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**Individual and social factors associated with body image in
adolescence**

PhD Thesis Abstract

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Cluj - Napoca

2013

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Key words: body image, adolescence, social influences, individual factors.

Introduction

The body is a biological entity that is inherited and therefore it is less likely to be changed. However, history abounds in methods of changing appearance. People were interested in altering their looks from ancient times. Although the techniques that were used were not always body friendly, the practices perpetuated over time.

Rumsey (2005) suggests that the need to manage appearance is linked to the role body image plays for an individual. Along with serving biological functions, the body, through appearance, sends messages about social status, about group membership, about individual preferences and even about personality traits and morality (Langlois, Kalakanis, Rubenstein, Larson, Hallam & Smoot, 2000). In this line, concerns with appearance are highly justified. Meta-analysis and reviews concluded that dissatisfaction with own body increased in the last years (Thompson, Heinberg, Altabe & Tantleff-Dunn, 1999; Grogan, 2008). Anthropological researches pointed that increasing worries about appearance are more prevalent in modern societies compared to traditional communities (Reicher & Koo, 2004). The authors explain that, while in traditional societies, a person builds its identity as a member of the community and conforms to the community norms; modern societies promote individual identity projects and offer models of success in order to guide these projects. The possibility to choose how someone expresses its identity raises vulnerability toward recipes offered by the consumer culture. One of these recipes is the perfect body. Very thin for girls and muscular for boys, the body size and shape promoted in mass-media is far from the average person and even far from a healthy weight. Also acquiring such a body, especially for boys, needs hours of training in the gym, leading to the loss of life balance between different activities. The body perfect is not created in the benefit of the person but in the benefit of the consumer culture. By presenting perfect models of appearance, media underlines the discrepancy between actual and ideal body image, while offering recipes to diminish this discrepancy. "Think ideal body and feel bad" (Dittmar, 2007) is expected to have motivational values toward consuming behaviour such as using steroids, diet programs or cosmetic surgeries.

From a very early age, children have a clear image about the ideal body. Grogan (2008) showed that girls as young as eight want a thin body and consider being fat as one of the worst things that could happen. When entering adolescence, both boys and girls have clear expectancies regarding how their body should look. Because the biological development, in most

cases, put the girls away from the thin ideal, adolescence is a period with high risks in developing weight and appearance related issues. Boys are favoured by the biological development that leads to the increasing of muscles. It was suggested that this might be the reason they are more satisfied with their body compared to girls. Adolescence is a critical period in developing concerns about body image. In search for an identity, teenagers are more vulnerable to the perfect body compared to other developmental periods.

Therefore, understanding how individuals negotiate between the ideal body and the reality of own body should be of high interest for health psychologists and deserves close attention. Today, body image research is in the process of acknowledging body image issues among males also. Although, the number of studies concerning male's samples is increasing, there is a lack of comparative studies regarding not just the outcome such as the level of satisfaction with own body but also the contributor factors, such as media, family and peers and their interaction with individual particularities.

Chapter 1

Theoretical perspectives on body image

1.1. Body image dimensions

Body image is a multidimensional construct that incorporates perceptive, cognitive, affective and behavioural dimensions (Grogan, 2008). More specific, Thompson, Heinberg, Altabe and Tantleff-Dunn (1999) mentioned three relevant dimensions of body image: the mental image of own body, the attitude toward own body and associated behaviours. The first is considered to be the mental image of the physical self, a person holds as a result of perception. The second is an evaluative dimension, the attitude toward own body. Regarding this dimension, the author makes a clear distinction between satisfaction with appearance and the importance of the body image for the self. They suggest that dissatisfaction can be problematic only if body image is perceived as a relevant aspect of the self. The third dimension refers to the effects of perception and attitude toward own body on behaviour. The authors mentioned two categories of disruptive behaviour as a result of dissatisfaction: avoidance of social contexts and body image checking rituals.

A different perspective over body image dimensions is proposed by Mendelson, White and Mendelson (1996). Underlining that body image is a dimension of the self; the authors

propose the concept of body esteem and define it as the evaluation of the body image and the associated emotional distress. Body image evaluation can be directed toward weight or toward overall appearance.

1.2. Body image as a dynamic process

Body image development is a dynamic process that includes building a mental image of own body, developing cognitions regarding the relevance of this image for the self and developing related emotions (Thompson et al., 1999). Across lifespan, the image we have about own body is changing due to the changes that occur in the physical self. Despite this, the level of satisfaction is rather stable. This seems to be due to the fact that adults have different evaluation standards compared to teenagers (Tiggemann, 2004). While adolescents are obsessed with reaching the body ideal, adults are more preoccupied with their health.

Chapter 2

Research aims

The present research is articulated on the following arguments that emerge from the literature in the area of the body image development. Body image is one of the most robust factors that contribute to the development of eating disorders (Stice, Schupak-Neuberg; Shaw & Stein, 1994) and other unhealthy behaviours of managing appearance (Stice, Schupak-Neuberg; Shaw & Stein, 1994) such as sun exposure or cosmetic surgery. Its influence is significantly higher in adolescence compared to other developmental periods (Smolak, 2004). For instance, if for adults, self-esteem influences body image, in adolescence, the relation has an opposite direction such as being dissatisfied with own body leads to a decrease in self-esteem (Tiggeman, 2005; Paxton et al. 2006).

While in early adolescence, the descending trend in body image satisfaction is widely documented, for the second part of the adolescence and the transition toward adulthood, the results of the studies that investigated how body image varies across age and gender, are contradictory. In some studies, age is positively associated with an increase in the level of satisfaction, while in others; young adults are less satisfied compared to adolescents. In this matter, we consider that the investigation of age and gender effects over body image would bring valuable information.

Although numerous, the studies that approach the problem of body image in adolescence, mostly use global measures of the subjective evaluation of own body image without making a clear difference between weight and appearance. Mendelson et al. (1996) underlines the differences between the two dimensions, appearance esteem being for example more relevant than weight esteem in relation with self-concept.

Another weakness identified in the literature is the underrepresentation of the male studies. Although the body image developmental models suggest that the contributory factors to body image are the same across gender, only a few studies explore these aspects in mixed populations. Regarding gender differences, although it is widely documented that males are more satisfied with their bodies compared to women, recent studies show that males are more preoccupied with their appearance than in the past (Ricciardelli & McCabe, 2006; Grogan, 2008). Therefore, the gender differences worth being reanalysed. Cash and Pruzinsky (2002) suggest also a possible overestimation of the gender differences in the literature due to the way body image was measured. If measured as a discrepancy between actual and ideal body, females mostly desire a thinner body while males are split between wanting a larger or a thinner body.

Regarding body image development, the general assumption is that the attitude toward body image is the result of an interaction between the biological body and the social and cultural meanings of the body. The theoretical models of body image development incorporate sociocultural, interpersonal and individual predictors (Thompson, Heinberg, Altabe, Tantleff-Dunn, 1999; Cash, 2002; Rumsey & Harcourt, 2005). Although there are numerous empirical evidences that sustain the relevance of these factors, only a few studies focus on individual mechanisms that facilitate the development of a negative body or act as protective factors.

Therefore, the present research focuses on social and individual factors in the development of body image. We started from the assumption that biological factors as well as social and cultural influences are significant contributors to body image development and we planned to explore the relation between the above factors and body esteem. We also considered individual mechanisms as potential risk or protective factors.

The first objective was to explore how appearance and weight esteem vary across age and gender, with a focus on late adolescence (study 1). The study has the purpose to bring empirical evidences about body image developmental trend in late adolescence, in a context of conflicting results from previous studies.

Regarding social influences, studies show that direct influences such as feedback or teasing have a stronger impact on body image development compared to modelling (Vincent & McCabe, 2000; Abraczinkas, Fisak & Barnes, 2012). The second objective was to investigate the relation between appearance feedback and body-esteem. The arguments are a high frequency of feedback in adolescence (Ricciardelli & McCabe, 2001) and the prevalence of retrospective studies (Menzel, Schaefer, Burke, Mayhew, Brannick & Thompson, 2010) which makes it difficult to identify potential factors that moderate the feedback effect. Also, we intended to explore the effects of positive feedback on body esteem. Less studied, positive feedback seems to have both positive and negative effects (Herbozo & Thompson, 2006). Therefore, in the second study, we intended to explore both positive and negative feedback in relation with body-esteem.

Starting from the assumption that there is a high variability in population in the level others influence the subjective evaluation of own appearance, the third objective was to identify the potential protective role of athletic and social competencies (study 3). In a recent study, Abbot and Barber (2011) showed that the focus on the functional body is a protective factor against body image dissatisfaction for both boys and girls. The authors suggest that, in this case, the attention is deviated from the aesthetic of the body toward the functional competencies. Therefore, high physical competencies could be a valuable protective factor against the effects of negative feedback on body image. Also, the assumption that self-perception of appearance influences social relations, is well documented in the literature (Littleton & Ollendick, 2003). Less is known about the way social competencies moderate the impact of negative feedback on body image.

Another line of research in this thesis aims to explore how media influences body image through the models of attractiveness. The thin ideal promoted in media is considered to be a relevant factor in developing dissatisfaction and eating disorders (Hausenblas, Campbell, Menzel, Doughty, Levine & Thompson, 2013). In an extensive review, Fergurson, Winegard and Winegard (2011) argument that media effects are higher in groups with eating disorders or with body image dissatisfaction. Dittmar (2009) suggests it is important to identify the psychosocial processes that mediate or moderate the media effects. A predictor less studied in relation with body image despite the fact that it is intensively researched in relation with eating disorders, is the perfectionism. A high level of perfectionism favours sensitivity toward sociocultural messages. In this line, an objective of the study was to investigate the relation

between perfectionism, thin ideal internalization and sociocultural influences. Using mediational models, we intended to identify if social influences are mediated by perfectionism and thin ideal internalization and if thin ideal internalization mediates the relation between perfectionism and body-esteem (study 4).

