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ROLE AND IMPORTANCE OF PHYSICAL ACTIVITY SCIENCES PROFFESIONAL IN THE SOCIETY DURING AND LATER LOCKDOWN FOR COVID-19: A VIEW OF DIFFERENTS HEALTH PROFESSIONALS

Rol e importancia del profesional en ciencias de la actividad física en la sociedad durante y post-confinamiento por COVID19: una visión general de diferentes profesionales de la salud

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Abstract

On March 11, 2020, the World Health Organization declared Covid-19 a pandemic. This new situation has caused the citizens around the world to be confined to their homes. In Spain, one of the countries hardest hit by the virus, its citizens have been held in their homes since March, 14, the date on which the state of alarm was declared. This confinement has led, among other things (social isolation, low exposure to sunlight, etc.), a drastic decrease of daily physical activity. Because lack of physical exercise or its poor performance worsens people´s general health, professionals in the activity and sport (PASSP) become important these days. The aim of the present study was to collect and know the opinions of different health professionals (doctors, podiatrist, physiotherapist, researchers, etc.) on the present and future importance of the professional in PASSP in society. To achieve the proposed objective, semi-structured interviews were conducted with health professionals (n = 33). The results showed that 72.7% of the sample considered that the professional in PASSP is little recognized by the authorities, 60.6% believed that they are not recognized by society. The main conclusions are that the inclusion of professionals in PASSP in public health should be considered, as well as the regulation of their profession to avoid work intrusion.

Keywords: Communication, COVID19, lockdown, physical exercise, public health.

Resumen

El 11 de marzo de 2020, la Organización Mundial de la Salud (OMS) declaró como pandemia a la Covid-19. Esta nueva situación ha provocado que los ciudadanos de todo el mundo estén confinados en sus hogares. En España, uno de los países más fuertemente golpeados por el virus, sus ciudadanos se mantienen recluidos en sus casas desde el día 14 de marzo, fecha en la cual se decretó el estado de alarma. Este confinamiento ha conllevado, entre otras cosas (aislamiento social, baja exposición a la luz solar, etc.), una disminución drástica de la actividad física diaria. Debido a que la falta de ejercicio físico o la mala ejecución de este empeora la salud general de las personas, los profesionales de las ciencias de la actividad física y el deporte (CCAFD) cobran importancia estos días. El objetivo del presente estudio fue recabar y conocer las opiniones de diferentes profesionales de la salud (médicos, podólogos, fisioterapeutas, investigadores, etc.) sobre la importancia presente y futura del profesional en CCAFD en la sociedad. Para conseguir el objetivo propuesto, se llevaron a cabo entrevistas semiestructuradas en profesionales de la salud (n=33). Los resultados mostraron que el 72,7% de la muestra consideró que el profesional en CCAFD está poco reconocido por las autoridades, asimismo el 60,6% opinó que no están reconocidos por la sociedad. Las conclusiones principales son que se debería de considerar la inclusión de los profesionales en CCAFD en la sanidad pública, así como la regulación de su profesión para evitar el intrusismo laboral.

Palabras clave: Comunicación, confinamiento, Covid19, ejercicio físico, salud pública.

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1. INTRODUCTION

Since the end of 2019, the appearance in China of a large number of unusual pneumonias has been attacking humans (Chan et al. 2020). The pathogen involved (SARS-CoV-2) has given rise to the World Health Organization (WHO) named "Coronavirus Disease2019" (COVID-19) (Zhou et al. 2020). This new SARS-CoV-2 coronavirus, as reported by WHO as of 27 April, has infected nearly 3 million people worldwide, while the total number of deaths is very close to 200,000. As COVID-19 has increased globally, the number one priority has been to optimize patient prognosis during this health crisis (Baron et al. 2020). The disease has not affected all countries in the world equally, and one of the countries hardest hit by this pandemic has been Spain. As of 28 April 2020, according to data from the Spanish government (Ministry of Health), the number of confirmed cases is more than 209,000, of which 23,521 have died. Since the Spanish government decreed the state of alarm on March 14, 2020, its citizens have been confined to their homes (45 days to date). Although this strategy has proven

effective in containing the COVID-19 outbreak (Lau et al. 2020; Wells et al. 2020), confinement can lead to detrimental health side effects such as addictive behaviors, insufficient exposure to sunlight, social isolation, weight gain, and a drastic decrease in physical activity (PA) levels (Lippi et al. 2020).

