

Perception of Body Image in Teenagers in Physical Education Classes

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ORIGINAL ARTICLE

ABSTRACT

This study showed the objectives to evaluate the self-perception of body image in adolescents, raising the issues related to the physical aspects and the physical education classes. The design of this research was qualitative and quantitative nature, associated with the field research of experimental and comparative type. In the experimental phase was the implementation of an intervention program in relation to body image. In the quantitative study, met the perception of body image of 102 students with a mean of 15.5 (± 1.2) years of age, 50 adolescents from the experimental school (49.0%) and 52 adolescents in the control school (51.0%), enrolled in classes of 1st and 2nd year of high school in the public-school network. In experimental school there was a significant improvement to the program in the perception that the girls had on their body image. In the qualitative study parse through 8 focus groups (48 students) the issue focus of research from personal experiences. The students showed a high rate of dissatisfaction with the body and the willingness to take risk behaviors in pursuit of the ideal body with better results after the program. The approach on body image in Physical Education was nonexistent.

Keywords: body image, physical education, adolescents, intervention program.

INTRODUCTION

The level of satisfaction with the body image of adolescents is a reason for growing attention of national and international organizations related to education and health promotion, governments, and researchers. The media, such as television, magazines (fashion and fitness) and the recent phenomenon of social networks, the most used by adolescents, propagate a model for the body whose lean pattern, besides being a reference for a healthy body (Marques, Diniz, Carreiro da Costa, Contramestre, & Piéron, 2009). It is recognized by the athletic and muscular profile, making it perfect and unattainable for cultural ideals to be conquered by adolescents, especially girls. These reasons are sufficient for social pressures to adapt to the current body model to become a goal to be achieved, especially among women, producing among other consequences the body dissatisfaction (Conti, Costa, Peres, & Toral, 2009).

The pattern of beauty valued in the society associated to thinness ends up emphasizing aspects related to shape, disregarding the diversity of the physical, socioeconomic, cultural and health constituencies present in the population (Damasceno et al., 2006; Kakeshita & Almeida, 2006; Teixeira et al., 2006). Although there are values of body mass index (BMI) and percentage of body fat (% BF) suitable for health, it is believed that the physical type can be determined culturally, with the acknowledged influence of parents and pairs in the development of body image (McKinley & Randa, 2005; Tantleff-Dunn & Gokee, 2004).

Being under subculture influences, as it is characteristic of adolescence, the young woman does not always reflect on the means to pursue her aesthetic goals (McKinley & Randa, 2005), being exposed to identifiable risks (restrictive diets, psychological disorders such as bulimia, anorexia and vigorexia, excessive practice of physical exercise and use of anabolic steroids) in

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the search for the ideal body. In addition, they have inherent difficulties of age to counter pressures and internalization of the media to which they are exposed (Knauss, Paxton, & Alsaker, 2007). As result it is not always expected, and the pursuit of the perfect body is unfeasible, the frustration that girls experience may lead to damage to self-esteem and cause depression (Paxton, Neumark-Sztainer, Hannan, & Eisenberg, 2006), causing emotional and physical instability (Thompson, Coover, & Stormer, 1999; Wertheim et al., 2009).

Actions related to body image in adolescence need to be treated as a public health problem due to injuries caused by the dissatisfaction of adolescents with their body. For these actions, it became a consensus that the school constitutes an ideal environment for interventions in education and health promotion, requiring the pedagogical support and commitment of Physical Education teachers. As in the last decades the problem has stabilized with a high incidence of affected adolescents, there are indications for evaluation and promotion of body image from efficient programs and interventions (Levine & Smolak, 2006; Yager, Diedrichs, Ricciardelli, & Halliwell, 2013). Several investigations showed that interventions in schools aimed to improve body image of adolescents, recognizing as appropriate this potential environment of interactions (Levine & Smolak, 2006; Ortiz, Veloz, Solis, & Montano, 2010; Richardson & Paxton, 2010; Wilksch & Wade, 2009), being the researchers external from the school where the study was conducted. It was not found specific participation of the Physical Education teacher. This fact is evidenced, since body image is a multidimensional construct (Adami, Fernandes, Frainer & Oliveira, 2005) which have, among others, affective, cultural, and motor aspects that are common approaches to Physical Education.

