Maladaptive Schemas as An Explanation for Gender Differences in Eating Disorder Symptoms in Adolescents

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Abstract

The present study examined gender differences in early maladaptive schemas as an explanation for gender differences in the prevalence of eating disorder symptomatology. A total of 789 adolescents (406 boys and 383 girls) between 11 and 17 years of age ($M = 14.51$, $SD = 1.59$) completed both the Eating Attitudes Test (EAT-8) to assess eating disorder symptomatology and the Brief Version of the Young Schema Questionnaire for Adolescents and Young Adults (YSQ-3-B) to assess early maladaptive schemas. The results showed that girls had higher early maladaptive schema scores compared to boys, particularly for the disconnection and rejection domain, the impaired autonomy and performance domain, and the other-directedness domain, partially explaining their higher eating disorder symptom scores. The findings of the study are discussed considering the social and patriarchal mandates that exist regarding gender.

Keywords: gender; early maladaptive schemas; eating disorders; adolescents.

Resumen

Esquemas Desadaptativos Tempranos como Explicación de las Diferencias de Género en Síntomas de Trastornos de Alimentación en Adolescentes. Este estudio examinó las diferencias de género en los esquemas desadaptativos tempranos como explicación de las diferencias de género en la prevalencia de sintomatología de trastornos de la conducta alimentaria. Participaron 789 adolescentes (406 chicos y 383 chicas), cuya edad oscilaba entre los 13 y los 17 años ($M = 14.51$, $DT = 1.59$) y quienes contestaron el Test de Actitudes Alimentarias (EAT-8) para evaluar la sintomatología de los trastornos de la conducta alimentaria y la Versión breve del Cuestionario de Esquemas para Adolescentes y Jóvenes Adultos (YSQ-3-B) para analizar los esquemas desadaptativos tempranos. Los resultados mostraron que las mayores puntuaciones de las chicas en esquemas desadaptativos tempranos, especialmente los dominios de desconexión y rechazo, autonomía dañada y foco en los demás, explicaban parcialmente sus mayores puntuaciones en síntomas de trastornos de la conducta alimentaria. Los resultados se discuten teniendo en cuenta los mandatos sociales y patriarcales que existen alrededor del género.

Palabras clave: género; esquemas desadaptativos tempranos; trastornos de la conducta alimentaria; adolescentes.

Eating disorders (EDs) are a major public health problem affecting the general population in developed countries (Galmiche et al., 2019). They are usually developed in adolescence, and they are the third most common chronic disease in adolescents (Herpertz-Dahlmann, 2015). Gender differences in EDs are evident from adolescence (Sahlan et al., 2021). It is estimated that 18.7% of adolescent girls between 15 and 19 years of age present ED psychopathology, compared to only 5.7% of adolescent boys of the same age (Smith et al., 2021). The main EDs are anorexia nervosa (AN), which is characterized by body dissatisfaction and fear of gaining weight, and bulimia nervosa (BN), which is characterized by binge eating behaviors followed by compensatory acts, such as vomiting or performing an exaggerated amount of exercise (Ameri-can Psychiatric Association [APA], 2013). However, there are also other types of EDs that have similar characteristics to binge eating episodes but are not followed by compensatory behaviors (APA, 2013), in which no major gender differences have been found (Murray et al., 2022).

Numerous biological, psychological, and social explanations have been proposed to explain the gender difference in the prevalence of EDs (Culbert et al., 2021; Murnen & Smolak, 2015; Schaefer et al., 2019). Many of these explanations highlight the role of the internalization of the thin ideal, which is considered one of the best predictors of EDS development because food is seen as a threat to meet this ideal (Schaefer et al., 2019; Wilson et al., 2022). Women are subject to some patriarchal mandates related to this thin ideal internalization that men

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are not. For example, the weight stigma, the violation of their body ownership, the internalization of damaging stereotypes that they are suggested to follow or the cultural pressure that women's bodies have to be thin and submissive (Chen & Gonzales, 2022; Murnen & Smolak, 2015). Thus, it would be these sociocultural mandates that influence women to suffer from more ED symptoms (Murnen & Smolak, 2015).

According to cognitive theories, the role of negative automatic thoughts about aspects involved in EDs, such as body weight or figure, is relevant in the development and maintenance of ED symptoms (Beck, 1976; Zarychta et al., 2014). Negative automatic thoughts are guided by deep maladaptive cognitive schemas (Dozois & Beck, 2008). Thus, maladaptive schemas could contribute to the development of EDs. In this context, the Schema Therapy Model (Young, 1990) proposes the existence of several early maladaptive schemas that can play a role in ED symptoms (Vervaet et al., 2021).

