



ELSEVIER

Contents lists available at [ScienceDirect](https://www.sciencedirect.com)

Data in Brief

journal homepage: www.elsevier.com/locate/dib



Data Article

Dataset for estimation of muscle Dysmorphia in individuals from Colombia

Isaac Kuzmar^{a,*}, José Consuegra^a, Jezael Jiménez^a, Einer López^a, José Hernández^a, Ana Noreña-Peña^b

^aSimón Bolívar University of Colombia, Cl. 58 #55-132, Barranquilla, Atlántico, Colombia

^bUniversity of Alicante, s/n, 03690 San Vicente del Raspeig, Alicante, Spain

ARTICLE INFO

Article history:

Received 30 April 2020

Revised 15 June 2020

Accepted 29 June 2020

Available online 03 July 2020

Keywords:

Body dysmorphic disorder

Food supplement

Obesity

Overweight

ABSTRACT

This paper presents data collected through a questionnaire for the estimation of body dysmorphic disorder known as vigorexy, weight level and levels of exercise dependence in individuals from Barranquilla, Colombia who attend local gyms, based on their physical activity, food supplements eating habits, psychological pressure, and risk of muscle dysmorphia. The Data contains 8 tributes and 200 records; labelling obesity range according to WHO into normal, overweight or obesity. All data was collected in person and directly from users. This data can be used to generate scientific research and intelligent computational tools to identify the obesity level and muscle dysmorphia risk of an individual and to build recommender systems that monitor health and mental status.

© 2020 The Author(s). Published by Elsevier Inc.
This is an open access article under the CC BY license.
(<http://creativecommons.org/licenses/by/4.0/>)

* Corresponding author.

E-mail address: isaac.kuzmar@unisimonbolivar.edu.co (I. Kuzmar).

Specifications Table

Subject	Medicine
Specific subject area	Nutrition
Type of data	Biology Text Table Figure
How data were acquired	Survey. <i>The questionnaire is provided as a supplementary file</i>
Data format	Raw Filtered
Parameters for data collection	Data was retrieved from physical in person survey and processed including missing and atypical data deletion, and data normalization
Description of data collection	Labelling process was performed based on WHO and a binary logistic regression model to predict our outcome (high risk of Muscle Dysmorphia symptoms)
Data source location	City/Town/Region: Barranquilla Country: Colombia Latitude and longitude (and GPS coordinates) for collected samples/data:] 10°58'6.74" N -74°46'52.75" W
Data accessibility	Kuzmar, Isaac (2020): Dataset for estimation of muscle dysmorphia in individuals from Colombia. figshare. Dataset. https://doi.org/10.6084/m9.figshare.12482516.v2

Value of the Data

- This data presents information from Barranquilla, Colombia that can be used for the estimation of obesity levels, muscle dysmorphia and levels of exercise dependence in individuals.
- The data can be used for estimation using six categories, allowing a detailed analysis of the affectation level of an individual.
- The data can validate the impact of several factors that propitiate the apparition of weight and muscle dysmorphia known as vigorexy problems.