With regard to the reduction of PA volume, the scientific literature has shown that a sudden and prolonged interruption in the amount of physical exercise can lead to negative health changes, including the development of insulin resistance, loss of bone mineral density, muscle atrophy, decreased aerobic capacity, increased heart rate and blood pressure, dyslipidemia, and an increased risk of complications when resuming PA again (Lippi et al., 2020). All these biological adaptations caused by this decrease or absence of physical exercise increase the risk of developing multiple diseases (Castrogiovanni et al., 2016; Bhaskarabhatla and Birrer, 2005; Lippi and Sanchis-Gomar, 2020; Sanchís-Gomar et al., 2015, Pietiläinen et al., 2008; Knoops et al., 2004). So much so, that the burden of disease attributable to physical inactivity could be associated with an increase of more than 22% in the risk of all-cause mortality in the general population (Mok et al., 2019). Related to this, an inverse association between PA volume and risk of death and loss of autonomy has been observed in European populations of older men and women (Groot et al., 2004). This association has also been demonstrated in populations of different ages and geographic areas (Woodcock et al., 2011). In turn, it has been shown that people who do more PA have a higher life expectancy than sedentary people (Mahmood, 2014).

All this solid scientific evidence highlights the importance of the figure of the professional in Physical Activity and Sport Sciences (CCAFD) for society. However, in the situation caused by the COVID-19 that we are currently experiencing, the CCAFD professional becomes even more important. With regard to these professionals, some studies have shown that they are people who have a consolidated sporting habit and a lifestyle that makes them have a good cardiovascular profile (Grima and Blay, 2016).

It is important to understand that we are not all the same, and the response to the same training protocol may be different, since there is great interindividual variability in the response to specific stimuli (Erskine et al., 2010). On the other hand, the performance of exercise in people with an absence of sporting habit or the sudden increase in volume and/or intensity in poorly trained subjects can lead to a higher rate of injury (Feito, Burrows, & Tabb, 2018). Therefore, it is essential that professionals in CCAFD are the ones who set the guidelines and guidelines regarding the performance of physical exercise and study each person individually; thus avoiding labor intrusion, which can interfere negatively in the quality of life of people and their safety (Conde et al., 2009). Not only individuals can benefit from CCAFD professionals, but also countries. It has been estimated that, in Spain, increasing PA in the population could reduce health spending by 10% and achieve annual savings of 5,000 million euros (Clemente, Fernández-Navarro & de Seoane, 2016).

Therefore, it is essential to know the opinions and different points of view of different health professionals (medicine, nursing, physiotherapy, podiatry, psychology, research,

etc.) about the role and importance in society of the CCAFD professional. Inciding on issues such as labor intrusiveness, recognition by the authorities, taxes on sports activities, etc.. At a time when anyone with a digital device and internet access can upload any type of content to the network, giving prominence to health professionals and experts is crucial.

2. MATERIAL AND METHODS

2.1. Participants

The study sample was composed of different health professionals. Different sports companies and health clinics were contacted via *email* or mobile app in order to obtain the largest possible sample for the research. Of the entire population sample covered, a total of 33 subjects agreed to participate in the study. All of them were sent a contact email with the most relevant information about the study, as well as the study procedure. The inclusion criteria were: a) to be an active worker and b) to exercise a health-related profession. All subjects who did not have a health-related profession were excluded.

2.2. Evaluation instrument

The first author, who is a PhD in Health and Sport Sciences with training and experience in qualitative research, and a registered podiatrist conducted semi-structured interviews via telephone. The interviews varied in length, on average lasting 25 minutes. In the interview itself, questions relating to socio-demographic information were asked: gender, age, number of children, profession and qualifications; the authors of the study in collaboration with other health professionals developed a series of questions to be asked during the interview. The interviews were reproduced in written format in a digital document. Field notes were also made immediately after each interview to record any information that might contribute to the reflection.

2.3. Informed consent

All participants gave their informed consent in writing, by signature. To guarantee the credibility of the results, the subjects of the study signed the written document referring to the interview, giving validity and verifying the veracity of what the researchers had noted.

2.4. Data analysis

All statistical analyses were performed using *IBM SPSS Statistics 21* software. The Student's t-test for independent samples with a 95% confidence interval percentage and the test of independence (Chi-square) with a value of $\alpha = 0.05$ were used. Descriptive statistics (frequencies, descriptive and contingency tables) were used for most of the data. $P<0.05$ was considered as statistical significance.

