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A PANORAMIC VIEW OF ANXIETY AND LIFESTYLE IN MEDICAL STUDENTS: AN UPDATED REVIEW

UNA VISIÓN PANORÁMICA DEL ESTILO DE VIDA Y RENDIMIENTO ACADÉMICO EN ESTUDIANTES DE MEDICINA: UNA REVISIÓN ACTUALIZADA

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REVIEW ARTICLES

ABSTRACT

Introduction: Lifestyles encompass the decisions a person makes, simultaneously impacting their quality of life. Especially for those pursuing health-related careers, it can be a particularly demanding and challenging period. They frequently encounter stressful situations that significantly affect their well-being and lifestyle choices. **Objective:** To determine if there is an association between lifestyle and academic performance in medical students. **Methods:** The review was conducted through evidence-based literature search for articles published from 2013 to 2023, using search platforms such as Scopus, PubMed, Scielo, BVS, ScienceDirect, and Google Scholar. **Results:** Out of the 33 articles reviewed, 9 were excluded for not being related to our research variables in the field of health sciences or for not involving a university population. Additionally, 2 articles were removed as they were published before 2013, leaving only 30 articles for this literature review. Among the 30 selected articles, 14 presented research results, while 16 were considered for theoretical and conceptual aspects related to the study's purpose. **Conclusion:** University students with healthy lifestyles tend to have better academic performance, and it has been observed that mental health plays a significant role. However, the lack of consensus in the findings suggests the need for further research to better understand this complex relationship.

Keywords: Students; Life style, Academic performance. (Source: MESH-NLM)

RESUMEN

Introducción: Los estilos de vida abarcan las decisiones que una persona toma y, al mismo tiempo, tienen un impacto en su calidad de vida. En especial, para aquellos que estudian carreras relacionadas a ciencias de la salud, puede ser un período especialmente exigente y desafiante. Frecuentemente, se encuentran con situaciones estresantes que afectan considerablemente su bienestar y elecciones de estilo de vida. **Objetivo:** Determinar si existe asociación entre el estilo de vida y el rendimiento académico en los estudiantes de medicina. **Métodos:** La revisión fue efectuada mediante búsqueda bibliográfica basado en evidencia publicados desde 2013 a 2023, en los sitios de búsqueda Scopus, PubMed, Scielo, BVS, ScienceDirect y Google Scholar. **Resultados:** De los 33 artículos revisados, se descartaron nueve por no tener relación con nuestras variables de investigación en el área de ciencias de la salud o por no presentar una población universitaria, y dos fueron retirados por ser publicados antes de 2013; han quedado solo 30 artículos para esta revisión bibliográfica. De los 30 artículos seleccionados, 14 contaban con resultados de investigación y 16 fueron considerados para aspectos teórico-conceptuales que se relacionan con el propósito del estudio. **Conclusión:** Los estudiantes universitarios con estilos de vida saludables tienden a tener un mejor rendimiento académico, además, se ha observado que la salud mental desempeña un papel importante. Sin embargo, la falta de consenso en los hallazgos sugiere la necesidad de investigaciones adicionales para comprender mejor esta compleja relación.

Palabras clave: Estudiantes; Estilos de vida; Rendimiento académico. (Fuente: DeCS- BIREME)

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INTRODUCTION

Life, in its most vibrant essence, is a blank canvas that each individual has the opportunity to paint with the colors of their choice. Lifestyles, in this context, are the brushstrokes with which we shape our personal masterpiece. They are the choices we make daily, the habits we cultivate, and the paths we decide to follow in our quest for a full and satisfying life. Lifestyles encompass the patterns and daily habits that define a person's behavior. These patterns are influenced by various factors, such as nutrition, interpersonal relationships, health care, and physical activity, among others [1].

In addition to being a reflection of our way of living, guiding our habits and shaping our behaviors, lifestyles not only shape our identity but also influence our health and the quality of our social relationships, determining whether we integrate into or exclude ourselves from these connections [2]. It is important to highlight the diversity of factors involved in the decision-making process that affect the quality of life and health of an individual.

