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Repercussions of the COVID-19 pandemic on the health profile of Physiotherapy students

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Abstract

The first case of the coronavirus disease (COVID-19) pandemic was located in Wuhan, China, in December 2019. As it is considered infectious and highly contagious, causing respiratory problems, it has led to numerous changes in the academic calendar of educational institutions. The present study aims to track the profile of physiotherapy students, recognizing the impacts of the pandemic on their overall health, as well as examining the greatest academic difficulties during this period. This is a qualitative data survey, collected from Centro Universitário São Camilo (CUSC) students during the months of August, September, and October 2021, totaling 169 responses. It was observed that during the pandemic, 45 (26.6%) students had some health problems. As for daily activities, 111 (65.7%) stated that they managed to adapt leisure activities at home, 84 (49.7%) worsened their eating habits, and 57 (33.7%) stated that they had less than eight hours of sleep. Regarding online learning, 68 (40.2%) considered their academic performance regular and 156 (92.3%) felt impaired in some way. In addition, 111 (65.7%) considered remote learning extremely stressful, where the majority opted for in-person classes, with 77 (45.6%) wanting to resume in-person activities completely, and 76 (45.0%) opted for a gradual return. It was found that the profile of CUSC physiotherapy students underwent significant changes in several aspects, such as sleep and diet, but mainly psychological and academic issues were referred to, with positive and negative points concerning online learning.

Palavras-chave: Students. Physiotherapist. SARS-CoV-2.

INTRODUCTION

In December 2019, the World Health Organization (WHO) reported the emergence of numerous cases of pneumonia in Wuhan, China. These occurrences were caused by a new type of coronavirus, SARS-CoV-2, not previously identified in humans, where it was later characterized as a pandemic[1].

This disease was considered infectious from a family of viruses that cause respiratory infections such as: Influenza Syndrome, Severe Acute Respiratory Syndrome (SARS), Pneumonia, and Acute Respiratory Failure. Viral transmission between humans occurs through droplets of respiratory secretions emitted by infected people through coughing or sneezing. The infection occurs through direct contact of the oral, nasal, and conjunctival mucous membranes with these respiratory secretions or indirectly through contact with contaminated objects[2].

In Brazil, the first case of COVID-19 was officially registered on February 26, 2020. With

Revista O Mundo da Saúde

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the increase in the number of cases of contamination around the world, the World Health Organization declared a pandemic, on March 11, 2020, concerning the new coronavirus and, therefore, preventive measures were adopted more intensely to contain its spread. On March 13, 2020, the Ministry of Health implemented isolation/social distancing and quarantine criteria to be applied by health authorities to patients with suspected or confirmed coronavirus infection, as a public health strategy to contain the spread of the pandemic[2]. Due to the measures adopted to contain the transmission of the virus, the Administration of the Centro Universitario São Camilo (CUSC) located in the city of São Paulo, respecting the requests of the public health bodies, started to take preventive measures and to monitor the evolution of the Coronavirus within their institution.

As of March 2020, in-person classes were suspended on both campuses (Pompéia and Ipiranga), where the scheduled content of the classes was followed remotely, according to the characteristics and specificities of each discipline, guided by the courses' coordinators.

Due to the scenario caused by SARS-CoV-2 in Brazil, it was necessary for universities to replan the school year, in order to reduce the impacts on learning, given that most educational institutions were not prepared for remote applications. Teachers and students had to reinvent themselves and adapt to this new educational format[3].

Challenges were imposed daily on students under the prolonged period of social distancing, such as limitations on access to technologies, disruption of routine, uncertainties, and insecurities about the future, in addition to concerns about contagion of close people by the virus[4].

The National Health Council issued recommendation No. 048, which was against carrying out internships and operating laboratories in a remote format in the healthcare-related courses. This is based on the fact that healthcare professionals need contact, real situations, technical skills, communication, and empathy for their training[5].

The period of isolation can lead to feelings such as loneliness, sadness, anxiety, and stress, with long-term psychological effects[6]. Furthermore, it is understood that young people are concerned with their limited social life, increasing their tension[7]. In addition, social and physical activities, eating and sleeping patterns may be related to the students' stress levels[8].

