, but also for sport managers, educational institutions, employers and policy makers who can better tailor support programmes and dual career systems based on the results.

The research results fill the identified gap by directly comparing the experiences and attitudes of current and former athletes towards preparing for a career transition. They show that active athletes declare a higher level of readiness for life after their career, which is related to their active planning, combining sports with studies and using digital learning opportunities. Former athletes, on the other hand, more often described the transition as sudden and associated with uncertainty, which indicates the need for targeted support in the period after the end of sports activity. The findings confirm the importance of education and digital competences in mitigating the stress of the transition, which is in line with the claims of McKnight et al. (2009) or Andres (2023).

The novelty of the study lies in the detailed comparison of both groups, which reveals not only different readiness, but also differences in the understanding of education and the use of skills acquired through sports. Education has been shown to be a key factor for a smooth transition to civilian employment, with the younger generation better positioned to develop it thanks to the availability of online platforms and a more tolerant approach by sports organizations (Asensio Castañeda et al., 2023). Transferable skills such as discipline, determination, and teamwork were confirmed in line with previous research (Stambulova et al., 2021; Richardson & McKenna, 2020), but the emphasis varied by career stage – former athletes emphasized leadership and collaboration, while current athletes valued mental toughness and performance orientation more. These findings point to the need for tailored support for different career stages.

The main limitations include the relatively small research sample, which limits the possibilities to generalise the findings broadly. The research relied on a combination of quantitative and qualitative data, but the timeframe only captures the current state and does not consider the long-term development of athletes' career strategies. In addition, some of the data was based on the subjective statements of the respondents, which may introduce a degree of bias. From a technological perspective, it is possible that rapid developments in artificial intelligence, big data and digital tools will cause some recommendations to require updating in the future.

Future studies should work with larger and more diverse samples to account for differences between sport disciplines, performance levels or cultural contexts. It is recommended that research be conducted to better track the planning and transition process throughout the sporting career. It is also interesting to further explore technological aspects, e.g. the specific impact of artificial intelligence, virtual reality or chatbots on athletes' learning and competence development. There is also scope for exploring the collaboration between sports organisations, universities and employers in developing personalised training plans and support systems that reflect the dynamics of the labour market and the individual needs of athletes.

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