PODIUM

PODIUM. Journal of Science and Technology in Physical Culture

Volume 16 Issue 1; 2021

University of Pinar del Río "Hermanos Saíz Montes de Oca". Scientific Publications Department.

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ISSN: 1996–2452 RNPS: 2148
Revista PODIUM, January-April 2021; 16(1):100-113

Translated from the original in spanish **Original article**

Effects of social, preventive and obligatory confinement on the physical and psychological health of the people of Comodoro

Efectos del confinamiento social, preventivo y obligatorio sobre la salud física y psíquica de los comodorenses

Efeitos do confinamento social, preventivo e obrigatório sobre a saúde física e psicológica do povo de Comodoro

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Received:26/11/2020.
Approved:01/12/2020.

How to cite item: Da Luz Pereira, Á., Pazos Espin, M., & Tögel, M. (2021). Efectos del confinamiento social, preventivo y obligatorio sobre la salud física y psíquica de los comodorenses. *PODIUM - Revista de Ciencia y Tecnología en la Cultura Física, 16*(1). Recuperado de http://podium.upr.edu.cu/index.php/podium/article/view/1047

ABSTRACT

During some months of 2020, the processes of reclusion and compulsory social isolation were a reality imposed by the Argentine government as a preventive measure against the SARS-CoV-2 pandemic. Thinking back to the last recorded event of a similar epidemiological situation, it was found that the last recorded event was in 1918, where the Spanish flu epidemic caused at least 50 million deaths worldwide and that, as of today, neither the epidemiology of the epidemic nor its true scope is clear. There are

currently no accurate statistical records showing the effects on the psycho-physical state of people who have been confined due to the preventive measures taken against infectious diseases and who are going through such a situation. In this study, the aim is to describe some of the self-perceived effects by the population of Comodoro. For this purpose, an anonymous questionnaire was designed and applied, answered by 1093 subjects (♀= 750 - ♂= 343), whose ages were 40±22 years and, with the data obtained, it was possible to conclude (P>0.05) that the social, preventive and mandatory confinement affected the physical and psychological health of the people of Comodoro, increasing physical inactivity, the associated risk factors, modifying eating habits, affecting the quality of sleep and causing situations of emotional instability and economic repercussion.

Keywords: Confinement; Pandemic; Physical and Mental Health.

RESUMEN

Durante algunos meses del 2020, los procesos de reclusión y aislamiento social obligatorios fueron una realidad impuesta por el gobierno argentino como medio preventivo frente a la pandemia del SARS-CoV-2. Rememorando el último hecho registrado de una situación epidemiológica similar, encontramos que el último hecho registrado fue en 1918, donde la epidemia de la *gripe española* causó al menos unos 50 millones de muertes en todo el mundo y que, desde el día de la fecha, aún no es clara la epidemiología de la misma ni su verdadero alcance. Es que actualmente no hay registros estadísticos certeros que muestren las afectaciones ocasionadas en el estado psico-físico de las personas, que han sido confinadas debido a las medidas preventivas que se toman frente a enfermedades infectocontagiosas y que se transita por una situación de tales características. En este estudio, se pretende describir algunos de los efectos autopercibidos por la población comodorense. Para tal fin, se diseñó y aplicó un cuestionario anónimo, contestado por 1093 sujetos ((♀= 750 - ♂= 343), cuyas edades eran de 40±22 años y, con los datos obtenidos, se pudo concluir (P>0,05) que el confinamiento social, preventivo y obligatorio afectó la salud física y psíquica de los comodorenses, aumentando la inactividad física, los factores de riesgo asociado, modificando los hábitos alimentarios, afectando la calidad del sueño y provocando situaciones de inestabilidad emocional y repercusión económica.

Palabras clave: Confinamiento; Pandemia; Salud Física y Psíquica.