Early maladaptive schemas (EMS) are broad, counter-productive, and pervasive patterns that include emotions, memories, cognitions, and bodily sensations. They start in childhood, but they continue developing through the rest of people's lives, affecting how they see themselves and how they relate to others. Furthermore, EMS are dimensional because they vary in the level of frequency or intensity at which they are activated (Young et al., 2003). There are 18 EMS categorized into five domains: disconnection and rejection, impaired autonomy and performance, other-directedness, impaired limits, and overvigilance and inhibition (Young et al., 2003). The disconnection and rejection domain involves the belief that one's need for vital aspects, such as security, empathy, or safety, will not be satisfied. This domain includes schemas of abandonment/instability, mistrust/abuse, emotional deprivation, defectiveness/shame, and social isolation/alienation (Young et al., 2003). The impaired autonomy and performance domain is characterized by expectations about oneself and the environment that affect individuals' perception of their capacity to perform successfully. This domain includes dependence/incompetence, enmeshment/undeveloped self, vulnerability to harm/illness, and failure. The other-directedness domain is defined as an exaggerated focus on the feelings and desires of other people, putting aside one's desires, which commonly involves not expressing one's own inclinations. This domain includes subjugation, self-sacrifice, and approval-seeking/recognition-seeking. The impaired limits domain is characterized by inadequate internal limits, long-term goal orientation, and responsibility for others. This domain includes the schemas of entitlement/grandiosity and insufficient self-control and/or self-discipline. Finally, the overvigilance and inhibition domain is defined as an exaggerated repression of one's feelings or compliance with performance expectations and rigid and internalized rules. It includes negativity/pessimism, emotional inhibition, unrelenting standards, and punitiveness.

EMS have been related to ED symptoms (Meneguzzo et al., 2021; Vervaet et al., 2021). Based on a review of 29 studies, it has been proposed that all EMS, except entitlement, are more common in people with elevated levels of ED symptomatology than in other populations (Maher et al., 2022). Similarly, Meneguzzo et al. (2020) found that people with AN scored higher for the majority of EMS than people who were healthy. Pugh (2015) found that some ED symptoms, such as body discontent, were highly associated with all five schema domains. Moreover, women who have high levels of EMS tend to have more severe ED symptomatology (Pauwels et al., 2013).

However, some EMS appear to be more relevant than others in relation to EDs. Studies on adult clinical samples found that women with binging and purging behaviors presented higher scores on five

EMS: abandonment/instability, emotional deprivation, enmeshment/undeveloped self, subjugation, and emotional inhibition (Unoka et al., 2010). Regarding restrictive symptomatology, it has been found that the most relevant EMS are subjugation (Pauwels et al., 2013) and defectiveness/shame and failure (Gongora et al., 2004; Pauwels et al., 2013), belonging respectively to the other-directedness, disconnection and rejection, and impaired autonomy and performance domains. According to studies on adolescent clinical samples, the most common EMS that patients with EDs tend to exhibit are abandonment/instability, mistrust/abuse, defectiveness/shame, and social isolation/alienation, which belong to the disconnection and rejection domain, and dependence/incompetence and enmeshment/undeveloped self, which are part of the impaired autonomy and performance domain (Nicol et al., 2020).

Regarding studies on community samples, the EMS associated with EDs in young adult women were defectiveness/shame (Meyer & Gillings, 2004), mistrust/abuse, and unrelenting standards (Meyer et al., 2001). However, in studies on community samples of adolescents, emotional deprivation, abandonment, subjugation, and insufficient self-control and/or self-discipline were related to EDs (Turner et al., 2005a). A problem of the above-mentioned studies is that they did not control the overlapping between EMS. Those that have controlled this overlap have reported mixed results. For instance, it has been found that EDs are associated with certain schemas belonging to the domains of disconnection and rejection (Cooper et al., 2005; Muris, 2006; Turner et al., 2005b), impaired autonomy (Cooper et al., 2005; Turner et al., 2005b), and overvigilance and inhibition (Cooper et al., 2005; Muris, 2006).

Importantly, previous studies have found gender differences in EMS, although the results have been mixed. Adolescent girls present higher scores than boys on the disconnection and rejection, impaired autonomy, and performance and other-directedness domains (Alba et al., 2018; Calvete et al., 2015; Orue et al., 2014). Láng (2015) found that adolescent girls scored higher on all EMS except social isolation/alienation, subjugation, entitlement/grandiosity, emotional inhibition, and unrelenting standards/hypercriticality, for which there were no statistical gender differences. Regarding entitlement/grandiosity schema, Calvete (2008) found that adolescent boys obtained higher scores than girls; nevertheless, current studies on family violence have not found any such gender difference (Calvete & Orue, 2013).

