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SATISFACTION WITH BODY IMAGE BETWEEN PRACTICING MUSCLE WOMEN, FUNCTIONAL TRAINING AND CROSSFIT: A COMPARATIVE STUDY

*¹Igor Sousa Germanio, ²Bruno Morbeck de Queiroz and ³Stenio Fernando Pimentel Duarte

Estudante, Av. lauro de freitas, 15, Brasil

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*Corresponding author: Igor Sousa Germanio

ABSTRACT

Observing small imperfections when you see your mirror image is human. When self-observation translates into non-existent or imperceptible defects, there may be a distortion of body image. The aim of this study was to compare the level of satisfaction with body image among women who practice bodybuilding, functional training and crossfit®. Data collection was done through two questionnaires, adapted from the National Health Survey, to assess body image satisfaction. The Body Shape Questionnaire was translated and adapted to portuguese by Di Pietro, Xavier and Silveira (2003). The sample was attended by 60 female individuals aged 15 to 44 years. All individuals present at the data collection site who agreed to collaborate with the research were included in the study. Data were tabulated and statistically treated using Microsoft Excel 2017®. Obtaining results through the mean, median, maximum, minimum and standard deviation. The results showed that 65% of women who practiced weight training were satisfied with their body image, 20% showed mild dissatisfaction, 10% found moderate dissatisfaction and only 5% reported extreme body dissatisfaction. In functional training 30% of women said they were satisfied, 55% showed a state of mild dissatisfaction and 15% showed moderate dissatisfaction. Does not hear reports of extreme dissatisfaction in the public practicing TF. In crossfit®, 40% of the sample had satisfaction, 40% reported mild dissatisfaction, 10% showed moderate dissatisfaction, and 10% of the public reported extreme dissatisfaction. When comparing the level of satisfaction with body image between the modalities, there was no significant difference.

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INTRODUCTION

Physical activity is recognized as a disease prevention factor since ancient times. Moreover, research has associated its advantages in combating chronic diseases, decreased risk of early death from cardiovascular complications and also for weight loss (POLISSENI; RIBEIRO, 2014). In Brazil, there was a high prevalence of people who do not practice any kind of physical activity, contributing to a higher number of sedentary people. About 49.2% of Brazilian adults reported not engaging in any kind of activity (MIELKI *et al.*, 2015). Among the evaluated domains of behavior is leisure, where individuals engage in systematized activities, such as strength training, functional training and, more recently, crossfit®. In this context, populations have adopted the practice of these modalities of physical exercise in order to improve their fitness, improve their physical appearance and achieve a satisfactory state of well-being (FRAINER, 2017).

Among these models, bodybuilding, also known as strength training, has been studied as a modality that provides improvement of physical valences and that has gained a lot of adherence by the population (FLECK; KRAMER, 2017). Another modality that has been gaining its space is Functional Training, which aims to improve the ability to perform daily motor tasks effectively and independently (TEIXEIRA *et al.*, 2015). In addition, crossfit® has also been widely explored and studied, as it provides positive effects on practitioners' muscle strength and fitness (XAVIER; LOPES, 2017). Such modalities, besides intervening directly in the physical capacities of the individual, are totally linked to the structural form of the body, being thus adopted by the population, in order to improve body image and ensure a state of well-being. The slim body is an example of beauty created by society and the most desired among women. Released by the media, thinness is considered an ideal situation for women, motivating them to exercise daily, and can become a frustrating search for

the perfect body and consequently leaving health and quality of life aside (DUARTE *et al.*, 2014). Considering that the performance of physical activity is totally linked to body image, also presenting an improvement in social life, the search for spaces and gyms that offer this kind of benefit has been increasing gradually (MOREIRA; CORREA; DOMINGUES, 2018). Some studies have been conducted in order to evaluate the level of satisfaction with body image of women practitioners of different modalities, in isolation. A survey conducted in Santa Catarina (Sousa, 2013) and another review study (Damasceno *et al.*, 2006) showed that there is a picture of dissatisfaction in women who practice bodybuilding and group gymnastics. However, no studies were found that compared the satisfaction level of women practitioners of different modalities. In this sense, the objective of this study was to comparatively evaluate which modality presents a higher level of body image dissatisfaction among women who practice bodybuilding, Functional training and crossfit®.

