

The COLIBAS Study—COVID-19 Lockdown Effects on Mood, Academic Functioning, Alcohol Consumption, and Perceived Immune Fitness: Data from Buenos Aires University Students

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Citation: Hendriksen, P.A.; Kiani, P.; Merlo, A.; Karadayian, A.; Czerniczyniec, A.; Lores-Arnaiz, S.; Bruce, G.; Verster, J.C. The COLIBAS Study—COVID-19 Lockdown Effects on Mood, Academic Functioning, Alcohol Consumption, and Perceived Immune Fitness: Data from Buenos Aires University Students. *Data* **2022**, *7*, 131. <https://doi.org/10.3390/data7090131>

Academic Editors: Rüdiger Pryss, Marc Schickler, Felix Beierle and Johannes Schobel

Received: 1 August 2022

Accepted: 6 September 2022

Published: 14 September 2022

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Abstract: A recent study was conducted in the Netherlands to evaluate the impact of the 2019 coronavirus (COVID-19) pandemic and its associated lockdown periods on academic functioning, mood, and health correlates such as alcohol consumption. The study revealed that lockdowns were associated with a significantly poorer mood and a reduced perceived immune fitness. Overall, a reduction was seen in alcohol consumption during the lockdown periods. Academic functioning in terms of performance was unaffected; however, a significant reduction in interactions with other students and teachers was reported. There was, however, great variability between students as follows: both an increase and a reduction in alcohol consumption were reported, as well as improvements and poorer academic functioning. The aim of the current online study was to replicate these findings in Argentina. To this extent, a modified version of the survey was conducted among students at the University of Buenos Aires, which was adapted to the local lockdown measures. The survey assessed possible changes in self-reported academic functioning, mood, and health correlates, such as alcohol consumption, perceived immune functioning, and sleep quality compared to before the COVID-19 pandemic. Retrospective assessments were made for four periods, including (1) the period before COVID-19, (2) the first lockdown period (March–December 2020), (3) summer 2021 (January–March 2021, no lockdown), and (4) the second lockdown (from April 2021 to July 2021). This article describes the content of the survey and the corresponding dataset. The survey was completed by 508 participants.

Dataset: The dataset is submitted as a Supplementary File.

Dataset License: CC0

Keywords: COVID-19; lockdown; mood; alcohol consumption; academic performance; social interactions; perceived immune fitness; sleep; quality of life; Argentina

1. Summary

The World Health Organization officially marked the spread of the 2019 coronavirus disease (COVID-19) as a pandemic on the 11 March 2020 [1]. In Argentina, the first infection with SARS-CoV-2 was discovered on 3 March 2020 [2]. Following the rapid spread of the virus [3,4], Argentina implemented a mandatory nationwide lockdown on 19 March 2020 (referred to as “preventive and mandatory social isolation”).

The first lockdown period (from March 2020 to December 2020) comprised the closure of educational institutions (e.g., kindergartens, schools, universities, etc.), as well as all social or non-essential facilities, such as cafes, restaurants, gyms, and other social and cultural places. Only essential places, such as supermarkets, pharmacies, and hospitals, remained open in compliance with strict hygiene concepts (e.g., limited numbers of customers, face masks, etc.). People were confined to their homes and could only go out for necessities, such as visiting the hospital or assisting relatives or dependents who did not live in the same household. In addition, people from high-risk groups (i.e., people over 60 years of age, pregnant women, and patients with at least one of the following pathologies: chronic respiratory diseases, heart diseases, immunodeficiencies, and diabetics) or those who had been infected with SARS-CoV-2 were placed in mandatory quarantine. From August 2020, the strict lockdown measures were somewhat eased, and during this phase (referred to as “social, preventive, and mandatory distancing”), people could leave home for recreational activities and visit previously forbidden places while adopting mandatory health measures (e.g., wearing a face mask, washing hands, attaining a minimum social distance of 1.5 m). The educational institutions, however, that made a transition to online education at the start of the first lockdown continued virtually. The summer of 2021 (January–March 2021) comprised a no lockdown period. From November 2020, a significant decrease in COVID-19 cases was evident. During the no lockdown period, some public and private institutions began to work on-site, and people were allowed to travel on vacation. These also included nurseries, primary schools, and secondary schools. However, universities remained closed and teaching continued to be conducted online. In March 2021, the number of SARS-CoV-2 infections increased again, and, consequently, in April 2021, a second lockdown period was enforced (from April 2021 to July 2021). Most public health regulations that had been implemented during the first lockdown were nationally re-introduced and remained active until approximately June 2021 (with regional differences). Thereafter, daily life returned to “normal”. The University of Buenos Aires maintained virtual classes up to the end of 2021.