The main objective of this study was to examine whether the higher frequencies of ED symptoms in girls are explained by the greater presence of maladaptive cognitive patterns (i.e., EMS). This sheds light on two previously unresolved issues in the literature. First, as indicated in the above review, the results of previous studies on the association between EDs and EMS are mixed. Whereas some studies have found that eating problems are associated with all or almost all EMS domains, others conducted with samples of adolescents, and in which the overlap between variables has been controlled, have found that EDs are only associated with the disconnection and rejection, impaired autonomy, and overvigilance and inhibition domains. Therefore, the current study sought to clarify and provide additional data regarding the relationship between schemas and ED symptoms. Second, the results of previous studies show a tendency for girls to have higher EMS scores, but the results are inconclusive. Thus, this study will contribute to elucidating potential gender differences in early maladaptive schemas among adolescents. Based on previous studies (Alba et al., 2018; Calvete et al., 2015; Láng, 2015; Orue et al., 2014), our main hypothesis is that girls will score higher on several schema domains, particularly those related to negative self-concept and the need to be accepted by other people (i.e., disconnection and

rejection and other-directedness schema domains), and that these schemas will be associated with higher ED symptom scores.

Methods

Participants

The sample included 789 adolescents (406 boys and 383 girls) between 11 and 17 years of age (mean age = 14.51 years, *SD* = 1.59), who were part of a larger longitudinal project (Calvete et al., 2022). They were from 34 classrooms of five educational centers (1 public and 4 private) of Bizkaia (Spain). The participants came from Bilbao and surrounding areas. The majority (93.7%) lived with their parents, 6.1% with only one parent and the rest in other contexts such as a child protection center. Regarding socio-demographic levels, parents' professions were classified according to the criteria of the National Institute of Statistics of Spain as follows: scientific and intellectual professionals (27.8%), restaurant and security service workers and vendors (11%), accounting and administrative employees (6.4%), technicians and support professionals (5.5%), artisans and skilled workers in the manufacturing and construction industries (4.6%), unemployed (3%), housewives (3%), directors and managers (2.2%), machinery operators (2.1%), elementary occupations (2.1%), and skilled workers in the agricultural, livestock, forestry, and fishing sectors (0.1%). A total of 32.2% of participants did not provide this information.

Instruments

ED symptoms were assessed using the *Eating Attitudes Test* (EAT-8; Richter et al., 2016), which is the short version of the Eating Attitudes Test (Garner & Garfinkel, 1979; Spanish validation: Peláez-Fernández et al., 2014). The EAT-8 is a self-report scale that consists of eight items for screening EDs in the general population. Although the original version uses a dichotomized response format, in this study the participants rated the frequency with which the statements that appear in the items apply to them using a six-point scale from 1 (*never*) to 6 (*always*). An example of the items is "I am preoccupied with the thought of having fat on my body." It has been demonstrated that the EAT-8 has good validity and reliability (Richter et al., 2016). In this study, Cronbach's alpha coefficient was .90.

EMS were assessed with the *Brief Version of the Young Schema Questionnaire* (Young, 2006; Brief version: YSQ-3-B, Santos et al., 2018; Spanish version by Calvete, 2020). The YSQ-3-B includes 54 items that evaluate the eighteen previously mentioned EMS grouped in five domains: disconnection and rejection (e.g., "When someone I care for seems to be getting away from me, I feel desperate, with fear of losing him/her"), impaired autonomy and performance (e.g., "I really need the help of others to get daily things done"), other-directedness (e.g., "In my group of friends, I feel that I have to do everything they want, if not, they can tease me, make fun of me or put me aside of the group"), impaired limits (e.g., "I feel that I deserve special treatment: I should not have to obey the rules that other people have to follow"), and overvigilance and inhibition (e.g., "When something good happens, I always wait for something bad to happen next"). The participants had to rate those items on a six-point scale ranging from 1 (*completely untrue of me*) to 6 (*describes me perfectly*). In this study, the Cronbach's alpha coefficients were .91, .86, .84, .77, and .87, respectively, for the disconnection and rejection, impaired autonomy and performance, other-directedness, impaired limits, and overvigilance and inhibition domains.

Procedure

First, the schools were contacted to explain the objectives of the study. After obtaining the permission of the principals, parents were sent a letter explaining the nature, conditions, risks, and benefits of the study, and their passive consent was collected. Therefore, parents had the alternative of denying the participation of their children. The parents of 12 adolescents refused their participation (1.5% of rejection). Participants' answers were anonymous in order to guarantee confidentiality. Some of the participants completed the questionnaires in their classrooms, while others had to complete them online due to COVID-19. There were no differences in the variables depending on the type of data collection. A researcher and/or a teacher was available while the adolescents completed the questionnaires in order to resolve possible doubts. The questionnaires took around 30 minutes to complete, and data were collected between March and April 2021. The Ethics Committee of the University of Deusto approved this study.

Data-Analytic Plan

We used path analysis with MPLUS-8.8 to test the main hypothesis of the study. The model included paths from gender to each of the schema domains and ED symptoms and paths from schema domains to ED symptoms. The percentage of missing values was low (0.25%), and the full information maximum likelihood method was used. In addition, age was included in the model to control its potential role in the study variables. The goodness of model fit was assessed using the comparative fit index (CFI), the Tucker–Lewis index (TLI), the standardized root-mean-square residual (SRMR), and the root-mean-square error of approximation (RMSEA). CFI and TLI values of .95 or higher indicate an excellent fit, while SRMR and RMSEA values lower than .08 indicate a good fit (Little, 2013). The significance of the indirect paths was tested by means of bootstrapping with 5,000 samples (Shrout & Bolger, 2002). In addition, IBM-SPSS-28 was used for descriptive analyses, correlations, and to identify gender differences in the study variables.

