

Family Functioning and Dysfunctional Eating Among Italian Adolescents: The Moderating Role of Gender

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Abstract The first aim of this study was to examine the association between different dimensions of family functioning and dysfunctional eating in a sample of Italian adolescent boys and girls. The second aim was to investigate whether gender moderates the relationship between family functioning and dysfunctional eating. Seven hundred and twenty seven adolescents (500 boys and 227 girls) with ages ranging from 15 to 18 years completed a survey of self-report measures. Findings from hierarchical multiple regression analysis suggested that aspects of family functioning such as flexibility, cohesion, disengagement, enmeshment, rigidity and chaotic were related to dysfunctional eating in adolescents. Additionally the results indicated differences between boys and girls, in particular dysfunctional eating in adolescent boys seemed to be more affected by dimensions of enmeshment and disengagement than dysfunctional eating in girls. This research highlights the important role of various aspects of family functioning in relation to dysfunctional eating in adolescents.

Keywords Dysfunctional eating · Adolescents · Family functioning · Moderation

Introduction

Dysfunctional eating can be conceptualized as a variety of attitudes and behaviors that reflect a broad range of symptoms of feeding and eating disorders, but that, by themselves, do not meet the diagnostic criteria of an eating disorder [1]. Dysfunctional eating includes weight preoccupation, body dissatisfaction, binge eating episodes, compensatory behaviors such as use of laxative and/or self-induced vomiting, dietary restraint, fasting or skipping meals, avoidance of high calorie food and excessive exercise [2–4].

Available evidence suggests that dysfunctional eating is prevalent during adolescence, particularly among females. For example, Grigg et al. [5] found that 27.4 % of adolescent girls engaged in binge eating, 8 % used laxative to lose weight and 33 % of the total sample were characterized by at least one dysfunctional eating behavior. Additionally, high prevalence of dysfunctional eating was found in a large representative sample of adolescents where 13.4 % of the girls and 7.1 % of the boys engaged in binge-purge behaviors (8.9 % of the girls and 4.1 % of the boys engaged in these behaviors at least once a week) [6]. More recently, Herpertz-Dalhmans et al. [7] showed that about one third of girls and 15 % of boys in their study were involved in dysfunctional eating behavior.

Several studies have highlighted that dysfunctional eating in adolescence is strongly associated to a wide range of variables. For example, dysfunctional eating has been related to dispositional characteristics such as impulsivity and sensation seeking [8–12], peer influences [13–16], difficulties in emotion regulation [17–20], identity formation [21–23], psychosocial functioning such as poor self-esteem and satisfaction with life [24–26], impairment in social-cognitive competencies such as mind reading skills

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[27–29]. Psychopathological concerns, including depression, anxiety, suicidal ideation and substance abuse [6, 30, 31] are associated with dysfunctional eating. These variables have also been found to predict clinical eating disorders in later adolescence or young adulthood [32–37].

In examining the factors involved in eating problems, the literature has directed much attention to the role of family dynamics in relation to dysfunctional eating. Research has turned to family functioning both in terms of an overall construct that reflects the general functioning of the whole family, and as a set of specific and distinct dimensions, such as flexibility, cohesion and communication. Among the models of family functioning, the family systems theory emphasizes family as a whole, rather than just considering family members individually. The main assumptions are that all family members are interconnected one another and the structure of the family can influence and affect the behaviors of all family members [38]. In this sense, the relationships among family members can shape and sustain a problematic behavior, such as dysfunctional eating. Minuchin, Rosman and Baker [39] have identified family dysfunctional characteristics believed to be characteristic of families with disordered eating: excessive enmeshment, rigidity, protectiveness and avoidance of conflicts.

One of the most widely used models to describe family functioning grounded on the principles of family systems theory [40] is represented by the Circumplex model of marital and family systems [41, 42]. The model is useful for explaining relationship patterns that characterize different family structures. The Circumplex model of marital and family systems consists of three dimensions considered critical for understanding family functioning: family cohesion, flexibility and communication. Family cohesion represents the emotional bonding between family members (e.g. coalitions, boundaries, shared interests); very low level of cohesion results in disengagement, from low to moderate leads to separateness, from moderate to high indicates connectedness, and very high level leads to enmeshment. Family flexibility has been previously defined as the ability to change family leadership, roles and rules based on life events. More recently, Olson [43, 44] has given a new definition of family flexibility: the quality and expression of family leadership, organization, roles, rules and negotiations; very low level of flexibility results in rigidity, low to moderate is characteristic of structured families, moderate to high indicates flexibility and very high level leads to chaotic families. Finally, communication is not just considered as a set of skills used by the family members to express their needs or feelings, but also a dimension that can help family members to change their levels of flexibility and cohesion. The assumption underlying this model suggests the balanced levels (from low to high) of cohesion and flexibility are associated with more

functional families, whereas, very low or very high levels of these two dimensions characterize problematic family systems.

