











Perception of the COVID-19 effects on the mental health of the UNASAM students, Huaraz-2022

[Percepción de los efectos del COVID-19 en la salud mental de los estudiantes de UNASAM, Huaraz-2022]

José Reynaldo Salvatierra Rosales ^{a,*} , Roberth Lozano Tacuri Toribio ^b ,
Miriam Esther Campos Llana ^b , Lourdes Leyva Minaya ^c , María del Carmen
Sánchez Pérez ^c , Manuel Nicolás Morales Alberto ^d , Antonio Salomón
Valderrama Romero ^d , Mario Humberto Taípe Cancho ^d , Víctor Henry
Morales Pacora ^e , Edwin Romualdo Benavente Ramírez ^f .

^aUniversidad Nacional Santiago Antúnez de Mayolo, Perú

^bUniversidad Nacional Daniel Alcides Carrión, Perú

^cUniversidad Nacional de Barranca, Perú

^dUniversidad Nacional de Cañete, Perú

^eUniversidad Nacional José Faustino Sánchez Carrión, Perú

^fUniversidad Nacional de San Antonio de Abad de Cusco, Perú

* cpc_jsr@hotmail.com.pe

Received: 26 October 2022; Accepted: 04 November 2022; Published: 24 December 2022

Resumen

En medio de la pandemia, los problemas de salud mental han saltado a la palestra por la cuarentena y el aislamiento social, las severas y prolongadas medidas de aislamiento, los toques de queda y los estados de excepción. El objetivo es conocer el impacto del coronavirus en los estudiantes. En la metodología es transversal, descriptivo y método mixto, además se elaboró una encuesta en la que participaron 23 los universitarios. Se concluyó que, el 63.8 % fueron afectados, adquiriendo secuelas como: el estrés y la ansiedad. Además, afectó en otra parte de su cuerpo humano en el ámbito neurológico, sistema respiratorio, manifestaciones cardiacas, cuerdas vocales, sistema nervioso y el habla. Por otro lado, que el 83.7 % no acudió a ningún médico ni profesional especializado, pero empleó el servicio de la telemedicina, uso de fármacos y plantas medicinales y sus preparados. Finalmente, el 81.4 %, después de la cuarentena cambiaron de hábito de vida, por la actividad física y nutricional.

Palabras clave: COVID-19; salud mental; estrés; ansiedad.

Abstract

In the midst of the pandemic, mental health problems have come to the fore due to quarantine and social isolation, severe and prolonged isolation measures, curfews and states of emergency. The objective is to know the impact of the coronavirus on students. In the methodology it is cross-sectional, descriptive and mixed method, in addition, a survey was prepared in which 23 university students participated. It was concluded that 63.8% were affected, acquiring sequelae such as: stress and anxiety. In addition, it affected another part of his human body in the neurological field, respiratory system, cardiac manifestations, vocal cords, nervous system and speech. On the other hand, that 83.7% did not go to any doctor or specialized professional, but used the telemedicine service, use of drugs and medicinal plants and their preparations. Finally, 81.4%, after the quarantine, changed their lifestyle, due to physical and nutritional activity.

Keywords: COVID-19; mental health; stress; anxiety.

I. Introduction

The current context, marked by the existence of a new global pandemic, has altered in many ways the daily life of Peruvians in the 21st century. One of the most affected sectors is, without a doubt, university education. Thus, how the COVID-19 pandemic forced higher education centers to postpone classes taught in person and replace them with virtual ones. (Cueva & Terrones, 2020, p.2). The pandemic has had a negative psychological impact on the most vulnerable: stress, fear, confusion, anger, depression, worry, boredom, loneliness, shame, anxiety, hopelessness, guilt, depression, and suicide. In this sense, the formation of crisis intervention mental health teams, the use of digital platforms, online communication, telemedicine interviews and the use of brief instruments for the detection of mental health problems, validated in our population, would be very helpful. utility for the challenges that lie ahead for public health in our country. (Lozano, 2020, p.5).

According to Ramírez, J. et al. (2020) that social isolation has implications for mental health both during and after flare-ups, long-term pathological emotional reactions, and highly debilitating mental disorders such as anxiety and stress. The current pandemic will cause an increase in psychopathology in the population, especially in health personnel, causing an outbreak or epidemic of mental health among them, requiring strategies to prepare, educate, and strengthen the mental health of the affected population. (p. 6). Therefore, many are affected by a pandemic, special interest should be directed to vulnerable populations, including 1) patients and their families, 2) people with physical and/or mental pre-existing medical conditions, 3) health workers, especially nurses and doctors who work directly with patients and in quarantine (Torales, 2020, p.2).

In addition, Navarro J. and Rodríguez A. (2020) affirmed that the coronavirus affected humanity and with the practice of solidarity and individual and collective self-care it would alleviate. What is considered a health emergency can affect not only the emotional and physical well-being of communities, but also entire countries and the global economy. One of the greatest human intelligences is foresight, and if everyone works together, this true public health disaster can be contained. (p.5). In the fight against COVID-19, along with social isolation and other health measures, it is urgent to promote resilience, personal growth, intra-family relationships and special attention to vulnerable groups in order to minimize the psychosocial impact of the epidemic on the population (Ribot, 2020, p.9).

