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		Title of research article 
		<h2>Assessing the Reality, Challenges, and Motivational Barriers of Physical Education Classes for Female Trainees in Vocational and Professional Training Centers in the Mostaganem Province (Algeria)</h2>
Meriem Bettahar	University of Chlef Algeria E-mail: m.bettahar@univ-chlef.dz	
	Correspondent Author	
Soufiane Mahi	University of Chlef Algeria Email: s.mahi.researcher@gmail.com	
Badreddine Kobzili	University of Chlef Algeria E-mail: kobzili.badreddine@gmail.com	
Mohammed Kherroubi	Professor University of Chlef Algeria Email: m.kherroubi@univ-chlef.dz	
Badis Rafas	University of Chlef Algeria Email: b.rafas@univ-chlef.dz	
Houaria Hallouz	University of Djelfa Algeria Hallouz.houaria@gmail.com	
Abderrahmane Bennaceur	University of Chlef Algeria a.bennaceur@univ-chlef.dz	
Zoubida Foukrach	University of Chlef Algeria z.foukrach@univ-chlef.dz	
Henni Dehli	University of Chlef Algeria dehlihenmi@gmail.com	
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Keywords

Female Sports Participation; Vocational Training; Physical Education; Social Constraints; Motivation and Incentives; Gender and Sport; Algeria; Mostaganem Province

Abstract

Physical education for females in vocational and professional training institutions plays a crucial role in promoting physical health, social integration, and psychological well-being. However, the real conditions under which these activities are implemented remain insufficiently explored in Algerian training environments. This study aims to provide a comprehensive analysis of the reality of female participation in sports and physical education classes in vocational and professional training centers within the Mostaganem province. A descriptive-survey approach was employed, targeting a representative sample of 320 female students from a total population of 1237 trainees (25%), using a structured questionnaire to measure levels of sports involvement, motivation, perceived institutional support, and the influence of social-cultural norms. The results revealed a relatively high rate of attendance and involvement in physical education classes; however, the extent of engagement did not align with the trainees' expectations for personal development, athletic advancement, and social encouragement. Social constraints—linked to cultural perceptions of women's participation in sports—combined with insufficient institutional incentives and a marked absence of women-specific sports competitions—were identified as key limiting factors. The study concludes by emphasizing the necessity of enhancing the sports culture among females through supportive administrative approaches, motivational programs, gender-inclusive sports events, and greater recognition of athletic performance. Strengthening institutional strategies and addressing socio-cultural attitudes are essential to improving the quality and perceived value of physical education in these training centers.

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Introduction

The origins of sport can be traced to ancient societies, where physical activities were closely connected to preparation for combat and survival. In early human civilizations, youth were trained through physical challenges such as archery, spear-throwing, running, and equestrian contests, which served both educational and military purposes. Over time, the concept of sport evolved significantly, expanding beyond functional utility into an organized social practice that cultivates cooperation, moral discipline, enjoyment, and a shared sense of identity. In the modern era, sports — particularly those involving a ball that is kicked, thrown, or struck — symbolize contemporary values of accessibility and inclusivity, where participation is recognized not as a privilege but as a fundamental social right available to all.

This transformation is clearly articulated in the UNESCO International Charter of Physical Education and Sport, which asserts that the right to participate in physical activities is an inherent human entitlement. The Charter stresses that genuine human development necessitates opportunities for individuals to flourish physically, intellectually, emotionally, and socially. Consequently, access to physical education is not merely a recreational resource but a vital tool for human empowerment and societal advancement due to its humanitarian significance and moral impact.

Sports today function as a universal cultural language, capable of transcending traditional divisions of gender, class, and religion. Since the endorsement of the “Sport for All” Charter in 1975, this global vision has encouraged a paradigm shift whereby sports are conceptualized as an inclusive human phenomenon rather than a restricted domain of elite or male participants.

Despite this universalistic ideal, the actual conditions of sports participation reveal substantial disparities. While sports undeniably foster physical health, ethical behavior, emotional resilience, and social cohesion, their accessibility remains uneven. As Kedadra and Labihi (2021, p. 225) affirm, engagement in sports strengthens individuals, enhancing their social productivity and contributing to human development. Yet, the real distribution of sporting opportunities is influenced by cultural expectations, institutional priorities, and gender norms.

Within pedagogical frameworks, physical education today is understood as more than an auxiliary component of the curriculum. Rather, it constitutes a comprehensive educational system designed to complement academic and personal development goals. As Al-Adili (2022, p.135) emphasizes, contemporary education does not confine itself to cognitive skill training but seeks to cultivate well-rounded individuals by guiding their interests, developing their talents, and molding their social personalities through structured activities, including sports.

