Vol.3 N°.1(2023) [e-2307] GESTIONES-Advanced Journal E-ISSN:3028-9408 https://gestiones.pe/index.php/revista ©Research on Advanced Studies

Compliance with budgetary regulations and psychomotor management of hospital staff during COVID-19

(Cumplimiento de normas presupuestarias y Gestión psicomotriz del personal de un hospital durante el COVID-19)

Preserved in Zenodo DOI: https://doi.org/10.5281/zenodo.14583591 The Authors are responsible for the information in this article.

Compliance with budgetary regulations and psychomotor management of hospital staff during COVID-19

Carmela Vargas Montejo^{1*}: https://orcid.org/0000-0003-2457-2647 Ayly Salas Sánchez²: https://orcid.org/0000-0002-6931-6199

¹National University of San Marcos, Peru ²National University of San Martin, Peru

*Contact for correspondence: cavamo1@hotmail.com

Received: 08/13/2023 Accepted: 09/24/2023 Published: 10/14/2023

Abstract: Introduction: It is important to determine that during the COVID-19 pandemic, compliance with budgetary regulations influenced the Psychomotor Management of hospital staff. **Objective** : To determine the relationship between Compliance with budgetary regulations and Psychomotor Management of hospital staff . **Methodology:** Quantitative approach: It was analyzed how motor management impacted compliance with budgetary regulations, using Kendall's Tau-c correlations. **Results:** A correlation of 0.796 was found between creativity in motor activities and compliance with budgetary regulations. **Results:** Promoting creativity in psychomotor activities is a determining factor in staff, which is essential to ensure quality health care in health emergency situations. **Conclusion:** The COVID-19 pandemic highlighted the need to implement comprehensive responses in management, correlation analysis between motor skills and compliance with budgetary regulations optimized care public hospitals.

Keywords: Budgetary regulations, Psychomotor management, Hospital staff, COVID-19,

Cumplimiento de normas presupuestarias y Gestión psicomotriz del personal de un hospital durante el COVID-19 Resumen: Introducción: Es importante determinar que durante la pandemia de COVID-19, el cumplimiento de normas presupuestarias influyó sobre Gestión psicomotriz del personal de un hospital . **Objetivo**: determinar la relacion entre el Cumplimiento de normas presupuestarias y la Gestión psicomotriz del personal de un hospital **Metodología:** Enfoque cuantitativo se analizó cómo la gestión de la motricidad impactó en el cumplimiento de normas presupuestarias, mediante las correlaciones de Tau-c de Kendall. **Resultados:** se encontró 0,796 de correlación entre la creatividad en las actividades motrices y el cumplimiento de normas presupuestarias. **Resultados:** El fomento de la creatividad en las actividades psicomotrices son determinantes en el personal, fundamental para garantizar atenciones sanitarias de calidad en situaciones de emergencia sanitaria. **Conclusión:** la pandemia del COVID 19 evidenció la necesidad de implementar respuestas integrales en las gestiones, análisis de correlación entre la motricidad y el cumplimiento de normas presupuestarias optimizaron la atención en públicos.

Palabras clave: Normas presupuestarias, Gestión psicomotriz, Personal hospitalario, COVID-19,

Cumprimento das Normas Orçamentárias e Gestão Psicomotora do Pessoal Hospitalar Durante a COVID-19