MATERIALS AND METHODS

This research was characterized by its quantitative, descriptive cross - sectional nature and field research procedure. The quantitative research proposes a form of approach that translates the opinions and information to be classified and analyzed in numbers and uses statistical techniques (RODRIGUES, 2007). As for the cross-sectional study, the parameter determinations are done at once, without any follow-up period, that is, at a certain point of time (BORDALO, 2006). To perform the sample calculation, the significance level of 5% (type I error) was adopted and the power of the test adopted was 80% (type II error) for statistical analysis by one-way ANOVA. First, it was considering the effect size (f) for the analysis of partial variance. The deviation score observed in the literature for the body satisfaction school (likert) was considered for the estimation of the minimum sample. It was determined that, to verify a significant minimum difference, 20 participants would be required in each group. Data were obtained using the Statistical G * Power program (version 3.1.9.2). The present project involved the participation of young and / or young adult women aged 15 to 44 years, residing in the city of Vitória da Conquista. Invitations were made to the raffled spaces that offer the modalities investigated. The selection of participants took into account their suitability for inclusion and exclusion criteria. The subjects were evaluated considering three groups: 1. bodybuilding practitioners; 2. crossfit practitioners; 3. functional training practitioners.

Inclusion Criteria: a) female gender; b) are aged 15 or 44 years old; c) Availability to participate in data collection; d) Participate in strength training, crossfit® or functional program for at least 1 year; e) hold at least 3 days of usual weekly sessions of training of the modalities; f) CREF-accredited gyms and brand-linked crossfit® boxes. Exclusion criteria: a) hormonal treatment or use of anabolic steroids; b) simultaneously perform two or more modalities of physical training; c) present the occurrence of breaks in the practice of training for at least one month in the last year; d) have been diagnosed or have a history of musculoskeletal disorders. For body image evaluation, the Body Shape Questionnaire - BSQ (Cooper, Taylor, Cooper, & Fairbum, 1987) was used, in its translated version to Portuguese and validated by Di Pietro and Silveira (2009). The scale adaptation maintained the characteristics of the original scale. The BSQ is a self-

administered Likert scale questionnaire consisting of 34 questions that score from one to six. The sum of the questions may vary from 34 to 204 points, and higher scores may indicate greater concern with body image (MARTINS; PETROSKI, 2015). The questionnaire has a cutoff point of: no dissatisfaction (<81 points), mild dissatisfaction (81-110 points), moderate dissatisfaction (111-140 points), extreme dissatisfaction (> 140 points).

And to assess socioeconomic, sociodemographic and health status questions, a questionnaire prepared by the authors themselves was used. Descriptive analysis of the study variables was performed by distributing absolute and relative frequency for categorical variables and measures of central tendency (mean, median and mode) and dispersion (standard deviation and amplitude) for continuous variables. In order to evaluate the difference between body satisfaction levels for the different modalities, the analysis of variance (ANOVA) was performed to obtain crude estimates. A significant association was considered, values that presented the level of significance adopted in the study of a maximum of 5%. The project was evaluated by the Research Ethics Committee. The Informed Consent Form (ICF) was duly presented to the participants, who were informed of the objectives of the study. Participation was not mandatory, and participants were guaranteed to withdraw at any stage of the project. In addition, any embarrassing question may no longer be answered without prejudice to participation in this project. The confidentiality and privacy of the data obtained in the research were guaranteed.

RESULTS

We evaluated 60 women aged 15 to 44 years, divided into 3 groups and each group consisted of 20 individuals, the first composed of those who practiced only functional training, the second consisted of those who practiced only crossfit® and the third group consisted of women who practiced only bodybuilding. The other characteristics of the study population are described in Table 1. When the socioeconomic and sociodemographic variables were evaluated, most of the public (74.4 %) reported having a high school degree and complete graduation, living accompanied (75%), having compensation between one and two minimum wages (53.3%), it is also observed that most (86.6%) have a good state of health and when compared to the health status of other people, it is perceived that they feel better (41.7%).