The association between positive family functioning and healthy eating behaviors has been widely documented. Existing literature has demonstrated that various aspects of family functioning such as adaptability, healthy communication skills among family members, problem solving abilities, and strong family cohesion, are related to fewer unhealthy weight control behaviors, binge eating and dieting in both adolescent boys and girls (e.g., [45–47]). Furthermore, higher family functioning seems to play a protective role in different eating behaviors. To the contrary, low family functioning has been found to be related to dysfunctional eating attitudes and behaviours; adolescents with dysfunctional eating, at high risk for later progression to an eating disorder, were found to perceive their families as possessing a significantly lower degree of cohesiveness and adaptability, poorer communication, difficulties regarding emotional responsiveness of family members and role relationships, and in general, reported lower family satisfaction [48–51]. Increased dysfunctional eating was also associated with family dysfunction when it co-occurred with negative family food-related experiences, such as criticism and modelling dieting [52]. Moreover Gillett et al. [53] found that dysfunctional eating was related to the presence of constrained rules and minimal facilitating rules within the family; in particular constraining rules were associated with the level of control that a family employs on the self, thoughts, and feelings of the members. In addition, several studies have highlighted that as the perception of family functioning becomes more dysfunctional, the disordered eating behaviors become more severe [54, 55]. Finally Turner, Rose and Cooper [56] showed that, in a sample of female adolescents the relationship between dysfunctional eating and parental emotional bonding was mediated by the core beliefs they had about themselves, the others, and the world; in particular, the schemas involved were related to shame and dependency, which could play an important role in establishing how parental emotional bonding could affect dysfunctional eating.

Past studies have revealed gender differences in the relationship between different dimensions of family functioning and dysfunctional eating among non-clinical samples of adolescents. For instance, Berge et al. [57] found that several aspects of family functioning were related to different eating behaviors in adolescent boys and girls; specifically for adolescent girls, a perceived positive family functioning, such as the presence of an healthy communication and closeness, and the use of problem solving skills, was associated with more consumption of healthy foods like fruits and vegetables, lower body mass index and overweight, more frequent family meals and breakfast

consumption. Whereas for boys, high levels of family functioning was related to less sedentary activity, more physical exercise, less consumption of high calorie foods, and more family meal participation and frequent breakfast consumption. In addition to showing the existence of a relationship between high family functioning and healthy eating behaviors, these findings highlight the idea that different dimensions of the family environment may have a differential role for adolescent boys and girls with respect to protecting them from engaging in various dysfunctional eating behaviors.

Furthermore, Vincent and McCabe [58] found interesting differences between boys and girls with respect to the influence of family environment in predicting dysfunctional eating in adolescents. The authors showed that in girls, dysfunctional eating was predicted by parental discussion and encouragement about weight loss, while boys' dysfunctional behaviours, such as binge eating and weight loss, was found to be more influenced by the maternal role in encouraging weight loss. On the other hand, in adolescents boys, fathers seemed to play an important role in predicting more severe forms of dysfunctional eating, including self-induced vomiting, and laxative and diuretic use. Moreover, it has been noted [59] that, while girls with negative eating attitudes and behaviours reported high levels of pressure from their families to lose weight, males at high risk for dysfunctional eating perceived family pressure to gain weight and be muscular (Figs. 1, 2).