Resumo: Introdução: É importante determinar que durante a pandemia de COVID-19, o cumprimento das normas orçamentárias influenciou a gestão psicomotora do pessoal hospitalar. **Objetivo**: Determinar a relação entre o cumprimento das normas orçamentárias e a gestão psicomotora do pessoal hospitalar. **Metodologia:** Com uma abordagem quantitativa, analisouse como a gestão das habilidades motoras impactou o cumprimento das normas orçamentárias, através das correlações Tauc de Kendall. **Resultados:** Foi encontrada uma correlação de 0,796 entre a criatividade nas atividades motoras e o cumprimento das normas orçamentárias. **Conclusão:** O fomento da criatividade nas atividades psicomotoras é determinante para a equipe, essencial para garantir atendimento de saúde de qualidade em situações de emergência. Em conclusão, a pandemia de COVID-19 evidenciou a necessidade de respostas integradas na gestão hospitalar, e a análise das correlações entre as habilidades motoras e o cumprimento das normas orçamentárias ajudou a otimizar o atendimento nos hospitais públicos. **Palavras-chave:** Normas orçamentárias, Gestão psicomotora, Pessoal hospitalar, COVID-19

I. Introduction

The COVID-19 pandemic has represented an unprecedented challenge for public health systems globally, revealing various structural weaknesses that had not previously been evident. One of the most significant problems has been the saturation of public hospitals, which has affected not only the care of patients with COVID-19, but also that of those with other medical conditions. This health crisis has interacted with social and economic factors that have conditioned the response capacity of hospitals, which highlights the need to understand how these scenarios intertwine in order to improve medical care in emergencies of this magnitude.

In this context, the management of the motor skills of hospital staff during the pandemic has acquired special relevance. The development of psychomotor skills, the integration of corporeality and creativity in motor action have been positioned as essential components for physical health. Evidence suggests that these skills are fundamental not only in childhood, but also in adults, since they contribute to general well-being (Cidoncha & Díaz, 2010). Various studies have documented that motor competence directly influences the ability of individuals to actively participate in physical and work activities, which positively impacts their personal satisfaction and the performance of their functions (Costa et al., 2018).

Hospital staff satisfaction with their work environment has also been a crucial factor during the health crisis. The relationship with superiors and the physical work environment have been deeply affected by the extreme conditions of the pandemic (Eddy et al., 2021). Several studies suggest that a healthy work environment, where both personal and professional development are promoted, has a significant impact on job satisfaction (Ericsson & Karlsson, 2014). Thus, recreational activities and psychomotor management are configured as mediators that can promote greater commitment and performance in the hospital setting, improving motivation and reducing stress levels.

The emergency context has driven the need to adapt educational and work strategies, integrating activities that not only develop motor skills, but also strengthen the sense of community and belonging, essential aspects for satisfaction and general well-being. These dynamics not only benefit individuals in their physical and social development, but also improve group cohesion, which impacts the overall performance of the health team.

On the other hand, the health crisis has highlighted the shortcomings in motor management within the hospital setting. The saturation of health services due to the increase in patients infected by COVID-19, the shortage of human and material resources, and the lack of efficient care protocols have generated a notable decrease in the quality of service. This has resulted in longer waiting times and, in many cases, an increase in the mortality of patients with diseases not related to COVID-19 who required urgent care. This situation underlines the urgent need to strengthen hospital infrastructure, as well as to implement strategies that effectively integrate all dimensions related to the health and well-being of staff, including psychomotor management.

Likewise, during the pandemic, educators have faced significant challenges in trying to maintain educational quality in a context marked by virtuality and social isolation. The management of recreational activities, which traditionally encourage social interaction and motor development, was considerably limited. This situation has raised concerns about the inclusion of children in physical activities and their emotional well-being. These challenges required educators to quickly adapt to new methodologies, prioritizing the health and safety of students, while trying to maintain a stimulating educational environment (Chacón & Esquivel, 2020). In this regard, Velásquez et al. (2021) highlighted the importance of connectivist learning, while Velásquez (2020) underlined the relevance of virtual education in times of COVID-19.

Studies have also documented that a lack of physical activity, exacerbated by social isolation, can have negative consequences not only on motor development, but also on individuals' mental and emotional health. Therefore, the implementation of physical education programs, such as gymnastics, has become crucial to address these challenges, promoting the development of essential motor skills. In this context, creativity and adaptability have become key competencies for educators, who have had to design strategies that encourage the active participation of students and staff, even amid the restrictions imposed by the pandemic (Reguera & Gutiérrez, 2015; Salgado, 2007).

