Where Did All the Sport Go? Negative Impact of COVID-19 Lockdown on Life-Spheres and Mental Health of Spanish Young Athletes

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During the 2020, the pandemic caused by the massive spread of the SARS-CoV-2 coronavirus (COVID-19) resulted in a global crisis. In Spain, the COVID-19 pandemic caused a lockdown for almost 100 days and forced the sudden stop of sport practices and competitions. This interruption had a negative impact on high-level athletes' mental health. However, its impact on young athletes, who are intrinsically developing a high-demanding dual career, remains unclear. Therefore, this study aimed at (1) describing and characterizing the general impact that COVID-19 lockdown had on Spanish young athletes' life-spheres and mental health, and (2) identifying different profiles of athletes regarding life-conditions and sport-related variables. A sample of 544 young athletes (M = 15.9; SD = 1.51) participated in this study. Measures included life-conditions and sport-related information along with the Holistic Monitoring Questionnaire (HMQ) and the General Health Questionnaire (GHQ-12). After the screening and description of the data, profiles were defined using a two-level cluster analysis using HMQ and GHQ-12 subscales. We explored differences in demographic and sports information between profiles using MANOVA and subsequent ANOVA. Results suggest a general negative impact of COVID-19 on young athletes' life-spheres and mental health, but with three different clusters regarding the degree of such impact. Cluster 1 grouped the 54.78% of the sample and exhibited a low negative impact of COVID-19 lockdown on life-spheres and few mental health issues. Cluster 2 grouped a 29.96% of the participants who reported a medium negative impact on life-spheres and moderate mental health issues. Cluster 3 represented 15.26% of the sample including participants who showed a high negative impact of the COVID-19 lockdown with high mental health issues. The paradigmatic participant in this third group would be a female student-athlete from a medium or low socioeconomic status with high academic demands and poor or inexistent training conditions during lockdown. Current findings emphasize the need to pay attention to young athletes' mental health and suggest possible influencing contextual variables. We suggest some applied recommendations aimed at helping clubs and sports institutions to mitigate the negative effects of such difficult circumstances on athletes' mental health.

Keywords: SARS-CoV-2, student-athletes, holistic approach, adolescent, cluster analysis, wellbeing

INTRODUCTION

The year 2020 will remain in History as the year of the coronavirus (COVID-19) outbreak. The COVID-19 pandemic[1] caused a global crisis with social, political, and economic consequences. In Spain, one of the countries where the pandemic hit harder,[2] a state of alarm was declared on March 14, letting the population on lockdown and with most of the regular activities restricted for almost 100 days. Young athletes remained without practices and competitions for months.

According to the experts in the field, mobility restrictions and social isolation policies developed during COVID-19 lockdown could have a negative impact on population mental health (e.g., Brooks et al., 2020; Papaioannou et al., 2020). Early evidence seems to confirm these predictions (Chen et al., 2020). In Spain, González-Sanguino et al. (2020) observed that between 15.8 and 21.6% of the general population showed depressive, anxious, and/or post-traumatic symptoms during the first month of confinement. However, to complement these general results, there is a need to understand better the consequences of the COVID-19 pandemic within the sports context.

Research addressing the impact of this pandemic in sports identified specific challenges for athletes' mental health during the lockdown, such as the difficulty in keeping training conditions (Pillay et al., 2020), the social distancing from teammates (Graupensperger et al., 2020), and the uncertainty regarding the delay or cancelation of future competitions (Samuel et al., 2020). Despite most of these challenges are common for athletes of all ages and levels, research has mainly focused on high performance, professional, and/or Olympic/Paralympic athletes (see also Schinke et al., 2020a,b; Stambulova et al., 2020), letting youth sports' reality underexplored.

Youth sport is characterized by youngsters intrinsically developing a dual career (i.e., academic education and sport combination) that requires an adequate balance of sports, academic, psychological, psychosocial, financial, and legal challenges (Wylleman, 2019). This is considered a high demanding stage that requires both high personal competencies (Miró et al., 2018; Perez-Rivases et al., 2020) and a supportive environment (Morris et al., 2020). Previous research has warned about the negative consequences that a non-successful dual career might have for athletes' mental health (Sallen et al., 2018; Sorkkila et al., 2020), highlighting the need to approach this by taking a holistic approach (e.g., Wylleman and Lavallee, 2004; Wylleman, 2019) that captures both indirect (e.g., impact on life-spheres) and direct (e.g., anxiety/depression and social dysfunction) indicators of athletes' mental health.

