Effects of physical activities in gym centres on body image of obese people

ABSTRACT: The present study aimed at comparing the body image dissatisfaction level between an active obese group (AG) and a sedentary obese group (SG). The sample individuals from group AG (n = 25) must be males, with IMC ≥ 30, practicing aerobic exercises in a gym centre for at least six months, 3 to 5 times a week. The sample individuals from group SG (n = 25) must also be males, with IMC ≥ 30, but must not practice any kind of physical activity. The “BSQ” questionnaire (“Body Shape Questionnaire”) according Di Pietro et al., (2001) was used to analyse the body image dissatisfaction level. The statistical data analysis was a descriptive and inferencial (Mann-Whitney U test). A Ho was tested and dismissed, as it proposed there would be no significant difference to p < 0.05 between the body Image dissatisfaction level of the sedentary obese group, when compared to the active obese group. The discussion and conclusion of the study was based on these results.

Keywords: Obesity, physical activity, Body Image and Gym centre.

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INTRODUCTION

Obesity affects both rich and emerging countries. The changes in the life style of many people have caused the worldwide population to increase significantly in the last century. WHO estimates that nearly 7% of worldwide population is obese, that is, it has BMI above 30 (Coutinho, 2002; House of Commons Health Committee, 2004; WHO, 2003; WHO, 2000).

Sedentariness, induced by the technological evolution, may lead the human being to become inactive and contract diseases caused by hypokinesia, what points that these types of onsets may be avoided with the increase of regular physical activity (Matsudo et al., 2002; Saba, 2003). The overweight or obese individuals are more susceptible to sedentariness and not to be inclined than those normal weight individuals, but the physical activity may protect against morbidity, that is, chronic diseases and mortality, even in this subgroup of population, considered overweight (Brodney; Blair; Lee, 2003).

The excess of weight for the overweight people may be the main barrier to adopt a regular physical activity, but the are other additional barriers such as previous negative experiences, scoffing, bad performance and feeling of inappropriateness (Schuster, 2000).

The obsession with body image, diets to become thin and fashion about the fitness and muscular complexion, popularly know as “cut” are spreading all over the world. However, the effort in fighting off the stature and weight of people at all costs seems not to have the desired effects (Schuster, 2000).

The process of the body image making may be influenced by several facts such as sex, age, means of communication, as well by the relation of the body with cognitive processes, as beliefs, values and attitudes in a given culture (Banfield; Mccabbe, 2002; Damasceno, 2004; Ricciardelli; Mccabbe; Banfield, 2000).

The dissatisfaction with the body image increases as the media exposes beautiful bodies, promoting in the last decades a compulsion for the search of the ideal body (Labre, 2002). The news in the media does not represent the truth though, they are neither educational, nor former of solid foundation. The health professional cannot be unaware of what is happening in the media market. It is the reponsibility of this professional to inform and guide the population that the body can and should be thought in its multiple dimensions, not being restricted to aesthetic standards imposed by models(Braga, 1999; Novaes et al., 2002). Media and society spare more men than women, when it comes to losing weight (Kupermann, 2004). The authors McCabe and Ricciardelli (2001) concluded in their studies that women are less satisfied with their bodies and that they adopt strategies to lose weight, while men adopt strategies to bodybuilding. Men are significantly more satisfied than women, independent of the age group, and the older individuals, for both sexes, are less dissatisfied with the body image, when compared to the younger (Davis; Cowles, 1991; Ford et al., 1991; Loland, 2000).

According to Martin and Lichtenberger (2002), in the past decades the studies have tried to prove the idea that the practice of physical activity is related to the improvement of body image. The results of some studies indicates a prevalency for values significantly higher in the more high in the post-test, in relation to greater dissatisfaction and smaller welfare state for the groups of non-users of physical activities (Vieira, 2004; Williams; CASH, 2001).
On the other hand, other studies have failed to show the relation between the changes in the body composition and body image. Some individuals can remain eternally dissatisfied with their body image, essentially sacrificed, massified and stuck to the esthetic ideal that they fancy they will never achieve (Davis et al. 1994; Davis; Cowles, 1991).