Faced with such academic, social, and emotional changes, the present study aimed to track the academic profile of Physiotherapy students at CUSC in the face of the pandemic scenario, evaluating various factors and aspects such as sleep, food, leisure, physical and psychological health, influenced by changes in the academic calendar, suspending in-person classes, and switching to remote learning.

MATERIALS AND METHODS

This was a cross-sectional study, with a qualitative character, where a survey of data was carried out with students enrolled in the Physiotherapy course at CUSC, in São Paulo (SP), during the second half of 2021.

A questionnaire entitled: "Repercussions of the covid-19 pandemic on the health profile of Physiotherapy students" was prepared by the researchers, consisting of 36 questions, divided into 2 parts, namely: the first consisted of 11 identification questions (email, age , sex, semester, and campus where they are studying, if they were socially isolated, if they belong to or live with someone in the risk group for COVID-19, if they had already been infected, or lost someone close to them by COVID-19); and the second part involved 25 questions about routine and possible changes in personal and

Revista O Mundo da Saúde

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academic life during the COVID-19 pandemic. Some questions were based on and adapted from the "Technical report of the Mental Health Survey of Students of the Federal Institute of Education, Science, and Technology of Pará (IFPA) in times of pandemic"[9].

The survey was voluntary and was sent to all students of the Physiotherapy course by email together with the invitation letter explaining the study, the Informed Consent Form (ICF), and the Google Forms access link for them to respond to the questions (https://forms.gle/MReks18uD7AZkkjs7). Students in their second, fourth, sixth, eighth, or tenth semesters were involved. The survey was available in the period of August, September, and October 2021, from which 169 responses were obtained from students, remotely.

Students who did not have access to the internet and/or refused to participate in the study did not participate in the study. Data were analyzed using the statistical analysis software Statistical Package for the Social Sciences (SPSS Statistics®), where qualitative surveys were carried out and transformed into percentiles. This study was applied after approval by the Ethics and Research Committee (COEP), number 4.917.398, of Centro Universitário São Camilo, the university where the study was carried out, after the Informed Consent Form (ICF) to participation in this survey was presented.

RESULTS

The survey was answered by 169 students from Centro Universitário São Camilo, which represents 56.71% of the total of 298 students enrolled in the Physiotherapy course at the two campuses (Pompéia and Ipiranga) for the second half of 2021. The participants were, on an average, 20 years old (20.75%), 136 (80.5%) were female, and 33 (19.5%) were male. Among the enrollment classes in the second period of the 2021 academic year, most of the students answered the questions. Fifty-three (31.4%) were in their second semester, followed by 42 (24.9%) in their fourth semester, 31 (18.3%) in their tenth semester, 24 (14.2%) in their sixth semester, and 19 (11.2%) in their eighth semester. Eighty-nine participants (52.7%) belonged to the Pompeia campus and eighty (47.3%) to the Ipiranga campus.

When asked about the infection and loss of relatives by the COVID-19 virus, 136 (80.5%) of the students said they had never been infected and 47 (27.8%) reported having lost a close relative to this disease. In terms of social isolation, 35 (20.7%) respected social isolation, 17 (10.1%) did not, and 117 (69.2%) responded that they were partially doing so. Regarding living with someone belonging to the at-risk group, 80 (47.3%) participants lived with someone belonging to this group, while 89 (52.7%) did not live with people who were part of the at-risk group.

In the question that addressed whether they had health problems before the pandemic and whether they developed any during it, 146 (86.4%) did not have any and 23 (13.6%) had health problems before the pandemic. During the pandemic, 45 (26.6%) developed a problem and 124 (73.4%) remained without health problems.

Of the health-related problems before the pandemic, some body systems were cited individually and others together. Individually, the respiratory system was listed most frequently before the pandemic, affecting five (3.0%) students together with by the endocrine system also by five (3.0%) students, and followed by the psychological system among four (2.4%) students. In conjunction, the most cited pair of problems were respiratory and

DOI: 10.15343/0104-7809.202347e13902022I

psychological, affecting two (1.2%) students. During the pandemic, the most affected systems reported were psychological among 27 (16.0%) students, respiratory among six (3.6%) students, endocrinological among two (1.2%) students, and gynecological among two (1.2 %) students, among others (table 1). With the appearance of these illnesses during the pandemic, eight (4.7%) of the students sought care but did not continue, six (3.6%) sought care, but the treatment was not effective, 42 (24.9%) sought care and were satisfied with the results, 89 (52.7%) did not seek professional help, and 24 (14.2%) did not answer this question.

