

The Role of Practicing Physical Activity in Enhancing Academic Adjustment among University Students- A Field Study on a Sample of Students from the Faculty of Humanities and Social Sciences, University of El Oued

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Abstract: This study aims to analyze the role of physical activity in enhancing the level of academic adaptation among university students, given that this stage represents a psychological, social, and cognitive transition that requires a high degree of adjustment across all domains.

The importance of the study stems from the increasing academic and psychological pressures faced by students, which calls for the exploration of supportive mechanisms that help them adapt and achieve academic success.

The current study adopts a field-based analytical approach by exploring the relationship between regular physical activity and levels of adaptation to the university environment. Literature suggests that physical activity contributes to reducing stress, boosting self-confidence, and improving concentration, which positively reflects on academic performance.

This study seeks to provide a deeper understanding of the relationship between physical health and academic adaptation, and to propose practical recommendations for activating sports activities within university institutions in ways that support student well-being and academic success.

Keywords: Physical activity; Academic adaptation; University student; Academic stress; Mental health

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Introduction:

The university stage represents a crucial turning point in an individual's life, as the student moves from a guided school environment to a more independent and complex academic setting. This transition requires a high level of academic adjustment, which includes adapting to curricula, teaching methods, and assessment systems, in addition to social integration within the university environment. However, academic pressures, achievement-related anxiety, and poor time management may negatively affect this adjustment.

In this context, physical activity has emerged as one of the supportive factors that contributes to achieving psychological and physical balance. Numerous studies confirm that regular exercise helps reduce stress, improve mood, and enhance cognitive abilities. This topic has become an area of growing interest in educational and psychological research, particularly in light of the major transformations taking place in university life, including increased academic competition and a noticeable decline in physical activity levels among many students, who spend long hours in front of screens at the expense of movement and physical engagement. Hence, the importance of studying the relationship between physical activity and academic adjustment among university students arises, as it represents an interconnected psychological, social, and health-related relationship that deserves careful scientific examination and analysis.

Significance of the Study:

The importance of this study stems from the nature of its subject, which lies at the intersection of three complementary scientific fields: educational psychology, physical activity and sports sciences, and sociology. Its significance can be summarized as follows:

- Highlighting the relationship between physical health and academic success, and providing scientific evidence that investing in students' physical well-being is fundamentally an investment in their academic trajectory and professional future.
- Contributing to the orientation of university policies toward supporting sports activities by providing applicable field data that reinforce the position of physical education within the university system.
- Providing a scientific framework that helps understand the factors influencing academic adjustment and bridging the knowledge gap observed in Arab studies that have not addressed this topic in sufficient depth.

Objectives of the Study:

This study seeks to achieve a set of integrated objectives, which can be summarized as follows:

- To identify the level of physical activity practice among university students in terms of frequency, intensity, and type.

- To measure their level of academic adjustment across its academic, social, and emotional dimensions.
- To examine the nature, direction, and strength of the relationship between physical activity and academic adjustment.
- To provide practical recommendations for universities and student counselors to enhance academic adjustment by encouraging the practice of physical activity.

Research Problem

To what extent does practicing physical activity contribute to enhancing academic adjustment among university students?

Research Questions

1. What is the level of physical activity practice among university students?
2. What is the level of academic adjustment among university students?
3. Is there a statistically significant relationship between physical activity practice and academic adjustment?
4. Which dimensions are most affected by physical activity: the emotional, social, or academic dimensions?

Study Concepts:

Physical Activity:

Physical activity is defined as “any bodily movement produced by skeletal muscle contraction that requires energy expenditure above the resting level” (World Health Organization, 2010, p. 7).

Caspersen et al. define it as any bodily movement resulting from skeletal muscle contraction that leads to an increase in energy expenditure beyond the resting level, encompassing a wide range of activities such as recreational sports, occupational work, household activities, and daily transportation (Caspersen et al., 1985, p. 126).