The dimensional expansion of its applicability has been consolidated the formative character with which Physical Education has been presented in the school environment (Catunda, Sartori, & Laurindo, 2014). Therefore, Physical Education is characterized as a unique discipline, being the only one to promote health

and the various languages of the human movement directly, through the teaching of an active and healthy lifestyle (Sallis et al., 2012) besides of developing cultural, motor, cognitive, affective, and social aspects.

It is in this panorama that the school has been pointed as privileged environment of intervention. The hypothesis that knowledge about health-related physical activity is linked to increased levels of physical activity in adolescents demonstrates the importance of the school promoting through Physical Education activities that potentiate this recommendation (Andersen, Harro & Sardinha, 2006). Since knowing how much physical activity the adolescent should do to benefit from the health effects could be a facilitator for the formation of healthy habits (Harrison et al., 1992) recognized as a predictor of a positive appreciation for body image (Marques et al., 2009).

In the context described, the objective of the research was to evaluate self-perception of body image, factors associated with weight concerns and satisfaction with appearance, and to know if the intervention program influenced the perception of the young female on body image.

METHOD

The design of this research has a qualitative and quantitative nature associated to field research of experimental and comparative type

Participants

The sample consisted of 102 students with a mean of 15.5 (\pm 1.2) years of age, ranging from a minimum of 13 to a maximum of 18 years. In this study, a non-probabilistic non-intentional sample consisted of 50 students from the experimental school (49.0%) and 52 students from the control school (51.0%). The sample of teachers was consisted of two teachers of the experimental school and two teachers of the control school.

Inclusion criteria for the students were: to be enrolled, to attend regularly the school, to be able to participate in the classes of Physical Education, and to sign the term of informed consent. Exclusion criteria were: medical impediment for not participating regularly in

physical education classes, and absence in the sessions where the researcher observed the classes. The sample of teachers was composed of the totality of high school teachers. Participants were informed of the guarantee of anonymity and confidentiality of the information that would be under the researcher's tutelage.

Instruments and Procedures

In order to verify the level of adolescents' dissatisfaction with body image, we applied the Body Dissatisfaction Scale in Adolescents (BDSA), developed by Baile, Grima, and Landívar (2003), and the Brazilian version translated by Conti, Slater and Latorre (2009). In the deepening of the study central question, we used the technique of focal group that was applied to all groups investigated, making a total of 8 groups with 6 participants each, totalizing 48 adolescents. Among the applications of the instruments, we developed a training program only for teachers from the experimental school on the teaching of physical fitness. Teachers participated in a theoretical exposition and practical experiences of the methodology to be worked with students from the experimental group during the period of 29 days. After the training phase, the teachers applied the activities during three consecutive classes in each of the groups surveyed, with the purpose of increasing the physical activity time of students during the classes with the experimental group compared to the control group. For this pedagogical experience, we used the context of modified games during application of the intervention program to teachers (Light & Georgakis, 2008).

In order to start the research, a request for authorization was issued to the school directors, by means of an agreement that explained the research and its development procedures. In addition, the students' underage of 18 years-old and their legal guardian had, obligatorily, to sign the Informed Consent Term (ICT), in addition, the teachers signed the ICT authorizing the study during Physical Education classes.

For the teachers from experimental school, we presented the research project, explained the data collection procedures, the instruments to be applied, the Physical Education experimental

training program to which they would be submitted, and set the date for the researcher's presentation to the students. For the data collection procedures, an agenda was developed in agreement with the teachers, containing an initial phase, pre, and post application for the experimental school, and an intervention program for teachers between the two phases. The control school had application in two moments without the intervention program.

Statistical analysis

For all variables of the questionnaires, the descriptive statistics were applied, calculating percentages, mean, standard deviation, minimum, and maximum values. For the continuous and ordinal variables that could be treated as quantitative, the normality of their distributions and the homogeneity of variances, respectively, were evaluated with the Kolmogorov-Smirnov or Shapiro Wilk test, depending on whether the group was about 50 individuals, and with the Levene test. Whenever one of the groups analysed had a subject number equal to or greater than 30, the central limit theory was evoked.

