

## ARTICLES

## GENDER AND PHYSICAL EXERCISE IN ADOLESCENTS AND COLLEGE STUDENTS

VIVIANNE OLIVEIRA GONÇALVES<sup>I</sup>JUAN PARRA MARTÍNEZ<sup>II</sup>TRANSLATED BY Luiz Inacio Schneider<sup>III</sup>**ABSTRACT**

*Our goal was to investigate gender and age differences regarding physical exercise in a sample of adolescents and higher education students in the Province of Toledo. A questionnaire was administered to 442 students, and discussion groups were held with 75 participants. Males were found to exercise more and to dedicate more time to physical exercises, regardless of age. Results for the focus groups indicate that the goals of and motivation for exercising can vary according to gender; we also found stereotypes and the traditional gender association with different sports, although practice is shared in the case of some sports.*

**GENDER • STEREOTYPES • PHYSICAL EDUCATION • SPORT**

## GÉNERO Y PRÁCTICA DE EJERCICIO FÍSICO DE ADOLESCENTES Y UNIVERSITARIOS

**RESUMEN**

*El objetivo ha sido investigar las diferencias de género y edad con relación a la práctica de ejercicio físico en una muestra de adolescentes y universitarios. Se aplicó un cuestionario a 442 estudiantes y se realizó grupos de discusión con 75 participantes de la Provincia de Toledo. Se ha observado que los chicos practican más ejercicio físico e invierten más tiempo en la práctica, independientemente de la edad. Los resultados apuntan que los objetivos y la motivación para la práctica de ejercicio físico son diferentes según el género, siendo encontrados estereotipos y la tradicional vinculación de género a los distintos deportes, aunque se observa que en algunos deportes la práctica es compartida.*

**GÉNERO • ESTEREOTIPOS • EDUCACIÓN FÍSICA • DEPORTE**

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## LE GENRE ET LA PRATIQUE D'EXERCICES PHYSIQUES CHEZ LES ADOLESCENTS ET LES ÉTUDIANTS UNIVERSITAIRES

### RÉSUMÉ

*Ce travail examine les différences en termes de genre et d'âge concernant la pratique d'exercices physiques d'un échantillon d'adolescents et d'étudiants universitaires. Un questionnaire a été soumis à 442 étudiants et des groupes de discussion de 75 participants ont été établis à Toledo. On a observé que les garçons pratiquaient plus d'exercices physiques et investissaient plus de temps dans leur pratique, indépendamment de l'âge. Les résultats des groupes de discussion ont mis en relief que les objectifs et la motivation de la pratique d'exercices physiques sont différents selon le genre, et qu'ils reproduisent les stéréotypes, ainsi que les rapports traditionnels reliant certains sports à un genre en particulier, même si la pratique est partagée pour certaines modalités sportives.*

**GENRE • L'STÉRÉOTYPES • ÉDUCATION PHYSIQUE • SPORT**

## GÊNERO E PRÁTICA DE EXERCÍCIO FÍSICO DE ADOLESCENTES E UNIVERSITÁRIOS

### RESUMO

*O objetivo foi investigar as diferenças de gênero e idade com relação à prática de exercício físico em uma amostra de adolescentes e universitários do Estado de Toledo. Aplicou-se um questionário a 442 estudantes e realizaram-se grupos de discussão com 75 participantes. Observou-se que os homens praticam mais exercício físico e investem mais tempo na prática, independentemente da idade. Os resultados dos grupos de discussão apontam que os objetivos e a motivação para a prática de exercício físico são diferentes de acordo ao gênero, sendo constatados os estereótipos e a tradicional vinculação de gênero aos diferentes esportes, apesar de que em algumas modalidades esportivas a prática é compartilhada.*

**GÊNERO • ESTEREÓTIPOS • EDUCAÇÃO FÍSICA • ESPORTE**



**OVER THE LAST DECADES, SEVERAL SCIENTIFIC STUDIES HAVE DEMONSTRATED THAT THE** regular practice of physical and/or sports exercise has significant health benefits (REINER-HEINRICH et al., 2013; WARBURTON; BREDIN, 2017). However, some of the main health problems found in today's society can be associated with high rates of physical inactivity (OMS, 2010; TROST; BLAIR; KHAN, 2014). The health problems that physical inactivity can cause include overweight, obesity and their resulting diseases such as high blood pressure and skeletal or muscle problems (MONASTA et al., 2010; McCARTHY et al., 2014; SELVENDRAN et al., 2018).