Regarding the practice of physical activity, before the pandemic period, 126 (74.6%) performed physical activities regularly. During the pandemic, 111 (65.7%) managed to adapt to their physical activities.

In the question that addressed eating habits, 137 (81.1%) of the students followed a regular diet, 21 (12.4%) followed a healthy and balanced diet, and 11 (6.5%) reported not having healthy habits. During the pandemic there were changes in eating habits, where 84 (49.7%) said that habits became less healthy, 58 (34.3%) maintained eating habits, and 27 (16%) said they had improved eating habits.

Regarding sleep, 111 (65.7%) reported having regular sleep and 58 (34.3%) irregular sleep. In the pandemic period, 57 (33.7%) stated that they sleep less than eight hours without waking up at night, 39 (23.1%) sleep less than eight hours, but wake up during the night, 32 (18.9%) sleep eight hours without waking up during the night, 28 (16.6%) sleep eight hours but wake up during the night, 7 (4.1%) sleep more than eight hours without waking up during the night, and 6 (3.6%) sleep more than eight hours but wake up at night.

With regards to academic performance before the pandemic, 43 (25.4%) students reported excellent academic performance, 95 (56.2%) had a good performance, 23 (13.6%) regular performance, 7 (4.1%) %) poor performance, and 1 (0.6%) bad performance. This scenario changed with online learning where 4 (2.4%) reported an excellent performance, 41 (24.3%) had a good performance, 68 (40.2%) had a regular performance, 45 (26.6%) had a poor performance, and 11 (6.5%) had a bad performance.

Distance learning (DL) emerged as a strategy in the face of measures to reduce contagion, however, 156 (92.3%) students of the Physiotherapy course felt negatively affected by this approach, mainly in the academic and psychological scope (32 - 18.9%), among others (Table 2). Moreover, 111 (65.7%) considered remote learning extremely stressful (Table 3).

When questioned about the greatest difficulties of the current times in relation to teaching, we obtained several answers, among them, 59 (31.4%) reported difficulties in concentrating during classes and adapting to the home environment, and 26 (15.4%) only had difficulty concentrating during classes (table 4). As for the positive part, several points were addressed and among them 30 (17.8%) stated that permission to record classes, the material added to the platforms, in addition to not having to travel to college (Table 5) were beneficial.

About 168 (99.4%) students reported that communication is essential during remote/distance learning. When asked about how often they kept in touch with classmates before and during the pandemic, 135 (79.9%) reported that contact was more visible in classes carried out in-person (Table 6).

With some flexible measures being implemented to ease the pandemic, it was proposed to return to academic activities in-person, respecting safety standards. The study showed that 16 (9.5%) students reported not feeling able to return, 77 (45.6%) would like to resume activities completely in-person, and 76 (45%) preferred to return gradually.

REVISTA O MUNDO DA SAÚDE

DOI: 10.15343/0104-7809.202347e13902022I

Table 1 – Distribution of responses by CUSC Physiotherapy students (n=169)/São Paulo - SP, 2021, regarding the most prevalent health problems before during the COVID-19 pandemic.

VARIABLES	Before the Pandemic		During the Pandemic	
	n	%	n	%
Psychological System	4	2.4	27	16.0
Cardiac System	1	0.6	1	0.6
Respiratory system	5	3.0	6	3.6
Endocrine System	5	3.0	2	1.2
Gynecological System	1	0.6	2	1.2
Cardiorespiratory System	1	0.6	1	0.6
Endocrine and Psychological System	1	0.6	-	-
Psychological and Digestive System	1	0.6	-	-
Integumentary, Endocrine and Psychological System	1	0.6	-	-
Respiratory and Genitourinary System	1	0.6	-	-
Respiratory and Psychological System	2	1.2	1	0.6
Digestive system	-	-	1	0.6
Endocrine, Genitourinary, Auditory, Respiratory System	-	-	1	0.6
Gynecological System	-	-	2	1.2
Musculoskeletal System	-	-	1	0.6
Nervous system	-	-	1	0.6
Psychological and Musculoskeletal System	-	-	1	0.6
Did not respond	146	86.4	125	74.0
	169	100	169	100

Table 2 – Distribution of responses by Physiotherapy students at CUSC (n=169)/São Paulo - SP, 2021, referring to which scope distance/online learning was harmful during the COVID-19 pandemic.

