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## **Drive for thinness as a women's strategy to avoid inferiority**

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### **ABSTRACT**

The emphasis on the need to achieve and be successful, and the contextual competitive dynamics in Western societies, may explain the increase of distinct forms of psychopathology. This study examined sex differences relative to the expression and consequences of feeling under pressure to compete to avoid a threatening social position. Also, we tested whether insecure striving moderates the impact of a low social rank on drive for thinness, in women. In this cross-sectional study self-report measures of insecure striving and secure non-striving, social comparison, depression, anxiety and stress, and eating disorders symptomatology were completed by a sample of 245 male and 429 female students. For both men and women, the need to strive is associated with general psychopathological symptoms (depression, anxiety and stress). Furthermore, insecure striving was a significant moderator between a low social rank and the endorsement of the importance of thinness and dieting behaviours in women. These findings support the hypothesis that drive for thinness arises as a competitive weapon to assure a secure place in the social world.

*Key words:* striving, social rank mentality, eating disorders' symptoms, thinness.

There is a growing interest about how highly competitive behaviours and the pressure to strive to achieve excellence goals can act as risk factors for psychopathology in the Western culture (Arrindel, Steptoe, & Wardle, 2003; Burkle, Ryckman, Gold, Thornton, & Audesse, 1999; Wilkinson, 1996), especially in younger cohorts (Fombonne, 1999).

According to Gilbert (1989, 2005b), some types of competitiveness emerge as ways to avoid the consequences of being rejected, criticized, or ostracized if viewed by others as inferior. This is largely explained by the need to cause a positive impression in others to assure one's adaptation and survival (Gilbert, 1997). Actually, along evolution, those who were regarded as attractive were chosen and had better access to fundamental social resources, like approval, support, and allies (Allan & Gilbert, 1995; Gilbert, 1997, 2002), compared to the less attractive ones. In face of the threat of being seen as an inferior social agent one may build self-other relationships based on competition and highly focused on social comparison. Gilbert, Broomhead, Irons, *et al.* (2007) conceptualize the perceived need to strive to prove self and earn a place in

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the social world to avoid inferiority as insecure striving. In contrast, feeling acceptable and accepted in one's social networks, whether one succeeds or fails, has been defined as secure non-striving (Gilbert *et al.*, 2007).

Research has shown that insecure striving may be a source of stress and is linked to the need for social validation and psychopathology (Gilbert, McEwan, Bellow, Mills, & Gale, 2009). Also, authors have demonstrated that rates of psychopathology are higher in competitive rather than in caring societies (Arrindell *et al.*, 2003). Gilbert (1989, 1992, 2005) suggests that competitive contexts may activate a social mentality oriented to social comparison, concerns with rank, inferiority, criticism and rejection. Thus, in modern societies, the vulnerability for some types of psychopathological conditions might be associated with increases in competitive behaviours (Twenge *et al.*, 2010) aiming at avoiding negative social evaluations and rejection (Gilbert, 1989, 1992, 1995, 2005; Leary, 1995, 2001; Liotti & Gilbert, 2001; Wilkinson, 1996). In these societies it is clearly defined who will be accepted and might prosper, and who will be passed over (Arrindell *et al.*, 2003; Kasser, 2002; Wilkinson, 1996). Thus, one has to be aware about which characteristics are valued by one's group (e.g., academic performances and forms of beauty; Gilbert, 2002), to know how one is perceived and to adapt one's behaviour and presentation to avoid being in a low rank (Gilbert, 1992, 1997, 2000).

Furthermore, culture always had an important role on determining the desirable body image, shape and weight, especially for women (Buote, Wilson, Strahan, Gazzola, & Papps, 2011; Pinto Gouveia, 2000). Currently, there is a continuous emphasis on feminine attractiveness linking a thin body with beauty, health, success, power and happiness (Feingold, 1992; Kanazawa & Kovar, 2004; Strahan, Wilson, Cressman, & Buote, 2006; Sypeck, Gray, Etu, Ahrens, Mosimann, & Wiseman, 2006; Webster & Driskell, 1983; Wiseman, Gray, Mosimann, & Ahrens, 1992). Physical appearance then emerges as a central self-evaluative dimension and as a particularly used domain to gather positive social attention (Ferreira, Pinto Gouveia, & Duarte, 2013; Gilbert, 2002; Gilbert, Price, & Allan, 1995; Myers & Crowther, 2009; Troop, Allan, Treasure, & Katzman, 2003).

