
Physical Activity, Sleep and Health-related quality of life (HRQOL) for college students in Iraq

Denise Koh Choon Lian¹, Halah Atiyah²

DOI: [https://doi.org/10.37359/JOPE.V36\(1\)2024.2064](https://doi.org/10.37359/JOPE.V36(1)2024.2064)

<https://creativecommons.org/licenses/by/4.0>

1 Faculty of Education / Universiti Kebangsaan Malaysia.

2 University of Baghdad, College of Physical Education and sport sciences.

Article history: Received 10/march/2024 Accepted 20/march/2024 Available online 28/march/2024.

Abstract

This study demonstrates the relationship between physical activity, sleep, and health-related quality of life among college students, reporting gender differences in levels of physical activity and sleep. The sample comprised four hundred twenty male and female students from the University of Baghdad's College of Physical Education and Sports Sciences. Three questionnaires were finished to gauge the quality of life concerning health, sleep, and physical activity. Stepwise regression, independent t-tests, and descriptive statistics were used to examine the data. The overall sample's health-related quality of life was strongly predicted by sleep characteristics and vigorous physical activity, according to the results ($F = 0.017$, $p = 0.000$). There was no significant correlation found between any level of physical activity and health-related quality of life for females. Still, vigorous and moderate physical activity variables significantly predicted health-related quality of life in males when examined by gender ($t = 6.837$, $df = 309.115$, $p < .05$). Vigorous physical activity and good sleep are beneficial for helping college students improve health-related quality of life, but this benefit may vary by gender.

Keywords: College students; health-related quality of life; physical activity; sleep; Iraq

¹ Faculty of Education / Universiti Kebangsaan Malaysia, denise.koh@ukm.edu.my

² University of Baghdad, College of Physical Education and sport sciences, hala.s@cope.uobaghdad.edu.iq

Introduction

For many students, college is their first opportunity to establish individual behaviors and become more active. Daily behaviors such as sleep, rest, and exercise affect health, in college, sudden changes occur from interventions on the daily system due to the nature of the university student's daily routine in the physical education and sports sciences faculty, it can be adapted easily or with difficulty depending on the nature of the student's behavior and lifestyle inside and outside the university this type of behavior during the four years of university affects a health student's future.

Modifiable factors such as insufficient sleep quality and low activity levels affect energy balance (Quick et al., 2014). Physical activity and sleep duration are important factors for health and well-being. Adults who get little sleep or little physical exercise run the risk of developing high blood pressure, and physical activity has an impact on the quality of sleep. (Watson, N. F., Badr, M. S., Belenky, G., Bliwise, D. L., Buxton, O. M., ... & Tasali, 2020). Daytime physical activity improves sleep health, while nighttime physical activity has the opposite effect, and short sleep duration is linked to cognitive impairment. The role that activity plays Physical health plays an important role in sleep health and mental well-being, so it should be taken into account that this relationship is negatively affected whenever an individual has fewer hours of sleep on an ongoing basis.

Many things influence HRQOL. Numerous research on the impact of short sleep duration and physical activity (PA) on HRQOL (Ge et al., 2019), showed that college students spent a significant amount of time sitting down and mostly engaged in sedentary behaviors. According to a global survey conducted across 23 nations, between 21.9 and 80.6% of university students do not engage in physical activity (Yang et al., 2012). Furthermore, a further study discovered that Chinese college students frequently had short sleep durations. College students' short sleep duration and low levels of physical activity may affect their health.

Several studies have assessed students' health-related quality of life. The associated effects of physical activity quality and sleep duration on HRQOL are not well-defined. However, the way they affect college students interacting with each other is not clear. Thus, it is these modifiable factors, such as insufficient sleep quality and low physical activity efficiency that affect net energy balance leading to poor health-related quality of life.

There are almost a million university students in Iraq overall, and 21 percent of the population is in the young demographic. (Al-jumaili, 2021). As a result, research on health factors and their causes is essential for this significant population that reflects the early adult period of life. Since college is a time of transition for young people in terms of their lives and behavior, there are a few studies that look at the connection between a healthy lifestyle and sleep quality among Iraqi university students. Their daily routines during this

time have a big influence on their lives and health choices. Consequently, a person's time in college may be their only chance to completely change their health-related behaviors.

Sleep duration is an aspect of an individual's daily behavior, and lack of sleep may affect energy balance. Feeling tired may negatively affect levels of physical activity and energy expenditure. Also, being awake for longer hours a day provides more time to eat and increases energy consumption. Few studies have identified the factors that predict the duration of sleep for an individual. In contrast, there are many studies linking the relationship between the duration of sleep and the surrounding circumstances that the individual is experiencing, such as illness, age, and psychological and functional status (Quick et al., 2014). In a study of Saudi adults, the prevalence of short sleep among adults was found to be one out of every three people, while long sleep duration is associated with the period of accompanying medical conditions in individuals (Ahmed et al., 2017).

In a study in China on physical activity and sleep, their effect was linked to depression among university students, taking into account physical differences between the sexes. The results did not show any specific relationship between activity and depression for women, but there was a clear benefit from the relationship between good sleep and vigorous physical activity in the life of the student. Daily differences in percentages may differ slightly according to gender (Cahuas et al., 2020). Which indicates that the connection between sleep and activity and their good condition improves the quality of the student's daily life, whether physically or psychologically.