Most of the studies that evaluate the effect of exposure to media images of beauty focus on the effect on intrapersonal evaluation, showing that exposure even for a short period of time leads to an increase in body image dissatisfaction. Less is known about the effects of the exposure over the interpersonal evaluation. Adolescents are mostly preoccupied with how they are perceived by others. In this line, we intended to measure the effects of the exposure to images of beauty promoted in media over worries regarding appearance exposure in social contexts. We developed an experimental design, where participants were exposed to either neutral media images or images that contained the thin ideal for girls and the muscular ideal for boys (study 5).

Chapter 3

Age and gender effects over appearance-esteem, weight-esteem and thin ideal internalization at teenagers between 15 and 20 years old

3.1. Body image in adolescence

Adolescence is a time period with significant physical changes, the adolescent has to adjust. This context facilitates an intense focus of attention on the physical body which is analysed, compared and evaluated. The teenager invests a lot in managing appearance. Studies show that, in this developmental period, body image is more relevant for self-esteem compared to other developmental periods (Grogan, 2008). Moore, there are speculations that the variation of self-esteem during adolescence is due to changes in the attitude toward own body (Tiggeman, 2005; Paxton, Neumark-Sztainer, Hannan & Eisenberg, 2006). For instance, the study of Paxton and colleagues (2006) showed that in the 12 years old girls sample and the 15 years old boys' sample, followed five years later, changes in body satisfaction were predictive for changes in self-esteem. Therefore, it is important to have a clear understanding of how body image varies across adolescence. Data suggest that puberty is the trigger of a significant decline in levels of satisfaction especially for girls (Tremblay & Lariviere, 2008). Media images of the perfect body for girls and for boys can be relevant in understanding why puberty has a stronger effect on girls'

body satisfaction. On one side, media promotes a very thin female body and a muscular male body. On the other side, the normal development of the girls' body places them further from the thin ideal reinforced through mass-media. Most girls gain fat that is not distributed according to the ideal body shape. Adding fat in a non-desirable part of the body might be perceived as a threat in conforming to social norms. Therefore, if they gain weight, they feel worst about their bodies (Presnell, Bearman & Stice, 2003) and worst about themselves. For boys, the normal physical development is associated with the increasing of muscles. This is a desirable condition, in line with the male's ideal body shape. In fact, muscularity concerns are the most invoked reasons for body dissatisfaction in males (McCabe & Ricciardelli, 2006). If the descending trend of body satisfaction in early adolescence is well documented in the literature (Smolak, 2004; Ricciardelli et al., 2001), for middle and late adolescents, there is evidence for both increases or decreases in the levels of satisfaction (Presnell et al 2003; Barker & Galambos, 2003); Eisenberg, Neumark-Sztainer & Paxton, 2006; Bearman, Presnell, Martinez & Stice, 2006; Crespo, Kiehlkowski, Jose & Pryor, 2009; Holsen, Jones & Birkeland, 2012); Bucchianeri, Arikian, Hannan, Eisenberg, Neumark-Sztainer, 2013). For example, Bucchianeri et al. (2013) in a ten years longitudinal research, following students from middle adolescence to young adulthood, found that levels of satisfaction with weight and shape decreased from middle to high school in both male and female samples and from high school to adulthood only in females. In a similar age sample, comprising data collection in approximately the same period, the trend was opposite (Holsen, 2012) such as both boys and girls became more satisfied until the age of 21 and registered stable scores in early adulthood. Also, in their longitudinal study comprising young adults, Gillen and Lefkowitz (2012) found evidence that the developmental pattern of body image differ by gender, such as, while for females, appearance evaluation became more positive over time, man's appearance evaluation was rather stable. Bucchianery et al. (2013) suggests that the heterogeneous results could be attributed to cross-cultural differences in sociocultural ideal emphasises, to the particularities of the samples or to methods of assessment. In his sample, he found that decreases in satisfaction were associated with weight increases overtime. It seems that both the weight status and the attitude toward the body ideal are associated to body satisfaction and could explain its variation across age. Therefore, any additional data would be valuable to disentangle age and gender effects on body image, especially in late adolescence.

3.2. Objectives

The present research focuses on late adolescence and on the transition toward adulthood and intends to identify age and gender differences in the relation between appearance esteem, weight esteem, body mass index and body ideal internalization.

It was hypothesised that, consistent with prior findings, both appearance esteem and weight esteem will be lower among females compared to males. We are expecting to find significant age group differences in appearance esteem and in weight esteem. Also young adults will have lower levels of thin ideal internalization compared to adolescents.

3.3. Method

Participants

The study sample consisted of 476 participants (250 girls and 226 boys) ranging in age from 15 to 20 years old. Based on BMI cut-off scores for children and adolescents (Cole, 2000), 380 participants (79.8%) were classified as having normal weight, 44 (9.2%) were underweight and 47 (9.9%) were overweight. The mean of body mass index was 20.20 (SD=2.41) for girls and 21.89 (SD=2.81) for boys.

Measures

Body Mass Index (BMI)

Body mass index was calculated from the equation (weight in kg)/(height in m²), using measures reported by participants.

Body-esteem – Appearance and Weight

Self-evaluation of weight and appearance was measured with The Body Esteem Scale for Adolescents and Adults (BESAA; Mendelson, Mendelson & White, 2001). Two subscales were selected: the Appearance Esteem subscale (BE-Appearance), consisting on 10 items that address self-evaluation of appearance, (*“I like what I see when I look in the mirror”*, *“There are a lot of things, I’d change about my look if I could”*) and the Weight Esteem subscale (BE-Weight), consisting on 8 items that address self-evaluation of weight, (*“I feel I weight the right amount for my height”*, *“My weight makes me unhappy”*). Participants rated each statement on a 5 point Likert scale ranging from 1 (never) to 5 (always). The total subscale score was obtained by calculating the mean rating for each subscale items. The authors reported high internal consistency and a 3 month test-retest reliability for the subscales in adolescents and adults

(Cronbach's $\alpha = .92$, BE-Appearance, Cronbach's $\alpha = .94$, BE-Weight). In the present study, both subscales had good internal reliability (BE-Appearance, Cronbach's $\alpha = .85$ and BE-weight, Cronbach's $\alpha = .88$).

Body ideal internalization

Internalization of the sociocultural body ideal was measured with the Internalization subscale of the Socio-cultural Attitudes towards Appearance Scale (SATAQ, Heinberg, Thompson & Stormer, 1994). The Internalization subscale contains 8 items that address the extent participants adopt the body ideal promoted through media ("*I tend to compare my body to people in magazines and on TV.* ", "*I believe that clothes look better on thin/muscular models.*"). The statements were constructed differently across gender. The authors reported a Cronbach's α of .88. In the present study, the subscale had good internal reliability (Cronbach's $\alpha = .78$).

Data analysis

A multivariate analysis of variance (MANOVA) with 2 (gender) x 3(age group) way was used to examine main effects and interactions of gender and age groups on appearance esteem, weight esteem, and socio-cultural ideal internalization. A MANOVA was chosen because it accounts for the relation between dependent variables and has the power to identify if groups differ along a combination of dimensions. The participants were classified in three age groups. The first group had 164 participants between 15 and 16 years old. The second group comprised 177 teenagers between 17 and 18 years old and the third group had 135 young adults between 19 and 20 years old.

Hierarchical multiple regressions were used in order to model the interaction between body mass index and body ideal internalization on body esteem.

3.4. Results

The correlations among studied variables are presented in Table 1. Gender significantly correlates with all variables except age, suggesting the presence of different scores for males compared to females. Also, BMI positively correlates with age. The positive relation between BMI and age illustrates the normal developmental trend across adolescence, young adults having higher BMI compared to adolescents. Furthermore, appearance and weight-esteem negatively correlates with BMI and body ideal internalization, although the correlations are rather small.

Table 1. Correlations between gender, age, BMI, appearance esteem, weight esteem and sociocultural ideal internalization (N = 476)

	1	2	3	4	5	6
1. Gender		-.004	.308**	.172**	.186**	-.168**
2. Age			.184**	.018	-.053	-.054
3. Body mass index				-.151*	-.274**	-.046
4. Appearance-esteem					.691**	-.348**
5. Weight-esteem						-.291**
6. Sociocultural ideal internalization						

Note. * $p < .05$, ** $p < .01$

A multivariate effect was significant for gender, $F(3,468) = 7.366, p = .000$, Pillai's Trace = .04, partial $\eta^2 = .04$. Although we did not identify a significant age group effect, we found a global interaction effect between age group and gender $F(6,938) = 3.239, p = .004$, Pillai's Trace = .04, partial $\eta^2 = .02$. The effect size (partial η^2) was moderate to small, indicating that gender explained 4% of the global variance in all three dependent variables and the interaction explained 2% of the variance.

Across gender condition, univariate tests found effects to be significant on appearance esteem [$F(1,470) = 11.891, p = .001$, partial $\eta^2 = .02$], weight esteem [$F(1,470) = 15.252, p = .000$, partial $\eta^2 = .03$] and body ideal internalization [$F(1,470) = 12.379, p = .000$, partial $\eta^2 = .02$]. The analyses illustrate the presence of gender differences in all three variables. The differences were larger in body ideal internalization. A series of t tests revealed the superiority of boys in weight esteem and appearance esteem and the superiority of girls in body ideal internalization (all $t_s > 2.41, p_s < .05$).