Thus, the comparison with others based on this specific domain becomes a relevant mechanism to estimate one's social rank and how one fits in the social group (Ferreira *et al.*, 2013; Jones, 2001; McKinley, 1999). For women, social comparison based on body image can be conducted with distinct social targets, and is often self-depreciative (e.g., Halliwell & Harvey, 2006; Krones, Stice, Batres, & Orjada, 2005; O'Brien *et al.*, 2009; Strahan *et al.*, 2006). Contrary to Festinger's (1954) social comparison theory, in this specific domain, instead of choosing similar social comparison targets, media images of women with thin and slender bodies (e.g., models, actresses or other celebrities), that represent the unrealistic ideal physical appearance pattern, are often chosen by women as the preferential comparison target (Engeln-Maddox, 2005). This often leads to body image dissatisfaction and negative emotional consequences, such as depressive and anxiety symptoms (Heinberg & Thomson, 1995; Stice, Spangler, & Agras, 2001; Tiggeman & McGill, 2004). These, in turn, were shown to precede weight concerns, dieting (Field *et al.*, 2001) and bulimic symptoms (Field, Camargo, Taylor, Berkey, & Colditz, 1999; Irving, 1990; Stice & Shaw, 1994). In addition, the perception of being significantly different from an upward social target (e.g., a model), may foster a sense

of being inferior and socially unattractive (Buote *et al.*, 2011; Goss & Gilbert, 2002; Strahan *et al.*, 2008; Yamamiya, Cash, Melnyk, Posavak, & Posavak, 2005). A recent study showed that social comparison based on the physical appearance domain (in relation to models), that is, physical appearance taken as a mean to enhance one's social status and feel accepted and valued by the social group, is a preponderant variable to understand the relationship between body weight dissatisfaction and dieting (Ferreira *et al.*, 2013). Taken together, these findings led us to hypothesize that the control over one's eating pattern and body image, may emerge as a strategy to overcome an unfavourable social rank. In other words, drive for thinness, the "excessive concern with dieting, preoccupation with weight and an extreme pursuit of thinness" (Garner, Olmsted, & Polivy, 1983, p. 17), can be a way to strive to avoid inferiority.

The first aim of the current study is to examine if there are sex differences in the way insecure striving relates to social ranking, and symptoms of psychopathology. Given previous evidence (Arrindell *et al.*, 2003; Bellew *et al.*, 2006; Gilbert *et al.*, 2007), we anticipate insecure striving to be related to poorer mental health (depressive, anxiety and stress symptoms) in both genders. Nevertheless, we hypothesize that, in the female sample, insecure striving is strongly associated with a perception of low social rank, and with dysfunctional eating attitudes and behaviours. Finally, we aim at examining the moderator effect of insecure striving on the relationship between social comparison through physical appearance and drive for thinness. We expect that women who perceive themselves as inferior, devalued, or less accepted, and that feel under pressure to strive and to compete in life, will present a stronger endorsement of the importance of being thin and a higher tendency to engage in restrictive diet (i.e., drive for thinness).

## METHOD

### *Participants*

Participants in this study were 691 students from secondary, high schools and higher educational institutions from Portugal: 245 males and 429 females. They ranged in age from 13 to 34. Men presented a mean age of 19.28 ( $SD= 3.56$ ) and women of 19.24 ( $SD= 3.32$ ). The years of education varied between 7 and 17; the mean for the male sample was 12.60 ( $SD= 2.66$ ), and for the female sample 12.60 ( $SD= 2.23$ ). There were no statistically significant differences between genders in these demographic variables (age:  $t(479.118)= .141$ ;  $p= .888$ ; years of education:  $t(437.634)= .002$ ;  $p= .999$ ).