“Adults should sleep 7 hours or more per night regularly to promote optimal health” (Watson et al. 2020). This is the recommendation known to many and the most accurate and widespread in the scientific and medical community, as it has been shown that sleep duration of less than 7 hours may be associated with poor health outcomes with regard to weight, diseases, and condition. Psychological, functional status, weak immunity, and risk of death. What was mentioned is a negative impact on the quality of life related to health, and the opposite is true, as sleep is associated with greater risks, as the number of hours of sleep increased to 9. In the Healthy People 2020 initiative to improve the nation's health, recommendations related to sleep for adults and relationships were shown. While improving overall health.

In reference to the relationship between sleep and health, the relationship may be inverse with lack of sleep, especially in the case of weight gain. In a study of normal-weight adults, energy balance was assessed during the duration of little sleep and the duration of usual sleep. It was found that the duration of little sleep increases energy consumption and the percentage of Fats (St-Onge et al., 2011). In this case, the increased energy expenditure may be compensated for through increased eating, which exposes them to obesity and its associated diseases.

Another association of health problems with physical activity and sleep was negative. In a systematic study on the management of chronic obstructive pulmonary disease (COPD), good physical activity and good quality sleep were associated with reducing the effects of COPD, as well as with the general health and well-being of adults (Lewthwaite et al., 2017). Many studies have shown that quality of life Health-related health in good condition may be greatly influenced by healthy sleep and vigorous physical activity.

This research aimed to investigate the correlation between physical activity levels, sleep duration, and health-related quality of life in university students. Additionally, any gender variations in physical activity patterns and sleep duration were assessed. Because of the paucity of health data for university students. These results are significant because they provide yet another tool for promoting college students' health.

Methods

Participants and setting

Volunteers were identified from professors of the College of Physical Education and Sports Sciences in order to follow up and explain the purpose of participating in the research, the method of responding to the questionnaires, and ensuring the confidentiality of information for the students participating in this study. After that, the questionnaire form was distributed to their students at the beginning of the second semester of the academic year 2023-2024. The sample represents first-year students in the College of Physical Education and Sports Sciences/University of Baghdad, with a number of 450 male and female students. The final data in this study were analyzed for only 380 participants after excluding students who did not complete their answers as required. The percentage of males was higher than that of females, with the percentage of males reaching 000% compared to females. 97.6% of participants were between 17 and 22 years old, with a mean age of 19 years (SD=1.42 years).

Data collection

The three questionnaires were filled out by participants in the second semester of the 2023–2024 school year. The three questionnaires evaluated sleep patterns, levels of physical activity, and health-related quality of life. In the questionnaire on health-related quality of life (Eeftens et al., 2023), The questionnaire was used to assess each participant's degree of health as well as how they felt about their capacity to carry out daily tasks. Twelve self-administered questions are included in the survey to evaluate health-related quality of life. An example of a question is "Would you say your general health is good?" Excellent, Very Good, Good, Fair, or poor are the available response options, with values of 1, 2, 3, 4, or 5. The values are totaled to provide a possible survey score between 0 and 100. The number of days that are healthy and unhealthy is calculated appropriately based on the results.

An inactive time log was kept track of every day, along with walking and moderate and strenuous physical exercise. The seven self-reported questions in the IPAQ exam ask the participant to recollect their physical activity during the previous week (Kurth & Klenosky, 2021). The results are used to estimate total physical activity measured by MET-minutes/week and time spent sitting. The Pittsburgh Sleep Quality Index (PSQI) (Buysse et al., 1989), was employed to assess the patterns and quality of sleep. The seven subscales of this questionnaire—"subjective sleep quality, sleep latency, sleep duration, habitual sleep efficiency, sleep disturbances, use of sleep medications, and daytime dysfunction"—evaluate the quality of sleep during the previous month. Scores for the answer options vary from 0 to 3, with good to poor options. Poor sleep quality is indicated by a score of five or more out of a possible total.

Results

Descriptive statistics Table:

The averages and standard deviations of the sample's overall survey scores are shown in Table 1, together with the scores for men and women. Twenty percent of individuals consistently engaged in minimal physical activity, fifty-two percent in moderate physical activity, and twenty-eight percent in intense physical activity, and the data shows the participants' gender distribution as follows: 22% of females participated in regular vigorous physical activity, 30% in high physical activity, and 48% in walking physical activity. Of the male participants, 33% engaged in vigorous physical activity, 46% in moderate physical activity, and 21% in minimal physical activity. As depicted in Figure 1.

The students generally had good sleep, as indicated by their average total score of 2.7476; a score of five or higher indicated poor quality of sleep. Poor sleep quality was reported by about 22% of participants overall (18% of men and 25% of women). The students' average overall health-related quality of life score was 32.4548, meaning that 34% of the male students and 40% of the female students exhibited healthy life behaviors.

Table 1 Means and standard deviations for participants' survey subscale score.