Other studies indicate that the practice of physical-sportive exercise tends to gradually decrease as the age advances, particularly in the case of women (DUMITH et al., 2011, MURILLO PARDO et al., 2015). In fact, some authors point out that in the last phase of adolescence and the first phase of adulthood there is a significant drop in the practice of physical exercise and/or sports (COCCA, MAYORGA, VICIANA, 2013).

With regard to gender-related differences in the rates of physical-sportive practice, many factors can help explain why men are generally more active than women, from the stereotypes and gender differences formed in one's early years by influence of family and peers, physical education classes and other sports activities, to the motivation and attitudes regarding practice.

According to Blández, Fernández-García y Sierra (2007), in the field of sportive and physical activities, investigations on gender stereotypes

have been conducted from three main perspectives: a) the attribution of masculinity and femininity traits and the setting of gender roles in physical and sports activities; b) the integration of traits and physical characteristics into the different physical and sports activities, and its subsequent gender stereotyping; and c) the stereotypes in relation to the social acceptability which combines different activities and their gender typification and participation.

Thus, researchers are no longer concerned only with the quantitative results in sports practice, but they are also stressing the qualitative aspects. The focus of research now includes youths' motives for exercising, the circumstances that motivate them to or not to practice some sport, the influence of the social environment on their beliefs and the changes that their experiences can cause to those beliefs (FERNÁNDEZ-GARCÍA, 2007).

## METHODOLOGY

This is a descriptive, transversal study. We used different investigation methods in a combined qualitative and quantitative approach. Our goal in the quantitative phase was to describe the practice of sports and exercise according to gender and age in a sample of adolescents (13-17 years of age) and higher education students (19-27 years of age). On the other hand, the qualitative phase of the study aimed to identify the perception of participants about the stereotypes more traditionally related with physical exercise, sports and the body.

## SAMPLE

The population of the study is formed by adolescents and college students of both sexes enrolled at public schools and at the University of Toledo (Spain). With regard to the centers and courses, the sample was selected using incidental sampling according to the availability that students manifested for data collection.

The sample in the quantitative phase of the study was formed by a total of 442 students (57,5% of which boys, and 42,5% girls) divided by profile (237 adolescents and 205 college students) in the following locations in the province of Toledo: Toledo, Talavera de La Reyna and Madridejos. The adolescent sample was made up of 237 students (50.2% of which boys and 49.8% girls) of which 27.4% were in the 3<sup>rd</sup> grade (Spanish mandatory secondary education), 29.1% were in the 4<sup>th</sup> grade of ESO, and 43.5% were in 1<sup>st</sup> grade of baccalaureate (also in secondary education). The profile characterized by college students totaled 205 subjects (65.9% of which were males and 34.1% females) enrolled in the Sport Sciences (2<sup>nd</sup> and 4<sup>th</sup> years) and Environmental Sciences (2<sup>nd</sup> and 4<sup>th</sup> years) degree programs at the University of Castilla-La Mancha, in

Toledo. Ages ranged from 14 to 17 years (grades 3 and 4 ESO and grade 1 of bac.) for adolescents, and from 19 to 27 years (2<sup>nd</sup> and 4<sup>th</sup> years of Sport Sciences, and 2<sup>nd</sup> and 4<sup>th</sup> years of Environmental Sciences) for college students.

From the sample above we formed a second sample for the qualitative phase of the investigation in order to gain further insights on the variables studied. The qualitative phase sample was formed by 75 students from the locations above, and they were divided in ten discussion groups, with each group based in a different education unit, and according to gender.

