

Article

Pedagogical Approaches to Enhance Positive Youth Development: An Observational Study Among Hungarian Youth Coaches

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Abstract

This study examined how youth sport coaches support positive youth development (PYD) through their pedagogical practices, focusing on the following key PYD outcomes: Competence, Confidence, Contribution, and Character. A total of 113 youth sport coaches were systematically observed, involving athletes aged between 12–18 years. The coaches ($M = 38.64$ years; Male = 74; Female = 39) represented both individual and team sports and had an average coaching experience of 12.92 years. Our results showed that coaches put the most effort on Competence, followed by Confidence, while Character and Contribution received comparatively less attention. Competence development was mainly supported through verbal instruction, Confidence through general feedback, Contribution through active listening, and Character through role modeling. Regarding sport types, coaches in individual sports demonstrated higher levels of Competence and Contribution than team sport coaches. Furthermore, all four PYD dimensions were positively correlated, suggesting that gains in one dimension may support the others. Overall, Hungarian coaches emphasize technical and tactical competence, with less focus on social skills and value development. Confidence is mainly supported through general rather than specific feedback. Coaches in individual sports showed higher PYD engagement than team sport coaches. These findings highlight the need for more balanced, developmentally intentional coaching approaches.

Keywords: PYD; observation; youth sport; Hungary; pedagogy

1. Introduction

Positive Youth Development (PYD) is a strength-based approach that conceptualizes young people not as problems to be solved, but as individuals with developmental potential that can be nurtured through supportive contexts and experiences (Damon, 2004; Lerner et al., 2005). From a PYD perspective, positive development occurs when youth participate in structured activities that promote the acquisition of personal, social, and psychological assets, rather than merely preventing negative outcomes (Shek et al., 2019). Sport represents one of the most common organized extracurricular activities among youths, and therefore constitutes a potentially powerful developmental context for fostering PYD (Holt et al., 2020). However, sport participation alone does not automatically result in positive developmental outcomes. To fully realize the developmental opportunities provided by sport, coaches need appropriate pedagogical and educational knowledge. Thus, this study aims to explore the Hungarian coaches' pedagogical and educational approaches, which could enhance PYD outcomes.



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One of the most widely applied theoretical frameworks for understanding PYD is Lerner and colleagues' 6Cs model, which conceptualizes positive development in terms of five core components: competence, confidence, character, connection, and caring. When these components are present and mutually reinforcing, a sixth component (contribution) is proposed to emerge, reflecting youths' active engagement within their families, communities, and broader society (Lerner et al., 2005). Within sport research, this framework has been further developed to account for the unique characteristics and demands of sport as a developmental context, emphasizing the role of structured participation, coaching practices, and social environments in fostering PYD outcomes (Côté et al., 2014; Holt & Jones, 2007). Accordingly, the present study focuses on four central PYD components (competence, confidence, character, and contribution) that were identified in the sport context.

Competence refers to youths' ability to function effectively across multiple domains. In sport contexts, competence encompasses the development of sport-specific technical and tactical skills, as well as cognitive abilities (e.g., decision-making and problem-solving) and motor components that support effective performance (Côté et al., 2014; Schmidt et al., 2018). Within the PYD frameworks, competence extends beyond performance outcomes and reflects youths' perceived and actual capacity to meet the demands of their sporting environment through ongoing learning, adaptation, and skill mastery (Holt & Jones, 2007; Lerner et al., 2005). From an educational perspective, several instructional approaches could effectively foster competence in youth sport. Verbal instruction and explicit explanation support athletes' understanding of task demands and skill execution, thereby facilitating these, which could reduce uncertainty (Pritchard et al., 2008; Starzak et al., 2022). The use of goal setting and appropriately structured challenges, by creating challenging tasks, further enhances competence by directing attention toward process-oriented improvement and promoting sustained engagement (De Almeida Carvalho et al., 2021; Kolovelonis et al., 2011). In addition, coach demonstration plays a critical role in skill acquisition by providing athletes with accurate visual models of desired movement patterns, which support the development of effective motor representations (Darden, 1997; Schmidt et al., 2018). More recently, pedagogical approaches emphasize that cognitive competence is an important part of PYD (Sun & Hui, 2012). The gain of cognitive function in sport is important to make children think, by involving them in the task (e.g., asking questions), encouraging them to explore multiple solutions in challenges and creating tactical problems that they need to solve. These could promote a deeper learning and adaptive competence, particularly in dynamic sport environments (Hermawan et al., 2024; McEwen et al., 2009). Overall, engaging athlete-centered learning opportunities, using specific verbal instruction, proper demonstrations, adding challenging tasks, and creating problem-solving situations could effectively enhance athletes' competence.