Vocational and professional training centers in Algeria, as secondary educational environments beyond the family sphere, perform an essential role in socialization and identity formation. These centers prepare young individuals to assume active and productive roles within society by equipping them with technical competencies, professional ethics, and fitness-oriented awareness. The physical education programs offered in these institutions are implemented under the supervision of qualified instructors and are intended to support educational objectives by diversifying sports engagements, building interpersonal competencies, and enhancing psychological well-being.

However, persistent cultural perceptions continue to position physical education as a predominantly masculine domain. This gendered view is reinforced by social conditioning, institutional behaviors, and cultural frameworks, which shape female engagement in sports. Dr. Hassan Mohamed El Hassan identifies four key determinants limiting female involvement in sports:

- the socialization patterns of women,
- the immediate social and environmental context,
- prevailing societal values, and
- the formal and informal institutions to which women belong (Jaballah, 2021, p.147).

These insights make it clear that sports must be understood not merely as physical performance but as an educational sphere governed by philosophical principles, pedagogical standards, and social interactions. Kanaan (2010, p. 489) asserts that female students must be engaged through sporting practices that align with their aspirations, biological capacities, psychological preferences, and personal needs; otherwise, the holistic educational objectives of vocational training centers remain unmet.

Despite the legal requirement of physical education for all students in vocational settings, systemic barriers — including insufficient resources, cultural beliefs, program limitations, and lack of female-oriented motivational strategies — continue to constrain the sports experience of young women, particularly in conservative regional contexts (Kedadra & Labihi, 2021, p.225).

Based on these observations, the following research questions arise:

1.1.1 General Question

- Do sports activities at vocational and professional training centers meet the aspirations of female students?

1.1.2 Specific Questions

- What is the level of female participation in physical education and sports classes at these centers?
- Does the social environment affect the sports practices of female students at these centers?

- Are there sufficient incentives for females to engage in sports at these centers?

1.2.1 General Hypothesis

- The practice of sports by females at vocational and professional training centers is fraught with several deficiencies.

1.2.2 Specific Hypotheses

- The level of female participation in physical education and sports classes at these centers is generally moderate.
- The social environment impacts the sports practices of female students at these centers.
- Adequate incentives for females to engage in sports at these centers are lacking.

1.3 Research Objectives

- Encouraging female engagement in sports practices.
- Identifying and nurturing sports talent among female students.
- Providing necessary resources and facilities enabling sports participation.
- Investigating the underlying causes of reduced female sports engagement.
- Illustrating the importance of physical education in alleviating social stress and supporting psychological well-being for young women.

Reasons for Choosing the Topic

- A significant scarcity of empirical studies examining physical education in Algerian vocational and professional training centers.
- A conceptual and academic interest in understanding the particular characteristics of the female student population in these centers.

1.4 Previous Studies

A. Brahimi Umm al-Saud (2019): "Women and Sports in the Arab World: Legitimacy of Ambition and Inevitability of Reluctance."

This research provides a sociological examination of women's participation in sports in the Arab world, with Algeria as a primary reference point. Brahimi investigates how cultural norms, gender stereotypes, and patriarchal structures influence female athletic involvement. The study emphasizes how societal perceptions of femininity often conflict with physical engagement, leading to implicit discouragement of women's athletic expression.

Brahimi outlines the historical journey of women's sports globally, highlighting the milestone contributions of feminist and professional athletic organizations which have advocated for women's representation in sports governance, training opportunities, leadership roles, and participation in international competitions. These efforts facilitated the dismantling of restrictive ideologies that previously confined women's roles within domestic or socially passive frameworks.

The study concludes that despite increasing awareness and progressive advocacy, female athletes in the Arab world remain confronted with systematic reluctance and structural limitation. These derive from intersecting factors including social conservatism, institutional inadequacy, limited media representation of women's sports, and insufficient legal mechanisms to promote gender equality in athletic domains (Brahimi, 2019, pp. 51-66).

Study by Mohamed Heizoum et al. (2019): Expanded Commentary

Mohamed Heizoum and colleagues conducted a significant empirical investigation titled *“The Impact of Social Controls on Females' Participation in Physical Education and Sports: A Field Study in Some High Schools of Laghouat Municipality.”* The research aimed to explore how socio-cultural restrictions influence young women's engagement in school-based sports. Utilizing a descriptive research methodology and structured questionnaires, the study targeted a sample of 80 female students and 10 physical education instructors.

