

# Perception of young athletes and non-athletes about their body image

**Juan Francisco Aguirre Chavez, Humberto Blanco Vega, Judith Margarita Rodriguez Villalobos, Gerardo Joel Arredondo Martell, Jose Rene Blanco Ornelas\***

Faculty of Physical Culture Sciences, Autonomous University of Chihuahua, Chihuahua, Mexico

## Email address:

jblanco@uach.mx (J. R. Blanco)

## To cite this article:

Juan Francisco Aguirre Chávez, Humberto Blanco Vega, Judith Margarita Rodríguez Villalobos, Gerardo Joel Arredondo Martell, José René Blanco Ornelas. Perception of Young Athletes and Non-Athletes about their Body Image. *Science Journal of Public Health*.

Vol. 2, No. 6, 2014, pp. 644-647. doi: 10.11648/j.sjph.20140206.33

---

**Abstract:** The main goal of this research consisted on determining the present, ideal and social body perception and body unconformity differences and similarities between young people who frequently practice a sport with the ones who don't. The total sample was 356 male high school students, with an average age of 15.29 years old (SD=1.42); 176 of them practice a sport and frequently participate in tournaments or competitions. The method adopted in the research was framed within a quantitative approach with a survey descriptive design. The results show that students who don't practice frequently sports are the ones who chose heavier models for their present, ideal and social body figure, besides they show higher body unconformity. Future investigations should answer these findings in wide samples.

**Keywords:** Body Figure, Practice Sports, Body Size Dissatisfaction, Figure Rating Scale

---

## 1. Introduction

Specially adolescence and youth are very vulnerable stages to experience body image problems since there are moments in this vital cycle characterized by physiologic, emotional and cognitive changes that contribute to increase the physical appearance concern [1, 2]. Besides, in these stages, the wish of getting thinner or being thin generates one of the most notable risk factors for alimentary behavior disorders [3].

In recent years modern societies have given an excessive value to body image, many of which have created a subculture based on body size perception and the importance of the ideal body image [4]. The ideal "thin" person and the concerns about weight come from a cultural ideal although nowadays it is considered aesthetic, this is, only a passing fashion and not necessarily healthy nor accessible which could have negative consequences as great concern about weight and body image that can be expressed as body size dissatisfaction, seen as the extent in which individuals value or despise their bodies in distortion to body image, that is the lack of accuracy in body size determination [5].

The ideal thin-weight and worries about weight come from a cultural idea, that even nowadays is considered esthetic, it is just a fashion and it is not necessarily healthy or accessible,

which might have negative consequences that generate anxiety such as a great worry about weight and having good physical shape which could be shown as body dissatisfaction that reveals how individuals value or despise their own bodies, and/or their body distortion, which is the lack of precision in determining the body size [6].

The body image and the esthetic norms that actually rule the occidental world can affect the physiological development in men as well as in women, but are pre-adolescent and adolescent women who present a higher tendency on having problems doing the body image elaboration linked to development problems on alimentary behaviors [7, 8]. The previous information is because the "beauty and thinness" standards are especially strict for them [9].

Raich [10] says that in a society that glorifies beauty, is not strange that youth and health increase the concern of physical appearance. In fact every year millions of pesos are spend on improving physical appearance. But excessive worry might be highly perturbing and even incapacitating for a lot of people.

Most of the investigators [1, 3, 11-13] on alimentary behavior disorders, agree that these come from several unplanned situations, highlighting the worry for body shape

and getting on diets, but most of all losing weight, which specialists consider risky these kind of behaviors [1, 12, 14].

The relation between body image and exercise allows to confirm the existence of two tendencies of opposite approaches. On the one hand, there is a serial of studies that show that doing exercise is related with a positive image [15-17]. It's been found that more active people have a more positive attitude towards their own bodies than sedentary people [18, 19]; that physical activity and sports are ways to improve one person's health and to prevent obesity [20-22] and that practicing sports have a positive effect on the physical appearance and the pleasure related with its consequences. Thanks to this, it's been proposed that, besides taking advantage of exercise has means of health protection, it also should be used as an area to explore body pleasure, fun and enjoyment [23].

In the second group are found those studies that point out a potentially negative effect about the body image based on the relation between the practice influence and the athletic performance, a person's body perception and the possibility of having an alimentary behavior disorder (ABD). Some studies have found that among risk ABD factors on elite athletes is found the socio-cultural influence of thinness, the athletic performance anxiety and the self-evaluation on athletic success or failures; in such way, that if these factors lead to an excessive concern of their body size or figure, there is a higher probability that they have a ABD [24, 25].