Confidence reflects a global sense of self-worth and self-efficacy that extends beyond domain-specific performance outcomes (Lerner et al., 2005). In sport contexts, confidence is fostered through experiences of mastery, perceived improvement, and supportive feedback from teachers and coaches (Carpentier & Mageau, 2016). Research indicates that positive feedback, provided at both the general and specific levels, is particularly effective in enhancing confidence, as it helps athletes recognize progress and value effort (Ávila et al., 2012; Ghanamah, 2025; Tzetzis et al., 2008). In addition, encouragement from teachers and coaches supports confidence by promoting persistence and reducing fear of failure (Aydi et al., 2025). Furthermore, confidence is more likely to develop when coaches design achievable learning activities that allow young athletes to experience success. Therefore, coaches should create an environment in which athletes can succeed in various tasks, as these experiences may reinforce positive self-beliefs and support continued engagement (Şahin et al., 2018; Yiamouyiannis, 2003).

Contribution represents the behavioral manifestation of PYD and is proposed to emerge when other developmental assets are well established. It involves youths' active engagement in leadership, helping behaviors, service, and civic participation within their teams and communities (Holt et al., 2020; Vella et al., 2011). Coaches play a key role in fostering contribution by creating environments that encourage cooperation, inclusion, and mutual support among athletes. Pedagogical practices such as team rituals can strengthen team cohesion and promote supportive behaviors among teammates (Bartošová et al., 2017; Xygalatas, 2019). Additionally, active listening and constructive communication could enhance athlete engagement and interpersonal skills, which facilitates collaboration and shared responsibility within teams (Collins & Barcelona, 2018; Millo et al., 2023). Inclusive sport environments that emphasize sportsmanship and respect for individual differences provide important opportunities for athletes to contribute positively to one another and to the collective team climate (Bailey, 2007; Ross, 2006). Based on these findings, coaches should promote team rituals and inclusion in their training, while also using active listening and constructive communication, as these practices may play a key role in fostering meaningful contribution among peers in real-life contexts.

The development of character is important for fostering respect for social norms and rules, moral integrity, and the capacity to behave ethically and responsibly. Within sport contexts, character is expressed through behaviors such as fair play, respect for opponents and teammates, adherence to rules, and personal responsibility (Holt et al., 2020; Lerner et al., 2005). Coaches play a particularly important role in this process because they contribute substantially to the socio-moral climate of sport and serve as salient role models for young athletes (Peláez et al., 2013). Accordingly, coaches should apply intentional pedagogical practices that provide positive examples and support athletes' character development throughout training and competition. These practices may include promoting respect for others, encouraging fair play through rule adherence, acknowledging prosocial behaviors such as applauding opponents or winners, and assigning meaningful responsibilities to athletes.

Although all PYD domains are theoretically important and pedagogically feasible, coaching in youth sport has often prioritized technical and tactical development over broader psychosocial outcomes (Camiré et al., 2012). This imbalance may limit the developmental potential of sport, because an excessive focus on performance may reduce opportunities for young athletes to develop psychosocial and life skills such as communication, decision making, teamwork, and self-awareness. Camiré et al. (2012) showed that life-skill development is more likely when coaches intentionally promote these outcomes through modeling, teachable moments, and explicit strategies that support transfer beyond sport. Without such an approach, youth athletes may improve sport-specific performance while receiving fewer opportunities to develop skills that are valuable in school, work, and everyday life.

International PYD research suggests that positive development in sport is more likely when coaches adopt an intentional and development-focused approach that creates a positive PYD climate and includes life-skill-building opportunities, rather than focusing only on technical or performance-related goals (Camiré et al., 2012; Santos et al., 2017). Therefore, training and competition environments should not only aim to improve athletic performance but also support the holistic development of young athletes as people.

In the Hungarian context, previous studies have mainly examined either the broader structure of youth sport or coaches' declared pedagogical views, especially in football. Earlier Hungarian research suggested that coaches may be regarded as pedagogues, but their work is often still strongly performance-oriented (Varga, 2017), while the study of sports schools highlighted the institutional importance of youth training despite infrastructural

limitations (Balatoni et al., 2016). Research in Hungarian football academies further showed that coaches often endorse pedagogical values in principle, yet may undervalue theoretical pedagogical knowledge and the intentional development of athletes' broader personal and social outcomes (Varga et al., 2018).

