# Lifestyles and habits of a Spanish University Community in times of COVID-19: a cross-sectional study Estilos de vida y hábitos de una Comunidad Universitaria Española en tiempos de COVID-19: un

estudio transversal

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**Abstract.** Background: COVID-19 pandemic caused unprecedented disruption in everyone's worldwide. The lockdown and related restrictions to which the Spanish population was subjected affected the general health of our society as a whole. Objective: The aim of the study was to explore the impact of the COVID-19 pandemic on the lifestyle and habits of the University of Vigo community -Spain-. Method: A descriptive, observational, cross-sectional study was carried out by means of an anonymous 76-question survey. Results: 418 questionnaires were received, 359 (85.88%) were considered valid for the analysis. Population performed physical activity several times a week (59.39%), non-smokers (89.76%), occasional drinkers (>40% drink no more than 2-3 times/month), slept  $7.06\pm0.9$  hours/day and the 60.59% perceived their current state of health as good. During the lockdown they remained active (56.31%), followed safe recommendations (96.86%), had contact with infected people (42%), developed the disease (6%), and required hospital admission (0.40%). People surveyed about the pandemic situation were quite or very concerned (89.84%), had a negative quality life impact (75.20%), and suffered muscle and joint pain due to overuse of electronic devices (66.26%). Conclusion: Our findings show healthy lifestyle, balancing physical activity and/or sports routines with adequate rest and by minimising toxic habits. This behaviour maintained over time, together with following the safe recommendations, may have a protective role in the mental and physical health, minimizing the negative influence of COVID-19.

Keywords: Life Style; Habits; Health promotion; COVID-19; Universities.

**Resumen.** Antecedentes: La pandemia por COVID-19 causó trastornos en las vidas de todo el mundo. El confinamiento y las restricciones en España afectaron a la salud general de toda la sociedad. Objetivo: fue conocer el impacto que tuvo la pandemia por Covid-19 sobre el estilo de vida y hábitos de la comunidad de la Universidad de Vigo, España. Método: Se realizó un estudio descriptivo, observacional, transversal, a través de una encuesta online anónima. Resultados: 418 cuestionarios fueron recibidos, 359 (85,88%) fueron considerados válidos para su análisis. La población realizó actividad física varias veces por semana (59,39%), no fumador (89,76%), bebedor ocasional (>40% bebe no más de 2-3 veces/mes), durmieron 7,06±0,9 horas/día y el 60,59% percibieron su estado de salud actual como bueno. El 56.31% se mantuvo activo durante el confinamiento. El 96,86% tomó las medidas de prevención recomendadas, un 42% tuvo contactos con positivos, desarrollando la enfermedad un 6% y necesitando ingreso hospitalario el 0,40%. Al 89,84% le preocupa la pandemia bastante o mucho, el 75,20% piensa que la pandemia le ha repercutido de forma negativa, y un 66,26% sufrió dolores musculares y articulares por el sobreuso de dispositivos electrónicos. Conclusión: Nuestros hallazgos muestran un estilo de vida saludable, equilibrando rutinas de actividad física o deportiva con descanso adecuado y alejado de hábitos tóxicos. Este hecho, mantenido en el tiempo, junto con un seguimiento de las recomendaciones de las autoridades sanitarias, ha podido jugar un papel protector en la salud mental y física, limitando la influencia negativa de la COVID-19.

Palabras clave: Estilo de vida; Hábitos; Promoción de la salud; COVID-19; Universidades.

# Introduction

In December 2019, a type of pneumonia with an unknown etiology appeared in Wuhan city, Hubei province, China. The subsequent isolation of the virus from human patients and its molecular analysis showed that the pathogen was a novel coronavirus, first named 2019-nCoV, and later, severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) by the Coronaviridae Study Group of the International Committee on Taxonomy of Viruses (2020), and Coronavirus disease19 (COVID-19) by the World Health Organization -WHO- (2020). Initially, the disease was diagnosed as a virus-induced pneumonia because of the clinical symptoms observed in the patients - similar to those of other respiratory viruses - their history of exposure to other people with the virus, and their history of visits to the affected area (Zhou et al. 2020).