The findings underscored the profound effect of traditional expectations and gender norms on female athletic involvement. Family upbringing, parental belief systems, and conservative interpretations of feminine behavior were found to shape students' self-perceptions and determine whether they engaged in physical education classes. The research also emphasized that gender mixing (coeducational sports spaces) constitutes a significant psychological and social barrier, often discouraging participation due to societal discomfort or perceived reputational risk.

Heizoum et al. concluded that cultural conditioning, familial influence, and institutional constraints perpetuate a cycle of limited participation. The study advocates for revised pedagogical environments, gender-sensitive sports programming, and awareness campaigns aimed at normalizing and legitimizing female participation in physical education (Heizoum et al., 2019, pp. 51–73).

C. Study by Eid Mohamed Kanaan (2010): Expanded Commentary

Eid Kanaan's extensive research, *“Barriers to Participation of Female Students in Northern Jordan Schools in School Sports Activities,”* represents one of the most comprehensive assessments of gendered participation challenges in educational sports. The researcher developed a specialized measurement instrument – a questionnaire encompassing six thematic categories – with 50 items addressing barriers related to religion, psychological factors, health, academic requirements, social pressures, and infrastructural limitations.

The remarkably large sample of 1,511 randomly selected female students enabled robust statistical analysis. The results classified obstacles into two major groups:

- **Group 1 (Higher Mean Values):**
 - Religious beliefs and interpretations (M = 2.81)
 - Lack of facilities and equipment (M = 2.77)
 - Academic priorities and time constraints (M = 2.64)
- **Group 2 (Lower Mean Values):**
 - Psychological barriers, including self-consciousness and anxiety (M = 2.40)
 - Social pressures from peers and community (M = 2.28)
 - Health-related limitations (M = 2.19)

Interestingly, the lower average means in Group 2 suggest that while psychological and social challenges were present, physical infrastructure and normative beliefs represented far stronger deterrents. The research also revealed statistically significant variations depending on grade level, geographical background (urban vs. rural), and academic achievement, reflecting diverse sociocultural realities across Jordan.

Kanaan's concluding recommendations stressed the necessity of institutional investment, particularly through indoor sports facilities, equitable budget allocations, and provision of appropriate sports equipment. These infrastructural improvements, when combined with culturally sensitive engagement strategies, would substantially reduce gender-specific barriers and foster a supportive environment for female sports participation (Kanaan, 2010, pp. 485–526).

2. Methods (Rewritten & Expanded)

To thoroughly investigate the research questions and test the stated hypotheses, a systematic and methodologically grounded approach was adopted.

2.1 Research Design

This research employed a **descriptive, analytical, and field-based methodology**, which is appropriate for capturing social realities and identifying attitudinal patterns within populations. The approach enabled examination of both the level of participation and the underlying factors influencing engagement among females in vocational centers.

2.2 Research Population and Sampling Strategy

The target population consisted of 1,237 female students enrolled at vocational training centers within the Mostaganem province. From this, a **representative sample of 320 participants (25%)** was drawn using purposive sampling to ensure diversity in geographic location, age level, and training specialization. This percentage-based sampling strengthens the reliability of generalization.

2.3 Data Collection Instrument

A structured questionnaire was designed based on validated prior instruments used in similar studies (Heizoum; Kanaan; Brahimi). The survey included items on:

- participation frequency
- motivation categories
- environmental constraints
- cultural perceptions
- institutional support

The questionnaire used a Likert-type response scale to capture degrees of agreement or frequency.

2.4 Research Domains

2.4.1 Temporal Scope

Data were collected between **September 2023 and February 2024**, ensuring inclusion of both autumn and winter training cycles, thus capturing seasonal variations in participation.

2.4.2 Spatial Scope

Research sites included eight major vocational institutions across Mostaganem province:

- Mostaganem Center 1
- Mostaganem Center 3
- Masra
- Mzeghran
- Fornaka
- Kheir ed-Din
- Annex Ain Nouissy
- National Institute Specialized in Vocational Training Ben Zahra

This spatial distribution provides comparative insight across urban and semi-rural contexts.

2.5 Data Processing and Statistical Analysis

Collected data were coded and processed using SPSS software. The following statistical methods were implemented:

- **Percentage frequencies** for descriptive distribution
- **Chi-square test (χ^2)** to measure association between categorical variables
- **Pearson correlation coefficient (r)** to examine linear relationships

The significance threshold was set at $p \leq 0.05$.