Whether the association between family functioning and dysfunctional eating might be moderated by gender in adolescents has been relatively understudied. A previous study [60] found that body satisfaction in adolescent girls was more affected by the perception of family connectedness than body satisfaction in boys. Furthermore Goldfield et al. [61] showed that the relationship between eating together as a family during meals (a typical characteristic of

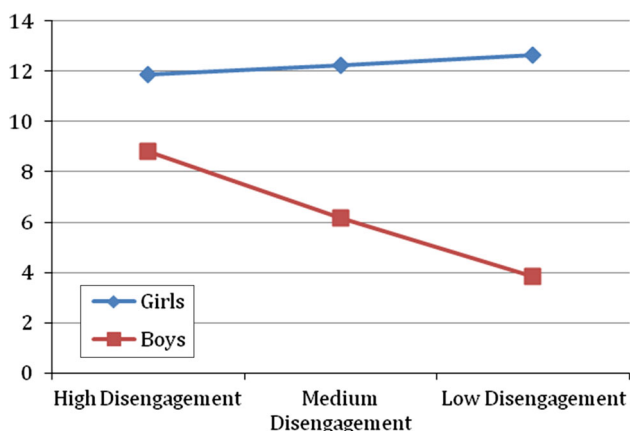


Fig. 1 Simple slopes analysis of the moderating role of gender in the link between disengagement and dysfunctional eating

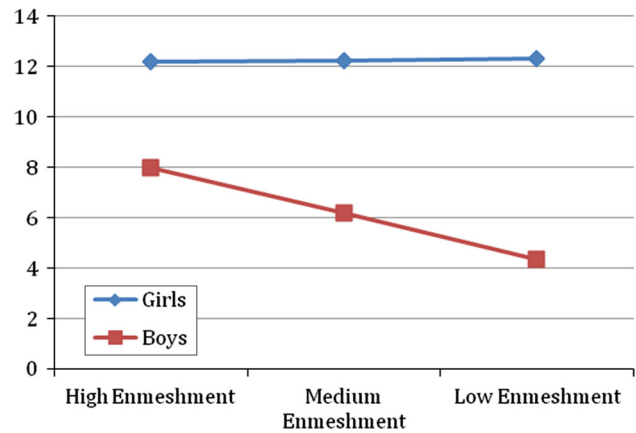


Fig. 2 Simple slopes analysis of the moderating role of gender in the link between enmeshment and dysfunctional eating

cohesive families) and body mass index was stronger in girls than boys.

To our knowledge there are no studies that have analyzed both the role of family functioning such as adaptability and cohesion according to the new model proposed by Olson [43, 44] and how these variables may differ in boys and girls who engage in dysfunctional eating. The present study aimed to replicate and extend previous research and address the gap in the literature.

Current Study

The goal of the current study was two-fold. The first goal was to investigate whether various dimensions of family functioning (e.g., disengagement, enmeshment, chaotic, rigidity, flexibility, and cohesion) are related to dysfunctional eating in a sample of adolescent boys and girls. The second goal was to consider the moderating role of gender on the association between family functioning and dysfunctional eating. Specifically, consistent with past research (e.g., [50–52]), we hypothesized that family dysfunction would be related to greater dysfunctional eating among adolescents. Moreover, in light of prior studies [60, 61], which found a moderating effect of gender between family connectedness and eating attitudes and behaviours, we hypothesized that gender would significantly moderate the relationship between dysfunctional eating and aspects of family functioning.

Methods

Participants and Procedures

The sample consisted of 727 students (500 boys and 227 girls). The average age of the students was 16.19

(SD = 1.21; range 15–18). The study involved 3 high schools from the center of Italy (Lazio) that were selected on the basis of their willingness to participate in the study. High schools in Italy are divided into distinct educational and occupational fields and include five grade levels. In terms of type of high school, 200 students (27.51 %) were enrolled in science-focused schools, 167 (22.97 %) were in technical-industrial art schools, 180 students (24.76 %) were in liberal arts-focused schools, and 180 (24.76 %) were in teacher-training schools.

Recruitment began by contacting the schools with letters that described the purpose of the study. Only two schools refused to participate to the research because they were enrolled in several projects. Individual school Principals were contacted and asked about study participation. The voluntary nature of participation was ensured, and anonymity of the results was guaranteed (only 20 students refused to participate to the research). The study procedures consisted of the students completing the questionnaire quietly in a classroom at school, after informed consent was acquired from both students and their parents. The questionnaires were administered in the classroom by a team of interviewers who were trained advanced graduate students in Psychology, with the supervision of the first author.

This survey was reviewed and approved by the Ethics Commission of the Department of Developmental and Social Psychology of Sapienza, University of Rome.