The advance of COVID-19 gradually began causing concern among the global population and health authorities, including those of Spain. Soon, in view of COVID-19's highly contagious nature, the high number of deaths, the dizzying overload of the health service and the absence of etiological treatment, the Spanish government - following WHO recommendations - declared a state of alarm, and ordered

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a lockdown of its citizens, with the sole exception of those defined as Key Workers. Around 18,625,000 Spanish households (Instituto Nacional de Estadística, 2020) suffered severe restrictions to their mobility, and abrupt changes to their lifestyle and living habits. This situation caused unprecedented disruption and alteration to the lives of everyone in the country, with very similar interventions taken by governments worldwide (Lai B et al., 2020; Anderson, Heesterbeek, Klinkenberg & Hollingsworth, 2020). The lockdown and related restrictions to freedom of movement to which the Spanish population was subjected affected the general health of our society as a whole (Xiong et al., 2020). Thus, lockdown in Spain meant a decrease in the amount of physical Exercise compared to what previously done (from 3.26 to 2.7 hours) and its intensity (from intense and moderate to moderate and mild), increasing the percentage of people who did not perform any physical activity (García-Tascón, Mendaña-Cuervo, Sahelices-Pinto & Magaz-González, 2021). In relation to habits, lockdown meant, according to Magaz-González, Mendaña-Cuervo, Sahelices-Pinto & García-Tascón (2021), an increase in the hours of sleep, but a worsening of its quality, while Santos-Miranda, Rico-Díaz, Carballo-Fazanes & Abelairas-Gómez (2022) point out the increase in sitting hours (from 6 to 8).

The so-called "new normality", or the new types of individual mobility and ways of relating to one another after lockdown was lifted in Spain on June 21, 2020, meant resuming social and family life, albeit while also observing a series of preventative measures. Although the situation at the end of June 2020 seemed to reflect that some control over the Covid-19 pandemic had been taken, by the end of the summer the Covid-19 infection rate had started to rise again. This meant that by the end of October 2020 there were once again closures of the hospitality industry, perimetral closures of certain geographical areas, restrictions of movement at both national and international levels, and so on. This situation once again led to the populace experiencing isolation, and to a corresponding increase in their levels of stress, depression and anxiety (Xiong et al., 2020; Dosil Santamaría, Ozamiz-Etxebarria, Redondo Rodríguez, Jaureguizar Alboniga-Mayor & Picaza Gorrotxategi, 2020; Serrano-Ripoll et al., 2020; Inchausti, García-Poveda, Prado-Abril & Sánchez-Reales, 2020). This situation may have led to the health and quality of life of the population being affected (Velandia Zambrano, Cuevas Rodríguez & Salvador Soler, 2022), conditions that could have worsened if, additionally, individuals directly experienced COVID-19, or it affected members of their family unit and/or circle of close friends.

On the other hand, in the universities there are people who do not live together. With the Covid-19 pandemic, their normal daily activity has been altered. So much so that, during the pandemic it has had to enhance the activity, teaching and non-teaching, in a non-face-to-face and semiface-to-face way (Farnell, Skledar Matijević & Šćukanec Schmidt 2021; Sahu, 2020), even though that prior to the COVID-19 pandemic, all teaching and learning was carried out face-to face. This change has not only affected the teaching/learning and research relationships that are inherent to the university environment but has also impacted negatively on the health of the university community -the students, the teaching and research staff and, the administrative and service personnel-. We consider it interesting to understand how COVID-19 has affected those who make up the university community, and specifically in a Spanish University -University of Vigo-, since these repercussions may have changed the way the university's teaching and research functions, as well as affecting the management and administrative processes, and the interpersonal relationships that exist within the university community.

Therefore, the aim of the present study is to explore the impact of the COVID-19 pandemic on the lifestyle and habits of the University of Vigo community, and the repercussions that the pandemic had on its individual members.

### Material and methods

#### Design and procedure

A descriptive, observational, cross-sectional study was carried out by means of an anonymous 76-question survey distributed among the university community.

The survey was sent to the entire community of the University of Vigo in electronic format and in Spanish, with participation being voluntary and anonymous. It was launched on December 17, 2020 through the internal communication lists of the University of Vigo, with a reminder being sent in mid-January, February and March 2021. Informed consent was obtained from all subjects involved in the study.