Results

Table 1 shows the descriptive statistics and correlation coefficients among the study variables. ED symptoms were significantly associated with all EMS domains, and there were also significant correlations between all EMS domains. As shown in Table 2, girls scored higher compared to boys on ED symptoms and on the domains of disconnection and rejection, impaired autonomy and performance, other-directedness, impaired limits and overvigilance and inhibition, and all of the differences were significant.

The results of the path analysis indicated that gender was directly and significantly associated with EDs and all schema domains, and that three schema domains (disconnection and rejection, impaired autonomy, and other-directedness) were directly and significantly associated with ED symptoms. In addition, age was directly associated with two schema domains: impaired limits and overvigilance. This model was saturated, and therefore a more parsimonious model was estimated in which non-significant paths were eliminated. The new model displayed excellent fit indices ($\chi^2(5, N = 789) = 5.64$; RMSEA = .013 (90%CI [.000, .052]), $p = .935$; TLI = .999; CFI = 1; SRMR = .011). This model explained 28% of the variance in ED symptoms. Figure 1 displays the path coefficients of the model. Next, we estimated the significance of the indirect associations by means of bootstrapping ($N = 5,000$). The results indicated that the indirect association between

gender and ED symptoms through EMS was significant for the disconnection and rejection (95% CI [0.007, 0.218]), impaired autonomy (95% CI [0.008, 0.168]), and other-directedness domains (95% CI [0.082, 0.280]).

Table 1. Descriptive statistics and correlation coefficients between ED symptoms and EMS domains

|	D/R	IA/P	OD	IL	OV/I	ED symptoms
D/R	1					
IA/P	.82**	1				
OD	.80**	.73**	1			
IL	.70**	.70**	.67**	1		
OV/I	.82**	.74**	.76**	.66**	1	
ED symptoms	.47**	.45**	.48**	.38**	.42**	1
Age	.04	-.01	.03	.15*	.10*	
Mean	2.46	2.24	2.74	2.50	2.66	1.58
SD	1.02	0.90	1.02	1.04	1.04	1.24
N	787	786	780	786	786	787

*Note. D/R = disconnection and rejection, IA/P = impaired autonomy and performance, OD = other-directedness, IL = impaired limits, OV/I = overvigilance and inhibition, ED symptoms = symptoms of eating disorders. * p < .05; ** p < .001*

Table 2. Descriptive statistics and effect sizes for gender differences in ED symptoms and EMS domains

	Boys (n =406)		Girls (n = 383)					
	Mean	SD	Mean	SD	t	df	p	d
D/R	2.16	0.88	2.77	1.07	8.73	787	< .001	.62
IA/P	2.02	0.79	2.48	0.95	7.40	785	< .001	.53
OD	2.39	0.88	3.10	1.04	10.29	778	< .001	.74
IL	2.24	0.94	2.77	1.08	7.36	785	< .001	.53
OV/I	2.43	0.98	2.91	1.04	6.71	776	< .001	.48
ED symptoms	1.21	1.02	1.96	1.33	8.90	786	< .001	.64

Note. D/R = disconnection and rejection, IA/P = impaired autonomy and performance, OD = other-directedness, IL = impaired limits, OV/I = overvigilance and inhibition, ED symptoms = eating disorder symptoms. n may change between the variables due to missing values.

Figure 1. Associations between gender, early maladaptive schemas, and eating disorders symptoms.
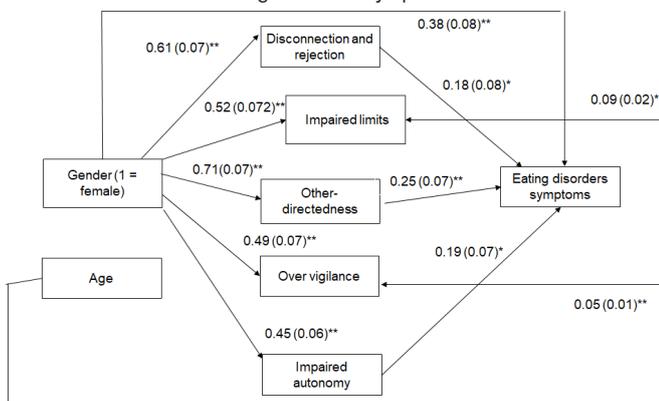
*Note. Only significant paths are displayed. The values indicate unstandardized coefficients and their standard errors. * p < .05, ** p < .001*

Discussion

EDs represent a severe and frequent problem among adolescents, especially girls, so it is important to identify the factors involved. This study examined the role of EMS as an explanation for gender differences in ED symptoms in a non-clinical sample of Spanish adolescent boys and girls. The study provides data about the associations between EMS and EDs and gender differences in these variables.

