

Reflexes of the pandemic on personal physical training in southern Brazil

Reflexos da pandemia no treinamento físico personalizado no sul do Brasil

Reflejos de la pandemia sobre la preparación física personal en el sur de Brasil

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Abstract

Objective: to analyze the impact of the COVID-19 pandemic on the routine of Personal Trainers (PTs) in southern Brazil. **Methods:** by invitation on social networks, 79 PTs (38 women; 41 men; aged 20 to 69 years) answered a questionnaire available on Google Forms during the months of April and May/2020, with questions about characterization, professional performance and physical exercise routine. **Results:** There was a decrease in clients both for less experienced PTs (92%) and for those with longer experience (68%); the most used digital technology used for training was WhatsApp (81%); most of the PTs (79%) believe that the intensity of virtual training is much lower, but that the method will continue to be used after the pandemic period. **Conclusion:** social isolation imposed by the pandemic impacted in a negative manner the work of PTs, reducing clients, forcing the use of remote methodologies and altering the PTs' physical exercise routine.

Keywords: Social isolation; Digital technologies; Virtual training; Professional performance.

Resumo

Objetivo: analisar o impacto da pandemia de COVID-19 na rotina de Personal Trainers (PTs) no sul do Brasil. **Métodos:** a convite nas redes sociais, 79 PTs (38 mulheres; 41 homens; 20 a 69 anos) responderam a um questionário disponibilizado no Google Forms durante os meses de abril e maio/2020, com questões sobre caracterização, desempenho profissional e exercício físico rotina. **Resultados:** Houve decréscimo de clientes tanto para os TP menos experientes (92%) como para os com mais experiência (68%); a tecnologia digital mais utilizada para treinamento foi o WhatsApp (81%); a maioria dos PTs (79%) acredita que a intensidade do treino virtual é bem menor, mas que o método continuará sendo utilizado após o período de pandemia. **Conclusão:** o isolamento social imposto pela pandemia impactou de forma negativa o trabalho dos PTs, reduzindo clientes, forçando o uso de metodologias remotas e alterando a rotina de exercícios físicos dos PTs.

Palavras-chave: Isolamento social; Tecnologias digitais; Formação virtual; Atuação profissional.

Resumen

Objetivo: analizar el impacto de la pandemia de COVID-19 en la rutina de los Entrenadores Personales (EPs) en el sur de Brasil. **Métodos:** por invitación en las redes sociales, 79 EPs (38 mujeres; 41 hombres; de 20 a 69 años) respondieron un cuestionario disponible en Google Forms durante los meses de abril y mayo/2020, con preguntas sobre caracterización, desempeño profesional y ejercicio físico rutina. **Resultados:** Hubo una disminución de clientes tanto para los EPs menos experimentados (92%) como para aquellos con más experiencia (68%); la tecnología digital más utilizada para la capacitación fue WhatsApp (81%); la mayoría de los EPs (79%) cree que la intensidad del entrenamiento virtual es mucho menor, pero que el método se seguirá utilizando después del período de pandemia. **Conclusión:** el aislamiento social impuesto por la pandemia impactó negativamente en el trabajo de los EPs, reduciendo clientes, obligando al uso de metodologías a distancia y alterando la rutina de ejercicio físico de los EPs.

Palabras clave: Aislamiento social; Tecnologías digitales; Formación virtual; Desempeño profesional.

1. Introduction

COVID-19 - Coronavirus Disease 2019 -, a disease caused by the new coronavirus, was considered a world pandemic by the World Health Organization on March 11, 2020 (World Health Organization [WHO], 2020). Since the virus is highly

contagious, a series of measures have been taken, worldwide, in an attempt to reduce transmission and stop the rapid evolution of the pandemic. Among the main ones, social distancing/isolation stands out, with prohibitions on gatherings and events with many people. Schools, universities, clubs and gyms were closed, and restrictions were applied on streets' circulation, with the exception of trips to supermarkets and pharmacies. Public transports were also limited (Aquino et al., 2020).