3. RESULTS

Socio-demographic data

33 adults (17 men and 16 women) participated in the study. The age range was 24-61 years. The mean age of the sample was 34.2 ± 11.7 years. The nationality of 96.9% of the sample was Spanish, only one subject had another nationality (Ecuadorian). With respect to the academic qualifications of the subjects, 33.3% had only a university degree/graduate degree. Of the sample, 45.5% had completed their master's degree or specialty studies, and 18.2% had doctoral degrees in various specialties. One subject in the sample did not have university studies. With regard to the professions carried out by the participants in the study, Table 1 shows the percentages relating to these.

Table 1. *Number of professionals and percentage of the total sample*

	Profession (n=32)
Physician	30,3% (n=10)
Nurse	15,2% (n=5)
CCAFD	15,2% (n=5)
Psychologist	3 % (n=1)
Podiatrist	15,2% (n=5)
Physiotherapist	9,1% (n=3)
University lecturer	9,1% (n=3)
Sports centre manager	3% (n=1)

CCAFD: Degree in Physical Activity and Sport Sciences

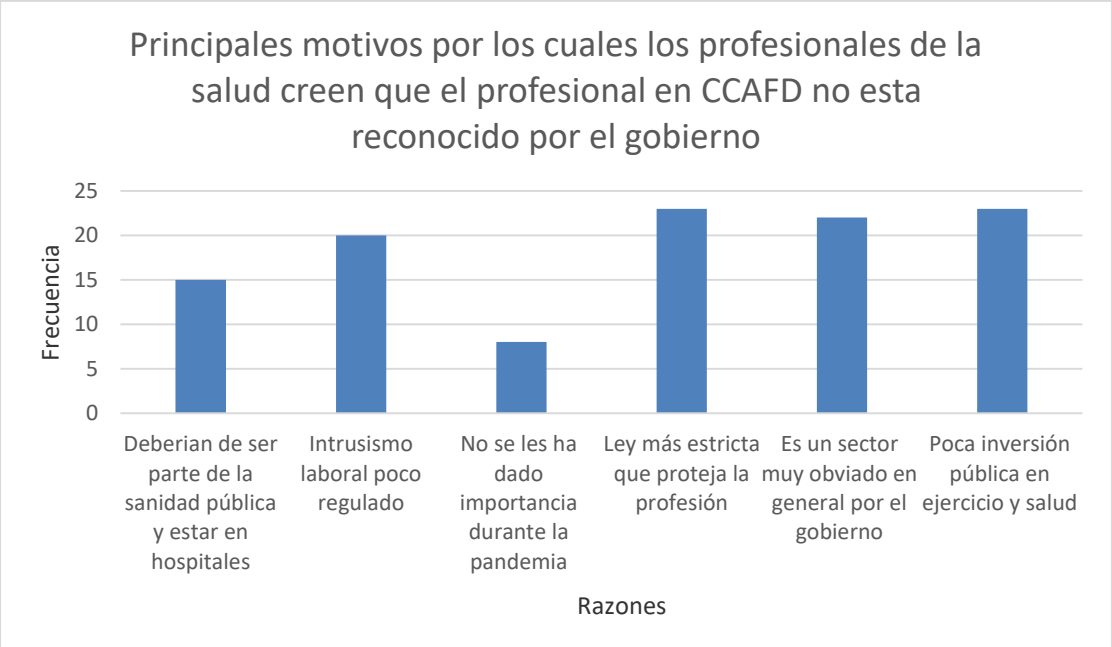
Source: *own elaboration*

In the case of physicians (n=10), the different specialties were cardiology (n=1), general medicine (n=3), neurology (n=3), hematology (n=1), sports medicine (n=1) and anesthesiology (n=1). Of the total study sample, 33.3% were engaged in health research.

3.2. Recognition of the CCAFD professional in general society and by authorities

With regard to this question, 27.3% of the subjects believe that the CCAFD professional is recognized by the authorities (government). However, almost 72.7% of the sample believes that the CCAFD professional is very little recognized by the government. On this same question in relation to society in general, 39.4% of the participants thought that society in general does recognize the role and work of professionals in CCAFD. On the other hand, 60.6% of the sample believes that this type of professional is still not as recognized as it should be by society. In reference to this question, during the interview, the subjects were also asked to justify their response, explaining as much as they wished. Figure I shows the graph with the 6 main reasons

given by the health professionals regarding the lack of recognition of the CCAFD professional by the government and the frequency of these reasons.