The global interaction effect between age and gender was confirmed on appearance esteem [$F(2,470) = 6.875, p = .000$, partial $\eta^2 = .02$] and on socio-cultural ideal internalization [$F(2,470) = 2.168, p = .022$, partial $\eta^2 = .01$]. Girls appearance esteem and thin ideal internalization described a different variation across age compared to boys (Fig. 1).

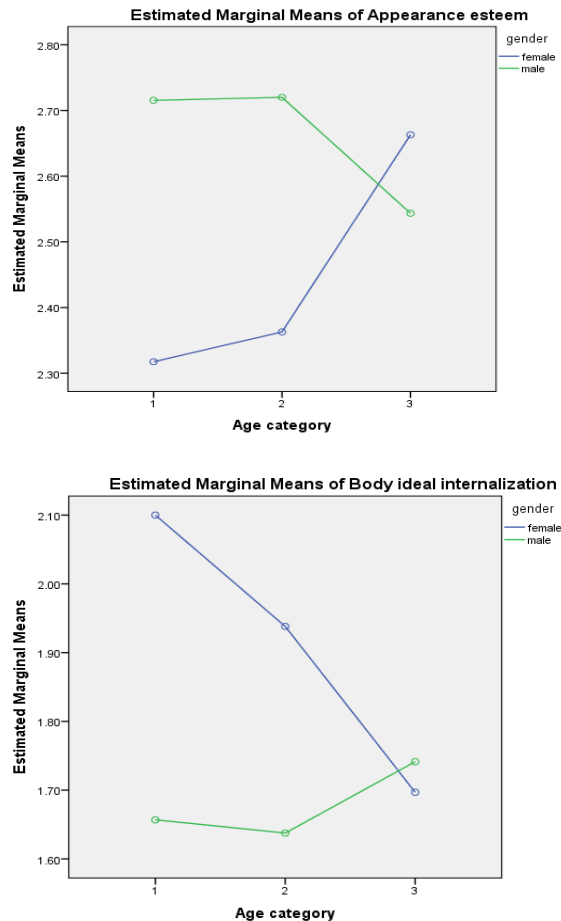


Figure 1. Interaction between age and gender on appearance esteem and body ideal internalization

The effects of age groups were explored further separately for girls and boys. The results are quite different across gender (Table 2), such as age has a significant effect on appearance esteem and on body ideal internalization for girls. Conducting post-hoc analysis for each gender, Turkey test indicated that girls with age between 19 and 20 registered significantly higher scores in appearance esteem and lower scores in socio-cultural ideal internalization, compared to younger girls. A series of t-tests were run to investigate gender differences in appearance esteem, weight esteem and body ideal internalization for each age group. For participants between 15 and 16 years old, we found significant gender differences in all three variables (appearance esteem $t(162) = -3.76, p < .001$; weight esteem $t(162) = -2.95, p < .05$; body ideal internalization $t(162) = 3.69, p < .001$). Similar results were found for the participants between 17 and 18 years old (appearance esteem $t(175) = -3.86, p < .001$; weight esteem $t(175) = -2.99, p < .05$; body ideal internalization $t(175) = 2.79, p < .05$). For participants between 19 and 21 years old, no

significant differences were found in any of the above dimensions (appearance esteem $t(133) = -1.03, ns$; weight esteem $t(133) = -1.01, ns$; body ideal internalization $t(133) = -.234, ns$).

Table 2. Means, standard deviations and univariate effects of appearance esteem, weight esteem and body ideal internalization for each age group, across gender.

		Age groups			F	p
		15-16 years old (n=80 girls and n=84 boys)	17-18 years old (n=97 girls and n=80 boys)	19-20 years old (n=73 girls and n=62 boys)		
		Mean (SD)	Mean (SD)	Mean (SD)		
Appearance esteem	Male	2.72 (.58)	2.72 (.52)	2.54 (.63)	2.028	.134
	Female	2.31 (.76)	2.35 (.73)	2.67 (.74)	5.185	.006
Weight esteem	Male	2.80 (.71)	2.78 (.76)	2.59 (.71)	1.709	.183
	Female	2.10 (.84)	1.93 (.85)	1.69 (.76)	.037	.964
Body ideal internalization	Male	1.65 (.69)	1.63 (.64)	1.72 (.61)	.436	.647
	Female	2.10 (.84)	1.93 (.85)	1.69 (.76)	4.568	.011

The moderating effect of body ideal internalization in the relation between body mass index and appearance esteem

To further explore the finding that appearance esteem is higher in young adult girls compared to adolescent girls while body ideal internalization has an opposite effect, we tested a potential moderation effect of body ideal internalization in the relation between body weight and appearance esteem, knowing that body weight is the most robust predictor of body image satisfaction.

The interaction was explored using multiple regressions. In order to avoid multicollinearity, the scores were centred according to Aiken and West (1991) recommendations. The two-way by-products were calculated by multiplying the centred variables. Table 3 condensate the results of hierarchical regressions having as criterion appearance esteem. BMI was entered in the first step of the hierarchical regression, followed by body ideal internalization in the second step and the product term in the third step.

Tab. 3 Summary for hierarchical regression testing the moderating role of body ideal internalization in the relation between BMI and appearance-esteem

	ΔR^2	<i>B</i>	SE <i>B</i>	β
<i>Appearance-esteem</i>				
<i>Step 1</i>				
BMI	.08**	-.09	.01	-.28**
<i>Step 2</i>				
BMI	.13**	-.08	.01	-.25**
Body ideal internalization		-.33	.05	-.36**
<i>Step 3</i>				
BMI	.01*	-.08	.01	-.25**
Body ideal internalization		-.33	.05	-.36**
BMI x Body ideal internalization		-.05	.02	-.12*

Note. * $p < .05$, ** $p < .01$

The interaction predicted 2% of the variance in appearance-esteem ($t = -2.145, p = .033$). As illustrated in Figure 2, the simple slope was significant only for participants with high levels of body ideal internalization ($\beta = -.12, t = -2.97, p = .003$).

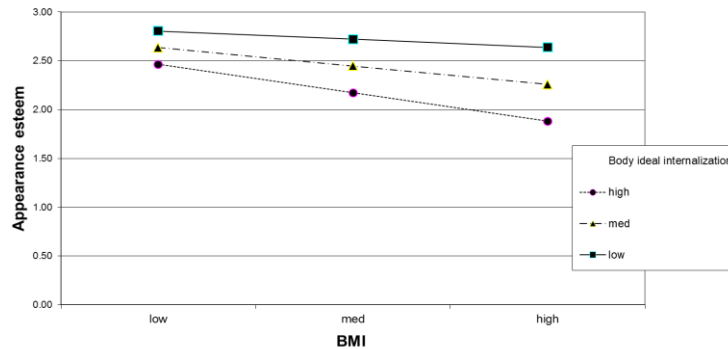


Figure 2. The interaction between BMI and body ideal internalization

3.5. Conclusions

The present research investigates age and gender effects on body image related constructs in a sample of adolescents with age between 15 and 20 years old. Previous research brought evidence that teenagers are the most critical in terms of how they evaluate their body. Also gender differences in body esteem are higher compared to other developmental periods. Almost all participants had a normal weight. Therefore, this sample allows us to explore body image patterns in a healthy weight population.

We adopted a two dimensional measure of body image intended to tap into weight evaluation and general appearance evaluation. We assumed that appearance esteem and weight esteem would be different in late adolescence and young adults compared to middle adolescence for both boys and girls. Then, we expected that young adults would internalise to a lower extent the body ideal compared to teenagers. We also explored moderating effects of body internalization in the relation between BMI and body esteem.

Compared to girls, boys had higher scores in both appearance esteem and weight esteem. Overall they were more positive when evaluating their weight and appearance. When considering gender differences in each age group, a different picture emerged. While in the group of participants under 18 years old, boys registered a higher weight and appearance esteem compared to girls, for the older participants, we found no gender differences. The result is surprising, previous studies showing that, although the gender differences decrease in adulthood, they are still significant (Tiggemann, 2004). Past research on gender differences focused mostly on weight concerns and concluded that women are more preoccupied to change their weight compared to males (McCabe et al., 2006). The satisfaction with appearance received scarce attention and led to different results regarding gender differences. Penkal and Kurdek (2007) brought evidence that college student girls gave higher rates to their attractiveness compared to boys. Shomaker and Furman (2009) investigating satisfaction with appearance in a sample of adolescents between 16 and 19 years old, found no gender differences. Addressing muscularity concerns in a cross cultural research, Frederick, Azar, Haselton, Buchanan, Peplau and Berezovskaya (2007) documented a wide spread desire to increase muscularity among US, Ukrainian and Ghanaian young adults, more than 50% being unsatisfied with their body shape.

In this sample, age by itself did not seem to affect any dependent variable but we found evidence for an interaction between age and gender. When asked about the way they evaluate their appearance in general, older girls stated that they feel better about the way they look compared to younger girls. The highest difference was found between young adults and adolescents. Females over 19 years old evaluated more positive their appearance compared to younger females. This result is in line with previous studies (Holsen, 2012; Gillen et al., 2012) and contradicts other studies (Presnell et al. 2003; Eisenberg, 2006; Bucchianery et al., 2013). We can advance an explanation for our finding based on the particularities of the samples. In the present research, weight esteem and BMI were rather similar across age groups. Nevertheless, a

descending trend of weight esteem and a small increase of BMI could be observed in the data for both boys and girls. Weight esteem mean scores were lower in the young adults group compared to adolescents, but the difference did not reach statistical significance. Regarding the relation between BMI and body esteem, the overall picture suggests that older girls feel better about their appearance even if they have approximately similar BMIs across age groups and similar weight esteem. Probably having a higher weight or the same weight is not perceived as a problem to the same extent as before. Because Bucchianery et al (2013) concluded that increases in dissatisfaction were associated with increases in body mass; we could speculate that our results are explained by an approximately stable BMI and a healthy weight. Then, probably after living high-school, females are emerged in a diversity of social contexts that might not put so much pressure on appearance. As a consequence, they feel better about their bodies. For boys, scores were stable across age groups. McCabe et al. (2006) speculated that since adolescent boys are focused on increasing muscles, they are rather satisfied with their body image because the normal physical development responds to this need. As they mature, they start to focus on both losing weight and increasing muscles which along with general fitness and functional competencies can lead to high levels of dissatisfaction.