Measures

Dysfunctional Eating. Eating Disorders Inventory-3

The Eating Disorder Inventory-3 (EDI-3; [62]) is a self-report instrument measuring psychological traits or constructs shown to be clinically relevant in individuals with eating disorders. This measure consists of 91 items organized into 12 primary scales, 3 eating disorder-specific scales (Drive for Thinness—DT; Bulimia—B; Body Dissatisfaction—BD) and 9 general psychological scales (Low Self-Esteem—LSE; Personal Alienation—PA; Interpersonal Insecurity—II; Interpersonal Alienation—IA; Interceptive Deficits—ID; Emotional Dysregulation—ED; Perfectionism—P; Asceticism—A; Maturity Fears—MF) that are highly relevant to, but not specific to, eating disorders. It also yields six composites, one that is eating-disorder specific (Eating Disorder Risk—EDRC) and five that tap general integrative psychological constructs (Ineffectiveness—IC, Interpersonal Problems—IPC, Affective Problems—AP, Over-control—OC, and Global Psychological Maladjustment—GPCM). In line with other studies (e.g., [30]), the Drive for Thinness (DT) and Bulimia scales of the Eating Disorder Inventory-3 (EDI-3;

[63]) were used to measure dysfunctional eating in the current study. A composite score was created in order to capture a range of eating pathology. The dysfunctional eating composite score was created by summing scores on the DT and Bulimia scales. The internal consistency for the scales range from $\alpha = .80$ and $\alpha = .90$, and test–retest reliability coefficients for the various composite scales are between .93 and .98 [62]. In the present study, internal consistency for EDI-3 dimensions ranged from $\alpha = .83$ to $\alpha = .90$.

Family Functioning

The Family Adaptability and Cohesion Evaluation Scales (FACES IV; [43]) was used to assess family functioning. The FACES IV is composed of 42 items on a Likert-type scale divided into 6 scales: 2 balanced scales (Cohesion and Flexibility) assessing central-moderate areas and 4 unbalanced scales (rigid, chaotic, enmeshed and disengaged) assessing the lower and the upper ends of Cohesion and Flexibility [44]. While the two balanced scales, Balanced Cohesion (sample item, “Family members are supportive of each other during difficult times”) and Balanced Flexibility (sample item, “My family is able to adjust to change when necessary”), are similar to previous FACES III scales, the four Unbalanced Scales, Enmeshed (sample item, “Family members feel guilty if they want to spend time away from the family”), Disengaged (sample item, “Family members seem to avoid contact with each other when at home”), Chaotic (sample item, “Our family feels hectic and disorganized”), Rigid (sample item, “There are clear consequences when a family member does something wrong”), represent an original improvement [43]. This latest revision was considered necessary because previous versions of FACES have produced scores that are often linearly related to adjustment and positive outcomes. A linear relationship between cohesion and adaptability and positive family adjustment is inconsistent with the Circumplex model because families extremely low and extremely high on each of these dimensions are postulated to be poorly functioning. To respond to the criticisms of the previous FACES measures, Olson and colleagues have recently developed FACES IV in the hope of contributing a reliable and valid self-report measure assessing the Circumplex model [64]. The two Balanced Scales assess normal functioning, while the other scales are related to problematic functioning. A further improvement brought on by the Balanced and Unbalanced ratio score is that it offers a method to assess the curvilinearity of Cohesion and Flexibility dimensions. In the present study, the range of internal consistency for the six scales ranged from $\alpha = .72$ to $\alpha = .84$.

Statistical Analyses

Using SPSS 18.0, an analysis of variance with sex and age groups as between-subjects factors was conducted for BMI and dysfunctional eating. A MANOVA was carried out on FACES-IV dimensions. The α level was divided by the number of statistical tests performed. For this multivariate analysis, Wilks' λ criterion was used. A hierarchical multiple regression analysis was conducted in order to identify which aspects of family functioning contribute uniquely to dysfunctional eating and whether gender serves as a moderator. The regression analysis was performed in four steps: after controlling for BMI and age (step 1), gender (step 2) was entered into the regression, followed by the family functioning scales (i.e., disengagement, enmeshment, chaotic, rigidity, flexibility, and cohesion; step 3) in order to test main effects. Finally, the interaction terms (the cross product of the centered family dysfunction variables and gender) were added (step 4). All variables were centered to minimize issues with multicollinearity.