Given the importance of PYD, this study aimed to explore the pedagogical and educational approaches that may enhance PYD outcomes. Previous studies have primarily examined PYD through interviews and questionnaires, whereas observational research remains limited (Camiré et al., 2012; Santos et al., 2017; Vella et al., 2011). Therefore, the purpose of the present study was to observe Hungarian coaches' pedagogical practices and examine how these practices may contribute to PYD outcomes.

2. Materials and Methods

2.1. Participants

Coaches were recruited using a convenience sampling strategy. The sampling frame consisted of youth sport coaches from Hungarian sport clubs and training groups that were accessible to the research team. Overall, 119 coaches participated in this study; however, 6 were excluded as the observation sheet was incomplete or the case was identified as an outlier according to the predefined screening procedure. Thus, the final sample included 113 youth sport coaches that were observed while working with athletes aged 12–18 years. The coaches ($M = 38.64$ years; 74 male and 39 female) represented both individual and team sports, with a nearly balanced distribution between individual ($n = 58$, 51%) and team sports ($n = 55$, 49%) and had an average coaching experience of 12.92 years. The sample included coaches from a wide range of sports, although tactical sports were the most strongly represented ($n = 66$, 58%), followed by endurance sports ($n = 18$, 16%), artistic sports ($n = 11$, 10%), combat sports ($n = 9$, 8%), and exercise-based activities ($n = 9$, 8%). At the sport-specific level, football and handball were among the most represented sports, alongside water polo and swimming within the team sport category. The observed athletes generally participated in organized youth sport, typically at the secondary school or high school level. Although many were involved in regular training and competitive sport, not all athletes competed formally, as some participated primarily for training, recreation, or personal development. Sample size adequacy was evaluated using G*Power 3.1 for Mac. The analysis indicated that between 10 and 134 participants would be required to detect small to medium effects, depending on the statistical procedure applied. Considering these estimates and in comparison with related research (Gan et al., 2023), the final sample size in the present study was considered sufficient and provided a statistical power of at least 95% ($1 - \beta$).

2.2. Procedure

Trained observers collected data during regular training sessions and systematically coded predefined pedagogical behaviors associated with the four PYD dimensions using standardized observation sheets. Each coded instance represented a single pedagogical action, and the observation protocol was event-based, meaning that every time a behavior occurred, it was counted once. The observation sheet was event-based. Observers did not rate coaches on ordinal response categories; instead, each occurrence of a predefined pedagogical behavior was recorded as one coded event. Therefore, the item-level variables represent frequencies (counts) of observed behaviors within a full training session, and the four PYD domain scores represent summed counts across the relevant behaviors. Because all sessions were observed from start to finish, the reported means can be interpreted as the average frequency of the coded behaviors per session. Given the count-based nature of these variables, inferential analyses were interpreted cautiously, and assumption checks

and robustness analyses were conducted. Only one training session was observed for each coach, and all sessions were followed from start to finish by one trained observer using the same standardized event-based observation sheet. To improve consistency, observers completed joint training with predefined scenarios and sport-specific examples before data collection. Observers coded behaviors related to competence, such as verbal instructions (e.g., explaining how to execute a skill), demonstrations (e.g., showing the correct technique), challenges (e.g., setting more demanding tasks), and cognitive activation (e.g., asking athletes to think about tactical solutions or reflect on performance). In the confidence domain, observers recorded general feedback (e.g., broad praise), specific feedback (e.g., precise comments on what was done well or what should be improved), encouragement (e.g., motivating athletes after mistakes), and ensuring success (e.g., adapting tasks so athletes could experience successful performance). In the contribution domain, coded behaviors included rituals (e.g., shared team routines), active listening (e.g., listening carefully to athletes' thoughts or concerns), inclusion (e.g., involving all athletes in activities), and constructive communication (e.g., fostering supportive interaction among athletes). In the character domain, observers coded respect (e.g., showing consideration toward teammates, coaches, and opponents), fair play (e.g., emphasizing rule compliance and ethical conduct), role modeling (e.g., the coach demonstrating behaviors and attitudes expected from athletes), and responsibility (e.g., encouraging athletes to be accountable for their actions and training-related duties), reflecting behaviors that promoted appropriate conduct, ethical behavior, and accountability. Prior to data collection, observers were trained using predefined scenarios and practical examples, and these scenarios were adapted to the specific characteristics of different sports in order to support consistent identification of pedagogical practices across varied training contexts. Negative behaviors were not coded in this observation, and all sessions lasted approximately one hour. The research received ethical approval from the Institutional Review Board of the Hungarian University of Sport Science (Ethical Approval Number: MTSE-KEB/No25/2025).