Considering the changes that COVID-19 lockdown meant for young athletes' dual career (i.e., new academic reality, practices and competitions canceled, and social distance from peers), and the lack of resources in certain athletic environments for youngsters developing a dual career in Spain (Mejías et al., 2020), it is needed to understand the complexity of the recent confinement in youth sport. Concretely, the aim of this study was two-fold: (1) to describe and characterize the general impact that COVID-19 lockdown had on Spanish young athletes' life-spheres and mental health and (2) to identify different profiles of athletes regarding these target variables along with their life-conditions and sport-related characteristics.

MATERIALS AND METHODS

Participants

A total of 833 athletes participated in this study. After applying the inclusion (i.e., having between 13 and 18 years) and exclusion (i.e., not completing the full survey or completing it in less than 3 min) criteria, the final sample consisted of 544 athletes (M_{age} = 15.9; SD = 1.51; ♀ = 48.5%). Participants were lower secondary school (63.2%), upper secondary school (27.8%), or tertiary education students (9.0%). The sample was composed of athletes having from 1 to 15 years of sports experience ($M_{experience}$ = 7.11; SD = 3.11), competing at regional (38.1%), autonomic (32.5%), national (23.0%), or international level (6.4%). Most athletes reported having an average (58.6%) or good (32.2%) socioeconomic level and living in a home (50.6%) or flat (33.5%) with garden or courtyard. Nearly all participants (98.9%) stayed with their families during the COVID-19 lockdown. When answering the questionnaire, all of them had accumulated between 50 and 100 days of confinement (M_{days} = 72.71; SD = 12.03).

Measures

Demographic and Sports Information

An *ad hoc* survey was created to assess relevant information for the objectives of this study. This survey was composed of items evaluating (a) life-conditions during COVID-19 lockdown (i.e., perceived socioeconomic level, academic course, number of co-habitants at home, and physical activity levels) and sport-related characteristics (i.e., years of sporting experience, competitive level, training conditions, and perceived support by the club and/or sports institutions).

Negative Impact of COVID-19 Lockdown on Life-Spheres

Impact of lockdown on athletes' life-domains was assessed using the Holistic Monitoring Questionnaire (HMQ; De Brandt et al., 2019). This questionnaire contains 11 items that evaluate the perceived impact of certain events, in this case the COVID-19 lockdown, on athletes' different life-spheres (e.g., "Please, rate the impact that the COVID-19 situation is having on your different life domains"). The HMQ is divided into four different life-spheres: (1) Dual career (i.e., studies, sport, social life, and the combination of these three areas); (2) Health (i.e., physical health, mental health, mood, and well-being); (3) Rest and recovery (i.e., sleep quality and recovery from training sessions); and (4) Economy (i.e., financial situation). Due to the characteristics

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of the participants of this study (i.e., economic dependence from their parents), the financial situation item was not included. All items were rated on a 5-point Likert-style scale from 1 (*very positive impact*) to 5 (*very negative impact*). Cronbach's alpha coefficient showed acceptable-to-good reliability indicators for dual career ($\alpha = 0.74$), health ($\alpha = 0.81$), and rest and recovery ($\alpha = 0.85$) subscales. Confirmatory factor analysis showed acceptable model fit indicators, with $\chi^2(32) = 203.55$, $p < 0.001$, RMSEA = 0.098, 90% CI (0.085, 0.111), CFI = 0.973, and TLI = 0.961.

Mental Health Issues

We used the Spanish version of the General Health Questionnaire-12 (GHQ-12; Goldberg et al., 1997; Sánchez-López and Dresch, 2008). This 12-item self-administered questionnaire screens different symptoms that are indicative of a poor mental health. Respondents must select the option that better fits their degree of agreement in a 7-point Likert scale from 1 (*strongly disagree*) to 7 (*strongly agree*). Following past research with similar samples (e.g., Padrón et al., 2012), items were grouped into (1) anxiety and depression, (2) social dysfunction, and (3) loss of confidence subscales. We reworded the stem of the questionnaire to adapt it to the aims of this study (i.e., "during last few weeks under the situation of confinement…"). Cronbach's alpha coefficient reported acceptable levels of reliability, with values of 0.79, 0.76, and 0.80, respectively. Confirmatory factor analysis presented acceptable model fit indices, with $\chi^2(51) = 309.06$, $p < 0.001$, RMSEA = 0.096, 90% CI (0.086, 0.107), CFI = 0.949, and TLI = 0.933.