The completed responses were collected from December 17, 2020 to April 27, 2021 with the online platform LimeSurvey being used for this purpose. The study was approved by the Ethics Committee of the Faculty of Physiotherapy of the University of Vigo (protocol code 205-2020-3 and date of approval 3<sup>rd</sup> December 2020).

## **Participants**

Students, teaching and research staff and, administrative and service personnel of the University of Vigo.

### Instrument

In devising the survey, the 2017 Spanish National Health Survey (Ministerio de Sanidad, Consumo y Bienestar Social, 2019) was used as one of the references, making up the foundation of its first four parts; and the COSMOS-Spain Study of the Carlos III Institute of Health (Instituto de Salud Carlos III, 2020) was used as the other, forming the basis of the remaining four parts. Therefore, the survey was organised into 2 blocks: the first concerned with general data (sociodemographic characteristics, lifestyle, health status, and quality of life and independence) with the second focussing on the effects of the COVID-19 pandemic (knowledge about the COVID-19 crisis, illness caused by COVID-19, the impact of the COVID-19 pandemic, and the effects of COVID-19 in the future). In addition, participants were free to leave comments at the end of the survey. Survey response time was between 15-20 minutes.

#### Data analysis

A descriptive analysis of the data was undertaken with measures of central tendency (mean and standard deviation) and percentages. Cronbach's Alpha coefficient was employed to calculate internal consistency. A greater value than 0.8 or more shows high internal consistency. In addition, for this survey the data was processed using IBM SPSS 25.0 (Armonk, NY) statistical software for Mac.

Table 1

Sociodemographic variables of the sample (n=359).

Sociodemographic variables of the sample (n=35 Variable	%
Gender	· •
Female	58.50%
Male	35.65%
Not indicated	5.85%
Group	0.007.0
Students	21.45%
Administrative and service staff	32.59%
Research staff	33.43%
Researchers, others	5.57%
Educational level	5.5770
Primary	0.00%
Secondary	0.56%
Baccalaureate or similar	21.17%
Diploma	8.36%
Bachelor's degree	14.21%
Master's degree	16.43%
Doctorate	32.03%
Marital Status	
Single	35.38%
Married	43.45%
Widow/er	0.56%
Separated	0.84%
Divorced	5.01%
Other	3.06%
Lifestyle	
Single	9.75%
With partner	44.29%
With parent/s	11.70%
With friends	5.29%
With child/ren	8.08%
Other	10.58%
Type of residence	
Flat	62.12%
Terraced house, or in housing complex	6.13%
Detached house	22.56%
Other	1.11%
Place of residence	
Rural	11.70%
Semiurban (5.000-20.000 inhabitants)	21.73%
Urban (>20.000 inhabitants)	59.33%

# Results

A total of 418 questionnaires were received, of which 359 (85.88%) were considered valid for the sociodemographic analysis. 120 (33.43%) were completed by teaching and research staff, 117 (32.59%) by administrative and service staff, 77 (21.45%) by students and 20 (5.57%) by researchers or others.

The mean age of the sample was  $43.55\pm14.18$  years (18-70), of which 210 (58.5%) were women. The sociode-mographic characteristics can be seen in Table 1.

The lifestyle and habits of the surveyed members of the university community are shown in Table 2 (entertainment, health and/or toxic habits).

When people were asked about the physical or sport activity that were undertaken during lockdown, 56.31% stated that they were active in some way by doing alternative exercises, as well as the 45.73% who used internet to search for information regarding possible therapies and/ or exercise. Turning to the present, when asked about the

Table 2 Lifestule and babits of the sample (n=20)