Additionally, a healthy lifestyle is defined as a lifestyle that reduces the likelihood of facing serious illnesses or premature death [3] or also as sets of multidimensional behaviors sustained over time due to both internal and external factors[4] that are linked with both physical and mental health, although to a lesser extent with mental health [3]; this differs from other studies that suggest a healthy lifestyle is more associated with psychological factors, such as psychological well-being and the self-regulation of eating habits, considering them as central elements in this relationship[5].

Healthy lifestyles are fundamental to human development, as they promote positive growth in the personal realm and improve the quality of life for individuals [6]. The absence of appropriate lifestyles undoubtedly significantly increases the risk of morbidity and mortality[6]. Therefore, it is essential that students establish and maintain healthy habits, as these patterns of life will influence their well-being as they progress towards adulthood. This aspect becomes particularly relevant in the case of those students who aspire to careers in the health field [7]. It is true that the university stage, especially for those studying health science-related careers, can be a particularly demanding and challenging period. In this phase, students often encounter stressful situations that can significantly affect their well-being and lifestyle choices [8]. These stressful situations can lead to the acquisition of lifestyle risk factors, with consequences for health in the short, medium, and long term[9]. Therefore, optimal university performance largely depends on the lifestyles adopted by the individual, especially regarding good nutrition, good physical health, and solid mental health[10].

Let me emphasize a crucial point: the need and importance of directing focus towards medical students, who are also impacted by unhealthy lifestyles. Studies provide a realistic view of the situation of students in health science careers, who, despite their acquisition of health knowledge, do not align their lifestyles with risk perception and management, which will have consequences on their well-being[11]. As rightly mentioned in the research by Cedillo Ramírez, in 2016 [12]. it is evident that most university students in the field of health sciences are not applying the knowledge acquired in their own lifestyles, which include aspects such as diet, physical activity, and other health-related practices [12]. Furthermore, research suggests that university students often do not make the best decisions regarding their health. The transition from a home environment to independence often relegates health to a secondary priority[13]. Some studies suggest that, during their university stage, students tend to abandon healthy habits and adopt harmful behaviors [14].

According to the research by Khalid A. Bin Abdulrahman, in 2021[15], a marked disparity is observed among medical students in Saudi Arabia, especially in relation to gender. This difference can be attributed to the influence of culture and religion, given that Islam is the official religion of the country.

The results of the study highlight that the vast majority of medical students in Saudi Arabia follow healthy lifestyles to a certain degree. Significant differences in these health-related behaviors were observed based on gender, particularly in terms of physical activity and eating habits. Furthermore, the findings revealed a significant correlation between study habits and academic performance of the students [15].

In line with the research titled "Relationship between lifestyles and academic performance in university students"[16], it was concluded that there indeed exists a correlation between lifestyles and academic performance. It was observed that maintaining a healthy lifestyle has a positive impact on the students' ability to perform in the classroom, as factors such as nutrition and physical activity play a crucial role in the cognitive development of students [16].

In Peru, the research conducted by Villavicencio et al., in 2020[6], revealed that, out of a group of 252 nursing students ranging from the first to the fifth year of study at a university in Huánuco, 95% of them maintain healthy lifestyles. Furthermore, statistical evidence was found supporting the relationship between lifestyles and the academic performance of nursing students [6]. Therefore, the aim of the current research is to conduct a systematic review on lifestyles and their relationship to academic performance in students of human medicine.