Sallis and Owen also describe physical activity as “a complex, multidimensional behavior that occurs in various contexts such as leisure, work, and transportation, and can be measured in terms of frequency, intensity, duration, and type” (Sallis & Owen, 1999, p. 34).

Taken together, these three definitions provide a comprehensive understanding of the concept of physical activity. They all associate it with skeletal muscle contraction and energy expenditure; however, they differ in their level of detail and scope. The World Health Organization’s definition is concise and clear, making it suitable as a foundation for general public health studies. Caspersen and colleagues broaden the concept to include non-sport daily activities, making it particularly appropriate for epidemiological and public health research. In contrast, Sallis and Owen’s definition introduces measurable quantitative dimensions—such as frequency, intensity, and duration—rendering it more suitable for quantitative studies that aim to classify and accurately determine levels of physical activity.

It is worth noting that these definitions implicitly distinguish between **physical activity** in its broad sense and **sport** in its narrower sense, which is limited to organized and structured activities. The

former is more comprehensive and allows the study to measure diverse patterns of daily movement in the life of university students without restricting itself to traditional sports practice.

Academic Adjustment:

Baker and Siryk defined academic adjustment as “the student’s ability to adapt to the academic, social, and psychological demands of university life” (Baker, 1984, p. 155).

Pascarella considers academic adjustment to be “a continuous dynamic process through which the student seeks to achieve a balance between the demands of the university environment on the one hand and his/her personal abilities and resources on the other, leading to satisfaction with the university experience and competence in performance” (Pascarella, 2005, p. 55).

Tinto defines it as the degree of integration of the student into the social and academic fabric of the educational institution, an integration that reflects functional adaptation and largely determines the likelihood of the student’s persistence in or withdrawal from the institution (Tinto, 1987, p. 71).

Baker and Siryk define academic adjustment as a multidimensional construct encompassing academic, social, and emotional aspects, which makes it the most widely cited in the scientific literature due to its comprehensiveness and its capacity to capture the complexity of the university student experience. In contrast, Pascant emphasizes the dynamic and evolving nature of the adjustment process, portraying it not as a static state but as an ongoing journey of balance and interaction. Tinto, meanwhile, introduces an institutional dimension by linking academic adjustment to the phenomenon of university dropout, thereby granting the concept strategic significance that extends beyond the individual level to inform educational policies.

From a practical standpoint, it is evident that academic adjustment is not merely an indicator of a student’s ability to assimilate course material; rather, it is a broader measure reflecting their psychological well-being, social satisfaction, and sense of belonging. This provides a sound scientific rationale for connecting it to physical activity.

Academic Stress:

Academic stress is defined as “psychological and emotional responses resulting from academic demands that exceed the student’s capacity for academic adjustment” (Lazarus, 1984, p. 71).

Gadzella defines it as “a set of stressors related to the academic context, such as fear of exams, excessive assignments, poor time management, and peer competition, which generate emotional and behavioral responses affecting academic performance” (Gadzella, 1994, p. 209).

Abu Hin considers academic stress to be “a state of psychological imbalance resulting from the student’s perception of a wide gap between what is academically demanded of them and the energy, ability, and resources they possess to cope with these demands” (Abu Hin, 2008, p. 54).

These definitions complement each other in providing a precise understanding of academic stress. Lazarus and Folkman establish the concept on a strong theoretical foundation centered on **cognitive appraisal**, emphasizing that stress does not arise from the event itself but from the individual’s interpretation of it and their perceived ability to cope. Gadzella’s definition adds practical value by concretely identifying the sources of academic stress.

It becomes evident from reviewing these definitions that academic stress is not an objective, fixed phenomenon, but rather a subjective experience that depends on the individual's nature and coping mechanisms in response to environmental demands. This opens a broad avenue for investigating the role of physical activity as an effective adaptive resource that restores the student's psychological balance.