Procedure

After obtaining the approval of the University ethics committee (reference 4996), we designed an online tool with the aforementioned questionnaires using LimeSurvey software. A total of 30 sport clubs and sports institutions with different sports characteristics (i.e., number of athletes, competition level, and sport type) were invited to participate in this study using a convenience sampling strategy. Twenty-six of them agreed to participate. We did not detect any common pattern between entities that declined to participate in the study. For those entities that agreed to participate, we asked them to share with their athletes the link to the survey and some relevant information about the research (e.g., invitation letter, survey instructions, and contact information). All participants signed an informed consent and were informed about the confidential and voluntary nature of the study and the absence of any kind of reward to participate. As a gratitude for their help, a global report with the main findings of the study was sent to that all entities that participated in the data collection.

Data Analysis

All analyses were conducted using SPSS 19.0 statistical package. Preliminary data analysis included the examination of the missing data patterns and multivariate outliers. Listwise deletion method was used to deal with missing data. Accordingly, partial responses were not considered in this study. Cases with responses outside the three interquartile ratio thresholds were also deleted (Hoaglin and Iglewicz, 1987). Afterwards, we calculated the descriptive statistics of the whole dataset, including means, standard deviations, bivariate correlations using Pearson's correlation coefficient, and reliability using Cronbach's alpha coefficient. Such descriptive analyses provided an overall understanding of Spanish young athletes during lockdown.

Next, we used the cluster analysis technique to characterize the different athletes depending on the impact that COVID-19 lockdown had on them. This characterization was conducted following the next steps: (1) we selected subscales of HMQ and GHQ-12 as clustering variables. Then, (2) we transformed the clustering variables into z-scores and (3) we combined both hierarchical and non-hierarchical cluster analysis in order to obtain a more stable solution (see Hair et al., 2010). Hierarchical cluster analysis was calculated using Ward's linkage and squared Euclidean distance. The number of clusters was derived from the visual inspection of the dendrogram and the Bayesian and Akaike Information Criteria (BIC and AIC; Akaike, 1974). The resulting cluster centers were used as starting points for the k-means cluster analysis, which tests the adequacy of a specified cluster solution. Such analyses identified different profiles of young athletes regarding the impact that COVID-19 had on their life.

Last, to approach the second aim of the study, we compared different life-conditions and sport-related variables between the resulting clusters. For categorical data, we used Pearson's Chi-square test and Fisher's exact test (when contingency tables contained at least a cell with less than five cases) with Monte Carlo iteration method. This test was computed considering the need to correct the value of p when conducting multiple comparisons ($p = 0.017$). For numeric data, we first used MANOVA to test whether compared groups differed in the explored dependent variables. Subsequently, we conducted ANOVA with *post-hoc* test comparisons using Games-Howell procedure to evaluate the differences between clusters in life-conditions and sport-related variables.

RESULTS

Descriptive Statistics

Descriptive statistics are presented in **Table 1**. Overall, results indicate that athletes reported that COVID-19 lockdown had a negative impact on their life-spheres and mental health. Regarding the different life-spheres, this impact seems to be more negative on dual career ($M = 3.6$; $SD = 0.7$; Rank = 1–5) and health domains ($M = 3.3$; $SD = 0.7$; Rank = 1–5) than in the rest and recovery domain ($M = 2.9$; $SD = 1.0$; Rank = 1–5). For mental health issues, young athletes reported, on average, higher anxious/depressive ($M = 3.5$; $SD = 1.0$; Rank = 1–7) and social dysfunction ($M = 3.5$; $SD = 1.5$; Rank = 1–7) symptoms in comparison with loss of confidence ($M = 2.6$; $SD = 1.7$; Rank = 1–7). Descriptive results also indicate positive correlations between life-spheres and mental health, with ranging magnitudes from 0.13 to 0.59 among them. Notably, social dysfunction showed

TABLE 1 | Descriptive statistics of negative impact of COVID-19 on life-spheres and mental health issues.