Is it likely to be a healthy overweight physically apt and have a better perception of the body, without losing weight completely tied to esthetic levels imposed by the current society? Some authors (Blair, 1999; Brodney et al., 2003; Bouchard, 2003; Hakala, 1999; Schuster, 2000; Vieira et al, 2004) affirm positively. Based on these evidences at the same time, it raises the subject matter which guides this investigation: Is it likely that positive changes occur from the practice of physical exercises, also in relation to the satisfaction with body image in overweight people?

**OBJECTIVE**

The objective of this study was to compare the levels de dissatisfation with the body image of the group of active overweight people (GA), physical activities users, with the group of sedentary overweight people (GS), apparently healthy, in the county of Rio de Janeiro.

**METHODOLOGY**

**Sample**

The non-probabilistic sample was limited for overweight people with BMI ≥ 30, physical activities users at fitness centers, aged 20-52 years, males (Flegner; Dias, 1995; Triola, 1999). In the first moment, 25 active overweight people were selected (GA, n = 25, \( \text{X} = 37.28 \pm 6.85 \) years), with at least 6 months of physical activities, frequency not less than 3 times a week. This small and intentional sample is explained by the difficulty in finding active overweight people, which regularly takes part of physical activities at least 6 months.

In the second moment, another group of 25 overweight people was chosen intentionally with nearly the same characteristics do the first one, but they were completely sedentary (GS, n = 25, \( \text{X} = 35.64 \pm 6.83 \) years).

**Procedures**

The chosen volunteers and interested people filled up a form with initial anamnesis. It was obtained the measures about weight and stature for the IBM calculation. The variables served to characterize the homogeneity of the sample. The collected data for these variables were analyzed by means of descriptive and inferential statistics (test t de Student), through a Windows statistical pack. To measure the dissatisfaction with the body image was used a questionnaire BSQ “Body Shape Questionnaire”, adapted and validated by Di Pietro et al., (2001). By means of the Mann-Whitney test, it was possible to compare the difference between the medians of the scores of this questionnaire. The study admitted the level of \( p < 0.05 \) for a statistical significance.

**RESULTS**

The results herein will be presented through the descriptive statistics, with mean mean, median, standard deviation, coefficient of variation, and through inferential statistics. Therefor, the following topic: a) characteristics of the sample and analysis of homogeneity; b) inferential analysis; c) evaluation of the BSQ questionnaire.

**DESCRIPTIVE ANALYSIS**

**Characteristics of the Sample and Homogeneity**

The descriptive results of the GA as regards the physical characteristics: age, weight, stature, BMI and scores of the questionnaire.

The descriptive results as regards the group of active overweight people (GA) (cf. Table 1)

Analyzing the table 1, it was evidenced that the values of means and medians are very close. The scores of the BSQ questionnaire of the group GA presented a high dispersion (CV>20%), therefore, this variable has in the median the best measure of central tendency.

There was no type of intervention and the study was carried ex post facto, that is, checking the phenomena already occurred and installed.

**Instruments**

As instruments for this study, it was used: a Filizolla (Brazil) mechanical scale, with maximum load of 200kg and precision of 100g, a Sonny Stadiometer. Using the measures of body weight (BW) and stature, the BMI was obtained from the relation between these measures expressed in the formula as follows: BW (kg) / (stature in meters)². For the determination of the variable Dissatisfaction with a body image, it was conducted the sum of the score obtained in the BSQ, according to the answers.

The score rating of the BSQ questionnaire 34 questions is the following: less of 110 points, you are almost not worried about the appearance; between 111 and 138, you are slightly worried about the appearance; between 139 and 167, you are moderately worried about appearance; form 168 higher, your are overworried about appearance and maybe you have any disturbance related to this subject matter. It is recommendable that you look for a doctor.

**Limitations**

This study may have suffered the interference of some limiting factor: size and sample limitations; inhibition and embarrassment of the individuals; sincerity about the answers of the questionnaire. The instruments for the measure of dissatisfaction with the body image are other limiting aspects, for they allow considering and representing the individual as a whole. Despite this fact, yet the instruments are trustworthy and precise (Gardner, 2002; Thompson; Van De Berg, 2002).
Analyzing the Table 2, it is observed that the group presented, for all the variables evaluated after the test, a normal distribution (p>0.05).