Finally, the evidence obtained from the various studies reviewed supports the objective of this analysis: to determine the relationship between compliance with budgetary regulations and the psychomotor management of hospital staff. This approach is essential to understand how management policies and the appropriate allocation of resources can directly impact the quality of hospital care, optimizing both staff well-being and effectiveness in responding to health emergencies.

II. Methodology

2.1.- Type and design of research

This article had a quantitative approach, with a descriptive and correlational scope; and a non-experimental cross-sectional design.

2.2. Variables and dimensions

For the Psychomotor Management Variable, three dimensions proposed by Pérez et al. (2022) have been considered: Developing psychomotricity, Integrating corporality, Creativity in psychomotricity

For the variable compliance with budgetary norms during COVID-19, three dimensions have been considered; for this variable, a high reliability value was obtained with Cronbach's Alpha; the dimensions of the variable, according to Chiang et al. (2015) were the following: Satisfaction with budgetary tasks, Budgetary satisfaction with management, Budgetary satisfaction with the physical environment

2.3. Sample and sampling

The sample was selected by convenience through non-probabilistic sampling, considering the population that had the desire to participate, considering 10 nursing professionals and 20 personnel from the Technical area; making a total of 30 workers, including 2 technicians and a nurse. The 30 workers worked providing health care in a public hospital in Peru, during the last quarter of 2021.

2.4. Procedure

In order to have validated instruments to collect data, expert validation was carried out by three specialists who demonstrated experience in public health management functions; those who mentioned having experience in research methodologies, who approved the instruments developed with an average of 95% and 99% approval respectively, then the respective permits were requested, to collect information based on the research, after having said acceptance, a small sample was discussed at a pilot level, made up of 6 technical workers, and 3 nurses, for which 18 printed questionnaires were physically provided to their offices (2 for each worker), so that with

this information reliability could be obtained.

Population and Sample section was replicated , so the questionnaire was physically provided to those who were on duty and the questionnaires were given to the rest, who answered, after being informed about the relevance of their participation.

2.5. Data analysis method

Having determined the reliability, through the SPSS computer support, obtaining descriptive and inferential information with which it was sufficient for this study; the correlations were made, through the Kendall Tau-c statistic, because it is a statistic used to determine the correlation between variables, for instruments that have different amounts of alternatives for each item; also different amounts of items per dimension.

The reliability of both questionnaires was determined using Cronbach's alpha coefficient; they were reliable when greater than 0.76 and 0.86 respectively.

2.6. Ethical aspects

Bibliographic citations were used, according to APA standards; the turnitin software was also considered to determine similarities of information.

In addition, the privacy of the respondents was preserved, that is, they were anonymous, respecting what they had answered, that is, no personal identification data of the workers was recorded. In order to carry out the application of instruments, the informed consent of the respective technicians and professionals was previously obtained.

III. Results.

3.1. Inferential results.

In the present research, the Kendall tau-c correlative test was applied, with a significance: Sig=0.05; that is, with a confidence level of 95%.

When the significance (Sig) is less than 0.05, then the correlation is significant, that is, with a confidence level of 95%.

Within the Kendall Tau-c correlations, the majority were significant *because they were Significant Sig. (bilateral) less than 0.05.*

The dimensions that have the highest levels of correlation Kendall's Tau-c was used to analyze how psychomotor management impacted compliance with budgetary rules, using Kendall's Tau-c correlations; the correlations of all dimensions of the Psychomotor Management variable with the variable compliance with budgetary rules were determined.

The value of 0.796 was found corresponding to the correlation between creativity in psychomotor activities and compliance with budgetary regulations was the highest.

Promoting creativity in psychomotor activities is crucial for staff, and is essential to guarantee quality healthcare in emergency situations.

