

Vol. 2, Issue Number 6, November 2014

- [01] **Assessment of Modern Contraceptive Practice and Associated Factors among Currently Married Women Age 15-49 Years in Farta District, South Gondar Zone, North West Ethiopia**

Views **157** since Oct. 25, 2014 Downloads **63** since Oct. 25, 2014

Tigabu Birhan Kassa, Getu Degu, Zelaalem Birhanu

Pages: 507-512 | [Full PDF Paper](#) | [Paper in Html](#) | [Google Scholar](#)

DOI: 10.11648/j.sjph.20140206.11

- [02] **Prevalence of Parasitism by Anisakis in a Sample of Fish Caught in Coastline of the Golfete of Coro, Venezuela**

Views **110** since Oct. 29, 2014 Downloads **28** since Oct. 29, 2014

Hector Bracho Espinoza

Pages: 513-515 | [Full PDF Paper](#) | [Paper in Html](#) | [Google Scholar](#)

DOI: 10.11648/j.sjph.20140206.12

- [03] **Retrospective Analysis of Dentin Hypersensitivity Among Patients at the University of Port Harcourt Teaching Hospital, Rivers State Nigeria**

Views **89** since Oct. 29, 2014 Downloads **30** since Oct. 29, 2014

Braimoh Omoigberai Bashiru, Ukegheson Gabriel, Osagbemiro Babatope

Pages: 516-519 | [Full PDF Paper](#) | [Paper in Html](#) | [Google Scholar](#)

DOI: 10.11648/j.sjph.20140206.13

- [04] **Perceptions on Bulgarian Nursing and Midwifery of the Work-Related Requirements in Healthcare Management**

Views **145** since Oct. 31, 2014 Downloads **32** since Oct. 31, 2014

Boryana Levterova, Donka Dimitrova, Rositza Dimova, Angel Dzhambov

Pages: 520-523 | [Full PDF Paper](#) | [Paper in Html](#) | [Google Scholar](#)

DOI: 10.11648/j.sjph.20140206.14

- [05] **Prediction of Physical Activity among Type-2 Diabetes Patients Attending Jimma University Specialized Hospital, Southwest Ethiopia: Application of Health Belief Model**

Views **176** since Oct. 31, 2014 Downloads **41** since Oct. 31, 2014

Abraham Tamirat, Lakew Abebe, Getachew Kirose

Pages: 524-531 | [Full PDF Paper](#) | [Paper in Html](#) | [Google Scholar](#)

DOI: 10.11648/j.sjph.20140206.15

- [06] **Experience of Sexual Coercion and Associated Factors among Female Students of Ambo University in Ethiopia**

Views **175** since Oct. 31, 2014 Downloads **32** since Oct. 31, 2014

Tolesa Bekele, Wakgari Deressa

Pages: 532-538 | [Full PDF Paper](#) | [Paper in Html](#) | [Google Scholar](#)

DOI: 10.11648/j.sjph.20140206.16

- [07] **Family Environment and Sexual Behaviours in Jimma Zone, South West Ethiopia**

Views **141** since Nov. 03, 2014 Downloads **34** since Nov. 03, 2014

Abebe Mamo Gebretsadik, Netsanet Fentahun Babbel

Pages: 539-545 | [Full PDF Paper](#) | [Paper in Html](#) | [Google Scholar](#)

DOI: 10.11648/j.sjph.20140206.17

- [08] **Malaria and Intestinal Parasite Infections and Co-Infections in Tach Gayint District, South Gondar Zone, Amhara Regional State 2010**

Views **123** since Nov. 04, 2014 Downloads **30** since Nov. 04, 2014

Mengstu Damtie Chanyalew, Mekdes Kondale Gurara

Pages: 546-553 | [Full PDF Paper](#) | [Paper in Html](#) | [Google Scholar](#)