The public does not have hypertension, diabetes and heart disease (93.8%). The level of satisfaction with body image was assessed by each modality as described in graph 1. In the group of functional training practitioners, 30% were satisfied with their image, 55% reported mild dissatisfaction and 15% showed moderate dissatisfaction. In the group that practiced crossfit®, 40% were satisfied, 40% had mild dissatisfaction, 10% reported moderate dissatisfaction and 10% were extremely dissatisfied and lastly in the group that performed bodybuilding, 65% were satisfied, 20 % had mild dissatisfaction, 10% reported moderate dissatisfaction, and only 5% had extreme dissatisfaction. Getting results through the mean, median and standard deviation shown in table 2, it was found that no there was a significant difference when comparing the level of satisfaction with body image between the modalities.

Table 1. Sociodemographic characteristics and health conditions of participants of the Academy of Health, Vitória da Conquista, 2017

Variable	Modalities							
	Functional		CrossFit®		Bodybuilding		Total	
	n	%	n	%	n	%	n	%
Schooling								
First Degree	0	0	0	0	1	5	1	1.7
Second Degree	5	25	6	30	6	30	17	28.3
Technical Assistant	3	15	2	10	0	0	6	10
Teaching	0	0	0	0	1	5	4	6.7
Graduation	8	40	2	10	2	10	28	46.7
Graduate	4	20	10	50	10	50	4	6.7
Housing								
Alone	7	35	4	20	3	15	14	23.3
Accompanied	13	65	15	75	17	85	45	75
I don't know	0	0	0	0	0	0	0	0
Did not answer	0	0	1	5	0	0	1	1.7
Marital Status								
Married	10	50	7	35	11	55	28	46.7
Single	9	45	11	55	8	40	28	46.7
Separated	1	5	2	10	1	5	4	6.7
Widow	0	0	0	0	0	0	0	0
Financial situation								
<R \$ 937	6	30	4	20	4	20	14	23.3
R\$ 937 - R \$ 1874	6	30	13	65	13	65	32	53.3
> R\$ 1874 - R\$ 3748	3	15	1	5	3	15	7	11.7
> R\$ 3748 - R \$ 5622	1	5	2	10	0	0	3	5
> R\$ 5622	4	20	0	0	0	0	4	6.7
Has money your way cient								
Yes	12	60	13	65	8	40	33	55
No	4	20	6	30	11	55	20	33.3
Do not know	4	20	1	5	0	0	3	5
No response	0	0	0	0	1	5	3	3.3
Times the doctor in the last year								
No	9	15	1	5	5	25	9	15
One	24	40	7	35	10	50	24	40
More than once	10	50	12	60	5	25	27	45
NS / NR	0	0	0	0	0	0	0	0
Health condition								
Very good	9	45	5	25	3	15	17	28.3
Good	9	45	12	60	14	70	35	58.3
Regular	2	10	3	15	3	15	8	13.3
Bad	0	0	0	0	0	0	0	0
poorly	0	0	0	0	0	0	0	0
NS /NR	0	0	0	0	0	0	0	0
Health compared to others								
Much worse	0	0	0	0	0	0	0	0
Worse	0	0	1	5	0	0	1	1.7
Same	6	30	8	40	7	35	21	35
Best	9	45	10	50	10	50	25	41.7
Much better	5	25	1	5	3	15	13	21.7
Hypertension								
Yes	0	0	2	10	0	0	2	3.3
Only in pregnancy	5	25	0	0	3	15	8	13.3
No	15	75	18	90	17	85	50	83.3
I don't know	0	0	0	0	0	0	0	0
Diabetes								
Yes	0	0	0	0	0	0	0	0
Only in pregnancy	0	0	0	0	0	0	0	0
No	20	100	20	100	20	100	60	100
I don't know	0	0	0	0	0	0	0	0.0
Heart disease								
Yes	1	5	1	5	0	0	1	1.7
No	19	95	19	95	20	100	59	98.3
I don't know	0	0	0	0	0	0	0	0.0

Table 2. Analysis of variance of mean BSQ scores for the evaluated modes, Victoria achievement of, 2019

Group	Mean	SD	Median	F	Sig
Functional	90.9000	21.41052	88.0000	0.773	467
CrossFit®	86.6500	27.32281	83.5000	0.774	467
Muscle	80.9500	26.96874	73.0000	0.773	467