Another line of researches pointed that lately mass-media strongly reinforces both the thin and the muscular ideal such as males are exposed to images of beauty more often than in the past (McCabe et al., 2006). In our sample, they had significantly lower scores in body ideal internalization although the items of the scale assessed the propensity to adhere to the gender specific body ideal, respectively the muscular ideal. Cusumano and Thompson (2001) pointed that there is a significant difference between internalizing the body ideal and feeling pressure to accept this ideal. Since we did not measure pressure, we could not conclude that our finding contradicts previous researches that stated that both boys and girls register similar awareness of social pressure (Blond, 2008).

The scores in body ideal internalization were significantly different across age groups, but in the opposite direction. Young adult girls internalised to a much lower extent the beauty ideal promoted through mass-media. This finding is in line with previous researches. For example, in a comprehensive meta-analytic review, Groesz, Levine and Murnen (2002) concluded that the effect of viewing media images is stronger for participants under 19 years old. No similar effects were found for boys, although there is a trend toward a higher level of body

ideal internalization in the young adults' sample, where they also registered lower appearance esteem. Follow up analysis confirmed that socio-cultural ideal internalization moderated the effect of BMI on appearance esteem, such as for girls with low levels of sociocultural ideal internalization, higher BMI did not lead to lower appearance esteem.

Chapter 4

Appearance related feedback and body-esteem

4.1. Introduction

Researches point toward the social context as a significant factor that influences body-esteem (Grogan, 2008). Significant others such as parents and peer model their own concern with appearance and offer appearance related feedback (Littleton & Ollendick, 2003). As a direct consequence, data show that mothers' negative feedback is associated with daughter's eating disorders (van den Berg, Wertheim, Thompson & Paxton, 2002). Also, fathers' concern with muscularity is associated with son's body image dissatisfaction (Galioto, Karazsia & Crowther, 2012). Significant others also can reinforce media effect and favour the development of unrealistic expectations regarding appearance. In adolescence, peers' social interactions often create a context where the perfect body is promoted and reinforced while failing to manage weight and appearance are penalized through teasing, negative feedback or even exclusion from the group (Jones & Crawford, 2006).

If the negative influences are well documented in the literature, the relevance of positive feedback in relation with body image received scarce attention. The few identified studies suggest that the relation between positive feedback and body image is influenced by the perceived importance of appearance and by the level of satisfaction. Herbozo and Thompson (2006) found that for young adults with high level of dissatisfaction and a lack of investment in appearance, positive feedback had a negative effect.

The pressure to conform to group norms is higher in adolescence compared to other developmental periods (Haines, Neumark-Sztainer, Hannan, van den Berg & Eisenberg, 2008; Menzel, Schaefer, Burke, Mayhew, Brannick & Thompson, 2010). Therefore, adolescence is a relevant developmental period for exploring the relation between social factors and body image.

4.2. Objectives

The present study aims to explore the relation between appearance related feedback and body esteem. Also we are targeting potential gender differences in the frequency of feedback occurrence and its contribution to body-esteem.

4.3. Methodology

Participants

330 adolescents (186 girls) age 15 – 20 participated in the study. Based on Cole’s cut-off (2000) 214 participants have normal weight, 20 are underweight and 25 are overweight.

Body mass index (BMI) was 19.81 ($SD = 2.34$) for girls and 22.14 ($SD = 2.98$) for boys.

Instruments

Body Mass Index (BMI)

Body mass index was calculated from the equation (weight in kg)/(height in m²), using measures reported by participants. In this sample, BMI is 19.81 ($SD = 2.34$) for girls and 22.14 ($SD = 2.98$) for boys.

Body-esteem – Appearance and Weight

Self-evaluation of weight and appearance was measured with The Body Esteem Scale for Adolescents and Adults (BESAA; Mendelson, Mendelson & White, 2001). Two subscales were selected: the Appearance Esteem subscale (BE-Appearance), consisting on 10 items that address self-evaluation of appearance, (“*I like what I see when I look in the mirror*”, “*There are a lot of things, I’d change about my look if I could*”) and the Weight Esteem subscale (BE-Weight), consisting on 8 items that address self-evaluation of weight, (“*I feel I weight the right amount for my height*”, “*My weight makes me unhappy*”).

Positive and negative appearance related feedback

The frequency of positive and negative feedback was measured using Positive feedback and Negative feedback subscales from the *Verbal Commentary on Physical Appearance Scale – VCOPAS* (Herbozo & Thompson, 2006). The scales contain items such as *Your facial skin looks good.* or *Your outfit makes you look fat.* Participants had to estimate the frequency of receiving this type of comments from mother, father, close friend and other persons.

4.4. Results

4.4.1. Gender differences in the occurrence of negative feedback

The means of negative feedback are illustrated in figure 3. Globally, we did not identify significant gender effects in the incidence of negative feedback (M boys = .95, SD = .65; M girls = .89, SD = .66, t (330) = -.857, p = .392) although boys declared they received a higher amount of negative feedback general others compared to girls (M boys = .77, SD = .66; M girls = .62, SD = .63, t (330) = -2.184, p = .030).

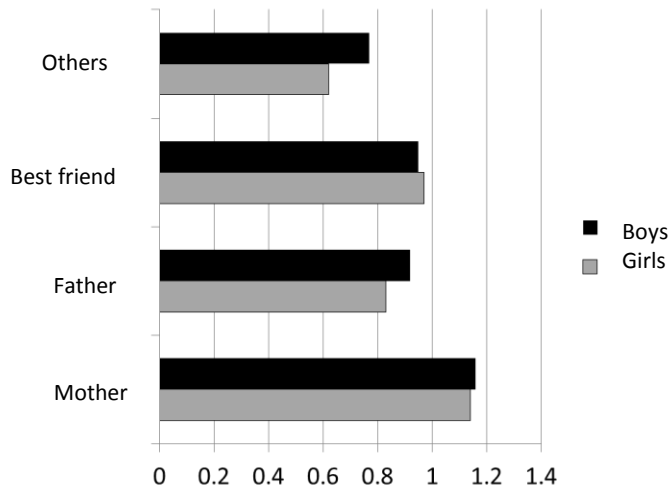


Figure 4. Frequency of negative feedback

Independent of gender, mother was the person who addressed most frequent appearance negative comments. We found a significant difference between the frequency of feedback received from mother and the frequency of feedback received from best friend, for both girls (t (186) = 8.918, p = .000) and boys (t (144) = 5.821, p = .000).

4.4.2. Gender differences in the occurrence of positive feedback

Girls received positive feedback more frequent than boys (t (330) = 2.976, p = .003). The feedback comes mostly from mother and best friend for both boys and girls.

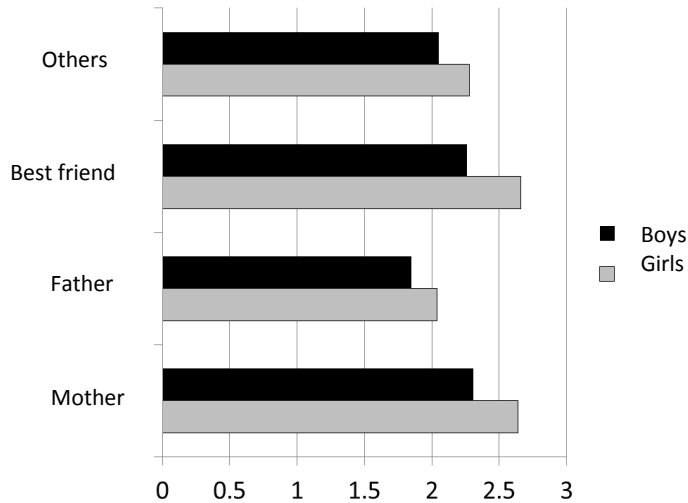


Figura 5. Frequency of positive feedback

In girls' sample, we identified a moderate association between the negative feedback and body-esteem. Girls who declared they frequently receive negative feedback reported a low appearance and weight esteem. For positive feedback, although the occurrence was higher than negative feedback, the association with body esteem was low but significant with the positive feedback received from mother and best friend.

In boys' sample, only the negative feedback received from mother was related to weight esteem. Positive feedback from parents was associated with appearance esteem. Concerning weight, BMI correlated with negative feedback, its occurrence being higher when overweight, independent of gender.

4.5. Conclusions

In the present study, we examined the relation between appearance related feedback and body esteem in middle and late adolescence. Compared to other studies that mostly explored negative feedback, we considered both negative and positive feedback. More, we requested to participants to differentiate between different sources of feedback such as parents, best friends and others.

Although we did not identify significant gender differences in the occurrence of feedback, the effect over body esteem followed different patterns across gender. Mother is the most frequent initiator of appearance related feedback. Her feedback has a relevant contribution to weight esteem for both boys and girls and to appearance esteem only for girls. The feedback

from friends has a relevant contribution to body esteem only in girls' sample. The positive feedback, although more frequent than the negative feedback, has a small contribution to body esteem. The relation between positive feedback and body image is a valuable direction of research in the future studies. The fact that positive feedback had a small contribution to body esteem raises questions about strategies of promoting a positive body image. As Herbozo and Thompson (2006) suggested, appearance related feedback, both positive and negative, might promote an excessive focus of attention on body features and an exaggerated investment in appearance management. Both aspects could become risk factors in body image dissatisfaction.