Analyzing the Table 3, it is noticed that the value of the mean and median, both measures of central tendency, are very close. It is also observed that in the sedentary group there was a superiority of 41 points, comparing the medians of the scores of the questionnaire between both groups.

Observing the presented values in the Table 4, the group of sedentary overweight people demonstrated for all variables of the study a normal distribution.

**INFERENTIAL ANALYSIS**

The Table 5 presents the results of the inferential analysis, through the test t Student, for the comparison of variables: age, weight, stature and BMI between both groups.

When the Table 5 is analyzed, it is noticed in relation to the relation to the variables do weight and BMI, the groups presented statistically significant differences (p<0.05). For the variables age and stature, the difference between the groups GA and GS was not significant.

The Table 6 presents the value referring to the inferential statistics, conducted through the Mann-Whitney Test, for comparison of difference between means of the scores of the questionnaire applied.

It is observed in the Table 6, from the results obtained for the scores relative to questionnaire, which the groups GA and GS presented statistically (significant differences p<0.05) for this variable.

**EVALUATION OF BSQ QUESTIONNAIRE**

The BSQ Questionnaire is a structured questionnaire in ordinal scale for independent groups. That being so it was used the non-parametric approach together with the Mann-Whitney test, having the median as measure of central tendency. The BSQ is a simple and self-administered questionnaire, which consists of 34 questions which evaluate the thoughts, feeling and behavior in relation to the body for graduating the body dissatisfaction (Gardner, 2002). Although there are other questionnaires and instruments with distinct degrees and levels of subtlety, there is a current tendency to simplify and even use a few questions to make the data collection easier (Araújo; Araújo, 2003; Sternfeld et al., 2000). For the application of this questionnaire two key aspects were taken into account: fastness and economy.

In the Table 7, it is presented the value of descriptive analysis of the scores scored in the questionnaire of each group.

It is observed in the Table 7 that there was a significant difference in the scores of the questionnaire. The GS presented the highest results of the median of the scores in comparison with the same measure for the other group GA. This means that the sedentary overweight people are more dissatisfied with the body image than the active overweight people (GA).

The figure 1 presents globally the comparison of the variables for both groups with the more significant differences (*).

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**Table 1 - Descriptive analysis of active overweight people (GA)**

<table>
<thead>
<tr>
<th>Group Active</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Median</th>
<th>Standard deviation</th>
<th>CV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>25</td>
<td>22.00</td>
<td>50.00</td>
<td>37.28</td>
<td>38.00</td>
<td>6.85</td>
<td>18.37</td>
</tr>
<tr>
<td>Weight</td>
<td>25</td>
<td>100.00</td>
<td>140.00</td>
<td>115.08</td>
<td>111.40</td>
<td>11.14</td>
<td>9.68</td>
</tr>
<tr>
<td>Stature (m)</td>
<td>25</td>
<td>1.67</td>
<td>1.90</td>
<td>1.79</td>
<td>1.80</td>
<td>0.05</td>
<td>0.03</td>
</tr>
<tr>
<td>BMI</td>
<td>25</td>
<td>30.10</td>
<td>44.05</td>
<td>35.69</td>
<td>33.95</td>
<td>4.32</td>
<td>12.10</td>
</tr>
<tr>
<td>Scores BSQ</td>
<td>25</td>
<td>37.00</td>
<td>108.00</td>
<td>80.64</td>
<td>86.00</td>
<td>18.36</td>
<td>22.77</td>
</tr>
</tbody>
</table>

CV = coefficient of variation
BSQ = Questionnaire use in the study.

**Table 2 - The Kolmogorov-Smirnov test - Group of active overweight people (GA)**

<table>
<thead>
<tr>
<th>Group active</th>
<th>age</th>
<th>weight</th>
<th>stature</th>
<th>bmi</th>
<th>BSQ scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Kolmogorov-Smirnov Z</td>
<td>0.50</td>
<td>0.77</td>
<td>0.75</td>
<td>1.04</td>
<td>0.67</td>
</tr>
<tr>
<td>p-value</td>
<td>0.95</td>
<td>0.57</td>
<td>0.61</td>
<td>0.22</td>
<td>0.74</td>
</tr>
</tbody>
</table>

p<0.05; BSQ score = Scores of the questionnaire used in the study.