Lifestyle and habits of the sample $(n=293)$ .	
Variable	%
1. How many hours do you usually sleep?	7.06±0.9 (4-12)
2. Approximately, how many hours TV do you	
watch a day?	1.54±1.13 (0-6)
3. Approximately, how many hours do you spend a	
day working on electronic devices (computer,	
tablet, mobile, etc.)?	7.22±2.43 (0-15)
4. Are you a smoker?	
No	89.76%
Yes	10.24%
5. If you are a smoker, have you increased your	
tobacco consumption since the beginning of	
lockdown?	
Yes	3.07%
It's the same	4.10%
It's gone down	3.07%
6. Do you regularly drink alcohol?	
Yes, every day	8.53%
5-6 days a week	1.71%
3-4 days a week	4.78%
1-2 days a week	23.55%
2-3 times a month	15.36%
Once a month	6.83%
Less than once a month	14.68%
I haven't drunk alcohol in the last year	4.44%
I've never, or almost never, drunk alcohol	15.70%
7. If you drink, has your alcohol consumption	
increased since the beginning of lockdown?	
Yes	5.80%
It's the same	37.88%
It's gone down	30.03%
8. Before lockdown, which of the following options	
best describe the frequency with which you did	
sport and/or took exercise in your free time?	
I didn't exercise. My free time was almost	
completely occupied with sedentary pursuits -	
Reading, watching TV, listening to the radio, going	
to the cinema, etc.	8.87%
I exercised or did sport infrequently (Once a	
month)	8.53%
I exercised or did sport once a week	17.41%
I exercised or did sport several times a week	59.39%

last 7 days, some 64.85% said they were doing sport and/ or physical activity in their free time (nearly 50% exercised vigorously 2-3 days a week for around 60 minutes per day, moderate exercise 2-3 days per week for 60-90 minutes per day and, walked 5-7 days per week between 60-90 minutes per day).

Regarding to their general state of health, 60.59% of the people in the university community perceived their current state of health as good, 23.79% as fair and, 8.18% as very good, while only 4.46% considered their health to be bad and, no participants considered it to be very bad. For the same question, but limited to the last 12 months, there were no relevant changes in the percentages (57.99, 25.28, 8.18 and 5.58, respectively). When asked if they had difficulty remembering things or concentrating, 55.76% said they had no difficulty at all, 38.66% said they had some difficulty and 1.49% said they had a lot of difficulty. Also, 39.78% confessed to having some difficulty in falling asleep, with 5.20% experiencing a lot of difficulty, although half of the respondents said they had no difficulty initiating sleep (50.93%). Finally, in relation to their quality of life and independence, 90.11% of the people said they were independent in every way, and, when questioned about their quality of life, this was basically considered to be good (63.12%), very good (22.43%) or average (11.03%). Tables 3 and 4 show the responses regarding the impact of the COVID-19 pandemic.

Table 3

Understanding of	the crisis caused by the C	COVID-19 pandemic(n=255).

Variable	%
1. Do you know anything about the COVID-19 pandemic?	
Yes	94.51%
No	0.78%
2. Of the following options, please indicate all of which	
you have used/are using to stay informed about the crisis	
caused by the COVID-19 pandemic	
TV	70.98%
Radio	45.49%
Newspapers	57.65%
Internet	86.27%
Social Networks	43.92%
Doctor	16.86%
Family members and friends	39.22%
Website of the Ministry of Health	36.86%
Scientific papers	40.78%
I don't look for information	1.96%
3. Are you taking preventative measures to avoid COVID-	
19 infection?	
Yes	96.86%
No	0.39%
4. If you are taking preventative measures, please indicate	
all of which apply below:	
Confinement at home following government advice	89.80%
Social distancing if I go out in the street.	89.02%
Use of masks	96.86%
Use of gloves	7.06%
Frequent hand washing	87.84%
Coughing into elbow	67.84%
Frequent cleaning of surfaces I touch	45.10%
Disinfection of purchases or of what someone I don't live	27.45%
with me brings	89.02%

Use of hand-sterilizing gel	22.75%
Changing clothes when returning home	17.25%
Cleaning the soles of my shoes when I get home	63.14%
Avoiding public transportation	81.18%
Ventilating enclosed spaces	78.82%
Avoiding social and/or family gatherings	
5.Have you had any contact with anyone you know to be	
suffering from COVID-19?	
Yes	42.00%
No	54.00%
6.In the case of contact with anyone suffering from	
COVID-19, did that person subsequently die of the	
illness?	
Yes	0.00%
No	47.60%
7.Have you at any time suffered from a diagnosed case of	
COVID-19?	
Yes	6.00%
No	87.60%
8.In the case of having suffered from a case of COVID-19,	
were you hospitalized?	
Yes	0.40%
No	99.60%

Table 4

Impact of the COVID-19 pandemic and future perspectives (n=246).