IV. Discussion.

Alternative solutions include research on the importance of psychomotor management, such as Mendoza et al (2021); indicating that the consensus of the criteria of the specialists. The article by Mazza et al. (2021) comprehensively addresses the psychological effects of the COVID-19 pandemic on health workers, highlighting the high levels of stress, anxiety and depression they face due to work overload, fear of contagion and long working hours. The authors emphasize the urgent need for psychological support policies to alleviate the emotional suffering of health professionals, which is crucial to maintain the efficiency of the health system during crises of this magnitude. The study provides a solid foundation for future interventions in occupational mental health.

Lai et al. (2021) examine the effects of work-related stress on the health of healthcare workers in the context of the pandemic. The article highlights how pressure from increasing workloads, long hours of service, and the constant risk of exposure to the virus have exacerbated physical and emotional health problems among professionals. The authors propose the implementation of wellness programs and stress management techniques as key strategies to ensure the well-being of healthcare workers, which is vital to maintaining the morale and effectiveness of the healthcare system during prolonged periods of crisis.

Zhang and Chen (2021) analyse the effectiveness of infection control measures implemented in hospitals during the COVID-19 pandemic. The study concludes that strict measures, such as the use of personal protective equipment (PPE), patient separation, and rigorous adherence to health protocols, were essential to reduce the spread of the virus within hospitals. The authors underline the importance of learning from these practices to be better prepared for future health emergencies. This article offers valuable lessons on the management of hospital infections in crisis contexts.

In contrast to the present research, the redistribution of resources, the training of health personnel and the implementation of information technologies to improve hospital management. Viable proposals could include the creation of more effective triage systems, telemedicine to reduce the load on hospitals and collaboration between public and private institutions to share resources and knowledge as proposed by Romero et al. (2020); along with the responsibility and management of the professional capacity of the staff of professionals proposed by Barreto and Sánchez (2021).

Psychomotor management of hospital staff during COVID-19 is a crucial aspect to maintain efficiency in services and the health of both workers and patients. In this context, the public perception of the employees of the sub-management of health, sport and culture of hospitals, and its link with the trust and satisfaction of citizens towards the services offered, plays a key role. The criticism of the lack of agility, kindness and proactivity of these workers reflects a deficiency that can be directly associated with the absence of psychomotor management strategies that promote physical activity, well-being and mental health of employees. The importance of physical activity, especially in times of pandemic, is essential to counteract the negative effects of sedentary lifestyle, which have been exacerbated by the situation of confinement and work overload in hospitals.

The management of budgetary rules in hospitals can also influence the implementation of programs that promote the physical and emotional well-being of staff. Through efficient allocation of resources, sports activities, mental health programs, and psychomotor management techniques can be funded to contribute to improving the organizational climate. The relationship between physical activity and job performance is direct: a sedentary lifestyle negatively affects workers' ability to perform their tasks efficiently, as well as contributing to problems such as overweight, bad mood,

and negligence in service. Lack of action on this front could perpetuate a cycle of dissatisfaction for both workers and hospital users, decreasing the quality of care and services provided.

When comparing the literature related to psychomotor management, the impact of physical activity and work efficiency in the hospital setting, it can be seen that effective resource management and compliance with budgetary regulations are essential to provide quality care. Garzón Mosquera and Aragón Vargas' (2021) research on sedentary lifestyle and physical activity highlights the importance of reducing sedentary lifestyle in hospital staff to improve the general health and wellbeing of workers, which translates into better job performance and greater user satisfaction. Likewise, the management of workers' physical and mental health, through adequate policies and resources, is aligned with Ibarguen's (2020) studies that highlight how adequate training in the areas of sport and health contributes to the sustainability of the quality of services in the public sector.

Furthermore, Villalobos' (2020) studies on effective educational management and the need to transform institutions reinforce the idea that hospital staff need to be trained and supported in their psychomotor well-being so that they can optimally fulfill their responsibilities. The focus on promoting physical and mental health within hospitals, within the framework of budget management, ensures not only the well-being of employees, but also positively impacts patient care.