METHODS

The review was carried out through electronic bibliographic search based on evidence with articles in English and Spanish published from 2013 to 2023, in the search sites Scopus, PubMed, Scielo, BVS, ScienceDirect, and Google Scholar. The clinical question used was: Is there an association between lifestyle and academic performance in medical students? PEO Question: Population: Medical students, Exposure: Lifestyle, Outcome: Academic Performance. The keywords used were: "Students"[mh] in combination with "Life Style"[mh] and"Academic Performance" [mh] (used in Scopus and PubMed); "Students" "Lifestyles", and "Academic Performance", used in Scielo and Google Scholar. This work is part of the "Research Lines of the Universidad Ricardo Palma 2021-2025". For this review, articles published with research results considering a period of at least seven years were selected, and those with theoretical-conceptual aspects were extended to at least 10 years. The results were analyzed and the background was incorporated into a database to evidence similarities and differences that assist in the organization of this article.

Inclusion Criteria

- Articles in Spanish or English published in the last 10 years.
- Studies with a minimum sample size of 80 participants.
- Articles that analyze lifestyles in university students

Exclusion Criteria

- Articles not related to the research objective.
- Articles with limited availability to the abstract.
- Research focusing exclusively on populations not related to university students.

RESULTS

Following an exhaustive review of the available literature that met our objectives and inclusion criteria, it is evident that the number of articles available on our topic is limited. Out of the 33 articles reviewed, nine were discarded for not being related to our research variables in the field of health sciences or for not presenting a university population, and two were removed for being published before 2013; thus, only 30 articles remain for this bibliographic review. Of the 30 selected articles, 14 had research results, and 16 were considered for theoretical-conceptual aspects related to the purpose of the study.

Table 1 presents the main characteristics of the 14 selected studies, showing the publication period from 2013 to 2023.

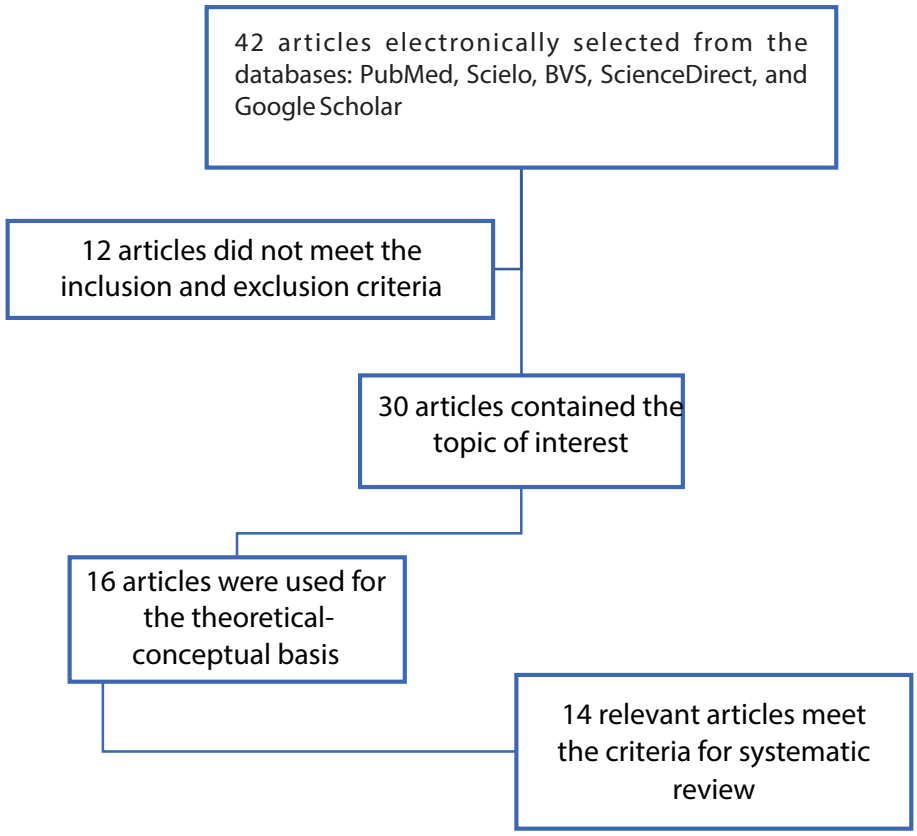

Table 1. Titles, authors, and research study designs related to lifestyles in university students.