VARIABLES	n	%
None	13	7.7
Academic	10	5.9
Psychological	4	2.4

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REVISTA O MUNDO DA SAÚDE

DOI: 10.15343/0104-7809.202347e13902022I

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VARIABLES	n	%
Friends	3	1.8
Academic and Psychological	32	18.9
Scholar and Friends	7	4.1
Academic and Leisure	1	0.6
Psychological and Friends	2	1.2
Psychological and Leisure	2	1.2
Academic, Psychological, and Health	3	1.8
Academic, Psychological, and Family	1	0.6
Academic, Psychological, and Friends	14	8.3
Academic, Psychological, and Leisure	8	4.7
Academic, Family, and Leisure	1	0.6
Academic, Friends, and Leisure	2	1.2
Psychological, Friends, and Leisure	1	0.6
Health, Friends, and Leisure	1	0.6
Academic, Psychological, Health, and Friends	3	1.8
Academic, Psychological, Health, and Leisure	5	3.0
Academic, Psychological, Family, and Friends	3	1.8
Academic, Psychological, Family, and Leisure	3	1.8
Academic, Psychological, Friends, and Leisure	21	12.4
Academic, Psychologist, Health, Friends, and Leisure	6	3.6
Academic, Psychologist, Family, Friends, and Leisure	8	4.7
All Options	15	8.9
Total	169	100.0

Table 3 – Distribution of responses by Physiotherapy students at CUSC (n=169)/ São Paulo - SP, 2021, regarding the stress of online learning during the COVID-19 pandemic.

VARIABLES	n	%
Extremely stressful	111	65.7
Indifferent	28	16.6
Not stressful, I adapted	30	17.8
TOTAL	169	100.0

REVISTA O MUNDO DA SAÚDE

DOI: 10.15343/0104-7809.202347e13902022I

Table 4 – Distribution of responses by Physiotherapy students at CUSC (n=169)/ São Paulo - SP, 2021, regarding the greatest difficulties during the COVID-19 pandemic.

VARIABLES	n	%
Internet	3	1.8
Communication with teachers	2	1.2
Communication with management	3	1.8
Concentration during classes	26	15.4
Adaptation in the home environment	5	3.0
Computer and/or cell phone with difficult access	1	0.6
Internet and Communication with Management	1	0.6
Internet and Concentration during classes	7	4.1
Internet and Adaptation in the home environment	1	0.6
Internet and Computer and/or cell phone with difficult access	1	0.6
Communication with Teachers and Concentration during classes	3	1.8
Communication with Teachers and Adaptation in the home environment	1	0.6
Communication with Administration and Concentration during classes	2	1.2
Concentration during classes and Adaptation in the home environment	53	31.4
Concentration during classes and Computer and/or cell phone with difficult access	2	1.2
Adaptation in the home environment and Computer and/or cell phone with difficult access	2	1.2
Internet, Concentration during classes, and Adaptation in the home environment	9	5.3
Communication with Teachers, Communication with Administration, and Concentration during classes	2	1.2
Communication with Teachers, Concentration during classes, and Adaptation in the home environment	6	3.6
Communication with Teachers, Concentration during classes, and Computer and/or cell phone with difficult access	1	0.6
Communication with the Administration, Concentration during classes, and Adaptation in the home environment	5	3.0
Communication with the Administration, Adaptation in the home environment, and Computer and/or cell phone with difficult access	2	1.2
Concentration during classes, Adaptation in the home environment, and Computer and/or cell phone with difficult access	5	3.0
Internet, Communication with Teachers, Communication with Administration, and Concentration during classes	1	0.6
Internet, Communication with the Administration, Concentration during classes, and Adaptation in the home environment	1	0.6

