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Changes in college student health due to COVID-19 (SARS-CoV-2): An approach in light of the emotional dimension

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Abstract

The current reality demands the appropriate management of a set of capabilities, skills, and personal and collective tools that allow solving the problems and needs of a transformed society. Caring for and teaching how to care for the physical and emotional health of students from a sociocultural approach is an important aspect that contributes to good academic performance, therefore, identifying some particularities related to the subject will favor the design and implementation of university public policies related to the promotion of integral health and care for life. Therefore, the objective of this research was to identify and analyze from an emotional dimension, the state of health, the presence of sleep disturbances, as well as the variations in eating habits that developed in the student community of the FES-Iztacala of the UNAM during the implementation of social distancing.

Keywords: Health; Students; COVID-19; Social Isolation; Sociological Factors; Emotions

1. Introduction

The new severe acute respiratory syndrome COVID-19 caused by the SARS-CoV-2 virus emerged in Wuhan (China) in December 2019 [1], rapidly causing an outbreak of acute infectious pneumonia in various countries [2]. For that reason, in March 2020 with 37,364 cases reported outside of China, it was officially classified as a pandemic.

Given this situation, one of the international public health strategies implemented by all countries was social confinement, defined as a state where practices are combined to reduce social interactions such as social distancing, the mandatory use of masks, restriction of working hour's circulation, suspension of transport, closure of borders, etc. [3]. What implied a drastic change in daily life activities, including work, education, and activities outside the home, required citizens to implement new ways of life within their homes [4].

The COVID-19 pandemic, analyzed as an unprecedented social phenomenon at a global, national and personal level, has caused a general disturbance that is difficult to understand, face and resolve. In the educational aspect, the teaching-learning process of the student body has been affected by the total suspension of face-to-face activities in educational institutions. University life represents a stage where a large part of the students are adolescents or young adults, with numerous changes, new responsibilities, and greater psychosocial pressures [5]. Confinement in homes and the educational process experienced at home has been an endless and transcendent experience that has kept family and

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non-family loved ones separated, with voluntary restriction of freedoms and movement; In addition, it has led to the appearance of diverse mental, behavioral, sentimental and emotional processes, where the most affected student communities are those that do not have easy access to the use of information and communication technologies (ICT) and those where several members inhabit small houses [6].

In this regard, the physical and emotional health of the student body is an important aspect that influences adequate academic performance, recognizing some particularities related to the subject will help in the design and implementation of university public policies for the benefit of the teaching-learning process.

1.1. The purpose of the study

The purpose of this research was to identify and analyze from an emotional dimension, the state of health, the presence of sleep disturbances, as well as the variations in eating habits that developed in the student community of the FES-Iztacala of the UNAM during the implementation of social distancing.

2. Material and methods

In this study, a triangulation between qualitative and quantitative research was used to combine both methods and from different perspectives to complement the study of the problem. As Jick ([983]) mentions “qualitative and quantitative methods should be seen as complementary rather than rival fields” operating side by side [7].

For this particular research, the triangulation of the qualitative and quantitative research focused on jointly analyzing the data obtained from the study subjects, where the frequency and distribution of all the responses to the questionnaire used were determined to later carry out a qualitative approach to quantitative data, to observe the context and thereby elucidate the possible response patterns found in the questionnaires and that could be influenced by the emotional dimension experienced by the students in the situation for the COVID-19.

This was done taking as a reference the approach of one of the designs for the integration of qualitative and quantitative research described by Miles and Huberman in 1994. The chosen integrative model begins with an interview (qualitative research), followed by the study of the object in question. Form of a questionnaire (quantitative research) to later finish with the deepening and evaluation of the results in a qualitative way [8]. (Figure 1).

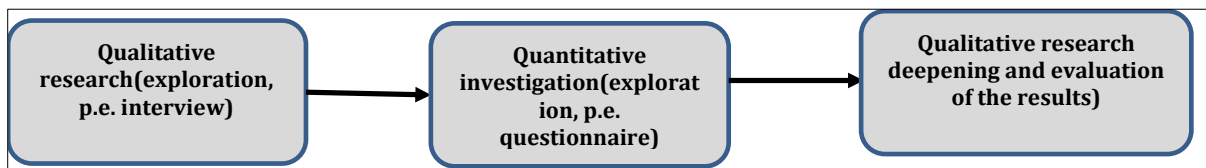


Figure 1 Integration model of qualitative and quantitative research of Miles and Huberman. Adapted from Flick, 2007

This combination of qualitative and quantitative results was used to obtain a broad knowledge about the problem of the study since through a mixed analysis the subjective meanings of the situation due to COVID-19 can be observed from the emotional dimension and in turn, its social distribution in the population, which are complementary to each other [8].