RESUMO

Durante alguns meses de 2020, os processos de confinamento social obrigatório e de isolamento foram uma realidade imposta pelo governo argentino como medida preventiva contra a pandemia da SRA-CoV-2. Recordando o último evento registado de uma situação epidemiológica semelhante, verificamos que o último evento registado foi em 1918, onde a epidemia de gripe espanhola causou pelo menos 50 milhões de mortes em todo o mundo e que, a partir de hoje, a epidemiologia da epidemia e o seu verdadeiro alcance ainda não é claro. Não existem atualmente registos estatísticos precisos que mostrem os efeitos sobre o estado psicofísico das pessoas que foram confinadas devido às medidas preventivas tomadas contra doenças infecciosas e que estão a passar por uma situação com tais características. Neste estudo, pretendemos descrever alguns dos efeitos auto percebidos pela população de Comodoro. Para este efeito, foi concebido e aplicado um questionário anónimo, respondido por 1093 sujeitos (♀= 750 - ♂= 343),

cuja idade era de 40±22 anos e, com os dados obtidos, foi possível concluir (P>0,05) que o confinamento social, preventivo e obrigatório afetou a saúde física e psicológica das pessoas de Comodoro, aumentando a inatividade física, os fatores de risco associados, modificando os hábitos alimentares, afetando a qualidade do sono e provocando situações de instabilidade emocional e repercussões económicas.

Palavras-chave: Confinamento; Pandemia; Saúde Física e Psíquica.

INTRODUCTION

On January 30, 2020, the SARS-CoV-2 outbreak was declared a Public Health Emergency by WHO. Forty days later, on March 11, it was declared a pandemic (World Health Organization, 2020).

At the onset of the pandemic, the widespread increase in cases, requiring medical attention, was mainly among people older than 65 years or in those younger than 65 years, carriers of underlying chronic diseases (Huang, *et al.,* 2020). The most prevalent comorbidities were hypertension (21.1 %, 95 % CI: 13.0-27.2 %) and diabetes (9.7 %, 95 % CI: 7.2-12.2 %), followed by cardiovascular diseases (8.4 %, 95 % CI: 3.8-13.8 %) and those affecting the respiratory system (1.5 %, 95 % CI: 0.9-2.1 %) (Yang, J. *et al.*, 2020).

In Argentina, due to the SARS-CoV-2 pandemic, government authorities propose confinement as a useful tool to prevent the spread of the virus, hoping to gain time to coordinate sanitary measures to avoid the collapse of the health system (Boletín Oficial de la República Argentina, 2020).

As specialists dedicated to the physical exercise sciences, we stress the importance of paying due attention to people's health, but understanding it not only from a biologist vision, but also from a holistic and integrating conception of the areas that contribute to the health of the subjects (Lalonde, 1974). It is for this reason that we will try to understand the impact that prolonged confinement can have on some other health parameters, beyond those merely observed through biological indicators.

It is hoped that a better understanding of the effect generated by confinement on some other health parameters in people will allow us in the future to establish specific guidelines for the design of preventive strategies aimed at mitigating the negative consequences of confinement, understanding the need to learn from the decisions taken in the past and preparing ourselves to face future outbreaks in a better way.

The deterioration that can be caused by the lack of physical and emotional care due to confinement has been described by different authors in other parts of the world (Mujica, I & Padilla, S., 2000; Zbinden, H. *et al.,* 2020). Therefore, we believe it is important to understand this type of situation in our context, recording the changes in habits that may be generated in people subjected to confinement, such as the quantity and quality of sleep hours, physical activity and eating habits in order to offer an interpretative analysis, including the possibility of correlating some present variables that are modified by this new way of living.

Although partial and incomplete, the description of the impact of confinement on the respondents was demonstrated by the observed alterations and relationships of the reported emotional and physical health factors.

The SARS-CoV-2 pandemic is an unprecedented health crisis in that entire populations have been asked to isolate themselves and live in home confinement for several weeks or months, which in itself represents a physiological challenge with significant health risks (Narici, 2020).

Confinement and physical inactivity

Unfortunately, most people are currently unaware of the health risks associated with not moving. Time spent sitting has been linked to increased risk of all-cause mortality (Katzmarzyk, 2009), increased incidence of cardiovascular disease (Stamatakis, 2011) and metabolic problems (Hu, 2003; Ford, 2010) (Figure 1).