Chapter 5.

Social and athletic competencies in the relation between negative feedback about appearance and body esteem

5.1. Introduction

In adolescence, negative feedback from significant others has a significant contribution in the development of body esteem. The effect seems to be higher for those who perceive appearance as being relevant in developing social relations. For instance, Oliver and Thelen (1996), while examining negative feedback and body image in children and adolescents, showed that the belief that being thin facilitates social relations was significant in predicting worries about body image for girls. Also, Herfert and Warschbrger (2011) showed that the fear of being excluded from the group was associated with worries about weight among boys. Overweight teenagers receive more frequent negative feedback compared to normal weight adolescents (Jones & Crawford, 2006). Both overweight and atypical appearance features are often penalised in the context of social relations (Rumsey & Harcourt, 2005). Therefore, the belief that a perfect body increases the chances of social interactions is not surprising in children and adolescents. Gerner and Wilson (2005) show that this cognition is strongly activated among overweight adolescents.

5.1.1. Social competencies

The social acceptance is a very serious problem among adolescents. They feel an acute need to be accepted by same age groups. In this social context, body image is modelled and reinforced through appearance dependent acceptance and frequent body talks, through group pressure and social comparison (Jones et al., 2006). The social support and social acceptance are

protective factors against body image dissatisfaction (Ata, Ludden & Lally, 2007). In this context, feeling socially accepted might act as a buffer against the effects of appearance negative feedback.

5.1.2. Athletic competencies

An aspect neglected in the study of body image is the role of physical competencies in the attitude toward own body. Interviewing aerobics instructors, Hanley (2005) concluded that, for them, the body is experienced holistic instead of being focused on details. Also, the superiority of the boys in body image satisfaction is considered to be due to a focus on functional competencies (Ricciardelli & McCabe, 2006; Holt & Finemore, 2003). Abbot and Barber (2011) concluded that the involvement in any type of sport, excepting the aesthetic ones, is associated with a focus on the functional competencies of the body instead of the aesthetic aspect of appearance. The physical activity is recognised as having positive effects over self-esteem (Fox, 2000) and body image (Smolak, 2004).

5.2. Objectives

These data lead to the conclusion that both athletic and social competencies are positive contributors to body esteem. Having as cognitive framing Cash's model of body image development that states that social influences interact with individual characteristics in the development of body image, the present study aims to test the role of social and athletic competencies in the relation between negative feedback and body esteem.

5.3. Methodology

Participants

172 participants (97 girls) aged between 15 and 18 years old participated in the study. Based on Cole's cut-off (2000), 155 participants have normal weight, 20 are underweight and 19 are overweight.

Instruments

Body Mass Index (BMI)

Body mass index was calculated from the equation (weight in kg)/(height in m²), using measures reported by participants.

Body-esteem – Appearance and Weight

Self-evaluation of weight and appearance was measured with The Body Esteem Scale for Adolescents and Adults (BESAA; Mendelson, Mendelson & White, 2001). Two subscales were selected: the Appearance Esteem subscale (BE-Appearance), consisting on 10 items that addressed self-evaluation of appearance, (“*I like what I see when I look in the mirror*”, “*There are a lot of things, I’d change about my look if I could*”) and the Weight Esteem subscale (BE-Weight), consisting on 8 items that addressed self-evaluation of weight, (“*I feel I weigh the right amount for my height*”, “*My weight makes me unhappy*”).

Positive and negative appearance related feedback

The frequency of positive and negative feedback was measured using Positive feedback and Negative feedback subscales from the *Verbal Commentary on Physical Appearance Scale – VCOPAS* (Herbozo & Thompson, 2006). The scales contain items such as *Your facial skin looks good* or *Your outfit makes you look fat*. Participants had to estimate the frequency of receiving this type of comments from mother, father, close friend and other persons.

Social and athletic competencies

Social and athletic competencies were measured using the subscale Physical abilities and the subscale Social relations from the *Self Description Questionnaire III*, SDQIII, March. Ellis, Parada (Richards & Heubeck, 2005). Both subscales contain nine items such as *I hate sports and physical activities*. *I make friends easily*.

5.4. Results

5.4.1. The association between social competencies, athletic competencies, body esteem and the appearance related negative feedback

Social and athletic competencies were associated with appearance esteem for both boys and girls (Table 7). Participants who declared they were happy with their appearance also reported a high level of social and athletic competencies. Weight esteem was related with social competencies for girls and with athletic competencies for boys. Also, girls who declared they receive negative feedback about their appearance had low perceived social and athletic competencies. For boys, negative feedback was not related with athletic and social competencies.

Tabelul 7. The association between appearance esteem, weight esteem, social competencies, athletic competencies and negative feedback

Pearson coefficient (N=98 girls)	1	2	3	4	5	6
BMI (1)	-	-.318**	-.487**	-.073	-.013	.137
Appearance esteem (2)		-	.740**	.281**	.205*	-.414**
Weight esteem (3)			-	.354**	.169	-.348**
Social competencies (4)				-	.214*	-.325**
Athletic competencies (5)					-	-.203*
Negative feedback (6)						-
* $p < .05$, ** $p < .01$						
(N=90 boys)	1	2	3	4	5	6
BMI (1)	-	-.108	-.157	.156	.010	.044
Appearance esteem (2)		-	.635**	.284**	.305**	-.123
Weight esteem (3)			-	.110	.241*	-.167*
Social competencies (4)				-	.327**	.041
Athletic competencies (5)					-	-.026
Negative feedback (6)						-
* $p < .05$, ** $p < .01$						

Regarding the predictive value of social and athletic competencies while controlling for BMI and negative feedback, we found different results across gender. For girls, social competency was a significant predictor for appearance ($F(4, 93) = 9.032, p = .000, \beta = .20, t = 2.147, p = .034$) and weight esteem ($F(4, 93) = 19.839, p = .000, \beta = .24, t = 2.970, p = .004$). For boys, athletic competency was a predictor of appearance esteem ($F(4, 76) = 3.571, p = .010, \beta = .22, t = 2.067, p = .042$).

5.4.2. The moderating role of social competencies in the relation between negative feedback and appearance esteem

We used the procedure and recommendations of Aiken and West (1991) in order to test for a moderation effect of social competencies in the girls' sample. To avoid the multicollinearity effects, the interaction was obtained by multiplying the centred variables. The interaction explained 7% of variance in appearance esteem. As illustrated in figure 5, the regression slope is significant for participants with a medium and high level of social competencies.

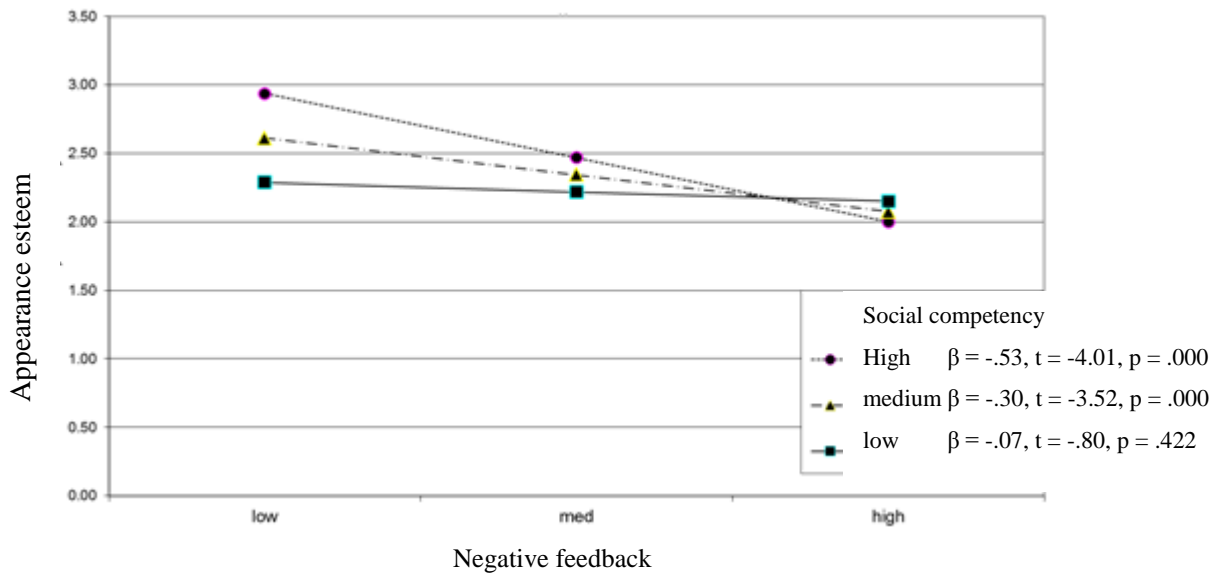


Figure 5. The moderation effect of social competencies in the relation between feedback and appearance esteem

5.5. Conclusions

The purpose of the study was to identify a potential protective role of social and athletic competencies in the relation between negative feedback and body esteem. Social competencies contributed to body esteem in girls’ sample while athletic competencies were relevant in relation with body esteem for boys. More, for girls, social competencies had the power to buffer the effect on negative feedback on appearance esteem.