DOI: 10.11648/j.sjph.20140206.18

- [09] **Assessment of Hygienic and Food Handling Practices among Street Food Vendors in Nakuru Town in Kenya**
Views **75** since Nov. 05, 2014 Downloads **32** since Nov. 05, 2014
Faith Muhonja, George Kobia Kimathi
Pages: 554-559 | [Full PDF Paper](#) | [Paper in Html](#) | [Google Scholar](#)
DOI: 10.11648/j.sjph.20140206.19
- [10] **Factors Associated with Visceral Leishmaniasis Infection in North Gondar Zone, Amhara Region, North West Ethiopia, Case Control Study**
Views **247** since Nov. 10, 2014 Downloads **26** since Nov. 10, 2014
Kindie Bantie, Fasil Tessema, Desalegn Massa, Yilkal Tafere
Pages: 560-568 | [Full PDF Paper](#) | [Paper in Html](#) | [Google Scholar](#)
DOI: 10.11648/j.sjph.20140206.20
- [11] **Studies on Prevalence, Co-Infection and Associated Risk Factors of Hepatitis B Virus (HBV) and Human Immunodeficiency Virus (HIV) in Benue State, Nigeria**
Views **71** since Nov. 11, 2014 Downloads **29** since Nov. 11, 2014
Emmanuel Msugh Mbaawuaga, Christian Ukuoma Iroegbu, Anthony Chibuogwu Ike, Godwin Terver Aondohebba Jombo
Pages: 569-576 | [Full PDF Paper](#) | [Paper in Html](#) | [Google Scholar](#)
DOI: 10.11648/j.sjph.20140206.21
- [12] **Predictors of Occupational Exposure to Neck and Shoulder Musculoskeletal Disorders among Sewing Machine Operators of Garment Industries in Ethiopia**
Views **52** since Nov. 11, 2014 Downloads **16** since Nov. 11, 2014
Ararso Tafese, Anisha Nega, Manay Kifle, Wakjira Kebede
Pages: 577-583 | [Full PDF Paper](#) | [Paper in Html](#) | [Google Scholar](#)
DOI: 10.11648/j.sjph.20140206.22
- [13] **The Comparison of Menarcheal Age with Familial Pattern and Body Mass Index**
Views **95** since Nov. 12, 2014 Downloads **23** since Nov. 12, 2014
Gulsen Meral, Aysegul Uslu, Faruk Akcay, Emel Unsur, Semra Kayaoglu, Eylem Erzurumlu
Pages: 584-588 | [Full PDF Paper](#) | [Paper in Html](#) | [Google Scholar](#)
DOI: 10.11648/j.sjph.20140206.23
- [14] **Short Birth Intervals Less than 2 Years Double Under-One Mortality in Ethiopia: Evidence from a Meta- Analysis**
Views **111** since Nov. 14, 2014 Downloads **25** since Nov. 14, 2014
Abel Fekadu Dadi
Pages: 589-595 | [Full PDF Paper](#) | [Paper in Html](#) | [Google Scholar](#)
DOI: 10.11648/j.sjph.20140206.24
- [15] **Patient Satisfaction on Admission in Nnamdi Azikiwe University Teaching Hospital, Nnewi, Nigeria**
Views **183** since Nov. 18, 2014 Downloads **24** since Nov. 18, 2014
Modebe A. I., Azuike E. C., Ucheagwa C. M., Azuike E. D., Obi D. C., Epundu U. U., Chikezie N. I., Ebulue C. C., Aniagboso C. C.
Pages: 596-600 | [Full PDF Paper](#) | [Paper in Html](#) | [Google Scholar](#)
DOI: 10.11648/j.sjph.20140206.25
- [16] **Relationship between Body Mass Index and Bone Mineral Density in Saudi Women Above 40 Years with Vitamin D Deficiency**
Views **78** since Nov. 22, 2014 Downloads **23** since Nov. 22, 2014
Anitha Oommen, Ibrahim Hassan AlZahrani, Allahrakhyo S. Shero, Jamal Alruwaili, Braa Aboalsteel
Pages: 601-604 | [Full PDF Paper](#) | [Paper in Html](#) | [Google Scholar](#)
DOI: 10.11648/j.sjph.20140206.26

