

The impact of the environment on women's participation in physical activities and sports clubs

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Abstract: The environment in which we live provides us with all the principles and ideas we acquire throughout our lives. In Arab society, women's participation in sports is subject to numerous standards and obstacles. There is significant apprehension surrounding women's involvement in sports, whether due to traditions, religion, or the patriarchal nature of society. Therefore, this study aims to determine the extent to which the environment influences women's participation in physical activities and their involvement in sports clubs. A descriptive approach was used, relying on questionnaires and the Mann-Whitney and Kruskal-Wallis tests to identify variables that generally influence women's participation in sports, such as sport type, age, and educational level. We also explored the relationship between indicators of women's interest in sports and indicators of their living environment. The study concluded that there is a correlation between women's interest in sports and their living environment, whereas the variables of sport type and age have no effect. Educational level influences women's interest in sports, while the same variables are also influenced by women's surrounding environment.

Keywords: environment, women, physical activities and sports, sports clubs

Introduction

It is self-evident that human behavior (movement, action, thought) is always acquired from the environment (subjective, external) surrounding him. Where the environment (community, family, school, etc.) works to provide its members with a set of ideas, principles, and even backgrounds to practice one job over another. Likewise, we find that women's practice of sports has been and still is the subject of question in many research and studies to this day, some of which have found that the family and society are the two social factors that most influence the choice of the type of sports (Mateo et al., 2021). Some have found that external factors, including the sports environment, educational context, social support, stereotypes, and gender roles in sports, influence adolescent girls' continued participation in, or cessation of, physical activity and sports in general (Moreno et al., 2024).

The environment is not just a well-defined concept, but a comprehensive, multi-faceted term that includes all conditions, factors, situations, and stimuli, the internal and external aspects that surround a person and are a cause and motivation for any behaviour he takes in his life. Thus, the environment becomes the space that encompasses the whole and, in one way or another, influences human behaviour: the family, the school, the university, the media, etc. Therefore, women's practice of sports nowadays remains hostage to the environment in which they live. This means that the characteristics of any environment are reflected in the behaviors we engage in in general, such as the difference between the characteristics of the secondary stage environment and the university environment. It was found that the university environment created difficulties and obstacles for girls, in particular, in practising physical activity and sports compared to the secondary stage environment, due to new characteristics of the university environment, such as cost (Arumi et al., 2025). Also, a study (Hanlon et al., 2019) concluded: "Characteristics of the physical environment on female participation in sports."

The impact of the environment on the extent to which women practice sports is clear on the one hand and hidden on the other hand. The environment is like the subconscious, meaning it affects, in one way or another, any decision, idea, or project we make. Thus, we find that the environment supporting women's practice of sports differs, of course, from the environment opposing their practice of sports, which is what many studies have reached, including the study that concluded that: "The environment supporting female students stimulated their determination to participate in sports and played a role in practice" (Iqra et al., 2020). Which has an infrastructure (moral or physical) for practicing sports will of course be the opposite of the environment it lacks, as confirmed by the study (Hazir & Raza, 2021): She found that cultural discourses, such as considering women's involvement in sports as reducing their femininity, are among the most important obstacles that discourage young women from practicing sports and also restrict and limit their participation by producing a prevailing traditional form of femininity through their choice and participation in specific sports and physical activities. Also, a study (Jannatul & Abdul, 2025) revealed that family expectations, religion, and stereotypes based on diversity and social class are among the most important social factors that hinder women's participation in sports. For the above reasons, in this study we aim to determine the extent to which the environment affects women's participation in physical sports and their involvement in sports clubs, according to the variables of type of sport, educational level, and age.

This study will begin with the following problem statement: To what extent does the environment influence women's participation in physical activities and sports, and their involvement in sports clubs?. To explore this problem, we will

address the following questions: Is there a correlation between indicators of girls' interest in sports and indicators of the environment in which they live? Also, what's the impact of the type of sport practised, educational level, and age on girls' participation in sports activities in general and their joining sports clubs, as well as the relationship between these factors and the surrounding environment in relation to women's participation in sports?. Therefore, this study's hypotheses are based on two main hypotheses for each variable: one null and one alternative. Our partial hypotheses relate to the three basic variables: the type of sport, the educational level, and finally, age.