impact of the COVID-19 panaemic and juture perspectives (n=240).	
Variable	%
1. Are you concerned about the COVID-19 pandemic?	
No at all	0.41%
A little	3.66%
Neither very much nor a little	4.47%
Quite a bit	41.06%
A lot	48.78%
	+0.70%
2.Do you think the COVID-19 pandemic has had a	
negative impact in your case?	
Yes	75.20%
No	20.33%
3.If you have increased your use of electronic equipment	
(computer, tablet, cell phone, etc.), have you suffered	
from muscular and/or joint pain as a result, or has	
already existing pain increased?	
Yes	66.26%
It's stayed about the same	28.46%
No	3.66%
	3.0070
4.Due to the COVID-19 pandemic, have you had any	
medical appointments that were postponed or cancelled?	
No	30.89%
No, but they were replaced by phone consultations	28.05%
Yes, the consultation was cancelled and rescheduled to a	35.37%
later date	
5. Finally, score from 0 to 5 the degree of impact that the	
global COVID-19 crisis has had on you personally, with	
0 being no impact at all, and 5 being the maximum	
impact possible:	
1	1.49%
2	5.69%
3	
	19.31%
4	24.75%
5	6.19%
Mean value	3,5±0,91
6. What do you think about the future of the COVID-19	
crisis?	
The worst of the pandemic is yet to come	20.00%
We are currently experiencing the worst of the	36.73%
epidemic	
The worst of the epidemic is over	33.06%
1	33.0070
7.How likely do you think it is that you'll get COVID- 19?	
	2 (70/
Very low chance	3.67%
Low chance	21.63%
Medium chance	55.92%
Fairly likely	11.84%
Very likely	2.45%

 8.Do you use any COVID-19 tracking applications on your mobile phone?
 34.29%

 Yes
 34.29%

 No
 61.63%

 9.Would you get the COVID-19 vaccine if it were available?
 1.22%

 I would not get vaccinated
 1.22%

 I would wait to see the side effects before deciding
 14.29%

 I would definitely get vaccinated
 80.82%

Table 5 shows a reliability analysis of the survey, stratified by dimensions and groups analyzed. The results show that the survey used has a good reliability in the group of students, administrative and service staff and research staff. The analysis also shows that the Impact of the COVID-19 pandemic and future perspectives dimension has excellent reliability ( $\alpha = 0.928$ ).

Table 5

Reliability analysis (Cronbach's alpha)

	Alfa de Cronbach (α)				
Questionnaire Domains	Students (21.45%)	Administrative and service staff (32.59%)	Research staff (33.43%)	Researchers, others (5.57%)	Total
Lifestyle and habits of the sample	$\alpha = 0.887$	α=0.887	α=0.898	α=0.767	α=0.886
Understanding of the crisis caused by the COVID-19 pandemic	α=0.701	α=0.734	α =0.798	α=0.611	α=0.771
Impact of the COVID-19 pandemic and future perspectives	α=0.893	α=0.934	α =0.938	α=0.867	α=0.928
Total Domains	$\alpha = 0.823$	α=0.851	$\alpha = 0.878$	α=0.748	$\alpha = 0.825$

### Discussion

#### **Demographic characteristics**

This study provides an overview of the lifestyle of those who are part of the university community of Vigo, Spain, after overcoming the periods of lockdown and mobility limitation of the first two waves of the Covid-19 pandemic.

Studies that might at first glance seem similar (Fornili et al., 2021; Odriozola-González, Planchuelo-Gómez, Irurtia & de Luis-García, 2020) turn out not to be, as they are oriented more towards the possible psychological effects of the pandemic during lockdown: Fornili et al. (2021) studied five Italian universities during the first lockdown, and Odriozola-González, Planchuelo-Gómez, Irurtia & de Luis-García (2020) studied a Spanish university during the same time period. While in both of these studies the percentage of women is similar to the one in the present study, other demographic characteristics differ, such as the proportions at which the different strata of the university community are represented (with these samples 13,14 being composed of more than 75% students, rather than the higher percentage of teaching staff in our study, 33.43%, and of administration and services staff, 32.59%). Our study also differs with a clearly higher average sample age, as well as higher levels of education.

The sample includes people with an average age of 43.55, with a high level of education (32.03% PhDs), who live with others (44.29%) and who live in an urban environment (59.23%).