	M	SD	Range	α	1	2	3	4	5	6
Negative impact of COVID-19 lockdown on life-spheres										
1. Dual career	3.59	0.74	1–5	0.74	-					
2. Health	3.27	0.68	1–5	0.81	0.633*	-				
3. Rest and recovery	2.92	0.99	1–5	0.85	0.204*	0.364*	-			
Mental health issues										
4. Anxiety and depression	3.46	1.04	1–7	0.79	0.180*	0.418*	0.273*	-		
5. Social dysfunction	3.53	1.50	1–7	0.76	0.428*	0.580*	0.263*	0.492*	-	
6. Loss of confidence	2.61	1.67	1–7	0.80	0.128*	0.375*	0.209*	0.600*	0.509*	-

Bivariate correlations were computed using Pearson's coefficient. *p < 0.001.

to be the most correlated factor with the negative impact on life-spheres subscales (dual career: $r = 0.43$, health: $r = 0.58$, rest and recovery: $r = 0.26$).

Cluster Analysis

Results from the hierarchical cluster analysis suggested the three-cluster solution as the most suitable (see **Figure 1** and **Table 2**). This structure was subsequently confirmed by the non-hierarchical k-means analysis and was considered as theoretically satisfactory. The MANOVA suggested the existence of significant differences between groups in all clustering variables (Pillai's trace = 0.95; $p < 0.001$). The resulting profiles were labeled as *low impact*, *medium impact*, and *high impact* clusters. Overall, these three profiles present differences in the way that COVID-19 lockdown impacted on athletes' life-spheres and mental health. For most of the participants, the impact was low or medium, but there was also a considerable group of athletes that reported important negative consequences. Concretely, the 54.78% of the sample ($n = 298$) belong to the *low impact* cluster, the 29.96% of the sample ($n = 163$) to the *medium impact* cluster, and the 15.26% of the sample ($n = 83$) to the *high-impact* cluster.

The *low impact* cluster included those athletes who reported a small negative impact of COVID-19 on life-spheres (dual career: $Z = -0.47$, health: $Z = -0.54$, rest and recovery: $Z = -0.18$) and few mental health issues (anxiety and depression: $Z = -0.47$, social dysfunction: $Z = -0.55$, loss of confidence: $Z = -0.44$). Second, the *medium impact* cluster contained those athletes who reported a medium negative impact of COVID-19 lockdown on life-spheres (dual career: $Z = 0.61$, health: $Z = 0.48$; rest and recovery: $Z = 0$) and moderate mental health issues (anxiety and depression: $Z = 0.20$, social dysfunction: $Z = 0.47$, loss of confidence: $Z = -0.03$). Finally, the *high impact* cluster included those athletes who reported a considerable negative impact of COVID-19 lockdown on life-spheres (dual career: $Z = 0.48$, health: $Z = 1.01$; rest and recovery: $Z = 0.67$) and high mental health issues (anxiety and depression $Z = 1.31$, social dysfunction $Z = 1.04$, loss of confidence $Z = 1.62$).

Differences Between Clusters

We compared the groups derived from the cluster analysis considering life-conditions and sports-related information to further characterize each observed profile (see **Tables 3A** and **3B**).

The three clusters presented no differences regarding the number of cohabitants during lockdown, physical activity levels before the pandemic, years of sports experience, and competitive level. However, these three groups differed in terms of gender, socioeconomic level, academic course, physical activity and training conditions during lockdown, and perceived support from sport clubs or institutions ($p < 0.05$). *Post-hoc* comparisons between groups showed that, compared to *low impact* and *medium impact* clusters, athletes in the *high impact* cluster were predominantly (72.0%) women ($p_{1-3} < 0.001$, $p_{2-3} = 0.005$) reporting a lower socioeconomic level ($p_{1-3} = 0.001$, $p_{2-3} = 0.006$), a higher academic course ($p_{1-3} < 0.001$, $p_{2-3} = 0.057$), and worse training conditions under lockdown ($p_{1-3} = 0.008$, $p_{2-3} = 0.098$). As illustrated in **Tables 3A** and **3B**, these differences are especially evident between *low impact* and *high impact* groups.