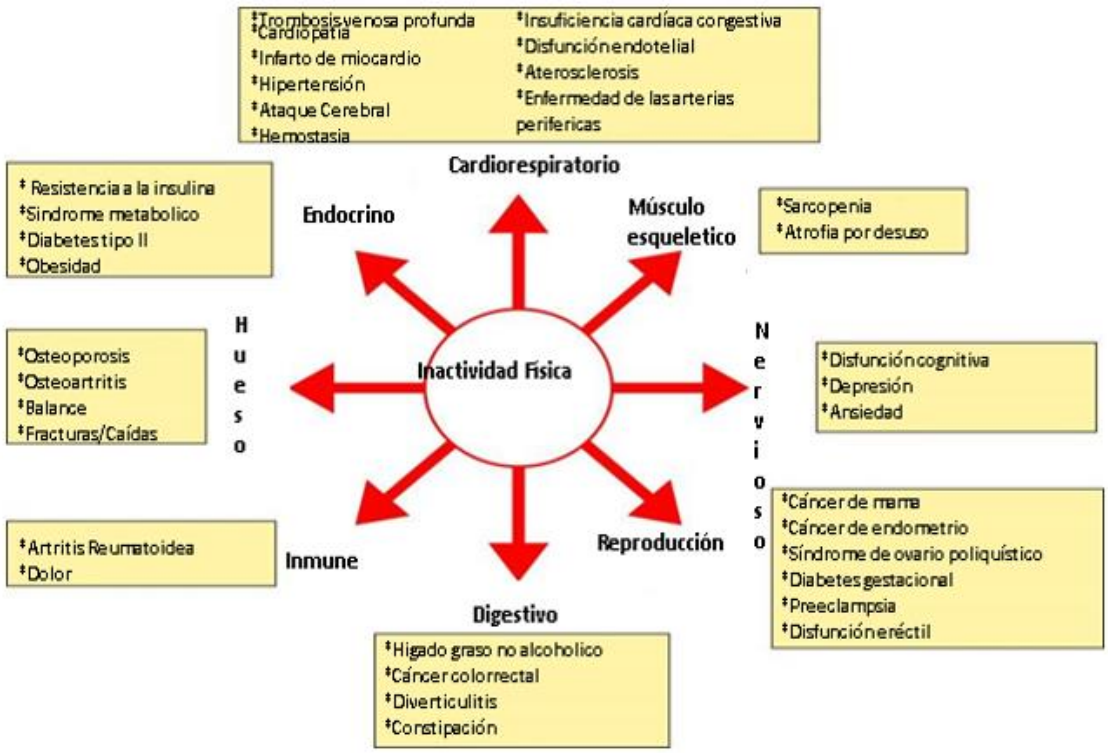

Fig. 1. - Physical inactivity increases 35 chronic disease
Source: Adapted from Booth, F. *et al.,* (2017).

Physical inactivity causes 9 % of premature deaths, causing more than 5.3 million of the 57 million deaths worldwide that occurred during 2008. If physical inactivity decreased by 10% or 25 %, more than 533,000 or more than 1.3 million deaths could be prevented each year, respectively (Lee, 2012).

Confinement and associated risk factors

Recent evidence has suggested that people with obesity and diabetes are at increased risk of complications from SARS-CoV- 2, including death (Hill *et al.,* 2020).

Indeed, physical training offers some protection against the development of several chronic metabolic diseases, including the state of insulin resistance that often accompanies obesity and diabetes. As such, individuals with comorbidities who have high

levels of cardiorespiratory fitness may mount a stronger host immune defense against SARS- CoV - 2 and reduce susceptibility to risk of infection early in the disease (Zbinden *et al.,* 2020) (Figure 2).