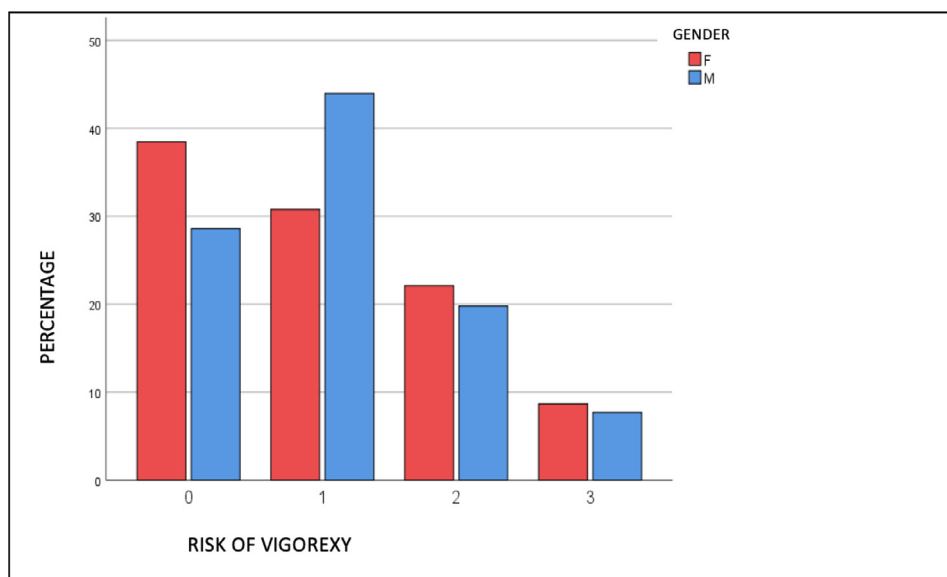
1. Data description

An obsessive mental body dysmorphic disorder known of a subtype of muscle dysmorphia is related with eating disorders; this muscle dysmorphia sometimes is called "vigorexy", "big-orexia", "megarexia", or "reverse anorexia", and consists of the delusional or exaggerated belief that one's own body is too small, too skinny, insufficiently muscular, or insufficiently lean, although in most cases, the individual's build is normal or even exceptionally large and muscular already [1,2,3].

This paper contains data for the estimation of muscle dysmorphia, weight level and levels of exercise dependence in individuals from Barranquilla, Colombia, with ages between 20 and 49 years and diverse eating habits and muscle dysmorphia condition as determined by [4,5], data was collected using a survey (see Table 1) where data collectors filled the document with each participant, then the information was processed obtaining 8 attributes and 200 records, after a data process described in Figs. 1 and 2. The attributes related with eating habits are: gender (G), age (A), Weight(W), Height (H), BMI, food supplements consumption (FSC), physiological condition (PC), and risk of muscle dysmorphia (RMD). The data contains quantitative and qualitative data, so it can be used for analysis based on algorithms of classification, prediction, segmentation and association. Data is available in SAV format to be used with SPSS tool. The questionnaire in English language is provided as a supplementary file. All the raw data related to survey and raw data for each graph, chart is available at: Kuzmar, Isaac (2020), "Data for: Dataset for estimation of muscle dysmorphia in individuals from Colombia", Mendeley Data, v1 <http://dx.doi.org/10.17632/8652jgm7p5.1> and/or I. Kuzmar, Dataset for estimation of muscle dysmorphia in individuals from Colombia, (2020). <https://doi.org/10.6084/m9.figshare.12482516.v2>

Table 1
Questionnaire.

Questions	Possible answers
What is your gender?	1. MALE 2. FEMALE 3. PREFER NOT TO ANSWER
What is your age?	1. < 20 2. 20–29 3. 30–34 4. 35–44 5. > 45
Height	Value in metre
BMI	0. 20–22.49 1. 22.50–24.99 2. 25–27.49 3. 27.50–29.99 4. > 30
Do you consume food supplements?	1. YES 2. NO
Have you felt guilt about your lack of adherence to the diet?	1. YES 2. NO
Risk of muscle dysmorphia	0 = LOW RISK 1 = MEDIUM RISK 2 = HIGH RISK 3 = VERY HIGH RISK

**Fig. 1.** Risk of muscular – body dysmorphic disorder by gender.

2. Experimental design, materials, and methods

The recollection of information was made directly through an in-person filled survey where users had evaluated their physical activity, eating habits and some aspects that helped to identify their muscle dysmorphia risk. The survey was collected over 12 weeks. Inclusion criteria: People who do physical activity, People who consume food supplements, Persons of legal age. Exclusion

		VIGOREXY RISK				Total
		0	1	2	3	
BMI	0	46	31	0	0	77
	1	20	16	7	0	43
	2	0	12	4	1	17
	3	0	10	19	12	41
	4	0	3	11	3	17
Total		66	72	41	16	195

Chi square= 130.182; $p < 0.001$

Fig. 2. Scrutinizing cross table BMI* risk of muscular dysmorphia.

Raw data of Fig. 2 is available at: Kuzmar, Isaac (2020), "Data for: Dataset for estimation of muscle dysmorphia in individuals from Colombia", Mendeley Data, v1 <http://dx.doi.org/10.17632/8652jgm7p5.1> and/or I. Kuzmar, Dataset for estimation of muscle dysmorphia in individuals from Colombia, (2020). <https://doi.org/10.6084/m9.figshare.12482516.v2> and/or I. Kuzmar, Dataset for estimation of muscle dysmorphia in individuals from Colombia, (2020). <https://doi.org/10.6084/m9.figshare.12482516.v2>.

criteria: people who are not physically active, people who do not consume food supplements, BMI < 20. In Table 1, the questions of the survey are presented.