## **INSTRUMENTS**

To collect data for the quantitative phase, the participants completed an identification questionnaire including school/course name and form number, as well as their age, weight, height and the amount, type and frequency of sports/physical activity practiced. The sportive-physical exercise variable was estimated through items which were valued through questions that assessed two items: hours per week and months per year.

The number of participants in each discussion group varied from five to six people, as suggested by Alonso (1998), who considers five as the minimum. We chose to design a script with open-ended questions about the practice of sports and/or physical exercise.

## **PROCEDURES**

To contact the participants, a letter presenting the study was sent to the institutions and school managers requesting their cooperation. The survey days were scheduled through arrangements which the teachers and principals. The parents of the adolescents completed an informed consent form on behalf of their children, which was later returned to the researcher. All the participants voluntarily agreed to participate in the survey after receiving the instructions from the researchers.

## **DATA ANALYSIS**

Data collected for the quantitative phase were analyzed using SPSS 17.0. Statistic description was conducted using contingency tables organized by gender and age. To formally codify and categorize the data collected from the opinions expressed at the discussion groups, we used Atlas.ti software. A code formed by three letters was assigned to each quote and, later, to each category. Once the codification process was complete, the codes were reorganized by similarity of meaning, thus originating the categorization.

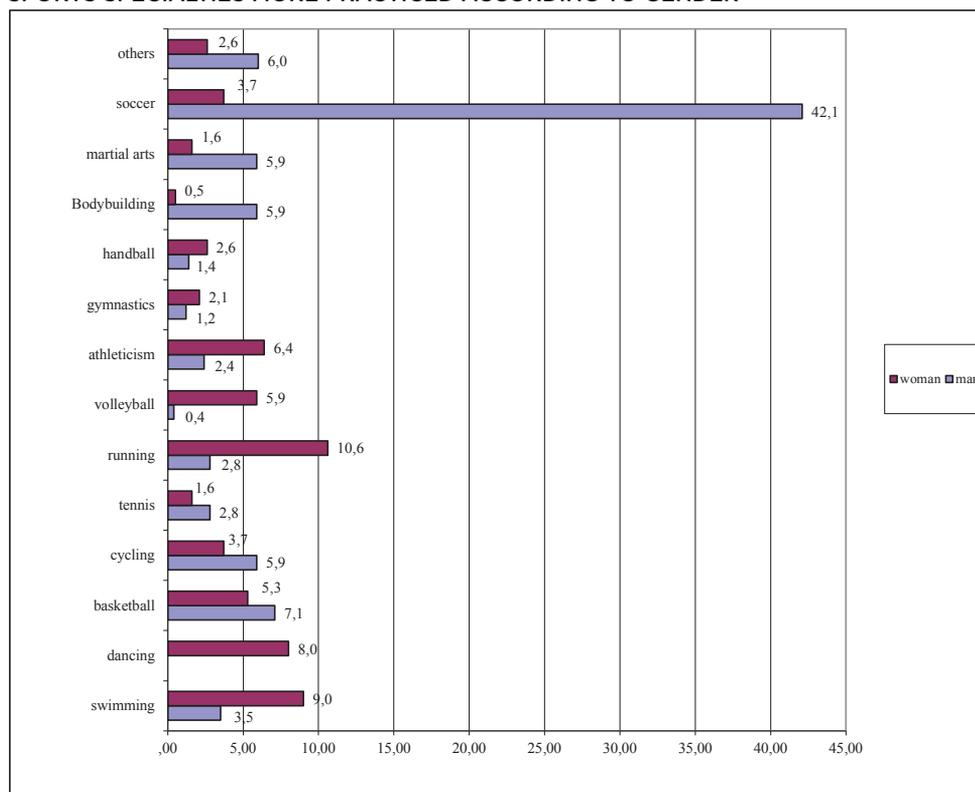
## RESULTS

### RESULTS FOR THE QUANTITATIVE DATA

Of the total sample (N=442), 7.8% reported practicing some kind of sport or physical exercise, though with a large practice frequency variation; another group (22.2%) doesn't practice physical exercises of any kind ( $X^2 = 136.91$  and  $p < .000$ ). Significant differences between boys (89%) and girls (62.8%) were found for sports/physical exercise practice ( $X^2 = 43.01$  and  $p = .000$ ), indicating that the number of boys who practice sports is significantly greater than that of girls.