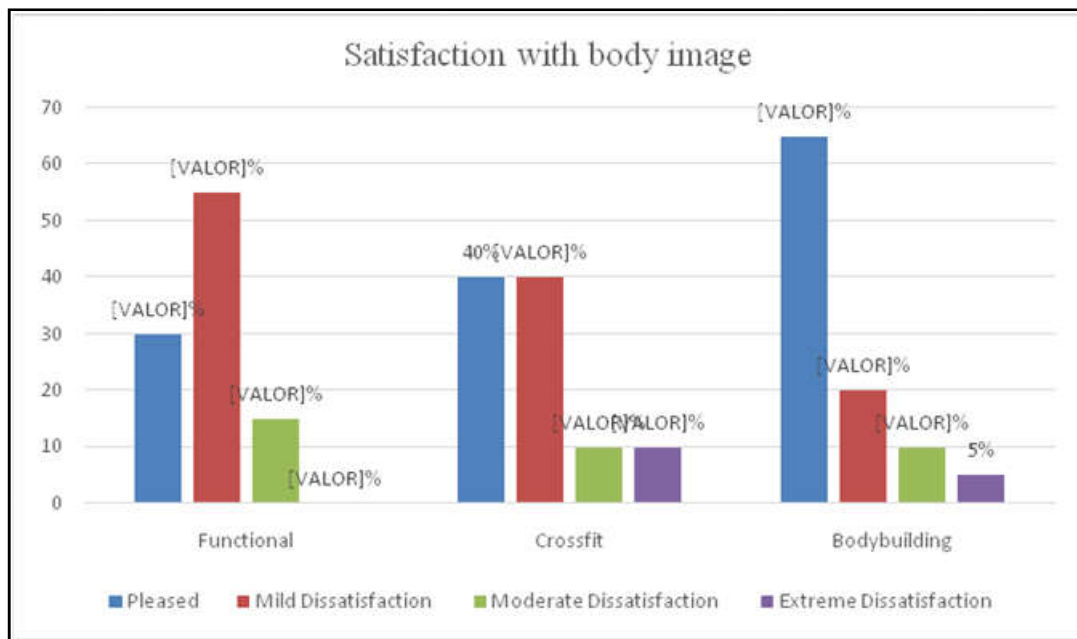


Figure 1.

DISCUSSION

This study comparatively evaluated which modality presents a higher level of body image satisfaction among women who practice bodybuilding, functional training and crossfit®. The results showed that despite finding differences in the frequencies regarding the satisfaction levels in each modality, when comparative analysis (ANOVA) was performed among the three modalities, it was observed that the differences were not significant. However, it was highlighted that the group that practiced weight training presented a higher level of satisfaction with body image compared to the other two modalities. Corroborating this research, a study by Vidal (2006) obtained similar results, however, using the Body Image Questionnaire that also aims to assess the level of satisfaction with body image through questions. The study was conducted with two groups: bodybuilders and group gymnastics practitioners, when comparing body satisfaction levels between the two groups, there was no significant difference. In another study by Coelho et al. (2012), where a comparative assessment of body image satisfaction levels is made between practitioners of aquatic modalities (swimming, aquabike and water aerobics) and weight training through the BSQ, also proves that there is no significant difference between satisfaction levels between both modalities. Dos Santos, da Silva, Romanholo (2012), performed a study related to body image with men and women who practice bodybuilding also using the BSQ and obtained results that corroborate the results of this research, where the female audience showed no change in perception. in body image.

Women end up seeking physical exercise in order to improve their body image and self-esteem. Even though there are no results that indicate differences in the levels of satisfaction between the modalities addressed, the perception of body image is not only linked to the practice of physical exercise. Media, social, cultural, psychological and economic factors all have a direct influence and may change the way women see and feel. A study by Conti, Frutuoso and Gambardella (2005), shows that body dissatisfaction has been caused by various causes such as media imposition, sociocultural influences,

social factors and the constant search for an ideal body model that ends up being linked to achievements and well-being, causing changes in the perception of body image. in the female audience. From this we can see that body image goes beyond just a beautiful, thin and healthy body. Society, the economy, the mind and the media have the power to transform a perfect body built by exercise into a horrible body image judged by them. Some limitations were found in the research, such as the lack of time to answer the questionnaires where the participant claimed to be in a hurry and fear that the information attributed in the questionnaires could become public, in which case the entire rules contained in the informed consent form were explained. Finally, this study was unprecedented for evaluating and comparing the level of satisfaction with body image among bodybuilding, functional training and crossfit® practitioners. Thus, we could observe that the practice of physical exercise is totally linked to body image. The results showed that although the methodology present in each modality is different, women presented a similar level of body satisfaction, highlighting the absence of differences in satisfaction levels when compared to the three modalities.