After all data was collected, then data was pre-processed, so it could be used for different techniques of data processing. $N = 200$ records were collected and the data was labelled using equation (4).

Overweight and obesity [6], have been a problem in Colombia [7]. The Medium Risk of Muscle Dysmorphia (Vigorexy) [8,9,10] is higher in Male (>40%) than Female (+30%) gender (see Fig. 1). Doing a simple and initial analysis of the data using the SPSS program obtained through the survey, we appreciate that there is a 9.7% of High Risk of Muscle Dysmorphia [5,6,7] with a BMI = 25–27.59 and a 6.2% of Very High Risk of Vigorexy [5,6,7] with a BMI = 27.50–29.99 (Chi square = 130.182, $p < 0.001$) (see Fig. 2). Raw data available at: Kuzmar, Isaac (2020), "Data for: Dataset for estimation of muscle dysmorphia in individuals from Colombia", Mendeley Data, v1 <http://dx.doi.org/10.17632/8652jgm7p5.1> and/or I. Kuzmar, Dataset for estimation of muscle dysmorphia in individuals from Colombia, (2020). <https://doi.org/10.6084/m9.figshare.12482516.v2>

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships which have, or could be perceived to have, influenced the work reported in this article.

Acknowledgments

Authors would like to thanks the Simón Bolívar University of Colombia, special the Research Department personnel for the technical support for this project.

References

- [1] J. Leone, E.J. Sedoryč, K.A Gray, Recognition and treatment of muscle Dysmorphia and related body image disorders, *J. Athl. Train.* 40 (4) (2005) 352–359.
- [2] V Jorquera, Challenging myths of masculinity: understanding physical cultures Lee F Monaghan and Michael Atkinson Monaghan Lee F and Atkinson Michael, challenging myths of masculinity: understanding physical cultures, *Fem. Psychol.* 26 (2) (2015) 235–239, doi:[10.1177/0959353515614113](https://doi.org/10.1177/0959353515614113).
- [3] Phillips K.A. Understanding body Dysmorphic disorder: an essential guide. 2009; 4: 50–54
- [4] A. Palazón-Bru, M.M. Rizo-Baeza, A. Martínez-Segura, D.M. Folgado-de la Rosa, V.F. Gil-Guillén, E. Cortés-Castell, Screening tool to determine risk of having muscle Dysmorphia symptoms in men who engage in weight training at a gym, *Clin. J. Sport Med.* 1 (2017) 6, doi:[10.1097/jsm.0000000000000422](https://doi.org/10.1097/jsm.0000000000000422).

- [5] H.G. Pope, A.J. Gruber, P. Choi, R. Olivardia, K.A. Phillips, Muscle Dysmorphia: an underrecognized form of body dysmorphic disorder, *Psychosomatics* 38 (6) (1997) 548–557, doi:[10.1016/s0033-3182\(97\)71400-2](https://doi.org/10.1016/s0033-3182(97)71400-2).
- [6] WHO. Fact sheets. Obes. Overweight. Available at: <https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight> Accessed on: 20.04.2020
- [7] Isaac Kuzmar, Ernesto Cortés, Mercedes Rizo, Attendance and response to treatment for overweight and obesity in a Barranquilla (Colombia) population, *Nutr. clín. diet. hosp.* 34 (3) (2014) 20–28, doi:[10.12873/343kuzmar](https://doi.org/10.12873/343kuzmar).
- [8] S. Bo, R. Zoccali, V. Ponzio, L. Soldati, L. De Carli, A. Benso, ..., G. Abbate-Daga, University courses, eating problems and muscle dysmorphia: are there any associations? *J. Transl. Med.* 12 (1) (2014) 1–8, doi:[10.1186/s12967-014-0221-2](https://doi.org/10.1186/s12967-014-0221-2).
- [9] B. Babusa, E. Czeglédi, F. Túry, S.B. Mayville, R. Urbán, Differentiating the levels of risk for muscle dysmorphia among Hungarian male weightlifters: a factor mixture modeling approach, *Body Image* 12 (2015) 14–21, doi:[10.1016/j.bodyim.2014.09.001](https://doi.org/10.1016/j.bodyim.2014.09.001).
- [10] M.A. Fabris, C. Longobardi, L.E. Prino, M. Settanni, Attachment style and risk of muscle dysmorphia in a sample of male bodybuilders, *Psychol. Men Masc.* 19 (2) (2018) 273–281, doi:[10.1037/men0000096](https://doi.org/10.1037/men0000096).