In this sense, it has special relevance to investigate if doing exercise frequently produces physical and or cognitive benefits or not that help to decrease the concern on physical appearance by improving one's body image perception.

This study tries to determine differences and similarities among young people who frequently practice sports with the ones who don't, according to their current, ideal and social body image and their body dissatisfaction.

## 2. Method

### 2.1. Participants

A sample of 356 male high school and preparatory students, aged 13-19 years old ( $M=15.29$ ;  $SD=1.42$ ) participated in the present study; 176 of them practice a sport and frequently participate in tournaments or competitions. A suitable sample was used in order to cover different representative school levels studied (Table 1).

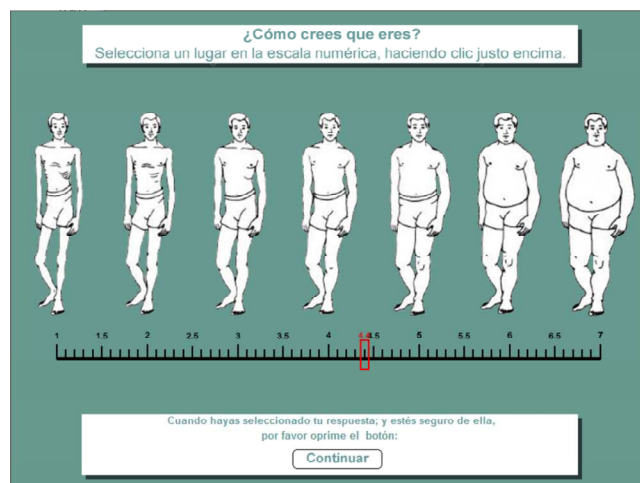
**Table 1.** Subject distribution according to school level and sports practice.

school level	sports practice		Total
	athletes	nonathletes	
high school	96	60	156
preparatory	80	120	200
Total	176	180	356

### 2.2. Instrument

Scale for the estimation of body shape, adapted and computerized for Gastélum and Blanco [4], of the original

version "Contour Drawing Rating Scale" (CDRS) of Thompson and Gray [26]. The CDRS adapted and computerized for Gastélum and Blanco [4] consists of seven drawings of a female figure (for female participants) or a male figure (for male participants). Each drawing increases in size from extremely thin (1) to very obese (7). Participants are asked to rate their current, ideal and social body shape. The discrepancy between the ideal and current size scores is an index of body shape dissatisfaction.



**Figure 1.** Scale for the estimation of body shape, adapted and computerized for Gastélum and Blanco.

### 2.3. Design

Regarding the design of the study, a quantitative approach with a descriptive and transversal survey design was used [27]. The independent variable was sports practice (athletes and non-athletes) and the dependent variables were the scores on body shape (current, ideal and social) and body size dissatisfaction (ideal minus current body shape).

### 2.4. Procedure

All the high school students were invited to participate in the present study. These students were fully informed about all the features of the project. Then, all the students that agree to participate were asked to sign a written informed consent. After the students approvals were obtained, participants completed the above mentioned questionnaire by means of the instrument module administrator of the Scales Editor Version 2.0 [28].

Participants completed the questionnaire in the computer rooms of their schools during a session. At the beginning of the session the researchers gave a general introduction about the importance of the research and how to access the questionnaire software. When the participants were into the editor, the instructions about how to fill out the questionnaire correctly appeared before the instrument. Additionally, the participants were advised to ask for help if confused concerning either the instructions or the clarity of a particular item. Completion of the entire questionnaire took approximately 10 minutes. At the end of the session their

participation was welcomed. Afterward, when all the participants completed the questionnaire, the data were collected by means of the results generator module of the Scales Editor Version 2.0 [28].

### 2.5. Data Analysis

Descriptive statistics (means and standard deviations) for all the variables were calculated. Subsequently, after verifying that the data met the assumptions of parametric statistical analyses, a one-way multivariate analysis of variance (MANOVA), followed by the one-way univariate analysis of variance (ANOVA), were used to examine the differences between the athletes and non-athletes on the reported current, ideal and social body shape and index of body size dissatisfaction scores. Moreover, the effect size was estimated using the eta-squared ( $\eta^2$ ). All statistical analyses were performed using the SPSS version 20.0 for Windows (IBM®

SPSS® Statistics 20). The statistical significance level was set at  $p < .05$ .