REFERENCES

- Bordalo, A. A. 2006. Estudo transversal e/ou longitudinal. *Revista Paraense de Medicina*, 20(4), 5.
- Coelho, F. D., Amaral, A. C. S., Carvalho, P. H. B., & Ferreira, M. E. C. 2012. Comparação da satisfação corporal entre praticantes de diferentes tipos de atividade física. *Motricidade*, 8(Supl. 2), 964-969.
- Costa, L. D. C. F. and Vasconcelos, F. D. A. G. D. 2010. Influência de fatores socioeconômicos, comportamentais e nutricionais na insatisfação com a imagem corporal de universitárias em Florianópolis, SC. *Revista Brasileira de Epidemiologia*, 13, 665-676.
- Damasceno, V.; e colaboradores. Imagem corporal e corpo ideal. *Revista Brasileira de Ciência e Movimento*. Vol. 14. Núm. 2. p. 81-94. 2006.
- De Almeida Xavier, Alan; Da Costa Lopes, Airton Martins. Lesões musculoesqueléticas em praticantes de crossfit.

- Revista Interdisciplinar Ciências Médicas, v. 1, n. 1, p. 11-27, 2017.
- Di Pietro, M. Desempenho da escala Body Shape Questionnaire em uma população de estudantes universitários. Trabalho apresentado no V Encontro de Transtornos Alimentares e Obesidade, junho de 2003, Gramado, RS. CONGRESSO NACIONAL DE EDUCAÇÃO-EDUCERE. Curitiba, 7 a 12 novembro. 2011. v. 2, n. 1, p. 229-248, jan./mar. 2011
- dos Santos, A. P. R., da Silva, F. J., & Romanholo, R. A. 2012. Distúrbios de imagem corporal e sua associação ao nível de atividade física em praticantes de musculação na cidade de Cacoal-RO. *RBP FEX-Revista Brasileira de Prescrição e Fisiologia do Exercício*, 5(25).
- Duarte, Lidiane Castro et al. Satisfação com a imagem corporal e uso de suplementos por frequentadores de academias de ginástica. *Sci Med [Internet]*, v. 24, n. 2, p. 137-41, 2014.
- Fleck, Steven J.; Kraemer, William J. Fundamentos do treinamento de força muscular. *Artmed Editora*, 2017.
- Frainer, Juliana et al. Motivos de adesão à prática de atividades físicas e esportivas no Brasil. 2017.
- Martins, C. R., & Petroski, E. L. (2015). Insatisfação com a imagem corporal em adolescentes do sexo feminino de uma cidade de pequeno porte: prevalência e correlações. *Motricidade*, 11(2), 94-106.
- Mielke, Grégore Iven et al. Prática de atividade física e hábito de assistir à televisão entre adultos no Brasil: Pesquisa Nacional de Saúde 2013. *Epidemiologia e Serviços de Saúde*, v. 24, p. 277-286, 2015.
- Moreira, Maria Luiza; Correia, Alexandre Augusto Macêdo; Domingues, Sabrina Fontes. Satisfação da imagem corporal em jovens praticantes de ginástica em grupo. *RBONE-Revista Brasileira de Obesidade, Nutrição e Emagrecimento*, v. 12, n. 71, p. 400-405, 2018.
- Polisseni, Maria Lucia De Castro; Ribeiro, Luiz Cláudio. Exercício físico como fator de proteção para a saúde em servidores públicos. *Revista Brasileira de Medicina do Esporte*, 2014.
- Rodrigues, W. C. 2007. Metodologia científica. Faetec/IST. Paracambi.
- Sousa, M. V. Imagem Corporal de mulheres praticantes de musculação. *EDeportes.com. Revista Digital*, Buenos Aires. Ano 18. Núm.186. 2013.
- Teixeira, Cauê Vazquez La Scala et al. Short roundtable RBCM: treinamento funcional. *Revista Brasileira de Ciência e Movimento*, v. 24, n. 1, p. 200-206, 2015.
- Vidal, A. 2006. Satisfação com a imagem corporal em praticantes de ginástica de academia: estudo comparativo entre praticantes de musculação e de aulas de grupo.