Previous Studies:

Biddle & Asare (2011) Study (Biddle, 2011)

Study Topic: Physical Activity and Mental Health among Children and Adolescents, *British Journal of Sports Medicine*

This study aimed to review the scientific evidence regarding the relationship between physical activity and mental health in youth, through a comprehensive systematic analysis of a wide range of experimental and descriptive studies. The researchers focused on examining the effect of physical activity on a broad spectrum of psychological indicators, including depression, anxiety, general mood, and self-esteem.

The study showed that physical activity is positively associated with improved mental health and a reduction in symptoms of anxiety and depression among youth. It was found that regular aerobic exercises contribute to increasing neurotransmitters such as serotonin and dopamine, leading to improved psychological well-being. The researchers also noted that the positive effects of physical activity appear even at relatively low levels of participation, emphasizing that a variety of activity types enhances the sustainability of psychological benefits. They concluded that physical activity can serve as an effective preventive and therapeutic tool in addressing anxiety and depression disorders without relying solely on pharmacological interventions.

These findings are directly relevant to the current study, as improved mental health and reduced anxiety levels among university students constitute a fundamental pillar of academic adjustment.

Study of Keating et al. (2005) (Keating, 2005)

Study Title: A Meta-Analysis of the Relationship Between Physical Activity and Academic Performance, *Journal of Teaching in Physical Education*

This study employed a meta-analytic approach to collect and analyze the results of experimental and correlational studies regarding the relationship between physical activity levels and academic achievement, aiming to reach more reliable and precise quantitative conclusions than individual studies could provide.

The study confirmed the existence of a statistically significant positive relationship between physical activity and academic achievement, although the strength of this relationship varied according to variables such as age, type of activity, and duration of practice. The analysis revealed that the most notable effect of physical activity on academic performance lies in the improvement of executive brain functions, including attention, working memory, and information processing speed.

The results also indicated that students with higher levels of physical activity tend to have lower absenteeism rates. The researchers noted that the academic benefits of physical activity do not occur immediately but accumulate gradually with continued practice, emphasizing the importance of adopting regular exercise habits during university years.

This study provides strong scientific support for the hypothesis of the current research, suggesting a positive relationship between physical activity and academic adjustment, while expanding the perspective to include the cognitive and functional aspects of achievement, not just the psychological dimension.

خطأ! لم يتم العثور على مصدر المرجع. (1996) Steptoe & Butler Study

Study Title: Physical Activity, Stress, and Psychological Well-Being

This study examined the relationship between physical activity, stress, and psychological well-being among adolescents and young adults. Using self-report questionnaires, the researchers measured levels of physical activity, perceived stress, and indicators of mental health, such as mood, anxiety, and overall life satisfaction.

The results showed that participants who engaged in regular physical activity experienced lower stress levels and reported higher psychological well-being compared to those with low physical activity levels. Additionally, physical activity appeared to act as a protective factor, mitigating the negative effects of stress on mental health.

The study concluded that regular physical activity not only improves physical health but also serves as an effective coping mechanism for psychological stress, highlighting its potential role in enhancing adaptive outcomes such as academic adjustment and social integration in students.

This study represents an Arab extension that confirms the validity of the hypothesis within cultural and social contexts similar to the Algerian setting. It also provides detailed findings regarding the impact of different types of sports on the various dimensions of adjustment, thereby enriching the theoretical framework of the current study.

Methodology;

The study adopted the descriptive-analytical method with a qualitative approach, as it is the most appropriate for understanding students' subjective experiences regarding the practice of physical activity and its relationship to academic adjustment. This method is considered one of the most suitable approaches in social and psychological research that seeks to comprehend lived experiences in depth. It allows the researcher to approach the participants' subjective realities and explore their meanings and interpretations, rather than relying solely on numerical data and statistical indicators, which often fail to capture the complexity of human phenomena.