AUTORS	TITLE	YEAR	COUNTRY	POPULATION	DESIGN
Al-Haifi AR, Al-Awadhi BA, Bumaryoum NY, Alajmi FA, Ashkanani RH, Al-Hazzaa HM.	The association between academic performance indicators and lifestyle behaviors among Kuwaiti college students	2023	KUWAIT	1259 university students	Observational, cross-sectional, analytical
Chu T, Liu X, Takayanagi S, Matsushita T, Kishimoto H.	Association between mental health and academic performance among university undergraduates: The interacting role of lifestyle behaviors	2023	JAPóN	1823 university students	Observational, cohort, prospective
Palomino Orizano, J. A., Zevallos Ypanaqué, G., & Orizano Quedo, L. A.	Healthy Lifestyles and Academic Performance in University Students	2021	PERÚ	157 university students	Descriptive, correlational, cross-sectional
Cara-Rodríguez R, Cara-Rodríguez M, Gálvez-Rodríguez M, Martínez-Pérez C, Rodríguez-López C.	Living Habits and Academic Performance during Evaluation Period in Nursing Students	2021	ESPAÑA	488 university students	Observational Descriptive Cross-Sectional

Ong CKY, Hutchesson MJ, Patterson AJ, Whatnall MC.	Is There an Association between Health Risk Behaviours and Academic Achievement among University Students?	2021	AUSTRALIA	1543 university students	Observational, cross-sectional, analytical
Kobbaz TM, Bittencourt LA, Pedrosa BV, Fernandes BDM, Marcelino LD, et al.	The lifestyle of Brazilian medical students: What changed and how it protected their emotional wellbeing during the COVID-19 pandemic	2021	BRASIL	548 university students	Observational, cross-sectional, analytical
Fernandez-Garcia A, Quiñones-La-Rosa I, Álvarez-Céspedes T.	Lifestyle and Academic Performance in Pharmacology among Stomatology Students	2020	CUBA	85 university students	Observational Descriptive Cross-Sectional
Hou Y, Mei G, Liu Y, Xu W.	Physical Fitness with Regular Lifestyle Is Positively Related to Academic Performance among Chinese Medical and Dental Students.	2020	CHINA	316 university students	Observational, Analytical, Prospective
Guillermo Sáez Abello, Julio Ocampo Serna, Edwin Peinado Rincón, Paola Ocampo Muñoz	Lifestyles and Reading Habits Regarding Academic Performance in University Students from Santander, Colombia	2019	COLOMBIA	160 university students	Descriptive Correlational Cross-Sectional
García GÁ, Gorguet PM, Cisneros PE, del Toro AY, Chi RJC	Academic Insufficiency in First-Year Medical Students	2019	CUBA	285 university students	Observational Descriptive Cross-Sectional
Domínguez-González A, Guzmán-Valdivia-Gómez: G, Linares-Rivera E.	Academic Performance, and its Relation to Quality of Life and Healthy Habits	2019	MEXICO	118 university students	Observational Analytical Cross-Sectional
García GA, Del Toro AAY, Cisneros PE, Querts MO, Cascaret SX	Some Psychosocial Variables Associated with Low Academic Performance in First-Year Medical Students	2017	CUBA	236 university students	Observational Descriptive Cross-Sectional
Tembo C, Burns S, Kalembo F.	The association between levels of alcohol consumption and mental health problems and academic performance among young university students	2017	AUSTRALIA	2518 university students	Observational, Cross-Sectional, Quantitative
Campo F. Yurley, Pombo O Luis M., Teherán V Anibal A.	Healthy Lifestyle and Risk Behaviors in Medical Students	2016	COLOMBIA	651 university students	Observational Descriptive Cross-Sectional

Table 2. Importance, strengths, and weaknesses of research studies related to lifestyles in university students.

