Psychology, Society & Education (2025) 17(1), 41-50

Psychology, Society & Education

www.uco.es/ucopress/ojs/index.php/psye

The role of strategic learning skills in the dropout from sport in adolescence

Carla Consoni

University of Rome - Tor Vergata, Rome (Italy)

Keywords

Abandonment
Physical activity
Healthy
Educational
School

Abstract

Abandonment from sports activities is a significant and increasing process in adolescence, with several negative involvements at multiple levels, such as the acquisition of an unhealthy lifestyle. The decision of dropping out of sporting activity may be linked to sport and non-sport aspects in various domains. Interestingly, the search of personal skills related to dropout rates that are operative in performance and other settings different from sport (such as school) is still understudied. This study examined the association between different types of quitting sports and strategic learning skills in the affective-motivational and cognitive-metacognitive dimensions. These skills, learned in the school context, are functional to academic careers, sports, and the wider fields of life. Sampling included 2,391 Italian and Spanish upper secondary students aged 14-18 years. They filled out two self-assessment questionnaires regarding workout and sporting routines and the affective-motivational and cognitive-metacognitive learning strategies. The search assumption was explored using the descriptive research method. The results revealed that strategic affective-motivational learning skills are linked with definitive and not-definitive sports dropout rates. These skills may have a crucial influence on making young people's physical exercise maintenance last in time and reduce the risk of maladaptive behavior in different areas of life. An early learning of these skills, starting as soon as children enter school, would allow young people to invest in their own health immediately.

La función de las habilidades estratégicas de aprendizaje en el abandono deportivo en la adolescencia

Palabras clave

Abandono
Actividad física
Saludable
Educativo
Escuela

Resumen

El abandono del deporte es un proceso significativo y creciente en la adolescencia que conlleva varias implicaciones negativas a múltiples niveles, como adquirir un estilo de vida poco saludable. Abandonar el deporte puede estar vinculado a aspectos deportivos y no deportivos en diversos ámbitos. Curiosamente, la búsqueda de habilidades personales relacionadas con el abandono que sean operativas en el rendimiento y en entornos diferentes del deporte sigue siendo poco estudiada. Este estudio examinó la relación entre diferentes tipos de abandono deportivo y habilidades estratégicas de aprendizaje afectivo-motivacional y cognitivo-metacognitivas, aprendidas en el contexto escolar y funcionales para las carreras académicas, el deporte y los varios ámbitos de la vida. El muestreo incluyó a 2,391 estudiantes italianos y españoles de secundaria superior entre 14 y 18 años. Estos rellenaron dos cuestionarios de autoevaluación sobre las rutinas de entrenamiento y deporte y las estrategias de aprendizaje. La hipótesis de búsqueda se exploró con el método de investigación descriptivo. Los resultados revelaron que las habilidades afectivo-motivacional se asocian con el abandono definitivo y no definitivo del deporte. Estas habilidades pueden influenciar crucialmente los jóvenes a mantener el ejercicio físico en el tiempo y reducir el riesgo de conductas desadaptativas en diferentes ámbitos de la vida. Aprender estas habilidades desde el principio de la escuela permitiría a los jóvenes invertir en su propia salud inmediatamente.

* *Corresponding author:* Carla Consoni. Teaching Learning Center - University of Rome - Tor Vergata, Italy. Cracovia, 50 0133 Rome, Italy. carla.consoni@gmail.com

Cite this article as: Consoni, C. (2025). The role of strategic learning skills in the dropout from sport in adolescence. *Psychology, Society & Education, 17*(1), 41-50. https://doi.org/10.21071/psye.v17i1.17549

Received: 28 september 2024. *First review*: 11 December 2024. *Accepted:* 28 January 2025.

ISSN 1989-709X

Abandonment of sports activities in young people is a noteworthy event with important consequences at more levels, such as being physically inactive over time and acquiring an unhealthy lifestyle (Logan et al., 2020). On the other hand, the teenage years are rich in modifications at psychological, physiological, and social-environmental ranks. These processes of change that mark the passage from adolescence to adult age in different areas of life such as school, sports, and work (Corder et al., 2019) could represent difficult situations to manage. To this end, it is determining to improve and develop coping strategies and personal skills that are functional for handling changes, challenges, and choices, particularly in young people.

Given that sport dropout rates increase in adolescence (Eime et al., 2019; Rullestad et al., 2021), working on a person's self-fulfillment and ability to achieve personal goals in both sports and life is crucial. Van Houten (2019) affirmed that not knowing how to deal with critical situations at a psychological and emotional level could influence the regularity of sporting habits and the participation in/abandonment of organized sports. However, adolescents who have an adequate configuration of psychosocial resources and action planning skills are more inclined to practice physical exercise and not quit sports (Schmid et al., 2019). On the other hand, other scholars, such as Sorkkila et al. (2019), observed that school and sports are interrelated domains and this can have a meaningful effect on adolescents' lives. Indeed, Aquilina (2013) states that major critical events lived in a school setting and not well managed can develop attrition factors toward sports participation in the developmental age period. Thus, low perception of competence, critical social relationships, difficulty in handling different tasks due to lack of time, socioeconomic inequalities, and relevant life changes (Battaglia et.al., 2021; Espedalen & Seippel, 2022; Moulds et al., 2022; Saez et al., 2021) may negatively affect sports persistence. Moreover, García-González et al. (2022) suggest a motivational reference model that is able to identify factors and processes that can improve learning and transfer motivation from sports to other extracurricular domains and promote adaptive behavior in students in multiple learning contexts.