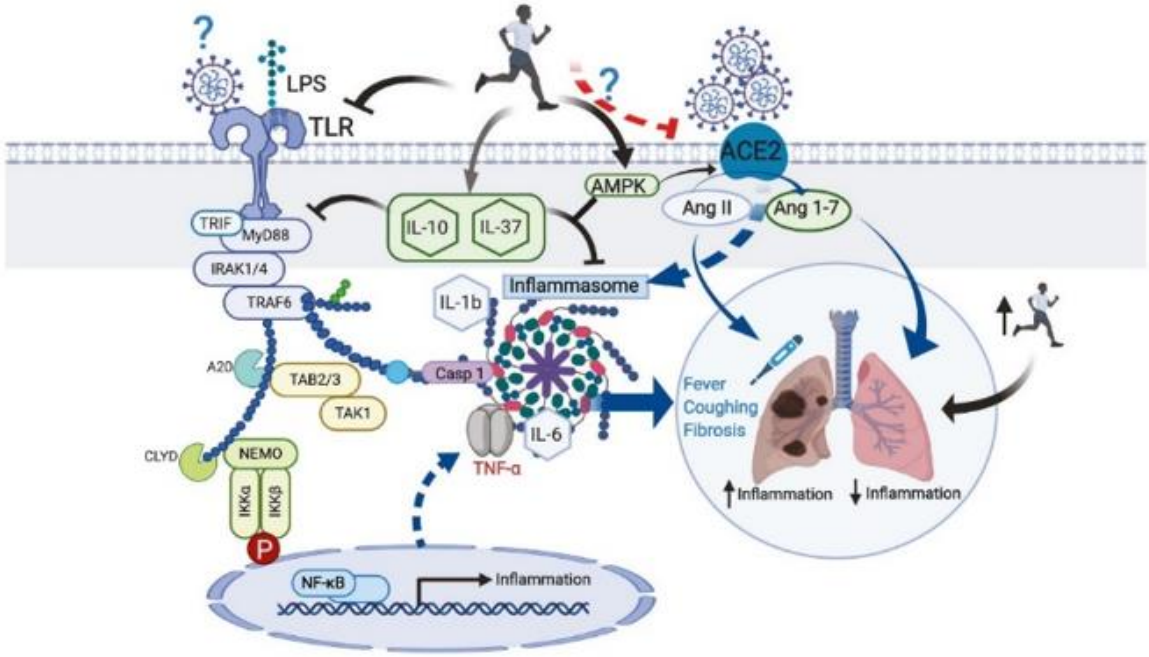

Fig. 2. - Does high cardiorespiratory capacity confer any protection against pro-inflammatory responses after SARS - CoV -2 infection?
Source: Zbinden, *et al.*, (2020).

Confinement and feeding habits

Due to the fear that confinement generates, there is an increase in the amount of food that is acquired, 1) due to the prevention of scarcity, as well as 2) due to the lower frequency of its acquisition. This can generate changes in the choice and quality of what is consumed, leading the population to a positive energy balance (Brooks, *et al.,* 2020).

In a stressful situation, nutrition may suffer from imbalances due to different reasons and factors related to confinement. Confinement and physical inactivity force many people to adopt nutritional behaviors that are harmful to the body, guided by emotions. This generates to inconvenient changes in body composition, such as a loss of muscle mass and an increased activation of systemic inflammation and antioxidant defenses (Narici, *et al.,* 2020).

Confinement and sleep quality

Social isolation, in general, leads to a decrease in contact with other people and changes in habits related to family, academic, work and social activities, presenting episodes such as lack of adequate rest during the night, associated with different stressful situations during the period of confinement. On the one hand, the appearance of fatigue during the day (Gené-Badia, *et al.,* 2016) and the aggravation of problems such as stress, anxiety and depression (Altena, *et al.,* 2020), which affects the amount of circulating

lymphocytes, NK (Natural Killer) cells and antibodies, which exposes an impaired defense function when an immune challenge occurs.

Confinement and emotional instability

Although few studies have been conducted to date on the effects on emotional instability in the general population related to the current SARS-CoV-2 pandemic (Torales, et al., 2020). Reactions to pandemic stress take on manifestations as diverse as fear or anxiety, which can become excessive reactions of sadness or boredom, which can lead to depressive symptoms, complicated grief reactions, increased propensity to develop addictive behaviors, and complications of previous psychopathological disorders, such as affective, anxiety, or psychotic conditions. In addition, a small segment of the population will subsequently develop anxiety, mood disorders and post-traumatic stress disorder (Brooks et al., 2020).

Confinement and economic impact

We are being hit by the biggest health crisis in the last 100 years. Brooks, *et al.,* (2020). It is foreseeable that pandemic stress will affect the most vulnerable groups of the population, to whom special attention will have to be paid. People without economic or social resources, the disabled, the elderly living alone or with little social support, children or adults living in troubled homes and people with previous psychopathology will cope worse with the consequences and restrictions of quarantine and confinement (Brooks *et al.,* 2020). The objective of this work is to demonstrate the effects of social, preventive and compulsory confinement on the physical and psychological health of people from Comodoro.

MATERIAL AND METHOD

a- Experimental unit, model and studied variables

This is a descriptive, correlational research study (P>0.05). All participants were informed of the purpose of the study and anonymously signed an informed consent form authorizing the use of their information for scientific purposes.