STUDY TITLE	IMPORTANCE OF THE STUDY	STRENGTHS	WEAKNESSES
The association between academic performance indicators and lifestyle behaviors among Kuwaiti college students	Lifestyle behaviors of Kuwaiti college students and their association with academic achievement markers.	The cross-sectional analytical study type to test the proposed relationship, the sample size was considerable.	The study questionnaire was not detailed enough to capture the factors that may affect academic performance, nor did it focus sufficiently on dietary habits.

Association between mental health and academic performance among university undergraduates: The interacting role of lifestyle behaviors	The association between impaired mental health associated with low academic performance among Japanese university students	The prospective cohort study type the follow-up year that was done in the study (2011-2015), the sample size that was considerable, the year of the study (2023). .	The scale used is not useful for making clinical diagnoses; in addition, the cut-off value for low academic performance was defined based on the regulation of a single university.
Healthy Lifestyles and Academic Performance in University Students	The presence of moderately healthy lifestyles in students favors academic performance at an average level or regular learning achieved.	The descriptive, cross-sectional correlational study type, the sample size was representative.	The chosen measurement instrument was adapted in some terms of the survey, and only certain parts of the survey were chosen.
Living Habits and Academic Performance during Evaluation Period in Nursing Students	Living habits or lifestyles and their influence on academic performance in university students.	The observational descriptive cross-sectional study type, the sample size that was considerable..	There was a larger female population (75%), and a scarce male population (Gender bias).
Is There an Association between Health Risk Behaviours and Academic Achievement among University Students?	The relationship between individual and group health risk behaviors and academic performance in Australian university students.	The cross-sectional analytical study type, the number of participants was representative, the use of validated assessment tools for health risk behaviors	The sample was a convenience sample and the self-reported grade average was biased towards higher values (included more high-performing students). Being the survey self-reported, the accuracy and reliability of the findings must be interpreted carefully.
The lifestyle of Brazilian medical students: What changed and how it protected their emotional wellbeing during the COVID-19 pandemic	How the fundamental areas of lifestyle in medical students changed, and the effect that their previous lifestyles had on their emotional well-being during the COVID-19 pandemic.	The cross-sectional analytical study type, the sample size was considerable, the accessibility to sample participation.	A questionnaire was used that could have led to different interpretations of the importance of each pillar of lifestyle and emotional well-being. Only students from a single private Brazilian medical school were included.
Lifestyle and Academic Performance in Pharmacology of Stomatology Students	The relationship between lifestyle and academic performance in stomatology students	The observational descriptive cross-sectional study type, the sample size was representative.a.	Not all dimensions of lifestyle were addressed in the study. There were limitations in some students to express their behaviors or personal attitudes.

Physical Fitness with Regular Lifestyle Is Positively Related to Academic Performance among Chinese Medical and Dental Students.	The relationship between physical fitness, lifestyle, and academic performance among Chinese medical and dental students.	The observational, analytical prospective study type, the sample size was considerable, real behavior data were used to analyze the students' lifestyle.	The number of dental students was not sufficient. Certain data were missing at the time of the evaluation (magnetic card records of dormitories).
Lifestyles and Reading Habits Regarding Academic Performance in University Students from Santander, Colombia	The relationship between lifestyles and reading habits regarding academic performance in Colombian university students.	he descriptive cross-sectional correlational study type, the sample size was representative.	The results cannot be extrapolated to other populations. Other variables that were not considered in the study to observe changes in academic performance.
Academic Insufficiency in First-Year Medical Students	Research was conducted to determine some psychosocial aspects associated with low academic performance in students.	The observational descriptive cross-sectional study type, the sample size was representative.	The study did not address all components of lifestyle. It is not mentioned whether data collection was face-to-face or digital.
Academic Performance, and its Relation with Quality of Life and Healthy Habits	The relationship with the self-perception of quality of life and healthy habits in academic performance.	The observational analytical cross-sectional study type, the sample size was representative.	The studied population only covers students of the premedical course.
Some Psychosocial Variables Associated with Low Academic Performance in First-Year Medical students	Determine some psychosocial aspects that are associated with low academic performance.	The descriptive cross-sectional study type, the sample size was representative.	Only first-year medical education students participated.. The number of males and females were not mentioned.
The association between levels of alcohol consumption and mental health problems and academic performance among young university students.	The association between levels of alcohol consumption, mental health problems, and academic performance among university students.	The observational, quantitative cross-sectional study type, the sample size was considerable, with accessible sample participation.	It did not cover the entire spectrum of mental health problems that students may experience. The mental health screening tool does not provide a true diagnosis. The respondents were more likely to be women than men and more likely to be enrolled in the Faculty of Health Sciences.