In summary, to be equipped with personal resources functional to widen an adaptive capacity may assist the person to deal with challenges in various settings and to improve the approach to well-being for a lifetime (Barrington-Leigh, 2021). Furthermore, Stambulova et al. (2021) affirmed that for student-athlete engaged in the dual career (DC), the development of transferable and functional skills to direct their career, plan their life and DC, and acquire self-emotional awareness is considered crucial to successfully manage both academic and athletic obligations. Conversely, the inability to cope with these demands can lead the student-athlete to burnout and abandonment from sports. These skills have been revealed themselves as the main resources of athletes for maintaining their sports career over time. Additionally, Kendellen and Camiré (2015) observed that there is a direct link between sports and skills needed for the self-realization and self-determination of the person and their transfer to other settings and domains. Besides, skills that are transferable to other settings and domains than sports present greater requirements to influence positively an excellent performance (Pierce et al., 2016). On the contrary, the impact and influence of similar skills learned in other contexts, such as school, and connected to participation and abandonment of sports fields is still partially explored. These competencies have primarily been investigated with a focus on the favorable effect of physical exercise on other life domains and educational outcomes (García-González et al., 2022). Hence, the reported scientific evidence fosters the study of fundamental skills and personal resources in the individual, as these could be supporting factors in maintaining sporting career over time. This process may start from sports and head to other contexts and vice versa. A recent study revealed that strategic learning skills, in the affective-motivational domain, are associated with sports dropout rates in Italian and Spanish students (Consoni et al., 2021). These skills concern the framework of the soft skills and refer to the capacity of self-determination and self-regulation. They identify the main cognitive-metacognitive and affective-motivational competencies related to study tasks and learning strategies implemented mostly in the school domain (Pellerey, 2017). Promoting behaviors aimed at acquiring cognitive, metacognitive, motivational, affective, and volitional skills in the school processes of learning may help the student to capitalize on these functional skills in multiple domains.

The present study

Considering that school portrays a central and irreplaceable developmental experience in young people, the study presented three objectives: 1) to identify different level of strategic learning skills learned in the school setting associated with sport dropout rates (definitive/not definitive); 2) to explore the different type of dropout from sport connected to the critical values categories in the affective-motivational strategic learning skills; and 3) to analyze the same association as a function of gender, age, and nationality.

Some hypotheses were stablished based on previous literature. Therefore, some studies (Ahmed et al., 2019; Furley et al., 2023) affirmed that the correlation between sports participation and academic success is due to a connection in the general domain of functional skills that depend on high-level cognitive functions. There is indirect evidence of fragmentary associations among strategic learning skills, sports participation and academic success (Chen et al., 2021). The first hypothesis established that these competencies, that are deemed functional to learning processes and mostly observed in academic achievement studies (Muijs & Bokhove, 2020), may be associated with sports practice as well and affect the sport persistence/dropout. These skills, that are cross-boundary in other domains such as sports, can assist students and athletes in facing critical situations and stages of change in both school and sports careers, since a high level of self-regulation skills can have long-term positive effects on persistence in sports practice and health (Balk & Englert, 2020). The second hypothesis expected that a low level of strategic learning skills may influence the premature sport abandonment and, on the contrary, a high level of

these competencies may sustain the sport engagement. Additionally, precocious sports abandonment seems to be affected, at individual level, by non-psychological factors (Zhang et al., 2024) such as demographic variables (Bann et al., 2019; Eime et al., 2016; Monteiro et al., 2018). The third hypothesis established that age, gender, and nationality may be connected to the association of sports dropout rates and different level of the strategic learning skills.

Method

Participants

Sampling was performed in a stratified manner in the schools of Rome, Frosinone, and Viterbo in Italy and Madrid and Murcia in Spain. The sampling stratified criteria for all participants were age (14-18 years), high school students, and eligible curriculum. Italian students attended high schools with traditional curricula (such as high school science, applied science, linguistics) and other senior high schools with different curricula in technical fields (such as computer technician and telecommunications, tourism, electronic) and senior high schools with reinforced sports curriculum (senior high school sports). The Spanish ones attended mandatory high school (ESO) and non-mandatory high school with different curricula, such as Science and Technology, Humanities, and Social Sciences (*Bachillerato*).

The Italian sample was distributed in seven schools in the city of Rome (19 classrooms of sports high school, 21 of scientific one, 2 of linguistic one, 8 of applied sciences one, and 36 of technical institutes), one school in Viterbo (9 classrooms of sports high school), and one school in Frosinone (6 classrooms of sports high school). The Spanish sample was distributed in two schools in Madrid (11 classrooms of ESO and 7 of *Bachillerato*) and two schools in Murcia (8 classrooms of ESO and 5 of *Bachillerato*). The number of participants for each classroom could range from 15 to 24/25 students both in Italian and Spanish schools. The total sample consisted of 2,391 students: it was composed of 545 Spanish (53.9% male, 46.1% female) and 1,846 Italian participants (68.7% male, 31.3% female) aged between 14-18 years, (M = 15.6 years; SD = 1.3 for Spanish students and M = 15.7 years; SD = 1.3 for Italian students). The distribution of participants by school year in each country consisted of the Italian students who attended the first year of high school were 583 (24.4%), the ones who attended the second year were 424 (17.7%), the ones who attended the third year were 412 (17.2%), and the ones who attended the fourth year were 427 (17.8%). The Spanish students who attended the third year of ESO were 144 (6%), the ones who attended the fourth year of ESO were 224 (9.4%), the ones who attended the first year of *Bachillerato* were 118 (4.9%), and the ones who attended the second year of *Bachillerato* were 42 (1.8%).

Potential influences joined to the socio-economic status of the participants, were limited through the selection of schools located in neighborhoods marked predominantly by middle social status.

Instruments

Two self-assessment questionnaires were selected. They proved themselves to be suitable for collecting data after a forward-backward translation process. The *Questionnaire for the Analysis of the Practice of Physical-Sports Activities*, CAPAFD (Hellín et al., 2004), gathered information concerning demographic variables and sport habits, such as dropout from sport, sport persistence and background variables pertinent to the study (e.g., "When did you start playing sports?", "Have you dropped out of sports?"). The original version of the questionnaire (targeted at people aged 15-64 years) was adapted and focused on adolescents. It assembled expository data on sports behaviors related to several socio-demographic variables in young people. This information was collected through 17 items composed of open/closed-ended questions. Responses involved dichotomous (*Yes*/*No*) and multiple-choice with three to six answers (e.g., "How many days a week do you do sports, in addition to Physical Education class?", "In which season of the year are you most involved in your sports activities?").

The main variable was classified in three clusters: 1 = *Definitive sport dropout* (general dropout from all sports); 2 = *No-dropout*; 3 = *Not-definitive sport dropout* (dropout from sport-specific with continuation in another sport/physical activity).