In the Salvadoran university sample of 1,440 people, a prevalence of anxiety was found as an empirical indicator of mental health problems; in eight out of ten people, with moderate to severe severity. The study reveals that women are more affected than men and that the group between 18 and 23 years of age is the one with the most anxiety symptoms, compared to other older age groups. (Gutiérrez et al, 2020, p.17). However, this situation of precariousness and radical exclusion, and the political work of pro-migrant organizations managed to mobilize the population in a formidable way. In this process of responses, which included some based on mutual support, solidarity, redistribution and recognition, social practices and forms of political sociability have been generated that include the rescue of social and political knowledge that had been subjugated in capitalism. advanced; namely, the practice of mutual support, radical love, inter-ethnic and interracial solidarity, and the care and protection of life. (Rivas, 2021, p.24)

It is worth mentioning for the solution according to Urzúa, A. et al., (2020) that technology must incorporate psychological knowledge. However, technology must be adopted and developed based on scientific evidence, not just as a technological construct with no social relevance and no basis in health sciences. Psychology and especially Health psychology has a lot of evidence, developments of how we have tried here to show this knowledge is at the base of the great health problem that we are facing (p.11). In the same way, they referred symptoms of indirect

traumatization, due to empathy and identification with the vulnerability and pain of the patient; these people generated loss of appetite, fatigue, physical deterioration, sleep disorders, irritability, lack of attention, numbness, fear and despair (Caballero and Campo, 2020, p.2).

This claim is corroborated by mental health as a barrier to medical and psychological interventions. Based on the available evidence, anxiety, depression and stress reactions are common in the general population during the initial phase of COVID-19. In addition, adequate and comprehensive management of mental health care is necessary to control the pandemic. The experience of other countries tells us that adhering to the recommendations mentioned in this review would help to improve the mental health of the population and health personnel (Jeff, 2020, p. 6). In quarantine and social isolation, conditions that create social isolation are configured as non-normative stressors that increase the likelihood of developing psychiatric problems for the first time or increase the worsening or recurrence of pre-existing psychiatric disorders. In addition, fear of infection, misinformation, distortion, or excessive information can cause anxiety, confusion, anger, or frustration. Added to this is the boredom of quarantine, the anguish or economic loss that this situation entails, and the fear of stigmatizing discrimination if one tests positive for contagion or, paradoxically, is a member of the health department responsible for direct care of patients. healthy patients. It is necessary to highlight the effect of the contagion of the pandemic on family members in whom it can occur, not only the expected concerns due to the closeness of their partners, children or siblings to convalescent people, but also depressive symptoms or post-traumatic stress, such as re-experiencing, alterations negative in cognition and hyperarousal (Caballero and Campo, 2020, p.1).

In relation to the severity of the psychological variables, 90% of the sample presents moderate to very severe levels of anxiety and depression, finding associations in gender, age, and the number of hours they think about COVID-19. The most affected groups are women between the ages of 17 and 23 and those who think between 1 and 3 hours about COVID-19. This finding indicates that the affectation of anxiety and depression is serious, since almost 100% of the people evaluated present moderate, severe and very severe levels of these two psychopathologies (Chacón et al, 2020, pp.9-10).

In the public policy for mental health, in Peru, drastic measures were applied, causing deep havoc in the population, who massively complied with these extreme norms of social confinement, fearful of losing their lives or exposing their loved ones; The media, which was in charge of spreading morning, noon and night the supposed catastrophe that the coronavirus would cause in the country and the world, did not transmit objective information to help deal with this pandemic, but rather spread fear and blame of the failure of these measures to a hungry population that is forced to take to the streets in order to survive. In our country, health is a right, which provides care to low-income people. Where programs such as the Comprehensive Health System have been created or paid at a lower cost. In addition, it has the psychology area to deal with mental health problems that were generated by the pandemic.

In the same way, for the solution, technology must be adopted and incorporated as a resource for psychological counseling and crisis intervention, telephone and Internet, for healthcare professionals, patients, family members and society in general, as a strategy to mitigate the emotional impact and facilitate the return to normal life in safe conditions, once the crisis period is over (Caballero and Campo, 2020, p. 2).

For this reason, the investigation was carried out on the perception of the effects of COVID-19 on the mental health of the students of UNASAM, Huaraz- 2022. The objective was to know the effect of (COVID-19) on the mental health of university students. It is also necessary to mention the purpose of this research is to promote a better quality of life in mental health.

II. Materials and Methods

Type of investigation

The research is based on the descriptive, non-experimental method; It was evaluated and quantified using questionnaire instruments about the moments that WhatsApp uses, the efficiency of the use of this technological tool and the improvement of the learning of university students when using it. The data was collected weekly and monthly within the schedule. The research was cross-sectional; since it was done only once and applied the mixed method for interpretation and analysis.

The research is based on the descriptive, non-experimental method; It was evaluated and quantified using the questionnaire (6 questions) and the perception of the effects of COVID-19 on mental health and the DASS-21 for levels of emotions according to Szabo, M. (2010). The respondents were 43 students between (18 males and 25 females), from the Professional Schools of Education (31) and Accounting (12). The survey was carried out virtually from October 2 to 17, 2022.