Healthy lifestyles and risk behaviors in medical students	Describing the healthy living practices of university students.	The descriptive cross-sectional study type, the considerable number of participants.	The observational nature of the study. The absence of the application of selection criteria, such as the exclusion of students with physical limitations and minors. The number of continuous items in the instrument used that could have fatigued the respondent.

In the thorough analysis of the literature, the reviewed studies have highlighted the following:

Al-Haifi AR et al. conducted a cross-sectional analytical study, which aimed to understand the lifestyle behaviors of Kuwaiti university students and their association with academic achievement markers. A sample of 1259 students was taken between November 2020 and February 2021. For data collection, an online questionnaire was used, composed of several parts; one part focused on the socio-demographic status, the average grades at the university, and their high school grade; another part focused on lifestyle behaviors, which included questions about physical activity, breakfast intake, sleep habits, and screen time. Additionally, data such as weight and height were requested to calculate the body mass index. In conclusion, the study did not find a correlation between lifestyle behaviors and academic achievement markers [17].

Chu T et al. developed a prospective cohort study, whose main objective was to investigate the association between impaired mental health associated with low academic performance among Japanese university students. The sample consisted of 1823 university students from 2011 to 2015. The survey was conducted in May and June of 2011; additionally, data on academic performance, which were administered by the university administration in April of 2015, were obtained. As a result of this study, it was demonstrated that the deterioration of mental health in the first semester of studies significantly predicted a higher risk of incidence of poor academic performance among the students during their overall university career, and remained significant even with adjustments for healthy lifestyle behaviors [18].

Palomino Orizano, J. A., et al. conducted a descriptive correlational and cross-sectional study, aiming to identify the relationship between healthy lifestyles and academic performance. A sample of 157 university students was used. Data were collected through a questionnaire on practices and beliefs about lifestyles, and to gather data on the academic performance variable, the weighted average records of academic performance issued by the university's Office of Registration and Academic Services were used. The results showed that 85.99% of the students had moderately healthy lifestyles, and 67.50% achieved an average or regular academic performance, suggesting that having healthy lifestyles is often associated with good academic performance. It was concluded that healthy lifestyles increase the likelihood of improving academic performance or learning in students [19].

Cara-Rodríguez R. et al. developed an observational, descriptive, and cross-sectional study; the purpose of which was to analyze living habits during the evaluation period and their influence on academic performance in university students. A sample of 488 students was recruited. A questionnaire with sociodemographic data and another questionnaire on lifestyle habits were used. The conclusion was that the hours of sleep, especially the week prior to the exam, are related to better academic performance. Furthermore, the results suggest that less healthy lifestyles lead to poorer academic performance [20]. Ong CKY. et al. carried out an observational, descriptive, and cross-sectional study; the objective was to understand the relationship between individual and group health risk behaviors and academic performance in university students. The sample included 1543 students with an average age of 25.0 ± 7.9 years.

Data were collected through an electronic survey available from September 9, 2019, to October 5, 2019. The findings suggest that the more health risk behaviors a student has, the lower their grade point average will be. It was also found that non-compliance with public health recommendations was associated with a lower grade point average [21].

