



# LIFESTYLE MEDICINE AND SLEEP QUALITY IN MEDICAL STUDENTS

MEDICINA DEL ESTILO DE VIDA Y CALIDAD DEL SUEÑO EN ESTUDIANTES DE MEDICINA

Fiorella Rosemary Allende-Rayme<sup>1,a</sup>, Jeremi Harold Acuña-Vila<sup>1,a</sup>, Juan Carlos-Roque<sup>1,b,c</sup>, Lucy E. Correa-López<sup>1</sup>

## Mr. Editor

Maintaining a good sleep quality is a basic human need, because the poor sleep is associated with negative effects such as exhaustion, uncontrolled emotions, the inability to concentrate, the inability to remember or think clearly, poor university and work performance, psychological and academic stress, anxiety, depression and difficulty in resolving problems; also long-term effects such as cardiovascular diseases, diabetes mellitus type II, obesity, cancer, among others<sup>(1)</sup>.

Not all medical students enjoy of good sleep quality and a sufficient number of hours, due to the high educational activity and various stressors with which they live daily at the university.

In our research work carried out in 410 students from 1st to 12<sup>th</sup> cycle of the Medical School of Ricardo Palma University in 2020, we found that 73.9% of medical students used electronic devices every day at the hour before sleep. The continuous use of these devices can alter the synchronization between the stages of sleep causing a negative impact on the habits, quality and hygiene of sleep; not using electronic devices one hour before sleep would lead to better sleep quality<sup>(2)</sup>.

The 60.49% of the population of our study ingested harmful substances (coffee, energy drinks, alcohol and they smoked cigarettes), the substance most frequently was the coffee. Consuming substances with caffeine can have repercussions at a cognitive, interpersonal and behavioral level, causing in the majority of cases alterations associated with circadian rhythm and sleep<sup>(3)</sup>.

The World Health Organization (WHO) recommends physical exercise for 30 minutes 5-7 times a week. In our study, we observed that 20.97% of medical students performed exercises with the indicated frequency, however 8 out of 10 university students have not practiced physical activity according to these recommendations<sup>(4)</sup>. The physical exercise is an activity that is associated with the improvement of sleep due to the benefits that it causes at a psychological and physical level as well as at the level of quality of life, mood and general well-being, the prevention of non-communicable diseases and reducing the risk of complications in adults with pre-existing diseases. In addition, the aerobic exercise has significant benefits in relation to the quality of sleep has been confirmed<sup>(5)</sup>.

Furthermore, a Spearman's rho with a value of 0.505 was found in our study (represented graphically in Figure 1) showing that academic stress and sleep quality (measured by the SISCO SV Academic Stress Inventory and the Pittsburgh Sleep Quality Index, respectively) presented a positive correlation, observing that increasing the academic stress score increased the sleep quality score (a score greater than 5 is poor sleep quality); which meant that the increase in academic stress caused a poor sleep quality. This finding

<sup>1</sup> Facultad de Medicina Humana, Universidad Ricardo Palma, Lima-Perú.

<sup>a</sup> Bachelor of Human Medicine.

<sup>b</sup> Master in Medicine.

<sup>c</sup> Surgeon.

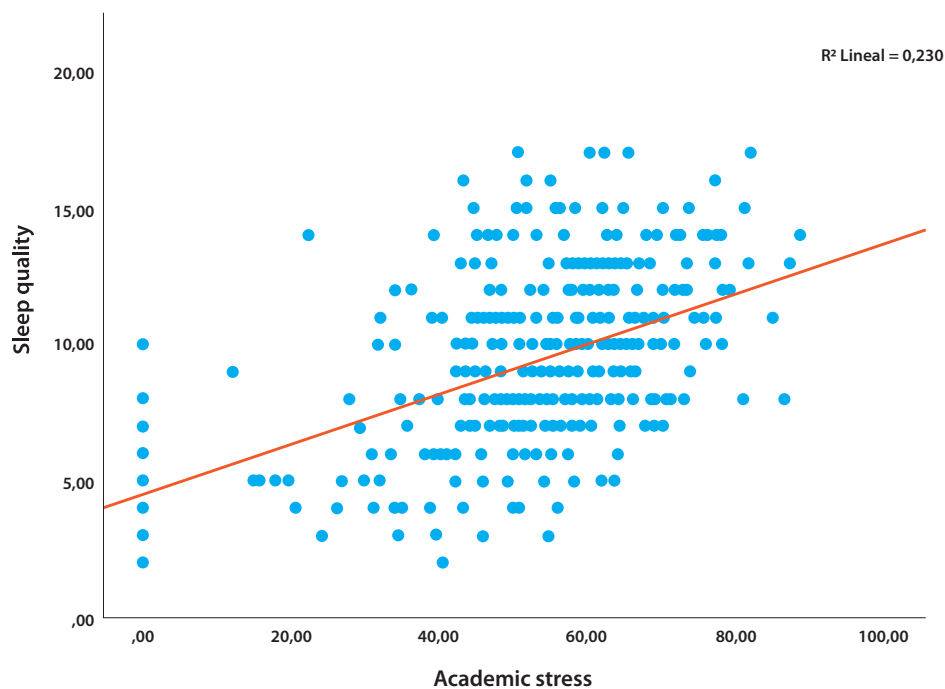
**Cite as:** Fiorella Rosemary Allende-Rayme, Jeremi Harold Acuña-Vila, Juan Carlos-Roque. Medicina del estilo de vida y calidad del sueño en estudiantes de medicina. Rev. Fac. Med. Hum. April 2021; 21(2):465-467. DOI 10.25176/RFMH.v21i2.3716