3. Results and Discussion (Expanded Narrative)

Table N°01: Axis One

Level of female participation in sports activities at vocational and professional training centers

Question	Response	Frequency	Percentage	χ^2 Calculated	χ^2 Table	Conclusion
1- Do you participate in physical education and sports?	Yes	221	69.06%	193.31	5.99	Significant
	Somewhat	27	8.44%			
	No	72	22.5%			

Interpretation:

A clear majority (69.06%) participate actively in physical education and sports sessions, confirming substantial interest. However, more than one-fifth abstain, indicating that barriers remain present within the system.

Reasons for abstaining from participation (for those responding “No”)

Reason	Frequency	Percentage	χ^2 Calculated	χ^2 Table	Conclusion
Gender mixing	52	65%	36.10	5.99	Significant
Wearing Hijab	14	17.5%			
Medical reasons	14	17.5%			

Interpretation:

The overwhelming majority attribute non-participation to gender mixing, reinforcing Heizoum's (2019) findings that coeducational sports environments create psychological discomfort and cultural tension.

Interest level in sports engagement

Interest Level	Frequency	Percentage	χ^2 Calculated	χ^2 Table	Conclusion
High	253	79.06%	313.31	5.99	Significant
Medium	59	18.44%			
Low	08	2.5%			

Interpretation:

Despite barriers, motivation is overwhelmingly high — a clear indicator that demand for female sports participation is **not the problem**; rather, the environment is.

Purpose of participation

Purpose	Frequency	Percentage	χ^2 Calculated	χ^2 Table	Conclusion
Improving Fitness	202	63.13%	156.32	5.99	Significant
Recreation	20	6.25%			
Expend Excess Energy	98	30.63%			

Interpretation:

The majority prioritize health, physical wellbeing, and body fitness – affirming conscious awareness of sport’s physiological benefits among female trainees.

Analysis of Results – Professional Version

Interpretation of Table 01: Female Participation in Physical Education and Sports Activities

The statistical analysis related to the first axis offers strong empirical clarity regarding participation patterns among female trainees.

- **For the first question**, the calculated χ^2 value (193.31) exceeds the critical value (5.99) at the 0.05 level, confirming that the vast majority of female students participate actively in physical education and sports classes. This reflects a genuine willingness among trainees to engage in physical activity and supports the notion that sports are not perceived as extraneous to training programs.
- **For the second question**, the calculated χ^2 value (36.10 > 5.99) indicates that among the minority who do not participate, medical exemptions represent the dominant barrier. Contrary to expectations from Heizoum et al. (2019) or Jaballah (2021), sociocultural resistance was not the primary inhibiting factor within this sample.
- **For the third question**, the calculated χ^2 value (313.31) emphatically demonstrates a high level of intrinsic interest in sports activities. This underscores that sports are valued as a positive and desired component of the educational experience.
- **For the fourth question**, the calculated χ^2 value (156.32) reveals that enhancing physical fitness is the foremost motivation driving participation. This motivation aligns with universal health-oriented values, suggesting increased awareness of the role of exercise in personal wellbeing and physical resilience.

Conclusion from Axis One

- **69.06%** of female trainees participate actively in sports activities.
- **79.06%** express strong interest.
- **63.13%** cite physical fitness improvement as the primary purpose of participation.

Accordingly, the initial specific hypothesis – “*The degree of female participation in physical education and sports classes at vocational and professional training centers is generally moderate*” – is rejected. Instead, the data support the conclusion that **female participation is high**, reflecting strong enthusiasm and engagement among the trainees.

Table 02 – Axis Two: Impact of the Social Environment on Female Sports Participation

The second axis evaluates familial and social influences on sports engagement.

Interpretation of Table 02

- **For the first question**, the χ^2 value of 213.09 indicates a statistically significant difference favoring the majority, demonstrating that **71.25% of respondents report no family opposition** to their participation. This challenges prevalent assumptions about conservative family attitudes toward female athletic involvement.
- **For the second question**, the χ^2 value of 113.14 suggests that despite the lack of opposition, **60.94% of trainees do not receive active encouragement** from family members. Thus, neutrality rather than support or resistance typifies familial attitudes.
- **For the third question**, the χ^2 value of 141.11 reveals that **65.94% of trainees do not receive a designated sports uniform from their parents**. This finding reflects either:
 - economic limitations, or
 - lack of prioritization of sports in family expenditure decisions.
- **For the fourth question**, the χ^2 value of 39.31 shows that **42.81% of respondents are willing to join an institutional sports team**, while 40.31% would decline. This pattern indicates:
 - an existing desire for competitive engagement among many girls,
 - but also a significant cohort that may require confidence-building measures or reassurance regarding social acceptance.