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DOI: 10.15343/0104-7809.202347e13902022I

...continuation table 4

VARIABLES	n	%
Internet, Concentration during classes, Adaptation in the home environment, and Computer and/or cell phone with difficult access	1	0.6
Internet, Communication with Teachers, Concentration during classes, and Adaptation in the home environment	3	1.8
Communication with Teachers, Communication with Administration, Concentration during classes, and Adaptation in the home environment	2	1.2
Communication with Teachers, Communication with Administration, Concentration during classes, and Computer and/or cell phone with difficult access	1	0.6
Communication with the Administration, Concentration during classes, Adaptation in the home environment, and Computer and/or cell phone with difficult access	2	1.2
Internet, Communication with Teachers, Communication with Administration, Concentration during classes, and Adaptation in the home environment	1	0.6
Internet, Communication with Teachers, Concentration during classes, Adaptation in the home environment, and Computer and/or cell phone with difficult access	1	0.6
Internet, Communication with the Administration, Concentration during classes, Adaptation in the home environment, and Computer and/or cell phone with difficult access	2	1.2
Communication with Teachers, Communication with Administration, Concentration during classes, Adaptation in the home environment, and Computer and/or cell phone with difficult access	2	1.2
All Options	4	2.4
Others	5	3.0
Total	169	100.0

Table 5 – Distribution of responses by Physiotherapy students at CUSC (n=169)/São Paulo - SP, 2021, regarding what the student considers positive about online learning.

VARIABLES	n	%
Permission to record classes	6	3.6
Class material attached to the platform	3	1.8
Welcoming of teachers	2	1.2
Flexibility in delivering work	1	0.6
No need to travel to college - optimizing time	4	2.4
Teachers' Understanding	2	1.2
Permission to record classes and Class Material attached on the Platform	19	11.2
Permission to record classes and not having to travel to college - optimizing time	16	9.5
Permission to record classes and Teachers' understanding	3	1.8

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REVISTA O MUNDO DA SAÚDE

DOI: 10.15343/0104-7809.202347e13902022I

...continuation table 5

VARIABLES	n	%
Class Material added to Platform and Teachers' Reception	1	0.6
Class Material added to Platform and No need to travel to college - optimizing time	3	1.8
Class Material added to Platform and Teachers' Understanding	1	0.6
Teachers' Reception and Flexibility in Delivering Work	1	0.6
Teachers' Reception and No need to travel to college - optimizing time	1	0.6
Teachers' Reception and Teachers' Understanding	1	0.6
Flexibility in Delivering Work and not having to travel to college - optimizing time	1	0.6
Flexibility in Delivering Work and Teachers' Understanding	2	1.2
No need to travel to college - optimizing time- and Teachers' Understanding	1	0.6
Permission to record classes, Class Material added to Platform, and Teachers' Reception	2	1.2
Permission to record classes, Class Material added to Platform, and Flexibility in Delivering Work	7	4.1
Permission to record classes, Class Material added to Platform, and No need to travel to college - optimizing time	30	17.8
Permission to record classes, Class Material added to Platform, and Teachers' Understanding	2	1.2
Permission to record classes, Teachers' Reception, and No need to travel to college - optimizing time	2	1.2
Permission to record classes, Teachers' Reception, and Teachers' Understanding	1	0.6
Permission to record classes, Flexibility in Delivering Work, and Not having to travel to college - optimizing time	1	0.6
Permission to record classes, No need to travel to college, and Teachers' Understanding	2	1.2
Class Material added to Platform, Teachers' Reception, and No need to travel to college - optimizing time	2	1.2
Class Material added to Platform, Flexibility in Delivering Work, and No need to travel to college - optimizing time	1	0.6
Class Material added to Platform, No need to travel to college - optimizing time, and Teachers' Understanding	1	0.6
Permission to record classes, Class Material added to Platform, Teachers' Reception, and Flexibility in Delivering Work	1	0.6

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DOI: 10.15343/0104-7809.202347e13902022I