Studies from around the world have pointed to the negative psychological and social effects of lockdowns on both adolescents and adults, including increased levels of anxiety, depression, and loneliness [5,6]. The negative impact on both mental and physical health has also been reported in Latin America, including Argentina. For example, lockdown periods have been associated with increased levels of psychological distress, fear of COVID-19, sleep problems, and reduced mood in both children [7–11] and the general adult population [12–20]. In addition, studies in Latin America revealed that lockdowns are associated with an increase in a number of unhealthy behaviors, such as poorer daily diet [21], weight gain [22], poorer sleep quality [14,19], and reduced physical activity [23,24]. However, there is great variability between individuals. There are also individuals that have improved their lifestyle following the lockdown periods. For example, by increasing healthy eating behaviors [25], presumably as a preventive measure to improve their immune fitness.

Some studies linked negative mood effects to the significant impact of the COVID-19 pandemic on the Argentinean economy and the corresponding uncertainty about the future [26,27]. Regarding specific job types, several studies have reported psychological distress, burnout, sleep problems, and lower mood among physicians and other healthcare workers, particularly among those that experienced increased work-related stress and workload during the COVID-19 pandemic [28–32]. The formerly mentioned lockdown effects have also been demonstrated in specific patient cohorts, including patients with cognitive impairment [33].

Mood effects were most pronounced in women and young adults [27,30]. However, data on the lockdown effects on mood in younger populations, such as students in Argentina, is limited [34–39]. Lopez Steinmetz et al. [36] found that mental health deterioration was noticeable among those studying in areas of Argentina with high COVID-19 spreading rates. During the first lockdown period, depression and anxiety increased regardless of the level of contamination in particular regions of Argentina. This suggests that the increase in mental health issues may be attributable to the implemented restrictions, such

as the lockdown, social distancing, and cancellation of events [36]. In other studies, Lopez Steinmetz et al. reported increased suicidal risk among students during the first lockdown period and increased levels of loneliness, anxiety, and depression [37–39]. Scotta et al. [35] examined insomnia during the first lockdown month and found that insomnia was highly prevalent in $N = 584$ Argentinean university students that were socially isolated. It was found that insomnia complaints were significantly associated with worrying, whereas physical activity had a positive effect on sleep complaints.

For students, the lockdown periods around the world included a change from in-person to online education. The latter could have a significant impact on academic functioning and social interactions between students and teachers. In a previous study that we conducted in the Netherlands, students reported that although academic input and output improved during the lockdown periods, this was accompanied by a significant reduction in interactions with other students and teachers [40]. Furthermore, academic input was associated with a significant reduction in the role satisfaction of being a student, negative mood changes (e.g., increased stress and fatigue), as well as an inadequate balance between study and private life [40].

Data from Argentina on academic functioning are very limited. While most adolescents (87%) maintained their educational activities [11], a transition from in-person to online education was seen during the COVID-19 pandemic. Some studies reported that shifting to primarily online education had positive outcomes [41]. However, in contrast to European and US studies, in Argentina and other Latin American countries, inadequate internet access and online learning facilities are relevant issues that negatively impacted educational activities during the COVID-19 pandemic [42,43].

Palacios Huatuco et al. [42] evaluated the surgical training program of medical residents in Argentina. Of these students, 83.2% reported that the COVID-19 pandemic had a negative impact on their training (e.g., fewer surgery cases), and 45% of the sample concluded that they were not adequately trained. An advantage of the transition to mainly online education was that the majority of students (71.3%) reported that they could dedicate more time to their training than before the COVID-19 pandemic. Although residents had more free time, about half of them felt more exhausted (52.3%) and reported increased stress at work (49%) during the COVID-19 pandemic. Similarly, $N = 1310$ radiography students from 11 Latin American countries, including Argentina, reported a reduced quality of education during the pandemic [43]. In particular, concerns about the lack of clinical training and concerns about future placements in hospitals due to the potential risk of becoming infected with SARS-CoV-2 were often expressed [43].

A study conducted by Vargas Rubilar et al. among $N = 9058$ Argentinean teachers revealed that the impact of the COVID-19 pandemic was not limited to students [44]. More than half of the teachers (60%) reported moderate or high levels of stress, caused by work overload, an inadequate working environment, and uncertainty about the future. Taken together, several studies have pointed to the negative mood effects reported by students during the first COVID-19 lockdown period in Argentina [36–45].