2.1. Study design, description of the sample, and procedure

The present descriptive, cross-sectional, mixed study was carried out from April to June of the year 2020, which was the beginning of the implementation of the Healthy Distance Day, a measure of physical distancing due to the COVID-19 pandemic. The information was collected through a questionnaire designed for this study and adapted to the Mexican context, which is called the Psychosocial and Socio-Emotional Meter against the COVID-19 contingency (MPE-COVID 19), where its main objective was to evaluate the processes of socio-emotional factors in the face of the pandemic and physical distancing [9].

The MPE-COVID-19 is made up of 32 questions divided into seven sections: 1) Interview, which collects demographic data (sex and gender identity, age, school grade, educational level, and career), 2) Consultation for COVID -19, 3) Spaces and family life, 4) Health, food and sleep hygiene, 5) Health and emotional life, 6) Academic activities and finally 7) Dynamics at home before/during COVID-19. With the use of the Google Forms platform, the MPE-COVID-19 was disseminated in the student community of the Faculty of Higher Studies, Iztacala campus of the National Autonomous

University of Mexico (FES-Iztacala UNAM), thus obtaining the responses of 3,469 students and interns from the careers of Psychology, Medicine, Nursing, Biology, Optometry, Dentistry and postgraduate level (master's and doctorate).

For this work, sections one and four were analyzed, which correspond to sociodemographic and health, food, and sleep hygiene data, which is made up of the following constructs:

- Your health status during social distancing has been...
- Do you present sleep disturbance from social distancing?
- Have your eating habits changed during confinement at home due to the COVID 19 contingency?

2.2. Statistical analysis

Initially, a descriptive analysis of the results obtained was carried out, of which the frequencies and percentages of each of the evaluations are presented. Subsequently, seeking the complementarity of the research methods, an analysis was carried out from the perspective of the emotional dimension to achieve an approach to the effects of COVID-19 on health, food, and sleep in a university student community.

2.3. Ethical considerations

The project from which the analyzed data originated has the approval of the Ethics Committee of the Faculty of Higher Studies Iztacala of the UNAM (registration number 1362). This research is classified within the General Law of Health in Research for Health (General Law of Health-Mexico, 2020) and the Official Mexican Standard 012-SSA3-2012 (Official Gazette of the Federation, 2013) [10] in category II, as they are commonly used and safe procedures. This study was conducted by the principles of the Declaration of Helsinki (World Medical Association, 2013) [11, 12] and the Federal Law on the Protection of Personal Data Held by Private Parties (Official Gazette of the Federation, 2010). The anonymity of every one of the participants will be strictly preserved.

3. Results and discussion

Greater participation of women (69.07%) over men (30.07%) and students who identified themselves differently (various, 0.86%; Table 1) was observed. In this regard, we can say that in all regions of the world there is a considerable increase in female enrollment in higher education, which tripled worldwide between 1995 and 2018, however, an overrepresentation of women continues to be observed in the areas of health, arts, humanities and social sciences (UNESCO, 2021) [13] About health care, women are the ones who remain positioned in the face of the COVID-19 crisis in health institutions and homes. National statistics show that the activity where the highest percentage of the female employed population is inserted is represented by the services sector 53.2% (INEGI, 2019) [14].

Table 1 Sociodemographic information

Variables	n	%
Gender/identity		
Women	2396	69.07
Men	1043	30.07
Diverse	30	0.86
Age		
18 - 20	1563	45.06
21 - 23	1231	35.49
24 - 26	309	8.91
27 - 29	122	3.52
30 -32	244	7.03
Career		
Psychology	933	26.90

Medicine	98	2.83
Nursing	375	10.81
Biology	736	21.22
Optometry	46	1.33
Odontology	944	27.21
no data	337	9.71
Semester		
First	357	10.29
Second	842	24.27
Third	280	8.07
Quarter	555	16.00
Fifth	46	1.33
Sixth	354	10.20
Seventh	18	0.52
Eighth	399	11.50
Ninth	31	0.89
Tenth	46	1.33
no data	541	15.60

n= number; %= percentage

The predominant age range among the participants was from 18 to 20 in one (45.06%) and from 21 to 23 years in (35.49%; Table 1), ages in which according to previous research related to SARS-CoV -2, have represented higher levels of depression, stress, and anxiety, due to the concern of becoming infected by the virus [15,16]. Of the students with the greatest participation in the research were those who were in the second and fourth semesters (40%), levels where the youngest population is found. Likewise, the careers with the greatest contribution were Dentistry (27%), Psychology (26%), and Biology (21%; Table 1).