Questionnaire

The questions asked were:

1. Do you think that Covid 19 has affected your mental health?
 - a) Yes
 - b) No

2. Choose which of the symptoms you have had during the pandemic, you can mark more than one alternative.
 - a) Fear
 - b) Stress
 - c) Anxiety
 - d) Depression
 - e) Insomnia
 - f) Despair

3. The levels of emotions in the perception of Covid 19 in mental health (the DASS – 21).

4. Have you gone to a doctor or specialized professional to solve the mental health problem, due to the pandemic?
 - a) Yes
 - b) No

5. What areas of your person do you think were most affected by Covid 19?
 - a). Mental
 - b). Physical
 - c). None of the above.

6. Have you changed your lifestyle after the quarantine?
 - a) Yes
 - b) No

Initially, the students were told that their participation was part of the study and that it was voluntary, and that their responses would be kept confidential and strictly anonymous when they submitted their results. The study was virtual because the students are on vacation.

Population

It consists of 7,200 students enrolled in the 2022-1 semester, which constitute the finite study population of all the UNASAM Faculties.

Sample

To determine the sample that reflects a high degree of reliability and a low percentage of error, the following statistical formula was used:

Formula:

$$n = \frac{\left[\frac{z - \alpha/2}{d} \right]^2 \cdot p (1 - p)}{1 + 1/N \cdot \left[\frac{z - \alpha/2}{d} \right]^2 \cdot p (1 - p) - 1/N}$$

Where:

n = sample size.

N = population size, total number of students = 7200 (enrolled, 2022-2, UNASAM)

Z = value corresponding to the Gaussian distribution = 1.96 for $\alpha = 0.05$

p = expected prevalence of the parameter to be evaluated. Since in this case it is unknown, applying the most unfavorable option (p = 0.5), which makes the sample size larger.

q = 1-p (p = 50%, q = 50%)

d = precision error (in this case we want 14.7%)

α = significance level of 0.05

$$n = \frac{\left[\frac{1.96 - 0.05/2}{0.145} \right]^2 \cdot 0.5 (1 - 0.5)}{1 + 1/7200 \left[\frac{1.96 - 0.05/2}{0.145} \right]^2 \cdot 0.5 (1 - 0.5) - 1/7200}$$

The number of students is:

$$n = 43.3178884 / 1.00587748 \quad n = 43.0647758$$

n = 43 students

Statistical analysis

Obtained the data from the evaluations of the effects of the mental health of the students and the survey, they were processed with basic statistics, which were elaborated tables and figures that were interpreted and analyzed.

Procedures

It was done as follows:

- To obtain the sample, it was processed with the statistical formula.
- The 43 students enrolled in Semester 2022-1 of UNASAM.
- Survey data will also be collected online.
- The survey was filled out only once, remaining as evidence in the Drive as a database <https://forms.gle/cGMy5NPRZhj3GR8>
- Once the data is obtained, it will be processed through statistics, as well as bar graphs and tables for interpretation and analysis.

III. Results

For this study, a total of 43 student surveys of the Faculty of Education and Accounting were carried out, where in addition to applying the DASS-21 scale and student notes.
. The data obtained are described below.

Table 1. Frequencies and percentages of the variable Sex

Gender	Frequency	Percentage
Male	18	41.86
Female	25	58.14
Total	43	100.0

The sample was made up of 43 students, 18 male represent 41.86% and 25 female students represent 58.14% of the total respondents.

Table 2. Frequency and percentages of the variable Age groups

Age groups	Frequency	Percentage
20-22 years	28	65
23-25 years	11	26
≥ 26 years	4	9
Total	43	100.0

Due to the great diversity of ages that was obtained when tabulating the data, the respondents were classified by age groups. Where three groups were established, being 28 with 65% (20 to 22) for the group of 23 to 25 years, 11 with 26% and for the last group of 26 years and over, 4 with 9%, found among the ages, the greatest number were 20 to 22 years of those surveyed.

Table 3. Frequencies and percentages of the variable by Vocational School

Profession	Frequency	Percentage
Education	31	72
Accounting	12	28
Total	43	100.0

Within the professional schools of the investigated population we found two groups that are Education and Accounting, where it was observed that 31 with 72% belong to the Education career and 12 with 28% of the Accounting career.

Table 4. Frequency of perception of the effect of COVID-19 on mental health

N°	Ítems	Quantity	Percentage
1	Sí	27	62.8
2	No	16	37.2
		43	100%

Of the 43 respondents, 27 representing 62.8% state that covid-19 does affect mental health and 16 representing 37.2% state that covid-19 does not affect mental health.