DISCUSSION

This study aimed at better understanding the impact of confinement on young athletes by (1) describing and characterizing the general impact of COVID-19 lockdown on Spanish young athletes' life-spheres and mental health and (2) identifying different profiles of athletes regarding these target variables along with their life-conditions and sport-related characteristics. Globally, results showed a negative impact of COVID-19 lockdown on the sample, but with three different profiles regarding the degree of such impact. Especially, the *high impact* cluster showed a substantial negative effect of confinement on young athletes' life-spheres and mental health. In comparison with the other two groups, this cluster is mostly composed of female athletes, with a lower socioeconomic level, higher academic course, and worse training conditions under lockdown. The present results expand the previous knowledge about the COVID-19 pandemic by providing new insights on the mental health status of young athletes, a frequently underexplored population in mental health research.

Descriptive results show a negative impact of COVID-19 lockdown on athletes' life-spheres and mental health, being the dual career factor the most negatively affected. This finding is in line with the predictions about the negative consequences of confinement (Brooks et al., 2020; Papaioannou et al., 2020), and the importance of an adequate dual career balance for mental health (Schinke et al., 2017). Similar results were found in early evidence exploring
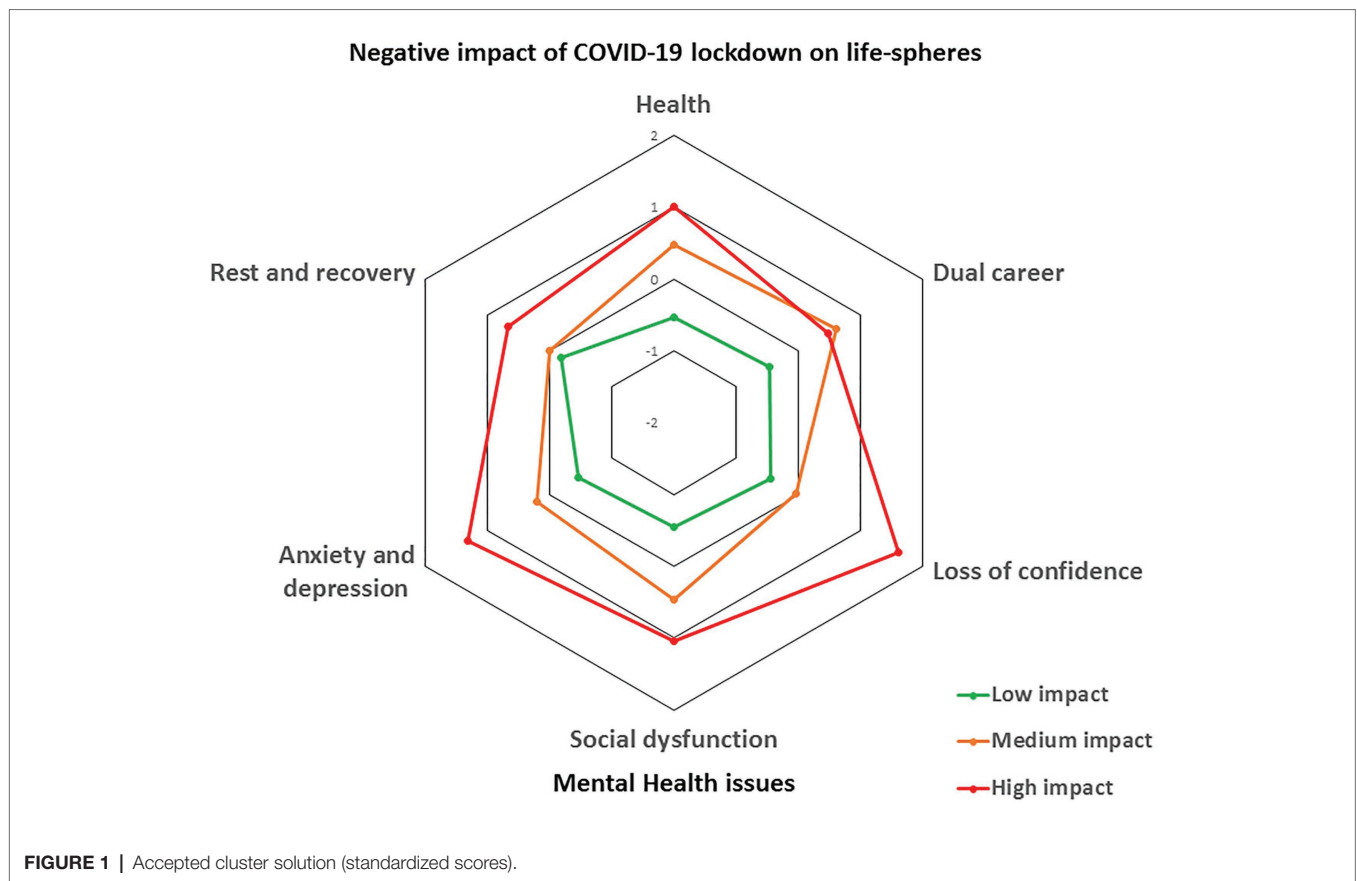
FIGURE 1 | Accepted cluster solution (standardized scores).