The *Learning Strategies Questionnaire* (reduced version) (QSA-R; Margottini, 2018) concerned the self-assessment of eight strategic learning skills functional to study routines and/or criticality faced in school and homework by students (like difficulty organizing and completing study assignments). The questionnaire evaluates the self-perception of these skills clustered into two dimensions of four scales each: cognitive/metacognitive (C1, C2, C3, C4) and affective/motivational (A1, A2, A3, A4). Each factor-scale refers to a particular competence: C1 (e.g., "To remember better when I study, try to connect the various ideas together"); C2 (e.g., "Before studying, I check what I have to do"); C3 (e.g., "I build diagrams, graphs, or summary tables to summarize what I study"); C4 (e.g., "While studying, I happen to think about something else") for the cognitive-metacognitive dimension; A1 (e.g., "When I get a bad mark I get discouraged"); A2 (e.g., "Even if a task seems boring to me, I still try to finish it"); A3 (e.g., "When I do well in an exam I think I did well to study so hard"); A4 (e.g., "I feel confident I will be able to get good grades"), for the affective-motivational dimension. The questionnaire consists of 46 questions: 21 items are clustered in the four cognitive–metacognitive scales, C1 (n = 6), C2 (n = 7), C3 (n = 5), C4 (n = 3) and 25 items are clustered in the four affective/motivational scales, A1 (n = 6), A2 (n = 6), A3 (n = 8), A4 (n = 5). A four-point Likert-type scale from 1 = *Never or almost never* to 4 = *Always or almost always* performed the answers of the students. The students' final profile was supplied on a nine-point standard Stanine scale (Margottini, 2018) by the formula {2*[(sum raw score-average)/standard deviation] + 5} from the raw scores for each of the eight subscales. For the subscales C1, C2, C3 and A2, A3, A4, a higher scoring corresponded to positive outcome. In opposite, only for the factor-scales C4 and A1 a lower scoring corresponded to positive outcome. Therefore, the

scores for C4 and A1 subscales were inverted to perform similar corresponding scores consistently across scales. Conforming to normative data (Margottini, 2018), the points from 1 to 3 on a nine-point Stanine scale refer to a below-average competence score; from 4 to 6 refer to an average ability range, and from 7 to 9 refer to an above-average skill score. For data analysis, all stanine-transported scores of the eight subscales (C and A, 1- 4) were further processing into dichotomous variables. The no-criticality value (0 = *No CL*) in the skills above critical level (with score from 4 to 9) and criticality value (1 = *CL*) in the skills with value from 1 to 3 were attributed to the dichotomous variables (Margottini, 2018). In this study, overall Cronbach's alpha was .76, and in the subscales: C1 = .74, C2 = .64, C3 = .71, C4 = .63, A1 = .79, A2 = .74, A3 = .52, A4 = .72.

Procedure

All participants received instructions for compiling the two questionnaires, which were administered jointly and anonymously during school time by a print version of the forms in one session (about 20 minutes). The informed parental consent was obtained to participate in the study, and it was signed by all participants over 18 years old. The same document was signed by parents or guardians of the students under 18 years old. The Institutional Ethics Committee of Catholic University of Murcia in Spain, UCAM (CE102012) approved the study.

Data analysis

The research hypotheses were performed in an explorative way, through descriptive research method. Frequency analyses were conducted to explore the distribution of the sample across different categories of sports dropout (definitive/not definitive) and critical values in the strategic learning skills. The cross-sectional study was conducted on Italian and Spanish adolescents to make a comparison between countries and to broaden the generalizability of the results (Bann et al., 2019). Students (n = 61) who did not complete the QSA-R questionnaire were excluded from the sample, as their data could not contribute to the study of the sport dropout rates associated with learning skills.

The critical level emerged in the affective/motivational subscales (from A1 to A4) and the cognitive/metacognitive ones (from C1 to C4) were summarized for each student. So, the student could get from 0 = *No critical values* to 4 = *Critical values in all four subscales*. Therefore, students were clustered in five categories of criticality (0, 1, 2, 3, and 4) in the two dimensions of strategic learning skills. Additionally, the sport dropout rates were compared with the strategic skills criticality classifications (from 0 to 4) and as function gender and nationality by frequency analyses. The Kolmogorov-Smirnov test ($p < .001$) analyzed the non-normality of all the observed variables ($p < .001$). Bivariate analysis with contingency tables and the chi-square test (χ^2) computed the results. Effect sizes were also estimated with Cramer's *V*. SPSS Statistics software (25.0; IBM, Armonk, NY, USA) processed data.

Results

Table 1 reports a significantly important effect of the distribution of the sports dropout rates (definitive and not-definitive) associated with affective-motivational learning skills. Differently, in the cognitive-metacognitive dimension, only the C4

Table 1

The absolute frequencies and percentages of the critical/no critical values for each scale-factor in relation to the three categories of sport abandonment are reported

	Definitive Sport Dropout *n* (%)		No-Sport Dropout *n* (%)		Not-definitive Sport dropout *n* (%)		χ^2 (*df* 2)	*p*	Cramer's *V*
	No CL	CL	No CL	CL	No CL	CL			
Strategic learning skills									
Cognitive/Metacognitive									
C1	276 (22.1)	258 (22.5)	872 (69.9)	790 (69)	99 (7.9)	96 (8.3)	0.26	.877	.01
C2	360 (21)	174 (25.7)	1.213 (70.7)	449 (66.4)	142 (8.2)	53 (7.8)	6.3	.043	.05
C3	370 (23)	164 (20.9)	1.100 (68.4)	562 (71.8)	138 (8.5)	57 (7.2)	2.95	.228	.04
C4	211 (18.3)	323 (26)	855 (74.4)	807 (65)	83 (7.2)	112 (9)	25.61	<.001	.1
Affective/Motivational									
A1	393 (20.2)	141 (31.2)	1.387 (71.4)	275 (61)	160 (8.2)	35 (7.8)	25.77	<.001	.1
A2	191 (18.4)	343 (25.3)	768 (74)	894 (66)	79 (7.6)	116 (8.5)	18.66	<.001	.09
A3	130 (19.8)	404 (23.2)	478 (72.7)	1.184 (68.2)	49 (7.4)	146 (8.4)	4.54	.103	.04
A4	369 (20.7)	165 (27)	1.266 (71.2)	396 (64.6)	143 (8)	52 (8.4)	10.72	.005	.07

Note. No CL = No criticality; CL = Criticality; C1 = Processing strategies for understanding and remembering; C2 = Self-regulation strategies; C3 = Graphic strategies to understand, summarize, and memorize; C4 = Attention control strategies; A1 = Emotion management strategies; A2 = Volition; A3 = Causal attribution-Locus of control; A4 = Perception of competence.