### *Instruments and measures*

Demographic Data included information regarding age, educational status, marital and professional status, weight and height. Body Mass Index (BMI) was calculated dividing weight (in kilogrammes) by height squared (in meters) (i.e.,  $Wt/Ht^2$ ). Participants completed a battery of self-report questionnaires designed to measure striving to avoid inferiority, social comparison, social comparison through physical appearance, psychopathology and eating disorders' symptoms:

- *Striving to Avoid Inferiority Scale* (SAIS; Gilbert *et al.*, 2007; Portuguese version by Ferreira, Pinto Gouveia, & Duarte, 2011). This scale was developed to assess the strength of ‘pressure to compete to avoid inferiority’ (Gilbert *et al.*, 2007, p. 635). In this study we used the first part of the scale, which comprises two dimensions (with 19 and 8 items, respectively) designed to assess: i) beliefs about the need to compete to avoid feeling inferior (e.g., “If I don’t strive to achieve, I’ll be seen as inferior to other people”) -insecure striving; ii) and feeling accepted by others whether or not one fails, without the pressure to compete (e.g., “Others will accept me even if I fail”) -secure non-striving. Respondents are asked to rate in a five-point Likert scale (ranging from “Never” to “Always”) the extent in which each item applies to their experience. In its original version (Gilbert *et al.*, 2007) the two subscales present Cronbach’s alpha values of .92 and .87. In this study the values were .88 for both subscales, similar to the ones found in the Portuguese version of the SAIS (.90 for insecure striving, and .87 for secure non-striving).
- *Social Comparison Rating Scale* (SCRS; Allan & Gilbert, 1995; translated to Portuguese by Gato, 2003). This scale was developed to measure self-perceptions of social rank and relative social standing. It is constituted by 11 items of bipolar constructs (e.g., Inferior/Superior), using a semantic differential methodology. Participants make a global comparison of themselves in relation to others and rate themselves on a 10-point Likert scale. The scale comprises judgments concerned with rank, attractiveness and how well the person thinks to “fit in” the social group. It has good reliability, with Cronbach’s alphas of between .90 and .91 with student populations (Allan & Gilbert, 1995). The Cronbach’s alpha of the total scale for the present study is .88, resembling the internal consistency value of Portuguese version of the scale (Gato, 2003).
- *Social Comparison through Physical Appearance Scale* (SCPAS; Ferreira *et al.*, 2013). This scale was based on the original SCRS (Allan & Gilbert, 1995) and assesses the subjective perception of women’s attractiveness, social ranking and group fit, according to the way one compares herself with others, using physical appearance as a reference. The participants are instructed to select a number, using a Likert scale ranging from 1 to 10, which best translates the way they feel in relation to other people [e.g., ‘When I physically compare myself with friends, colleagues and other known girls (proximal targets -Part A: Peers)/models, actresses or celebrities (distal targets -Part B: Models) I feel... Inferior/Superior, Left out/Accepted, Devalued/Valued’]. Higher scores represent more favourable comparisons. The SCPAS was designed to be used only in women, and it presents a high internal reliability (.94 in Part A: Peers, and .96 in Part B: Models). In this study the Cronbach’s alpha for the first part of the scale was .94 and for the second part .95.
- *Eating Disorder Inventory* (EDI; Garner *et al.*, 1983; Portuguese version by Machado, Gonçalves, Martins, & Soares, 2001). This scale is a self-report comprehensive methodology to assess behavioural and psychological eating disorders dimensions. It is one of the most used and rigorous scales for this purpose and can be used as a diagnostic measure. It comprises 64 items subdivided in 8 subscales, assessing weight, shape and eating related attitudes and behaviours, and psychological characteristics common in patients with eating disorders. Using a 6-point Likert scale (ranging from “Always” to “Never”) respondents rate how much each item apply to them. For the purpose of this study we only analyzed the Drive for Thinness (DFT), Bulimia (BUL), and Body Dissatisfaction (BD) subscales, which present adequate internal consistency coefficients and are well-validated (Garner *et al.*, 1983). The Portuguese version presents the following internal consistency values: DFT= .91; BUL= .81; BD= .91

(Machado *et al.*, 2001). The coefficient alphas in the current study were .81(DFT), .66 (BUL), and .87 (BD).