TABLE 2 | Standardized and non-standardized scores in the clustering variables of the accepted cluster solution.

	Cluster 1 (n = 298): low impact		Cluster 2 (n = 163): medium impact		Cluster 3 (n = 83): high impact		F	p
	Z-scores	Raw scores	Z-scores	Raw scores	Z-scores	Raw scores		
Negative impact of COVID-19 lockdown on life-spheres								
Dual career	−0.47 (0.06)[c2c3]	3.25 (0.04)	0.61 (0.04)[c1]	4.04 (0.03)	0.48 (0.08)[c1]	3.95 (0.06)	97.93	**<0.001**
Health	−0.54 (0.05)[c2c3]	2.90 (0.04)	0.48 (0.05)[c1c3]	3.60 (0.03)	1.01 (0.07)[c1c2]	3.96 (0.05)	171.00	**<0.001**
Rest and recovery	−0.18 (0.05)[c3]	2.74 (0.05)	0.00 (0.09)[c3]	2.92 (0.08)	0.67 (0.11)[c1c2]	3.58 (0.11)	25.66	**<0.001**
Mental health issues								
Anxiety and depression	−0.47 (0.05)[c2c3]	2.82 (0.08)	0.20 (0.05)[c1c3]	3.83 (0.08)	1.31 (0.06)[c1c2]	5.50 (0.09)	179.55	**<0.001**
Social dysfunction	−0.55 (0.04)[c2c3]	2.89 (0.04)	0.47 (0.06)[c1c3]	3.95 (0.07)	1.04 (0.10)[c1c2]	4.55 (0.10)	176.08	**<0.001**
Loss of confidence	−0.44 (0.04)[c2c3]	1.88 (0.07)	−0.03 (0.06)[c1c3]	2.56 (0.09)	1.62 (0.07)[c1c2]	5.31 (0.12)	276.79	**<0.001**

C1, Cluster 1; C2, Cluster 2; C3, Cluster 3. Boldface indicates inter-group significant differences. Superscripts indicate intra-group significant differences using Games-Howell post-hoc test.

the impact of COVID-19 lockdown in similar samples (di Fronso et al., 2020; Pillay et al., 2020). However, Clemente-Suárez et al. (2020) reported no effects on Spanish Olympic athletes' mental health during the first month of confinement. The differences between studies are probably due to the diverse characteristics of the samples (i.e., as pointed by the authors, Olympic athletes are more used to cope with challenging situations) and to the number of days of confinement when participating in each study.

Results from cluster analysis indicate differences regarding how young athletes experienced the COVID-19 lockdown, suggesting different impact realities. In line with the results found in non-sportive samples (e.g., Chen et al., 2020), most youngsters showed a low-to-medium impact of confinement. However, a substantial percentage (i.e., 15.26%) of young athletes reported a high impact of COVID-19 lockdown on their life-spheres and mental health. According to previous

TABLE 3A | Differences in demographic and sports information between clusters (ordinal variables).