Reasons why the CCAFD professional is not recognized by the authorities (Government) Figure 1.
Source: *own elaboration*

Observing the graphic (Figure I), it can be seen that 90% of the subjects who did not believe that the CCAFD professional was recognized by the authorities in general (n=24), justified this by saying that a stricter law is needed to protect the profession, thus avoiding work intrusion and delimiting the competencies of these CCAFD professionals. The fact that the government and the communities invest little money in exercise and health is also a reason shared by 90% of the participants. More than 80% of the participants were of the opinion that the sector of physical exercise and sport (health oriented) is very much neglected in general by the authorities. However, performance-oriented sport is more important for the authorities. 80% think that there is a lot of labour intrusion in the profession, since any person with or without a minimum of training can upload content to social networks and offer physical exercise services, without a legal cost for it. To highlight the fact that 60% of the 24 health professionals (among which there were doctors) argued that the CCAFD professional should be part of the public health system, prescribing physical exercise for patients with or without pathologies. Among this profile of patients they included people with obesity, post-infarction, patients with metabolic syndrome, diabetics, patients with cancer or who have already overcome it, subjects at risk of depression or excessively stressed, etc. 30% supported the idea that the government has not given importance to exercise professionals during this COVID-19 pandemic.

Figure II shows the graph with the 6 most repeated arguments given by health professionals to justify the lack of recognition received by CCAFD professionals by society. It can be seen that almost 100% of the subjects who did not believe that the CCAFD professional was recognized by society (n=20), justified this by saying that in Spain there is still no culture in society of training that is regulated and carried out by experts in physical exercise. In relation to this, more than 80% of these professionals were of the opinion that people still opt to go to "*low cost*" sports centres, in which there is no direct supervision and most of the users train independently, with the risks that this could entail. In the graph we can also observe that more than 70% of the professionals who think that society does not recognise the CCAFD professional as much as it should, think that it is because they still give much more importance to the recommendations of a doctor. It is worth noting that they were talking about recommendations regarding physical exercise, something in which, in the opinion of these study participants, CCAFD professionals have much better training than doctors. A 70% of them also argued that the figure of personal trainer is still associated only with aesthetics, something wrong and mistaken, since they are closely related to the prevention of pathologies and health.