- *Depression, Anxiety and Stress Scales* (DASS42; Lovibond & Lovibond, 1995; Portuguese version by Pais-Ribeiro, Honrado, & Leal, 2004). This scale includes three subscales (of 14 items each) designed to measure levels of Depression (DEP), Anxiety (ANX) and Stress (STR). The point is to obtain an estimate of how much the subjects experienced each symptom during the previous week using a 4-point Likert scale. Higher results indicate higher levels of emotional distress. The Cronbach's alpha of the Portuguese version resembles the original ones: .93 for DEP (.91 in the original version), .83 for ANX subscale (.84), and finally .88 for STR subscale (.90). In the present study the values were of .95, .91 and .92, respectively.

### *Procedure*

Participants were fully informed about the purpose of the study, the procedures involved, that their cooperation was voluntary and that the data was confidential. The battery with the measures described above was administered by the authors and completed by the students at the end of a lecture, with previous knowledge and authorization of the Professor in charge. All the involved institutions' boards were contacted, the research aims were clarified and authorization from the institutional ethics committee board was obtained so that the subjects could voluntarily participate.

### *Data Analysis*

The results for both the male and female samples were compared using t-tests for two independent samples. The relationship between the variables was examined by product-moment Pearson correlation analyses in both genders.

Regression analyses were conducted only in the female sample. Insecure striving (IS, as measured by SAIS), and social comparison (SCPAS) were entered in different steps of a hierarchical multiple regression analysis in to predict drive for thinness (DFT, as measured by EDI; dependent variable), controlling for the effect of BMI. A moderation analysis was tested in which the predictor variable, in the first step, was social comparison through physical appearance with models (SCPAS: Part B), in the second step we added insecure striving, and in the third step the interaction terms between the two. In this analysis the dependent variable was drive for thinness; insecure striving was assumed to be the moderator on the relationship between an inferior social rank and drive for thinness.

## **RESULTS**

Preliminary data analyses were conducted to examine the violation of test assumptions (Maroco, 2007; Tabachnick & Fidell, 2007). The normality of variables was assessed by the Kolmogorov-Smirnov Test. In the male and female samples social comparison followed a normal distribution. Also, in men, insecure striving, secure non-striving,

and stress followed a normal distribution. The distribution of the remaining variables was biased from normal curve. Nevertheless, we analysed the values of Skewness and Kurtosis obtained, and concluded that the values were acceptable (between -.5 and .5; Kline, 1998). The Bulimia subscale, in the female sample presented an exception, with a Kurtosis value of 8.790. Nevertheless, according to Kline (1998), this value does not represent a serious bias.

Results of the descriptives and differences analyses between genders regarding striving to avoid inferiority, social rank and psychopathology are presented in Table 1. The male ( $n= 245$ ) and the female samples ( $n= 429$ ) do not present statistical significant differences in the following variables: insecure striving, secure non-striving (SAIS), and general psychopathology measures of depression and anxiety (DASS42). However, they significantly differ in terms of social comparison (SCRS), stress (DASS42) and all the eating disorders features (EDI). Men present a more favourable social rank perception, less stress symptomatology, and lower scores on drive for thinness, bulimia, and body dissatisfaction, compared to women.

Table 2 presents the Pearson product-moment correlation coefficients between insecure striving, secure non-striving (SAIS), social comparison (SCRS), depression, anxiety and stress (DASS42), and drive for thinness, bulimia and body dissatisfaction (EDI), in both genders. The results show that, in the male ( $n= 245$ ) and female samples ( $n= 429$ ), insecure striving and secure non-striving are negatively and significantly correlated. Specifically in men, insecure striving had a weak positive, but significant association only with depression, anxiety and stress. However, in women, this variable presented a significant relationship, although small, with all the studied variables. In fact, insecure striving was, in women, significantly and negatively associated with social comparison, and positively linked to general psychopathology dimensions, and to eating disorders features.

On the other hand, secure non-striving, in men, was positively associated with favourable social comparisons, and presented significant negative associations with general psychopathology and body dissatisfaction. Interestingly, in this case, secure non-striving was not associated with drive for thinness and bulimia. In women, though, we

Table 1. Means, Standard Deviations, and differences between males ( $n= 245$ ) and females ( $n= 429$ ) samples.