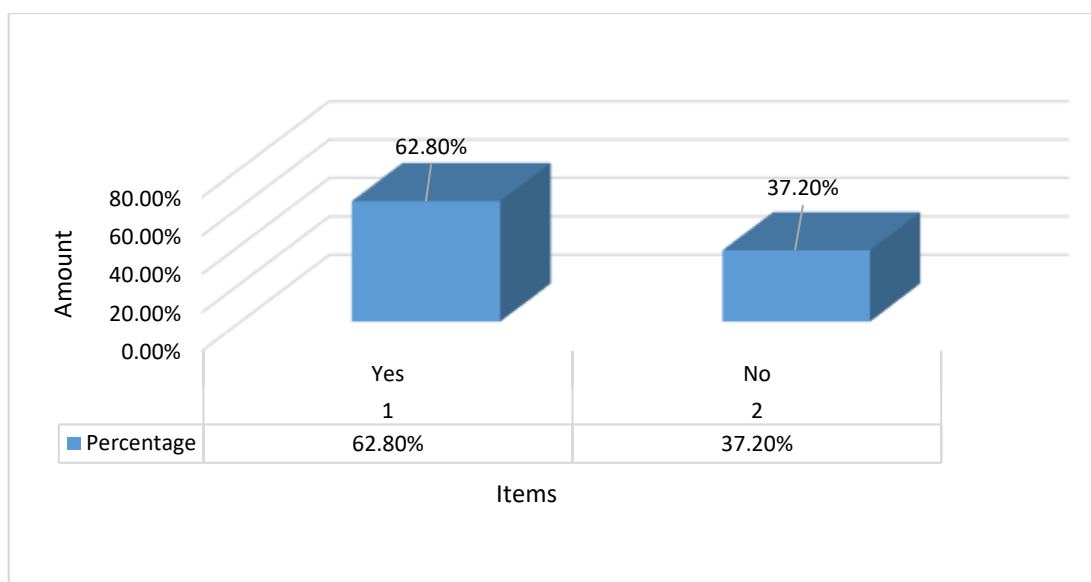


Figure 1. Frequency of perception of the effect of COVID-19 on mental health

Table 5. Frequency of symptoms you have had during the pandemic

N°	Ítems	Quantity	Percentage
1	Fear	18	41.9
2	Stress	27	62.8
3	Anxiety	26	60.5
4	Depression	13	30.2
5	Insomnia	4	9.3
6	Despair	8	18.6
Total		86	200%

Of 43 respondents from the Professional Schools of Education and Accounting, the highest result is Stress 27 which represents 62.8%, followed by 26 which is Anxiety which represents 60.5%, the item Fear 18 which is represented by 41.9%, Insomnia 4 which represents 9.3% and despair 8 that represented 18.6%. The study found that more than 50% of university students presented medium to moderate levels of anxiety, these results are close, although higher than those found in the study (Carlessi, 2021).

The studies reported that around 50% of the patients infected by Covid-19 presented mental sequelae, occupying the first place, anxiety, in second place, depression is located and in a certain percentage a combined prevalence of these two pathologies was found. . (Aguilar, I., et al, 2021, p.13).

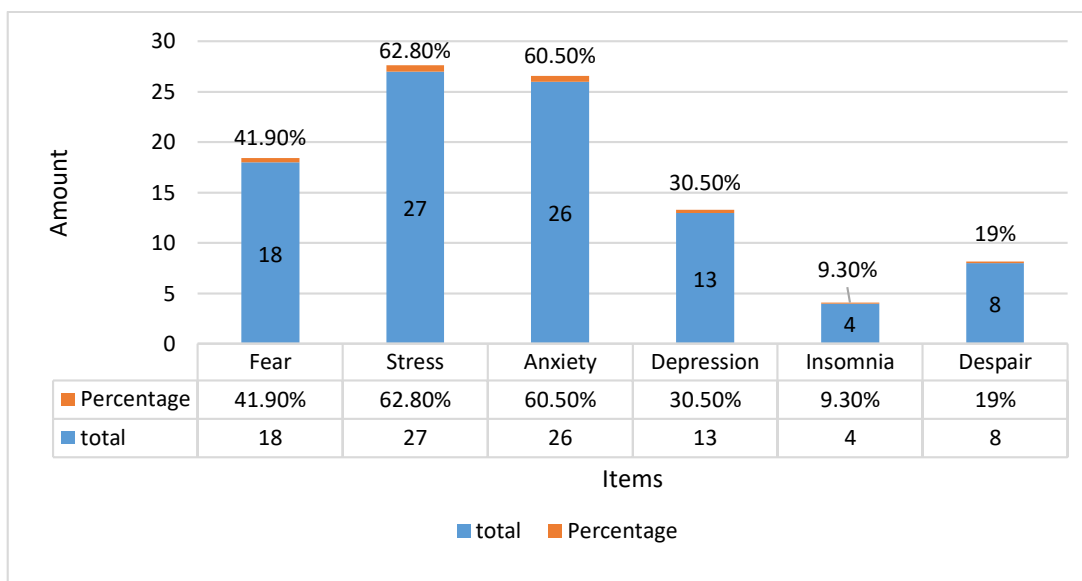


Figure 2. Frequency of symptoms you have had during the pandemic

Table 6. Frequency of levels of symptoms of Covid 19

N°	Ítems	Levels of emotions				Total
		Mild	Moderate	Severe	Extremely severe	
1	Fear			6	12	18
2	Stress		1	5	21	27
3	Anxiety			3	23	26
4	Depression		2	8	3	13
5	Insomnia	2	2			4
6	Despair	2	4	2		8

Of 43 respondents, they marked two alternatives, the highest result is Stress 27 (extremely level 21, severe 5 and moderate 1) which represents 62.8%; followed by Anxiety 26 (extremely level 23 and severe 3), which represents 60.5%; the item Fear 18 (extremely 12 and severe 6) that is represented by 41.9% and Tranquility 4 (mild 2 and moderate 2) that represents 9.3%. Anger 8 (mild 2, moderate 4 and severe 2) that represents 18.6%. In conclusion, the results of this study indicate that the structure of the DASS21 scale is mainly one-dimensional, although with the presence of some specific factors of a residual nature. Of these specific factors, it is the depression factor that requires further analysis as a possible independent dimension. Future studies should examine the possibility of generating ultra-short versions that better delineate the structure of the specific factors of the DASS-21. (Valencia, 2019, p.9). The results obtained indicate that the DASS-21 would be a reliable instrument, with acceptable psychometric performance in the Chilean non-consulting university population, with adequate construct, convergent, and discriminant validity, as well as solid internal consistency. (Antúnez & Vinet, 2012, p.8).