Variable	Mean	Standard deviation
Total PA	102.0619	9.43643
Males	102.2150	9.89005
Females	101.9100	8.49967
Total sleep	102.0619	9.43643
Males	34.0779	9.59411
Females	27.1919	5.17978
Total (HRQOL)	32.4548	9.22694
Male	102.2150	9.89005

Female	101.5657	5.17978
--------	----------	---------

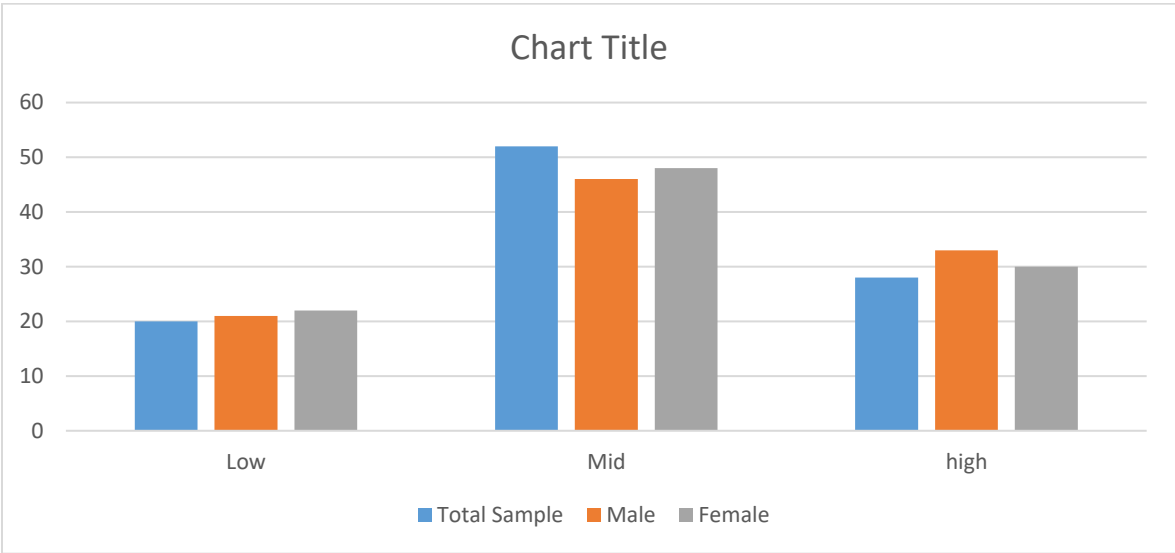


Figure 1 Percentages of self-reported physical activity habits among males, females, and total sample.

Association of physical activity and sleep with health-related quality of life:

With physical activity subscales acting as independent variables and general health-related quality of life as the dependent variable, Table 2 presents the findings of the stepwise regression analysis. The stepwise regression model's results, as presented in Table 2, demonstrated a substantial correlation ($p = 0.000$) between physical activity variables and health-related quality of life. Moreover, 42.1% of the variance in health-related quality of life was explained by variables related to physical activity. Exercise was linked to an improvement in health-related quality of life, according to the data, which showed that physical activity strongly predicted health-related quality of life ($b = -0.200$, $p = 0.000$). For females, there was no significant correlation found between the level of physical activity and overall depression.

Table 3 presents the findings of a stepwise regression study that employed sleep subscales to forecast the sample's overall health-related quality of life. As demonstrated in Table 3, the multiple regression model's findings showed that sleep-related quality of life for the sample had a significant relationship with sleep variables ($F = 0.017$, $p = 0.000$); for males, the sleep subscales with individual relationships with quality of life that were significant included General health-related ($b = 0.002$, $p = 0.000$). In addition, sleep-related factors explained 33.5% of the variation in females' health-related quality of life. The total health-

related quality of life for females was strongly predicted by subjective sleep quality, according to the results of regression coefficients ($b = 0.083$, $p = .000$).

Table 2 Results of a stepwise regression model using physical activity subscales to predict overall health-related quality of life (HRQOL) for total sample.

Variable	R	R2	F	df	Sig.	B	t	Sig.
Total PA	.073	.005	2.261	1	.133	.200	1.504	.133
Total (HRQOL)				419		25.487	5.474	.000
PA Males (HRQOL) Males	.194	.038	12.436	1	.000	.552	3.683	.000
PA Females (HRQOL) Females	.729	.532	110.077	1	.000	1.095	10.492	.000

Table 3 Results of step-wise regression model using Sub-scales of Sleep to predict total Health-related quality of life (HRQOL) for total sample.

Variable	R	R2	F	df	Sig.	B	t	Sig.
Total Sleep	.006	.000	.017	1	.898	.006	.129	.898
Total (HRQOL)				419		33.083	6.749	.000
Sleep Males (HRQOL) Males	.002	.000	.002	1	.000	.002	.043	.966
Sleep Females (HRQOL) Females	.125	.016	1.541	1	.218	.083	1.241	.000

Gender differences:

The findings of independent t-tests comparing the mean scores of males and females on physical activity and sleep factors are shown in Table 5. Table 5 indicates that when it comes to subjective sleep quality ($t = 0.598$, $df = 203.638$, $p < .05$) and overall health-related quality of life ($t = 6.837$, $df = 309.115$, $p < .05$), men scored considerably worse than women. On the other hand, in terms of overall physical activity, men scored noticeably higher than women ($t = 1.164$, $df = 309.115$, $p < .05$).