...continuation table 5

VARIABLES	n	%
Permission to record classes, Class Material added to Platform, Teachers' Reception, and No need to travel to college	6	3.6
Permission to record classes, Class Material added to Platform, Teachers' Reception, and Teachers' Understanding	5	3.0
Permission to record classes, Class Material added to Platform, Flexibility in Delivering Work, and No need to travel to college	4	2.4
Permission to record classes, Class Material added to the Platform, Flexibility in Delivering Work, and Teacher's Understanding	2	1.2
Permission to record classes, Class Material added to Platform, No need to travel to college, and Teachers' Understanding	2	1.2
Permission to record classes, Teachers' Reception, Flexibility in Delivering Work, and No need to travel to college	3	1.8
Permission to record classes, Welcoming of Teachers, Flexibility in Delivering Work, and Understanding of teachers	1	0.6
Permission to record classes, Teachers' Reception, No need to travel to college, and Teachers' Understanding	1	0.6
Class Material added to Platform, Teachers' Reception, Flexibility in the delivery of Work, and No need to travel to college	1	0.6
Permission to record classes, Class Material added to Platform, Teachers' Reception, Flexibility in Delivering Work, and No need to travel to college	1	0.6
Permission to record classes, Class Material added to Platform, Teachers' Reception, Flexibility in Delivering Work, and Teachers' Understanding	3	1.8
Permission to record classes, Class Material added to Platform, Teachers' Reception, No need to travel to college, and Teachers' Understanding	6	3.6
Permission to record classes, Class Material added to Platform, Flexibility in Delivering Work, No need to travel to college, and Teachers' Understanding	2	1.2
All options	11	6.5
Permission to record classes, Flexibility in Delivering Work, No need to travel to college - optimizing time, Teachers' Understanding, and Saving money	1	0.6
Total	169	100.0

REVISTA O MUNDO DA SAÚDE

DOI: 10.15343/0104-7809.202347e13902022I

Table 6 – Distribution of responses by Physiotherapy students at CUSC (n=169)/São Paulo - SP, 2021, regarding the frequency of contact with colleagues before and during the COVID-19 pandemic.

VARIABLES	Before the Pandemic		During the Pandemic	
	n	%	n	%
Only within the academic environment	34	20.1	70	41.4
Inside and outside the academic environment	135	79.9	99	58.6
	169	100	169	100

DISCUSSION

A study carried out with nursing students stated that exposure to long-term stressors, such as the pandemic, negatively affects both the development as well as the health of these professionals[8]. The present study corroborates these statements, where more than half of the Physiotherapy students considered online learning extremely stressful and felt negatively impacted in some way. Family support is of fundamental importance, serving as a support network and helping to cope with these problems.

During the pandemic period, continuous feelings of sadness/depression reached 40% of Brazilian adults, and frequent feelings of anxiety and nervousness was reported by more than 50% of them[10]. There are possible justifications for the increase in anxiety among students during this pandemic period, such as fear of getting sick, uncertainties for the future, interruption of practical classes, in addition to anxiety starting the profession for those who were in the last year[8]. In this study, it was observed that the health of the Physiotherapy students was affected mainly in relation to their mental health, where there was a great appearance of symptoms of anxiety, depression, and even panic attacks.

Support networks are important resources in healthcare, since promoting and protecting individual and group health involves the formation of social ties and solidarity relationships between people and groups[11]. These social interactions are fundamental for relieving difficulties and suffering, helping in the process of coping and overcoming moments of crisis[12]. The present study demonstrated that when classes took place in person, the frequency with which students interacted was more effective both inside and outside the academic environment. The disadvantages were also similar, where they reported feeling a lack of contact with teachers and colleagues, since this interaction has a lot to add to learning.