All restrictive measures that are taken in order to reduce the transmission of the new coronavirus, increase the sedentary lifestyle of the population (Ammar, et al., 2020). This has become a major concern worldwide as regular exercise is widely recognized not only as a proven way to improve overall health, but also in the prevention and treatment of a range of diseases, including clinical conditions associated with COVID-19. It is known, e.g., that physically active individuals have lower percentages of body fat, a more balanced metabolic profile and better cardiovascular functioning (Dwyer et al., 2020).

Throughout the pandemic period, it has been proven that fragile populations, such as the elderly, immunocompromised and groups with multiple comorbidities, are more likely to present severe complications of COVID-19. Among the main comorbidities associated with hospitalization and death from COVID-19 are obesity, diabetes and cardiovascular problems (Chen, et al., 2020).

In this perspective, the World Health Organization (WHO, 2021) has encouraged, since the beginning of quarantine, people to keep physically active in their homes. Lifestyle maintenance strategies have been proposed by Education and Health Institutions, such as #StayHomeStayFit led by the University of Milan (Lucini, et al., 2020) and according to Fearnbach, et al. (2021) there was an increase in the purchase of equipment to perform exercises at home.

Physical Education professionals who work with personalized training, known as Personal Trainers (PTs) had to adapt their way of working to the new reality so that they could keep their clients active and healthy. Unable to guide the exercise performances in clubs and gyms, closed during social isolation, many had to use other places and other strategies. Thus, the aim of this study was to analyze the impact of the COVID-19 pandemic on the work routine and practice of physical activities of Physical Education professionals who work as PTs in the state of Rio Grande do Sul, Brazil.

2. Methodology

The target population of this research was Physical Education Professionals who work as PTs in the state of Rio Grande do Sul, Brazil. The invitation to participate in the study was made through social networks (Instagram, Facebook and Whatsapp). The inclusion criterion was to be working with personalized physical training when the pandemic started. For those who agreed to participate, the link to the online questionnaire was sent. Around 120 PTs were invited and 79 of them agreed to participate in the study, 38 women and 41 men, with ages ranging between 20 and 69 years.

For data collection, a questionnaire was created, including questions about personal characteristics (age, sex, city they lived, university where they studied Physical Education), professional practice during the pandemic and their own physical exercise routine. It was elaborated via Google Forms, in a very simple way so that participants could respond respecting social distance. The questionnaire was available to be answered in April and May 2020. Before the questions, the Informed Consent Form was presented, describing the objectives and procedures for participation. Afterwards, the question: "Do you agree to participate in this study?" popped up. By checking the "yes" option, the questionnaire opened and, if the "no" option was chosen, the questionnaire ended automatically.

Data were treated and presented through descriptive statistical analysis, with measures of central tendency and dispersion. For qualitative analysis, the content analysis method proposed by Bardin (2011) was used, with the procedures of pre-analysis, material exploration, results' treatment and interpretations. The research was conducted in accordance with the principles of the Declaration of Helsinki and Resolution No. 466/12 of the National Health Council (Brazil, 2012) which

regulates research with human beings in Brazil.

3. Results

The 79 participants were represented by 38 women and 41 men, with ages ranging between 20 and 69 years. The invitation to participate in the study was made through social networks (Instagram, Facebook and Whatsapp). We chose to analyze the responses stratifying the group by time since graduation in Physical Education. Thus, the cutoff point of five years since graduation was used (PTs-5 group, for those who graduated up to five years ago: n=38; PTs+5 group, for those graduated more than five years ago: n=41), considering that the first five years of the profession are normally challenging for the insertion and permanence in the job market.

The impact of the period of social distancing was reported by both groups. However, it was observed that the professionals that graduated longer ago reported lower losses of clients. The decrease in PTs' customers showed a variation of 24% between the PTs-5 (92%) and PTs+5 (68%) groups, with less negative consequences for longer-term graduates. Table 1 shows the effects of the COVID-19 pandemic on the total number of professionals' clients.

Table 1 - Dynamics of the number of clients during the pandemic.

Clients	PTs-5 (n=38)		PTs+5 (n=41)	
	af	rf (%)	af	rf (%)
No alteration in the number of clients	3	7.9	13	31.7
Reduction in the number of clients	20	52.6	15	36.6
Great reduction in the number of clients	15	39.5	13	31.7

Note: PTs: personal trainers; PTs-5: professionals graduated until 5 years ago; PTs+5: professionals graduated more than 5 years ago; af: absolute frequency; rf (%): relative frequency. Source: Authors.