		Male sample		Female sample		<i>t</i>	<i>p</i>
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
SAIS	IS	39.39	10.43	37.98	10.50	1.680	.093
	SNS	21.24	5.27	21.22	5.13	.041	.967
SCRS	Total	69.48	13.22	67.07	13.54	2.242	.025
DASS42	DEP	11.00	8.75	11.10	9.58	-.135	.893
	ANX	10.07	7.61	10.03	8.01	.066	.948
	STR	14.24	7.25	15.85	8.23	-2.631	.011
EDI	DFT	1.46	2.40	3.64	4.47	-8.246	.000
	BUL	.82	1.62	1.24	2.30	-2.706	.014
	BD	3.89	4.73	7.19	6.23	-7.734	.000

Notes: SAIS= Striving to Avoid Inferiority Scale; IS= Insecure Striving; SNS= Secure Non-Striving; SCRS= Social Comparison Rating Scale; DASS42= Depression (DEP), Anxiety (ANX) and Stress (STR) scales; EDI= Eating Disorder Inventory; DFT= Drive for Thinness; BUL= Bulimia; BD= Body Dissatisfaction.

verified significant associations between secure non-striving and all the studied variables. Secure non-striving positively and significantly associates with social comparison and, negatively, with general psychopathology and disordered eating variables.

The role that social comparison and striving to avoid inferiority plays in the prediction of women's eating difficulties was further examined. Specifically, we conducted a hierarchical multiple regression analysis (Table 3) in the female sample to examine the relative contribution of insecure striving to avoid inferiority and the perception of a low social ranking (defined by one's physical appearance in comparison with the appearance of others) to predict drive for thinness (EDI; dependent variable), controlling for the effect of BMI (covariate).

Prior to the regression analyses, we tested for the associations between BMI, the dimensions of the social comparison through physical appearance scale (SCPAS), and drive for thinness (EDI). Pearson Product Moment Correlation coefficients showed that: BMI was positively linked to drive for thinness ( $r = .25$ ;  $p < .01$ ); social comparison through physical appearance with peers and models were negatively and significantly associated with drive for thinness ( $r = -.31$ ;  $p < .01$ ; and  $r = -.41$ ;  $p < .01$ , respectively).

In the hierarchical multiple regression analysis (Table 3) BMI was entered in the first step; in the second step we added insecure striving, and, in the third step the two dimensions of the SCPAS -peers and models- were added.

The results showed that the regression equation accounted for 23% of the variance in the prediction of drive for thinness. With the exception of social comparison with peers, all variables significantly contributed for the variance. When BMI was controlled for, social comparison with models yielded the highest  $\beta$  value ( $\beta = -.35$ ;  $p < .001$ ;  $Sr = -.25$ ), followed by insecure striving ( $\beta = .19$ ;  $p < .001$ ;  $Sr = .21$ ). Although significant, BMI  $\beta$  decreased for  $.17$  ( $p < .001$ ;  $Sr = .183$ ).

Given that the previous findings suggested that the pressure to strive and to compete to earn one's place (Gilbert *et al.*, 2007) and social comparison with models using physical appearance as the comparison domain, were differentially related with drive for thinness, we sought to explore the impact of insecure striving on the relationship between perceptions of inferiority and drive for thinness. In order to analyse such moderator effect we conducted a multiple hierarchical regression analysis considering the interaction of a continuous predictor (Cohen, Cohen, West, & Aiken, 2003). To reduce the error associated with multicollinearity, we have used a standardized procedure, centring the values of the two predictors (social comparison and insecure striving) and then obtained the interaction product by multiplying the two created variables (Aiken & West, 1991).

Results showed that the three steps of the model are statistically significant (Table 4). On step one, we entered social comparison with models as a predictor and on step two we further included insecure striving as a predictor variable. Both steps presented statistically significant models. The third step, where the interaction terms were entered, presents a  $R^2$  of  $.21$ , with social comparison with models, insecure striving, and the interaction term predicting drive for thinness.