Table 4 Results of independent t test comparing mean scores of males and females

Variable	t	df	Sig
Total PA	1.164	159.744	.859
Total sleep	.598	203.638	.004
Total (HRQOL)	6.837	309.115	.000

Discussion

The purpose of this study was to look into how students at the College of Physical Education and Sports Sciences responded to physical activity, sleep, and health-related quality of life. According to this study, increased health-related quality of life in students was significantly predicted by vigorous physical activity as well as all sleep subscales (subjective sleep quality, sleep latency, sleep duration, habitual sleep efficiency, sleep disturbances, use of sleep medications, and daytime dysfunction). However, different factors affected the quality of life connected to health for men and women differently. It might be more significant and helpful to look at these gender disparities to understand the particular interventions and investigate their effectiveness on health status. Vigorous and moderate physical activity were substantially linked to better health in males. Comparable findings have been found in other studies about the connection between men's health-related quality of life and physical activity.

In a recent study of 1279 students at an Italian university to investigate the prevalence of poor sleep quality and insomnia and reveal the association with health-related quality of life, it was found that a group of 65% of them suffered from poor sleep quality, and 55% suffered from symptoms of insomnia. The students who suffer from health-related quality of life Sleep and insomnia have the highest level of stress and the lowest level of quality of life-related to health, both physically and mentally (Carpi et al., 2022). In this study, improving subjective sleep quality and sleep duration is significantly associated with an increase in health-related quality of life.

According to these results, male college students may find it beneficial to commit to engaging in regular, intense or moderate physical activity as well as to develop strategies for enhancing the quality of their subjective sleep, falling asleep more quickly, and maintaining their health, particularly given the college's daily schedule and the inclusion of sporting events in the curriculum. Which can give them confidence to keep up their strong work over the day. However, this research also revealed no statistically significant link between increased physical activity levels and better health-related quality of life in

women. This finding is in opposition to several research that demonstrate that regular physical activity can enhance health-related quality of life, notwithstanding the rarity of studies that specifically focus on females. (Lavados-Romo et al., 2023).

In this study, women's health-related quality of life was found to be positively correlated with enhanced sleep quality, sleep latency, and sleep disruptions. These findings show that it is advantageous for female students to investigate specific techniques to enhance sleep quality, fall asleep fast, and feel rested during the day with a busy school day or even on routine days in order to improve health-related quality of life. Few research have looked at gender differences in the association between sleep and health-related quality of life, but prior research has shown that those with unhealthy lifestyle choices are much more likely to experience sleep disturbances. While getting enough sleep and exercising can enhance one's quality of life in terms of health (Lee et al., 2021). The existence of gender-based variations in physical activity characteristics was investigated in this study. According to the findings, women engage in far less physical activity than men do on average. This could imply that women's quality of life at college is worse when it comes to their health.

This is in line with other studies that show women sleep for longer periods of time than males do (Peltzer & Pengpid, 2016). This is in line with other studies that shows women to have greater rates of hours spent sleeping than men do, as well as significantly poorer rates of sleep quality in women than in men. Women also scored higher on the measures measuring sleep disorders and quality of sleep. This is in line with research findings that indicate teenage girls are most likely to experience poor sleep quality. (Fatima et al., 2016). When compared to the overall levels of physical activity for females, the percentage of guys participating in this sort of physical activity was higher. Prior research has revealed that male college students engage in more intense physical activity than female counterparts. Additionally, male college students are more driven to exercise due to their focus on professionalism, challenge, and seriousness of performance, whereas female students are more concerned with weight management, appearance, and health benefits. (Pauline, 2013).

These disparities in motivations and gender disparities in physical activity participation suggest that social, cultural, and physical inequalities may be influenced in some way. According to the Leisure-Time Physical Exercise (LTPA) survey, men engage in leisure-time physical exercise at a higher rate than women. (Beville et al., 2014), Research on the relationship between gender and health, physical activity, and sleep quality is needed since there is evidence of disparities between the sexes in these areas. These differences may have biological or cultural roots. Although this study indicated that students' health-related quality of life is positively associated with both sleep and physical activity, more research is needed to account for gender differences in this relationship, as well as the possibility that positive health outcomes promote physical activity. Adding some activities to their daily routine (Koh & Salamuddin, 2014), and also knowing the

importance of the need for self-monitoring of health and increasing the number of activities and walking on a daily basis by students.

There were several restrictions on this study, and the self-administered questionnaires used to collect the data may have introduced bias or imprecision. The socioeconomic situation of the students' families, which can occasionally have an impact on their health, was not a question that was asked of them. Furthermore, since only one college at the University of Baghdad was used for participant selection, the findings cannot be applied to all Iraqi university students. To get more general findings on the connection between sleep, health, and physical activity among college students, this study may pave the way for future research that choose a large sample of individuals from other universities or ages.

Conclusions

A healthy lifestyle may be enhanced for college students by frequent exercise and restful sleep. But gender may also be a predictor of physical activity and sleep quality, so students might only experience restful sleep if they adopt healthy lifestyle choices that enhance their quality of life in terms of health. Studying sustainable health involves assessing how variables are impacted by the quality of sex as well as the physiological pathways via which exercise and sleep promote better health. Campuses can use this study and similar ones to help students' overall health by encouraging physical activity and sharing recommendations for healthy sleeping habits that take gender differences into consideration.