#### GRAPHIC 1

##### SPORTS SPECIALTIES MORE PRACTICED ACCORDING TO GENDER



Source: Authors' elaboration.

As for gender differences in the various sports and exercise types, soccer was found to be the sport that boys practice most (42.1%), with a small participation of girls in this sport (3.7%). The sports and exercise types most practiced by girls are running (10.6%), swimming (9%), dancing (8%) and athletics (6.4%). Therefore, it is worth highlighting that differences of participation between boys and girls in some stereotyped activities remain, like in soccer. However, the practice of activities like athletics, swimming and cycling seems to be shared by both genders.

Considering the participation in sports and physical activities according to the age profiles in the sample (adolescents and college

students), again, participation was found to vary by gender. In the adolescent group, the differences are significant (83.2% of boys vs. 62.7% of girls;  $X^2=12.60$  y  $p=.000$ ). In addition, adolescent boys practice more soccer and martial arts, while girls practice more dancing. As for the higher education group, we also found significant differences in the practice of sports and physical exercise (94.1% of males and 62.9% of females;  $X^2=32.47$ ;  $p=.000$ ). Male college students practice more soccer and swimming compared with their female counterparts. According to these results, males practice more sports than females, regardless of age.

On the other hand, we found that the university students practice more physical exercise and sports than the adolescents (Table 1). However, it is necessary to consider that most college students in the sample are enrolled in a Sports Sciences program. The college students practice more soccer, swimming and bodybuilding, while the adolescents are more involved in martial arts.

By comparing the practice of sports and/or physical exercise by females according to age, we found significant differences (Table 1). With regard to the activities that female adolescents and college students practice most, female adolescents were found to practice dancing more than female college students ( $X^2=3.98$ ;  $p=.043$ ).

**TABLE 1**  
PERCENTAGE IN PHYSICAL-SPORT PRACTICE ACCORDING TO AGE AND SEX

AFD	MAN				WOMAN			
	NO	YES	$X^2$	$P$	NO	YES	$X^2$	$P$
teenagers	16.8%	83.2%	7.63	.006**	37,3%	62.7%	.000	.984
university students	5.9%	94.1%			37,1%	62.9%		

Source: Authors' elaboration.

\* $p \leq .05$  \*\* $p \leq .01$  \*\*\* $p \leq .001$

Considering the practice of physical exercise and sports by age in the total adolescent group, we found that it tends to decrease, as the percentage was 78.5% for students in grade 3 ESO, 73.9% for grade 4 and 68.9% for grade 1 of baccalaureate, though differences are not significant.

**TABLE 2**  
**PERCENTAGE IN THE FREQUENCY OF PHYSICAL-SPORT PRACTICE**

HOURS/WEEK	0 TO 1	2 TO 3	4 OR MORE	$X^2$	$P$
man	14.6%	34.3%	51.2%	49.45	.000***
woman	42.5%	34%	24.5%		
MONTH/YEAR	0 TO 1	2 TO 3	4 OR MORE	$X^2$	$P$
man	11%	5.5%	83.5%	49.16	.000***
woman	38.8%	6.4%	54.8%		

Source: Authors' elaboration.

\* $p \leq .05$  \*\* $p \leq .01$  \*\*\* $p \leq .001$

When we discriminate for age profile and sport/activity type, males practice more than females, i.e., they dedicate more time to practice. In the adolescent group, we found a higher percentage for boys regarding time dedicated to practicing sports/physical exercise both in hours per week ( $X^2=23.65$ ;  $p=.000$ ) and months per year ( $X^2=13.5$ ;  $p=.001$ ).