To better understand the relation between social comparison with models and drive for thinness with different levels of insecure striving we plotted a chart (Figure 1) considering one curve for each of the three insecure striving (SAIS) levels (low,



Table 2. Correlations (2-tailed Pearson *r*) between SAIS, SCRS, DASS42 and EDI subscales in the Male (*n*= 245) and in the Female sample (*n*= 429)

		IS	SNS	SCRS	DEP	ANX	STR	DFT	BUL	BD
SAIS	IS	1	-.42**	-.15**	.28**	.22**	.26**	.27**	.25**	.22**
	SNS	-.38**	1	.42**	-.28*	-.17**	-.27**	-.14**	-.17**	-.23**
SCRS	Total	-.07	.28**	1	-.37**	-.18**	-.27**	-.18**	-.16**	-.31**
	DEP	.26**	-.29**	-.30**	1	.77**	.81**	.26**	.27**	.36**
DASS42	ANX	.21**	-.25**	-.16*	.79**	1	.76**	.28**	.28**	.31**
	STR	.25**	-.21**	-.14*	.81**	.80**	1	.24**	.28**	.31**
EDI	DFT	.10	-.09	-.07	.25**	.25**	.25**	1	.38**	.61**
	BUL	.07	-.10	.00	.17**	.13*	.19**	.30**	1	.34
	BD	.10	-.22**	-.29**	.22**	.17**	.13*	.58**	.30**	1

Notes: Male sample results at the bottom left section of the table; female sample results at the upper right section of the table. SAIS= Striving to Avoid Inferiority Scale; IS= Insecure Striving; SNS= Secure Non-Striving; SCRS= Social Comparison Rating Scale; DASS42= Depression (DEP), Anxiety (ANX) and Stress (STR) scales; EDI= Eating Disorder Inventory; DFT= Drive for Thinness; BUL= Bulimia; BD= Body Dissatisfaction; \*\*= $p < .01$ ; \*= $p < .05$ .

Table 3. Hierarchical Regression Analysis Summary for BMI, Insecure Striving and Social Comparison through Physical Appearance predicting Drive for Thinness (EDI; criterion variable; *N* = 429).

Step	Predictor variable	$\beta$	<i>t</i>	<i>p</i>	<i>R</i>	<i>R</i> <sup>2</sup>	<i>F</i>	<i>p</i>
Step 1	BMI	.25	5.37	<.001	.25	.06	28.81	<.001
					.36	.13	31.26	<.001
Step 2	BMI	.24	5.22	<.001	.48	.23	28.00	<.001
	SAIS - Insecure Striving	.25	5.59	<.001				
Step 3	BMI	.17	3.82	<.001				
	SAIS - Insecure Striving	.19	4.44	<.001				
	SCPAS - Peers	.02	2.66	.790				
	SCPAS - Models	-.35	-5.40	<.001				

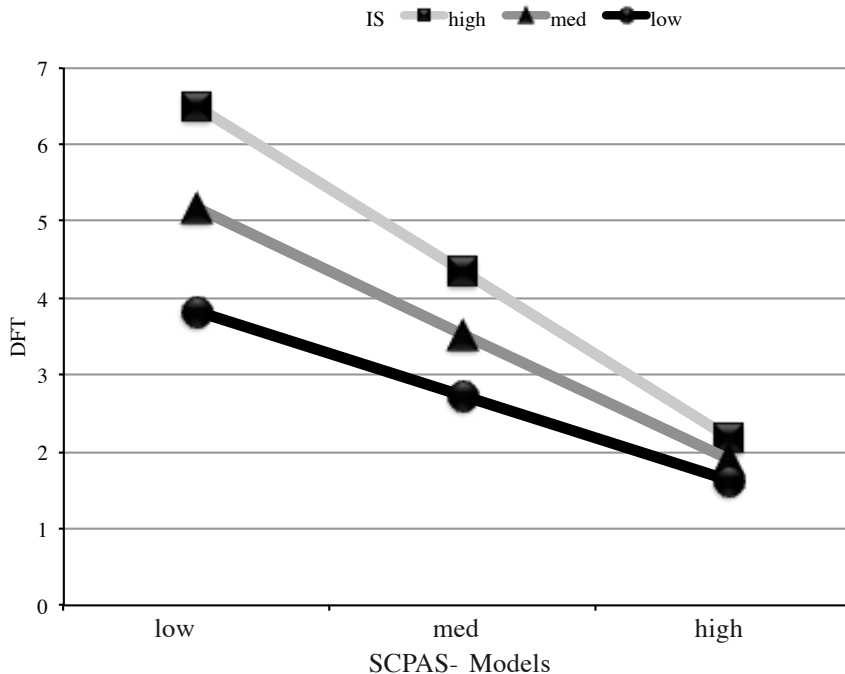
Notes: BMI= Body Mass Index; SAIS= Striving to Avoid Inferiority Scale; SCPAS= Social Comparison Through Physical Appearance Scale with Peers and Models.