Results

Preliminary analysis

Factorial ANOVA on BMI revealed significant main effects of sex, $F(1,725) = 35.49, p < .001, \eta_p^2 = .05$, but not for age (15–16 vs. 17–18 years), $F(1,725) = .80, p = .36$. There was no significant effect of the interaction between sex and age, $F(1,725) = 1.28, p = .25$.

Factorial ANOVA on dysfunctional eating revealed significant main effects of sex, $F(1,725) = 29.16, p < .001, \eta_p^2 = .03$, but not for age, $F(1,725) = .73, p = .39$. There was no significant effect of the interaction between sex and age, $F(1,725) = 3.19, p = .08$. These results demonstrate that girls obtained higher scores than males.

The MANOVA on Family Adaptability and Cohesion Evaluation Scales dimensions revealed main effect for sex, $\lambda = .93, F(6,718) = 8.38, \eta_p^2 = .06, p < .001$. There was no effect of age, $\lambda = .98, F(6,718) = 1.96, p = .07$, nor effect of interaction between the variables, $\lambda = .97, F(6,718) = 2.92, p = .08$. Results from the univariate tests revealed that groups differed on the subscale of Disengagement, $F(1,725) = 21.45, p < .001, \eta_p^2 = .03$, Enmeshed, $F(1,725) = 28.13, p < .001, \eta_p^2 = .04$, and Rigidity, $F(1,725) = 8.54, p < .01, \eta_p^2 = .01$, where males showed a higher mean score than males, and on the subscales of Cohesion, $F(1,725) = 7.34, p < .01, \eta_p^2 = .01$, and Flexibility, $F(1,725) = 5.89, p < .05, \eta_p^2 = .01$, where females showed a higher mean score than males.

Descriptive information and bivariate correlations, separately for gender, are presented in Tables 1 and 2, respectively. All of the predictor variables were significantly correlated with the outcome variable.

Hierarchical Multiple Regression Analysis Testing Gender as Moderating the Relationship Between Family Functioning and Dysfunctional Eating

Preliminary, we ascertained that the assumptions of hierarchical multiple regression were met, checking for multicollinearity. All the variance inflation factor scores (VIF) ranged from 1.44 to 3.12 for male subsample, and ranged from 1.34 to 2.70 for female subsample. So, there were no problems with collinearity. The results of the hierarchical multiple regressions are presented in Table 3. In step 1 (i.e., control variables), age was found to have a significant negative association with dysfunctional eating ($p < .05$), while BMI was found to be significantly positively associated with dysfunctional eating ($p \leq .001$). Overall, the control variables accounted for 2 % of the variance in dysfunctional eating. Results for step 2 found gender (girls were coded as 0) to be significantly associated with dysfunctional eating ($p < .001$), accounting for 4.6 % of the variance. In step 3, family functioning variables were added to the model. Family flexibility was found to be negatively associated with dysfunctional eating ($p < .01$), while family rigidity, enmeshment, and disengagement were found to be positively associated with dysfunctional eating (p 's $< .01$). In this model, family cohesion and chaotic were not found to be significantly related to dysfunctional eating. The family functioning variables were found to account for 10.9 % of the variance in dysfunctional eating. The results of step 4 found a significant

Table 1 Summary of means and standard deviation scores of variables

Variables	Boys (<i>N</i> = 500)		Girls (<i>N</i> = 227)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Age	16.21	1.22	16.12	1.17
BMI	22.00	3.22	20.58	2.50
Disengagement	17.44	4.77	15.85	4.35
Enmeshment	17.58	4.45	15.71	3.75
Rigidity	21.85	4.40	20.78	4.29
Chaotic	17.51	4.85	17.01	4.28
Flexibility	25.66	4.17	26.31	3.43
Cohesion	26.84	4.52	27.81	3.98
Dysfunctional eating	9.51	9.79	13.71	10.93