### Lifestyles and Habits

The average lifestyle revealed in our sample is one which is healthy, with an average sleep time of around 7 hours  $(7.06\pm0.9)$ , a non-smoking profile (89.76%), with occasional alcohol consumption (more than 40% drink, at most, 2-3 times a month) and that, for the most part, they do physical activity or sports several times a week. A healthy lifestyle is an important factor in the control of various diseases and for maintaining people's mental health, so what the data found may have counteracted the negative effects caused by exposure to the pandemic and the lockdowns experienced during this most recent year of the sample's lives. Similarly, Hamer, Kivimäki, Gale & Batty (2020) found that unhealthy habits, such as smoking or physical inactivity, and obesity were risk factors in the United Kingdom for contracting severe COVID-19 and subsequent hospital admission. Other studies follow similar lines. In this vein, Lange & Nakamura (2020) point out that appropriate lifestyle changes with respect to nutrition, exercise, sleep, smoking and alcohol intake can help to change the distribution of the population in terms of the risk of infection, and of contracting severe COVID-19. Balanzá-Martínez et al., (2021) found that a healthier lifestyle, in terms of nutrition and physical activity, was one carried out by those who also had better stress management, greater social support and more time spent outdoors, while in contrast, being an essential worker, having poorer self-assessed health, suffering from depression or anxiety, and from changes in diet and sleep patterns, were all factors associated with a less healthy lifestyle. Imaz-Aramburu et al., (2021) also associated a lower detrimental effect of the COVID-19 pandemic among those who, prior to its onset, had healthy habits. Finally, Khan, Sultana, Hossain, Hasan, Ahmed & Sikder (2020) found a significant association between stress, anxiety, depression and symptoms of post-traumatic stress, and fear of infection, inadequate diet, lack of physical exercise and limited or no recreational activity.

In the present study, in addition to maintaining a physical activity or sports regime several times a week during the periods of lockdown (56.31%), almost half of the sample were proactive in pursuit of these healthy habits (45.73% sought information on the web about possible therapies and/or exercises to undertake). This gives the impression that perhaps they maintained a healthy lifestyle and habits due to possible concerns about the pandemic, something also revealed by Van der Werf, Busch, Jong & Hoenders (2021); Imaz-Aramburu et al., (2021) or Santos-Miranda et al. (2022) who also found that a significant proportion of their samples tried to maintain healthy diets and/or engage in physical activity prior to the pandemic.

However, although in our study there were fewer than ten percentage points difference between those doing regular physical activity during periods of confinement (56.31%) and outside of them (64.85%), other studies have revealed other findings. Romero-Blanco, Rodríguez-Almagro, Onieva-Zafra, Parra-Fernández, Prado-Laguna & Hernández-Martínez (2020) found that, during lockdown, both physical activity (219.31 min) and sitting time (141.67 min) increased over a seven-day period. However, Giuntella, Hyde, Saccardo, & Sadoff (2021), in their longitudinal study, found large alterations to physical activity, sleep, time use and mental health (steps taken per day reduced by more than a half, an increase from 25 to 30 minutes of sleep time per night, a decrease in social relationships by more than a half to less than 30 minutes a day, and an increase to over 5 hours daily spent in front of a screen, while simultaneously rates of depression also increased). Similarly, García-Tascón et al. (2021) showed that Spanish people who did no physical activity at all, increased during lockdown, or Alarcón Meza & Hall-López (2021) that indicate that Mexican university athletes reduced their level of exercise during lockdown. Furthermore, Zamarripa, Marroquin-Zepeda, Ceballos-Gurrola, Flores-Allende & Garcia-Gallegos (2021) reported that Mexican adults increased sedentary behaviors such as watching TV/play video games, listen to music... while the level of physical activity tended to decrease and Savage et al., (2020) found that physical activity among British university students decreased during the lockdown. Nevertheless, it should be noted that these studies were carried out with data linked to the first wave of the pandemic, when many countries opted for an almost total lockdown of the population, whereas our study was carried out during the third wave in Spain, and the impact of this may have been different to the huge changes which were brought about by the impact of the first lockdown on the population as a whole. Neither is our data in line with that of Goncalves, Le Vigouroux & Charbonnier (2021) who report that physical activity among French university students has been in decline since the first lockdown.