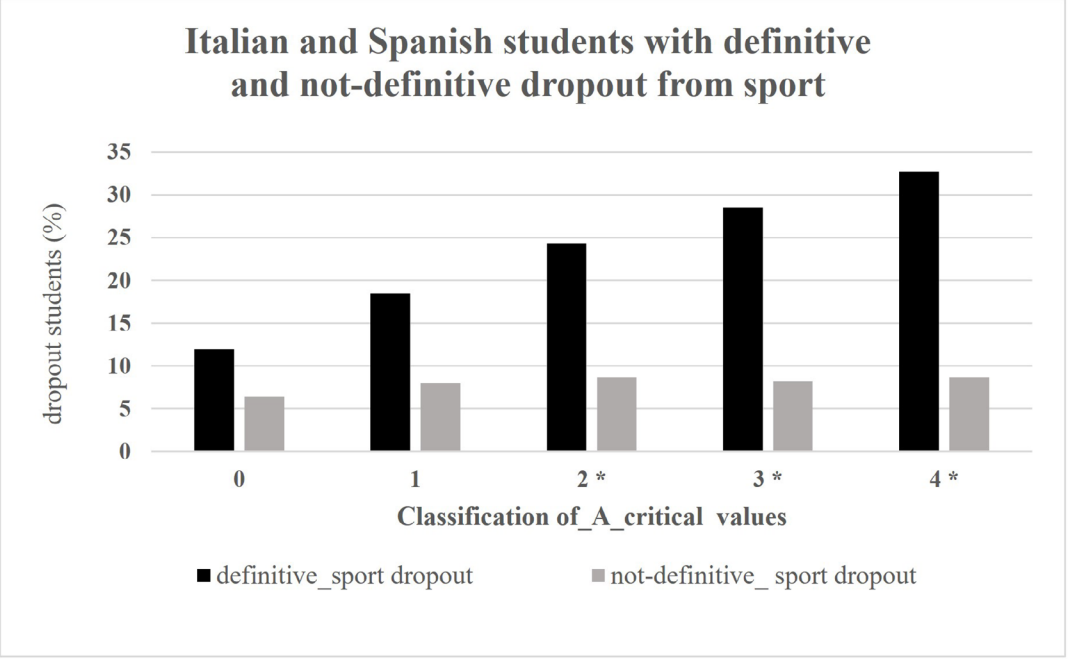
factor-scale showed a significant effect in association with both definitive and not-definitive dropout rates. Furthermore, the distribution of the sample across the no-sport dropout category linked with strategic learning skills revealed higher frequencies of students comparing to the definitive and not definitive sport dropout categories.

Further analysis was performed to examine a different level of strategic learning skills associated with sports dropout rates. The overall distribution of the frequencies in the criticality clusters categorized from 0 to 4 revealed that the higher the number of critical values in affective-motivational strategic skills, the higher the frequency of students with definitive sport dropout rates ($\chi^2 = 42.29$, $p < .001$, Cramer's $V = .09$), in comparison to less pronounced effect of the not-definitive sports dropout (Figure 1).

Moreover, additional analysis was conducted to investigate the influence of demographic variables on the association between sports dropout rates and different level of the strategic learning skills. On the one hand, it was founded that the distribution of the frequencies in the categories of criticality of the skills in the cognitive-metacognitive dimension linked to overall sport dropout rates was non-significant for both genders (male: $p = .138$; female: $p = .223$) and for both countries (Spain: $p = .777$; Italy: $p = .049$). And on the other hand, that the critical values categories in the affective-motivational competencies are connected to both definitive and not-definitive sport dropout rates and gender and nationality. Age is connected nor to the affective-motivational ($\chi^2 = 25.51$, $p = .061$, Cramer's $V = .11$) neither to cognitive-metacognitive ($\chi^2 = 11.79$, $p = .758$, Cramer's $V = .75$) dimension. The pattern presented in Table 2 revealed that Italian and Spanish male students displayed a significant progressive increase in definitive sports dropout rates associated with a higher number of critical values from 0 to 4 in affective-motivational learning skills. Nevertheless, in

Figure 1

Percentages of definitive and not-definitive sport dropout rates distributed across the critical values categories in affective-motivational strategic skills (A)



* $p < .05$.

Table 2

Definitive and not-definitive dropout rates from sport associated with Classification of A_critical values as a function of gender and nationality

	Definitive_ Sport Dropout N (%)						Not-definitive_Sport dropout N (%)								
Number of critical values	0 n (%)	1 n (%)	2 n (%)	3 n (%)	4 n (%)	Total n (%)	0 n (%)	1 n (%)	2 n (%)	3 n (%)	4 n (%)	Total n (%)	χ^2 (df 8)	p	Cramer's V
Gender															
Male	11 (8)	90 (16.9)	111 (20.1)	82 (28.2)	16 (30.1)	310 (19.8)	9 (6.5)	34 (6.3)	44 (8)	22 (7.5)	5 (9.4)	114 (7.2)	35.03	< .001	.11
Female	15 (18.5)	64 (21.6)	88 (33)	39 (29.1)	18 (35.2)	224 (27)	5 (6.1)	32 (10.8)	27 (10.1)	13 (9.7)	4 (7.8)	81 (9.8)	17.03	.03	.1
Nationality															
Italian	15 (9.2)	107 (16.5)	141 (23.3)	95 (27.8)	28 (31.1)	386 (20.9)	8 (4.9)	55 (8.4)	59 (9.8)	33 (9.6)	9 (10)	164 (8.8)	47.84	< .001	11
Spanish	11 (20)	47 (26)	58 (27.2)	26 (31.7)	6 (42.8)	148 (27.1)	6 (10.9)	11 (6)	12 (5.6)	2 (2.4)	0	31 (5.6)	8.3	.404	.09

not-definitive sport dropout rates, the effect that emerged did not show the same incremental progression. Unlike, female students revealed a less remarkable and non-significant outcome both in definitive and not-definitive sports dropout rates.