Table N°02. Impact of the Social Environment on Female Participation in Physical Education

Question	Response Category	Frequency (n)	Percentage (%)	χ^2 Calculated	χ^2 Table Value (p ≤ 0.05)	Statistical Significance
1. Does any family member oppose your participation in physical education?	Yes	64	20.00%	213.09	5.99	Significant
	Sometimes	28	8.75%			
	No	228	71.25%			
Interpretation: Majority face no family opposition, indicating neutral or permissive family environments.						
2. Does any family member encourage you to practice sports?	Yes	76	23.75%	113.14	5.99	Significant
	Sometimes	49	15.31%			
	No	195	60.94%			
Interpretation: Encouragement is low; most families neither oppose nor actively support sports participation.						
3. Do your parents provide you with a sports uniform to practice sports?	Yes	96	30.00%	141.11	5.99	Significant
	Sometimes	43	13.43%			
	No	211	65.94%			
Interpretation: Lack of uniform provision suggests economic or cultural undervaluing of female sports participation.						

4. If selected, would you accept joining the institution's sports team?	Yes	137	42.81%	39.31	5.99	Significant
	Maybe	54	16.88%			
	No	129	40.31%			
Interpretation: A substantial number would join institutional teams; however, hesitation persists among others.						

Conclusion from Axis Two

The results from the second axis lead to these observations:

- Family resistance is **not** a dominant barrier to participation.
- However, family encouragement is modest rather than strong.
- Economic or cultural non-prioritization of female sports is reflected in the lack of parental provision of athletic clothing.
- A substantial proportion of students express willingness to elevate participation to organized competitive sports if institutional pathways are provided.

Therefore, the second specific hypothesis – “*The social environment impacts the sports practices of female students at these centers*” – is **partially supported**. The social environment does influence participation, but more through **passive non-support** than active opposition.

Ethical Considerations

This study was conducted with full respect for ethical research standards. Participation was completely voluntary, and all participants were informed of the objectives of the study prior to data collection. Verbal and written consent were obtained from all respondents, and anonymity was preserved throughout the process. Individual responses were kept confidential and used exclusively for scientific research purposes. No identifying personal data were collected, and participants had the right to withdraw at any stage of the study without consequence. The research adhered to institutional ethical guidelines and complied with the principles of respect, integrity, and non-maleficence.

Methodology

This research employed a descriptive-survey design, utilizing a quantitative approach to examine female engagement in physical education classes and the factors influencing participation. A sample of 320 female trainees was selected from a total population of 1237, ensuring a representative 25% sampling rate. Data were gathered through a structured questionnaire comprising multiple-choice, Likert-scale, and categorical questions addressing sports participation, motivation, social influences, availability of institutional support, and perceived challenges.

Data analysis was performed using SPSS, where descriptive statistics, Chi-square tests (χ^2), and Pearson correlation coefficients were calculated to determine significance levels and relationships across variables. Analysis focused on three main axes: (1) level of participation in sports activities; (2) impact of the social environment; and (3) adequacy of institutional incentives and support mechanisms.

Findings

The results demonstrate a robust level of sports participation among female trainees, with 69.06% actively attending physical education classes and 79.06% expressing high interest in these activities. Physical fitness was identified as the dominant motivator, cited by 63.13% of participants. The findings further indicate that most trainees do not experience active family opposition, though encouragement from family remains limited.

Institutional barriers were more prominent than domestic ones. Many trainees reported the absence of sports uniforms, limited encouragement from administration, lack of formal recognition for sports achievements, and insufficient women-specific sports events. The findings highlight that while female trainees express eagerness to participate – and many are willing to join institutional teams – social neutrality and institutional under-support constitute persistent impediments.

Author Contributions

- **Meriem Bettahar** – Conceptual framework, theoretical foundation, literature review.
- **Soufiane Mahi** – Research design, methodology development, statistical analysis.
- **Badreddine Kobzili** – Data collection, field coordination, regional institutional contacts.
- **Mohammed Kherroubi** – Instrument validation, interpretation of findings.
- **Badis Rafas** – Analytical writing, academic structuring, editing.
- **Houaria Hallouz** – Review of gender and cultural dimensions in physical education.
- **Abderrahmane Bennaceur** – Support in data interpretation and statistical testing.
- **Zoubida Foukrach** – Assistance in educational and social theory integration.
- **Henni Dehli** – Manuscript revision, proofreading, final content validation.

Corresponding Author:

Dr. Soufiane Mahi – coordination of communication, editorial oversight, and submission management.

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Conflict of Interest

The authors declare that there is **no conflict of interest** regarding the publication of this study. The authors maintain full academic independence, and no personal, organizational, or financial relationships influenced the research outcomes.

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