Table 4. Hierarchical Regression Analysis Summary for Social Comparison through Physical Appearance with models predicting Drive for Thinness, having Insecure Striving as a moderator (*N*= 429).

Step	Predictor variable	$\beta$	<i>t</i>	<i>p</i>	<i>R</i>	<i>R</i> <sup>2</sup>	<i>F</i>	<i>p</i>
Step 1	SCPAS - Models	-.41	-9.23	<.001	.41	.16	85.15	<.001
					.45	.20	19.48	<.001
Step 2	SCPAS - Models	-.37	-8.42	<.001	.47	.21	8.94	.003
	SAIS - Insecure Striving	.19	4.41	<.001				
Step 3	SCPAS - Models	-.37	-8.35	<.001				
	SAIS - Insecure Striving	.18	4.09	<.001				
	SCPAS - Models x SAIS	-.13	-2.99	.003				

Notes: SAIS = Striving to Avoid Inferiority Scale; SCPAS = Social Comparison Through Physical Appearance Scale with Models.

medium and high). This procedure can be done with centred and uncentred variables (Aiken & West, 1991; Cohen *et al.*, 2003) and we opted for the centred variables. Since we did not have theoretical cut points we plotted the three curves taking into account the following cut-point values of SAIS variable on the *x* axis: one standard deviation below the mean, the mean and one standard deviation above the mean, according to Cohen *et al.* (2003) recommendation.



*Figure 1.* Graphic representation of the association between social comparison with models (SCPAS) and drive for thinness (EDI), with different levels of insecure striving (SAIS). (Notes: ISS= Insecure Striving Subscale; DFT= Drive for Thinness; SCPAS-Models= Social Comparison through Physical Appearance Scale with Models.).

Individuals with higher levels of insecure striving show a positive and higher relation with drive for thinness comparing to those who have medium and low values. Noteworthy is that women who have high levels of insecure striving and that perceive themselves as inferior when socially comparing themselves with models (lower scores on the social comparison through physical appearance scale), will have higher scores on the tendency to seek thinness. Additionally, those that feel a low pressure to compete to keep up, show a smaller or moderate relation with drive for thinness, even when in an unfavourable social position. In this sense, the association between striving and feelings of social inferiority (that derive from physical appearance based comparisons with idealized beauty images) seems particularly relevant to understand the over-evaluation of thinness and dieting attitudes in women.

## DISCUSSION

Concerns about the negative impact of the competitive nature of our society on mental health are increasing. In fact, several studies have noted the association between psychopathology rates, especially in youth, and the pressure to strive to achieve in

life (Arrindel *et al.*, 2003; Burkle *et al.*, 1999; Fombonne, 1999; Wilkinson, 1996). Additionally, it is well established that contextual competitive dynamics influence the degree and expression of psychopathology (Arrindel *et al.*, 2003; Kasser, 2002; Liotti & Gilbert, 2011; Wilkinson, 1996). For instance, research shows that feeling under pressure to compete to avoid inferiority and fears of being rejected and passed over are associated with young women's dysfunctional eating attitudes and behaviours (Bellew *et al.*, 2006). However, it still remains unclear whether striving to avoid inferiority plays a distinct role on psychopathological conditions, depending on gender. In this sense, the current study was designed to clarify the associations between insecure striving and secure non-striving, and social comparison, general psychopathology symptomatology and eating disorder's features (Garner *et al.*, 1983), in two samples of young men and women.

Our findings showed that insecure striving is negatively related with feeling accepted in the social world, whether one achieves or not, both in men and women. Additionally, feeling insecure and under pressure to compete is positively associated with depression, anxiety and stress, which is in line with previous research (Arrindel *et al.*, 2003; Burkle *et al.*, 1999; Gilbert *et al.*, 2007; Gilbert *et al.*, 2009; Twenge *et al.*, 2010; Wilkinson, 1996). However, men and women present a distinctive association pattern between insecure striving, and social rank and eating psychopathology. In fact, although competitive concerns and feeling under pressure to succeed avoiding inferiority is linked to general psychopathology symptoms in both genders, key to our findings is that insecure striving does not significantly associates with social comparison in men. This result leads us to the hypothesis that men feel the pressure to succeed whether or not they perceive themselves as being in an inferior social rank. In other words, the need to compete and keep up with others might be influenced by social norms and expectations linked to the male gender and not exclusively to an unfavourable social rank position.