Discussion

This study explored the association between dropout rates from sports and learning skills crucial to both sports and schooling performance in Italian and Spanish students attending upper secondary education. The hypotheses defined were the following: (1) to investigate the association between dropout from sports and strategic learning skills, (2) to examine a different level of strategic learning skills associated with sports dropout rates, and (3) to evaluate the impact of demographic variables on the association between sports dropout rates and different level of the strategic learning skills.

The results revealed the distribution of the sample in the categories of definitive (22.3%), not-definitive sports dropout (8.2%), and no-sports dropout rates (69.5%). These last ones were mainly associated with affective-motivational learning skills and in a limited manner with the cognitive-metacognitive ones. Thus, the first hypothesis was partially confirmed.

Although cognitive-metacognitive skills were only associated in part with dropout rates from sports, the results of this study are in line with the research of Goudas et al. (2017). They affirmed that students' achievements may be influenced by self-regulatory cognitive, metacognitive, affective, and motivational skills. Since the reference literature, especially among metacognitive processes learned in school and functional to sports practice is limited, it can be indirectly hypothesized that the minor effect of cognitive-metacognitive skills on abandonment from sport is due to a lack of ability to control study tasks and, more generally, learning action processes themselves, implemented during school work (Ottone, 2014). Being aware of the strategies and the processes implemented during one's study actions can be functional to learn further tasks in other contexts. Moreover, self-regulated students demonstrate awareness of their strengths and weaknesses and of the personal resources. They also know how to manage their behaviors in different contexts to optimize learning strategies (Young et al., 2023). On the contrary, a low self-awareness of one's learning actions does not trigger the monitoring and the control in the self-regulation processes that are functional to achieve objectives (Goudas et al., 2017). Nevertheless, only the C4 factor-scale showed a significant effect in the cognitive-metacognitive dimension associated with sports dropout rates. This finding is partially consistent with a recent study (Consoni et al., 2021) where none of the factor-scales of the cognitive-metacognitive dimension were associated with sport dropout rates, although this study considered only the definitive sports dropout ones. However, recent searches (Kim et al., 2024; Lee et al., 2023) observed the attention control strategies, although they were focused on the role and influence of attention management processes used by individuals in their past and adopted during cognitive processes, even when such strategies do not produce suboptimal performance. Further studies should be encouraged to deepen the effectiveness of the attention control strategies, especially in young people.

The positive association between learning competencies, academic achievement, and persistence in sports participation highlighted in this study could be confirmed by the cross-border and transferable nature of self-regulation processes from one field to the other one. This is consistent with Pierce et al. (2016), which affirmed that skills are functional when they can be developed through the experiences and transferred from one domain to other. Also transfer contexts fulfill an important environmental function, since they must implement optimal conditions that can foster or hinder the transfer of life skills (Allen & Rhind, 2018).

In addition, Zimmermann (1998) maintains that self-regulation mechanisms, even if learnt in formal study contexts, can be transversal in more settings, informal and non-formal (such as sports, music, and writing), because they displayed commonalities. This assumption allows the self-regulation process to be available in various situations throughout life, where people live different experiences. This linkage displays that the skills enhanced in the school setting and functional to the academic career may be also operational and applicable in the sports context for fulfilling sports career. Therefore, the enhancement of study and learning competencies during school fosters the acquisition of self-regulation processes (Zimmerman & Schunk, 2001). In the same way, self-regulation processes (based on the potential of personal resources) support the management of the dynamics and criticality related to sports practice and can sustain the sports persistence over time. Furthermore, these personal resources enable the person to self-direct and self-orient in the achievement of their own objectives, as they are a strategic component of the action planning (Nota et al., 2004).

The second hypothesis of the study was confirmed. The results revealed that the higher the number of critical values in affective motivational skills, the higher the number of students who dropped out of sports. A low level of these skills may negatively affect sports participation.

Since the study of the association between strategic learning skills and sports dropout rates is still poorly investigated, it can be indirectly hypothesized that students with a higher value of learning skills in the affective-motivational dimension are able to perform a not-definitive dropout from sports and continue in another sport/physical activity their sports career and redirect the one's personal choices by selecting a new sporting activity and persist in it. These skills refer to a wide range of self-regulation skills and their management can help the person to give purpose, direction, and perspective to their own actions (Pellerey, 2017). This suggests that, during adolescence, the lack of self-regulation strategies and the difficulty of managing personal dynamics, such as anxiety, emotional control, and self-efficacy, as well as the lack of motivation and perseverance, may be connected with abandonment from sports (Zhang et al., 2022). Therefore, it is thinkable that the competencies addressed in this study might have a connection in this association and affect the choice to abandon sports definitively/not definitively and/or to support per-

sistence in sport practice over time (Zhang et al., 2024). This is consistent with Young et al. (2023), who affirmed that self-regulated behaviors might affect the sport practice persistence. Furthermore, a reasonable similarity of the skills related to sports burnout processes with those ones explored in this study could allow to frame the latter in a reference theory (Morano et al., 2022). Therefore, people who display an internal locus of control are more incline to adopt health behavior and be persistent in practicing sport (Kesavayuth et al., 2020) and perceive their skill level as suitable and recognize themselves motivated. On the contrary, a low level of resilience-related skills (Sorkkila et al., 2019) –comparable to the volition-competence examined in this research–, high level of anxiety (Morano et al., 2022), and low perception of competence (Nicolosi et al., 2021) may represent friction factors in the process of dropout from sport. The deficit in these skills highlighted in the literature could correspond to the criticality level of the strategic learning skills in the affective-motivational dimension found in this research.

Additional outcomes revealed that the association between sports dropout rates and strategic learning skills was associated to nationality and gender, but not to age. Thus, the third hypothesis was partially confirmed. This suggests that additional elements of personal, cultural, and socio-environmental nature might be attrition factors and affect sport persistence/quitting. This is in accordance with the latest studies, which state that the development of a group of soft skills, like those addressed in this study (e.g., to be oriented to action, to be resilient, and to be assertive), may be affected by geographical and cultural context, cultural factors, such as scholastic curriculum/cultural background (Nasheeda et al., 2019; Ragusa et al., 2022). Besides the effect that emerged in the association between affective-motivational skills and dropout rates as a function of nationality, there were few comparable studies in the literature on this association. Fernández-Sanz et al. (2017) state that the ethnic minorities examined in their study, compared to the dominant ethnic groups, had less possibilities to develop soft skills, because they were economically and culturally disadvantaged. This may confirm that different cultural factors and contexts (e.g., socioeconomic disparities) could influence the development of strategic learning skills, since they are mainly acquired in the school context (Bann et al., 2019; Hippe et al., 2018). Further research is required to deep this assumption.