The frequency analysis of the health status of the student body during social distancing showed that 43.81% of the total population had regular health, which means having had stomach discomfort, allergies, and muscle pain during the initial stage of the pandemic, on the other hand. On the other hand, only 5% of the students presented with complicated health which implied the manifestation of symptoms and signs that forced them to visit the doctor (Table 2).

Table 2 Results obtained from the question was your state of health during social distancing...?

Your health status during social distancing has been						
Gender/Identity	Good (you are in good health without medication) n= 1786		Regular (upset stomach, allergies, muscle aches, others) n= 1520		Complicated (symptoms and signs that have forced you to visit the doctor) n= 163	
	n	%	n	%	n	%
Women	1150	64.39	1122	73.82	124	76.07
Men	624	34.94	383	25.20	36	22.09
Diverse	12	0.67	15	0.99	3	1.84

n= number; %= percentage

Families may have initially avoided seeking medical attention for fear of leaving home, however, some difficult situations led them to seek medical help. Similar studies have found that lifestyles due to confinement due to the

pandemic caused by COVID-19 have generated an increase and/or prevalence of sedentary behavior patterns, with repercussions at the physical state level [17].

Research has shown that men's and women's health behaviors are different and change over time. In the case of men, risk behaviors related to physical issues such as being involved in acts of violence, the abuse of harmful substances, among others, are observed. On the other hand, women often present problems related to physical and mental health associated with the performance of their sociocultural roles. In this regard, it was observed that women have diseases related to exhaustion, mental exhaustion, depression, etc., conditions that could be derived from the performance of double or triple work shifts [18].

The presence of sleep disturbances as a consequence of the situation derived from the COVID-19 pandemic was observed in 92.99% of the student body, of which 29.69% sleep the same hours with different schedules. 31.13% sleep a greater number of hours and 32.17% of the student community sleep fewer hours (Figure 2).

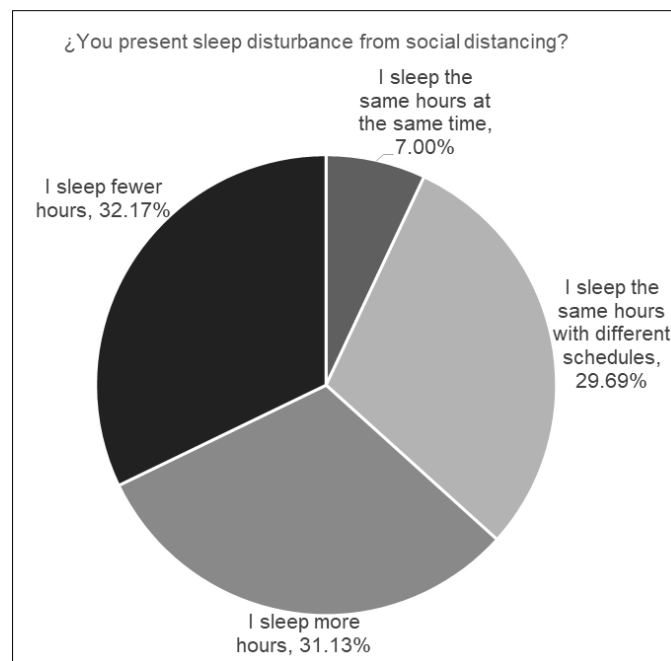


Figure 2 Results obtained from the question Do you present sleep disturbance from social distancing? Frequencies are presented in percentages

Sleep disorders are a very common problem among university students, affecting up to 70% of this population, which can negatively influence their academic performance [17,18]. During the pandemic, there has been a high prevalence of dysfunctional habits of sleep disorders, in a study, it was found that 35% of those surveyed recognized that their exercise time has decreased, which also affects their quality of sleep [19].

Similarly, it has been observed in younger university students in the health area, presence of more insomnia and hypersomnia, which was related to situations of anxiety. [20]. Other studies have shown that insomnia appears to be associated with female sex, younger age, and how stress is perceived for fear of contagion [21, 22]. In addition, it has been found that women began to sleep less during the sleep period. Confinement and reported waking up more during the night compared to men [23].