- Independent variable: social, preventive and mandatory confinement.
- Dependent Variable: physical inactivity, associated risk factors, eating habits, sleep quality, emotional instability and economic impact**.**

b- Population and sample tested

The present research work analyzed 1093 respondents residing in the city of Comodoro Rivadavia, between May 8 and 17, 2020. The gender distribution was 31.4 % male and 68.6 % female, being an exclusion factor to be under 18 years old.

c- Instruments

A survey designed by the research team using the Google-Forms application was used. This questionnaire was composed of a total of 35 questions structured in sections (physical inactivity, associated risk factors, eating habits, sleep quality, emotional instability), which were disseminated via online, e-mail, social networks and radio and television media.

d- Statistic analysis

Statistical data were collected by means of: a) Online Google forms questionnaire, then the information was analyzed, determining frequency counts and percentage calculations b) Subsequently, the data were exported to the IBM SPSS statistical program, version 25.0, which allowed examining the relationship between variables through the non-parametric Chi-square test.

RESULTS

Based on the data obtained from the survey, the following results are shown, which will be detailed in several sections:

The sample collected led to a figure of 1093 surveys, the female gender had the highest participation, with a percentage of 68.6 % over 31.4 % male.

The ages were recorded with a higher percentage of respondents; in a population of young people from 18 to 25 years with 26.1 % (n= 285), followed by an age range of 36 to 45 years with 23.6 % (n= 258), continuing with 21.9 % (n= 239) in the age range of 26 to 35 years, 20.2 % (n= 221) in 45 to 60 years and 8.2 % (n= 90) in those over 60 years.

a) Physical inactivity

According to the results, in the group aged 18 to 26 years, a polarization was observed in terms of the type of activity practiced. On the one hand, there is an important percentage that remained inactive during the confinement period, exceeding in proportion to the other groups. The age range of 26 to 45 years has a greater preference for combined training.

However, there is a high percentage that remained active, leaning specifically towards overload and combined training.

In older adults, there was a decrease in sports practice, with this reduction being more accentuated in overload training. This could have a negative impact on osteo-myo-articular health.

On the other hand, there was a decrease in the percentage values for the weekly frequency of physical activity. Those who selected more than 4 weekly stimuli changed from 34 % before confinement to 26.7 % during confinement. There was also a reduction in the percentages of the population that chose "3 weekly stimuli".

The counterpart of this decrease is observed in the options that reflect less weekly frequency. In this sense, they indicate that there was an increase in the number of people who maintained a weekly frequency of physical activity, comprised between 1 and 2 weekly stimuli (Table 1).

Table 1. Weekly frequency of physical activity before and during confinement

Porcentaje pre	Frecuencia semanal	Porcentaje durante
7,2 %	1	11,9 %
14,8 %	2	16,9 %
31,2 %	3	19,1 %
34 %	+4	26,7 %

Source: Own elaboration (2020).

b) Associated risk factors

It was inquired about chronic non-communicable diseases (Diabetes - Arterial hypertension - Dyslipidemias) and it was observed that 80.8 % (n= 883), responded that they did not suffer from a particular physical condition and on the other hand, they tend to be undergoing a specific treatment for the condition, with 19.2 % (n= 210).

As for gender, the female sex has the highest rate of chronic non-communicable diseases, above the male sex. Continuing with the same trend of the 4th National Survey of Risk Factors, it was found that 77 % (n=161) corresponds to women, against 23 % (n= 49) of men.

c) Feeding habits

Taking into account what was observed in the surveyed population, they have preferences for bakery foods with 52.2 % (n= 571). In decreasing order, the following foods are listed: egg 48.1 % (n= 526), red meat 45.3 % (n= 495), fruits 41.9 % (n= 458), vegetables 40.6 %, chicken 38. 2 % (n= 417), sweets and chocolates 34 % (n= 372), dairy products 31.1 % (n= 340), legumes 27 % (n= 295), fresh foods 21.4 % (n= 234), canned and preserved foods 21 % (n= 229), cereals 19.9 % (n= 217) and fish with 18.6 % (n= 203). It can be observed on the basis of the observed data, that there is a higher consumption of foods with acid metabolism. These have negative effects on physical health, such as alteration of lipid metabolism, with potential to be generators of diseases such as obesity and its associated morbidities such as diabetes and arterial hypertension.

d) Quality of sleep

At the same time, the quality of sleep during confinement was analyzed, and it was concluded that 65.9% (n= 720) presented nighttime sleep disturbances, compared to 34.1% (n= 373) who did not report such disturbances (Figure 3).

Fig. 3. - Nighttime sleep quality during confinement
Source: Own elaboration (2020).