Table 2 Summary of bivariate correlations by gender

Measure	Girls							Boys						
	1	2	3	4	5	6	7	1	2	3	4	5	6	7
1. Disengagement	–	.12	–.03	.20**	–.39**	–.66**	.07	–	.24**	–.05	.45**	–.38**	–.52**	.31**
2. Enmeshment	–	–	.28**	.20**	–.06	–.06	.04	–	–	.36**	.32**	.05	.001	.31**
3. Rigidity	–	–	–	–.01	.25**	.02	.09	–	–	–	.03	.37**	.29**	.16**
4. Chaotic	–	–	–	–	–.15*	–.05	.01	–	–	–	–	–.15**	–.16**	.24**
5. Flexibility	–	–	–	–	–	.55**	–.15*	–	–	–	–	–	.68**	–.14**
6. Cohesion	–	–	–	–	–	–	–.11	–	–	–	–	–	–	–.14**
7. Dysfunctional eating	–	–	–	–	–	–	–	–	–	–	–	–	–	–

* $p < .05$, ** $p < .01$ **Table 3** Hierarchical multiple regression analysis testing gender as moderating the relationship between family functioning and dysfunctional eating

Predictor	Dysfunctional eating							
	<i>B</i>	<i>B</i> _{se}	β	<i>R</i>	<i>R</i> ²	ΔR	<i>df</i>	ΔF
Step 1				.14	.02	.02	2.72	7.43**
Covariates								
BMI	.40	.12	.12***					
Age	–.78	.32	–.09*					
Step 2				.26	.07	.05	1.72	35.93***
Gender	–4.91	.82	–.22***					
Step 3				.42	.17	.11	6.72	15.73***
Enmeshment	.33	.09	.14***					
Disengagement	.37	.10	.17***					
Rigidity	.28	.09	.12**					
Chaotic	.13	.08	.06					
Flexibility	–.35	.12	–.13**					
Cohesion	.09	.12	.04					
Step 4				.44	.19	.02	6.71	2.70*
Enmeshment \times gender	.44	.21	.16*					
Disengagement \times gender	.58	.23	.22**					
Rigidity \times gender	–.03	.19	–.01					
Chaotic \times gender	.12	.18	.04					
Flexibility \times gender	.17	.27	.06					
Cohesion \times gender	.26	.27	.09					

* $p < .05$, ** $p \leq .01$, *** $p \leq .001$

interaction between enmeshment and gender ($p < .05$), as well as disengagement and gender ($p \leq .01$), in predicting level of dysfunctional eating.

Higher levels of family enmeshment and disengagement (+1 SD) were associated with higher levels of dysfunctional eating in boys, while lower levels of family enmeshment and disengagement (–1 SD) were associated with lower levels of dysfunctional eating in boys. However,

level of family enmeshment and disengagement did not affect level of dysfunctional eating for girls. In other words, level of family disengagement and enmeshment was more influential on dysfunctional eating for adolescent boys compare to girls. No significant interactions were found between gender and the other measures of family functioning. Step 4 accounted for 1.8 % of the variance in dysfunctional eating.

Discussion and Conclusions

The first goal of the present study was to analyze the relationship between different dimensions of family functioning and dysfunctional eating in a sample of Italian adolescent boys and girls. The finding that dysfunctional eating in adolescents is related to poor family functioning is consistent with previous research which found an association between aspects of family environment and dysfunctional eating (e.g., [48–51]). In particular, in line with several studies (e.g., [57–59]), our results showed important gender differences; girls with dysfunctional eating perceive their families as characterized primarily by low level of flexibility, that is, families that have difficulty changing their structure when necessary, or when adolescents are not very involved in decision making. Families of boys with dysfunctional eating were also found to have unbalanced levels of both cohesion and flexibility; these families characterized by very high emotional closeness between family members, or on the contrary, have little involvement among individuals who are generally very independent, do not have shared interests, and do not spend much time together. Furthermore, they present with strict rigidity, where a status quo is maintained and there is no space for change, or where rules and roles are unclear and there is a lack of leadership. Results suggest that living in unbalanced families could contribute to the expression of dysfunctional eating in adolescents.

Furthermore, these results extend the findings of a limited number of studies on family functioning and dysfunctional eating in non-clinical sample of adolescent girls and boys by highlighting that there is a relationship between lower family functioning and negative eating attitudes and behaviours (e.g., body dissatisfaction, binge eating episodes, compensatory behaviors). According to family systems theory which emphasizes the interconnectedness of family members and their behaviors, family environment shapes and influences family members' behaviours; thus, in presence of low family functioning such as low levels of flexibility and cohesion, adolescents could become more vulnerable and at risk of developing a dysfunctional behaviour.