References

- Abd, Z. A. H. (2022). Individual analysis of kinetic response variables according to the measurement of the H7 system for the best jumping players in the national basketball team 2021. *Sciences Journal Of Physical Education*, 15(3).
- Abd, Z. A. H., & Shabba, F. S. Y. (2021). The Contribution of Ball Launching and Ring Entrance Angle Variables in 3 points Jump Shot in Basketball. *Journal of Physical Education*, 33(3).
- Abdel-Nabi, M., Taqi, B. M., & Hammood, A. H. (2020). Leadership patterns for university student activities managers according to the Blake and Moton model (The managerial Grid). *Sciences Journal Of Physical Education*, 13(7), 493–501. <https://www.iasj.net/iasj/article/246988>
- AbdulsalamWaheeb, A., Tawfeeq, M. I., Raheem, B. A., & Dakheel, H. O. (2024). COMPARISON OF THE PERFORMANCE OF THE FOREHANDKICK (STRAIGHT AND ACCOMPANIED BY FORWARD ROTATION) IN TERMS OF ACCURACY AND SPEED AMONG THE PLAYERS OF THE NATIONAL TEAM (ADVANCED CATEGORY) IN TENNIS. *International Development Planning Review*, 23(1), 138-148.
- Ahmed Amer Abdul Hussein, M. D. A. S. S. (2020). he use of the electronic system with special exercises and its impact in the development of shooting on the basketball for young people. *Journal Mustansiriyah of Sports Science*, 2(4), 24–29.
- Ahmed Fadhil Farhan Mohammed Jawad Kadhim, G. M. S. (2016). THE EFFECTIVENESS OF INJURY PREVENTION PROGRAM ON REDUCING THE INCIDENCE OF LOWER LIMB INJURIES IN ADOLESCENT MALE SOCCER PLAYERS. *Injury Prevention*, 22(Suppl 2), 346. <https://www.proquest.com/openview/fd995719bc359d2e05fa6fe346bed0f6/1?pq-origsite=gscholar&cbl=2031963>
- Ahmed, A. E., Al-Jahdali, F., AlALwan, A., Abuabat, F., Bin Salih, S., Al-Harbi, A., Baharoon, S., Khan, M., Ali, Y. Z., & Al-Jahdali, H. (2017). Prevalence of sleep duration among Saudi adults. *Saudi Medical Journal*, 38(3), 276–283. <https://doi.org/10.15537/smj.2017.3.17101>
- Ahmed, M., Hussein, A., & C, R. H. J. (2023). The effect of an electronic device designed to measure the degree of bending of the knee angle in developing the skill of catch and Clearance the high ball for football goalkeepers under (15 years). *Journal of Xi'an Shiyou University*, 19(11), 751–764. <https://www.xisdjxsu.asia/viewarticle.php?aid=2794>

- Al, S. A. Z. H. M., Bahadli, P., & Al-Tamimi, A. F. A. (2022). The effect of a rehabilitation program for rhomboid muscles (shoulder) and fibrous strain on young and advanced wrestlers (Free and Roman).
- Ali Al-Attar, L. S., & Jari, H. S. (2023). the Effect of Special Exercises According To a Designed Device in Developing the Performance of a Kinetic Chain on the Balance Beam Device. *Revista Iberoamericana de Psicologia Del Ejercicio y El Deporte*, 18(3), 254–258.
- Ali, Y. S., Abdulhussein, A. A., & Jassim, A. H. (2023). EMPLOYMENT OF RESISTANCE EXERCISE IN ACCORDANCE TO VARIABLE BIOMECHANICAL MARKERS TO DEVELOP THE STRENGTH AND THE SPEED OF ARM MUSCLES OF WATER POLO PLAYERS. *International Development Planning Review*, 22(2), 589-605.
- Al-jumaili, M. S. A. (2021). Sleep Patterns in Overweight/Obese Adults in Baghdad City. *Medico-Legal Update*, 21(1), 1051–1057. <https://doi.org/10.37506/mlu.v21i1.2455>
- Al-Shammari, A. G. H., & Al Sodani, A. K. R. (2022). The effect of cognitive trips via the Internet (web quest) accompanying practical lessons in learning some basic handball skills for female students. *International Journal of Early Childhood Special Education*, 14(3), 2567–2574. [https://doi.org/doi.org/10.37359/JOPE.V34\(2\)2022.1268](https://doi.org/doi.org/10.37359/JOPE.V34(2)2022.1268)
- Awad, M. K., Qasim, K. J., & Ali, S. H. (2024). Using an educational method according to special exercises to perform the skill of bow and develop flexibility for cub wrestlers in Iraq. *Eximia*, 13, 38-50. <https://doi.org/10.47577/eximia.v13i1.423>
- Awad, M. M. K., Mahmoud, M. A. A., & Rahim, M. Y. M. (2022). The Explosive Capacity Of The Muscles Of The Two Men And Their Relationship To The Scoring Of Football Halls. *Journal of Positive School Psychology*, 6(7), 4699-4702.
- Building and measuring e-learning scale from the point of view of students of the College of Physical Education and Sports Sciences - University of Baghdad . (2021). *Modern Sport*, 20(4), 0126. <https://doi.org/10.54702/msj.2021.20.4.0126>he Effect of Using Teaching Aid on the Development of Straight Forehand and Backhand Shot Performance in Lawn Tennis. (2022). *Journal of Physical Education*, 34(3), 296-304. [https://doi.org/10.37359/JOPE.V34\(3\)2022.1321](https://doi.org/10.37359/JOPE.V34(3)2022.1321)
- Buyse, D. J., Reynolds III, C. F., Monk, T. H., Berman, S. R., & Kupfer, D. J. (1989). The Pittsburgh Sleep Quality Index: a new instrument for psychiatric practice and research. *Psychiatry Research*, 28(2), 193–213.