Additionally, Ariany et al. (2021) investigated the role played by age in the development of soft skills in high school and university students. From this study emerged that the mastery of soft skills increased in proportion to participants' age and this strengthened the self-efficacy.

Although the sample examined in this study did not reveal an association between age and learning skills, this outcome is in line with the study of Kirchhoff and Keller (2021). They stated that the development of a broad range of self-regulatory skills begins in childhood and continues throughout life. The onset of this process generally starts with entering school in most cultures (Sameroff, 2010). However, during adolescence, it is crucial to promote the learning of these self-regulating skills due to the multifaceted developmental dynamics that also concern the adoption of correct and healthy lifestyles. Therefore, age is not a discriminating factor in the development of these skills because their improvement is a gradual and continuous process over time (Unicef, 2019).

Further outcomes revealed a gender effect in males. This is consistent with a recent study which declared that males are more likely to develop soft skills, as they are more engaged in extracurricular activities (Siddiky, 2020). On the contrary, females showed a lower level of soft skills and this was related to gender stereotypes (Ladrón de G. R. et al., 2023).

The large size of the sample ($N = 2{,}391$), the sampling stratified procedure, and the similarity of the socio-economic level of the city territory where the selected institutes are placed enhanced the extensibility of the results, limiting the influence of other potential covariation factors. However, a more balanced sample between Italian/Spanish, male/female, including other students with low socioeconomic backgrounds, could ensure a stronger cross-country interpretation of the data. These results call for other research that can further analyze the strategic role of functional skills in multiple domains as mediating factors in the prevention of the dropout phenomenon, even in multiple socio-cultural contexts.

Practical implications

The observed evidence encourages the deepening of learning practices and method systems focused on the acquirement of self-regulating competencies, such as strategic learning skills in the school context. School curricula should involve also a focus on these skills in wider areas of schooling, in addition to the specific aims of individual school subjects.

Hence, according to the literature (Chiappetta Cajola et al., 2020; Ottone, 2014), schools may implement specific and calibrated work plans to their educational reality. General directions to enact practical interventions aimed at improving self-perception, self-reflection, self-awareness, and comparison between equals about the study routines and/or the criticality events related to school assignments may be systematized. To this end, teachers could perform target strategies during teaching and/or training processes based on processes and situations common to athletes, such as goal achievement, motivation and volition, perceived competence, anxiety state, time management, self-monitoring/evaluation, etc. (Zimmermann, 1998). Since these self-regulation mechanisms present similarities both in school and in sports settings, developing strategic learning skills during education may foster adherence in sports practice.

Conclusions

The development of strategic learning skills during schooling can be a support for improving the internal potential of the person. This becomes the fundamental prerequisite for a productive management of one's abilities aimed at self-realization and well-being of the person. This process increases knowledge and awareness of one's skills related to cognitive, meta-cognitive,

affective, and motivational processes. Moreover, the school role may improve these skills in students as they progress through school, which is essential and crucial and can create the basis for a healthy lifestyle (Kirchhoff & Keller, 2021; Singla et al., 2020). Therefore, the improvement of this internal potential becomes the fundamental prerequisite for the productive management of one's abilities aimed at self-realization and well-being of the person.

Author contributions

Conceptualization: C.C.
Data curation: C.C.
Formal analysis: C.C.
Investigation: C.C.
Visualization: C.C.
Writing – Original draft: C.C.
Writing – Review & editing: C.C.

Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Acknowledgments

I thank Dr. Caterina Pesce for her valuable contribution to the preliminary study that started this wider research work and Dr. Domenico Cherubini as first director of my doctoral thesis at UCAM. I also thank Chiara Rossello for providing linguistic and statistical help.

Declaration of interests

The author declares that there is no conflict of interest.

Data availability statement

The data that support the findings of this study are available on request from the corresponding author.

References

Ahmed, S. F., Tang, S., Waters, N. E., & Davis-Kean, P. (2019). Executive function and academic achievement: Longitudinal relations from early childhood to adolescence. *Journal of Educational Psychology*, *111*(3), 446-458. https://doi.org/10.1037/edu0000296

Allen, G., & Rhind, D. (2018). Taught not caught: Exploring male adolescent experiences of explicitly transferring life skills from the sports hall into the classroom. *Qualitative Research in Sport, Exercise and Health*, *11*(2), 188-200. https://doi.org/10.1080/2159676X.2018.1519717

Aryani, F., Wirawan, H., Saman, A., Samad, S., & Jufri, M. (2021). From high school to workplace: Investigating the effects of soft skills on career engagement through the role of psychological capital in different age groups. *Education + Training*, *63*(9), 1326-1345. https://doi.org/10.1108/ET-03-2021-0087

Balk, Y. A., & Englert, C. (2020). Recovery self-regulation in sport: Theory, research, and practice. *International Journal of Sports Science & Coaching*, *15*(2), 273-281. https://doi.org/10.1177/1747954119897528

Bann, D., Scholes, S., Fluharty, M., & Shure, N. (2019). Adolescents' physical activity: Cross-national comparisons of levels, distributions and disparities across 52 countries. *International Journal of Behavioral Nutrition and Physical Activity*, *16*, Article 141. https://doi.org/10.1186/s12966-019-0897-z

Barrington-Leigh, C. (2021). *How does the science of wellbeing inform an education strategy across the life course?* Institute for Health and Social Policy.