In addition, simple descriptive quantitative analysis—represented by percentages and frequencies—was employed to support the qualitative findings and provide a complementary numerical overview. This combination of qualitative and quantitative approaches is known in research methodology as methodological triangulation, which aims to enhance the reliability and validity of the findings by using more.

Justification for the Choice of Method;

The selection of the descriptive-analytical method with a qualitative orientation was not arbitrary; rather, it was grounded in several solid scientific and methodological justifications, including the following:

*The study examines the relationship between two social variables—physical activity and academic adjustment—a relationship characterized by complexity, where psychological, social, and cultural dimensions intersect. Such a multifaceted phenomenon cannot be reduced to mathematical equations or mere statistical figures without losing its essential meaning.

*The need to understand the psychological and social meanings associated with the individual experience of university students. The research seeks to explore how sports influence the process of adjustment from the students' own perspective, rather than solely from the viewpoint of the external researcher.

*The aim of uncovering the symbolic and social dimensions of practicing sports within the university environment, including meanings related to social identity, group belonging, and the construction of social networks. These aspects often remain beyond the scope of purely quantitative methods and require an in-depth qualitative approach to be adequately captured.

Population and Sample;

The target population of the study consists of students from the Faculty of Humanities and Social Sciences at the University of El Oued. This faculty includes multiple disciplines ranging from psychology and sociology to philosophy and history, making it a diverse academic environment that provides the study with rich data and varied academic experiences and trajectories.

This faculty was specifically selected due to the nature of its humanities and social science specializations, which tend to make students more open to expressing their subjective experiences and more willing to participate in qualitative field research.

Sample

The study sample consisted of 250 male and female students, a size considered appropriate for balancing the requirements of the qualitative approach—which requires depth in analysis—with those of descriptive quantitative analysis, which necessitates a minimum level of numerical representation to ensure the reliability of the extracted percentages.

The researcher adopted a purposive heterogeneous sampling method in selecting participants, with the aim of capturing the widest possible range of experiences and perspectives. The selection was based on the following criteria:

Gender dimension: The sample included both male and female students in relatively balanced proportions, allowing the study to examine differences in patterns of sports participation and experiences of academic adjustment between genders.

Academic year dimension: The sample included students from different academic levels, ranging from first-year undergraduate to Master's level. This enabled the study to observe changes in the relationship between physical activity and academic adjustment throughout the students' university journey.

Interview

The interview was used as the primary data collection tool. It is one of the most widely used and effective qualitative research instruments in the social and human sciences.

The interview guide was structured around five interrelated main axes:

First axis: Level of physical activity practice

This axis aimed to identify the nature of the physical activity practiced by the student, including its type, frequency, and duration, as well as whether it was organized within formal activities or practiced informally in daily life.

Second axis: Motivations for practice

This axis sought to understand the underlying reasons behind students' engagement in or abstention from sports practice, whether these reasons were health-related, psychological, social, or cultural. This allows for a deeper understanding of the dynamics driving sports behavior within the university environment.

Third axis: The impact of sports on psychological well-being

This axis addressed the student's subjective experience regarding the effects of sports practice on mood, stress levels, sleep quality, and concentration, with the aim of exploring the psychological links between physical movement and emotional state.

Fourth axis: The impact of sports on academic adjustment

This axis examined how physical activity influences students' academic engagement, motivation to study, ability to manage time, and capacity to cope with exam-related stress.

Fifth axis: Students' perceptions of the relationship between sports and academic success

This axis explored the beliefs

Data Analysis Tool

Content Analysis

Content analysis was adopted as the main analytical tool for processing the qualitative data extracted from the interviews. It is one of the most widely used methodological approaches in qualitative data analysis due to its clarity, flexibility, and systematic nature.

First step: This consisted of the full verbatim transcription of the interview content from its recorded oral form into written text. This stage required a high level of accuracy to ensure faithful transcription and to preserve all linguistic and expressive details that might carry important analytical meanings.

Second step: The transcribed text was then segmented into smaller meaning units, with each unit representing a specific idea, position, or experience that could be classified and analyzed systematically.