Also, in the male sample, insecure striving was found not to be associated with eating psychopathology -drive for thinness, bulimia and body image dissatisfaction. In women the pressure to compete to avoid feeling inferior or rejected is positively associated with such eating disorder's variables. This suggests that a competing mentality, operating in specific social contexts (e.g., men and women social expectations), may promote distinct types of psychopathological difficulties. Additionally, our findings suggested that women that feel under greater pressure to compete for a safe social place present higher levels of body image dissatisfaction and over-evaluation of thinness. These findings can be explained considering the previous research showing that body image has a more relevant role in women, comparatively to men (Buote *et al.*, 2011). In fact, physical appearance is, for women, a central dimension based on which they largely estimate their self-worth and the place they occupy in the social group (Ferreira *et al.*, 2013; Myers & Crowther, 2009; Troop *et al.*, 2003).

Based on this premise, one of the main purposes of the current study was to analyse if insecure striving was a significant predictor of drive for thinness. Drive for thinness (defined as an excessive concern with dieting, weight and a thin body image, and an intense fear of gaining weight) is pointed out by the literature as a nuclear feature

and one of the main vulnerability and maintenance factors of eating psychopathology (Garner *et al.*, 1993; Stice & Shaw, 1994). Furthermore, we aimed at examining the moderator effect of striving to avoid inferiority on the relationship between a low social rank defined by physical appearance and drive for thinness. Results showed that social comparison through physical appearance with models and striving to avoid inferiority were significant predictors of drive for thinness, even after controlling for BMI. We then conducted a hierarchical multiple regression analysis to test for the abovementioned moderator effect. Analysis revealed that when the interaction terms were entered on the regression model they produced a significant increase in the model prediction, and presented a significant effect upon drive for thinness. These data suggest, therefore, that women that feel a higher pressure to compete to keep up and avoid losing social resources (of being valued, accepted or chosen), and that perceive themselves as socially inferior relatively to models, present a higher tendency to develop excessive concerns and emphasize the importance of being thin to be valued by others. Additionally, those that feel less pressured to compete to keep up, present a lower tendency to adopt such concerns, even when perceiving themselves as being in an unfavourable social position. This suggests that a competitive social mentality magnifies the impact of a low social rank in drive for thinness. Thus, our results seem to support the conclusion that the over-evaluation of thinness and dieting emerge as a strategy of women's competition, that is, as a weapon to avoid inferiority in the social world. Moreover, these findings suggest the importance of considering the role of the need to compete to avoid inferiority when assessing and conceptualizing eating psychopathology. Also, they imply the importance of targeting this process in a therapeutic context, focusing on developing a caring and kind mentality, in opposition to a mentality focused on ranking and competition (e.g., Compassion Focused Therapy; Gilbert, 2005a).

Nonetheless, since this is the first study addressing insecure striving as a moderator to understand disordered eating, replications will be needed to draw more firm conclusions. In fact, the conclusions we propose cannot be generalized to women of the general population, from different cultures and social contexts. Thus, we detailed the design and analytic strategy so that future research can explore these relationships with other samples. Also, given the complexity of the psychopathological process that characterizes eating disorders, the role of striving may not be necessarily the same in women with and without an eating disorder. Thus, upcoming studies should explore the impact of striving to avoid inferiority in samples of patients with eating disorders. Other limitation of the current study is associated with its cross-sectional nature. This methodological design does not allow the establishment of causal directions. Hence, we suggest that longitudinal studies should be conducted to confirm the directionality and predictability of these findings.

Nevertheless, we believe that the current study raises important questions about how striving to avoid inferiority may have a different impact on psychopathological symptoms, depending on gender. Also, it proposes that the control over one's body image may be a way to compete for a social place and social acceptance, especially in women. Finally, the fact that insecure striving amplifies the impact of a low social rank on increased drive for thinness, offers new possibilities to the research on the

relationship between contextual and sociocultural variables and the individual vulnerability to eating pathology.

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