2.3. Statistical Analysis

The unit of observation was the frequency of occurrence of each predefined pedagogical behavior. An event-based coding procedure was applied, whereby each occurrence of a given behavior was recorded as a single coded instance. After data collection, the observational sheets were used to create a database. In the first step, we deleted the participants that had missing data or were outliers. Thus, our final sample included 113 participants. Besides descriptive statistics, an independent sample *t*-test was used to reveal the differences between gender and sport types (team vs individual). Furthermore, one-way analysis of variance (ANOVA) with Tukey's post hoc test was used to deeper understand the differences between sport categories (Combat Sports, Tactical Sports, Endurance Sports, Artistic Sports, Exercise). A final correlation analysis was used to see the bivariate associations between age, coaching years and PYD dimensions. All analysis was conducted via Jamovi 3.2.

3. Results

3.1. Descriptive Statistics and Gender Differences

Table 1 presents the descriptive statistics for the PYD-related variables, along with independent sample *t*-tests examining gender differences. Overall, coaches reported greatest emphasis on Competence ($M = 40.30$) and Confidence ($M = 37.11$), whereas Character ($M = 23.07$) and Contribution ($M = 22.04$) received comparatively lower scores. Across the competence-supporting practices, verbal instructions showed the highest mean ($M = 20.54$), whereas cognitive activation was the lowest ($M = 4.63$). For confidence-related coaching

behaviors, general feedback was most common ($M = 12.17$), while ensuring success had the lowest mean ($M = 6.26$). Regarding contribution-supporting practices, active listening had the highest mean ($M = 9.26$), whereas constructive communication was the lowest ($M = 3.40$). Within the character domain, role modeling was the highest-rated strategy ($M = 6.49$), while fair play was the lowest ($M = 5.50$). Gender comparisons indicated no statistically significant differences across the PYD dimensions or the specific pedagogical methods. Therefore, we analyzed the results for the full sample and did not divide the analyses by gender.

Table 1. Descriptive statistics and gender differences for PYD-related variables.

Variable	Total M (SD)	Skewness	Kurtosis	Female M (SD)	Male M (SD)	<i>t</i> (111)
Competence	40.30 (16.78)	0.81	0.44	40.46 (14.18)	40.22 (18.09)	0.07
Verbal instructions	20.54 (9.58)	0.90	0.44	19.26 (7.96)	21.22 (10.32)	−1.03
Challenging tasks	5.56 (3.06)	0.89	1.23	5.92 (3.26)	5.36 (2.95)	0.92
Problem solving	4.63 (3.12)	0.73	0.46	5.00 (3.19)	4.43 (3.08)	0.92
Demonstrations	9.58 (5.90)	1.30	1.76	10.28 (4.83)	9.20 (6.40)	0.92
Confidence	37.11 (19.82)	0.89	0.70	41.23 (20.67)	34.93 (19.14)	1.62
General feedback	12.17 (7.05)	0.76	0.17	13.51 (7.45)	11.46 (6.78)	1.48
Specific feedback	7.68 (5.68)	1.56	3.53	8.46 (6.98)	7.27 (4.86)	1.06
Encouragement	6.51 (4.35)	1.52	4.02	7.00 (4.53)	6.26 (4.27)	0.86
Ensuring success	6.26 (4.46)	1.23	1.77	7.21 (4.95)	5.76 (4.13)	1.65
Contribution	22.04 (14.29)	1.48	2.94	25.10 (16.68)	20.43 (12.68)	1.66
Team rituals	4.64 (4.19)	2.47	7.97	5.36 (4.60)	4.26 (3.94)	1.33
Active listening	9.26 (6.10)	0.91	0.59	10.77 (6.43)	8.46 (5.81)	1.94
Inclusion	4.75 (4.55)	1.31	1.45	5.38 (5.35)	4.42 (4.06)	1.07
Constructive communication	3.40 (3.89)	2.66	9.33	3.59 (5.18)	3.30 (3.03)	0.38
Character	23.07 (20.99)	2.08	5.85	21.56 (17.69)	23.86 (22.60)	−0.55
Respect	5.58 (4.86)	1.31	1.08	5.69 (4.83)	5.51 (4.91)	0.19
Fair play	5.50 (7.58)	3.06	11.06	4.79 (5.86)	5.86 (8.36)	−0.71
Role modeling by the coach	6.49 (6.16)	2.11	5.40	5.74 (4.59)	6.88 (6.84)	−0.93
Responsibility	5.51 (5.74)	2.07	6.53	5.33 (5.43)	5.61 (5.93)	−0.24

Note. $p < 0.001$.