In order to continue serving customers and passing on physical training, PTs changed the form of contact, from face-to-face to virtual. The need to adapt to the model of social distancing and, at times, isolation, made professionals use different digital information and communication technology (DICT) tools, transmitting guidance and training through audio and video platforms available on the internet (Figure 1). Through the chosen DICT, PTs sent their own demonstration videos, photos with the positions of the exercises, sheets or spreadsheets created especially for this purpose and made lives with exercise classes.

Figure 1 - Technological digital tools used to guide physical training.



Note: frequency of citation of digital tools used to assist clients/customers during the pandemic. From left to right, in the top row: WhatsApp (n=64); Instagram (n=35); Facebook (n=32); Youtube (n=9); Skype (n=3); Zoom (n=6); in the bottom row: Duo Google (n=1); Meet (n=2); Hangout (n=1); Email (n=5); Cell Phone (n=6); Exercise Applications (n=2). Source: Authors.

The professionals' perception about the intensity of online or remote training, compared to the exercise training applied in person, before the pandemic, is described in Table 2 and the justifications in Table 3, based on the analysis

categories: a) motivation; b) overload; c) external interference; d) adaptation; and e) evaluation and feedback.

Table 2 - Perception about online physical training intensities.

Intensity of virtual training	PTs-5 (n=38)		PTs+5 (n=41)	
	af	rf (%)	at	rf (%)
There was alteration (reduced)	34	89.5	28	68.3
Maybe there was alteration	4	10.5	10	24.4
There was no alteration	-	-	3	7.3

Note: PTs: personal trainers; PTs-5: professionals graduated until 5 years ago; PTs+5: professionals graduated more than 5 years ago; af: absolute frequency; rf (%): relative frequency. Source: Authors.

Table 3 – Comments of online training during the pandemic.

Categories	PTs' Comments
Motivation	"Training tends to be more relaxed and procrastinated". "Face-to-face is not the same as virtual". "The presence of the professional is what motivates the client". "The clients are dependent on the professionals".
Overload	"There is lack of adequate materials". "Alone, people don't perform training in the same intensity". "In the gyms there is the support of the equipment". "There is no control of exercise volume, intensity and intervals".
External Interference	"Domestic environment, adapted, does permit". "Clients who have to take care of their children during training".
Adaptation	"Lack of space at home". "The client does not have the help of the professional". "There was a need to modify greatly the training". "Clients have difficulty to train without real training equipment".
Evaluation and feedback	"We can't be sure if the client performed completely the exercise". "The control of the variables is difficult". "Lack of effective control of the training". "When the client sends the video of his training it already happened, and it is not possible to correct exercise execution".

Note: PTs: personal trainers; categories are based on the content analysis. Source: Authors.

Both in the PTs-5 and PTs+5 groups, the professionals stated that the customers reduced the number of weekly training days (50% and 44%, respectively). Regarding their customers' preferences, the majority described that they liked less (or disliked) virtual training, compared to face-to-face training (97%; n=37 in PTs-5 and 83%; n=34 on PTs+5).

When PTs were asked about the possibility of training guidance via internet becoming a common practice after the COVID-19 pandemic, the majority in both groups (PTs-5: 74%; PTs+5: 85%), stated that they believe that this may occur. In Table 4, the professionals' comments are presented to justify the maintenance of this training format the control of COVID-19 pandemic or to argue about the damages resulting from this practice. Comments are distributed based on the following analysis categories: a) need for updating; b) emergence of the moment; c) flexibility; d) cost of the service; e) clients' convenience; and f) losses.

In addition to the impact of the pandemic on professional activity, the study investigated the PTs' own physical exercise routines. Both in the PTs-5 (84%; n=32) and PTs+5 (68%; n=28) groups, the professionals stated that, during the pandemic, they continued to train, but with less intensity but 3% (n=1) and 15% (n=6), respectively, interrupted their physical

exercise routines. So it seems that among the younger ones it was easier to maintain the recommended physical activity level during the pandemic.

Table 4 - Comments about the continuity of online training after the pandemic.