## 3. Results

Table 2 shows the mean values and standard deviations of the body shape, as well as the results of the MANOVA and the follow-up univariate ANOVAs. The MANOVA results indicated overall statistical significant differences between athletes and non-athletes on the body shape scores (Wilks'  $\lambda = .678$ ;  $p < .0001$ ;  $\eta^2 = .322$ ). Subsequently, the ANOVAs' follow-up showed that compared with the athletes, the non-athletes expressed a greater discrepancy between ideal and actual body shape ( $F1 = 8.631$ ;  $p < .001$ ) and had higher scores of current body shape ( $F1 = 150.103$ ;  $p < .0001$ ), ideal body shape ( $F1 = 20.257$ ;  $p < .0001$ ) and social body shape ( $F1 = 137.679$ ;  $p < .0001$ ).

**Table 2.** MANOVA results for the sports practice differences in the four variables of body shape

	Athletes (n = 176)	Nonathletes (n = 180)	F	p	$\eta^2$
current body shape	3.66 (0.90)	4.71 (0.71)	41.727	<.0001	.322
ideal body shape	3.71 (0.74)	4.02 (0.56)	150.103	<.0001	.298
social body shape	3.59 (1.08)	4.88 (1.00)	20.257	<.0001	.054
body size dissatisfaction	0.55 (0.62)	0.75 (.93)	137.679	<.0001	.280
			8.631	<.001	.024

Note. Descriptive values are reported as mean (standard deviation)

## 4. Discussion and Conclusions

Results show that students who don't frequently practice any sports are the ones who chose more obese for their current, ideal and social figures, besides showing higher body dissatisfaction, which coincides with Moreno and Cervello's reports [29], and Gastellum's [30] in the sense that active students have a better body image than sedentary students.

The gotten results point to potential benefits that physical-sports activities generate on teenagers' health. Thus, it would be important to value the physical-sports activities as a positive health factor, as this study shows, could enhance positive effects on physical self-concept.

The results suggest that exercise should be explored as a preventive measure against the development of a negative body image or greater body dissatisfaction; Yet it is extremely important determine which characteristics (type, intensity, frequency, etc.) and mechanisms by which exercise improves body image [15]

## Acknowledgements

This study is part of a project funded by the Secretaría de Educación Pública-Subsecretaría de Educación Superior-Dirección General de Educación Superior Universitaria de México [Mexican Ministry of Education-Department of Higher Education-General Directorate of the University Education] (OF-13-6894). Additionally, the fifth author is supported by a grant from the National Council of Science and Technology of Mexico (Conacyt).

## References

- [1] C.J. Inglés, J.A. Piqueras, J.M. García-Fernández, L.J. García-López, B. Delgado, C. Ruiz-Esteban, Diferencias de género y edad en respuestas cognitivas, psicofisiológicas y motoras de ansiedad social en la adolescencia, *Psicothema*, Vol. 22, pp. 376-381, 2010.
- [2] J. Santrock, *Adolescencia. Psicología del desarrollo*, McGraw Hill, España, 2004.
- [3] N. Solano, A. Cano, Ansiedad en los trastornos alimentarios: Un estudio comparativo, *Psicothema*, Vol. 24, pp. 384-389, 2012.
- [4] G. Gastellum, H. Blanco, Versión informatizada de la escala estimación del contorno de la figura, in: Facultad de Educación Física y Ciencias del Deporte (Ed.) *X congreso internacional, facultad de educación física y ciencias del deporte*, UACH, México, 2006, pp. 285-286.
- [5] S. Banfield, M.P. McCabe, An evaluation of the construct of body image, *Adolescence*, Vol. 37, pp. 373-393, 2002.
- [6] A. Anuel, A. Bracho, N. Brito, J.E. Rondón, D. Sulbarán, Autoaceptación y mecanismos cognitivos sobre la imagen corporal, *Psicothema*, Vol. 24, pp. 390-395, 2012.
- [7] R. Francisco, M. Alarcão, I. Narciso, Avaliação de factores de risco de desenvolvimento de perturbações alimentares: Desenvolvimento e estudos de validação da versão portuguesa do mcknight risk factor survey iv, *Revista Iberoamericana de Diagnóstico y Evaluación Psicológica*, Vol. 32, pp. 143-170, 2011.