is similar to a study by Benham (2019) in Hispanic students at an university in the United States, where he obtained a Spearman's rho of 0.51 by associating both variables<sup>(6)</sup>.

Lifestyle medicine is revolutionizing healthcare systems and medical education in universities. It is for this reason that Ricardo Palma University created in 2019 the First Chair of Lifestyle Medicine, for the

purpose of developing activities and programs in undergraduate, postgraduate and continuing education. Its curricular incorporation and promoting a healthy lifestyle will be very beneficial for university students and staff of the institution due to the implications that it will generate in personal and professional development in the short and long term.

LETTERS TO THE EDITOR



Source: Research Institute of Biomedical Sciences - Ricardo Palma University.

**Figure 1.** Scatter diagram of academic stress with sleep quality.

**Authorship contributions:** The author participated in the conception, writing, final revision and approval of the manuscript.

**Financing:** Self-financed.

**Interest conflict:** The authors declare that they have no conflicts of interest in the publication of this article.

**Received:** February 21, 2021

**Approved:** March 05, 2021

**Correspondence:** Fiorella Rosemary Allende-Rayme.

**Address:** Jr. Los Quinuales 348 Urb. Las Flores, San Juan de Lurigancho. Lima, Perú.

**Telephone number:** +51 984 744 393

**E-mail:** fiorella.allende@urp.edu.pe



## BIBLIOGRAPHIC REFERENCES

1. Herawati K, Gayatri D. The correlation between sleep quality and levels of stress among students in Universitas Indonesia. *Enfermería Clínica*. septiembre de 2019;29:357-61. DOI: <https://doi.org/10.1016/j.enfcli.2019.04.044>
2. Jniene A, Errguig L, El Hangouche AJ, Rkain H, Abouddar S, El Ftouh M, et al. Perception of Sleep Disturbances due to Bedtime Use of Blue Light-Emitting Devices and Its Impact on Habits and Sleep Quality among Young Medical Students. *Biomed Res Int.*;2019. DOI: <https://doi.org/10.1155/2019/7012350>
3. Safhi MA, Alafif RA, Alamoudi NM, Alamoudi MM, Alghamdi WA, Albishri SF, et al. The association of stress with sleep quality among medical students at King Abdulaziz University. *J Family Med Prim Care*. 26 de marzo de 2020;9(3):1662-7. DOI: [https://doi.org/10.4103/jfmpc.jfmpc\\_745\\_19](https://doi.org/10.4103/jfmpc.jfmpc_745_19)
4. OMS | La actividad física en los adultos [Internet]. WHO. World Health Organization; [citado 19 de febrero de 2021]. Disponible en: [https://www.who.int/dietphysicalactivity/factsheet\\_adults/es/](https://www.who.int/dietphysicalactivity/factsheet_adults/es/)
5. Chang S-P, Shih K-S, Chi C-P, Chang C-M, Hwang K-L, Chen Y-H. Association Between Exercise Participation and Quality of Sleep and Life Among University Students in Taiwan. *Asia Pac J Public Health*. 1 de mayo de 2016;28(4):356-67. DOI: <https://doi.org/10.1177/1010539516645160>
6. Benham G. The Sleep Health Index: Correlations with standardized stress and sleep measures in a predominantly Hispanic college student population. *Sleep Health*. 1 de diciembre de 2019;5(6):587-91. DOI: <https://doi.org/10.1016/j.sleh.2019.07.007>

Indexado en:



[http://www.scielo.org/pe/scielo.php?script=sci\\_serial&pid=2308-0531&lng=es&nrm=iso](http://www.scielo.org/pe/scielo.php?script=sci_serial&pid=2308-0531&lng=es&nrm=iso)



<https://network.bepress.com/>



<https://doaj.org/>



<http://lilacs.bvsalud.org/es/2017/07/10/revisitas-indizadas-en-lilacs/>