Materials and methods

We will adopt a descriptive approach, which studies phenomena as they exist in reality. This approach focuses on accurately describing the phenomenon and expressing it qualitatively or quantitatively. We will choose the survey method, particularly because it saves time and effort, allowing us to study phenomena that are too large or complex for our current capabilities. Furthermore, the survey method allows us to generalise results to the population with similar characteristics to the sample.

For these reasons, our study sample consists of 21 girls enrolled in active sports clubs at the "Badji Mokhtar Complex" in Souk Ahras, Algeria. Table 1 shows their description.

Table 1. The statistics of the study sample

Variables and classifications		by level		Σ Each classification	Σ Each variable
		Secondary (12)	University (9)		
By sport	Athletics	06	01	07	21
	Football	03	03	06	
	Rhythmic dance	03	05	08	
By age	Under 20 years	10	02	12	21
	Under 30 years	02	04	06	
	Under 40 years	00	03	03	

Regarding the research instrument, we will rely on a questionnaire in this study. It is well known that any researcher's creation of a form or test does not occur in a vacuum but rather results from extensive research, including a review of previous work on the same topic. Therefore, after reviewing several similar studies, we developed a set of questions that represent and measure the indicators related to our topic among respondents. The questionnaire comprises 17 statements: 3 questions on the main study variables (type of sport, age, and skill level), 7 on indicators of interest in sports participation, and 7 on indicators of the environment surrounding women's participation in sports.

Results

The Kruskal-Wallis test for the first sub-hypothesis:

The variable for the type of sport practised, which likely includes more than two events (e.g., athletics, football, rhythmic dance), was used due to the data's abnormality. After entering the data into SPSS version 20, the results are shown in Table 2.

Table 2. Kruskal-Wallis test regarding the answers & the type of sport variable

Axis or Section	Sport Type	N	Rang moyen	Test de Kruskal-Wallis		H ₀	H ₁	Result
				Sig	Sig Description			
Indicators of interest in practice	Athletics	7	11.64	.067	>0.05	Accept	Reject	No differences
	Football	6	12.21					
	Rhythmic dance	8	11.00					
Environmental Indicators	Athletics	7	7.69	.010	<0.05	Reject	Accept	There are differences
	Football	6	14.67					
	Rhythmic dance	8	9.58					

Table 2 presents the Kruskal-Wallis test for differences among respondents in indicators of interest in sports practice and in indicators of the environment surrounding women's sports practice, by sport type (athletics, football, rhythmic dance). We find that the significance level for the "Indicators of Interest in Practice" section was 0.67, which is greater than 0.05. This means rejecting the alternative hypothesis H1 and accepting the null hypothesis H0, which states that there are no statistically significant differences between respondents in indicators of interest in sports practice attributable to the type of sport. Also, the significance level for the "Indicators of Environment" section was 0.10, which is less than 0.05. This means rejecting the null hypothesis H0 and accepting the alternative hypothesis H1, which states that there are statistically significant differences between respondents in indicators of the environment surrounding women's sports practice attributable to the type of sport.

The preceding results indicate that girls generally share similar interests in sports, meaning that the type of sport does not influence their responses, as they all have similar interests in participating. Conversely, the type of sport affected girls' responses to environmental indicators. Specifically, the environmental indicators surrounding girls' participation in sports differ by sport. This suggests that the environment surrounding women's participation in sports may have underlying biases or reservations about certain sports practised by girls, such as football (as evidenced by the sample's responses favouring football).

Kruskal-Wallis Test for the Second Sub-Hypothesis

For the age variable, which has more than two possible outcomes (less than 20 years, less than 30 years, less than 40 years), and due to the abnormality of the study data, we will use the Kruskal-Wallis test to test the second sub-hypothesis. After entering the data into SPSS version 20, we obtained the results shown in Table 3.