3.2. Sport Types of Differences Between PYD Dimensions

Table 2 presents the independent-sample *t*-tests comparing coaches in individual versus team sports. Coaches in individual sports reported significantly higher Competence scores ($M = 43.88$) than those in team sports ($M = 36.53$). Among competence-supporting practices, demonstrations were also higher in individual sports ($M = 11.31$) compared with team sports ($M = 7.75$). For Contribution, individual-sport coaches reported higher scores ($M = 24.97$) than team-sport coaches ($M = 18.96$). The difference was reflected in active listening, which was higher in individual sports ($M = 10.41$) than team sports ($M = 8.04$). No significant differences emerged for Confidence or Character overall. Within the character-related practices, respect was significantly higher in individual sports ($M = 6.50$) than team sports ($M = 4.60$), while all other practice-level comparisons were non-significant.

One-way ANOVAs were used to examine differences across Combat Sports, Tactical Sports, Endurance Sports, Artistic Sports, and Exercise. Significant sport-type differences were found on Competence, Challenges, Cognitive activation, Demonstrations, Ensuring success, Encouragement, Constructive communication, Confidence, and Character (Table 3). The follow-up post hoc test revealed that exercise types of activities were consistently lower than several sport categories on multiple variables. For Competence, Exercise scored lower than Artistic Sports and Combat Sports. For Challenges, Exercise was lower than Combat Sports, Tactical Sports, Endurance Sports, and Artistic Sports. A similar pattern was

observed for Cognitive activation, where Exercise scored lower than Tactical Sports, Endurance Sports, and Artistic Sports. For Demonstrations, the only significant difference was higher scores in Combat Sports compared with Tactical Sports. Differences also emerged in confidence-supporting practices. For Ensuring success, Artistic Sports scored higher than Exercise, and Tactical Sports also exceeded Exercise. For Encouragement, Exercise scored lower than Tactical Sports and Artistic Sports. For Constructive communication, Exercise was lower than Tactical Sports. At the domain level, Confidence was higher in Artistic Sports than in Exercise. Finally, Character differed such that Exercise scored lower than Tactical Sports and Artistic Sports.

Table 2. Independent sample *t*-tests comparing individual and team sports.

Variable	Individual Sports M (SD)	Team Sports M (SD)	<i>t</i> (111)
Competence	43.88 (17.65)	36.53 (15.05)	2.38 *
Verbal instructions	21.88 (10.12)	19.13 (8.85)	1.54
Challenging tasks	5.90 (3.25)	5.20 (2.82)	1.21
Problem solving	4.79 (3.07)	4.45 (3.18)	0.58
Demonstrations	11.31 (6.75)	7.75 (4.19)	3.35 ***
Confidence	36.81 (19.45)	37.42 (20.38)	−0.16
General feedback	11.74 (6.48)	12.62 (7.64)	−0.66
Specific feedback	8.34 (6.51)	6.98 (4.61)	1.28
Encouragement	6.53 (4.39)	6.49 (4.35)	0.05
Ensuring success	6.79 (4.70)	5.69 (4.16)	1.32
Contribution	24.97 (14.76)	18.96 (13.21)	2.27 *
Team rituals	5.38 (4.52)	3.85 (3.69)	1.96
Active listening	10.41 (6.35)	8.04 (5.63)	2.10 *
Inclusion	5.50 (4.77)	3.96 (4.19)	1.81
Constructive communication	3.67 (4.01)	3.11 (3.78)	0.77
Character	25.81 (24.48)	20.18 (16.25)	1.43
Respect	6.50 (5.25)	4.60 (4.24)	2.11 *
Fair play	5.91 (8.91)	5.05 (5.91)	0.60
Role modeling	7.38 (6.75)	5.55 (5.37)	1.59
Responsibility	6.02 (6.93)	4.98 (4.14)	0.96

Note. $p < 0.05$ *, $p < 0.001$. ***

Table 3. Results of one-way ANOVA comparing sport type categories.