The current study will further investigate the impact of the COVID-19 pandemic and lockdown periods on students in Buenos Aires. In addition to mood, the study will examine alcohol consumption and smoking behaviors. There is very limited information on alcohol consumption during the COVID-19 pandemic in Argentina. A study by Alamo et al. [46] found that over 60% of young adults (18–24 years old) reported that alcohol consumption was not increased during the COVID-19 pandemic. The percentage of unaltered alcohol consumption grew with increasing age and was higher than 85% in individuals older than 55 years old. Increased alcohol consumption during the first lockdown period was reported by approximately 20% of young Argentinean adults (18–24 years old), but percentages rapidly declined with increasing age, and above the age of 55, this percentage was less than 10% [45]. Leonangeli et al. [34] reported a significant decrease in alcohol consumption among Argentinean college students during the first COVID-19 lockdown. A significant reduction in the social and enhancement motives for alcohol consumption was observed

during the lockdown period. In line with this, Lopez Steinmetz et al. [36] reported a decrease in negative alcohol-related events among Argentinean college students during the first lockdown period. The reduction in social gatherings and the closure of drinking venues may account for the decrease in alcohol consumption and the reduction in negative alcohol-related consequences during the first lockdown period [36].

Taken together, the current study investigated the impact of the COVID-19 lockdowns in Argentina on mood, academic functioning, alcohol consumption, and perceived immune fitness among university students in Buenos Aires. The study is of importance as most published Argentinian data are limited to the first lockdown period, and several topics, such as academic functioning and alcohol consumption, are not extensively investigated. However, the data are also relevant for other countries around the world, as many other countries also enforced comparable lockdown periods and switched to online education. To a significant extent, the survey content corresponds to a previous survey that we conducted in the Netherlands [40,46,47]. However, the questions, answers, and other specifics (e.g., lockdown periods) were adjusted to the COVID-19 circumstances in Argentina. In particular, the lockdown periods were adapted to the Argentinean situation. In addition, the immune status questionnaire was not included. A “fear of COVID-19” item was added to the mood assessments, and two academic functioning questions were omitted to shorten the listing of questions on this topic. This data descriptor article describes the survey and the dataset. Several forthcoming publications are currently in preparation. In addition, researchers may use the dataset for additional analyses and can be inspired by the description of the methodological background for the development of future surveys.

2. Data Description

2.1. Informed Consent

Before the start of the survey, a short text was shown to provide a short background and the purpose of the study, including information about ethics approval, the anonymity of the participants, and the contact details of the researchers. It was also stated that participants could enter a price draw to win one of five 50 USD Amazon gift vouchers after completion of the survey. After reading this information, the participants could provide electronic informed consent to participate in the study. After the consent was given, the survey started, and the participants received a unique participant identification number. In the dataset, this number is labeled as “Subject ID” and is listed in column 1.

2.2. Demographics

The first and second questions assessed age (in years) and sex (male or female), respectively. In the dataset, the demographic data are listed in columns 2 and 3, respectively.

2.3. Mood, Being Active, and Quality of Life

Question 3 assessed mood, being active, and quality of life. The ten mood items included “stress”, “anxiety”, “depression”, “fatigue”, “hostility”, “worry”, “fear of COVID-19”, “loneliness”, “optimism”, and “happiness”. Each item was scored on a scale ranging from 0 (absent) to 10 (extreme). In a similar way, “being active” was assessed (question 4). Quality of life was assessed on a scale ranging from 0 (poor) to 10 (excellent) (question 5). The use of single-item scales has been validated previously [48]. The items were rated for (1) the period before COVID-19, (2) the first lockdown period (March–December 2020), (3) summer 2021 (January–March 2021, no lockdown), and (4) the second lockdown (from April 2021 to July 2021). In the dataset, the mood items are listed in columns 4 to 43; the ratings on “being active” are listed in columns 44 to 47; the quality of life items are listed in columns 48 to 51.

2.4. Sleep Quality and Perceived Immune Fitness

Question 6 assessed sleep quality, and question 7 assessed perceived immune fitness. These health correlates were assessed with single-item scales that ranged from 0 (very poor)

to 10 (excellent). The use of these single-item scales has been validated previously [48–51]. The items were rated for (1) the period before COVID-19, (2) the first lockdown period (March–December 2020), (3) summer 2021 (January–March 2021, no lockdown), and (4) the second lockdown (from April 2021 to July 2021). In the dataset, the sleep quality ratings are listed in columns 52 to 55, and the perceived immune fitness is listed in columns 56 to 59.