Regarding the relationships between EMS and ED symptoms, the results showed that the EMS domains that were associated with ED symptoms were disconnection and rejection, impaired autonomy and performance, and other-directedness. The results related to the disconnection and rejection domain were expected since several schemas included in this domain, such as abandonment, mistrust, emotional deprivation, and defectiveness, have been found to be related to ED symptoms (e.g., Meyer et al., 2001; Meyer & Gillings, 2004; Turner et al., 2005a, 2005b). Likewise, previous studies led us to hypothesize a relationship of ED symptoms with the domain of impaired autonomy (Turner et al., 2005b). This domain has also been related to having body image concerns about oneself (Boone et al., 2013), which leads to a higher risk of suffering from ED symptoms (Kapoor et al., 2022). However, although the domain of overvigilance did correlate significantly with ED symptoms, it was not significantly associated when controlling for the overlap between schema domains. Finally, we found a relationship between the other-directedness domain and ED symptoms.

The version of the questionnaire used to measure EMS is a possible explanation for the fact that our results were slightly different from those obtained in other studies that were also conducted in community samples of adolescents and in which the overlap between the different domains was controlled. For example, the Young Schema Questionnaire-Short Form (YSQ-S; Young & Brown, 1998), which does not include some schemas such as approval-seeking/recognition-seeking, was used in studies that did not find a relationship between the other-directedness domain and ED symptoms (Cooper et al., 2005; Muris, 2006). In the current study we used a brief version of the YSQ-3 (Young, 2006), which includes the 18 schemas proposed by Young et al. (2003). In this version, the other-directedness domain includes the approval-seeking/recognition-seeking schema, which has been related to some EDs, such as AN (Meneguzzo et al., 2020). Therefore, the inclusion of this schema in the other-directedness domain may have contributed to the results of this study because the fear of being evaluated negatively by others may lead to dysfunctional concerns about one's physical appearance, resulting in ED attitudes (Barbeau et al., 2022).

Regarding gender differences, the results supported the hypotheses that girls score higher than boys on ED symptoms (Sahlan et al., 2021; Smith et al., 2021; Vega et al., 2005) and that gender differences in EMS contribute to the higher levels of EDs in girls. Namely, girls' higher scores on the disconnection and rejection, impaired autonomy and performance, and other-directedness domains explained part of the gender differences in EDs. Gender differences in these schema domains are consistent with those found in other studies with community samples of adolescents (Alba et al., 2018; Calvete et al., 2015; Orue et al., 2014).

A possible explanation for why these schema domains contribute to girls' greater ED symptomatology is the way in which they relate to the social and patriarchal mandates to which girls are subjected. For example, some schemas included in the domain of autonomy and impaired performance (e.g., failure) have been linked to perfection-

ism (Deas et al., 2011). Perfectionism has been found to be associated with some EDs, such as AN (Miles et al., 2022), and is often socially required of women. Thus, it is common for women to receive messages from society that they should be perfect (Jackson & Vares, 2015).

The other-directedness domain includes schemas involving the need to be accepted and the tendency to sacrifice one's own needs and preferences in order to obtain the approval of others. Girls' higher scores on these schemas could be influenced by the fact that girls experience more social mandates than boys. People who score higher in this domain, in this case girls, will try to comply to a greater extent with social mandates, including the need to be thin (Murnen & Smolak, 2015).

Finally, regarding disconnection and rejection, the results suggest that girls may more easily assimilate dysfunctional schemas indicating negative self-perceptions. Some ED symptoms (e.g., exercising excessively or vomiting), could represent dysfunctional coping processes to improve their self-view in an attempt to obtain the perfect self-image. Thus, these schemas may make girls more vulnerable to the development of ED symptoms (Sarin & Abela, 2003).

In any case, the fact that the analyses showed a direct path between gender and EDs suggests that, in addition to EMS, other variables may contribute to explaining the greater presence of EDs in girls. As mentioned, there are numerous biological, social, and psychological factors that may jointly contribute to explaining these gender differences (Culbert et al., 2021; Murnen & Smolak, 2015; Schaefer et al., 2019).

This study has some limitations that should be considered in order to improve future research. First, as the design is cross-sectional, the results only show statistical associations between variables. Therefore, future research should use a longitudinal design to examine mediational mechanisms. Second, the results of this study may not be generalizable to other cultures and countries. Third, only binary gender was considered in this study, and thus future research is recommended to replicate this study with different gender identities.