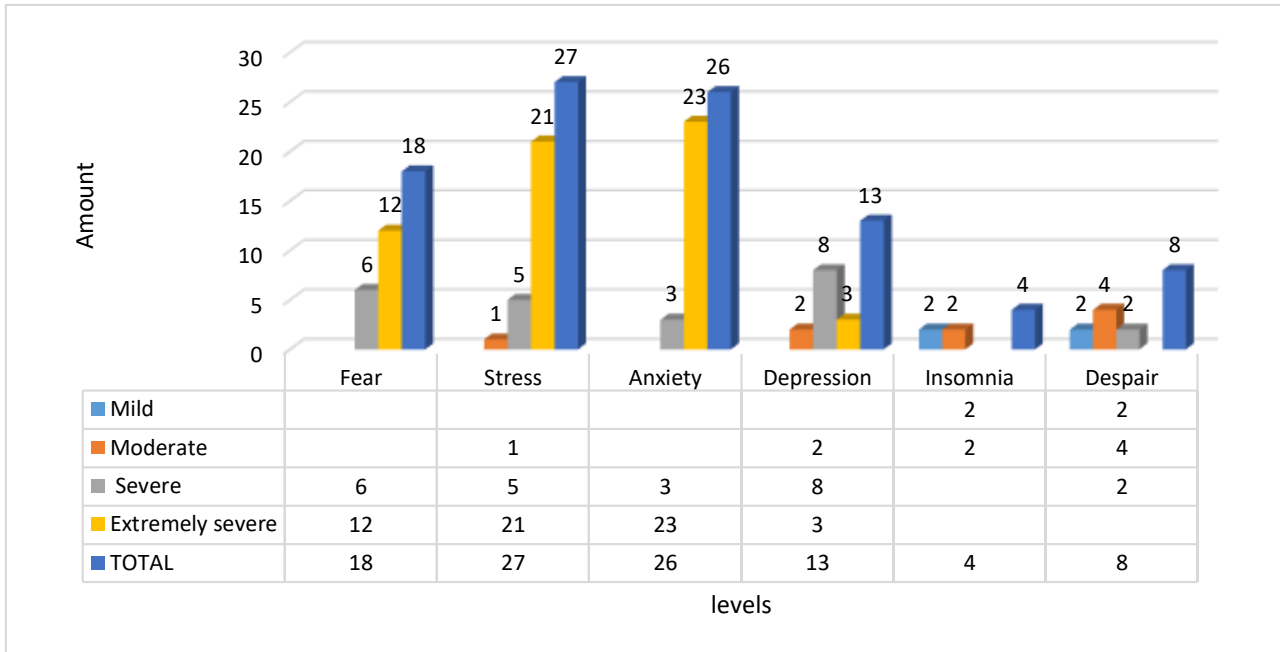


Figure 3. Levels of emotions in the perception of Covid 19 in mental health

Table 7. Frequency of those who went to a doctor or specialized professional

N°	Ítems	Total	Percentage
1	Yes	7	16.30%
2	No	36	83.70%
		43	100%

Of the 43 respondents from the Professional Schools of Education and Accounting, 7 marked Yes, which represents 16.30%, and 36 marked No, which represents 83.7%. It was identified that in the emotional states of the students a set of feelings typical of negative emotions predominated, which is evidenced in the following information: for 31.0% anxiety and anguish, for 21.2% stress, then for 20.8% depression and sadness, for 14.7% difficulties concentrating in studies as a result of other negative emotions such as anxiety, depression and stress, and for 12, 3% boredom and uncertainty. (Huaman & Soto, 2022, p.76). First-year human medicine students showed high levels of anxiety during the current pandemic, which were higher than those previously reported by different authors. Anxiety, from mild to severe, occurred more frequently in the female sex, and is also more characteristic among university students under 18 years of age. It is opportune to develop intervention strategies in universities that allow young students of human medicine to develop assertive coping techniques applicable to situations that constitute a threat to the preservation of their own mental health. (Saravia, 2020, p.6).