Third step: This involved assigning codes or conceptual labels to each meaning unit in order to organize the diverse data within a classificatory system that facilitates processing, comparison, and interpretation.

Fourth step: This stage consisted of grouping semantically similar codes into broader categories representing coherent analytical domains, thereby paving the way for identifying the major patterns embedded in the data.

Fifth step: This was the deepest interpretative stage, in which the researcher identified the major thematic axes that organize all previous categories and codes, granting them a comprehensive explanatory meaning that addresses the study's research questions.

Presentation of Results According to Content Analysis

1. Level of Physical Activity Practice:

Table 1: Distribution of Students' Sports Practice

Category	Frequency	Percentage
Practice regularly (3 or more times per week)	110	44%
Practice occasionally	85	34%
Do not practice	55	22%

Source: Prepared by the researcher based on interview data.

These findings indicate that more than three-quarters of the sample (78%) engage in physical activity to some extent, which represents a positive indicator reflecting a relative awareness of the importance of movement in daily life. However, it is noteworthy that only 44% practice regularly according to internationally recommended standards, a proportion that remains below the desired level when compared to the recommendations of the World Health Organization, which advocate consistent weekly physical activity.

The 22% of students who reported not engaging in any physical activity constitute a group worthy of particular attention and follow-up. Interviews revealed that this group expressed the highest levels of academic stress and exam-related anxiety, thereby reinforcing the study's hypothesis that a functional relationship exists between physical activity and academic adjustment.

Interviews conducted with students who practice sports regularly consistently revealed two main thematic axes. The first relates to the direct psychological impact of physical activity, which most participants described as "improved mood."

2. The Impact of Sports on Psychological Well-Being

Table 2: The Impact of Sports on Students' Psychological State

Thematic Category	Frequency
Stress reduction	172
Improved concentration	148

Thematic Category	Frequency
Enhanced self-confidence	130
Improved sleep	95

Source: Prepared by the researcher based on interview data.

The most frequently reported psychological benefit was **stress reduction**, with 172 occurrences. This finding aligns with existing scientific evidence on the role of physical activity in regulating the body's stress response by lowering cortisol levels and stimulating the release of endorphins.

Improved concentration ranked second, with 148 occurrences. This benefit holds exceptional importance in the academic context due to its direct association with comprehension and study efficiency.

Enhanced self-confidence came third, with 130 occurrences, reflecting the cumulative effect of sports practice in building self-efficacy, which students transfer from the athletic domain to the academic sphere.

Finally, **improved sleep** ranked fourth, with 95 occurrences. Although it appears last in frequency, its.

The Impact of Sports on Academic Adjustment

Table 3: The Effect of Sports on Students' Academic Adjustment

Category	Frequency
Reduction of exam anxiety	180
Enhancement of social relations	160
Increased study motivation	140
Improved time management	120

Source: Prepared by the researcher based on interview data.

The category "**reduction of exam anxiety**" ranks highest in the study with 180 occurrences, indicating that students intuitively recognize the role of physical activity in alleviating symptoms of anxiety related to academic evaluation. "**Enhancement of social relations**" follows with 160 occurrences, demonstrating that sports contribute not only to individual psychological well-being but also to building the student's social capital within the educational institution. "**Increased study**

motivation” (140 occurrences) highlights the role of sports in renewing psychological energy and stimulating intrinsic motivation, encouraging academic engagement. Finally, **“improved time management”** (120 occurrences) suggests that regular physical activity fosters a form of temporal discipline that positively affects study organization.

Sociological Analysis of the Results

Functionalist Approach:

The study’s results indicate that sports perform an integrative function within the university system by promoting students’ psychological and social balance, thereby enhancing stability and reducing dropout likelihood. From a functionalist perspective, where society is viewed as an integrated system with each element performing specific roles to maintain equilibrium, sports act as a functional component that mitigates stress caused by academic pressures and restores balance, ensuring the continuity and effectiveness of the academic system.