**Table 3 - Statistics Descriptive of group of sedentary overweight people (GS)**

<table>
<thead>
<tr>
<th>Sedentary Group</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Median</th>
<th>Standard deviation</th>
<th>CV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>25</td>
<td>28.00</td>
<td>53.00</td>
<td>35.64</td>
<td>34.00</td>
<td>6.83</td>
<td>19.16</td>
</tr>
<tr>
<td>Body Mass</td>
<td>25</td>
<td>91.50</td>
<td>190.00</td>
<td>128.47</td>
<td>130.40</td>
<td>18.92</td>
<td>14.73</td>
</tr>
<tr>
<td>Stature (m)</td>
<td>25</td>
<td>1.67</td>
<td>1.96</td>
<td>1.77</td>
<td>1.77</td>
<td>0.07</td>
<td>0.04</td>
</tr>
<tr>
<td>BMI</td>
<td>25</td>
<td>31.24</td>
<td>62.04</td>
<td>40.94</td>
<td>42.16</td>
<td>6.10</td>
<td>14.90</td>
</tr>
<tr>
<td>BSQ Scores</td>
<td>25</td>
<td>76.00</td>
<td>151.00</td>
<td>125.08</td>
<td>127.00</td>
<td>15.78</td>
<td>12.62</td>
</tr>
</tbody>
</table>

CV = coefficient of variation
BSQ = Questionnaire use in the study.

**Table 4 - Test de homogeneity of the group of sedentary overweight people (GS)**

<table>
<thead>
<tr>
<th>Group sedentary</th>
<th>Age</th>
<th>Weight</th>
<th>Stature</th>
<th>BMI</th>
<th>BSQ Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Kolmogorov-smirnov z</td>
<td>0.77</td>
<td>0.76</td>
<td>0.64</td>
<td>0.85</td>
<td>0.76</td>
</tr>
<tr>
<td>p-value</td>
<td>0.58</td>
<td>0.60</td>
<td>0.80</td>
<td>0.46</td>
<td>0.60</td>
</tr>
</tbody>
</table>

p<0.05; BSQ score = Scores of the questionnaire used in the study.

**Table 5 - Results of the inferential analysis between GA and GS**

<table>
<thead>
<tr>
<th>Test-t for the equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>t</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>Age</td>
</tr>
<tr>
<td>Weight</td>
</tr>
<tr>
<td>Stature (m)</td>
</tr>
<tr>
<td>BMI</td>
</tr>
</tbody>
</table>

p<0.05; t = t calculated; p = p value; df = degree of freedom.

**Table 6 - Inferential Statistics of the scores of the groups GA and GS**

<table>
<thead>
<tr>
<th>Variables</th>
<th>GA</th>
<th>GS</th>
<th>U</th>
<th>z</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scores</td>
<td>13.84</td>
<td>37.16</td>
<td>21.00</td>
<td>-5.65</td>
<td>0.00</td>
</tr>
</tbody>
</table>

U = Mann-Whitney; z = score z; p<0.05
DISCUSSION OF RESULTS

This study based on a sample consisting of male middle-aged adults for both groups GA (\(X = 37.28 \pm 6.85\) years) and GS (\(X = 35.64 \pm 6.83\) years) rated as overweight by BMI \(\geq 30\). The BMI has been widely used in epidemiological and clinical studies. Even considering the criticism and limitations, it was decided to use it due to the large scientific experience accumulate by this index found in the literature (Araújo; Araújo; 2003; Calle et al.1999; Kruel et al., 2003; Yarnell et al., 2000).

The results showed significant differences, presenting the active overweight people more satisfied with their body image than the other groups, despite the high BMI (35.69 \(\pm 4.32\)). Nevertheless, when it was analyzed the score in the scale, it was noticed an unexpected results. Although the individuals presented high BMI (BMI \(\geq 30\)), the results in the rating of the questionnaire indicate for he GA almost no worry about appearance (median of score GA= 86) and for the GS a slight worry about appearance (median of score GS = 127). Some scores of the GS were at level above the scale of the questionnaire, reaching a maximum score of 151 points (moderately worried). It is possible that the rating scale has its parameters in inferior scales with very ample intervals of scoring for the characteristics of both groups in small samples. Additionally, there must have been some bias about the sincerity of the answers, this aspect had already been predicted in the study limitations, where the embarrassment and exposure may have influenced the results. Other possibilities will also be raised and discussed, taking into account these low levels of body dissatisfaction for the overweight people.