In this sense, 55.1 % (n = 602) respond having problems falling asleep and 44.9 % (n = 491) do not present this problem.

e) Emotional instability

From what is reflected in the survey, it was observed that, going through the confinement stage, 53.2 % produced emotional instability; 30.1 % answered that maybe and 16.7 % did not present altered feelings (Figure 4).

Fig. 4. - Economic impact during confinement
Source: Own elaboration (2020).

f) Economic impact

As shown in graph 7, 67.9 % (n= 742) of the population stated that the confinement affected their economic income, while 32.1 % (n= 351) reported that the measures implemented did not affect them.

From the Chi-square statistical analysis, significant relationships were observed between the indicators shown in the table (P>0.05) (Table 2).

Table 2. - Correlations obtained from Pearson's chi-square test among the different indicators

	Significación asintótica (bilateral)
Hábitos alimentarios con los estímulos semanales de actividad física, previos al confinamiento	,000
Calidad de sueño y los horarios alimentarios, durante el confinamiento	,000
Calidad de sueño con la repercusión económica, durante el confinamiento	,012
Calidad de sueño con la inestabilidad emocional, durante el confinamiento	,000
Sexo y los factores de riesgo asociados (malestar osteomioarticular), durante el confinamiento	,000

*p>0.05 significant correlation between the indicators.
Source: Own elaboration (2020).

DISCUSSION

It is important to understand that adherence to good lifestyle habits has a positive health aspect to face the pandemic. The World Health Organization (WHO) recommends an ephemeral physical activity design, detailing the physical and emotional health implication in different age ranges, through movements of different intensities and execution time. As a consequence of this, it is suggested strategies for the design of physical exercise programs by a qualified professional, who prescribes activities according to the individuality of the subject (Lippi, 2019).

The pandemic has hidden aspects, to which very few make reference, such as the associated risk factors that affect the probability of Covid-19 infection, as mentioned in the study by Zbinden *et al.,* (2020); Enciso-Olivera, *et al.,* (2016); Maher, *et al.,* (2017). There are no studies in the scientific literature on historical facts that reflect a confinement of healthy people. However, there are bibliographic references that address scientific study topics of "Detraining", as noted by Mujika and Padilla (2000), which refers to losses of physical conditions, caused by known events such as injuries of the osteo-myo-articular system, infection in general, and surgeries.

On the other hand, the record of eating habits shows a diet with a tendency towards acidity, with a lower percentage for alkaline foods since many processed foods generate a significant alteration in blood pH, having coincidence with the 4th. national survey of risk factors Ministerio de Salud y Desarrollo Social de la Nación (2018), Argentina, which follows worldwide trend dietary patterns, especially affecting groups in a greater situation of vulnerability. Fruit consumption in Argentina fell by 41 % and vegetable consumption by 21 % in the last 20 years. As for sugar consumption, our country is in the fourth highest consumption in the world, around 150 grams (30 teaspoons of sugar) for a daily recommendation of 50 grams per day.

Regarding the quality of sleep, it is mentioned that the complex molecular mechanisms of the organic clock can be summarized in a sleep-wake cycle, temperature regulation, melatonin and cortisol synthesis, generating a conflict of hormonal secretions that end up affecting people's health in the future (National Institute of General Medical Science, 2020).

Regarding emotional instability, the situation of confinement and isolation turns out to be a negative position to the psychic behavior of the population. It is due to the fact that, on the one hand, this stage distances closer ties and, on the other hand, it conditions the social aspects among humans, as described in the literature according to Torales (2020).

With regard to the impact of economic income, an imbalance in behavioral habits is manifested; they are present in a large part of the surveyed population, with consequences in the future, in the deterioration of the quality of life as narrated in the article Nadal, *et al.,* (2020).

CONCLUSSIONS

As an integrating conclusion, we can think of the negative effect during the confinement phase, generating changes that we can cite according to the results of the work that will be mentioned below: a) increase in physical inactivity, generating changes in eating habits; b) associated risk factors (discomfort of osteomyoarticular tissue), in relation to age; c) disruption of sleep quality in relation to eating schedules, to the situation of emotional and economic instability bewilderment.

We are currently facing several pandemics simultaneously; on the one hand, the current SARS-CoV-2 and, on the other hand, the pre-existence caused by confinement, leaving scars on people's psychophysical health.