Another point is in relation to sleep, which is physiologically essential for physical and mental well-being, and the break in a normal cycle can lead to a prolonged state of alertness, contributing to cases of insomnia, excessive sleepiness, and fatigue, which may also be associated with mental health problems

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during the pandemic[13]. We know that it is during sleep that our body works to maintain the balance of the immune, endocrine, and neurological systems, which are fundamental for learning, memory consolidation, productivity, muscle relaxation, and repair of cellular damage, among other functions. Thus, the difficulty of sleeping and staying asleep can be a risk element for quality of life and learning[9]. This survey showed that most students sleep about 7 to 9 hours, but most wake up during the night. This can be a factor that hinders their academic performance, concentration, anxiety, and the appearance of diseases. Most international guidelines recommend that adults should practice at least 150 minutes of moderate activity and 75 minutes of more intense activity per week[14]. However, due to the pandemic, it was possible to observe a large reduction in the level of physical activity, especially in metropolitan regions[15]. In addition, the changes brought about by social distancing can lead to effects on various dimensions of health, such as a decrease in physical fitness[16]. More than half of a group of respondents in a survey practiced physical exercises at home, where 64.8% did not have professional help and 20% practiced with the help of professionals who already accompanied them before the pandemic, showing their ability to adapt to the home environment[17]. Considering that the population of the present study resides in the metropolitan region of São Paulo, the results indicated that this reduction occurred due to the preventive measures against contamination, where the majority carried out social isolation. Most students that performed physical activities before the pandemic managed to adapt them in some way during the pandemic.

Social isolation can have a major impact on diet, increasing the consumption of sweets, sugary drinks, snacks, and sauces, also known as comfort foods[18]. A healthy and balanced diet combats health problems, and are associated with a better immune response, lower risk of developing diseases, and a longer life expectancy[19]. In our analysis, the students of the Physiotherapy course who participated in the study maintained a regular diet before the pandemic period and during the pandemic and reported that their eating habits became less healthy. It is believed that increased levels of anxiety and stress can increase the feeling of hunger and serve as a stress-reliever in some situations, which justifies the perception of less healthy habits and weight gain.

Another point that was very affected was communication. Many people who respected social isolation were using apps to allow live interaction[20], which is extremely positive since the inability to socialize and interact with people increases anxiety, boredom, and suicidal thoughts[21]. In the present study, the students almost unanimously stated that communication is essential during the pandemic period, where a way to keep in touch with their friends was possibly the use of social networks and interaction apps.

Technology, combined with specialized tools, helps with online learning[22]. When using the Virtual Learning Environment (VLE) in online courses, it is expected that the simple availability of didactic materials, texts, and audiovisual media will ensure that all students, often alone, receive knowledge even without an effective pedagogical mediation[23]. One of the main advantages of remote learning is regarding students not having to travel to college, followed by flexibility in study schedules. On the other hand, there is a relationship between autonomy and organization, as studying at home often results in distractions that hinder performance[24]. Physiotherapy students considered permission to record classes, materials added to the platform, and not having to travel to college as the greatest advantages of online learning; however, they had difficulty concentrating.

With regards to the return of face-to-face classes at universities in the country, perhaps this is a hasty attitude, in view

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of the possibility of new outbreaks of the SARS-CoV-2 virus[25]. In the present study, the Physiotherapy students demonstrated great enthusiasm in returning to in-person activities, some would like to return to the in-person model completely, while others, a little more fearful, prefer to return gradually. In Brazil, universities are following the guidelines given by public authorities on the best way to return, in order to avoid hasty actions and contribute to the increase in cases.

CONCLUSION

During the pandemic period, the students of the CUSC physiotherapy course had to readapt and create strategies for the new situation they were experiencing. Social isolation made them start to develop or present a worsening of diseases, where the most affected systems were the respiratory, endocrinological, and psychological systems. Most of the students stated that they had difficulty concentrating, as when they had to look for a space in their homes to attend classes, they often came across other people in the same place, leading to distractions. Another point to be addressed is related to the internet, as many claimed not to be able to watch classes since the internet was failing.

Factors such as sleeping disorders, irregular eating habits, and lack of physical activity negatively influenced physical and psychological health and academic performance. They explained that they felt quite negatively impacted by online learning, and most students would prefer to return to in-person activities gradually or completely.

There were limitations found throughout the development of this study, such as the lack of participation of students enrolled in the physiotherapy course at CUSC, in addition to the incipient literature on the topic addressed, which made it difficult to select material for analysis. On the other hand, although this study does not have robust statistical significance, it can and should be used as a reference for the institution to outline service strategies for its public.

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