In the literature review made, it was not found studies related to dissatisfaction with body image, aiming at only overweight people being active, male adults with BMI \(\geq 30\), compared with sedentary overweight people with the same characteristics. But there are some evidences which can underpin the findings of this study as regards the inexistence of a high level dissatisfaction related to overweight people with BMI \(\geq 30\). Active overweight people for more than 6 months, regular users of physical activities, which underwent critical moments for admission in the program, maybe they are now more aware in relation to the welfare, health and life quality, not being pretty much worried about esthetics (Wing, Jakicic, 2003). Corroborating this idea, other studies showed that overweight people were more satisfied with the body image than other individuals slimmer and athletic worried about the improvement and esthetic maintenance (Becker, 2002; Ross, 1994).

It is important to highlight that the data of other studies indicate that nearly 50% of the overweight participants drop out of the exercise program during the first 3 or 6 months for many reasons.

| Table 7 - Descriptive Analysis of the scores of the BSQ questionnaire |
|--------------------------|---------|-------|-------|---------|-------|-------|
| Score      | Mean    | \(\bar{\epsilon}\) | Md    | \(s\)  | CV    | Min   | Max   |
| GA         | 80.64   | 3.67  | 86.00 | 18.36  | 22.77 | 37    | 108   |
| GS         | 125.08  | 3.16  | 127.00| 15.78  | 12.62 | 76    | 151   |

GA= active group; GS= sedentary group; \(\bar{\epsilon}\)= standard error; Md= median; \(s\)= Standard deviation; CV= coefficient of variation; MIN= minimum score; MAX= maximum score.

Psychological, physical, social and environmental problems affect the behavior of the physical activity for the overweight people (Ceeddia, 2002; Matsudo et al., 2002). The overweight people who do physical activities for a short period of time, in the expectation of esthetic miracle to get an ideal body are likely to get frustrated and give up, or maybe get dissatisfied. The adult sedentary overweight people with BMI \(\geq 30\) for different reason are already conformed to their bodies, besides they do not intend to undergo new failure in life, they begin to accept their bodies the way they are. This behavior of self-deception and self-defense probably derived from the insconscient, for they feel they are satisfied or conformed to their body image (Araújo; Araújo, 2003; Cairo, 2002; Kessler; Halpern; Zukerfeld, 2001).

Other studies show that the BMI presented a positive correlation to body dissatisfaction and to strategies to lose weight, that is, they indicated that the individuals who presented a greater BMI were more dissatisfied with their bodies and adopted more strategies to lose weight (Araújo; Araújo, 2003; McAbe; Ricciardelli, 2001; McReady; Sasse, 2000). On the other hand, it is not possible to attribute dissatisfaction with the body image only to the high indices of BMI. Some studies showed that dissatisfaction happens to body image as well as to athletes and individuals with low BMI (McAuley et al., 2000, Safran, McKeag; Camp, 2002; Sundgot-Borgen, 1994; Yeager et al., 1993).

Therefore, in relation to BMI, there is no agreement as regards the levels of dissatisfaction with the body image that identify the point and real circumstances in which these levels increase significantly. Another point equally important is the relation of body dissatisfaction to the age group. A series of studies (Braggion et al., 2000; Damasceno et al., 2001; Davis et al., 1994; Hetherington; Burnett, 1994; LoLand, 2000; 1998; Pliner, Chaiken; Flett, 1990) showed that older individuals are less demanding in relation to their appearance, confirming the findings of this investigation. Middle-aged men, financially stable, married, with children seem to be less influenced by the media, fashion and society. Maybe for being aware of the biological, psychological and social problem, they may have less desire of becoming slim and with well defined muscles, that is, the body popularly known as cut presenting less body dissatisfaction when compared to younger people. Physical activity practice for older people happens due to the health issues; as a consequence they avoid the weight increase and mainly