People usually tend to focus on the threat, which causes a "tunnel vision", tending to focus all attention on a single problem, neglecting a host of personal, not minor, aspects that help a sustainable base of psychophysical health.

REFERENCES

Altena, E., Baglioni, C., Espie, C. A., Ellis, J., Gavriloff, D., Holzinger, B., … Riemann, D. (2020). Dealing with sleep problems during home confinement due to the COVID-19 outbreak: Practical recommendations from a task force of the European CBT-I Academy. *Journal of Sleep Research*, *29*(4), e13052. https://doi.org/10.1111/jsr.13052

Booth, C., Roberts, J., Thyfault, G., Ruegsegger, G., & Toedebusch, R. G. (2017). Papel de la inactividad en las enfermedades crónicas: Conocimiento evolutivo y mecanismos fisiopatológicos. *Physiol Rev*, *97*(4), 1351-1402. https://doi.org/10.1152/physrev.00019.2016

Booth, F. W., Roberts, C. K., & Laye, M. J. (2012). Lack of exercise is a major cause of chronic diseases. *Comprehensive Physiology*, *2*(2), 1143-1211. https://doi.org/10.1002/cphy.c110025

Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, G. J. (2020). The psychological impact of quarantine and how to reduce it: Rapid review of the evidence. *The Lancet*, *395*(10227), 912-920. https://doi.org/10.1016/S0140-6736(20)30460-8

Chenot, J.-F., Greitemann, B., Kladny, B., Petzke, F., Pfingsten, M., & Gabriele Schorr, S. (2017). Non-Specific Low Back Pain. *Deutsches Ärzteblatt International*, *114*(51-52), 883-890. https://doi.org/10.3238/arztebl.2017.0883

Enciso-Olivera, C. O., Galvis-Rincón, J. C., Díaz, E. D. L. T., Devia-León, A., & Camargo-Puerto, D. A. (2016). Cardiovascular effects as a result of a physical conditioning protocol on a critical care in-patient, at three medical centers in BogotáColombia. *Medicas UIS*, *29*(2), 161-173. https://doi.org/10.18273/revmed.v29n2-2016014

Ford, E. S., Schulze, M. B., Kröger, J., Pischon, T., Bergmann, M. M., & Boeing, H. (2010). Television watching and incident diabetes: Findings from the European Prospective Investigation into Cancer and Nutrition-Potsdam Study. *Journal of Diabetes*, *2*(1), 23-27. https://doi.org/10.1111/j.1753-0407.2009.00047.x

Gené-Badia, J., Ruiz-Sánchez, M., Obiols-Masó, N., Oliveras Puig, L., & Lagarda Jiménez, E. (2016). Aislamiento social y soledad: ¿qué podemos hacer los equipos de atención primaria? *Atención Primaria*, *48*(9), 604-609. https://doi.org/10.1016/j.aprim.2016.03.008

Hu, F. B. (2003). Television Watching and Other Sedentary Behaviors in Relation to Risk of Obesity and Type 2 Diabetes Mellitus in Women. *JAMA*, *289*(14), 17-85. https://doi.org/10.1001/jama.289.14.1785

Huang, C., Wang, Y., Li, X., Ren, L., Zhao, J., Hu, Y., Cao, B. (2020). Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. *The Lancet*, *395*(10223), 497-506. https://doi.org/10.1016/S0140-6736(20)30183-5

Katzmarzyk, P. T., Church, T. S., Craig, C. L., & Bouchard, C. (2009). Sitting time and mortality from all causes, cardiovascular disease, and cancer. *Medicine and Science in Sports and Exercise*, *41*(5), 998-1005. https://doi.org/10.1249/MSS.0b013e3181930355

Lalonde, M. (1974). *A New Perspective on the Health of Canadians*. Ottawa, Ontario, Canada: Minister of National Health and Welfare. https://www.phac-aspc.gc.ca/ph-sp/pdf/perspect-eng.pdf

Lee, I.-M., Shiroma, E. J., Lobelo, F., Puska, P., Blair, S. N., & Katzmarzyk, P. T. (2012). Effect of physical inactivity on major non-communicable diseases worldwide: An analysis of burden of disease and life expectancy. *The Lancet*, *380*(9838), 219-229. https://doi.org/10.1016/S0140-6736(12)61031-9

Lippi, G., Henry, B. M., & Sanchis-Gomar, F. (2020). Physical inactivity and cardiovascular disease at the time of coronavirus disease 2019 (COVID-19). *European Journal of Preventive Cardiology*, *27*(9), 906-908. https://doi.org/10.1177/2047487320916823