Social Adaptation Theory:

Physical activity aligns closely with social adaptation theory, which posits that individuals continually seek to restore equilibrium between themselves and the demands of their social environment. University students face an environment laden with academic and social demands, and physical activity serves as an effective mechanism to recalibrate this balance, reflecting Tinto’s concept of academic and social integration.

Social Capital Perspective:

The adaptive function of sports also intersects with Bourdieu’s concept of social capital. Sports participation, particularly team sports, creates opportunities for developing social networks and friendships that extend beyond the athletic domain into the academic sphere. This accumulation of social capital enhances students’ sense of belonging and institutional integration, supporting academic persistence and reducing vulnerability. The prominence of **“enhancement of social relations”** among the main benefits of sports on academic adjustment in this study exemplifies this phenomenon.

Study Results

The study reached several key findings that address its research questions and collectively provide a comprehensive picture of the relationship between physical activity and academic adjustment:

There is a clear positive relationship between regular physical activity and students’ academic adjustment across cognitive, psychological, and social dimensions.

Students who engage in regular sports exhibit lower levels of academic anxiety, particularly during exams and evaluations, suggesting that physical activity acts as a protective factor against exam-related stress.

Physical activity significantly enhances the social dimension of academic adjustment by offering spaces for interaction, friendship formation, and social support networks within the university environment.

Time constraints remain the main barrier preventing students from engaging in sports, reflecting a sociological paradox: students forego an adaptive tool precisely because of pressures that such a tool could help them manage.

Qualitative data revealed a clear gender gap in physical activity patterns: female students participate less than male students, likely due to intersecting cultural, social, and infrastructural factors, including limited sports facilities for women on campus.

Study Recommendations

Based on the findings of this study, a set of practical recommendations can be proposed for various stakeholders within the university system:

***Integrate structured and regular sports programs** into the official university timetable as a mandatory requirement rather than an optional activity. Ensure the availability of well-equipped, accessible sports facilities within or near the campus.

***Organize periodic awareness campaigns** to educate students about the close link between physical health and academic performance, and to dispel the common misconception that sports drain study time.

***Develop sports programs and facilities that consider the cultural and social specificities of female students**, encouraging them to engage in physical activity within a safe and comfortable environment.

***Include physical activity as part of student counseling and psychological intervention programs**, and train counselors to utilize sports as both a therapeutic and preventive strategy to manage academic stress and exam anxiety.

Conclusion

The study concluded that engaging in physical activity is neither a form of leisure nor a marginal pastime resorted to during free time; rather, it constitutes a scientifically validated sociological and psychological mechanism for enhancing academic adjustment among university students. Sports play a dual, inseparable role: on one hand, they reduce psychological stress, restore emotional balance, and boost the student's cognitive energy; on the other hand, they strengthen social integration within the university system and reinforce the sense of belonging and institutional identity.

Collectively, these findings indicate that promoting a sports culture within Algerian universities should not be viewed as a mere institutional luxury but as a real and necessary investment in human capital. A student who is physically, psychologically, and socially balanced is better equipped to meet the demands of academic life and more likely to contribute effectively to post-graduation development. Therefore, any university educational policy that neglects the physical and health dimension in shaping the student's personality is essentially building on an incomplete foundation.

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Interview Questions

Physical Activity Questions:

1. Do you regularly engage in physical activity?
2. What type of physical activity do you practice?
3. How many times per week do you exercise?
4. What is your main motivation for practicing sports?

Academic Adjustment Questions:

5. Do you feel able to adapt to the demands of university study?
6. How do you cope with academic stress?
7. Do you believe that sports help you focus and improve academic performance?
8. Have you noticed any changes in your mental state during periods when you stop exercising?

Analytical Questions:

9. In your opinion, what is the relationship between physical activity and academic success?
10. What suggestions do you have to enhance sports activity within the university?