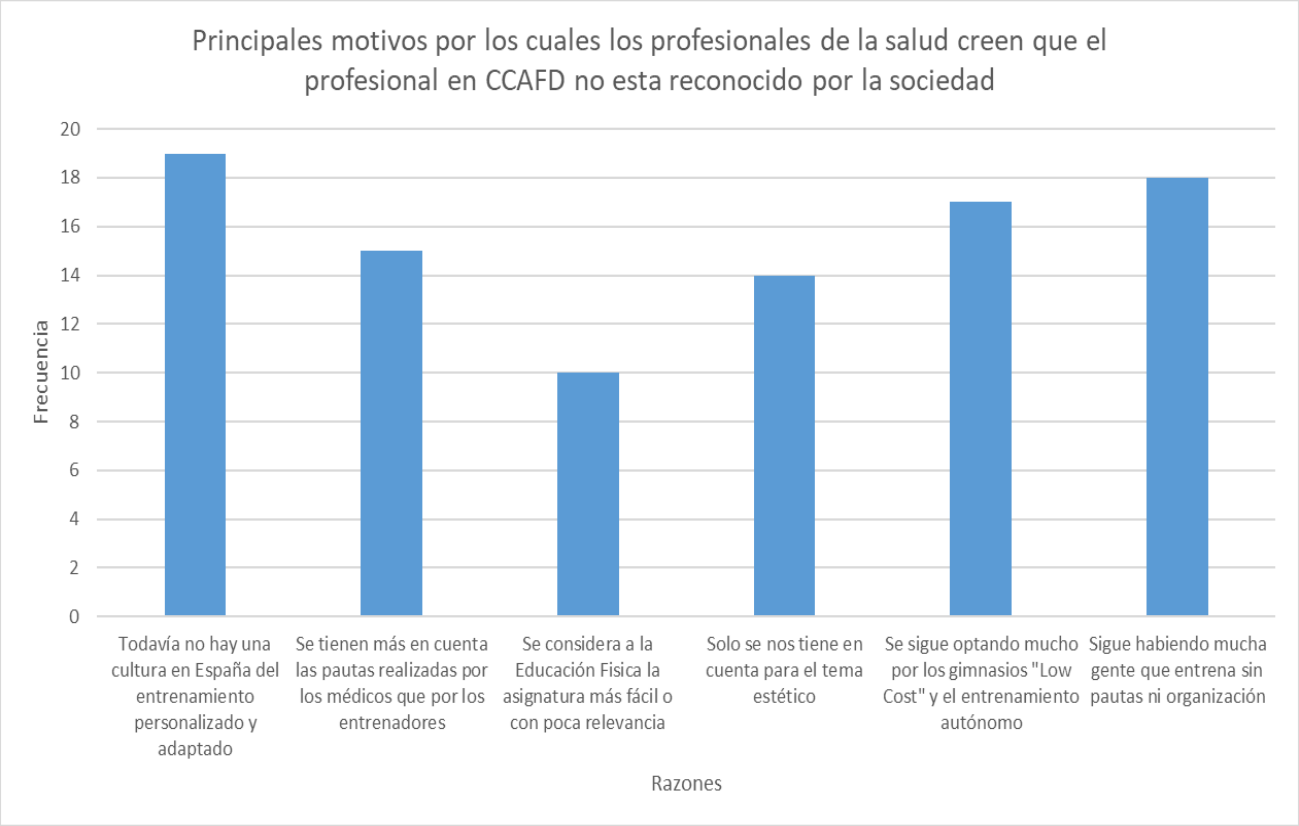


Figure 2. *Reasons why the CCAFD professional is not recognized by society.*
Source: *own elaboration*

3.3. Physical exercise in the open air during confinement

The study participants were asked about the fact of exercising outdoors during the confinement. It should be noted that all the interviews were carried out between week 3 and 4 after the decree of the state of alarm. 75.8% of the total sample (n=33) were of the opinion that people should be allowed to go for walks or jogging with temporary limitations. On the contrary, 24.2% argued that at that stage of the confinement (week 3 and 4) it was not prudent to let people go out for exercise. The 3 main reasons given by 75.8% of the health professionals who participated in the study to justify outdoor physical exercise were the following (ordered from highest to lowest according to the percentage of subjects who commented on them):

- Achieve sufficient light exposure (85%)
- Decrease stress and anxiety levels (72%)
- Increase caloric expenditure and train aerobic capacity in people with difficulties to perform strength and/or high intensity training (61%).

The 3 main reasons given by 24.2% of the sample for not exercising outdoors during confinement were the following (ordered from highest to lowest according to the percentage of subjects who mentioned them):

- Many people would not comply with the measures applied in terms of social distance, distance from home, maximum time, etc. (70%)
- You can still exercise at home, even walking around the house (55%).
- Outdoor physical exercise is not a primary need. The risks outweigh the benefits at this time (36%).

3.4. Exercising at home during confinement

Study participants were asked whether they felt that people were doing adequate training at home, or were they carrying out inadequate training routines that could lead to injury in the short to medium term. 74% of the sample felt that they were carrying out training that was not adapted and too generic, which could lead to injury. In contrast, the remaining 26% said that with all the information available on digital platforms, people were training appropriately. The main reasons for saying that the training that was generally being carried out at home was inadequate were as follows:

- Excessive load on the tissues (bone, ligament, muscle) of people who are not used to training (82%).
- Over-training due to boredom (66%)
- Poorly focused training routines presented by unqualified people (60%)

On the contrary, the reasons for justifying that there would be no risk of injury training at home were as follows:

- People are going to do gentle physical exercise (70%)
- People are afraid to go to hospitals and will avoid risky behaviors that could lead to injury (58%).
- There is a lot of quality information through social networks and people know how to differentiate between good and bad professionals (40%).

3.5. Supporting the health-oriented sport and physical activity sector

Another of the questions that were raised during the interviews was whether the fitness, exercise and health sector should have more support in various aspects that encompassed it (labour intrusion, subsidies and grants, recognition within public health, reduction of VAT on sports services, etc.). Of the 33 health professionals interviewed, 97% of them thought that the fitness and health sector should have more support in general. More specifically, 85% of the participants emphasized the reduction of VAT for sports centres, and 97% agreed that a law should be created to regulate the sector in order to avoid labour intrusion.