In the higher education group, we found results similar to those of the group above, i.e., a greater percentage for males regarding practice frequency, while females were found to dedicate less time. Results are significant both in terms of hours per week ( $X^2=30.94$ ;  $p=.000$ ) and months per year ( $X^2=39.33$ ;  $p=.000$ ).

Nevertheless, by comparing the age profiles of (adolescents vs. college students) with regard to sports and/or exercise frequency, we found significant differences in the amounts of hours per week ( $X^2=6.37$ ;  $p=.041$ ) and months per year ( $X^2=12.20$ ;  $p=.002$ ) for male participants. Therefore, results show that, compared with male adolescents, male college students devote more time to sports and/or physical exercise practice.

However, by comparing the scores for female adolescents and college students, we found no significant differences in the amounts of hours per week and months per year dedicated to physical exercise and/or sports.

## RESULTS OF THE QUALIFYING DATA

With respect to males' greater interest in and practice of sports and/or physical exercise compared to females, the opinions expressed by discussion group participants attributed this phenomenon to several factors:

- women's lack of sports habits and involvement: "Yes, they do practice sports, but not so much, because they don't like it so much. They don't like being sweaty, they worry about their image" (grade 1 of baccalaureate, male);
- the sexist traits of some physical exercises and/or sports: "You have to say, also, that some sports are mostly women sports, for example, volleyball is played much more by women than by men. Rhythmic

- gymnastics and the ones that are more fashionable... spinning for example” (2<sup>nd</sup> year of Environmental Sciences, male);
- the existence of stereotypes related to man and woman in the Western culture: “In the best hypothesis that one, maybe it’s a traditional thing, something that remains in the culture. Traditionally in Spain, women stay in the kitchen and men go to the bar, so to speak. Then, men have always spent more time outdoors, they’ve always had more free time, so this, too, has determined the situation” (grade 4 ESO, male);
  - the goals in and motivation for practicing sports and physical exercise differ according to gender: “Yes, women exercise more to lose weight, things like cardio, running, cycling, and men prefer things for the muscles” (4<sup>th</sup> year of Sports Sciences, female); “I think we girls, we always do it to get thin, lose weight, for the looks, and boys because they like it, for hobby and some take to bodybuilding and everything. Boys are usually more active” (4<sup>th</sup> year of Sports Sciences, female).

On the other hand, results of the qualitative analysis mostly reflect a positive opinion about doing sports and physical exercise as the best way to get good health and physical wellbeing, besides improving one’s physical appearance.

*Yes, but that was in previous generations, I can tell you that in my generation there’s more and more girls practicing sports. In my class... Well, my class is very particular, but yeah, in the new generations there’s more sports practice, people are more aware that it’s vital form them to exercise, I mean, it’s because you have to do it, you have to be in a great shape and your life will be affected - you’re going to have a life that’s worse, you’re going to live less, you’re going to be sick -, and I think people are beginning to understand that physical exercise is something that can bring you benefits, it brings you wellbeing and people can experience that. So girls who start to experience being physically better (they may do it for esthetics, right?), well, that’s a factor that makes them take to sports. (4<sup>th</sup> year, Sports Sciences, male)*

Although the positive effects of physical exercise to health are clear to them, participants stress that not all types of exercise and sports practice are guaranteed to have only physical and psychological benefits. Thus, they argue that today’s canon of physical beauty has caused people to acquire unhealthy life habits where body shape concerns are overcoming health concerns.

*It's important that people take it as a hobby, as a normal, day-to-day thing that's good, healthy and all. It's becoming fashionable now, so because people are giving so much importance to physique, to image, it's becoming fashionable that you have to do sports, 'cause it will help you lose weight. So, people are obsessing about exercise as a form of losing weight, rather than something healthy. (4<sup>th</sup> year, Sports Sciences, female)*

Another question that emerged in discussion groups regards the gender role of women who practice sports. Despite agreeing that there is social pressure towards an esthetical standard of female body that prescribes slimness and even excessive thinness, the female participants reported to feel good about their bodies by practicing sports.