Chapter 6

Perfectionism and body ideal internalization in the relation between social influences and body esteem

6.1. Introduction

In adolescence, body ideal promoted in media is very popular and considered a realistic standard in the evaluation of own attractiveness. Very thin for girls and muscular in the upper body for boys, this ideal is impossible to be reached in most cases. The media pressure, often reinforced by significant others is documented to contribute to the development of eating disorders (Hausenblas, Campbell, Menzel, Doughty, Levine & Thompson, 2013). Although most adolescents are exposed to media messages, there is a high variability regarding the adoption of the body ideal as a personal standard (Dittmar & Haward, 2004). One of the potential risk

factors, explored mostly in relation with eating disorders is the perfectionism (Bardone-Cone, Wonderlich, Frost, Bulik, Mitchell, Uppala & Simonich, 2007). Perfectionistic person set high standards for themselves. They often perceive that others' acceptance is dependent of personal success (Jones, 2004). Considered for a long period of time as being a one-dimensional variable, perfectionism is described lately as a multidimensional construct (Hewitt, Flett, Besser, Sherry & McGee, 2003). Regarding this matter, Sherry, Vriend, Hewitt, Sherry, Flett and Wardrop (2009) differentiated between the need to be perfect and the need to hide own imperfections. Grammas and Schwartz (2009) consider that the need to hide imperfections is generated by the perception that others have perfectionistic expectations from the self. The authors name this dimension socially prescribed perfectionism and document its relation with body ideal internalization. Also, self-oriented perfectionism was found to be related to restrictive eating behaviour and anorexic disorders (Bardone-Cone, 2007).

Less studied is the way perfectionism interferes with sociocultural influences in the development of body image dissatisfaction. Van den Berg, Thompson, Obremski-Brandon and Coover (2002) showed that perfectionism predispose to a high sensitivity to others' feedback and frequent involvement in social comparison.

As mentioned before, body ideal promoted in media is often reinforced in social groups. A more subtle way of influencing body image compared to direct feedback are general conversations on the topic of appearance. In adolescence, the so called body talk is a frequent behaviour. A significant amount of studies documented the existence of a relation between body talk and body image dissatisfaction (Cash et al, 2002; Compeau & Ambwani, 2013; Tompkins, Martz, Rocheleau & Bazzini, 2009; Warren, Holland, Billings & Parker, 2012). Engeln, Sladek and Waldron (2013) showed that this type of conversations is directed toward body shape, weight or muscles. It's been suggested that adolescents participate in this type of conversations not necessarily from a sincere preoccupation with appearance but often because they perceive body talk as a facilitator of group integration and social acceptance (Jones, 2004; Tompkins et al., 2009).

6.2. Objectives

The present study aims to investigate the relation between body talk, perfectionism, body ideal internalization and body esteem. A first objective is to investigate if body talk and

perfectionism contribute to body esteem. Second, we intend to explore if perfectionism and body ideal internalization mediates between social influences and body esteem. Based on previous studies that suggest that perfectionism is a distal factor that favours body ideal internalization, we analysed if body ideal internalization mediates between perfectionism and body esteem.

6.3. Methodology

Participants

269 participants (119 girls) aged between 15 and 19 years old participated in the study.

Instruments

Body-esteem – Appearance and Weight

Self-evaluation of weight and appearance was measured with The Body Esteem Scale for Adolescents and Adults (BESAA; Mendelson, Mendelson & White, 2001). Two subscales were selected: the Appearance Esteem subscale (BE-Appearance), consisting of 10 items that address self-evaluation of appearance, (“*I like what I see when I look in the mirror*”, “*There are a lot of things I’d change about my look if I could*”) and the Weight Esteem subscale (BE-Weight), consisting on 8 items that address self-evaluation of weight, (“*I feel I weight the right amount for my height*”, “*My weight makes me unhappy*”).

Self-oriented and socially prescribed perfectionism

The two dimensions of perfectionism were measured using *Child and Adolescent Perfectionism Scale – CAPS-14*, Flett & Hewitt, 1990; O’Connor, Dixon & Rasmussen, 2009). The subscale *Socially Prescribed Perfectionism, SPP* contains 7 items that measure the perception that others ask to much from an individual (*My family expects me to be perfect*). The subscale *Self Oriented Perfectionism, SOP* contains also 7 items that tap the individual need to be perfect (*I want to be the best at everything I do*).

Body image related conversations

The frequency of involving in appearance related conversations was measured using the subscale *Appearance Conversation with friends* from the scale *Peer Appearance Culture* (Jones, Vigfusdottir & Lee, 2004). The subscale contains five items that measure the frequency of conversations about appearance (*My friends and I talk about what we would like our bodies to look like.*)

6.4. Results

Participants who adopt the body perfect promoted in media impose themselves high standards and perceive others as asking them to be perfect. The frequency of appearance conversations is related with both dimensions of perfectionism.

While controlling for BMI and appearance related conversations, socially prescribed perfectionism was a relevant predictor for appearance esteem, in girls' sample, while self-oriented perfectionism was relevant in boys' sample.

Regarding the effect of multiple mediation in the relation between appearance conversations and body esteem, having as mediators body ideal internalization and perfectionism, the only model that satisfied the preconditions (Preacher & Hayes, 2008) is the following (Figure 6).

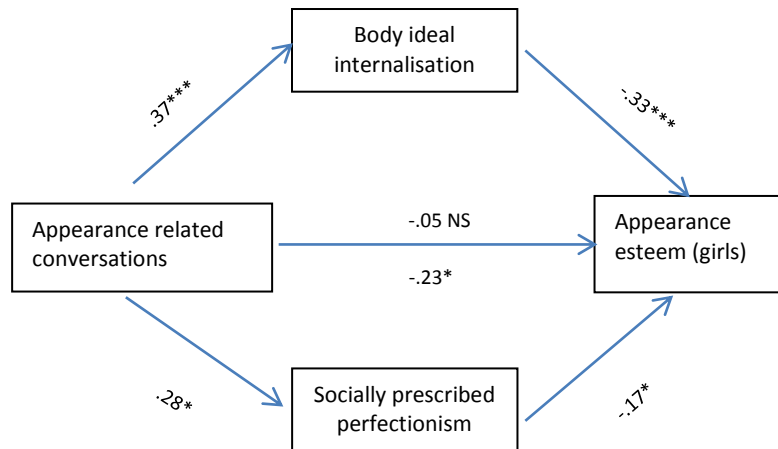


Figure 6. Mediation of body ideal and socially prescribed perfectionism in girls' sample

Following Baron and Kenny (1986) procedure, a series of simple mediation models were verified to identify the potential mediating role in the relation between different dimensions of perfectionism and body esteem, separately for each gender. Out of the eight models, two proved to respect the preconditions of mediation (Figure 7). For girls, body ideal internalization mediated between socially prescribed perfectionism and appearance esteem. Therefore, socially prescribed perfectionism has both a direct and an indirect effect over appearance esteem. In boys' sample, body ideal internalization mediated between self-oriented perfectionism and appearance esteem.

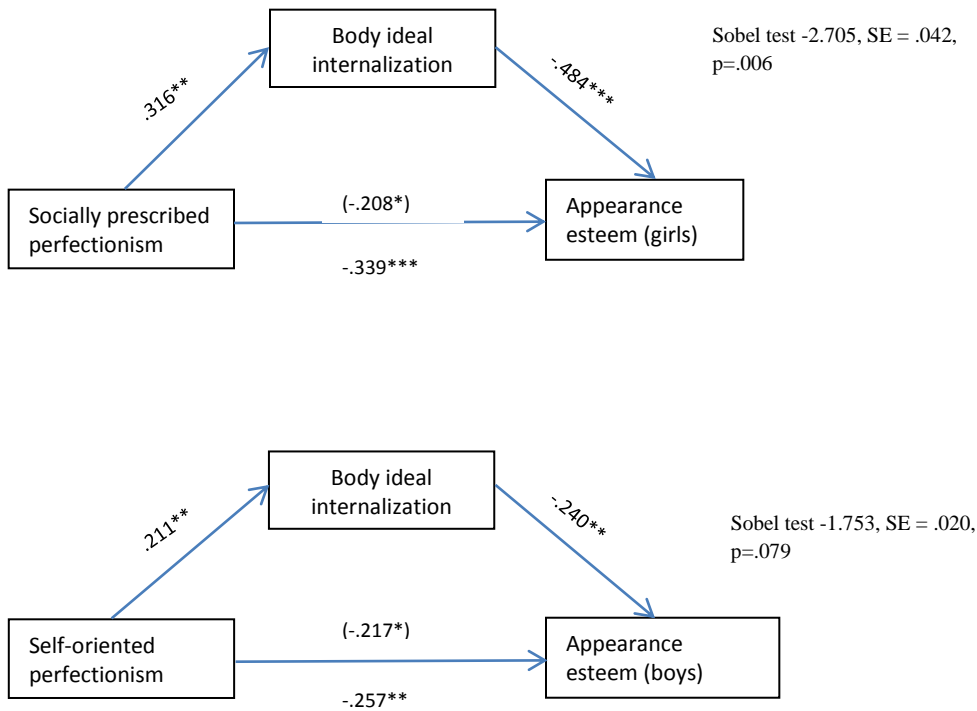


Figure 7. The mediation between perfectionism and appearance esteem having body ideal internalization as mediator

6.5. Conclusions

The focus on perfectionism as an individual variable in relation with body image favoured the evidence of relevant gender differences. The social dimension of perfectionism was important for girls, while the individual dimension of perfectionism contributed to boys' body image. Considering increases in preoccupation with body image among boys (Adams, Turner & Bucks, 2005), the understanding of individual factors that influence the development of body image has relevant clinical implications. In terms of prevention, the results of the present study suggest that an intervention on perfectionism could favour a more positive body image.

Chapter 7

Testing the effects of exposure to images of the body ideal promoted in media over the social physique anxiety

7.1. Introduction

The negative effect of the media in developing body image dissatisfaction is well documented in the literature through various research designs (Groesz, Levine & Murnen; Grabe, Ward & Hyde, 2008; Grogan, 2008). Experimental studies show that it is enough for a person to visualize, for a short period of time, images that contain the body ideal in order to develop negative emotions toward own body (Hausenblass, 2013). The effect is stronger among females but less studied among males (Labre, 2002; Blond, 2008). Also, the effect is stronger in adolescence (Want, 2009). The main mechanisms considered responsible for this effect are the adoption of the body ideal promoted in media as a personal standard and the social comparison.