Table 3. Kruskal-Wallis test regarding the answers according to the age variable

Axis or Section	Age	N	Rang moyen	Test de Kruskal- Wallis		H ₀	H ₁	Result
				Sig	Sig Description			
Indicators of interest in practice	Under 20	12	11.71	.732	>0.05	Accept	Reject	no differences
	Under 30	6	9.58					
	Under 40	3	11.00					
Environmental Indicators	Under 20	12	8.83	.027	<0.05	Reject	Accept	There are differences
	Under 30	6	7.08					
	Under 40	3	12.50					

Table 3 presents the results of the Kruskal-Wallis test for differences among respondents in indicators of interest in sports practice and in indicators of the environment surrounding women's sports practice, by age group (under 20 years, under 30 years, under 40 years). The results show that the significance level for the "Interest Indicators" section was 0.732, which is greater than 0.05. This means rejecting the alternative hypothesis H₁ and accepting the null hypothesis H₀, which states that there are no statistically significant differences among respondents in indicators of interest in sports practice attributable to age. Also, the significance level for the "Environment Indicators" section was .027 which is less than 0.05. This means rejecting the null hypothesis H₀ and accepting the alternative hypothesis H₁, which states that there are statistically significant differences among respondents in indicators of the environment surrounding women's sports practice attributable to age.

The preceding results indicate that age does not affect girls' interest in sports or their participation in sports clubs; in other words, their interest is similar. Conversely, age does influence girls' responses regarding the environmental factors surrounding women's participation in sports. Specifically, this influence is greater among younger girls (the sample's responses favoured those under 40), as this age group tends to have stronger attitudes and interests than other younger groups. In other words, the environment surrounding women's participation in sports has a greater influence on younger girls' participation, and this influence diminishes as

they get older. This can be explained by the girls' determination to participate in sports despite the influence of their surrounding environment.

The Mann-Whitney test was used to test the third sub-hypothesis

Since we will be testing for differences in indicators of interest in sports and indicators of the environment surrounding women's sports participation, based on the educational level variable (which includes only two possible events: secondary school, university level), and due to the abnormality of the study data, we will use the Mann-Whitney test to test the third sub-hypothesis. After entering the data into SPSS version 20, we obtained the results shown in Table 4.

Table 4. Mann-Whitney test results & the educational level variable

Axis or Section	educational level	N	Rang moyen	Kruskal-Wallis Test		H ₀	H ₁	Result
				Sig	Description			
Indicators of interest in practice	Secondary	12	13.13	.047	<0.05	Reject	Accept	There are differences
	University	9	8.17					
Environmental Indicators	Secondary	12	10.88	.917	>0.05	Accept	Reject	no differences
	University	9	11.17					

Table 4 presents the results of the Mann-Whitney test for differences between respondents on indicators of interest in sports participation and indicators of the environment surrounding women's sports participation, by educational level (secondary, university). The results show that the significance level for the "Interest Indicators" section was 0.47, which is less than 0.05. This means rejecting the null hypothesis H₀ and accepting the alternative hypothesis H₁, which states that there are statistically significant differences between respondents in indicators of interest in sports participation attributable to the educational level variable. On the other hand, the significance level for the "Environment Indicators" section was .917 which is greater than 0.05. This means rejecting the alternative hypothesis H₁ and accepting the null hypothesis H₀, which states that there are no statistically significant differences between respondents in indicators of the environment surrounding women's sports participation attributable to the educational level variable.

The preceding results indicate that, first, the educational level variable affects the degree of interest in sports participation. Second, the educational level variable does not affect the girls' responses in the environmental indicators section. The meaning is that interest in practising sports is subject to the educational level variable, and conversely, the environmental indicators are identical among girls and are not subject to the educational level variable, meaning that the environment

surrounding women's practice of sports has no apprehension or background regarding women's practice of sports according to the educational level variable.