4. DISCUSSION

This study investigated and analysed the opinions and perceptions of health professionals (mostly hospital and health centre workers) in active practice regarding the present and future role in society of the Physical Activity and Sport Science professional (PASAS). Most of the participants were of the opinion that the CCAFD professional was not recognized by the authorities (government) and society, at least not as much as it should be. They also emphasized the importance of this type of professional within the health sector, with a large part of the sample stating that they should form part of the public health system. With regard to confinement, a large number of the health professionals interviewed stated that the CCAFD professional should be a basic pillar in the day-to-day life of people (during and after confinement), since inappropriate physical exercise behaviour could lead to more or less serious injuries. The importance of not getting carried away by social networks and being advised by qualified and experienced exercise experts was also stressed. Regarding the fact of exercising outdoors during the period of confinement, most of the professionals interviewed were of the opinion that it should be allowed, always respecting the basic rules of separation from others, hygiene, time limit and distance.

The results extracted in the present study are in agreement with the conclusions of Morris (1994) in the scientific article entitled "*Exercise in the prevention of coronary heart disease: today's best buy in public health",* published in the prestigious journal *Medicine and Science in Sports and Exercise.* This study concludes that physical activity is "the best buy" that could be made today in public health for the West. Furthermore, in agreement with this study, Clemente, Fernández-Navarro and de Seoane (2016) stated that the increase in physical exercise in society could reduce public health spending in Spain by 10%. In this line, Blair et al. (2012) state that, due to the devastating human losses and economic burden of chronic diseases, the far-reaching and cost-effective health benefits of physical exercise interventions should be taken into account and promoted. The same authors add that the implementation of exercise counselling in clinical practice should be encouraged on a global scale.

Considering that physical inactivity can have consequences such as the development of osteoporosis, diabetes, cardiovascular disease, cancer or dementia; that weight gain can lead to diabetes, pulmonary embolisms, low back pain, dysfunction and/or

osteoarthritis (Lippi et al., 2020), the findings of our study support the importance of physical exercise under the supervision of a qualified professional.

What was observed in the present study with respect to the risk of performing autonomous or uncontrolled physical exercise, as well as being carried away by fads or unqualified disseminators, agrees with what is stated by the Spanish Heart Foundation. This entity stresses the importance of adequate progression in exercise volumes and intensities, especially in less trained individuals. In turn, the National Institute of Arthritis and Musculoskeletal Skin Diseases (NIAMS) states that improper technique, poor exercise form or inadequate equipment are causes that can lead to injury in the short and medium term. This statement is related to the results of our study, which show that the majority of health professionals interviewed believe that exercising without control or supervision carries a risk of injury.

Regarding the fact of exercising outdoors during confinement, the results of our study suggest that the authorities should allow controlled outings of people to exercise outside the home. On this issue, the World Health Organization (WHO) itself published on its website on March 27, 2020 an informative article entitled "*Be Active During Covid-19*", refers to the importance of walking, running or cycling (in a park or open public space) as long as physical distancing is practiced and there is hand hygiene with soap and water before and after sports practice.

More research is needed to determine the importance of professionals in Physical Activity and Sport Sciences (PASAS) and physical exercise in society. Issues such as professional regulation of this sector, labour intrusion, improvement of working conditions, investment in physical activity and prevention, and the possible inclusion of professionals in CCAFD in public health should be addressed by other studies.

5. CONCLUSIONS

The present study provides information analyzed by different experts and health professionals regarding the importance of physical exercise and the professionals qualified to prescribe and supervise it. CCAFD professionals should be considered and valued to be part of different areas of public health. In turn, they should be regulated by law for professions related to the *fitness* and physical exercise sector. It is of vital importance that people contact and can rely on the professionalism of qualified (during and after confinement) and experienced agents to carry out training routines with taught techniques, either individually or in groups.

Inadequate and unsupervised physical exercise (direct or indirect) can have fatal consequences such as adverse cardiovascular events or musculoskeletal injuries in the short and medium term.

It is important to exercise outdoors to increase people's motivation, improve sunlight absorption, and reduce stress levels. However, measures of social isolation, hygiene, and time for exercise must be strictly enforced.

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