Kobbaz TM. et al. conducted an observational, analytical, and cross-sectional study; the main goal was to assess how the COVID-19 pandemic modified the fundamental areas of students' lifestyles and to examine the effect that their previous lifestyles had on their emotional well-being. A sample of 548 university students was used. For data acquisition, a digital questionnaire was utilized, which included demographic data and information on the pillars of lifestyle medicine, before and during the pandemic. In conclusion, the results reinforce the importance of adhering to as many lifestyle pillars as possible to preserve emotional well-being during periods of stress [22].

Fernandez-Garcia A. et al. carried out an observational, descriptive, and cross-sectional study; with the purpose of determining the relationship between lifestyle and academic performance in university students. The sample consisted of 85 university students. A lifestyle questionnaire comprising 20 items and 5 response criteria was applied, and its interpretation was performed by the sum of the responses of each item. Regarding the results, it was found that the lifestyle was adequate in 51.76% of the students. However, no significant relationship was found between lifestyle and academic performance [23].

Hou Y, Mei G, Liu Y, Xu W. performed an observational, analytical, and cross-sectional study; aimed at examining the relationship between physical fitness, lifestyle, and academic performance of university students, and investigating the lifestyle differences between medical and dental students. This study was conducted with 316 students. To gather data, university physical examination scores were used to represent the physical health of the students, in addition, measuring lifestyle through variables extracted from behavioral data provided by the university, and academic performance was assessed according to the average scores of basic and professional courses, as well as collecting demographic information. In conclusion, physical condition, library use, and regularity of lifestyle are significant factors influencing academic performance; it is also observed that medical students have less rest time compared to dental students [24].

Guillermo Sáez Abello., et al. carried out a descriptive, correlational, and cross-sectional study aimed at determining the relationship between lifestyles and reading habits in relation to academic performance in university students. A sample of 160 students was used. The instruments used included a survey format for sociodemographic variables, as well as the academic record provided by the university's academic secretary, and a validated survey for reading habits. It was concluded that the relationship between lifestyles and reading habits in relation to academic performance did not correlate in most cases [25].

García GÁ. et al. conducted an observational, descriptive, and cross-sectional study with the objective of determining some psychosocial aspects associated with low academic performance in students. A sample of 285 university students, who had failed the subject Nervous, Endocrine, and Reproductive Systems, was used. A survey was applied to assess stress, anxiety, and depression; in addition, the grades of the evaluations and the students' trajectory in the subject were considered. The results showed that low academic performance predominated among those who presented inadequate lifestyles and parental divorce. Among the psychological factors that influenced, demotivation and high levels of stress stood out [26].

Domínguez-González A et al. developed an observational, analytical, and cross-sectional study, whose main objective was to evaluate academic performance in relation to self-perception of quality of life and healthy habits in students. A sample of 118 students was obtained. A sociodemographic survey and the WHOQOL-Bref survey for quality of life were applied. In conclusion, high scores on the WHOQOL-Bref test correlate with high academic performance;

moreover, the habit of skipping breakfast leads to low school performance and a lower quality of life in students [27].

García GÁ. et al. conducted an observational, descriptive, and cross-sectional study with the purpose of determining some psychosocial aspects associated with low academic performance in these students. A sample of 236 students was used. A survey, the stress scale, the state-trait anxiety inventories, and Beck's depression inventories were applied; in addition, the grades of the evaluations and the student's trajectory in the subject were considered. This study found a predominance of inadequate lifestyles, which was associated with the low school performance of the students. Likewise, divorce had significant value[28]. Tembo C et al. conducted an observational, cross-sectional, and quantitative study, aiming to understand the association between levels of alcohol consumption, mental health problems, and academic performance among university students. A total of 2518 students between 28 and 24 years old were recruited. Data were collected through an online survey or a face-to-face survey. It was concluded that high levels of alcohol consumption are associated with low academic performance and negative mental health outcomes among students[29].

