

PHYSICAL SELF-CONCEPT OF MEXICAN ATHLETE AND NON-ATHLETE TEENAGERS

Maria Del Carmen Zueck

Gabriel Gastelum

Francisco Munoz

Veronica Benavides

Jesus Enrique Peinado

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

Abstract

The purpose of this study consists of outlining the differences and similarities between elementary and junior-high school Mexican students' physical self-concept based on the variables of those who practice a sport on a regular basis and those who do not do. A total sample of 596 male students, between the ages of 11-16 participated in this study; 270 of them practice a sport and participate regularly in tournaments or competitions. A quantitative approach with a descriptive and transversal survey design was used. All the participants completed the Physical Self-Description Questionnaire. The results of the one-way multivariate analysis of variance, followed by the one-way univariate analyses of variance, show that students who do not participate in sports regularly are the ones who obtained lower scores on the coordination, activity, sports competence, appearance, strength, flexibility, endurance, global physical self-concept, and global self-esteem subscales. However, in the health subscale, statistically significant differences were not found. Further research should seek these findings in larger samples.

Keywords: Physical self-concept, Student's beliefs, Physical Activity, Self-perception

Introduction

According to the main psychological theories, a positive self-concept is the basis for an optimal personal, social, and professional performance. In addition, a positive self-concept is responsible for personal satisfaction and self-acceptance. More specifically, one's physical self-concept is a reliable indicator of resilience and mental health (A. Goñi, 2009; E. Goñi & Infante,

2010; Reigal, Videra, Parra, & Juárez, 2012), since feeling at ease with one's body promotes positive feelings. Numerous academic, clinical, community-based, and civic psychological programs aim for a positive self-concept. These programs focus on strategies and resources that enhance a positive self-concept (Esnaola, Goñi, & Madariaga, 2008).

Moreover, there is a significant correlation between a low, physical self-concept and eating disorders; hence, a poor physical self-concept might as well provide a diagnostic warning on eating-disorder behavior (A. Goñi & Rodríguez, 2004). It has also been proven that people with a poor physical self-concept during adolescence are prone to be more vulnerable to cultural pressure in favor of attractive physical appearance and thinness; they are also more anxious individuals. On the other hand, those who have a healthy, physical self-concept score higher in subjective, psychological well-being; they feel more satisfied about their life, and perceive themselves as being in a more positive state of mind (A. Goñi, Rodríguez, & Ruiz de Azúa, 2004).

In addition, a series of studies on the relation between body image and physical activity demonstrates that physical activity relates to a positive body image (Martin Ginis & Bassett, 2012; Tucker & Mortell, 1993; Williams & Cash, 2001). These studies show that more active individuals develop a more positive attitude toward their body compared to sedentary subjects (Tornero & Sierras, 2008; Urrutia, Azpillaga, de Cos, & Muñoz, 2010). Besides, sports and physical activity are means to health improvement and obesity prevention (Camacho, Fernández, & Rodríguez, 2006; Katzmarzyk & Janssen, 2003; Kokkinos, 2012). Physical activity also has a positive effect on the person's physical appearance and pleasure related to sports performance (Alley, 1991). Therefore, physical activity should be seen not only as a health enhancer, but as a means to explore physical pleasure and joy (Alley, 1991).

On the other hand, a second group of studies focuses on the potential negative influence exercise may have on body image on the basis of the connection among sports performance, the individual's self-body image, and the possibility of experiencing eating disorders. There is the socio-cultural influence on elite athletes regarding thinness, performance-related anxiety, and success and failure self-assessment which puts individuals at risk of developing eating disorders. Thence, if these variables escalate to an excessive concern degree, there is a higher probability of an eating disorder emergence (Márquez, 2008; Williamson et al., 1995).

As a result, it is quite relevant to find out if regular physical activity has or not physical and/or cognitive benefits that contribute to diminish the concern for certain physical appearance and improve self-body image. Therefore, the purpose of the present study is to outline differences and similarities regarding perception of self-body image among Mexican

teenagers who practice sports on a regular basis compared and contrasted to those Mexican adolescents who do not get involved in sports.

Methods

Participants

A sample of 596 male elementary and junior-high school students, aged 11-16 years ($M = 12.41$; $SD = 1.52$) participated in the present study. 270 participants practice a sport and participate regularly in tournaments and/or competitions. Convenience sampling was used in order to try covering the representative of different school levels included in the present study.