This study shows that EMS, specifically the disconnection and rejection, impaired autonomy and performance, and other-directedness domains, contribute to explaining the gender differences in ED symptoms in adolescents. Thus, EMS should be considered when designing future ED prevention and intervention programs. Specifically, some of the contents of these schemas could be modified by maladaptive schema education, cognitive restructuring techniques, positive schema imagination exercises, and other techniques proposed in Schema Therapy (van Wijk-Herbrink et al., 2018; Young et al., 2003). Working with these schemas may be especially beneficial in girls since they tend to endorse maladaptive schemas to a greater extent than boys. Accordingly, a relevant contribution of this study is that it highlights gender differences in psychological problems as well as the importance of including a gender perspective in psychological research in order to promote equality between girls and boys.

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Conflict of interest

The authors of this paper declare that there is no conflict of interest.

References

Alba, J., Calvete, E., Wante, L., Van Beveren, M. L., & Braet, C. (2018). Early maladaptive schemas as moderators of the association between bullying victimization and depressive symptoms in adolescents. *Cognitive Therapy and Research*, *42*(1), 24–35. https://doi.org/10.1007/s10608-017-9874-5

American Psychiatric Association [APA] (2013). *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.). https://doi.org/10.1176/appi.books.9780890425596

Barbeau, K., Carbonneau, N., & Pelletier, L. (2022). Family members and peers' negative and positive body talk: How they relate to adolescent girls' body talk and eating disorder attitudes. *Body Image*, *40*, 213–224. https://doi.org/10.1016/j.bodyim.2021.12.010

Beck, A.T. (1976). *Cognitive therapy and the emotional disorders*. International Universities Press.

Boone, L., Braet, C., Vandereycken, W., & Claes, L. (2013). Are maladaptive schema domains and perfectionism related to body image concerns in eating disorder patients? *European Eating Disorders Review, 21*(1), 45–51. https://doi.org/10.1002/erv.2175

Calvete, E. (2008). Justification of violence and grandiosity schemas as predictors of antisocial behavior in adolescents. *Journal of Abnormal Child Psychology, 36*(7), 1083–1095. https://doi.org/10.1007/s10802-008-9229-5.

Calvete, E. (2020). Cuestionario de Esquemas de Young: Adaptación de una versión breve para adolescentes y jóvenes españoles. *Revista de Psicopatología y Psicología Clínica, 25*(3), 219–229. https://doi.org/10.5944/rppc.29013

Calvete, E., & Orue, I. (2013). Cognitive mechanisms of the transmission of violence: Exploring gender differences among adolescents exposed to family violence. *Journal of Family Violence, 28*(1), 73–84. https://doi.org/10.1007/s10896-012-9472-y

Calvete, E., Orue, I., Echezarraga, A., Cortazar, N., & Fernández-González, L. (2022). A growth mindset intervention to promote resilience against online peer victimization: A randomized controlled trial. *Computers in Human Behavior*, *135*, 107373.

Calvete, E., Orue, I., & Hankin, B. L. (2015). A longitudinal test of the vulnerability-stress model with early maladaptive schemas for depressive and social anxiety symptoms in adolescents. *Journal of Psychopathology and Behavioral Assessment*, *37*(1), 85–99. https://doi.org/10.1007/s10862-014-9438-x

Chen, C., & Gonzales, L. (2022). Understanding weight stigma in eating disorder treatment: Development and initial validation of a treatment-based stigma scale. *Journal of Health Psychology*, 1–18. https://doi.org/10.1177/13591053221079177

Cooper, M. J., Rose, K. S., & Turner, H. (2005). Core beliefs and the presence or absence of eating disorder symptoms and depressive symptoms in adolescent girls. *International Journal of Eating Disorders, 38*(1), 60–64. https://doi.org/10.1002/eat.20157

Culbert, K. M., Sisk, C. L., & Klump, K. L. (2021). A narrative review of sex differences in eating disorders: Is there a biological basis? *Clinical Therapeutics*, *43*(1), 95–111. https://doi.org/10.1016/j.clinthera.2020.12.003

Deas, S., Power, K., Collin, P., Yellowlees, A., & Grierson, D. (2011). The relationship between disordered eating, perceived parenting, and perfectionistic schemas. *Cognitive Therapy and Research, 35*(5), 414–424. https://doi.org/10.1007/s10608-010-9319-x

Dozois, D. J., & Beck, A. T. (2008). *Risk factors in depression*. Elsevier.

Galmiche, M., Déchelotte, P., Lambert, G., & Tavolacci, M. P. (2019). Prevalence of eating disorders over the 2000–2018 period: a systematic literature review. *The American Journal of Clinical Nutrition*, *109*(5), 1402–1413.

Garner, D. M., & Garfinkel, P. E. (1979). The eating attitudes test: An index of the symptoms of anorexia nervosa. *Psychological Medicine, 9*(2), 273–279. https://doi.org/10.1017/S0033291700030762

Gongora, V. C., Derksen, J. J., & van Der Staak, C. P. (2004). The role of core beliefs in the specific cognitions of bulimic patients. *The Journal of Nervous and Mental Disease*, *192*(4), 297–303. https://doi.org/10.1097/01.nmd.0000120889.01611.2f

Herpertz-Dahlmann, B. (2015). Adolescent Eating Disorders. *Child and Adolescent Psychiatric Clinics of North America, 24*(1), 177–196. https://doi.org/10.1016/j.chc.2014.08.003

Little, T. D. (2013). *Longitudinal structural equation modeling*. Guilford Press.