	Cluster 1: low impact (n = 298)	Cluster 2: medium impact (n = 163)	Cluster 3: high impact (n = 83)	χ^2 (gl)[f]	p
Gender	C3	C3	C1 C2	26.70 (2)	**<0.001**
Male	59.6%	47.9%	28.0%		
Female	40.4%	52.1%	72.0%		
Socioeconomic level	C3	C3	C1 C2	21.02 (8)	**0.003**
Very bad	0%	0%	2.4%		
Bad	4.0%	4.3%	14.5%		
Medium	60.1%	57.7%	55.4%		
Good	31.9%	35.0%	27.7%		
Very Good	4.0%	3.1%	0%		
Academic course[a]	C2 C3	C1	C1	48.02 (10)	**<0.001**
1° ESO (year 8)	7.1%	5.0%	0%		
2° ESO (year 9)	23.8%	13.6%	6.8%		
3° ESO (year 10)	23.5%	20.0%	13.5%		
4° ESO (year 11)	22.8%	25.7%	29.7%		
1° BACHILLER (year 12)	10.0%	25.7%	31.1%		
2° BACHILLER (year 13)	12.8%	10.0%	18.9%		
Competitive level				4.37 (6)	0.634
Regional	35.2%	39.3%	45.8%		
Autonomic	35.2%	29.4%	28.9%		
National	22.5%	25.2%	20.5%		
International	7.1%	6.1%	4.8%		
Lockdown training conditions	C3		C1	12.63 (6)	**0.045**
Not training	10.6%	12.5%	24.7%		
Training with important changes	55.0%	57.5%	54.3%		
Training with minor changes	27.6%	25.0%	18.5%		
Training as always	6.8%	5.0%	2.5%		
Satisfaction with club/institution	C2	C1		22.87 (8)	**0.003**
Very unsatisfied	4.7%	3.1%	8.4%		
Unsatisfied	3.7%	9.3%	4.8%		
Indifferent	19.5%	22.2%	24.1%		
Satisfied	32.7%	40.1%	42.2%		
Very satisfied	39.4%	25.3%	20.5%		

C1, Cluster 1; C2, Cluster 2; C3, Cluster 3. Boldface indicates inter-group significant differences (p < 0.05). Superscripts indicate intra-group significant differences (corrected p < 0.017) using Chi-square test.
[a]Academic course was computed removing those participants pursuing tertiary education programs (participants excluded = 49).
[f]All inter-group comparisons that included a group with n < 5, were computed using Fishers' exact test.

TABLE 3B | Differences in demographic and sports information between clusters (numerical variables).

	Cluster 1 (n = 298): low impact		Cluster 2 (n = 163): medium impact		Cluster 3 (n = 83): high impact		F	p
	M	SD	M	SD	M	SD		
Number of co-habitants	4.02	0.89	3.94	0.81	4.01	1.09	0.38	0.682
PA time before lockdown	9.45	6.02	9.31	5.22	8.08	3.91	2.05	0.130
PA time during lockdown	5.81	4.29	4.94	3.58	4.83	3.94	3.42	**0.034**
Sports experience	7.16	0.18	7.33	0.24	6.49	0.35	2.09	0.125

PA, physical activity. Boldface indicates inter-group significant differences.

research, this group could be at risk for suffering from psychological problems. Considering that, adolescent athletes are a population with a low tendency for help-seeking behaviors (Tomalski et al., 2019), present results emphasize the need to pay attention to young athletes' mental health to prevent potential psychosocial problems.

A second aim of this study was to explore the differences between clusters regarding general demographic and life-conditions and sports-related characteristics. Group comparisons showed that, compared to the other two groups, the *high impact* cluster had a greater percentage of female athletes exhibiting a lower socioeconomic level, who reported pursuing higher academic courses and having poorer training conditions during confinement. Although these differences cannot be interpreted in a causal way, present findings suggest some research lines to be explored in the future. Regarding gender, research addressing differences in how the pandemic hit male and female athletes has revealed a more negative impact of COVID-19 lockdown in female athletes (di Fronso et al., 2020). In this line, Bowes et al. (2020) identified some factors that might help to explain these differences

in elite sport, such as a later resumption of the sport activity, greater difficulties for training at home, and a lesser financial support. As suggested in this study, future research in the field of youth sport should explore in more detail the sociological factors causing these gender differences beyond the impact of COVID-19 lockdown.