Battaglia, A., Kerr, G., & Tamminen, K. (2021). A grounded theory of the influences affecting youth sport experiences and withdrawal patterns. *Journal of Applied Sport Psychology*, *34*(4), 780-802. https://doi.org/10.1080/10413200.2021.1872732

Chen, S., Li, X., Yan, J., & Ren, Z. (2021). To be a sportsman? Sport participation is associated with optimal academic achievement in a nationally representative sample of high school students. *Frontiers in Public Health, 9,* Article 730497. https://doi.org/10.3389/fpubh.2021.730497

Chiappetta Cajola, L., Traversetti, M., & Rizzo, A. L. (2020). Strategie di apprendimento e allievi con bisogni educativi speciali. Alcuni dati di ricerca nella scuola primaria. In M. Pellerey, M. Margottini & E. Ottone (Eds.), *Dirigere se stessi nello studio e nel lavoro. Competenzestrategiche.it: strumenti e applicazioni* (pp. 67-76). RomaTre-Press. https://doi.org/10.13134/979-12-80060-75-4/25

Consoni, C., Pesce, C., & Cherubini, D. (2021). Early drop-out from sports and strategic learning skills: A cross-country study in Italian and Spanish students. *Sports*, *9*(7), Article 96. https://doi.org/10.3390/sports9070096

Corder, K., Winpenny, E., Love, R., Brown, H. E., White, M., & Van Sluijs, E. (2019). Change in physical activity from adolescence to early adulthood: A systematic review and meta-analysis of longitudinal cohort studies. *British Journal of Sports Medicine*, *53*(8), 496-03. https://doi.org/10.1136/bjsports-2016-097330

Eime, R. M., Harvey, J. T., Charity, M. J., Casey, M. M., Westerbeek, H., & Payne, W. R. (2016). Age profiles of sport participants. *BMC Sports Science, Medicine and Rehabilitation*, *8*, Article 6. https://doi.org/10.1186/s13102-016-0031-3

Eime, R. M., Harvey, J. T., & Charity, M. J. (2019). Sport drop-out during adolescence: Is it real, or an artefact of sampling behaviour? *International Journal of Sport Policy*, *11*(4), 715-726. https://doi.org/10.1080/19406940.2019.1630468

Espedalen, L. E., & Seippel, Ø. (2022). Dropout and social inequality: Young people's reasons for leaving organized sports. *Annals of Leisure Research*, *27*(2), 197-214. https://doi.org/10.1080/11745398.2022.2070512

Fernández-Sanz, L., Villalba, M. T., Medina, J. A., & Misra, S. (2017). A study on the key soft skills for successful participation of students in multinational engineering education. *International Journal of Engineering Education*, *33*(6), 2061-2070.

Furley, P., Schütz, L. M., & Wood, G. (2023). A critical review of research on executive functions in sport and exercise. *International Review of Sport and Exercise Psychology*, 1-29. https://doi.org/10.1080/1750984X.2023.2217437

García-González, L., Abós, Á., Sevil-Serrano, J., Sanz-Remacha, M., & González-Cutre, D. (2022). *Cómo motivar en Educación Física: Aplicaciones prácticas para el profesorado desde la evidencia*

científica. Prensas de la Universidad de Zaragoza. https://doi.org/10.26754/uz.978-84-18321-22-1

Goudas, M., Dermitzaki, I., & Kolovelonis, A. (2017). Self-regulated learning and students' metacognitive feelings in physical education. *International Journal of Sport and Exercise Psychology*, *15*(2), 131-145. https://doi.org/10.1080/1612197X.2015.1079791

Hellín, P., Moreno, J. A., & Rodríguez, P. L. (2004). Motivos de práctica físico-deportiva en la Región de Murcia. *Cuaderno de Psicología del Deporte*, *4*(1-2), 101-115.

Kendellen, K., & Camiré, M. (2015). Examining the life skill development and transfer experiences of former high school athletes. *International Journal of Sport and Exercise Psychology*, *15*(4), 395-408. https://doi.org/10.1080/1612197X.2015.1114502

Kesavayuth, D., Poyago-Theotoky, J., & Zikos, V. (2020). Locus of control, health and healthcare utilization. *Economic Modelling*, *86*, 227-238. https://doi.org/10.1016/j.econmod.2019.06.014

Kim, A. J., Lee, D. S., Grindell, J. D., & Anderson, B. A. (2024). Selection history and the strategic control of attention. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 50*(2), 204-211. https://doi.org/10.1037/xlm0001194

Kirchhoff, E., & Keller, R. (2021). Age-specific life skills education in school: A systematic review. *Frontiers in Education, 6*, Article 660878. https://doi.org/10.3389/feduc.2021.660878

Ladrón de Guevara Rodríguez, M., Marcenaro-Gutierrez, O. D., & Lopez-Agudo, L. A. (2023). On the gender gap of soft-skills: The Spanish case. *Child Indicators Research*, *16*(1),167-197. https://doi.org/10.1007/s12187-022-09966-w

Lee, D. S., & Anderson, B. A. (2023). Selection history contributes to suboptimal attention strategies. *Psychonomic Bulletin & Review, 30*(5), 1866-1873. https://doi.org/10.3758/s13423-023-02285-3

Logan, K., Lloyd, R. S., Schafer-Kalkhoff, T., Khoury, J. C., Ehrlich, S., Dolan, L. M., Shah, A.S., & Myer, G. D. (2020). Youth sports participation and health status in early adulthood: A 12-year follow-up. *Preventive Medicine Reports*, *19*, Article 101107. https://doi.org/10.1016/j.pmedr.2020.101107

Margottini, M. (2018). Validazione del QSA Ridotto. In M. Pellerey (Ed.), *Strumenti e metodologie di orientamento formativo e professionale nel quadro dei processi di apprendimento permanente* (pp. 257-304). Centro Nazionale Opere Salesiane - Formazione Aggiornamento Professionale.

Monteiro, D., Marinho, D., Moutão, J., Vitorino, A., Antunes, R., & Cid, L. (2018). Reasons for dropout in swimmers, differences between gender and age and intentions to return to competition. *The Journal of Sports Medicine and Physical Fitness*, *58*, 180-192. https://doi.org/10.23736/S0022-4707.17.06867-0

Morano, M., Robazza, C., Ruiz, M. C., & Bortoli, L. (2022). Sport participation in early and middle adolescence: The interplay between self-perception and psychobiosocial experiences in predicting burnout symptoms. *Frontiers in Psychology*, *13*, Article 855179. https://doi.org/10.3389/fpsyg.2022.855179

Moulds, K., Galloway, S., Abbott, S., & Cobley, S. P. (2022). Youth sport dropout according to the Process-Person-Context-Time model: A systematic review. *International Review of Sport and Exercise Psychology*, *17*(1), 440-481. https://doi.org/10.1080/1750984X.2021.2012817

Muijs, D., & Bokhove, C. (2020). *Metacognition and Self-Regulation: Evidence Review.* Education Endowment Foundation.