- Cahuas, A., He, Z., Zhang, Z., & Chen, W. (2020). Relationship of physical activity and sleep with depression in college students. *Journal of American College Health*, 68(5), 557–564. <https://doi.org/10.1080/07448481.2019.1583653>
- Carpi, M., Cianfarani, C., & Vestri, A. (2022). Sleep quality and its associations with physical and mental health-related quality of life among university students: A cross-sectional study. *International Journal of Environmental Research and Public Health*, 19(5), 2874.
- Chermit K.D., Zabolotny A.G., Tikhonova I.V., & A. M. S. E. A. (2022). Simulation of the technique of pedaling of cyclists on the basis of visual control of the correspondence of the rhythm of angular movements in the links of a kinematic chain. *Teoriya i Praktika Fizicheskoy Kultury*, 8, 6–9.
- Dhahi, N. M., Hani, A. T., & Khudhair, M. O. (2022). a Study of Mental Perception and Sports Confidence and Their Relationship To the Motivation of Sports Achievement for the Players of the Iraqi Premier League Football Clubs. In *Revista Iberoamericana de Psicologia del Ejercicio y el Deporte* (Vol. 17, Issue 6, pp. 391–395).
- Dhuha Hadi, & Widad Kadhum. (2021). Building and measuring e-learning scale from the point of view of students of the College of Physical Education and Sports Sciences - University of Baghdad . *Modern Sport*, 20(4), 0126. <https://doi.org/10.54702/msj.2021.20.4.0126>
- Dr. Zina Abdul-salam, S. J. (2020). show the effect of the physical education lesson while using the interactive ground games with the 4th grade students to enhance their kinetic abilities. *Modern Sport*, 19(2), 57–64. <https://doi.org/doi.org/10.54702/msj.2020.19.2.0057>
- Easa, F. A. W., Shihab, G. M., & Kadhim, M. J. (2022). the Effect of Training Network Training in Two Ways, High Interval Training and Repetition To Develop Speed Endurance Adapt Heart Rate and Achieve 5000 Meters Youth. In *Revista Iberoamericana de Psicologia del Ejercicio y el Deporte* (Vol. 17, Issue 4, pp. 239–241). <https://www.riped-online.com/articles/the-effect-of-training-network-training-in-two-ways-high-interval-training-and-repetition-to-develop-speed-endurance-adapt-heart-r-87005.html>
- Eeftens, M., Pujol, S., Klaiber, A., Chopard, G., Riss, A., Smayra, F., Flückiger, B., Gehin, T., Diallo, K., & Wiart, J. (2023). The association between real-life markers of phone use and cognitive performance, health-related quality of life and sleep. *Environmental Research*, 231, 116011.
- Fahem, L., & Wahid Easa, A. (2021). The Effect of Lactic Endurance Training on Developing Speed Endurance, Lactic Acid Concentration, and Pulse after Effort and Achievement for 1500m Junior Runners (Vol. 25, pp. 10008–10013). <http://annalsofrscb.ro>

- Farhan, A. F., Kadhim, M. J., & Shihap, G. M. (2016). 972 The effectiveness of injury prevention program on reducing the incidence of lower limb injuries in adolescent male soccer players.
- Fatima, Y., Doi, S. A. R., Najman, J. M., & Al Mamun, A. (2016). Exploring gender difference in sleep quality of young adults: findings from a large population study. *Clinical Medicine & Research*, 14(3–4), 138–144.
- Ge, Y., Xin, S., Luan, D., Zou, Z., Liu, M., Bai, X., & Gao, Q. (2019). Association of physical activity, sedentary time, and sleep duration on the health-related quality of life of college students in Northeast China. *Health and Quality of Life Outcomes*, 17(1), 1–8. <https://doi.org/10.1186/s12955-019-1194-x>
- Ghafoor, Q. H. A., Salman, A. D., & Ali, S. A. S. (2022). Effect of Proposed Exercises Using the Sponge Mat in the Performance of the Skill of Court Defence in Sitting Volleyball. *Specialusis Ugdymas*, 1(43), 2135-2144.
- Hadi, D., & Kadhum, W. (2021). Building and measuring e-learning scale from the point of view of students of the College of Physical Education and Sports Sciences-University of Baghdad. *Modern Sport*, 20(4), 126.
- Hawash, D. G., & Hillel, M. H. (2022). The effect of the use of exercises with the performance of assistance in improving the performance of some combat capabilities and accuracy. *International Journal of Early Childhood Special Education*, 14(4).
- HE EFFECT OF PLYOMETRIC EXERCISES ACCORDING TO SOME BIOMECHANICAL VARIABLES IN DEVELOPING THE PERFORMANCE AND ACCURACY OF PASSES IN SOCCER FOR YOUTH. (2024). *International Development Planning Review*, 23(1), 301-320. <https://idpr.org.uk/index.php/idpr/article/view/141>
- Hiama, A. H., & Al-Asadi, H. H. (2023). Effect of the reality of transformational leadership of school principals from the point of view of physical education teachers of Baghdad-Rusafa Education Directorates. *Mustansiriyah Journal of Sports Science*, 5(3), 20-29.
- Hussein, A. A. A., & Sakhi, A. S. (2020). The use of the electronic system with special exercises and its impact in the development of shooting on the basketball for young people. *Mustansiriyah Journal of Sports Science*, 2(4), 24-29.
- Iyad Salih Salman and Suzan Salim Daoud: The effect of using two active learning strategies, jigsaw. Solving problems in learning some balance beam skills in artistic gymnastics. Published research, *Al-Qadisiyah Journal of Physical Education and Sports Sciences*, Volume 18, Issue 1, 2018, p. 23.