Instrument

Physical Self-Description Questionnaire. This questionnaire consisted of 70 items that measure nine specific components of the physical self-concept (health, coordination, body fat, activity, sports competence, appearance, strength, flexibility and endurance) and two global components (global physical self-concept and global self-esteem). Its response format is based on a 6-point true/false Likert-type scale (higher scores indicating higher physical self-concept). The items have both positively and negatively worded questions. All negatively worded items (21 in total) are reverse scored and summarized with other scores of the correspondent scale. The PSDQ was translated into Spanish, followed by a back-translation procedure widely described in the literature (Marsh, Tomás, & Abçý, 2002).

Design

A quantitative approach with a descriptive and transversal survey design was used (Hernández, Fernández, & Baptista, 2010) for the purposes of the present study. The independent variable was sports practice (athletes and non-athletes), and the dependent variables were the scores on physical self-concept subscales.

Procedure

The elementary and junior-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 who had agreed 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 (Blanco et al., 2013).

Participants completed the questionnaire in the computer lab at their schools during a class meeting 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 through the software. When the participants got into the editor, the instructions about how to fill out the questionnaire correctly appeared before the instrument. Additionally, 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 40 minutes. At the end of the session their participation was acknowledged. Afterwards, when all the participants had completed the questionnaire, the data were collected by means of the results generator module of the Scales Editor Version 2.0 (Blanco et al., 2013).

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 physical self-concept scores. Moreover, the effect size was estimated using the eta-squared (η^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 $p < .05$.

Results

Table 1 shows the mean values and standard deviations of the physical self-concept subscale variables, 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 physical self-concept scores (Wilks' $\lambda = .799$; $p < .001$; $\eta^2 = .201$). Subsequently, the follow-up ANOVAs showed that compared to the athletes, the non-athletes obtained lower scores on the coordination, activity, sports competence, appearance, strength, flexibility, endurance, global physical self-concept, and global self-esteem subscales; and higher scores on body fat. However, in the health subscale, statistically significant differences were not found ($p > .05$).

Table 1. MANOVA results for the sports practice differences on the eleven physical self-concept subscales

	Non-athletes (n = 326)	athletes (n = 270)	F	p	η^2
			13.343	<.001	.201
Health	1.52 (0.69)	1.45 (0.65)	1.785	.182	.003
Coordination	2.76 (1.06)	3.33 (0.96)	45.510	<.001	.071
Body fat	1.61 (1.30)	1.15 (1.13)	20.083	<.001	.033
Activity	2.70 (1.22)	3.56 (1.04)	82.081	<.001	.121
Sports competence	2.53 (1.21)	3.53 (1.01)	116.691	<.001	.164
Appearance	2.14 (0.77)	2.38 (0.79)	14.340	<.001	.024
Strength	2.33 (0.91)	2.77 (0.88)	34.184	<.001	.054
Flexibility	2.11 (0.93)	2.50 (0.95)	25.441	<.001	.041
Endurance	2.22 (1.10)	2.90 (1.10)	54.492	<.001	.084
Global physical self-concept	3.53 (1.23)	4.07 (1.00)	33.236	<.001	.053
Global self-esteem	3.52 (0.77)	3.83 (0.73)	24.448	<.001	.040

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

Discussion and Conclusion

Results cast light on the fact that in most physical self-concept areas, students who practice sports on a regular basis have a better self-image than those students who do not regularly participate in sports events. The latter have a less developed physical self-concept which agrees with Moreno and Cervelló (2008) and *Author* (2011) reports on how active students have a better physical body-image, and that sedentary students develop a higher risk of eating disorders due to the fact that a poor physical self-concept makes individuals vulnerable to cultural pressure in favor of a leaner body (A. Goñi & Rodríguez, 2004; E. Goñi & Infante, 2010; Rodríguez, González-Fernández, & Goñi, 2013).

Moreover, results indicate the possible benefits on teenage health when involved in sports/physical activity. Hence, it is desirable to stress sports/physical activity as a positive health enhancement factor to promote an affirmative physical self-concept (Kokkinos, 2012; Martin Ginis & Bassett, 2012).

Furthermore, findings suggest that exercise should be considered as a preventive measure against the development of a negative self-body image or a growing physical dissatisfaction; nevertheless, it is crucial to determine which exercise characteristics (type, intensity, frequency, etc.) and mechanisms improve the physical self-concept (Martin Ginis & Bassett, 2012). Likewise, the present study implications aim to the importance of further research on the subject in Mexico.