Campo F. Yurley et al. conducted an observational, descriptive, and cross-sectional study with the goal of describing the healthy living practices of students in relation to lifestyles. A total of 651 students participated. The data collection method used was the university youth lifestyle questionnaire, which determined the frequency of motivations and resources for each dimension. It was concluded that healthy lifestyles were evident in the majority of the dimensions evaluated among medical students [30].

DISCUSSION

In this review, the association between lifestyle and academic performance in medical students was explored, which aligns with one of the Research Lines of the Universidad Ricardo Palma for the period 2021-2025, specifically Lifestyle Medicine, Preventive Medicine, and Public Health. The results revealed that good lifestyles, as shown in the studies by Palomino Orizano[19], Kobbaz TM [22], and Campo F. Yurley[30], are associated with satisfactory academic performance. These findings support the importance of promoting healthy living practices among students to improve their academic performance. However, it is crucial to remember that the relationship between lifestyle and academic performance is multifaceted and complex. These studies establish correlations between lifestyle and academic performance, but establishing a direct causal relationship can be challenging due to the presence of multiple factors influencing academic performance.

Although there are studies, such as those by Al-Haifi AR et al. [27] , Fernandez-Garcia A[23] and Guillermo Sáez Abello [25], that provide a different perspective regarding the association between lifestyle and academic performance in university students. These studies did not establish a significant relationship between lifestyle behaviors and students' academic performance. Therefore, it suggests that, in these specific contexts, factors such as physical activity, sleep patterns, breakfast intake, and other studied life habits do not seem to have a significant impact on students' academic success.

On the other hand, it is essential to highlight that mental health, as evidenced in the studies by Chu et al.(18), which showed that the deterioration of mental health state predicted a higher risk of poor academic performance among university students; and García GÁ et al.[26], which found that low academic performance was associated with inadequate lifestyles and psychological factors such as demotivation and high levels of stress. Thus, mental health plays a crucial role in academic performance. This underscores the importance of addressing both physical and mental health of students, as essential components to foster optimal academic performance. ealth risk behaviors, as demonstrated in the studies by Ong et al. [21], where non-compliance with public health recommendations in aspects such as diet, physical activity, sedentary time, sleep, alcohol consumption, and smoking is associated

with a lower grade point average; and Tembo C. et al. [29], which concludes that high levels of alcohol consumption are associated with low academic performance and negative mental health outcomes among students. All this must be considered when evaluating students' academic performance, as these behaviors can have a significant impact on their health and academic outcomes.

Finally, maintaining adequate sleep habits and leading a healthy lifestyle, which includes regular physical activity, can greatly contribute to better academic performance. As stated in the study by Cara-Rodriguez R. et al.[20], it was found that hours of sleep, especially in the week before exams, positively relate to better academic performance. Similarly, the study by Hou Y, Mei G, Liu Y, and Xu W. [24] highlights that physical fitness, library use, and regularity in lifestyle are significant factors influencing academic performance. Regarding the limitations of this study, firstly, it is important to highlight that, due to time and resource constraints, it was not possible to conduct a comprehensive search and analysis of a larger number of articles. For future research, it would be beneficial to carry out a broader search following a more rigorous protocol. Additionally, challenges were encountered in the process of analysis and interpretation of the articles due to language differences, although these obstacles were successfully overcome.

CONCLUSION

In the thorough analysis of the literature, diverse findings have been identified regarding the relationship between lifestyle and academic performance in university students. While some studies suggest that university students with healthy lifestyles tend to have better academic performance, others do not find a significant correlation between the two. Moreover, it has been observed that mental health plays an important role, as the deterioration of mental health has been associated with low academic performance in some cases. Various factors such as lack of breakfast, lack of sleep, alcohol consumption, and other habits can negatively influence academic performance. Also, it was demonstrated that physical fitness, regularity in lifestyle, and psychosocial factors, like stress and anxiety, play a role in academic performance. However, the lack of consensus in the findings suggests the need for additional research to better understand this complex relationship and how different factors may influence the academic performance of university students.

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