- Jumaah, A. H., & Ameen, B. A. M. (2023). The Effect of the Strategy of Differentiated Education According to the Auditory Learning Style by Using Assistance in Learning the Back Kick (T-Chagi) for the Young Players of Specialized Schools in Taekwondo. *Pakistan Heart Journal*, 56(1), 137-148.
- Kadhim, M. J. (2012). The effects of drinking water, magnetized through training on some biochemical variables in blood. *Journal of Physical Education*, 24(1), 453–480.
- Kazim, M. J., Zughair, A. L. A. A., & Shihab, G. M. (2019). The effect of zinc intake on the accumulation of lactic acid after cooper testing among football Premier league referees. *Sciences Journal Of Physical Education*, 12(5).
- Koh, D. C. L., & Salamuddin, N. (2014). Intervention To Increase Participation in Physical Activity For Adults. *European Proceedings of Social and Behavioural Sciences*.
- Kurth, J. D., & Klenosky, D. B. (2021). Validity evidence for a daily, online-delivered, adapted version of the International Physical Activity Questionnaire Short Form (IPAQ-SF). *Measurement in Physical Education and Exercise Science*, 25(2), 127–136.
- Lavados-Romo, P., Andrade-Mayorga, O., Morales, G., Muñoz, S., & Balboa-Castillo, T. (2023). Association of screen time and physical activity with health-related quality of life in college students. *Journal of American College Health*, 71(5), 1504–1509.
- Lee, S., Kim, J. H., & Chung, J. H. (2021). The association between sleep quality and quality of life: a population-based study. *Sleep Medicine*, 84, 121–126.
- Lewthwaite, H., Effing, T. W., Olds, T., & Williams, M. T. (2017). Physical activity, sedentary behaviour and sleep in COPD guidelines: A systematic review. *Chronic Respiratory Disease*, 14(3), 231–244. <https://doi.org/10.1177/1479972316687224>
- Mahmood, H. A., & Kadhim, M. J. (2023). Special exercises for some physical, kinetic and electrical abilities accompanied by symmetrical electrical stimulation in the rehabilitation of the muscles of the legs for patients with simple hemiplegic cerebral palsy. *Pakistan Heart Journal*, 56(1), 580-595.
- MANDOOBMAKKIATI, A., & ABED, Y. (2024). AN ANALYTICAL STUDY OF THE ORGANIZATIONAL CRISES FACING COACHES IN THE IRAQI FOOTBALL LEAGUE. *International Development Planning Review*, 23(1), 226-236.
- Mohammed Khalid Awad, Khulood Juma Qasim, & Shaima Habib Ali. (2024). Using an educational method according to special exercises to perform the skill of bow and develop flexibility for cub wrestlers in Iraq. *Eximia*, 13(1), 38–50. <https://doi.org/10.47577/eximia.v13i1.423>