Categories	PTs' Comments
Need for updating	"Adaptation to the new future".
	"New way to work".
	"Discovery of virtual tools".
	"Learning about new tools".
	"A new way of movement orientation".
Emergence of the moment	"New ways to analyze client evolution will be created".
	"More professionals were trained for that".
	"Clients' fear will remain" (referent to COVID-19).
	"Crisis forced us to offer training online".
Flexibility	"Fear of virus transmission in collective environments".
	"Quicker trainings".
	"It could be used as auxiliary tool".
	"It minimizes commuting in big cities".
	"Na option for the lack of time".
	"Possible to train wherever the client is."
Cost of the service	"Greater variety in timetable for training".
	"Adherence of more clients".
	"In some situations, it becomes cheaper".
Clients' convenience	"Lower cost".
	"Price of the training hour may be lower".
	"Practicality of being at home".
	"Physical training without leaving the house".
	"Convenient to exercise at home".
	"Some people like to stay home".
Losses	"Start to realize that it is possible to train at home".
	"Clients prefer to train at home".
	"Efficiency and results will never be the same".
	"People are not prepared for online activities".
	"It is too impersonal".
	"Loss of the investments in equipment and building structure".

Note: PTs: personal trainers; categories are based on the content analysis. Source: Authors.

4. Discussion

This study describes the impact that the COVID-19 pandemic had on the work routine and physical activity level of Physical Education professionals who work as PTs in the state of Rio Grande do Sul, Brazil.

Initially, it was found that there was a decrease (53% of PTs-5 professionals and 37% of PTs+5 professionals) or a large decrease (40% of PTs-5 professionals and 32% of PTs-5 professionals PTs+5) of clients during the pandemic, which is more pronounced in the group of professionals who have been graduated for a shorter period of time (PTs-5) and, therefore, had less experience. In their study on the impacts of COVID-19 on the PTs working in cities of the states of Minas Gerais and São Paulo (Brazil), Miguel, Lima, Campos and Santos (2020) found in a group of 69 individuals (mean age: 31.4 years; length of professional experience: \approx 3.2 years), a decrease in face-to-face classes and orientation to 58% of them. It was also identified that there was a drop of 28% in clients that already had virtual physical exercise orientation before the pandemic. The same survey also found that the average reduction in earnings was 52%, compared to the months prior to COVID-19. According to

the authors, this factor limits the purchasing power of these professionals in the acquisition of personal goods, services contracting and update/refresher courses.

In Norway, a study aimed to map the changes in the working and living conditions of PTs during the lockdown in the second quarter of 2020. One hundred and fifty professionals participated (mean age: 35.5±8.4 years; length of professional experience: ≈6.5 years). The authors also found that the working and living conditions of Norwegian PTs had negative effects during the COVID-19 lockdown period and that female professionals reported greater losses and reductions in working hours (Bratland-Sanda, Mathisen, Sundgot-Borgen, Sundgot-Borgen, & Tangen, 2020).

From another perspective, Jankowska (2021) discusses the results of the research that aimed to discover the experiences and interpretations of the PTs' daily life and work reality in light of the changes imposed by the pandemic. Fitness coaches and consumers were exposed to the challenges of the pandemic period, such as the closing of workplaces, gyms, studios and the restriction of public spaces for the practice of physical activities. Despite the difficulties, the author sees this moment as an opportunity for PTs to contribute to filling gaps related to the practice of physical activities and global health problems such as those related to obesity and sedentary behavior.

The European Delphi Study, developed by Moustakas, Szumilewicz, Mayo, Thienemann and Grant (2020) with 50 fitness experts from 26 countries, aimed to define the direction of changes faced by the fitness sector and identify the professional skills needed for the job. Although the study was conducted in 2019, researchers argue that the trends and skills identified remain relevant, even in the face of major global changes imposed by the COVID-19 pandemic. Thus, they found that health maintenance, customer retention and the use of digital technologies are the determining factors for change, especially in relation to use digital technology in exercise, health and quality of life practices. Menezes, et al. (2021) also showed in their bibliographic review that Physical Education professionals had to reinvent themselves using new technologies and online classes. In the present study, it was found that most of the participating PTs indicated that they had to adapt to the social distance imposed by the pandemic and started to use more technological tools and social networks to transmit information and teach their classes, being the preferred methodologies videos with their own demonstration of exercises, photos with exercise positions, live interaction and sheets or spreadsheets created specifically for this purpose.