Testing the main hypothesis

Since we will be measuring the correlation between indicators of girls' interest in sports and indicators of their environment, we will use Pearson's correlation coefficient to test the main hypothesis. After entering the data into SPSS (version 20), we obtained the result shown in Table 5:

Table 5. Correlation between indicators of interest in sports and indicators of the environment surrounding women's participation in sports

Description		Indicators of interest in participation	Indicators of the environment surrounding women's participation in sports
Indicators of interest in participation	Corrélation de Pearson	1	.787**
	Sig		.000
Indicators of the environment surrounding women's participation in sports	Corrélation de Pearson	.787**	1
	Sig	.000	

Table 5 presents Pearson correlation coefficients indicating the degree of correlation between indicators of interest in sports participation and indicators of the environment surrounding women's participation in sports among respondents. We find that: The Pearson correlation coefficient between the two indicators is 0.787, indicating a strong correlation between the two indicators. The significance level is 0.00, which is less than 0.05. This means rejecting the null hypothesis H0 and accepting the alternative hypothesis H1, which states there is a correlation between indicators of interest in sports participation and indicators of the environment surrounding women's participation in sports among the respondents.

Based on the above, and since the Pearson correlation coefficient is greater than 0.05 indicating a correlation between indicators of interest in sports participation and indicators of the environment surrounding women's participation in sports among the respondents, and since the significance level is less than 0.05 this means rejecting the null hypothesis H0 and accepting the alternative hypothesis H1, which states: There is a statistically significant correlation between indicators of girls' interest in sports participation and indicators of the environment in which they live. The preceding results indicate a strong correlation between women's participation in sports and their living environment. The environment surrounding a woman's participation in sports significantly influences whether or not she chooses to participate.

Discussion

On the one hand, we found that the variables of sport type and age do not affect indicators of interest in, or lack thereof, sports participation. This means that a woman's participation in and interest in sports are entirely unrelated to the type of sport or age. In other words, a woman is simply interested in participating in sports, regardless of the sport she plays or her age. Women's interests when participating in sports naturally differ from men's, as confirmed by the study (Soares, 2013). The results show that boys tend to prefer competitive activities, driven by a desire to win and gain popularity. Girls, on the other hand, tend to prefer health and fitness activities, driven by a desire to make friends. Based on this, we find that there are other factors that may influence women's interest in or lack thereof in sports. These factors have been identified in numerous studies, some of which found that societal expectations and traditional norms are major obstacles restricting women's participation in sports. These obstacles include issues related to dress and physical appearance, a lack of dedicated sports facilities, and limited mobility due to cultural and religious norms (Irfan & Aqsa, 2025). Other studies have found that economic barriers, a lack of infrastructure and sports culture, limited job opportunities, insufficient knowledge, and social and cultural obstacles are all fundamental reasons limiting women's participation in both sports and society (Debashree et al., 2025). Furthermore, findings indicate that the ethics of physical education, gender issues, religion and culture, and the conflict between religion and feminism are among the obstacles to female participation in sports (Rizwan et al., 2025).

Contrary to the above, the type of sport and age influence the indicators of the environment surrounding women's participation in sports. This means that the environment surrounding women's participation in sports, in its broadest sense, varies in perspective depending on the sport and the woman's age. Society and family permit women to participate in sports at a certain age, while prohibiting it after a certain age. For example, the Arab family's perspective on women playing football differs radically from their perspective on women playing swimming because football is perceived as more masculine. This masculinity does not mean that the Arab family accepts sports with a feminine character; rather, other factors and constraints come into play, further limiting Arab women's participation in sports. For instance, the Arab family and society do not accept the idea of women practising rhythmic dancing due to the rules of this sport, which are considered incompatible with religion and social customs, such as dress codes. Therefore, the support women receive for participating in sports is a crucial factor in their decision to do so, as confirmed by the study by Iqra et al. (2020), which found that a supportive environment, including coaches, parents, and peers, significantly motivates female students to participate in sports. This aligns with the findings of Jannatul & Abdul (2025), who identified family expectations, religious conservatism,

and gender stereotypes as key social factors hindering women's participation in sports. Indeed, this encompasses all elements of the environment, regardless of their specific definition. Just as a woman's participation in sports is influenced by the family as her immediate environment, it is also affected by society as a larger environment, by education as a framework for this environment, and by religion and laws as broader environmental frameworks, and so on. This is the conclusion reached by the study (Joanne et al., 2025).