2.5. Alcohol Consumption and Hangovers

Question 8 asked whether or not the participants consumed alcohol (listed in column 60). If they answered “no”, the other questions on alcohol consumption were skipped. If they answered “yes”, the participants were asked to report the “average number of alcoholic drinks per week” that they consumed (answer possibilities ranged from 0 to >100) (question 9) and “the number of drinking days per week” (answer possibilities ranged from 0 to 7 days) (question 10). Guidance was provided on serving sizes and how to convert these into standard alcoholic drink sizes (units). For liquor and mixed drinks, one shot equaled one unit. One glass of beer (250 mL) equaled one glass of wine and one shot of liquor. One bottle of wine (750 mL) equaled 6 units, and one bottle of liquor (750 mL) equaled 20 units. The items were rated for (1) the period before COVID-19, (2) the first lockdown period (March–December 2020), (3) summer 2021 (January–March 2021, no lockdown), and (4) the second lockdown (from April 2021 to July 2021). In the dataset, the number of alcoholic drinks consumed per week is listed in columns 61 to 64, and the number of drinking days per week is listed in columns 65 to 68.

Questions 11 to 13 concerned the heaviest drinking occasion for (1) the period before COVID-19, (2) the first lockdown period (March–December 2020), (3) summer 2021 (January–March 2021, no lockdown), and (4) the second lockdown (from April 2021 to July 2021). For question 11, the participants reported the number of alcoholic drinks they consumed on this occasion. For question 12, the participants rated their drunkenness on a scale ranging from 0 (sober) to 10 (extremely drunk) [52]. Question 13 concerned their possible next-day alcohol hangover, i.e., the combination of negative mental and physical symptoms that can be experienced after a single episode of alcohol consumption, starting when blood alcohol concentration (BAC) approaches zero [53]. The participants rated their next-day hangover severity on a scale ranging from 0 (absent) to 10 (extreme) [54]. In the dataset, the number of alcoholic drinks consumed on the heaviest drinking occasion is listed in columns 69 to 72; the level of drunkenness (i.e., subjective intoxication) is listed in columns 73 to 76; the hangover severity is listed in columns 77 to 80. In question 14, the participants reported “the number of hangovers per month” that they experienced (answer possibilities ranged from 0 to 31 days) for the four time periods. In the dataset, the hangover frequency is reported in columns 81 to 84. Question 15 comprised a 12-item Drinking Motive Questionnaire [55]. The items can be grouped into four scales, representing the drinking motives of “enhancement”, “social”, “coping”, and “peer pressure”. In the dataset, the items assessing the motives for drinking alcohol are listed in columns 85 to 96.

2.6. Smoking

Question 16 asked whether or not the participants smoked tobacco (listed in column 97). If they answered “no”, the other questions on smoking were skipped. If they answered “yes”, the participants were asked to report how many days per week they smoked (answering possibilities ranged from 0 to 7 days) (question 17) and the average number of cigarettes that they smoked per day (answering possibilities ranged from 0 to >100) (question 18). Question 17 and 18 were answered for (1) the period before COVID-19, (2) the first lockdown period (March–December 2020), (3) summer 2021 (January–March 2021, no lockdown), and (4) the second lockdown (from April 2021 to July 2021). In the dataset, the data on the frequency and quantity of smoking tobacco are listed in columns 98 to 105.

2.7. Academic Functioning

Question 19 concerned academic functioning during the COVID-19 pandemic [40,46]. Students were asked to rate eight items on academic functioning, including “general performance quality”, “academic achievement/amount of knowledge gained”, “reading articles/textbooks”, “writing assignments”, “contact with teachers or supervisors”, “interactions with other students”, “balance study–private life”, and “the extent you enjoy being a student (role satisfaction)”. The participants had to indicate how the academic functioning items had changed compared to before the pandemic on scales ranging from –5 (extremely worse) to +5 (extremely improved) around a midpoint of 0 (unchanged). In the dataset, the academic functioning outcomes are listed in columns 106 to 113.

2.8. Concluding Questions and Remarks

Question 20 asked the participants’ permission to contact them for possible future research. They were asked to leave their email address to enter a prize draw to win one of five 50 USD Amazon gift vouchers. The participants were also invited to comment on the survey. Finally, they were advised to consult their physician if they experienced COVID-19 symptoms. For further information on COVID-19, they were referred to the corresponding website of the Argentinean government (<https://www.argentina.gob.ar/salud/coronavirus-COVID-19>). For information on alcohol or drugs, they were referred to the corresponding Argentinean government website (<https://www.argentina.gob.ar/jefatura/sedronar>).