With the results from BDSA, in the first and second moment of its application, the internal consistency was calculated, obtaining alpha values of 0.87 and 0.84, respectively. Then a score was calculated that translated the general perception of the corporal image of each student. However, for the analysis of the body image constructs presented in the BDSA (Conti et al., 2009), we used the exploratory factorial analysis, for the extraction of the factors by the main components method, followed by a Varimax rotation. The application of the factorial analysis to the 32 items of the EEICA, after checking its adequacy, through the Bartlett sphericity test ($\chi^2(496) = 1871,106, p < 0.001$) and the Kaiser-Meyer-Olkin statistic $KMO = 0.803$), allowed the extraction of 7 components according to the eigenvalue rule superior to 1, which explained 65.8% of the total variance of the original variables. However, the grouping of the items did not follow the one described by Conti et al. (2009) and it was not possible to interpret the items grouped in each component.

In this way, we chose to compute new variables from items that had the same meaning, after checking their internal consistency through Cronbach's alpha. The constructs created were: self-perception of body image, concerns about weight, means used to achieve the ideal body, rejection of the body today, difficulties with dress, satisfaction with appearance, control of eating and fear of gaining weight, with values of consistency of $\alpha = 0.7$.

With the qualitative analysis we wanted to complement the quantitative data, looking for possible implicit explanations in the speeches, documents and testimonies, establishing configurations and flow of cause and effect. For this purpose, we used the method of content analysis (Bardin, 1977). From the messages of the subjects and from the interview guide, the categories of message analysis were defined. From the categories were named the subcategories, in order to classify more specifically the units of record. Quantitative data

were processed using the Statistical Package for Social Sciences (SPSS) version 22. The significance level for the analyses was 0.05.

RESULTS

The results regarding to body image perception before and after the intervention program are presented in Table 1. Before the intervention program, the experimental school had a BDSA total score of 21.88 ± 16.54 (highest dissatisfaction), while the control school adolescents presented a lower value (less dissatisfaction). Nevertheless, the values did not present significant differences ($t(100) = 0.894$, $p = 0.373$). On the other hand, in the self-perception of body image, the adolescents from experimental school initially presented a value superior to the one of the adolescents from control school (2.91 ± 0.76 vs. 2.58 ± 0.85), being the differences between schools statistically significant ($t(100) = 2.071$, $p = 0.041$).

Table 1

Perception of body image (BI) at the beginning and end of the intervention program in the experimental and control schools

Variable	Experimental School			Control School		
	Initial	Final	p^a	Initial	Final	p^a
Total Score	21.88 ± 16.54	19.29 ± 12.65	0.373	17.08 ± 11.32	19.19 ± 15.64	0.438
Self-perception of BI	2.91 ± 0.76	2.58 ± 0.85	0.041	2.65 ± 0.72	2.67 ± 0.95	0.913
Weight Concerns	2.98 ± 0.89	2.27 ± 0.96	<0.001	2.66 ± 0.77	2.39 ± 0.98	0.123
Appearance Satisfaction	2.33 ± 1.28	2.04 ± 1.31	0.373	1.91 ± 1.10	2.05 ± 1.22	0.550

The comparison between the initial and final moments of the intervention program can be observed in Table 2. In the experimental school, it was verified that the program promoted a significant improvement in the adolescents' perception of their body image, since the values registered were significantly lower for the total score of BDSA ($t(49) = 4,846$, $p < 0.001$), self-

perception of body image ($t(49) = 2,450$, $p = 0.018$), concerns about weight ($t(49) = 2.517$, $p = 0.015$), and satisfaction with appearance ($t(49) = 2.564$, $p = 0.013$). For the control school, the values of the variables related to body image differed slightly between the two moments of intervention, with no statistically significant difference being recorded.