- [17] **Role of Physical Activity among Geriatric Patient in Their Quality of Life**
Views **86** since Nov. 25, 2014 Downloads **18** since Nov. 25, 2014
Martha Ornelas Contreras, Verónica Benavides Pando, Juan Francisco Aguirre Chávez, Judith Margarita Rodríguez-Villalobos, Francisco Muñoz Beltrán
Pages: 605-609 | [Full PDF Paper](#) | [Paper in Html](#) | [Google Scholar](#)
DOI: 10.11648/j.sjph.20140206.27
- [18] **Employment Status and Health Care Utilization in a Context of Economic Recession: Results of a Population Based Survey in East Central Sweden**
Views **88** since Nov. 25, 2014 Downloads **24** since Nov. 25, 2014
Gloria Macassa, Anne-Sofie Hiswåls, Nader Ahmadi, Johana Alfredsson, Joaquim Soares, Mindaugas Stankunas
Pages: 610-616 | [Full PDF Paper](#) | [Paper in Html](#) | [Google Scholar](#)
DOI: 10.11648/j.sjph.20140206.28
- [19] **Utilization of Essential Immunization Services among Children under Five Years Old in Kacheliba Division, Pokot County, Kenya**
Views **56** since Nov. 27, 2014 Downloads **11** since Nov. 27, 2014
Koskei Alfred, Simiyu Tabu, Paul Kisia Malalu, Irene Marete, Robert Too, Koskei K. Peter, Constance Tenge
Pages: 617-623 | [Full PDF Paper](#) | [Paper in Html](#) | [Google Scholar](#)
DOI: 10.11648/j.sjph.20140206.29
- [20] **Knowledge, Attitude and Practice towards Osteoporosis among Primary Health Care Physicians in Riyadh, Saudi Arabia**
Views **51** since Nov. 28, 2014 Downloads **17** since Nov. 28, 2014
Mohammed Yehia Saeedi, Fahd Al-Amri, Ashry Mohamed, Ahmed Khair Ibrahim
Pages: 624-630 | [Full PDF Paper](#) | [Paper in Html](#) | [Google Scholar](#)
DOI: 10.11648/j.sjph.20140206.30
- [21] **Determinants of Exclusive Breastfeeding in Kilimanjaro Region, Tanzania**
Views **25** since Jan. 04, 2015 Downloads **5** since Jan. 04, 2015
Melina Mgongo, Tamara Hussein Hashim, Jacqueline Gilbert Uriyo, Damian Jeremia Damian, Babill Stray-Pedersen, Sia Emmanuel Msuya
Pages: 631-635 | [Full PDF Paper](#) | [Paper in Html](#)
DOI: 10.11648/j.sjph.20140206.31
- [22] **Maternal Perception and Care-Seeking Patterns for Childhood Febrile Illnesses in Rural Communities of Osun State, South-Western Nigeria**
Views **35** since Jan. 04, 2015 Downloads **2** since Jan. 04, 2015
Adedire Elizabeth B., Asekun-Olarinmoye Esther O., Fawole O.
Pages: 636-643 | [Full PDF Paper](#) | [Paper in Html](#)
DOI: 10.11648/j.sjph.20140206.32
- [23] **Perception of Young Athletes and Non-Athletes about their Body Image**
Views **36** since Jan. 06, 2015 Downloads **3** since Jan. 06, 2015
Juan Francisco Aguirre Chavez, Humberto Blanco Vega, Judith Margarita Rodriguez Villalobos, Gerardo Joel Arredondo Martell, Jose Rene Blanco Ornelas
Pages: 644-647 | [Full PDF Paper](#) | [Paper in Html](#)
DOI: 10.11648/j.sjph.20140206.33
- [24] **A Gender Study on College Students' Self-Efficacy in Health Care Behavior**
Views **53** since Jan. 14, 2015 Downloads **7** since Jan. 14, 2015
Francisco Muñoz Beltrán, Alejandro Chávez Guerrero, María Del Carmen Zueck Enríquez, Juan Francisco Aguirre Chávez, Francisco Javier Flores Rico
Pages: 648-652 | [Full PDF Paper](#) | [Paper in Html](#)
DOI: 10.11648/j.sjph.20140206.34
- [25] **Knowledge, Attitude and Practice among Rural Mothers about Home-Related Injuries in a Rural Area in El-Minia Governorate, Egypt**
Views **30** since Jan. 23, 2015 Downloads **1** since Jan. 23, 2015
Emad Girgis Kamel, Shimaa Anwer Emam, Eman Sameh Mohammed
Pages: 653-659 | [Full PDF Paper](#) | [Paper in Html](#)
DOI: 10.11648/j.sjph.20140206.35

Abstracting and Indexing

Science Journal of Public Health has been included by the following Abstracting and Indexing databases:

WorldCat

WorldCat is the world's largest network of library content and services. WorldCat libraries are dedicated to providing access to their resources on the Web, where most people start their search for information.