It is noteworthy that although professionals adhered to remote work for training orientation, the vast majority (90% of PTs-5 professionals and 68% of PTs+5 professionals) noticed a decrease in the exercise intensity with distance training, as well as in the number of weekly training days (50% and 44%, respectively) of their clients. These results are similar to those observed by Schneider, et al. (2022) in the United Kingdom and by Parker, et al. (2021) in Australia. The most cited reasons for this are lower motivation, less exercise overload due to the lack of adequate equipment, external interference due to being in the home environment, problems in adapting to the environment due to lack of space and difficulty to evaluate exercise performance and give feedback.

These results are in accordance with the observations made by Kurylo (2016) that in online training guidance, the physical distance between the trainer and the student can generate some barriers, such as the difficulty of reliably passing on the correct way to perform an exercise, lack of motivation and lack of commitment resulting from the professional's absence during training. Another study carried out during the COVID-19 pandemic, with Physical Education students, also showed that those who receive online guidance find it difficult to get feedback on motor performance and cannot maintain their performance due to inadequate space and equipment at home, as well as the monotony of being alone (Laar, et al., 2021).

With regard to the possibility of training guidance via internet becoming a common practice after the COVID-19 pandemic, most PTs in both groups (PTs-5: 74%; PTs+5: 85%) believe that this is likely to happen and cite as reasons the need to adapt to the future, the fact that many people will continue to be afraid of transmitting the virus in collective environments,

the need for greater flexibility in training, lower cost and greater convenience for the clients. Kurylo (2016) also points out in his study similar potentialities to those mentioned in this research, for the Personal Trainer's online work, such as flexible timetables for training, more accessible costs, the possibility of expansion in the performance network of the professional and, consequently, in their income.

The present study also investigated the impacts of social isolation on the physical exercise routine of PTs themselves, noting that most of them kept their training, but with less intensity. In addition, in the group that graduated more than five years ago, the percentage of individuals who stopped training (15%) was higher than in the group who graduated less than 5 years ago (3%). Similar results were found by Srivastav, Sharma and Samuel, (2021) in a study that found a 57% reduction in the weekly time of vigorous physical activities and 64% in moderate physical activities in physical therapy professionals and students. In an interinstitutional study, in which 1047 adults from Asia, Africa and Europe were surveyed, there was a reduction of 33% in the weekly time of vigorous physical activity and 33% in moderate physical activity.³ Even high-level athletes experienced a reduction in the level of physical activity during the COVID-19 pandemic, as demonstrated in a systematic review involving studies with athletes from various sports (Jurecka et al., 2021).

Therefore, it is inferred that, unfortunately, not even people professionally involved with physical exercise were able to avoid a great decrease in their levels of physical activity during the social isolation imposed by the pandemic. This finding is worrisome, considering all the benefits that regular physical activity provides, which are already well known by common sense. Sallis and Pratt (2020) go further, citing benefits of physical activity with direct relevance to the pandemic period, such as reduction of the severity of coronavirus infections, prevention of chronic diseases that increase the risk of death from COVID-19, improvement of mental health, which is quite affected in a pandemic, and pulmonary function protection, which is precisely the organ most affected by the coronavirus.

Thus, in the interest of public health, but at the same time respecting the sanitary measures of distance to mitigate the transmission of the coronavirus, PTs play an important role in maintaining adequate levels of physical activity in the population. To this end, we suggest the development of more studies focusing on new virtual physical exercise guidance methodologies, their benefits, and limitations.

5. Conclusion

It is concluded that the social isolation imposed by the COVID-19 pandemic significantly impacted the professional performance of Personal Trainers in Rio Grande do Sul, reducing the number of clients and causing the need of adopting remote methodologies. The use of digital technologies for virtual training guidance resulted in a decrease of the intensity and weekly frequency of physical exercises by their clients, but even so, professionals believe that this form of work will remain even after the pandemic. In addition, the studied Personal Trainers continued to train during the pandemic, however, there was a reduction in the training intensity.

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