References:

- Alley, T. (1991). Visual detection of body-weight change in young women. *Perceptual and motor skills*, 73 (3), 904-906.
- Blanco, H., Ornelas, M., Tristán, J. L., Cocca, A., Mayorga-Vega, D., López-Walle, J., & Viciano, J. (2013). Editor for creating and applying computerise surveys. *Procedia Social and Behavioral Sciences*, 106, 935-940. doi: <http://dx.doi.org/10.1016/j.sbspro.2013.12.105>
- Camacho, M. J., Fernández, E., & Rodríguez, M. I. (2006). Imagen corporal y práctica de actividad física en las chicas adolescentes: incidencia de la modalidad deportiva. *Revista Internacional de Ciencias del Deporte*, 3(2), 1-19.
- Esnaola, I., Goñi, A., & Madariaga, J. M. (2008). El autoconcepto: perspectivas de investigación. *Revista de Psicodidáctica*, 13(1), 69-96.
- Gastélum, G. (2011). *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*. España: Universidad de Granada.
- Goñi, A. (2009). *El autoconcepto físico: Psicología y educación*. Madrid: Pirámide.
- Goñi, A., & Rodríguez, A. (2004). Trastornos de conducta alimentaria, práctica deportiva y autoconcepto físico en adolescentes. *Actas Españolas de Psiquiatría*, 32(1), 29-36.
- Goñi, A., Rodríguez, A., & Ruiz de Azúa, S. (2004). Bienestar psicológico y autoconcepto físico en la adolescencia y juventud. *Psiquis*, 25(4), 141-151.
- Goñi, E., & Infante, G. (2010). Actividad físico-deportiva, autoconcepto físico y satisfacción con la vida. *European Journal of Education and Psychology*, 3(2), 199-208.
- Hernández, R., Fernández, C., & Baptista, P. (2010). *Metodología de la investigación*. México: McGraw- Hill.
- Katzmarzyk, P., & Janssen, I. (2003). Physical inactivity, excess adiposity and premature mortality. *Obesity Reviews*, 4(4), 257-290.
- Kokkinos, P. (2012). Physical Activity, Health Benefits, and Mortality Risk. *ISRN Cardiology*, 2012, 1-14. doi: 10.5402/2012/71878
- Márquez, S. (2008). Trastornos alimentarios en el deporte: factores de riesgo, consecuencias sobre la salud, tratamiento y prevención. *Nutrición Hospitalaria*, 23(3), 183-190.
- Marsh, H. W., Tomás, I., & Abçý, H. (2002). Cross-cultural validity of the physical self-description questionnaire: comparison of factor structures in Australia, Spain, and Turkey. *Research Quarterly for Exercise and Sport*, 73(3), 257-270. doi: 10.1080/02701367.2002.10609019

- Martin Ginis, K. A., & Bassett, R. L. (2012). Exercise and Changes in Body Image. In T. F. Cash & L. Smolak (Eds.), *Body Image A Handbook of Science, Practice an Prevention* (pp. 378-386). New York: Guilford Press.
- Moreno, J. A., & Cervelló, E. (2008). 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*, 8(1), 171-183.
- Reigal, R., Videra, A., Parra, J. L., & Juárez, R. (2012). Actividad físico deportiva, autoconcepto físico y bienestar psicológico en la adolescencia. *Retos. Nuevas tendencias en Educación Física, Deporte y Recreación*, 22, 19-23.
- Rodríguez, A., González-Fernández, Ó., & Goñi, A. (2013). Sources of perceived sociocultural pressure on physical self-concept. *Psicothema*, 25(2), 192-198. doi: 10.7334/psicothema2012.229
- Tornero, I., & Sierras, Á. (2008). *Satisfacción corporal y actividad física en el alumnado de la facultad de ciencias de la educación de la universidad de Huelva*. Paper presented at the IV Congreso Internacional y XXV Nacional de Educación física, Córdoba, España.
- Tucker, L. A., & Mortell, R. (1993). 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*, 8(1), 34-42.
- Urrutia, S., Azpillaga, I., de Cos, G. L., & Muñoz, D. (2010). Relación entre la percepción de estado de salud con la práctica físicodeportiva y la imagen corporal en adolescentes. *Cuadernos de Psicología del Deporte*, 20 (2), 51-56.
- Williams, P. A., & Cash, T. F. (2001). Effect of a circuit weight training program on the body images of collage students. *Internacional Journal of Eating Disorders*, 30 (1), 75-82.
- Williamson, D. A., Netemeyer, R. G., Jackman, L. P., Anderson, D. A., Funsch, C. L., & Rabalais, J. Y. (1995). Structural equation modeling of risk-factors for the development of eating disorder symptoms in female atheletes. *International Journal of Eating Disorders*, 17(4), 387-393.