Group differences regarding academic course showed that participants in the *high impact* cluster were pursuing higher academic courses than the *low impact* one. Research in this line suggested that individuals with higher academic level usually report lower levels of well-being (Wanberg et al., 2020). Within the sports field, previous evidence relates mental health issues with higher difficulties to undertake a dual career pathway (Sallen et al., 2018; Sorkkila et al., 2020). As highlighted by other authors (e.g., Samuel et al., 2020; Stambulova et al., 2020), COVID-19 lockdown can be understood as a change-event with unexpected demands for the athletes that combine academic and sports career. Therefore, it would be interesting that future research addresses the impact of this adaptation process on young athletes' mental health.

Regarding the socioeconomic level, group comparisons showed that the *high impact* cluster had a worse socioeconomic level than *medium* and *low impact* ones. While lower socioeconomic level has been identified as a risk factor associated with mental health issues (e.g., Jones et al., 2016), recent research specifically addressing the impact of the pandemic suggests that people with higher incomes experienced a greater relative decrease in well-being during lockdown (Wanberg et al., 2020). In line with this relative perception of loss, our results also showed group differences regarding training conditions during confinement, with the *high impact* cluster showing worse training conditions than the *low impact* cluster. Faulkner et al. (2020) had suggested that regular and structured physical activity would act as a coping strategy for mitigating COVID-19 lockdown negative consequences. However, further research should address whether the socioeconomic conditions of the athletic population might be interrelated with training conditions. In this line, we hypothesize that athletes with more resources would be more likely to keep similar training conditions during COVID-19 lockdown and perhaps is this perception of preservation of conditions despite the general conditions what would have a positive effect.

Practical Implications

Current findings entail some appealing applied considerations. By presenting the way that COVID-19 impacted young athletes, this research contributes to the visibility of potential mental health issues in the youth sport population. In this sense, and in view of the observed contextual differences between profiles partly related with the backing of sport institutions, we recommend clubs and sport organizations to promote youngsters' physical activity and to facilitate the access to supportive network during challenging circumstances even when the competitions are canceled (e.g., lockdown, high-demanding academic courses, and career transitions).

Special attention should be given to women's sport, as female athletes seem to be the least-favored group. By developing these supportive resources (e.g., dual career support services and communication networks with athletes and families) that serve as backup system for young athletes, sports clubs and institutions will become protective agents against mental health issues in this population.

Limitations and Future Directions

Some considerations are needed when evaluating the reported results. First, it is important to bear in mind that this is a descriptive study, therefore, while group comparisons may indicate a possible role of certain life-conditions and sport-related variables in the health of young athletes, these relations cannot be interpreted in a causal way. Future studies should continue developing this approach using designs that allow making predictive or causal attributions. Second, this work is a first attempt to study the psychometric properties of the Holistic Monitoring Questionnaire (HMQ; De Brandt et al., 2019). However, more evidence is needed in different athletic samples to confirm the satisfactory properties regarding internal consistency and factorial structure obtained in this study.

As a complement of the descriptive nature of these findings, further studies should deepen some other research questions regarding the effects of the COVID-19 pandemic in this population. Specifically, focusing on reporting complementary mental health indicators (e.g., performance, well-being, and basic psychological needs satisfaction; Schinke et al., 2017) in this sample, evaluating the long-term impact of lockdown on mental health, and/or implementing intervention programs aimed at improving the mental health status of highly affected athletes could be of great interest.

Conclusion

The COVID-19 lockdown had a general negative impact on Spanish young athletes. However, significant differences were found when comparing different individual realities. While most of the sample reported a low-to-moderate impact, an important group of participants reported high negative issues in relation to this COVID-19 lockdown. Group comparisons showed that the *high impact* cluster was composed mostly of female athletes with lower socioeconomic level, pursuing a more demanding academic course and reporting worse training conditions than their counterparts. This study reinforces the need to focus on young (specially women's) athletes' mental health and highlights the role of contextual variables with potential issues. Sport clubs and institutions, by supporting young athletes during difficult moments, could and should help mitigating the negative impact of such challenging circumstances on their athletes' mental health.

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

ETHICS STATEMENT

AUTHOR CONTRIBUTIONS

FUNDING

ACKNOWLEDGMENTS

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Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.