Jackson, S., & Vares, T. (2015). 'Perfect skin','pretty skinny': girls' embodied identities and post-feminist popular culture. *Journal of Gender Studies, 24*(3), 347–360. https://doi.org/10.1080/09589236.2013.841573

Kapoor, A., Upadhyay, M. K., & Saini, N. K. (2022). Relationship of eating behavior and self-esteem with body image perception and other factors among female college students of University of Delhi. *Journal of Education and Health Promotion, 11*(1), 80. https://doi.org/10.4103/jehp.jehp_855_21

Láng, A. (2015). Machiavellianism and early maladaptive schemas in adolescents. *Personality and Individual Differences*, *87*, 162–165. https://doi.org/10.1016/j.paid.2015.07.039

Maher, A., Cason, L., Huckstepp, T., Stallman, H., Kannis-Dymand, L., Millear, P., Mason, J., Wood, A., & Allen, A. (2022). Early maladaptive schemas in eating disorders: A systematic review. *European Eating Disorders Review, 30*(1), 3–22. https://doi.org/10.1002/erv.2866

Meneguzzo, P., Collantoni, E., Bonello, E., Busetto, P., Tenconi, E., & Favaro, A. (2020). The predictive value of the early maladaptive schemas in social situations in anorexia nervosa. *European Eating Disorders Review, 28*(3), 318–331. https://doi.org/10.1002/erv.2724

Meneguzzo, P., Todisco, P., Collantoni, E., Meregalli, V., Dal Brun, D., Tenconi, E., & Favaro, A. (2021). A Multi-Faceted Evaluation of Impulsivity Traits and Early Maladaptive Schemas in Patients with Anorexia Nervosa. *Journal of Clinical Medicine*, *10*(24), 5895. https://doi.org/10.3390/jcm10245895

Meyer, C., & Gillings, K. (2004). Parental bonding and bulimic psychopathology: The mediating role of mistrust/abuse beliefs. *International Journal of Eating Disorders, 35*(2), 229–233. https://doi. org/10.1002/eat.10236

Meyer, C., Leung, N., Feary, R., & Mann, B. (2001). Core beliefs and bulimic symptomatology in non-eating-disordered women: The mediating role of borderline characteristics. *International Journal of Eating Disorders, 30*(4), 434–440. https://doi.org/10.1002/eat.1104

Miles, S., Nedeljkovic, M., & Phillipou, A. (2022). Can Cognitive Flexibility and Clinical Perfectionism Be Used to Identify People with Anorexia Nervosa? *Journal of Clinical Medicine, 11*(7), 1954. https://doi.org/10.3390/jcm11071954

Muris, P. (2006). Maladaptive schemas in non-clinical adolescents: Relations to perceived parental rearing behaviours, big five personality factors and psychopathological symptoms. *Clinical Psychology and Psychotherapy*, *13*(6), 405–413. https://doi.org/10.1002/cpp.506

Murnen, S. K., & Smolak, L. (2015). Gender and Eating Disorders. In L. Smolak & M.P. Levine (Eds.), *The Wiley Handbook of Eating Disorders* (pp. 352–366). Wiley Blackwell. https://doi.org/10.1002/9781118574089.ch27

Murray, S. B., Ganson, K. T., Chu, J., Jann, K., & Nagata, J. M. (2022). The Prevalence of Preadolescent Eating Disorders in the United States. *Journal of Adolescent Health*, 1–4. https://doi.org/10.1016/j.jadohealth.2021.11.031

Nicol, A., Mak, A. S., Murray, K., Walker, I., & Buckmaster, D. (2020). The relationships between early maladaptive schemas and youth mental health: a systematic review. *Cognitive Therapy and Research*, *44*(4), 715–751. https://doi.org/10.1007/s10608-020-10092-6

Orue, I., Calvete, E., & Padilla, P. (2014). Brooding rumination as a mediator in the relation between early maladaptive schemas and symptoms of depression and social anxiety in adolescents. *Journal of Adolescence*, *37*(8), 1281–1291. https://doi.org/10.1016/j.adolescence.2014.09.004

Pauwels, E., Claes, L., Smits, D., Dierckx, E., Muehlenkamp, J. J., Peuskens, H., & Vandereycken, W. (2013). Validation and reliability of the Young Schema Questionnaire in a Flemish inpatient eating disorder and alcohol and substance use disorder sample. *Cognitive Therapy and Research*, 37, 647–656. https://doi.org/10.1007/s10608-012-9501-4

Peláez-Fernández, M. A., Ruiz-Lázaro, P. M., Labrador, F. J., & Raich, R. M. (2014). Validación del Eating Attitudes Test como instrumento de cribado de trastornos de la conducta alimentaria en población general. *Medicina Clínica*, *142*(4), 153–155. doi.org/10.1016/j.medcli.2013.03.018