*When you do a sport, your legs get thicker, but that doesn't matter. It's a consequence of that sport, it requires that. It's no big deal, you may complain, "My legs are too big", but you'll soon take it as part of you, and it's no big deal. You'll just try to balance that in your upper part, to make it a little more equal, and that's it. (4<sup>th</sup> year, Sports Sciences, female)*

## DISCUSSION

Results indicate that most participants practice sports and/or physical exercise. However, we found that males reach a significantly higher practice rate compared to females (89% of males, 62.8% of females). Likewise, we found males to dedicate more time to exercise and sports than females, regardless of age.

These results are similar to those found by Fernández-García (2007). In an investigation with 3.103 primary and ESO students in the communities of Madrid and Castilla-La Mancha, 72.8% of participants reported to practice some type of sport or physical exercise after school, and there was initially a group of students (27.2%) who did no physical activity of any type. That study sample was formed by 42.3% of girls and 56.8% of boys, and it is noteworthy that the boys had a higher exercise practice rate as they participated in more than one sport, dedicated more time to practice and engaged in higher-intensity sports. These differences were also found in investigations like the one conducted in Madrid by Cordente Martínez (2006), in which the percentage of active boys in the sample was 64%, compared to 36% for girls, although the differences were mostly related to exercise duration and intensity, as occurred in the present study.

Moreover, in the study of Labrado (2011), in a sample of 826 students in grades 1 to 4 ESO in Castilla-La Mancha, and some other

180 students in ESO's 1<sup>st</sup> cycle (grades 1 and 2), the results related to sports and exercise practice differ according to gender. The study used a questionnaire about sports and exercise practice and health-wellbeing and collected various body composition measures in order to determine the rates of physical activity and sedentary habits. According to his results, 23% of the population did not exercise regularly, and in several questionnaire items (exercise enjoyment, motor competence, exercise appreciation) the boys had higher scores than the girls. Nevertheless, after the implementation of a physical exercise program, gender differences were still found, though there was an improvement in all aspects assessed, which clearly confirmed the positive effects of the program.

In another study conducted in eight public schools in the autonomous communities of Madrid and Castilla-La Mancha with primary and secondary students, Blández, Fernández García y Sierra (2007) also found gender differences in the practice of sports and physical exercise. Results from the discussion groups demonstrated that activities involving strength and resistance or that are more active, aggressive or risky are associated with the male gender. In contrast, activities that are quieter or related with rhythm, expression, elasticity, flexibility or coordination are linked to the female gender. The adolescents' discourses indicated that this distinction is linked to aesthetics and recreation features, mostly present in girls' orientation, while boys are more oriented to physical conditioning and sports performance.

In our study, data also present gender differences as we analyze the types of sports practiced. The sports that males practice most are soccer, basketball, martial arts and bodybuilding, while females practice mostly running, swimming and dancing. However, we found practices that are shared by both genders for some sports such as athletics, swimming or cycling. Other studies have also found greater percentages of male practice for collective sports (soccer, basketball), including participation in contests, while women choose individual activities or collective activities with some musical support such as dancing, aerobics or cycling (GARCÍA FERRANDO; LLOPIS, 2011; ALONSO et al., 2014).

In the discussion groups, the participants said that gender differences in the practice of sports and exercise stem from various reasons: a lack of sports habits in girls or their non-involvement in sports and/or physical exercises; the sexist traits of some activities or sports; the existence of stereotypes related to men and women in the Western culture; and the fact that the goals of and motivation for practicing sports and exercise can vary according to gender. Nevertheless, they were unanimous in saying that the majority of women engage in physical exercise for aesthetic reasons, particularly weight loss, while men/boys are more interested in competition and performance enhancement.