![Figure 1 - Global Comparison of the variables between both groups](image)
maintain the body functionality for esthetic issues (Tiggemann, 2004; Vieira et al., 2004). Other studies make it clear that for younger people the levels of body dissatisfaction are much higher (Feingold; Mazzella, 1998; Hoffman-Muller; Amstad, 1994; Levine; Smolak, 2002; McCabe; Ricciardelli, 2003; McReady; Sasse, 2000). This way, more studies (Labre, 2002; Leit; Gray; Pope Jr, 2002; Pope Jr; Phillips; Olivardia, 2003) corroborate the previous ones, confirm that there is greater dissatisfaction with the body image in male young people in relation to athletic body, cut and ripped. These young people are subject to image imposed by the media and by the society in general, which described these characteristics, as the ideal ones for a man.

Additionally, the fact that the sample universe consisted of overweight males contrary to overweight females may also have influenced in the light and moderate levels of dissatisfaction with the body image. In relation to the differences between the sexes, men do not care much about being big, heavy and muscular, while women prefer to be thin, light and slender (McCabe; Ricciardelli, 2001; McCreary; Sasse, 2000; Pope Jr; Phillips; Olivardia, 2003; Ricciardelli, McCabe; Banfield, 2000; Tiggemann, 2004). Other studies also corroborate these findings, showing that obsessive-compulsive behavior, smorfi as bodyrais, feeling of embarrassment and body dissatisfaction are more related to the females (Levine; Smolak, 2002; McCabe; Ricciardelli, 2001; 2003; Siegel et al., 1999).

The results of this study in relation to the rating of the scores of the questionnaire, despite having presented some significant difference between both groups, maybe they could have a greater impact on the dissatisfaction with the body image for female groups in lower group ages.

The main focus for discussion is that there was a significant difference between the groups, indicating that the GA was more satisfied with the body image than the GS. This significant difference suggests that the physical activity may be a factor which influences the development of greater satisfaction with the body image also in overweight people.

Scientific evidences, corroborating this study, have emphasized the importance of body activities to improve the physical aptitude and gain benefits related to the physical and mental health for all the people (Oja, 2001). In the past decades, several studies have been trying to confirm the idea that the physical activity is related to the improvement of the body image (Dilorenzo et al., 1999; Martin; Lichtenberger, 2002; Tucker; Mortell, 1993; Williams; Cash, 2001). The physical activity through movements changes the muscular tension of the body and activates all the mechanism of proprioception and spatial perception. The human being movement has a singular characteristic as regards its meaning for each individual. The interrelationship between body image, muscular tone and physical activity, referenced by Paul Schilder (1999), is more and more evident.

These findings suggest that the practice of physical activity regardless of the aesthetic dimension may provide a better satisfaction with a body image. Physical, artistic activities, body experiences, sports, gymnastics, games, body and psychological therapies are relevant and likely to energize the whole process of development of the body image throughout the lifetime (Tavares, 2003).

In this sense, Williams and Cash (2001) also corroborate the findings and the scientific evidences afore-mentioned. These authors investigated changes in the body image of 39 individuals who underwent a program of strength exercises, when compared to the control group which did not carry out any activity. The group underwent a 3-time-a-week training for 6 weeks and became significantly more satisfied when evaluated their appearance, presented greater body satisfaction and less social anxiety in relation to the build. The researchers concluded that the strength training may produce multiple changes as regards the body image.

In this manner, Loland’s study (1998) also concluded that more physically active individuals are less dissatisfied with the body image than the less active or sedentary individuals, for both sexes and different group ages. Other studies as Davis and Cowles’s study (1991) and Ford et al.’s study (1991) proved this strong evidence.

Still in accordance with the significance of physical activity for overweight people, other authors found in their studies strong evidences that physical activity can provide a better satisfaction with the body image in fitness center users (Damascono, 2004; Lima, 2002; Vieira, 2004).

In the past decades, the studies have been trying to prove the idea that regular practice of physical activity is related to the improvement of body image (Martin; Lichtenberger, 2002). Some authors confirm that the effects of an exercise program about body composition generally bring about changes, even being modest, but significant, nearly 10% of variation in the scores of body image (Dilorenzo; Bargman, 1999; Williams; Cash, 2001).