Where our study is similar to the others (Romero-Blanco, Rodríguez-Almagro, Onieva-Zafra, Parra-Fernández, Prado-Laguna & Hernández-Martínez, 2020; Giuntella, Hyde, Saccardo, & Sadoff, 2021; Savage et al., 2020) is that, during the pandemic, especially during periods of lockdown, the average number of hours spent daily in front of the television, or electronic devices such as computers, cell phones or tablets, has increased.

# Impact of COVID-19

COVID-19 has posed a challenge for universities, as pointed out by Wilson et al., 2020. As a result of the lockdown imposed during the first wave of the pandemic (March-June 2020), teaching and meetings, traditionally carried out in person, had to be relocated to the virtual world, something that was maintained throughout the 2020-21 academic year. Although the University of Vigo, like many others, tried to make this transition as easy as possible by providing the means and facilities for its roll out, both for students and the university staff - who tried, while continuing with their work, to protect the university community from COVID-19 (Sahu, 2020) - it does not alter the fact that this was a huge and difficult upheaval for all participants. The pandemic has unequivocally altered the lifestyles of the different groups that make up the university community (students, faculty and administrative and service personnel), as has been pointed out in other studies (Fornili et el., 2021; Odriozola-González, Planchuelo-Gómez, Irurtia & de Luis-García, 2020). These facts have been confirmed both by studies whose sample was the general population (Balanzá-Martinez et al., 2021; García-Tascón et al., 2021; Khan, Sultana, Hossain, Hasan, Ahmed & Sikder, 2020; Magaz-González et al., 2021; Xiong et al., 2020;), or health professionals (Dosil Santamaría, Ozamiz-Etxebarria, Redondo Rodríguez, Jaureguizar Alboniga-Mayor & Picaza Gorrotxategi, 2020; Serrano-Ripoll et al., 2020), and also by those focussing only on university students (Imaz-Aramburu et al., 2021; Khan, Sultana, Hossain, Hasan, Ahmed & Sikder 2020; Romero-Blanco, Rodríguez-Almagro, Onieva-Zafra, Parra-Fernández, Prado-Laguna & Hernández-Martínez, 2020; Giuntella, Hyde, Saccardo & Sadoff, 2021; Savage et al., 2020; Ruiz-Zaldivar et al., 2021; Yun et al., 2021; Wang & Zhao H 2020; Saravanan, Mahmoud, Elshami & Taha 2020; Kaparounaki, Patsali, Mousa, Papadopoulou, Papadopoulou, & Fountoulakis 2020; Bánhidi & Lacza 2020). Therefore, although the current study did not specifically analyse the possible effects on the sample of stress, anxiety or depression, there are certain responses that could be related to these: almost 90% are quite or very concerned about the COVID-19 pandemic, 75.2% think that it has affected them negatively, one fifth think that the worst is yet to come, and two thirds consider that there is a medium to high probability of being infected by COVID-19. However, this is a possible relationship that remains to be studied, as Fornili et al. (2021) found no correlation in their study between the levels of anxiety or depression and concern about contracting the virus.

Furthermore, this self-perceived concern is supported by the habits of self-protection adopted during the pandemic: almost 97% indicate that they are taking preventative measures to avoid infection, with more than 75% of the measures recommended by the health authorities being followed, such as the use of masks, restriction of personal movement according to the established norms, social distancing when going out, use of hand sanitising gel, frequent hand washing, ventilation of closed spaces and avoidance of social and/or family gatherings. Furthermore, at the time of the survey, 80.82% assured us that they would definitely be getting vaccinated -at the end of the response period, the percentage of the population having received the complete course of vaccination had not yet reached 10% and was limited to front-line health workers and social-health care personnel, residents and personnel of aged care homes, the elderly and people over 70 years of age- (Gobierno de España, 2021).