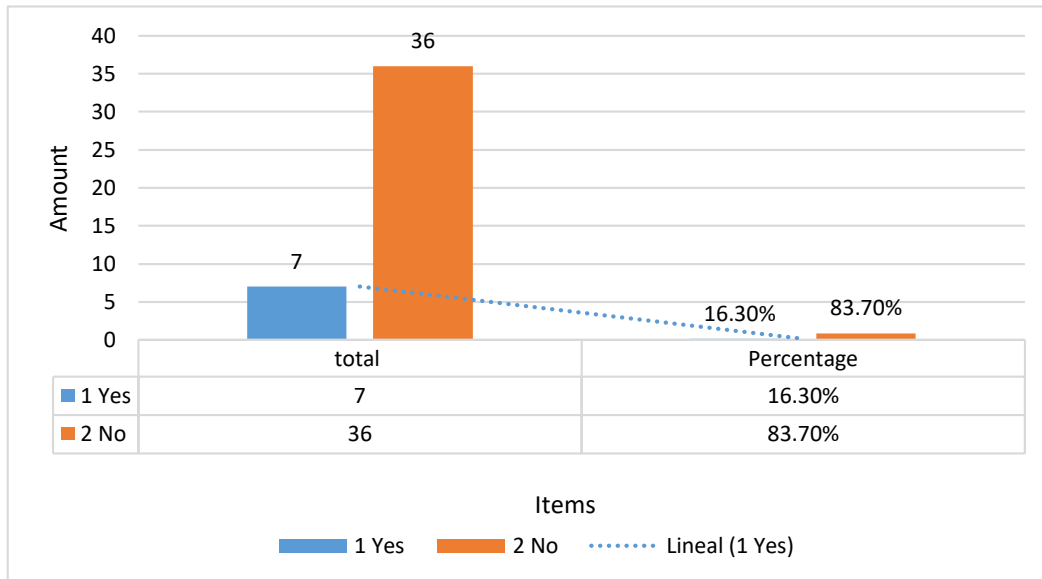


Figure 4. Those who have gone to a doctor or specialized professional

Table 8. Frequency on the area that was most affected by Covid 19

N°	Ítems	Total	Percentage
1	Physical	5	11.6%
2	Mental	12	27.9%
3	None of the above	26	60.5
		43	100%

Of the 43 respondents from the Professional Schools, 26 marked that covid-19 did not affect, which represents 60.5%, 12 marked that covid-19 affected the Mental area, which represents 27.9%, and 5 marked that covid-19 affected the Physical area with 11.6%. In conclusion, the results showed that there is a relationship between anxiety about COVID -19 and mental health in a group of Peruvian university students during the pandemic. However, it is essential to carry out more studies at the national and international level to complement the results obtained, with the aim of interventions aimed at university students who have been affected, to improve their mental health (Vivanco et. al, 2020, p.14). The minimum was physical, that is, the nervous, respiratory, and circulatory systems were the most affected, and also the growing number of cardiac manifestations mentioned in this study showed a strong relationship with the use of cytokines, cardiac monitoring, and imaging. There is some evidence of patients who have overcome COVID 19, and manifest difficulty in speech, affectations in the vocal cords, difficulties swallowing, due to having been connected to respirators (Ponce et al., 2020, p.9).

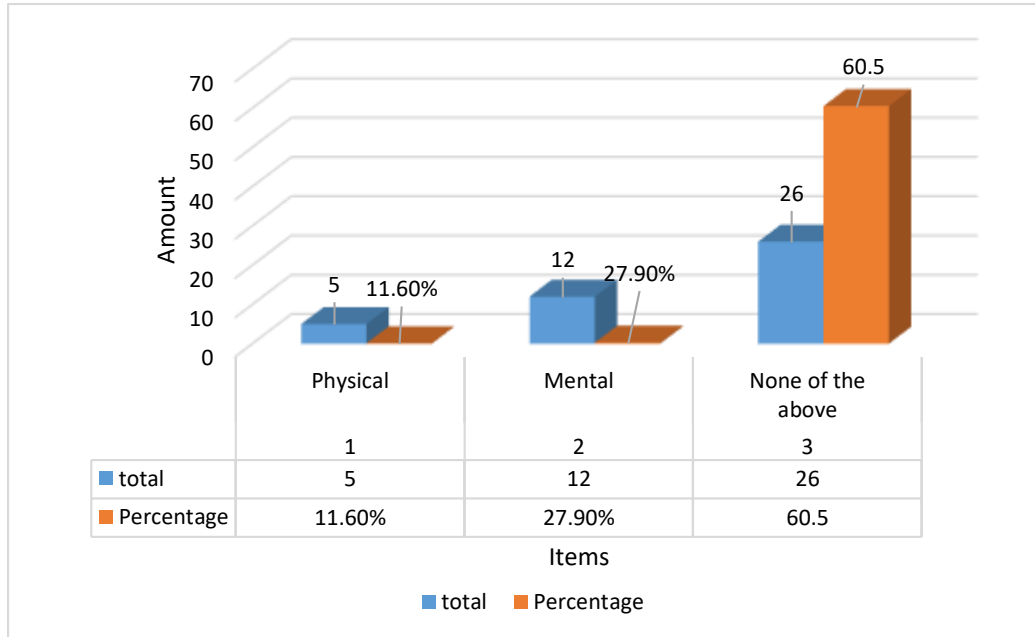


Figure 5. Frequency on the area that was most affected by Covid 19

Of the 43 respondents, 35 changed their lifestyle, representing 81.6% and 8 did not change their lifestyle, representing 18.6%. Anxiety has been one of the most typical reactions that students have experienced in the new academic scenario and, of course, it constitutes a niche that will require greater attention from the scientific community. (Castillo et al, 2021, p. 12). This study shows the need to create effective strategies aimed at increasing levels of physical activity, reducing sedentary behaviors and promoting healthy lifestyle habits in order to maintain the health of the population and prevent associated diseases, especially during the current crisis. humanitarian and possible future (Santos et al., 2022, p. 6). In this sense, the nutritional situation during and after the quarantine is a priority aspect (Vergara et al., 2020, p. 3). They confirmed that the current social, academic and professional limitations of physical activity and the general state of health related to the unforeseen circumstances of the Covid-19 pandemic allow 46.35% of the population to perform low-intensity exercise, as determined by the International Activity Questionnaire (IPAQ), 21.89% of the population exercise moderate and 31.76% perform high intensity exercise. In relation to the state of health, assessed with the Nottingham Health Scale, there are impacts in the emotional area, mainly in mood and sleep (it is worth noting here the benefits of promoting physical activities at home, which would bring improvements of an emotional nature (Rico et al., 2020, pp. 8-9).