Academickeys

AcademicKeys.com is the premier source for academic employment. Academickeys' 17 discipline-focused sites offer comprehensive information about faculty, educational resources, research interests, and professional activities pertinent to institutions of higher education. More than 89% of the top 120 universities (as ranked by US News and World Report) are posting their available higher ed jobs with AcademicKeys.com.

Researchbib

ResearchBib, which is providing a global and local service for researcher, is a free academic resource publishing system that is flexible, easy to use.

Directory of Research Journals Indexing

The Directory of Research Journal Indexing (DRJI) is to increase the visibility and ease of use of open access scientific and scholarly journals thereby promoting their increased usage and impact. DRJI supply champion has access to global-renowned content in all discipline areas including magazine and journal articles.

JournalSeek

Genamics JournalSeek is the largest completely categorized database of freely available journal information available on the internet. The database presently contains 100101 titles. Journal information includes the description (aims and scope), journal abbreviation, journal homepage link, subject category and ISSN. Searching this information allows the rapid identification of potential journals to publish your research in, as well as allow you to find new journals of interest to your field.

Polish Scholarly Bibliography

Polish Scholarly Bibliography (PBN) is a portal of the Polish Ministry of Science and Higher Education, collecting information on publications of Polish scientists and Polish and foreign scholarly journals. PBN is a part of POL-on - The System of Information on Higher Education.

Electronic Journals Library

The Elektronische Zeitschriftenbibliothek EZB (Electronic Journals Library) offers an effective use of both scientific and academic journals publishing full text articles in the internet.

This service has been developed at the Universitätsbibliothek Regensburg (University Library of Regensburg) in cooperation with the Universitätsbibliothek der Technischen Universität München (University Library of the Technical University of Munich).

Zeitschriftendatenbank

The ZDB is the world's largest specialized database for serial titles (journals, annuals, newspapers etc., incl. e-journals). The ZDB-network is managed by the Staatsbibliothek zu Berlin; the database is held on a server of the Deutsche Nationalbibliothek.

The ZDB actually contains more than 1.6 million bibliographic records of serials from the 16th century onwards, from all countries, in all languages, held in 4.300 German and Austrian libraries, with 11.5 million holdings information. It does not contain contents, i. e. journal articles.

EZB

The Electronic Journals Library was founded in 1997 by the University Library of Regensburg in co-operation with the Technische Universität München University Library within the framework of a project. The aim of this project was to present e-journals to the library users in a clearly arranged user-interface and to create for the EZB member libraries an efficient administration tool for e-journal licences.

Wissenschaftszentrum Berlin

The WZB Berlin Social Research Center conducts basic research with a focus on problems of modern societies in a globalized world. The research is theory-based, problem-oriented, often long-term and mostly based on international comparisons.

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.

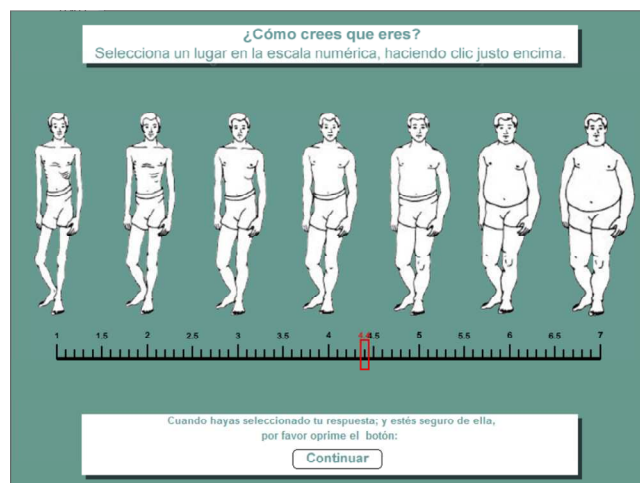


Figure 1. Scale for the estimation of body shape, adapted and computerized for Gastélum and Blanco.

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 (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 $p < .05$.

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	η^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.