Variable	Combat Sports M (SD)	Tactical Sports M (SD)	Endurance Sports M (SD)	Artistic Sports M (SD)	Exercise M (SD)	<i>F</i>
Competence	52.56 (17.81)	37.45 (14.90)	42.11 (18.76)	52.27 (18.42)	30.67 (10.14)	4.18 *
Verbal instructions	23.22 (11.61)	19.42 (8.69)	22.00 (12.32)	25.64 (9.31)	16.89 (5.64)	1.89
Challenging tasks	8.22 (4.49)	5.32 (2.85)	6.06 (2.90)	6.18 (2.40)	2.89 (1.36)	7.39 ***
Problem solving	5.11 (3.76)	4.83 (3.26)	4.67 (2.79)	5.27 (2.10)	1.78 (1.79)	5.28 **
Demonstrations	16.00 (6.89)	7.88 (4.06)	9.39 (5.34)	15.18 (9.03)	9.11 (5.49)	4.30 *
Confidence	45.22 (19.29)	36.98 (19.48)	36.39 (22.65)	43.91 (16.93)	23.00 (15.26)	2.55
General feedback	15.67 (6.80)	12.17 (7.35)	11.72 (6.16)	13.36 (6.15)	8.11 (6.97)	1.37
Specific feedback	9.44 (5.46)	7.03 (4.81)	8.44 (5.85)	11.82 (8.93)	4.11 (3.95)	2.50
Encouragement	6.67 (4.03)	6.73 (4.15)	6.94 (5.87)	7.18 (3.71)	3.11 (2.15)	4.64 **
Ensuring success	7.22 (5.52)	5.92 (4.05)	6.00 (5.42)	10.00 (4.12)	3.67 (1.32)	7.13 ***
Contribution	26.67 (15.40)	20.23 (13.97)	26.50 (16.15)	27.09 (12.95)	15.67 (9.70)	1.98
Team rituals	5.56 (4.82)	4.11 (3.75)	5.61 (5.10)	6.45 (5.16)	3.44 (2.88)	1.07
Active listening	12.33 (5.59)	8.20 (5.56)	11.56 (7.13)	11.18 (7.39)	7.00 (4.56)	2.20
Inclusion	4.22 (3.93)	4.44 (4.49)	5.56 (5.18)	6.09 (4.11)	4.33 (5.17)	0.49
Constructive communication	4.56 (4.98)	3.48 (4.07)	3.78 (3.95)	3.36 (2.58)	0.89 (1.36)	4.91 **
Character	24.33 (19.13)	24.45 (23.39)	22.94 (20.66)	21.91 (10.71)	13.33 (13.42)	1.08
Respect	7.22 (5.02)	5.23 (4.62)	6.39 (6.35)	6.45 (3.24)	3.78 (4.74)	0.86
Fair play	4.89 (4.57)	6.39 (8.68)	5.11 (6.15)	3.27 (3.32)	3.00 (7.53)	1.19
Role modeling	7.44 (6.25)	6.62 (6.73)	6.72 (6.40)	6.64 (3.75)	3.89 (3.22)	1.27
Responsibility	4.78 (5.12)	6.21 (6.42)	4.72 (4.65)	5.55 (4.52)	2.67 (3.77)	1.39

Note. $p < 0.05$ *, $p < 0.01$ **, $p < 0.001$. ***

3.3. Correlation Analysis Between the Domains of PYD

Table 4 presents Pearson correlations among age, coaching experience, and the four PYD dimensions. PYD dimensions were significantly and positively interrelated: Competence correlated with Confidence ($r = 0.58$), Contribution ($r = 0.59$), and Character ($r = 0.45$). Confidence was associated with Contribution ($r = 0.65$) and Character ($r = 0.38$). Finally, Contribution correlated with Character ($r = 0.59$). Age and coaching experience did not show any significant relationships.

Table 4. Pearson correlations among age, coaching experience, and PYD dimensions.

Variable	1	2	3	4	5	6
1. Age	—					
2. Coaching experience	0.82 ***	—				
3. Competence	0.14	0.10	—			
4. Confidence	−0.03	−0.03	0.58 ***	—		
5. Contribution	0.08	0.08	0.59 ***	0.65 ***	—	
6. Character	−0.00	0.03	0.45 ***	0.38 ***	0.59 ***	—

Note. $p < 0.001$. ***

4. Discussion

The aim of this study was to examine Hungarian youth coaches' pedagogical practices related to PYD outcomes. Overall, coaches reported placing the greatest emphasis on Competence and Confidence, while Contribution and Character received comparatively less attention. Verbal instruction emerged as the primary strategy for fostering competence, whereas general feedback was the most common approach to supporting confidence. In addition, coaches in individual sports reported using more competence- and contribution-focused practices than those in team sports, and combat and artistic sports stood out on competence-related indicators. Since this study was exploratory, the findings should be interpreted as descriptive and pattern-identifying rather than as formal tests of a priori hypotheses.