Also, it was found that the effect is moderated by the weight status, self-esteem and by the previous body image dissatisfaction.

Most studies that evaluate the effect of exposure to images from media focus on the intrapersonal evaluation, showing that visualizing a thin model leads to dissatisfaction with own body. Less is known about the effect over the interpersonal evaluation. Adolescents are mostly preoccupied about others opinion regarding their appearance. The success in appearance management is validated in the social context. In this line, Choi, Leshner and Choi (2008) advance the hypothesis that the risk factor might not be our attitude toward own body, but the perceived significant others' attitude toward own appearance.

7.2. Objectives and hypothesis

The present research aims to investigate the effect of visualizing images that illustrate the body ideal over the social physique anxiety, in adolescence.

Hypothesis:

1. Exposure to images of the ideal body compared to neutral images leads to an increase in the level of social physique anxiety.
2. Participants who adopted the body ideal as a personal standard will register a higher level of social physique anxiety compared to participants with low body ideal internalization.
3. Appearance and weight esteem moderate the effect of exposure such as a high esteem will lead to a significantly smaller effect compared to a low esteem.
4. Gender also moderates the effect, such as the impact on girls will be higher than the impact on boys.

7.3. Methodology

Participants:

131 adolescents (82 girls), age between 15 and 16 years old, participated in the experiment. BMI was 19.71 ($SD = 2.25$) for girls, and 20.4 ($SD = 2.82$) for boys.

Instruments:

Images from media

Images that represent the body ideal were selected from magazines that promoted different beauty products, following the procedure proposed by Dittmar and Howard (2004). First we chose a pool of 20 images for each experimental condition. To select the final 6 images for each experimental condition, we conducted a study, having as participants 30 adolescents, aged between 15 and 16 years old. Their task was to evaluate the attractiveness of the models and if the models represent the type of body image media promotes. For the neutral images, their task was to evaluate the quality of the commercial and the lack of any association with the body ideal.

Appearance and weight esteem

The subjective evaluation of weight and appearance was measured using *The Body Esteem Scale for Adolescents and Adults – BESAA* (Mendelson, Mendelson & White, 2001).

Body ideal internalization

Body ideal internalization was measured using the internalization subscale from the *Socio-cultural Attitudes towards Appearance Scale – SATAQ* (Heinberg, Thompson & Stormer, 1994).

Social physique anxiety

The level of anxiety following exposure was evaluated with the scale *Social Physique Anxiety Scale* (Hart, Leary & Rejeski, 1989; Ginis, Murru, Conlin & Strong, 2011). The scale contains nine items that measured anxiety experienced when a person anticipates that others evaluate or could evaluate its appearance (*Unattractive features of my physique/figure make me nervous in certain social settings. I am comfortable with how fit my body appears to others.*). Ginis and his colleagues adapted the initial version of the scale, in order for the scale to be able to measure body trait and state anxiety.

Socio-economic status

To evaluate the family socio-economic status, we solicited participants to answer the following question using a 5 Likert scale: How do you evaluate the wealth of your family compared to those from your community?

Procedure

Data collection took place in two steps separated by a time period of two weeks. In the first step, participants were randomly assigned to two groups. One group had to evaluate commercials containing images of the ideal body, while the second group had to evaluate commercials containing neutral images. They had to decide if the commercial was informative, original and aesthetic. The experimental task was administered under the label of a marketing study in order to hide the real purpose of the study. In the end, the participants completed the Social Physique Anxiety Scale along with questions regarding social competencies and demographic questions. Two weeks later, a different person asked them to complete a body image related questionnaire comprising measures of body esteem, body ideal internalization and social physique anxiety

7.4. Results

Because participants were randomly assigned to the experimental and the control group, a series of t tests were conducted to check for potential significant differences among the groups. Results were insignificant for both demographic variables and body image related measures. The correlation between demographic variables and appearance related anxiety showed a significant relation between the socio-economic status and the level of anxiety in both pre-test ($r = -.191$, $p = .02$) and post-test ($r = -.216$, $p = .01$). Therefore, the socio-economic status will be included as a covariate.

Gender as moderator

To identify potential gender differences in the effect of exposure to images of the body ideal over the level of appearance related anxiety, we run ANCOVA analysis having as independent variables gender and the experimental condition and controlling for the initial level of the anxiety as well as for the socio-economic status. The model was significant at the global level ($F(4,123) = 122.66$, $p = .000$, $\eta^2 = .83$) and for the experimental groups ($F(4,123) = 4.871$, $p = .029$, $\eta^2 = .03$). Gender did not contribute to significant differences neither individual (F

(1,123) = .043, $p = .83$, $\eta^2 = .00$), nor in interaction with the experimental group ($F(1,123) = 1.057$, $p = .306$, $\eta^2 = .00$).

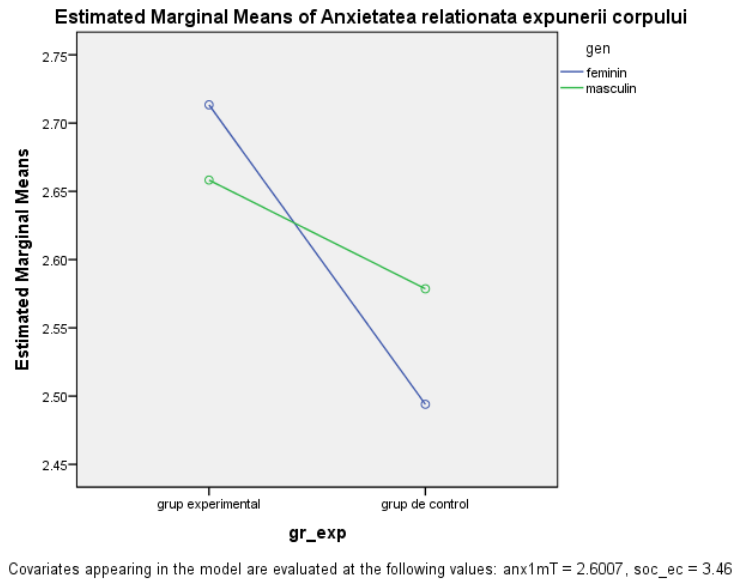
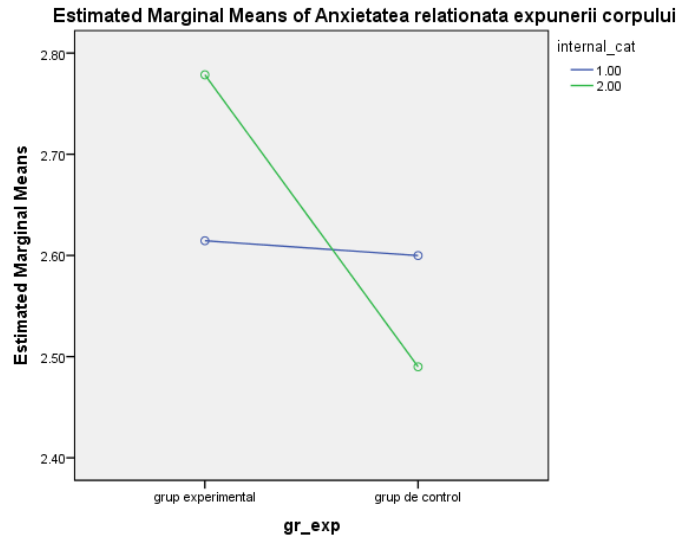


Figure 8 experimental effect moderated by gender

Body ideal internalization as moderator

Using the value of the median ($Me = 3.28$) as a cut-off score, participants were divided into two groups: with low versus high level of internalization. ANCOVA analysis evidenced significant differences in the effect of exposure based on body ideal internalization ($F(1,122) = 4.337$, $p = .039$, $\eta^2 = .03$)

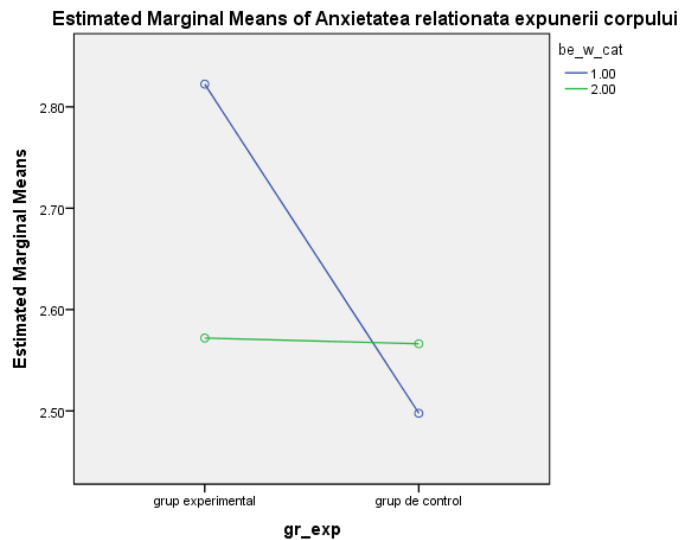


Covariates appearing in the model are evaluated at the following values: anx1mT = 2.6007, soc_ec = 3.46

Figure 9 experimental effect moderated by body ideal internalization

Weight esteem as moderator

The median value for weight esteem ($Me = 3.75$) was used to split the participants in two groups, those with low versus those with high weight esteem. A significant interaction effect was found ($F(1,122) = 6.244, p = .014, \eta^2 = .04$) such as participants with low levels of weight esteem, in the experimental condition, registered significantly lower levels of anxiety compared to those with high weight esteem.