Table 2

Effect of intervention program on body image perception for experimental and control

Variable	Experimental School			Control School		
	Initial	Final	p^a	Initial	Final	p^a
Total Score	21.88 ± 16.54	17.08 ± 11.32	<0.001	19.29 ± 12.65	19.19 ± 15.64	0.927
Self-perception of Body Image	2.91 ± 0.76	2.65 ± 0.72	0.018	2.58 ± 0.85	2.67 ± 0.95	0.246
Weight Concerns	2.98 ± 0.89	2.66 ± 0.77	0.015	2.27 ± 0.96	2.39 ± 0.98	0.150
Satisfaction with appearance	2.33 ± 1.28	1.91 ± 1.10	0.013	2.04 ± 1.31	2.05 ± 1.22	0.942

^a Tested with t-test for paired samples

After the application of BDSA, the adolescents were invited to participate in a deepening of the study in the questions about the physical aspect, the Physical Education classes and the corporal image, presented in Table 3, in which we used the focal group technique.

Regarding to body rejection, the students stated that the biggest reason for rejection was to be considered lean (56.3%). For 31.3% of the students, another reason with more frequent registration was rejection because they were obese. Plastic surgery was the mean that young women indicated more frequently to solve problems of dissatisfaction with the current body (59.7%).

Table 3
Distribution of reasons and situations related to the physical aspect

Categories	n of citations (%)
Category 1: Rejection to the body in social relations	
She felt rejected for being thin	9 (56.3%)
She felt rejected because she was obese.	5 (31.3%)
She felt rejection with the height	1 (6.2%)
She felt rejection with the appearance	1 (6.2%)
Category 2: Body image and social relationships	
Professionally disrupts	2 (9.1%)
Affects affective relationships	11 (50.0%)
Does not influence	9 (40.9%)
Category 3: Means used in search of the ideal body	
Plastic surgery	37 (59.7%)
Diets	16 (25.8%)
Gymnastics Academy	6 (9.7%)
Category 4: Current Body Satisfaction	
Dissatisfaction with thinness	35 (38.1%)
Obesity Dissatisfaction	31 (33.7%)
Dissatisfaction with various reasons	14 (15.2%)
Satisfied	12 (13.0%)

In the questions related to Physical Education (Table 4), the adolescents' perceptions about the classes showed that the effective participation, the feeling of effectiveness, and the positive interaction with teachers, would raise the level of satisfaction of 76.9% who affirmed to feel the sensation of well-being in class.

The results related to the body image approach in Physical Education classes, the majority of adolescents (75.0%) affirmed the absence of a body image approach in classes. Regarding the influence of physical education

classes on body image formation, 48.1% of the young women stated that they had an expectation for influence, evidencing the importance of teachers discussing issues related to body in general and body image formation.

Table 4
Distribution of reasons related to Physical Education classes

Categories	n of citations (%)
Category 5: Perceptions about Physical Education classes	
Feeling of well being	30 (76.9%)
Feeling of embarrassment/Absence of well-being	8 (20.5%)
Does not participate in practical classes	1 (2.6%)
Category 6: Body image approach in Physical Education classes	
Approach, discussions and dialogues present	2 (6.2%)
Superficial and disintegrated class approaches	6 (18.8%)
Absence of approach	24 (75.0%)
Category 7: Influence of physical education on the formation of body image	
Positive Influence	12 (44.5%)
Does not exert influence	02 (7.4%)
Expectations that influence	13 (48.1%)

DISCUSSION

The adolescents from experimental school showed greater dissatisfaction with the body image before the intervention program, compared to the girls in the control school, without, however, presenting significant differences. Several studies in the national and international literature have shown that body dissatisfaction is highly prevalent among adolescents, and the results are similar to the present study (Al Sabbah et al., 2009; Bearman, Martinez, & Stice, 2006; Schneider et al., 2013), in which adolescents pointed out many parts of their body that they desired to change (Conti, Frutuoso, & Gambardella, 2005), psychological implications such as depression (Paxton, Neumark-Sztainer, Hannan, & Eisenberg, 2006), self-esteem and depressive mood (Mond et al., 2011).

Considering the negative implications that the low perception of the body image may have on the psychological level in the adolescents, in some countries projects have been developed whose objective is the improvement of the body image, as for example the program Happy being me (Bird, Halliwell, Diedrichs, & Harcourt, 2013) and Bodythink (Shanel, Richardson, Paxton, & Thomson, 2009). These programs, implemented in a school context, have contributed to the reduction of factors

associated with negative body image, eating disorder (Bird et al., 2013; Shanel et al., 2009) and improvement of self-esteem (Richardson et al., 2010).