Nasheeda, A., Abdullah, H. B., Krauss, S. E., & Ahmed, N. B. (2019). A narrative systematic review of life skills education: Effectiveness, research gaps and priorities. *International Journal of Adolescence and Youth*, *24*(3), 362-379. https://doi.org/10.1080/02673843.2018.1479278

Nicolosi, S., Ortega Ruiz, R., & Benitez Sillero, J. D. D. (2021). Achievement goal orientations and perceived physical competence profiles in adolescent physical activity. *Psychology, Society & Education*, *13*(1), 27-47. https://doi.org/10.21071/psye.v13i1.13983

Nota, L., Soresi, S., & Zimmerman, B. J. (2004). Self-regulation and academic achievement and resilience: A longitudinal study. *International Journal of Educational Research*, *41*(3), 198-215. https://doi.org/10.1016/j.ijer.2005.07.001Get rights and content

Ottone, E. (2014). *Apprendo*. Anicia.

Pellerey, M. (2017). *Soft skill e orientamento professionale*. Centro Nazionale Opere Salesiane - Formazione Aggiornamento Professionale.

Pierce, S., Gould, D., & Camiré, M. (2016). Definition and model of life skills transfer. *International Review of Sport and Exercise Psychology*, *10*(1), 186-211. https://doi.org/10.1080/1750984X.2016.1199727

Ragusa, A., Caggiano, V., Trigueros Ramos, R., González-Bernal, J. J., Gentil-Gutiérrez, A., Bastos, S. A. M. C., González-Santos, J., & Santamaría-Peláez, M. (2022). High education and university teaching and learning processes: Soft skills. *International Journal of Environmental Research and Public Health*, *19*(17), Article 10699. https://doi.org/10.3390/ijerph191710699

Rullestad, A., Meland, E., & Mildestvedt, T. (2021). Factors predicting physical activity and sports participation in adolescence. *Journal of Environmental and Public Health*, *2021*(1). Article 9105953. https://doi.org/10.1155/2021/9105953

Sáez, I., Solabarrieta, J., & Rubio, I. (2021). Reasons for sports-based physical activity dropouts in university students. *International Journal of Environmental Research and Public Health*, *18*(11), Article 5721. https://doi.org/10.3390/ijerph18115721

Sameroff, A. (2010). A unified theory of development: A dialectic integration of nature and nurture. *Child Development*, *81*(1), 6-22. https://doi.org/10.1111/j.1467-8624.2009.01378.x

Schmid, J., Gut, V., Yanagida, T., & Conzelmann, A. (2019). Who stays on? The link between psychosocial patterns and changes in exercise and sport behaviour when adolescents make transitions in education. *Applied Psychology: Health and Well-Being*, *12*(2), 312-334. https://doi.org/10.1111/aphw.12186

Siddiky, M. R. (2020). Does soft skill development vary among the students? A gender perspective. *Turkish Journal of Education*, *9*(3), 205-221. https://doi.org/10.19128/turje.658198

Singla, D. R., Waqas, A., Hamdani, S.U., Suleman, N., Zafar, S. W., Zill-E-Huma, Saeed, K., Servili, C., & Rahman, A. (2020). Implementation and effectiveness of adolescent life skills programs in low-and middle-income countries: A critical review and meta-analysis. *Behaviour Research and Therapy*, *130*, Article 103402. https://doi.org/10.1016/j.brat.2019.04.010

Sorkkila, M., Tolvanen, A., Aunola, K., & Ryba, T.V. (2019). The role of resilience in student-athletes' sport and school burnout and dropout: A longitudinal person-oriented study. *Scandinavian Journal of Medicine & Science in Sports*, *29*(7), 1059-1067. https://doi.org/10.1111/sms.13422

Stambulova, N. B., Ryba, T. V., & Henriksen, K. (2021). Career development and transitions of athletes: The international society of sport psychology position stand revisited. *International Journal of Sport and Exercise Psychology*, *19*(4), 524-550. https://doi.org/10.1080/1612197X.2020.1737836

Unicef. (2019). *Global framework on transferable skills*. www.unicef.org/education

Van Houten, J. M., Kraaykamp, G., & Pelzer, B. J. (2019). The transition to adulthood: A game changer!? A longitudinal analysis of the impact of five major life events on sport participation. *European Journal for Sport and Society*, *16*(1), 44-63. https://doi.org/10.1080/16138171.2019.1603832

Young, B. W., Wilson, S. G., Hoar, S., Bain, L., Siekańska, M., & Baker, J. (2023). On the self-regulation of sport practice: Moving the narrative from theory and assessment toward practice. *Frontiers in Psychology*, *14*, Article 1089110. https://doi.org/10.3389/fpsyg.2023.1089110

Zhang, M., Wang, X. C., & Shao, B. (2022). Predictors of persistent participation in youth sport: A systematic review and meta-analysis. *Frontiers in Psychology*, *13*, Article 871936. https://doi.org/10.3389/fpsyg.2022.871936

Zhang, Y., Wang, F., Szakál, Z., Bíró, Z., Kovács, M., Őrsi, B., & Kovács, K. E. (2024). Why do students drop out of regular sport in late adolescent? The experience of a systematic review. *Frontiers in Public Health*, *12*, Article 1416558. https://doi.org/10.3389/fpubh.2024.1416558

Zimmerman, B. J. (1998). Academic studing and the development of personal skill: A self-regulatory perspective. *Educational Psychologist*, *33*(2-3),73-86. https://doi.org/10.1080/00461520.1998.9653292

Zimmerman, B. J., & Schunk, D. H. (2001). *Self-regulated learning and academic achievement: theoretical perspectives*. Routledge. https://doi.org/10.4324/9781410601032

Carla Consoni

The role of strategic learning skills in the dropout from sport in adolescence
La función de las habilidades estratégicas de aprendizaje en el abandono deportivo en la adolescencia

Psychology, Society & Education
vol. 17, no. 1, p. 41 - 50, 2025
Universidad de Córdoba,
ISSN: 2171-2085

DOI: https://doi.org/10.21071/psye.v17i1.17549