Martínez Baena et al. (2012) point out that one of the reasons for these differences is that the female gender usually seeks long-term goals, whether towards health purposes or aesthetic concerns, a desired body image. Men, on the contrary, pursue immediate goals, being driven towards entertainment, competition, socializing and even just enjoyment in sports. In this respect, Cambronero et al. (2015) say that men have higher scores for intrinsic motivation and integrated regulation, while in women, motivation is extrinsic. Other authors have attributed these differences to the cultural stereotypes existing between both genders in relation to sports and exercise practice (FERNÁNDEZ-GARCÍA, 2007).

As for age-based differences in the practice of sports and physical exercise, Labrado (2011) found a negative trend as students advance in age and education. In fact, the study of Pavón y Moreno (2006) identifies admission into university with abandoning sports practice, as students must then dedicate more hours to study, with the consequent reduction of leisure time. However, to adequately interpret our results it is necessary to consider that part of our sample is formed by Sports Sciences undergraduates, and due to their relationship with the sports environment, they tend to practice more. By analyzing practice according to age in the adolescent group, we also found a negative trend, since the percentage of physically active students for grade 3 ESO is 78.5%, decreasing to 73.9% for grade 4, and 68.9% for baccalaureate 1.

With regard to physical exercise practice, participants in the discussion groups highlighted positive and negative aspects. They said that in today's society, practicing physical exercises by aesthetic reasons is becoming increasingly ordinary, which they consider negative, similarly to cases of anorexia and vigorexia. On the other hand, in emphasizing the positive aspects, they said one can practice it for the mere pleasure that physical activity can bring, and for the benefits felt in humor and state of mind.

Another aspect refers to the gender role conflict experienced by women who practice sports. In other words, there is a role, a social definition of femininity and a set of social expectations on them as women, which can conflict with their sportive conduct and its accompanying traits of aggression, competitiveness, strength, etc. However, the female participants in the discussion groups said this conflict is not an actual problem, since the practice of sports is what really matters, although they recognize the existence of gender roles and of a female aesthetic body standard which prescribes excessive thinness, which may not be the prototype of an athlete's body.

According to Fernández-García (2007) there has been some social evolution in how the more traditional sports-related gender stereotypes are presented, although they have been maintained to some extent and are still present in education. Several studies show that

students associate male sports with sports involving aggressiveness, physical contact, strength and competition, while the sports practiced by women are the ones involving flexibility, corporal expression and rhythm (BLÁNDEZ; FERNÁNDEZ-GARCÍA; SIERRA 2007; ZARAVIGKA; PANTAZIS, 2012). Similarly to our investigation, those studies highlight the influence of the socialization process on gender stereotypes and sports/exercise practice, which also reflects on body-related stereotypes and on the fact that men seek the cult of muscles and women seek thinness and a slim silhouette.

## CONCLUSIONS

The general conclusions below summarize our results and are organized with gender at their core. Results indicate that young males show significantly higher sports/exercise practice rates compared to young females. Young males practice more physical exercise and dedicate more time to that practice (both in hours per week and months per year), regardless of age.

The sports that young males practice most are soccer, basketball and martial arts (adolescents and college students). The activities most practiced by young females are running, swimming (college students) and dancing (adolescents). Therefore, we found that the participation in stereotyped activities remains, although we also found that practice can be shared by both genders in the case of some sports such as swimming and cycling.

As to the age variable, our results indicate that college students practice more exercise and sports than adolescents. This difference is not significant for young females.

In the discourse of participants in the discussion groups, with regard to the practice of sports and physical exercise, they pointed out women's lack of exercise/sports habits and involvement, and said that the goals of and motivation for practice vary according to gender. Females usually exercise to be in a good shape and have a good physical appearance, while males seek exercise and sports for the pleasure of competition, for building a sports career and being more active.

Our results reveal the importance of promoting measures and intervention plans which allow equality in sports practice regardless of gender by eliminating social and cultural barriers that can affect the access to any type of practice according to gender.

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