Mattson, M. P. (2015). Lifelong Brain Health is a Lifelong Challenge: From Evolutionary Principles to Empirical Evidence. *Ageing research reviews*, *0*, 37-45. https://doi.org/10.1016/j.arr.2014.12.011

Ministerio de Salud y Desarrollo Social de la Nación. (2018). *4° Encuesta Nacional de Factores de Riesgo. Resultados definitivos*. Buenos Aires, Argentina: Instituto Nacional de Estadística y Censos (INDEC)-Secretaría de Gobierno de Salud de la Nación. https://www.indec.gob.ar/ftp/cuadros/publicaciones/enfr_2018_resultados_definitivos.pdf

Mujika, I., & Padilla, S. (2000). Desentrenamiento: Pérdida de las Adaptaciones Fisiológicas y de Rendimiento Inducidas por el Entrenamiento. *PubliCE*. https://journal.onlineeducation.center/api-oas/v1/articles/sa-K57cfb272094bd/export-pdf

Nadal, M., Corradi, G., Barrada, J. R., Clemente, A., & Chuquichambi, E. G. (2020). Reply to Myszkowski *et al.,* (2020): Some matters of fact concerning aesthetic sensitivity. *British Journal of Psychology*, *111*(4), 663-664. https://doi.org/10.1111/bjop.12443

Narici, M., Vito, G. D., Franchi, M., Paoli, A., Moro, T., Marcolin, G., Maganaris, C. (2020). Impact of sedentarism due to the COVID-19 home confinement on neuromuscular, cardiovascular and metabolic health: Physiological and pathophysiological implications and recommendations for physical and nutritional countermeasures. *European Journal of Sport Science*, *0*(0), 1-22. https://doi.org/10.1080/17461391.2020.1761076

National Institute of General Medical Sciences. (2020). *5-Year Strategic Plan Progress and Outcomes*. National Institute of General Medical Sciences. Recuperado de National Institute of General Medical Sciences website: https://www.nigms.nih.gov/about/pages/strategicplanning.aspx

Stamatakis, E., Hamer, M., & Dunstan, D. W. (2011). Screen-Based Entertainment Time, All-Cause Mortality, and Cardiovascular Events: Population-Based Study With Ongoing Mortality and Hospital Events Follow-Up. *Journal of the American College of Cardiology*, *57*(3), 292-299. https://doi.org/10.1016/j.jacc.2010.05.065

Torales, J., O'Higgins, M., Castaldelli-Maia, J. M., & Ventriglio, A. (2020). The outbreak of COVID-19 coronavirus and its impact on global mental health. *International Journal of Social Psychiatry*, *66*(4), 317-320. https://doi.org/10.1177/0020764020915212

Woolf, S. H., Chapman, D. A., Sabo, R. T., Weinberger, D. M., Hill, L., & Taylor, D. D. H. (2020). Excess Deaths From COVID-19 and Other Causes, March-July 2020. *JAMA*, *324*(15), 1562-1564. https://doi.org/10.1001/jama.2020.19545

Yang, J., Zheng, Y., Gou, X., Pu, K., Chen, Z., Guo, Q., Zhou, Y. (2020). Prevalence of comorbidities and its effects in patients infected with SARS-CoV-2: A systematic review and meta-analysis. *International Journal of Infectious Diseases*, *94*, 91-95. https://doi.org/10.1016/j.ijid.2020.03.017

Zbinden Foncea, H., Francaux, M., Deldicque, L., & Hawley, J. A. (2020). Does High Cardiorespiratory Fitness Confer Some Protection Against Proinflammatory Responses After Infection by SARS-CoV-2? *Obesity*, *28*(8), 1378-1381. https://doi.org/10.1002/oby.22849

Conflict of interests:
The authors declare not to have any interest conflicts.

Authors' contribution:
Ángel Da Luz Pereira: Conception of the idea, drafting of the original (first version).

Manuel Pazos Espín: Literature search and review, instrument making, instrument application, compilation of information resulting from the instruments applied, statistic analysis, review and final version of the article, article correction, authorship coordinator, translation of terms or information obtained, review of the application of the applied bibliographic standard.

Maximiliano Tögel: Preparation of tables, graphs and images, database preparation, general advice on the topic addressed.