Regarding eating habits during confinement, it stands out that 48.83% of the population studied increased food consumption, being similar to an investigation where people mentioned that during confinement they eat all the time and frequently food, fresh, processed, and canned, at 52.5%. In another part, in our study, 20.99% reduced it and 19.34% maintained the intake of the same amount and type of food (Figure 3).

About the above, studies mention that eating behavior is a multifactorial construct defined by physiological needs, personal emotions, and sociocultural factors that motivate it and serve as determinants in consumption preferences [24, 25]. Therefore, in situations such as social isolation, being at home and having to carry out all activities in the same space has led to less time available for cooking and little travel to local markets, which has generated an increase in

consumption of fast, processed, hypercaloric and unhealthy foods [25]. The delivery of fast food at home prepared with a high content of saturated fats, sodium, and sugar has become an option for the population, [25,26] these situations have led to an increase in overweight and obesity in the population [27].

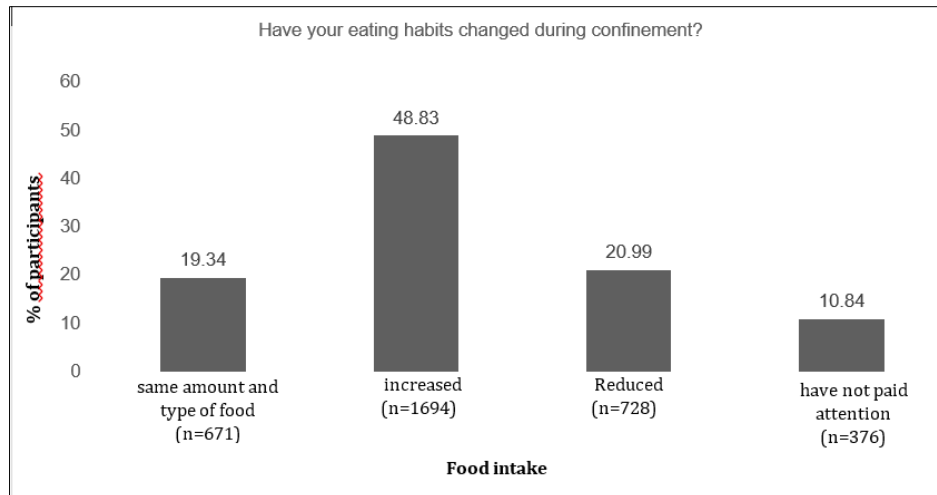


Figure 3 Results obtained from the question have your eating habits changed during confinement. Frequencies are presented in percentages

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Finally, confinement in the home, keeping a distance of two meters, the loss of routines, not touching or seeing each other, and not living in a group, eliminates an attribute as social beings that is essential for a healthy life. This has triggered the development of social uncertainty, where a general feeling of concern is expressed in the population that is linked to confinement and the general economic, social, and labor consequences of daily life [28]. Similarly, it has been shown that not socializing negatively affects physical and mental health, generates depression of the immune system, cognitive, thought and emotional difficulties, irritability, anger, anguish, and fear, making people who already suffer from diseases [29]. Prolonged stress due to the health emergency has designed an optimal environment to generate maladaptive behaviors: mental exhaustion, progressive loss of interest in daily activities, apathy, behaviors that range from indifference to distancing to sometimes hopelessness, symptoms that can generate dysfunction work, family, and social; thus, emotional and behavioral reactions become persistent and contribute to the appearance of symptoms of anxiety or depression [30]. From mild to severe, anxiety has occurred during the pandemic more frequently in females and is more characteristic among those under 18 years of age [31].

4. Conclusion

The restrictions of social distancing and the implications of distance education have become social determinants of health for the university community. What is experienced socially tends to impact the emotional dimension of people, causing alterations and physiological changes in health, nutrition, and sleep, such as what was observed in this research, situations that require attention from different disciplines.

This approach between emotionality and health in the context of the COVID-19 pandemic generates the need to carry out more studies to provide information on the long-term effects of the COVID-19 pandemic and from a

transdisciplinary perspective to propose preventive and coping strategies that allow students to cope with this situation and continue with their university education process.

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Compliance with ethical standards

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Disclosure of conflict of interest

The authors declare no conflict of interest.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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