We affirm that adolescents' recognition of body image has a great importance, since body dissatisfaction stimulated by the ideal leanness pattern is commonly related to eating disorders, restrictive diets, abuse of purgative methods and excessive practice of physical exercises (Ramalho et al., 2007), being necessary to confront the problem by the school in order to reduce the high rates of adolescent dissatisfaction with the body, especially girls in relation to excess of body fat (Graup et al., 2008; Martins, Pelegrini, Matheus, & Petroski, 2010). The few programs implemented regarding health in the school need greater participation of Physical Education professionals (Brito, Silva, & França, 2012).

For the self-perception of the body image, the results presented in relation to the experimental school showed that the adolescents presented a negative perception of the body, demonstrating that the female gender is minded to greater body dissatisfaction (Branco, Hilário, & Cintra, 2006; Martins, Nunes, & Noronha, 2008), different from the control school adolescents who showed a positive perception of the body image, being in this case the differences between groups statistically significant. After completion of the intervention program, the experimental school showed a significant improvement in the adolescents' perception of their body image. In the control school, there was a slight difference in the variables values between the two moments of the intervention, not being found statistically significant difference.

Analysing the values related to body image perception in the two moments evaluated (before and after the intervention program), considering the comparisons between schools and values within each school, the results indicate that the intervention program had a positive effect on adolescents' perception of their body image, emphasizing the role of the Physical Education discipline in addressing body related issues and the need to develop more school programs which promote changes in body image

concepts (Alves, Vasconcelos, Calvo, & Neves, 2008). These programs may involve more adolescents in coeducation, in physical activities with compatible demands their abilities and participation capacity, through modified games with adapted rules (Van Acker, Carreiro da Costa, Bourdeaudhuij, Cardon, & Haerens, 2010).

The adolescents showed dissatisfaction with their weight, both because they felt lean and because they were above ideal weight independent of BMI. Studies have shown that female adolescents are more concerned with weight than men with body image disorders (Smolak, 2012), compromising their psychological well-being (Wardle & Cooke, 2005) and showing poor performance in performing tasks which require the support of body weight (Morano et al., 2010). Regarding to satisfaction with appearance, the adolescents pointed out parts of the body that they said they did not like and were determined to seek change at any cost, using means such as plastic surgery, diets and physical exercises. As the goal was not always achieved, body dissatisfaction was common. The adolescents at the experimental school had a positive self-perception of body image compared to the adolescents from the control school.

After the intervention program, the adolescents from experimental school showed a significant improvement in their perception of body image. In control school, there was a slight difference between the two moments. When we analysed the two moments (before and after the program) between schools considering comparisons and values, we identified that the intervention program had a positive effect on the adolescents' perception of their body image.

The adolescents chose as main objectives valued in the classes of Physical Education, the search for information on the health and the sporting experience, which suggests a positive intention referring to the health approach at school. Regarding the perception of the classes, the adolescents affirmed a relation with "being healthy" and "improvement of physical capacities", affirming that the classes should bring more direct health benefits. The teacher of

Physical Education is determinant for this approach, since the movement is the essence for recognition and construction of corporal image (Schilder, 1999). Regarding to body image approach in the classes, most of subjects reported total absence of approach (Catunda, 2015). Our results confirm the hypothesis of insecurity referred to teachers in the approach to the theme, due to the lack of knowledge in the formation corroborating with other studies (Ricerardelli et al., 2010; Yager, Diedrichs, Ricciardelli, & Halliwell, 2013).

CONCLUSION

The discipline of Physical Education presents a favourable potential to influence the acquisition of a positive body image in adolescents. However, it was not identified in the practice and in the planning of the teachers mention to body image. Schools do not take advantage of the condition of Physical Education as the only discipline capable of acting directly on the promotion of young women's health.

We identified that the intervention program had a positive effect on the adolescents' perception of their body image. In this aspect, we highlight the role of Physical Education in offering activities compatible with the level of motor development of adolescents, making them feel able to participate and perform tasks successfully, bringing improvements to self-esteem and positive self-assessment of their body image.

Regarding the body image approach in the classes, most of students mentioned a total lack of approach. We identified the existence of an expectation that Physical Education classes will influence development and provide a positive relation with body image.

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