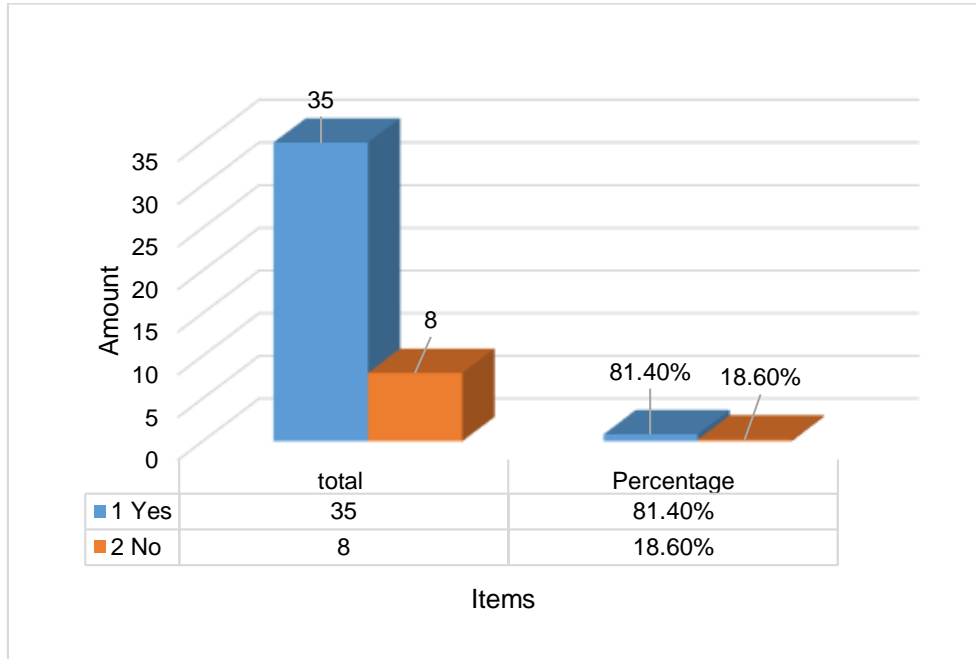


Figure 6. Frequency of lifestyle changes after quarantine

IV. Conclusions

- The results were known that 63.8% were affected by Covid 19, which, having been left with sequelae in mental health such as: psychological and emotional, that stress and anxiety exceeded more than 60%.
- Finally, 81.4%, after the quarantine, change of lifestyle, physical activity and nutritional change, measures such as recreation, face-to-face classes, walks and walks were carried out.

References

- Aguilar et. al, 2021. Secuelas post-COVID en salud mental: una revisión narrativa. *Revista Médica Vallejana*. DOI: <https://doi.org/10.18050/revistamedicavallejana.v10i2.08>.
- Antúnez, Z., & Vinet, E. V. 2012. Escalas de depresión, ansiedad y estrés (DASS-21): Validación de la versión abreviada en estudiantes universitarios chilenos. *Terapia psicológica*, 30(3), 49-55. <https://www.scielo.cl/pdf/terpsicol/v30n3/art05.pdf>
- Caballero C. y Campo A. 2020. Problemas de salud mental en la sociedad: Un acercamiento desde el impacto del COVID 19 y de la cuarentena. *Duazary / Vol. 17, No. 3 – 2020 / 1 – 3*, <https://revistas.unimagdalena.edu.co/index.php/duazary/article/view/3467>
- Carlessi, H. H. S., Yarlequé L.A., Javier L., Nuñez E. R., Arenas C., Iparraguirre M.L., Matalinares, M.L., Gutierrez E., Egoavil I., Solis J., Fernandez C. 2021. Indicadores de ansiedad, depresión, somatización y evitación experiencial en estudiantes universitarios del Perú en cuarentena por covid-19. *Revista de la Facultad de Medicina Humana*, 21(2), 346-353. <http://www.scielo.org.pe/pdf/rfmh/v21n2/2308-0531-rfmh-21-02-346.pdf>