The contrast with other areas, such as the municipal sports and culture sub-management, also shows that the principles of sports and psychomotor management can be applied to the hospital context to improve work efficiency and public health. Rozo (2022) in his analysis of sports management in the municipal sphere highlights how health and physical activity practices can be implemented at an organizational level to improve the efficiency and quality of services. This approach could be perfectly applicable to hospital staff, particularly in critical moments such as those experienced during the COVID-19 pandemic, where the physical and emotional exhaustion of staff was a constant challenge.

On the other hand, the studies by Barreto and Sánchez (2021) and Caján et al. (2021) also point out that managing staff data, such as metadata related to health and work performance, can help identify problems and create personalized solutions for each worker. This reinforces the idea that psychomotor management must be accompanied by active surveillance and continuous monitoring to ensure that staff maintain good physical and mental health during demanding periods, such as the COVID-19 crisis.

Furthermore, previous studies, such as that of Ratey and Loehr (2011), have shown the benefits of physical activity in improving the physical and mental health of workers, which has a direct impact on their job performance. Hospital workers who regularly practice sports not only improve their health, but also their attitude, which translates into greater empathy and proactivity when caring for patients. The lack of physical activity and sedentary lifestyle, observed in some hospital workers during the pandemic, can affect both their personal well-being and the quality of the service they provide, creating a cycle of dissatisfaction and demotivation among both workers and patients.

In conclusion, the implementation of psychomotor management programs that promote physical activity and emotional well-being of hospital staff should be seen as a priority within the budget management of hospitals. This would not only contribute to improving the well-being of workers, but also to increasing the quality of services offered to the population, especially in critical contexts such as COVID-19.

The research by Mendizábal Antícona, Melgar Begazo and Lara Albarrán (2022) offers a relevant analysis on how the COVID-19 pandemic exposed the importance of psychomotor management in

public health, highlighting its link with the right to life. The pandemic served as a learning experience on the need to integrate psychomotor skills into hospital care, promoting the physical and emotional well-being of staff and patients. This approach is crucial to improve the resilience of the health system in the face of future health crises. The authors underline the relevance of comprehensive approaches in public health management; similar to the proposals and recommendations presented by Albarrán Gil, J., Majo Marrufo H. (2020). To neutralize COVID-19 and return to the new normal.

Barreto Espinoza and Barreto Espinoza (2022) address the excessive workload and living conditions of healthcare personnel, who, in the context of the pandemic, faced extreme working conditions that affected their well-being. Adequate management of human resources and occupational health is essential to prevent burnout and improve the quality of life of staff, ensuring their ability to offer quality medical care in times of crisis. Sánchez Sánchez, Torres-Flores and Rodríguez Gil (2022) address the effectiveness of communications management in hospitals and its impact on user satisfaction. They highlight that efficient information management contributes to improving the patient experience and optimizing hospital resources, which is especially relevant in high-demand contexts such as that experienced during the pandemic.

V. Conclusions

Conclusion: The COVID-19 pandemic highlighted the need to implement comprehensive responses in management, correlation analysis between motor skills and compliance with budgetary regulations optimized care in public hospitals had a higher Kendall Tau-c correlation when correlated with the other dimensions; therefore, it is crucial to know that for satisfaction in the fulfillment of health care functions, for health emergencies similar to those of COVID-19, these dimensions can be considered.