Although the shorlisted scientific evidences and the findings in it point that the regular practice of physical activity reduces the dissatisfaction with a body image, some studies failed to show this very association. Other studies showed that some physically active individual can be less satisfied than the inactive individuals. For example, in the case of individuals in activities which require control or maintenance of weight, or which emphasize muscular mass more apparent, or when the exercise become compulsive, the users tend to grow more critical about their bodies (Davis et al. 1994; Davis; Cowles, 1991).

Still, contrary to the idea that the physical activity can improve the satisfaction with the body image, a study conducted by Araújo and Araújo (2003) aimed to evaluate the level of satisfaction with the body weight and check the influence of the physical activity. Taking into account that the evaluation of satisfaction with the body weight is different from the evaluation of body image, it was concluded in that study that there was no association between the frequency of physical activity and the level of satisfaction with the body weight or with the self-perception in relation to the BMI.

Nevertheless, other authors showed that some physical activities, as bodybuilding and sports in which there is an over demand of the body in relation to maintenance of the body form, weight and greater gain in terms of performance. These elements can bring dissatisfaction always increased with a body image. These individuals tend to direct their attitudes, expectations, anxieties and behavior for diets and overtrainings. In these cases, they always present a strong tendency to have a distorted body image (McAuley et al., 2000; Sofran; McKEAG; Camp, 2002). It is
shown that these people may grow dissatisfied with their body image, seeking the perfection and being stuck to the aesthetic ideal. This behavior and dissatisfactions were not evidenced in this study. It was not either found reports in the literature about this very association for active overweight individuals compared to the sedentary overweight individuals, validating still more the aim of this article.

The sujetos can have different perceptions in isolated aspects of their lives. And thus, their self-image is developed and reevaluated continuously during their lifetime. The overweight, the thin, the esthetically beauty, the muscular, the athletic all of them suffer from the very influences and can have several levels of satisfaction with the body image during their lifetime (Becker JR, 2002). It is supposed that the overweight, for being away from the insatiable search for perfect, having achieved a little success in terms of losing weight, physical aptitude and mainly health, can grow more satisfied with the body image than other thinner and compulsive individuals by exercises in fitness centers.

The fitness phenomenon is a product of industrialized societies. The body is the center of everything in these societies (sexuality, attractiveness, aesthetics) and some worry about it (health). That being so, the change of mind as regards the physical form, placing more emphasis on health and life quality than aesthetics, can be an important investment for the improvement of body image (Becker, 2002).

Last but not least, these data corroborate the hypothesis of Novaes’s thesis (2001), when pointing that fitness centers as a contemporary stage of philosophical and deeper and more human sociological dimensions as regards the cult of the aesthetic physical appearance.

The aesthetic physical appearance can be understood as the visible tip of a big iceberg. Educating aesthetically the personality is not easy, for it transcends the simple gestural of the muscles (Novaes, 2001).

CONSIDERATIONS AND RECOMMENDATIONS

We conclude that there was a significant difference (p<0.05) between the groups GA and GS in terms of levels of dissatisfaction with the body image, indicating that the GA was more satisfied with the body image than the GS. Based on the statistical results, it is rejected the null hypothesis (H0) formulated, which predicted that there would not be any significant difference for p<0.05, between the levels of dissatisfaction of body image for GS compared to GA.

The general aim of the study was met, once when compared in the inter-group form, it was checked that the GS presented greater indices of dissatisfaction than the GA. Further studies can be conducted taking into account the prevalence may derive from the beneficial effects of physical activities, interfering in a great level of satisfaction for GA, independent of the esthetics imposed by the media. The generalization of the data and result does not apply to the whole society due to the sample universe was restricted to a small sample.

The fulfillment of other studies conducted using the very line of research would be enriching for the discussion on obesity, physical activity and body image, once even being in this small sample, it was possible to notice some relevant meanings. The values, concepts and creations of new images will be always related culture values of a given society at the time of the study. This process will undergo several and constant changes, what makes us believe that from now on is liable to come across other settings of body beauty, other values of satisfaction in relation to image and other meanings for body practices.

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