- Castillo Riquelme, V., Cabezas Maureira, N., Vera Navarro, C., & Toledo Puente, C. 2021. Ansiedad al aprendizaje en línea: relación con actitud, género, entorno y salud mental en universitarios. *Revista Digital de Investigación en Docencia Universitaria*, 15(1). http://www.scielo.org.pe/scielo.php?pid=S2223-25162021000100004&script=sci_arttext
- Chacón-Andrade, E. R., Lobos-Rivera, M. E., Cervigni, M., Gallegos, M., Martino, P., Caycho-Rodríguez, T., Barés I., Calandra M., Flores-Monterrosa, A. N. 2020. Prevalencia de ansiedad, depresión y miedo a la COVID-19 en la población general salvadoreña. *Entorno*, (70), 76-86. <https://doi.org/10.5377/entorno.v0i70.10373>
- Cueva, M. A. L., & Terrones, S. A. C. 2020. Repercusiones de las clases virtuales en los estudiantes universitarios en el contexto de la cuarentena por COVID-19: El caso de la PUCP. *Propósitos y representaciones*, 8(3), 28.
- Gutiérrez Quintanilla, J. R., Lobos Rivera, M. E., & Chacón Andrade, E. R. 2020. Síntomas de ansiedad por la COVID-19, como evidencia de afectación de salud mental en universitarios salvadoreños. *Universidad Tecnológica de El Salvador, Vicerrectoría de Investigación y Proyección Social*.
- Huaman De La Cruz, H., & Soto Rojas, K. R. 2022. Efectos de la pandemia covid-19 en las emociones y la salud mental de los universitarios de la Facultad de Sociología de la UNCP, 2021. https://repositorio.uncp.edu.pe/bitstream/handle/20.500.12894/8145/T010_46966272_T.pdf?sequence=1
- Jeff, V. 2020. Consideraciones sobre la salud mental en la pandemia de covid-19. *Rev Peru Med Exp Salud Publica*. 2020;37(2):327-34, <https://doi.org/10.17843/rpmpesp.2020.372.5419>.
- Lozano, A. 2020. Impacto de la epidemia del Coronavirus (COVID-19) en la salud mental del personal de salud y en la población general de China. *RevNeuropsiquiatr*.2020;83(1):51-56/ DOI: <https://doi.org/10.20453/rnp.v83i1.3687>
- Navarro J. y Rodríguez A. 2020. Coronavirus y anestesia: Consideraciones en torno a la solidaridad. *Rev Chil Anest* 2020; 49: 333-338/ DOI: 10.25237/revchilanestv49n03.010/
- Ponce L. Et al. 2020. Secuelas que enfrentan los pacientes que superan el COVID 19. *10.26820/recimundo/4.(3).julio.2020.153-162*. <http://recimundo.com/index.php/es/article/view/858>.
- Ramírez et. al 2020. Consecuencias de la pandemia covid 19 en la salud mental asociadas al aislamiento social. <https://preprints.scielo.org/index.php/scielo/preprint/view/303/358>.
- Ribot, V. et al. 2020. Efectos de la COVID-19 en la salud mental de la población. *Revista Habanera de Ciencias Médicas*. AÑO 2020 19 (Supplement) ISSN 1729 - 519X. <https://www.medigraphic.com/pdfs/revhabciemmed/hcm-2020/hcms201h.pdf>.
- Rico et al, 2020. Hábitos de actividad física y estado de salud durante la pandemia por COVID-19. *Revista Espacios*. Vol. 41 (42) 2020, Art. 1, Especial COVID-19. <https://www.revistaespacios.com/a20v41n42/a20v41n42p01.pdf>.
- Rivas, E. 2021. Grietas en las fronteras: Insurgencias migrantes en Canadá, solidaridad, refugio, y protección de la vida en los tiempos del covid-19. *Revista de Sociología*33(2021): 95-121 DOI: <https://doi.org/10.15381/rsoc.n33.21797>ISSN impreso: 1605-8933 / ISSN en línea: 1609-7580.
- Santos et. al 2022. Cambios en hábitos saludables relacionados con actividad física y sedentarismo durante un confinamiento nacional por covid-19. 43, 415-421. <https://recyt.fecyt.es/index.php/retos/article/view/89425/65930>.
- Saravia-Bartra, M. M., Cazorla-Saravia, P., & Cedillo-Ramirez, L. 2020. Nivel de ansiedad de estudiantes de medicina de primer año de una universidad privada del Perú en tiempos de COVID-19. *Revista de la Facultad de Medicina Humana*, 20(4), 568-573.
- Szabo, M. 2010. The short version of the Depression Anxiety Stress Scales (DASS-21): Factor structure in a young adolescent sample. *Journal of Adolescence*, 33 2010, pp. 1-8 <http://dx.doi.org/10.1016/j.adolescence.2009.05.014> | Medline

- Torales J., O'Higgins M., Castaldelli-Maia JM, Ventriglio A. 2020, The outbreak of COVID-19 coronavirus and its impact on global mental health. *Int J Soc Psychiatry*. Mar 31: <https://doi.org/10.1177/002076402091>
- Urzúa A., Vera P. et al. 2020. La Psicología en la prevención y manejo del COVID-19. Aportes desde la evidencia inicial. *TERAPIA PSICOLÓGICA 2020*, Vol. 38, N° 1, 103–118/ Copyright 2019, Sociedad Chilena de Psicología Clínica
- Valencia, P. D. 2019. Las Escalas de Depresión, Ansiedad y Estrés (DASS-21): ¿miden algo más que un factor general? *Avances En Psicología*, 27(2), 177-190. <https://revistas.unife.edu.pe/index.php/avancesenpsicologia/article/download/1796/2008>
- Vergara et. Al. 2020. Cambios en el comportamiento alimentario en la era del COVID-19. *RELAIS*, vol. 3, no. 1. <https://revistasinvestigacion.lasalle.mx/index.php/relais/article/view/2637/2589>.
- Vivanco Vidal, A., Saroli Aranibar, D., Caycho Rodríguez, T., Carbajal León, C., Noé Grijalva, M. 2020. Ansiedad por Covid-19 y salud mental en estudiantes universitarios. https://repositorio.ucv.edu.pe/bitstream/handle/20.500.12692/58290/AC_Vivanco_VA-Saroli_AD-Caycho_RT-Carbajal_LC-No%C3%A9_GM.pdf?sequence=1