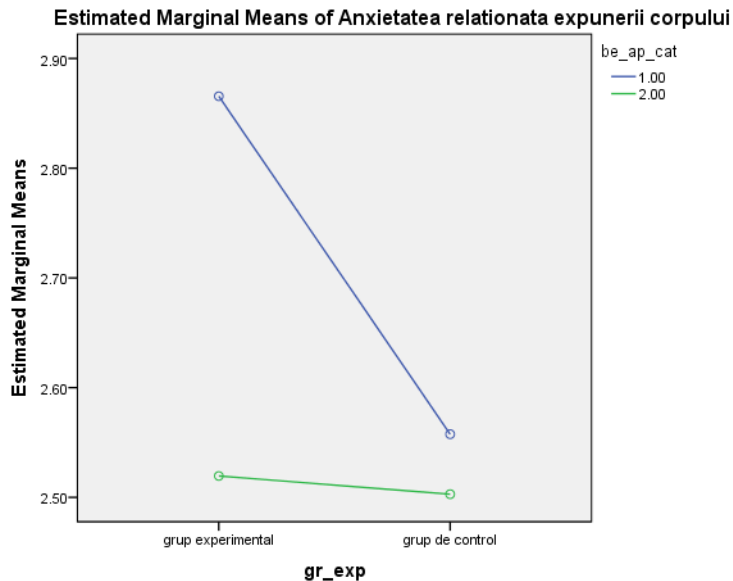


Covariates appearing in the model are evaluated at the following values: anx1mT = 2.6007, soc_ec = 3.46

Figure 10. Experimental effect moderated by weight esteem

Appearance esteem as moderator

The same procedure of using the median ($Me = 3.60$) as a cut-off score, led to two groups of participants. A significant interaction effect between the experimental groups and the low versus high appearance esteem groups was found ($F(1,122) = 5.349, p = .022, \eta^2 = .04$).



Covariates appearing in the model are evaluated at the following values: anx1mT = 2.6007, soc_ec = 3.46

Figure 11 Experimental effect moderated by appearance esteem

7.5. Conclusions

The present study tested the effect of exposure to images that represent the body ideal promoted in media, on appearance related anxiety. We were also interested in identifying moderators of this relation by looking at gender, body ideal internalization and body esteem. To our knowledge, is the first study that tests the effect of exposure on worries regarding interpersonal evaluation such as the anxiety that others would evaluate our appearance in a negative manner.

The results confirm the hypothesis that visualizing, even for a short period of time, images of the body ideal compared to visualizing neutral images led to a significant increase of appearance related anxiety in the experimental condition for both boys and girls. Worries regarding how others perceive our appearance received scarce attention (Brunet et al., 2010). In a study regarding perceived attractiveness perception by others, Dijkstra și Barelds (2011) showed that we have positive illusions about the way others perceive us, especially when others are

significant persons. This phenomenon could not be documented for persons with eating disorders or severe body image dissatisfaction (Anson et al., 2012; Rofey, Kisler-van Reede, Landsbaugh & Corcoran, 2007).

Chapter VIII. Final conclusions

8.1. Main results of the research

Studies regarding body image development revealed on one side the small contribution of the physical characteristics compared to the sociocultural influences and, on the other side, the large variability of these influences at the individual level (Levine & Murnen, 2009). Body image is a psychological phenomenon significantly affected by social factors. The main objective of the present research was to investigate social and individual factors that contribute to adolescents' body image. We focused on appearance esteem as an overall subjective evaluation of appearance and on weight esteem.

In the first study, we investigated age and gender effects in adolescence. Results evidenced significant age effects on appearance esteem, in girls' sample, such as elder adolescent girls felt happier with their appearance compared to younger adolescent girls. The variation in appearance esteem seems to be rather due to the body ideal internalization than to the actual weight. Weight esteem was more stable as a function of age. In boys' sample, both appearance esteem and weight esteem were rather stable across age. We also found significant gender differences, such as boys had higher body esteem compared to girls.

In adolescence, the attitude toward own body is strongly influenced by significant others. In the second study, we aimed to explore the role of positive and negative direct feedback in relation with body esteem. We evaluated the frequency of the feedback received from different persons (study 2) as well as the frequency of involving in appearance related conversations (study 4) with focus on gender differences. Results showed that, although there were not significant gender differences in the occurrence of the feedback, the influence over body esteem follows different patterns across gender. While girls are influenced by both the feedback that comes from family and friends, boys' body esteem is influenced by the feedback that comes from the family. This feedback seems to be directed toward weight. The positive feedback, although more frequent than the negative feedback, has a small contribution to body esteem. As Herbozi and Thompson (2006) suggested, such a feedback can be a risk factor because it favours

a focus of attention on appearance management. In support for this assumption comes the data obtained from the study 4. The frequency of being involved in appearance related anxiety associated with low body esteem, although the items of the scale focused on general positive conversations regarding appearance management.

Starting from the previous researches that evidenced a high variability in population regarding the reactions to sociocultural influences, we investigated potential individual factors that could mediate or moderate the sociocultural effects. In study 3, we investigated social and athletic competencies as potential moderators, while in study 4, we investigated perfectionism dimensions and body ideal internalization as potential mediators. Results evidenced significant gender differences. In relation with body image, athletic competencies proved to be relevant for boys while social competencies were important for girls. Moreover, in girls' sample, social competencies moderated the effect of negative feedback on appearance esteem. For the girls who perceive they were accepted by others negative feedback had a lower influence on appearance esteem compared to the girls who felt they had low social competencies.

Regarding perfectionism dimensions, we investigated a personal dimension of perfectionism (self-oriented perfectionism) and a social dimension (socially prescribed perfectionism). Results showed that the social dimension of perfectionism is relevant for girls, while the personal dimension of perfectionism is relevant for boys. In girls' sample, socially prescribed perfectionism partially mediated the relation between appearance related conversations and appearance esteem. In boys' sample, the same role was accomplished by the self-oriented perfectionism.

In the 5th study, we utilised an experimental design in order to test for the effects of short time exposure to images of body ideal promoted in media over appearance related anxiety. Results confirmed that the exposure to this type of images compared to the exposure to neutral images led to a significant increase in appearance related anxiety. The direct effect is moderated by the body ideal internalization and the body esteem.

8.2. Contributions of the present research

8.2.1. Theoretical contributions

The present research is based on cognitive-behavioural models of body image development, models that underline the importance of social context, interpersonal experiences

and individual particularities in the subjective evaluation of own body image as well as in the cognitive, emotional and behavioural investment in appearance (Thompson, Heinberg, Altabe & Tantleff-Dunn, 1999; Cash, 2002). These models focus on social learning, on the reciprocal relation between social and individual factors and on the cognitive mediation of emotions and behaviour.

First, the results offer empirical support for potential risk factors among significant others and mass-media. Second, the study evidences relevant gender differences in the way body image is experienced. For girls, body image seems to be at a larger extent a social phenomenon. Feedback from friends, social competencies and socially prescribed perfectionism are relevant in relation with body image. For boys, what seems to matter is the feedback from parents, the athletic competencies and the self-oriented perfectionism. Media pressure instead, is a relevant contributor to body image for both genders.

8.2.2. Methodological contributions

The research used both cross-sectional and experimental designs. The instruments used to collect data were translated using the retroversion technique. Internal consistency coefficients were adequate for each scale. Also, we successfully adapted an experimental design in order to test for short term effects of exposure to images that represent the body ideal promoted in media.

9.2.3. Practical contributions

The conclusions of the present research underline some relevant aspects that should be considered while designing prevention programs against body image dissatisfaction. Social and athletic competencies as well as low levels of perfectionism favour a positive body image. The fact that the involvement in appearance related conversations is a predictor of low body esteem suggests that the prevention programs might be more efficient if they are directed toward developing protective factors than if they directly address body image. Also, it seems to be relevant to develop critical thinking skills in media consumption in order to impede the internalization of the body ideal promoted through mass-media. Another relevant result with practical implications is the mothers' influence in developing low body esteem for both genders. It might be beneficial to inform the parents, especially the mother about how to address overweight issues without directing the child's attention toward appearance and the benefits of having a body in line with sociocultural standards of beauty.

8.3. Limits and future directions of research

The main purpose of the research was to explore social and individual factors that contribute to body image in adolescence. One of the main limits of the research was the cross sectional design. As a result, the identified relations cannot be interpreted in terms of causality or temporal relations. As consequence, the results of the first study should be confirmed by longitudinal follow-ups. In the second study, a methodological limit is the fact that we did not measure the emotional impact of the appearance related feedback, nor the quality of relations with significant others such as parents. They might provide valuable information in understanding the relation between feedback and body image. In the third study, the fact that we did not find athletic competencies as being predictors of body esteem for girls is somehow unexpected (Abbott & Barber, 2010). Probably a different picture would emerge if we measured the frequency of practicing different types of sport instead of the perceived athletic competency. Previous studies showed that some sports, like ballet or dance, favour body image dissatisfaction due to a focus on the aesthetic of the body. In the experimental design, a limit is the small number of boys compared to girls. In this study, although we evidenced a short term effect, we cannot make inferences about a long term effect as a result of daily media consumption. Here also, a longitudinal design could bring valuable information concerning long term effects of media exposure.

The high risk of developing a negative body image as well as the teenagers' vulnerability to sociocultural influences makes adolescence an important period for prevention and intervention programs. The results of the present research identified a few relevant targets for prevention, such as social and athletic competencies, perfectionism and critical thinking skills in media consumption. We also evidenced that appearance esteem is better explained by the analysed factors compared to weight esteem, which suggest that weight is just one of the potential problems in the relation with own body.

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