Competence received the highest ratings among all PYD domains, indicating that Hungarian coaches tend to adopt a strongly competence-focused approach. This pattern is consistent with the broader Hungarian sport culture, in which coaches are often socialized to view performance and results as central indicators of success (Varga, 2017). Such an orientation naturally places technical and tactical development at the center of the coaching process. In addition, performance expectations are often reinforced at the level of sport federations, further strengthening the priority given to competence-related outcomes (Gál, 2010; Géczi et al., 2015). From this perspective, the prominence of competence in the present study is not surprising. Nevertheless, a strong emphasis on performance may limit attention to other important developmental goals, particularly psychosocial outcomes related to character and contribution. This is especially relevant because previous research has shown that psychosocial skill development can be successfully integrated into competitive sport settings without undermining performance aims (Santos et al., 2019). In line with this interpretation, coaches in the present study most frequently used traditional instructional methods, such as verbal instruction and demonstration, whereas more athlete-centered strategies appeared relatively rare. In particular, cognitive activation and the use of challenges received comparatively low ratings. Hungarian coaching has historically been shaped by a performance- and sport-specific tradition in which the development of technical and tactical skills is prioritized. Within such a context, contemporary pedagogical approaches that intentionally stimulate athletes' thinking, reflection, and autonomous problem solving may receive less emphasis in domestic coaching practice (Varga, 2017; Varga et al., 2018).

Sport has substantial potential to enhance athletes' confidence, but this depends greatly on how coaches structure the learning environment and interact with their athletes (Coatsworth & Conroy, 2009; Müjdecı et al., 2025). Confidence is fostered through repeated experiences of support, progress, and success, which is why encouragement, specific and individualized feedback, and intentionally created success experiences are particularly important in youth sport (Mason et al., 2020; Tzetzis et al., 2008). However, the present findings suggest that these strategies were not especially prominent in the observed coaching practices. Instead, Hungarian coaches appeared to rely mainly on general feedback, such as short approving or motivational comments, which may help create a positive atmosphere but may be less effective than specific feedback in strengthening athletes' self-belief. Encouragement and ensuring success also received relatively little emphasis, suggesting that coaches may not fully exploit the confidence-building potential of their pedagogical practices. One possible explanation is that coaches rely on traditional communication patterns shaped by their own earlier sporting and coaching experiences. As a result, confidence may be supported more implicitly than intentionally, even though a more deliberate use of encouragement, specific feedback, and structured success experiences could further strengthen this important dimension of positive youth development. Previous findings also highlighted the implicit nature of PYD (Vella et al., 2011).

The focus on Contribution and Character was lower than for the two other PYD outcomes. This is concerning because coaches play a central role in shaping environments that promote cooperation, inclusion, prosocial responsibility, and respect (Bartošová et al., 2017; Cruz Feliu et al., 2018; Palou & Borrás, 2019; Xygalatas, 2019). In our sample, the weakest contribution-related behavior was constructive communication, suggesting that coaches may place less emphasis on structured dialogue, conflict management, and intentionally building an inclusive team climate. At the same time, active listening was the strongest contribution-supporting practice, indicating that coaches may be open to athletes' perspectives even if they less often translate this into consistent communication routines that explicitly foster inclusion and cooperation. Within the character domain, role modeling emerged as the most common strategy, whereas practices linked to explicit value teaching (e.g., fair play and responsibility) were comparatively lower, implying that character development may be approached more implicitly (through "being an example") than through deliberate discussion and reinforcement of ethical principles.

As it was seen earlier Hungarian coaching context, where coach education and everyday coaching culture tend to remain performance- and skill-oriented, with strong emphasis on technical/tactical instruction and coach-led training structures. In such environments, psychosocial goals (e.g., inclusion, shared responsibility, value transmission) may be viewed as secondary outcomes that "happen naturally" through participation rather than targets that require specific pedagogical tools. In addition, traditional hierarchical coach–athlete relationships, still relatively common in many Hungarian sport settings, which neglects athlete-centered strategies such as collaborative problem solving, conflict resolution through dialogue, and explicit reflection on values (Varga, 2017; Varga et al., 2018). This may explain why Contribution and Character received lower ratings overall, and why the most frequent strategy for Character was role modeling rather than explicit, structured practices that intentionally teach prosocial and moral skills. However, youth-sport research increasingly conceptualizes psychosocial development as a core outcome of effective coaching and youth sport participation, alongside athletic competence and performance (Côté et al., 2014; Müjdecı et al., 2025; Santos et al., 2019).