Pugh, M. (2015). A narrative review of schemas and schema therapy outcomes in the eating disorders. *Clinical Psychology Review*, *39*, 30–41. https://doi.org/10.1016/j.cpr.2015.04.003

Richter, F., Strauss, B., Braehler, E., Altmann, U., & Berger, U. (2016). Psychometric properties of a short version of the Eating Attitudes Test (EAT-8) in a German representative sample. *Eating Behaviors*, *21*, 198–204. https://doi.org/10.1016/j.eatbeh.2016.03.006

Sahlan, R. N., Saunders, J. F., Mond, J. M., & Fitzsimmons-Craft, E. E. (2021). Eating disorder symptoms among adolescent boys and girls in Iran. *International Journal of Eating Disorders*, *54*(1), 19–23. https://doi.org/10.1002/eat.23420

Santos, L., Vagos, P. & Rijo, D. (2018). Dimensionality and Measurement Invariance of a Brief Form of the Young Schema Questionnaire for Adolescents. *Journal of Child and Family Studies, 27*, 2100–2111. https://doi.org/10.1007/s10826-018- 1050-3

Sarin, S., & Abela, J. R. Z. (2003). The relationship between core beliefs and a history of eating disorders: An examination of the life stories of university students. *Journal of Cognitive Psychotherapy*, 17, 359–374.

Schaefer, L. M., Burke, N. L., & Thompson, J. K. (2019). Thin-ideal internalization: How much is too much? *Eating and Weight Disorders-Studies on Anorexia, Bulimia and Obesity*, *24*(5), 933–937.

Shrout, P. E., & Bolger, N. (2002). Mediation in experimental and nonexperimental studies: New procedures and recommendations. *Psychological Methods, 7*(4), 422–445. doi:10.1037/1082-989x.7.4.422

Smith, A. J., Farstad, S. M., & von Ranson, K. M. (2021). Self-reported eating disorder psychopathology prevalence in community-based female and male Albertans: Gender and age group comparisons. *International Journal of Eating Disorders*, *54*(3), 438–444. https://doi.org/10.1002/eat.23434

Turner, H. M., Rose, K. S., & Cooper, M. J. (2005a). Parental bonding and eating disorder symptoms in adolescents: The mediating role of core beliefs. *Eating Behaviors, 6*(2), 113–118. https://doi. org/10.1016/j.eatbeh.2004.08.010.

Turner, H. M., Rose, K. S., & Cooper, M. J. (2005b). Schema and parental bonding in overweight and nonoverweight female adolescents. *International Journal of Obesity, 29*, 381–387. https:// doi.org/10.1038/sj.ijo.0802915

Unoka, Z., Tölgyes, T., Czobor, P., & Simon, L. (2010). Eating disorder behavior and early maladaptive schemas in subgroups of eating disorders. *Journal of Nervous and Mental Disease*, *198*(6), 425–431. https://doi.org/10.1097/NMD.0b013e3181e07d3d

van Wijk-Herbrink, M. F. (2018). *Schema Therapy in adolescents with externalizing behavior problems: Bridging theory and practice*. Uitgeverij BOXPress.

Vega, A. T., Rasillo, M. Á., Alonso, J. E.L., Carretero, G.R., & Martín, M. F. (2005). Eating disorders. *Social Psychiatry and Psychiatric Epidemiology, 40*(12), 980–987. https://doi.org/10.1007/s00127-005-0996-9

Vervaet, M., Puttevils, L., Hoekstra, R. H., Fried, E., & Vanderhasselt, M. A. (2021). Transdiagnostic vulnerability factors in eating disorders: A network analysis. *European Eating Disorders Review*, *29*(1), 86–100. https://doi.org/10.1002/erv.2805

Wilson, S., Benning, S. D., & Racine, S. E. (2022). Examining relationships among thin-ideal internalization, eating pathology, and motivational reactions to high-and low-calorie food. *Appetite, 178*, 106258. https://doi.org/10.1016/j.appet.2022.106258

Young, J. (1990). *Cognitive therapy for personality disorders: A schema-focused approach*. Professional Resource Exchange.

Young, J. (2006). *Young Schema Questionnaire-3*. Cognitive Therapy Center.

Young, J. E., & Brown, G. (1998). *Young schema questionnaire short form*. Cognitive Therapy Centre.

Young, J. E., Klosko, J. S., & Weishaar, M. E. (2003). *Schema therapy: A practitioner's guide*. Guilford.

Zarychta, K., Luszczynska, A., & Scholz, U. (2014). The association between automatic thoughts about eating, the actual–ideal weight discrepancies, and eating disorders symptoms: a longitudinal study in late adolescence. *Eating and Weight Disorders-Studies on Anorexia, Bulimia and Obesity*, *19*(2), 199–207. https://doi.org/10.1007/s40519-014-0099-2