- Mohsen, Y. F., Makttof, A. M., Sami, M. M., Hikmat, T. Z., Hammood, A. H., Abed, N., & Abdulhussein, A. A. (2024). EVALUATING THE EFFECTIVE CREATIVE LEADERSHIP ROLE OF THE DEAN AND HEADS OF SCIENTIFIC DEPARTMENTS IN THE COLLEGE OF PHYSICAL EDUCATION AND SPORTS SCIENCES AL-MUSTANSIRIYAUNIVERSITY. *International Development Planning Review*, 23(1), 321-337.
- Mousa, A. M., & Kadhim, M. J. (2023). NMUSING AN INNOVATIVE DEVICE TO IMPROVE THE EFFICIENCY OF THE ANTERIOR QUADRICEPS MUSCLE OF THE INJURED KNEE JOINT AFTER SURGICAL INTERVENTION OF THE ANTERIOR CRUCIATE LIGAMENT IN ADVANCED SOCCER PLAYERS. *Semiconductor Optoelectronics*, 42(1), 1504-1511.
- Muhsen, A. S., & Al-Talib, T. N. (2020). The Effect of Using Immediate Feedback on Learning Double Tuck Backflip on Floor Exercises in Artistic Gymnastics For Men Aged 14–16 Years Old. *Journal of Physical Education*, 32(3).
- Naif, A. S., & Atia, M. A. H. (2020). The Effect of Constructive Learning Model on Cognitive Achievement and Learning dribbling Skill in Soccer for Secondary School Students. *Journal of Physical Education*, 32(2).
- Pauline, J. (2013). Physical activity behaviors, motivation, and self-efficacy among college students. *College Student Journal*, 47(1), 64–74.
- Peltzer, K., & Pengpid, S. (2016). Sleep duration and health correlates among university students in 26 countries. *Psychology, Health & Medicine*, 21(2), 208–220.
- Qasim, K. J., & Ibrahim, A. J. (2023). Effect of amino acids (Bcaa) on some physical abilities of advanced futsal players. *journal of the college of basic education*, 29(121)
- Quick, V., Byrd-Bredbenner, C., White, A. A., Brown, O., Colby, S., Shoff, S., Lohse, B., Horacek, T., Kidd, T., & Greene, G. (2014). Eat, sleep, work, play: Associations of weight status and health-related behaviors among young adult college students. *American Journal of Health Promotion*, 29(2), e54–e72. <https://doi.org/10.4278/ajhp.130327-QUAN-130>
- Sabhan, H., & Abd AL-Hussein, D. (2015). Visual Vision, and their relationship in the performance of high-Spike Diagonal and rectum skill accuracy Volleyball. *Journal of Physical Education*, 27(4).
- Salih, I. H., Yaseen, A. M., Naseer, K. J., Attieh, A., & Kadhim, M. J. (2024). THE IMPACT OF COMPETITIVE SPEED EXERCISES ON JUNIOR BOXERS' EFFECTIVENESS OF

SKILL PERFORMANCE AND COUNTERATTACK SPEED. International Development Planning Review, 23(1), 149-162.

Salman, S. M., KADHIM, M. J., & SHIHAB, G. M. (2022). The effect of special exercises in the rehabilitation of the shoulder muscle for the youth wrestling category. International Journal of Early Childhood Special Education, 14(5).

Salman, T. D., & Hameed, G. N. A. (2022). Study of some visual functions and functional variables of the respiratory and nervous systems and their relationship to the level of achievement of air rifle shooting. International Journal of Early Childhood Special Education, 14(3).

Salmana, T. D., & Hameed, G. N. A. (2022). Effect of a Training Curriculum for the Development of Some Functional Variables and the Level of Achievement in the Effectiveness of Air Rifle Shooting. International Journal of Health Sciences, 6, 13180-13190.

Sarhan, Q. A. (2019). The Effect of the Exercises of Retrieving the ball from the Net on the Development of the skill of Defending the stadium in the Volleyball. University of Anbar Sport and Physical Education Sciences, 4(19).<https://doi.org/10.37655/uaspesj.2019.172349>

St-Onge, M. P., Roberts, A. L., Chen, J., Kelleman, M., O’Keeffe, M., RoyChoudhury, A., & Jones, P. J. H. (2011). Short sleep duration increases energy intakes but does not change energy expenditure in normal-weight individuals. American Journal of Clinical Nutrition, 94(2), 410–416. <https://doi.org/10.3945/ajcn.111.013904>

The Effect of Using Teaching Aid on the Development of Straight Forehand and Backhand Shot Performance in Lawn Tennis. (2022). Journal of Physical Education, 34(3), 296-304. [https://doi.org/10.37359/JOPE.V34\(3\)2022.1321](https://doi.org/10.37359/JOPE.V34(3)2022.1321)

Watson, N. F., Badr, M. S., Belenky, G., Bliwise, D. L., Buxton, O. M., ... & Tasali, E. (2015). (2020). Recommended Amount of Sleep for a Healthy Adult: A Joint Consensus Statement of the American Academy of Sleep Medicine and Sleep Research Society. 11(6), 591–592.

Yang, P. Y., Ho, K. H., Chen, H. C., & Chien, M. Y. (2012). Exercise training improves sleep quality in middle-aged and older adults with sleep problems: A systematic review. Journal of Physiotherapy, 58(3), 157–163. [https://doi.org/10.1016/S1836-9553\(12\)70106-6](https://doi.org/10.1016/S1836-9553(12)70106-6)

Zeb, A., Bahadur, S., & Rehman, G. (2020). Outcome of Physical Rehabilitation Interventions in Persons with Post-Traumatic Spinal Cord Injuries at Paraplegic Centre Peshawar, Pakistan. In Journal of Physical Medicine Rehabilitation Studies & Reports (pp. 1–4). [https://doi.org/10.47363/jpmrs/2020\(2\)123](https://doi.org/10.47363/jpmrs/2020(2)123)



ZidaneHmood, M., Hamza, M. K., & Ahmad, S. A. G. (2024). THE EFFECT OF PLYOMETRIC EXERCISES ACCORDING TO SOME BIOMECHANICAL VARIABLES IN DEVELOPING THE PERFORMANCE AND ACCURACY OF PASSES IN SOCCER FOR YOUTH. *International Development Planning Review*, 23(1), 301-320.