Overall, the present findings point to a more performance-oriented pattern in the Hungarian sample, in line with earlier domestic research showing a strong emphasis on performance and a limited realization of pedagogical values in Hungarian coaching con-

texts (Varga, 2017; Varga et al., 2018). By contrast, international studies have highlighted the importance of intentional life-skill development and athlete-centered coaching approaches (Camiré et al., 2012; Santos et al., 2017; Vella et al., 2011). In our sample, coaches placed the greatest emphasis on competence, while contribution and character received comparatively less attention, suggesting that psychosocial goals were supported more implicitly than explicitly.

When comparing sport types, coaches in individual sports appeared to demonstrate more pedagogical practices associated with PYD outcomes than coaches in team sports. Within the sport-type categories, combat sports and artistic sports showed relatively higher levels of PYD-supportive practices. One possible explanation is that these sports are typically characterized by a more structured environment, with clear routines, expectations, and rules, which may allow coaches to provide more individualized attention and feedback (Cadotte & Caron, 2025; Kistorz & Sas-Nowosielski, 2021; Oh & Yoo, 2023). Such closer coach–athlete interactions may, in turn, contribute to broader PYD outcomes (MacDonald et al., 2020). In contrast, exercise-based activities displayed the lowest values across several indicators. Although exercise-based participation, such as gym training with a personal coach, is becoming increasingly popular in Hungary among youth, these contexts may offer fewer opportunities for the kinds of intentional developmental experiences typically embedded in organized sport.

Finally, it is important to note that the investigated pedagogical practices were strongly intercorrelated. This suggests that when a coach intentionally applies one PYD-supportive practice, they are also likely to use other supportive practices as part of a broader coaching approach. Therefore, coach education should emphasize the psychosocial significance of everyday coaching behaviors, as greater awareness and intentionality may strengthen multiple PYD outcomes simultaneously and enhance young athletes' development in several ways.

Several limitations should be addressed when interpreting these findings, which also point to important directions for future research. First, the study relied on observing coaching practices, which may be influenced by the observer and may not fully reflect coaches' actual behavior. Second, we can only assume PYD outcomes from pedagogical practices. Third, although the sample covered multiple sport contexts, some subgroups had small sample sizes, limiting statistical power and the generalizability of sport-specific differences; larger and more balanced samples (e.g., gender) would allow more robust comparisons. Fourth, the analyses did not account for potentially important contextual factors such as competitive level, club resources, coaching qualifications, or training frequency, which should be examined as moderators in future work. Fifth, some sport-category subgroups were small and disproportionate, which reduces statistical power and weakens the stability of subgroup comparisons. Furthermore, the recruitment depended on accessibility and willingness to participate, the sample should not be considered nationally representative, and some degree of self-selection bias is possible. Finally, the variables were derived from event-based count data, the parametric analyses should be interpreted with caution. Future research should aim to develop and evaluate coach education modules that explicitly strengthen the less emphasized PYD domains, especially contribution and character. Such modules may provide practical guidance on the use of athlete-centered strategies, including specific feedback, encouragement, cognitive activation, active listening, inclusive communication, and the deliberate promotion of fair play, respect, and responsibility. The expected outcome of these interventions is greater coach awareness of psychosocial developmental goals and a more balanced integration of PYD-supportive practices across diverse Hungarian sport settings.

5. Conclusions

We believe our study provides a useful overview of the pedagogical practices that can enhance PYD outcomes. Psychosocial development appears to lag behind performance-focused goals in the Hungarian sport context, it is especially important to communicate these key findings to coaches and other professionals working with youth athletes. Therefore, we have to following conclusion based on our observation: Hungarian coaches appear to adopt a predominantly competence-oriented approach, placing strong emphasis on technical skill development and tactical instruction during training sessions. In contrast, comparatively less attention is given to the intentional development of social skills and value transmission. Although confidence is addressed within training, it is primarily supported through general feedback rather than individualized, specific feedback and targeted encouragement, which may limit its developmental impact. Differences across sport contexts further indicated that coaches in individual sports demonstrated greater engagement with the PYD dimensions compared to team sport coaches.

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Abbreviation

The following abbreviation is used in this manuscript:

PYD Positive Youth Development

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