However, the most interesting result of our study concerns the moderating effect of gender; adolescents boys are differentially affected by family disengagement and enmeshment as it relates to dysfunctional eating compared to adolescent girls. In line with previous studies [60, 61], the present research suggests that family cohesion is an important aspect of the whole family environment that has to be taken in great consideration in relation to eating behaviours. Nevertheless, while previous research highlighted that family connectedness had a stronger influence on

eating behaviours, such as obesity and body satisfaction, in adolescent girls than in boys, our findings, at the contrary, show that boys are more affected by perceiving unbalanced levels of family cohesion (disengagement and enmeshment) than girls. The evidence seems to suggest that unhealthy eating behaviors in boys are more affected by perceiving the excessive or poor family cohesion, while healthy eating behaviors in girls would be more influenced by a balance level of connectedness that characterize, for example, families that eat together during meals. However, to our knowledge, this was the first study to analyze different dimensions of family functioning according to the new Circumplex model of marital and family systems; thus, future studies are needed to extend the analysis as well as dimensions that characterize family connectedness, even to conditions where levels of family cohesion are too high or too low.

The present study has several strengths. Unlike the majority of research in this area which focuses exclusively on adolescent girls, the current study included a sample of both adolescent boys and girls. Further, the present study took into consideration the role of gender as it relates to family functioning and dysfunctional eating. The findings lend support for the notion that aspects of family functioning play an important role in patterns of dysfunctional eating among non-clinical samples of adolescents.

Despite the strengths of the study, it is important to acknowledge some of the limitations. For one, the study implemented a cross-sectional design; thus, precluding the ability to draw casual inferences amongst study variables. Further, the present study used an unbalance sample of boys and girls. The study utilized a normative, school-based sample of adolescent boys and girls; therefore, it is difficult to generalize the results to adolescents who are experiencing clinical levels of disordered eating. Further, the study findings might not generalize to non-Italian adolescents.

Furthermore there are various suggestions for forthcoming research in the area. Firstly, it would be interesting for future research to replicate the results using a sample of non-Italian adolescent boys and girls to determine whether or not the findings are culturally specific. Related, researchers should also aim to replicate the results using a clinical sample of adolescents with diagnosed eating disorders. Further, future research should strive to utilize a more balanced sample of boys and girls. It will be important for future research to implement a longitudinal design in order to better understand the temporal nature of the study variables. Similarly, a longitudinal approach could also assist in examining whether there are important developmental changes in the relationship between family functioning and dysfunctional eating across the adolescent period.

Finally, several important clinical implications arise from the present findings. Most importantly, the results of this study, along with other studies, highlight the important contribution of family functioning as it relates to dysfunctional eating in youth. More specifically, the findings suggest that it is critical to consider various facets of family functioning as it relates to dysfunctional eating in adolescent boys, in order to design interventions that are more targeted and effective that may help to contain the growing prevalence of dysfunctional eating among adolescents. It will be useful for clinicians working with adolescents to inquire about family functioning and symptoms of dysfunctional eating. Dysfunctional eating prevention programs may address family functioning as a way to improve healthy eating attitudes and behaviours in adolescents, for instance educating families about the importance of aspects of home environment such as cohesion, communication and flexibility in protecting them from unhealthy eating behaviours. In addition, the results suggest that adolescent boys may need additional interventions; clinicians may need to pay extra attention to dysfunctional eating when they have to deal with boys who live in dysfunctional families characterized mainly by poor or excessive cohesion among family members.

Summary

In our study, we focused on the association between different dimensions of family functioning and dysfunctional eating in a sample of Italian adolescent boys and girls. The results of our research indicate that various aspects of family functioning are associated with dysfunctional eating; in particular, girls with dysfunctional eating perceive their families as characterized primarily by low level of flexibility, that is, families that have difficulty changing their structure when necessary, or when adolescents are not very involved in decision making. Families of boys with dysfunctional eating were also found to have unbalanced levels of both cohesion and flexibility; these families characterized by very high emotional closeness between family members, or on the contrary, have little involvement among individuals who are generally very independent, do not have shared interests, and do not spend much time together. Additionally the results indicated differences between boys and girls, in particular dysfunctional eating in adolescent boys seemed to be more affected by dimensions of enmeshment and disengagement than dysfunctional eating in girls. This research highlights the important role of various aspects of family functioning in relation to dysfunctional eating in adolescents.

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