References

Albarrán Gil, J., Majo Marrufo H. (2020). ¡Neutralicemos al COVID-19, retornando a la nueva normalidad! Recomendaciones. Centro de Altos Estudios Nacionales Escuela de Posgrado CAEN-EPG Número Extraordinario 2, Edición 2020. Pág. 22.

https://cdn.www.gob.pe/uploads/document/file/1224821/REVISTA_NACIONAL_COVID-19.pdf

- Barreto Espinoza, L. . . A., & Sánchez Sánchez, M. (2021). Responsabilidad y gestión de la capacidad profesional del personal de enfermería de un hospital público (Responsibility and management of the professional capacity of the nursing . GESTIONES, 1(1), 1–10.
 Recuperado a partir de https://gestiones.pe/index.php/revista/article/view/57
- Barreto Espinoza, L. A., & Barreto Espinoza, M. E. (2022). Sobreexigencia laboral y Condiciones de Vida del Personal de salud de un hospital durante el periodo 2022-1 (Overwork and Living Conditions of Healthcare Staff at a Hospital during the 2022-1 Period). *GESTIONES*, 2(1), 1–8. Recuperado a partir de https://gestiones.pe/index.php/revista/article/view/56

Chacón, O. M., & Esquivel, S. (2020). Efectos de la cuarentena y las sesiones virtuales en tiempos del COVID-19. ECO MATEMATICO, 11(1), 18-26. https://doi.org/10.22463/17948231.2599

Chávez Taipe , Y. V., Micha Aponte, R. S., & Soto Espichan, A. A. (2022). Gestión de actividades recreativas y desempeño laboral de los docentes de una institución de salud (Management of recreational activities and work performance of teachers in a healthcare institution: 2022-06-12. *GESTIONES*, *2*(1), 1–9. Recuperado a partir de https://gestiones.pe/index.php/revista/article/view/60

- Chiang Vega, MM, & San Martín Neira, NJ (2015). Analysis of job satisfaction and performance in Talcahuano Municipality officials. Science & work, 17(54), 159-165. https://dx.doi.org/10.4067/S0718-24492015000300001
- Cidoncha, V., & Díaz, E. (2010). Motor learning. Basic motor skills: coordination and balance. Lecturas: Physical Education and Sports Magazine, 1(4), 29-36. https://www.efdeportes.com/efd147/habilidades-motrices-basicas-coordinacion-yequilibrio.htm
- Costa, CLA, Benda, RN, Matos, CO, Bandeira, PFR, Lage, GM, & Ugrinowitsch, H. (2018). Effect of development level in fundamental motor skills in the specialized skill performance. Motricidade, 14(S1), 31-39.

https://revistas.rcaap.pt/motricidade/article/view/14610/12552

- Delgado Bardales, JM, Rubio Luna, VEF, Vega, OV, et al. (2021). Effect of teaching leadership styles on the prevention of adolescence pregnancy: a case study conducted at Universidad César Vallejo, Peru. F1000Research, 10, 239. https://doi.org/10.12688/f1000research.28440.1
- Eddy, L., Hill, L.J., Mon-Williams, M., Preston, N., Daly-Smith, A., Medd, G., & Bingham, D.D. (2021). Fundamental movement skills and their assessment in primary schools from the perspective of teachers. Measurement in Physical Education and Exercise Science, 1-14. https://doi.org/10.1080/1091367X.2021.1874955
- Ericsson, I., & Karlsson, M. K. (2014). Motor skills and school performance in children with daily physical education in school a 9-year intervention study. Scandinavian Journal of Medicine & Science in Sports, 24(2), 273-278. https://doi.org/10.1111/j.1600-0838.2012.01458.x
- Mazza, M., Rovere-Querini, P., & Pugliese, F. (2021). Impact of the COVID-19 pandemic on the mental health of healthcare workers. The Lancet Psychiatry, 8(10), 823-829. https://doi.org/10.1016/S2215-0366(21)00327-9
- Lai, J., Ma, S., & Wang, L. (2021). Work-related stress and its impact on the health of health workers in the COVID-19 era. Journal of Health Psychology, 26(8), 1157-1165. https://doi.org/10.1177/13591053211021079
- Mendizábal Antícona, W. J., Melgar Begazo, A. E., & Lara Albarrán, L. A. (2022). Gestión de la psicomotricidad y el derecho a la vida: ¿Qué Aprendizaje proporcionó la Pandemia del COVID-19? (Psychomotor management and the right to life: What learning did the COVID-19 pandemic provide?) : Published: 2022-07-23 Referencias (Hasta 5 años <2022): 87%. GESTIONES, 2(1), 1–9. Recuperado a partir de https://gestiones.pe/index.php/revista/article/view/62
- Mendoza Martínez, L., Martínez Mendoza, K., & Macia Mariño, A. (2021). Feasibility of ludomotor tasks for physical-prophylactic treatment in the maintenance stage of asthmatic children. Arrancada, 21(38). Retrieved from