The environment, in its general sense, is closely related to the practice of sports activities in general, as specialized literature in the two fields (geography and sports) has led to the conclusion that "sports geography" has taken two main directions: the geography of sports categories (where it studies the preference for some sports in different regions), the geography of sports infrastructure (where it identifies the locations of sports clubs, stadiums, sports facilities, etc.), and the geography of sports events (the venues for organizing sports events and their requirements)(Chirazi, 2019). This relationship between the environment and sports includes all practitioners, male and female, as many studies have proven the result that training in different environmental conditions may be a motivator for athletes to engage in their sporting activities, especially those effects that touch the physiological and biochemical aspects of athletes(Paul et al., 2017). This relationship can even create barriers that limit women's participation in sports, much like the existence of environments characterised by sexism and stereotypes that diminish women and their sport, reproducing restrictive gender norms for women, and even being structurally embedded in women's sports environments. This extends to official sports governing bodies, which, in one way or another, limit women's participation in sports. A European Commission report confirms that statistics show the number of active men exceeds that of women. Women in leadership positions in sports remain a minority and face numerous obstacles. On average, women hold only 14% of senior leadership positions in sports federations across EU member states (European Commission, 2022).

Regarding the results obtained for the third sub-hypothesis, we found that the educational level variable influences indicators of interest in, or lack thereof, sports participation. This means that a woman's educational level is a determining factor in her participation in sports. The higher a woman's educational level, the more natural her participation in sports becomes; the lower her educational level, the more difficult it is for her to participate. It is as if, in this context, a woman with a higher level of education is more inclined to participate in sports, and vice versa. While it is commonly believed that girls nowadays have ample opportunities to participate in sports and that those who do not simply choose not to because they are not interested (Cheryl, 2009), this perspective is entirely incorrect. A woman's

lack of participation in sports does not necessarily mean that she has chosen not to participate of her own free will. Rather, it is due to countless factors and variables that deprive women of sports, including family, school, society, friends, and the media. However, educational level often remains a crucial factor in women's participation in sports, as confirmed by numerous studies. One such study highlighted the impact of educational attainment on athletic practice, finding changes in health behaviours and sports practices between high school and university, as well as factors such as institutional infrastructure, teacher attitudes, and social influence (Marianna, 2019).

Our main hypothesis is that there is a statistically significant correlation between girls' interest in sports and the environment in which they live. This means that an environment conducive to women's participation in sports will undoubtedly be supportive and encouraging, and vice versa. An environment that provides women with opportunities to participate in sports will, in one way or another, encourage them to do so. One study found a relationship between participation in traditionally male-dominated sports and gender role beliefs related to the abilities and interests of women and men. Women who participated in at least one traditionally male-dominated sport during elementary or secondary school exhibited more gender-neutral attitudes (Andréanne & Richard, 2025). This suggests that providing women with opportunities to participate in sports is itself a motivating factor, encouraging them to view sports more neutrally rather than negatively due to their exclusion. And like depriving her of media coverage, which in one way or another reduces the size of women's participation in sports, as confirmed by the study (Beth, 2023), whose results showed increases in neutral sports and sports practised by males at the expense of sports practised by women.

Also, many studies have shown that the problem of the lack of women's participation in sports in our contemporary time is mainly due to the influence of the environment in which we live, which does not allow women to practice sports simply, whether it is society or the sports system itself, which works to exclude women from practicing sports in a fair and transparent manner, such as the case of gender inequality in sports, which many studies have concluded, including the study (Selçuk, 2022), which acknowledged the existence of gender stereotyping in sports and its impact on success in team sports, and its results indicated that the impact of gender inequality varies in size and direction according to the type of sport.

Conclusion

Despite the level of modernity and progress we witness in our contemporary lives across all fields, many taboos and prejudices persist in today's societies. The topic of women's participation in sports is one such issue that remains confined by

traditions and prejudices instilled in individuals by their societies. Changing these misconceptions is perhaps not solely within the power of women themselves, but rather a collective responsibility of all social institutions (family, school, media, etc.), each of which must work to ensure that women's participation in sports is a guaranteed right, not a point of contention. Through this study, we arrived at the following conclusion: the type of sport and age do not affect girls' interest in sports in general. Conversely, we found that sport type and age affect indicators of the environment surrounding women's participation in sports. Also, educational level affects girls' interest in sports in general. Conversely, we found that educational level does not affect indicators of the environment surrounding women's participation in sport.

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