Our findings show that the University of Vigo community seemed to be aware of the seriousness of the pandemic, and thus established responsible behaviour patterns. In this regard our results differ from those found by Bánhidi & Lacza (2020), who reveal that, among Hungarian university students, the main change there was only that some took hygiene measures more seriously (and then in just 47% of the sample). Furthermore, the current study reveals not only that the University of Vigo community followed the safety recommendations set by the government and health authorities, but also that almost 95% of them have a good understanding of the pandemic, and that this knowledge has been acquired from various sources. The fact that they have visited primary sources such as scientific articles (40.78%) or the Ministry of Health website (36.86%) stands out. This is important regarding the prevention of COVID-19, due to the sheer quantity of misinformation and hoaxes that have been generated by the phenomenon of fake news throughout the pandemic. In this regard, the study by Kaparounaki, Patsali, Mousa, Papadopoulou, Papadopoulou, & Fountoulakis (2020) of the Greek university student community - in which one third accept, and one fifth are open to, conspiracy theories regarding COVID-19 - is worrying.

Although the aim of this study was not to know the prevalence of COVID-19 in the target population, data shows that on the analysed period, the percentage of people infected with COVID-19 was very low. However, the main findings obtained indicate that although a high percentage of the sample had contact with positives (42%), there were only 15 positive cases, and of them, only 1 person required hospital admission.<sup>-</sup>

Despite this positive data relating to the direct impact of the pandemic, it is important to remember that 75.2% of

the sample believed that they have been negatively affected by the pandemic and that, on a scale of 0 (no impact) to 5 (maximum impact), they indicated a perceived impact of 3.5/5. This is in line with the fact that, due to lockdown and restrictions to mobility, and the rise in the use of electronic devices, 66.26% of respondents reported increased muscle and joint pain. This fact, along with the new regime of working and studying at least partially from home, maintained until recently and to which we may return in the event of a new wave of the pandemic, should lead us to reflect on the healthiness and suitability of home workplaces. The ergonomics of the work and/or study space should be reviewed, along with the establishment of schedules and breaks (Luger, Maher, Rieger & Steinhilber, 2019) that include - as indicated by the European Agency for Safety and Health at Work (2021) - preventative measures to minimize possible injuries, such as: not sitting still for more than 2 hours; in the case of feeling any tension or discomfort in the neck, wrists, shoulders or back, move for 20-30 seconds every 30 min; do simple exercises for the arms, shoulders, neck and ankles; do some relaxation exercises; go for short walks; stretch hands, wrists, fingers, shoulders, chest or back. In addition to possible musculoskeletal disorders, other areas of health have also deteriorated, such as health-related stress -which has already been mentioned- or in the work/home-life balance. As pointed out by Vyas & Butakhieo (2021) working at home can lead to being distracted (due to family commitments and/or household chores), an uncomfortable working environment, lack of supervision, lack of social interaction, barriers to effective and normal communication, etc, all of which contribute to an unhealthy lifestyle. This last issue was also raised by Goncalves, Le Vigouroux & Charbonnier (2021), who found, after two periods of lockdown among French university students, that the increase of sedentary behaviour which occurred during these periods of studying from home persisted over time, with subsequent risks to the subjects' future health, and therefore they advise limiting virtual teaching as much as possible.

#### Limitations

The main limitation of this study lies in the design of the survey used, as this may have been the reason why the sample size, although significant, did not reach a higher value. The survey may have taken too long to complete, some participants not finishing it. Besides, the non-mandatory nature of the questionnaire also meant that, for some questions, there was a percentage of "no response". Our objective was to address different subject areas within the university community with the *ad hoc* design of the survey, these issues should be considered in future studies.

## Conclusions

In summary, although this study has limitations in the format and/or methodology of the survey which was conducted, it can nevertheless be concluded that the university community of the University of Vigo, Spain, has a healthy lifestyle, balancing physical activity and/or sports routines with adequate rest and by minimising toxic habits. This behaviour maintained over time, together with following the recommendations of the health authorities, may have played a protective role in the mental and physical health of the study population, limiting the negative influence of COVID-19 and the restrictions on mobility and social interaction imposed for its control. Nevertheless, although the direct impact of the pandemic seems to be low within the community which was investigated - with few affected or asymptomatic individuals - the indirect pandemic impact of the was high, and generated concern and uncertainty among the studied population. However, healthy habits which had been established before the pandemic were maintained during the periods of lockdown and the return to the "new normal", which has helped the members of this community continue to see themselves as being in good health. Nonetheless, future research is needed to analyse the overall impact of the pandemic in this and in other social settings.

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