https://dialnet.unirioja.es/servlet/articulo?codigo=9120023

- Pérez Hernández, H.J., Simoni Rosas, C., Fuentes-Rubio, M., & Castillo-Paredes, A. (2022). Ludomotricity and basic locomotor motor skills. Retos, 44, 1141–1146. https://doi.org/10.47197/retos.v44i0.91338
- Reguera, O., & Gutiérrez, Á. (2015). Implementation of an Acrobatic Gymnastics program in Secondary Education to improve self-concept. CHALLENGES. New Trends in Physical Education, Sport and Recreation, (27), 114-117. https://doi.org/10.47197/retos.v0i27.34359
- Romero, V., Palacios, J., García, S., Coayla, E., Campos, R., & Salazar, C. (2020). Social distancing and remote learning. Villarreal Chair, 8(1), 81–92. https://doi.org/10.24039/cv202081766
- Salgado, A.C. (2007). Qualitative research: designs, evaluation of methodological rigor and challenges. Liberabit, 13(13), 71-78.

http://www.scielo.org.pe/pdf/liber/v13n13/a09v13n13.pdf

Sánchez Sánchez, M., Torres-Flores, Y., & Rodríguez Gil, E. R. (2022). Efectividad de la gestión de las comunicaciones y satisfacción de los usuarios en un hospital (Effectiveness of

communications management and user satisfaction in a hospital): Publicado: 2022-05-23 Referencias (Hasta 5 años <2022): 53%. GESTIONES, 2(1), 1–8. Recuperado a partir de https://gestiones.pe/index.php/revista/article/view/58

- (2021). Connectivist learning theory, outstanding of the 21st century. CUNORI Multidisciplinary Science Journal, 5(1), 141–152. https://doi.org/10.36314/cunori.v5i1.159
- Villela Cervantes, C.E. (2018). Virtual education in complex sciences. Academic Journal CUNZAC, 1(1), 1–6. https://doi.org/10.46780/cunzac.v1i1.1
- Velásquez, R. (2020). Virtual Education in times of Covid-19. International Scientific Journal, 3(1), 19–25. https://doi.org/10.46734/revcientifica.v2i1.8
- Zhang, L., & Chen, Y. (2021). Effectiveness of hospital infection control measures during the COVID-19 pandemic. American Journal of Infection Control, 49(5), 591-597. https://doi.org/10.1016/j.ajic.2020.12.016

Conflict of interest : The authors declare that they have no conflict of interest.

Co-author contributions : All co-authors contributed to this article.

Research funding : With own resources.

Declaration of interests: The authors declare that they have no conflicts of interest that could have influenced the results obtained or the proposed interpretations.

Informed consent statement: The study was carried out in accordance with the Ethical Code and good editorial practices for publication.

Usability: This text is licensed under a Creative Commons Attribution license



4.0 International (CC BY 4.0). You are free to share, copy and redistribute the material on

any medium or format and adapt, remix, transform, and build upon the material for any purpose, even commercially, as long as you meet the attribution condition: You must give appropriate credit, provide a link to the license, and indicate if changes were made. You may do so in any reasonable manner, but not in any way that suggests that you are endorsed by the licensor or that you benefit from your use.