- [8] J.K. Thompson, Introduction: Body image, eating disorders, and obesity – an emerging synthesis, in: J.K. Thompson (Ed.) *Body image, eating disorders, and obesity: An integrative guide for assessment and treatment*, American Psychological Association, Washington, D C, 2003, pp. 1-20.
- [9] M. Calaf, M. León, C. Hilerio, J. Rodríguez, Inventario de imagen corporal para féminas adolescentes (iicfa), *Revista Interamericana de psicología*, Vol. 39, pp. 347-354, 2005.
- [10] R.M. Raich, Una perspectiva desde la psicología de la salud de la imagen corporal, *Revista Avances en Psicología Latinoamericana*, Vol. 22, pp. 15-27, 2004.
- [11] A. Goñi, A. Rodríguez, Variables associated with the risk for eating disorders in adolescence, *Salud Mental*, Vol. 30, pp. 16-23, 2007.
- [12] M. Lameiras, M. Calado, Y. Rodríguez, M. Fernández, Hábitos alimentarios e imagen corporal en estudiantes universitarios sin trastornos alimentarios, *Revista Internacional de Psicología Clínica y de la Salud*, Vol. 3, pp. 23-33, 2003.
- [13] J. Wardle, A. Haase, A. Steptoe, Body image and weight control in young adults: International comparisons in university students from 22 countries, *International Journal of Obesity*, Vol. 30, pp. 644-651, 2006.
- [14] B. Castillo, Sociedad de consumo y trastornos de la conducta alimentaria, *Trastornos de la Conducta Alimentaria*, Vol. 4, pp. 321-335, 2006.
- [15] K.A. Martin Ginis, R.L. Bassett, Exercise and changes in body image, in: T.F. Cash, L. Smolak (Eds.) *Body image a handbook of science, practice an prevention*, Guilford Press, New York, 2012, pp. 378-386.
- [16] L.A. Tucker, R. Mortell, Comparison of the effects of walking and weight training programs on body image in middle-aged women: An experimental study, *American Journal of Health Promotion*, Vol. 8, pp. 34-42, 1993.
- [17] P.A. Williams, T.F. Cash, Effect of a circuit weight training program on the body images of collage students, *Internacional Journal of Eating Disorders*, Vol. 30 pp. 75-82, 2001.
- [18] I. Tornero, Á. Sierras, Satisfacción corporal y actividad física en el alumnado de la facultad de ciencias de la educación de la universidad de huelva, IV Congreso Internacional y XXV Nacional de Educación física Córdoba, España, 2008.
- [19] S. Urrutia, I. Azpillaga, G.L. de Cos, D. Muñoz, Relación entre la percepción de estado de salud con la práctica físicodeportiva y la imagen corporal en adolescentes, *Cuadernos de Psicología del Deporte*, Vol. 20 pp. 51-56, 2010.
- [20] M.J. Camacho, E. Fernández, M.I. Rodríguez, Imagen corporal y práctica de actividad física en las chicas adolescentes: Incidencia de la modalidad deportiva, *Revista Internacional de Ciencias del Deporte*, Vol. 3, pp. 1-19, 2006.
- [21] P. Katzmarzyk, I. Janssen, Physical inactivity, excess adiposity and premature mortality, *Obesity Reviews*, Vol. 4, pp. 257-290, 2003.
- [22] P. Kokkinos, Physical activity, health benefits, and mortality risk, *ISRN Cardiology*, Vol. 2012, pp. 1-14, 2012.
- [23] T. Alley, Visual detection of body-weight change in young women, *Perceptual and motor skills*, Vol. 73 pp. 904-906, 1991.
- [24] S. Márquez, Trastornos alimentarios en el deporte: Factores de riesgo, consecuencias sobre la salud, tratamiento y prevención, *Nutrición Hospitalaria*, Vol. 23, pp. 183-190, 2008.
- [25] D.A. Williamson, R.G. Netemeyer, L.P. Jackman, D.A. Anderson, C.L. Funsch, J.Y. Rabalais, Structural equation modeling of risk-factors for the development of eating disorder symptoms in female atheletes, *International Journal of Eating Disorders*, Vol. 17, pp. 387-393, 1995.
- [26] M.A. Thompson, J.J. Gray, Development and validation of a new body-image assessment scale, *Journal of Personality Assessment*, Vol. 64, pp. 258-269, 1995.
- [27] R. Hernández, C. Fernández, P. Baptista, *Metodología de la investigación*, McGraw- Hill, México, 2010.
- [28] H. Blanco, M. Ornelas, J.L. Tristán, A. Cocca, D. Mayorga-Vega, J. López-Walle, J. Viciania, Editor for creating and applying computerise surveys, *Procedia Social and Behavioral Sciences*, Vol. 106, pp. 935-940, 2013.
- [29] J.A. Moreno, E. Cervelló, Importancia de la práctica físico-deportiva y del género en el autoconcepto físico de los 9 a los 23 años, *International Journal of Clinical and Health Psychology*, Vol. 8, pp. 171-183, 2008.
- [30] G. Gastélum, *Desarrollo y validación de una versión informatizada del body image anxiety scale y contour drawing rating scale: Un estudio sobre percepción y nivel de ansiedad de la imagen corporal en universitarios chihuahuenses*, Universidad de Granada, España, 2011.