3. Methods

The survey was conducted online between July and November 2021. The students at the University of Buenos Aires were invited by email to complete the survey. The study was reviewed and approved by the Ethics Review Board of the University of the West of Scotland (approval code: 2021-16410-13697; date of approval: 18 May 2021). The participants provided electronic informed consent before the start of the survey, and the study followed the rules of the Declaration of Helsinki of 1975 (<http://www.wma.net/en/30publications/10policies/b3/> (accessed on 1 September 2022)), which was revised in 2008. As an incentive, the participants could enter a prize draw to win one of five 50 USD vouchers.

3.1. Participants and Sample Size

The participants in the study were students from the University of Buenos Aires. The participants were included if they were between 18 and 35 years old. No formal power analysis was conducted, but the aim was to achieve a sample size comparable to the Dutch COVID-19 student survey ($n = 345$) [46] to allow for comparable statistical analyses.

3.2. Data Collection

The students were invited via university email to participate in the study. The survey was designed in QuestionPro and written in Spanish. On average, it took 16.1 min to read the informed consent page and to complete the survey.

3.3. Data Handling

The data were downloaded in Excel and prepared for transfer to SPSS (IBM Corp. Released 2013; IBM SPSS Statistics for Windows, Version 28.0. IBM Corp.: Armonk, NY, USA). In total, $N = 815$ students opened the survey. In total, $N = 109$ did not provide informed consent. Of the $N = 706$ participants that gave informed consent, $N = 79$ were excluded because they were outside the age range of 18 to 35 years old, and another $N = 111$ were excluded because they provided only data on age and sex. The data from another $N = 8$ participants were excluded because they were considered unreliable (surveys were completed from the same IP address with the same completion time, having identical

answers). In total, data from $N = 508$ participants were used for the statistical analysis. The final dataset is attached as a supplementary file.

4. User Notes

The dataset is provided as a SPSS .sav file as a Supplementary File accompanying this article. The variable names listed in the column “Name” are described in more detail in the “Label” column, and the answer possibilities are given in the column “Values”. The abbreviations in the variable names refer to the period that was assessed and include the following: (1) “B” (the period before the pandemic), (2) “L1” (the first lockdown period, March–December, 2020), (3) “NL” (no lockdown, January 2021–March 2021), and (4) “L2” (the second lockdown, April 2021–July 2021).

All data were collected as planned, except for the number of alcoholic drinks consumed on the heaviest drinking occasion. Due to a technical error in the survey design, the answer possibilities for this question ranged from 1 to 7. Although the weekly alcohol consumption of the current cohort was low (on average, it was 3.1, 2.7, 3.2, and 2.8 alcoholic drinks per week before the pandemic and during L1, NL, and L2, respectively), it is possible that some students may have consumed more than seven drinks on their heaviest drinking occasion. Therefore, the outcome of this question should be interpreted with caution. This technical error does not affect the other outcomes related to the heaviest drinking occasion, including subjective intoxication and next-day hangover severity.

Finally, some of the participants stopped the survey before completion. Table 1 gives an overview of the number of participants that completed each section of the survey.

Table 1. Assessments.

Question	Assessed Variables	Number of Items	Number of Completers
1	Age	1	508
2	Sex	1	508
3	Mood	10	508
4	Being active	1	508
5	Quality of life	1	482
6	Sleep quality	8	482
7	Perceived immune fitness	3	482
8–14	Alcohol consumption	7	482 (258)
15	Motives for drinking alcohol	12	231
16–18	Smoking	3	434 (107)
19	Academic functioning	8	426

The number of completers is listed. The number of participants that reported being smokers or consuming alcohol and answered the corresponding questions is given in brackets.

Supplementary Materials: The following supporting information can be downloaded at: <https://www.mdpi.com/article/10.3390/data7090131/s1>, Dataset S1.

Author Contributions: A.K., A.C., S.L.-A., G.B., P.A.H., A.M., P.K., and J.C.V. contributed to the conceptualization, design, and methodology of the study; J.C.V. conducted the statistical analysis; J.C.V. prepared the original draft. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: The studies were conducted in accordance with the Declaration of Helsinki and approved by the Ethics Review Board of the University of the West of Scotland (approval code: 2021-16410-13697; approval date: 18 May 2021).

Informed Consent Statement: Electronic informed consent was obtained from all of the participants involved in the study.

Data Availability Statement: The data are available as supplementary materials. The dataset is licensed under CC0, which means that it is open data, free for anyone to use, reuse, and distribute for both commercial and non-commercial purposes. In the event of using the dataset, it would be appreciated if the current data descriptor article is cited.

Conflicts of Interest: Over the past 3 years, J.C.V. has acted as a consultant/advisor for KNMP, Mentis, Red Bull, Sen-Jam Pharmaceutical, and Toast! The other authors have no potential conflicts of interest to disclose.

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