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REVIEW

Family systems, offspring and eating disorders: Can perfectionism close the gaps?

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Abstract

Research on the etiology and risk factors of Eating Disorders (ED) combines several dimensions in complex interactions. Classical and more modern theoretical approaches are consistent in acknowledging a web of cultural, family and neurobiological aspects, at both inter and intrapersonal levels. Although such approaches have contributed to a deeper comprehension in this domain, a robust conceptual framework that fully integrates all the different elements is still lacking.

Herein, we aim at tackling such integrative account, by presenting a review of past and current research based on three major dimensions: perfectionism, parenting and family dynamics, and offspring's behavior and characteristics. Given their critical role in ED across different conceptual frameworks, these dimensions have been consistently pointed out as associated with ED. The available data suggests that perfectionism may be taken not only at an individual level but also as a family phenotype. Furthermore, it may be the link between intrapersonal factors in the onset and development of ED, and interpersonal factors, particularly parenting styles and family dynamics.

The current integrative framework may aid in the disclosure of some of the underlying processes by which personal and contextual factors interact and translate into illness and, therefore, contribute to new insights regarding the role of families and parents-child interaction in the etiology of ED and to more effective therapeutic interventions at both individual and family level.

Keywords: Eating Disorders, Parenting Styles, Perfectionism, Offspring.

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Meeting the old and new in Eating Disorders

Eating disorders (ED) have been receiving increased attention as an important health issue. Estimates show that 3-5% of young Western women present significant symptoms of ED [1], and up to 22% may have some form of eating disorder [2]. More importantly, some studies associate ED, particularly Anorexia Nervosa, with the highest mortality rate of all mental disorders [2-4].

However, studies on the etiology and classification of ED are far from being conclusive. Current research identifies several factors as contributing to the etiology and maintenance of ED, ranging from cultural to neurobiological dimensions, at both individual and family levels. The diversity and complexity of these factors involved in ED is translated into a biopsychosocial model, arguably too broad and non-specific to truly help attaining suitable pathways of illness [5, 6]. One of the difficulties in designing a useful model for ED, capable of integrating all the available knowledge, is the fact that, too often, different relevant factors are studied outside a robust theoretical framework, hence not fully integrating the available data [5].

One of the classical aspects pointed out in the etiology of ED is parenting and family dynamics. Moura [7], in the late 1940s, as well as Selvini-Palazzoli [8], Minuchin [9, 10] and Bruch [11] in the 1970s, are references of some of the early studies on the subject. More recent data confirmed the relevance attributed to family dynamics, regarding specific characteristics and family-based treatments [12-14]. However, although attempts have been made to characterize specific patterns within families of ED patients, results have not been consensual, neither concerning patterns nor the specificity of ED families [15, 16]. As such, parenting styles and family dynamics have been regarded not as a discriminating factor but as a risk factor for psychopathology, including ED [17].

Studies of family dynamics in ED are outnumbered by research on individual risk factors. Perfectionism is one of those factors, and it has been subjected to thorough clinical and theoretical investigation [18, 19]. Interestingly, perfectionism shares with family dynamics the fact that it has long been related to ED. Classic literature contains profuse descriptions of patients with high patterns of conduct and exceptional performances, with such descriptions being widely confirmed across different research settings [20, 21]. Perfectionism has been considered as a multidimensional construct, including both intra and interpersonal dimensions, minimizing the gap between individual and interpersonal research approaches, including the family [22-24]. Moreover, perfectionism shares with ED the relevance attributed to family dynamics, in its genesis, development and maintenance [18, 25, 26].

Considering the triad consisting of (1) parenting styles and family dynamics, (2) perfectionism and (3) ED, and its consistency throughout time in both clinical and research settings, it is surprising that the study of the relationships between those factors has not received a matching level of attention in the scientific literature. A very limited number of studies have addressed these connections, supporting the mediating role of perfectionism and a renovated interest in the family environment. These data sheds light over pathways inherent to ED but also over each dimension individually, which may be more integrative of the current knowledge while backed in a robust clinical and theoretical framework [2, 25, 27, 28].

Parenting styles and family dynamics in families of patients with ED

Parenting styles and family dynamics have long played a very important role in the study of ED. Lasegue (1873) and Gull (1874), cited in [29], advocated the separation of patients and their family as part of an effective treatment. Also, Moura [7] mentioned what he designated by "parentectomy" as a way of breaking the cycle of illness. The emergence of systemic theories set the grounds for research in family dynamics in ED. While Bruch [11] shifted from the traditional psychodynamic conceptions focusing on intrapsychic conflicts, to issues of differentiation of the self and parents-child relationship, authors such as Selvini-Palazzoli [8] and Minuchin [10] further elaborated on systemic formulations. Despite different conceptualizations, one of the most important common features is the assumption that the symptoms presented by the ED patient are the visible facet of an underlying, largely unspoken, family conflict [29]. Disturbances in the family dynamics, the role of each member within the family system and in the communication patterns contribute to dysfunctional interactions and to a difficulty of the anorexic or bulimic child to build personal autonomy from the family and consolidate an individual identity [16, 30].

One of the most important attempts to theorize about the organization of families of patients with ED was made by Minuchin. According to this author, families are described as exhibiting specific interaction patterns—enmeshment, rigidity, overprotectiveness and lack of conflict resolution [10, 30, 31]. Along with the involvement of the child in the parental conflict and with an individual vulnerability, those three factors would constitute the necessary ingredients for the development of psychosomatic symptoms, including ED [31].

Although intellectually seductive and coherent with clinical observations of the management and treatment of patients with ED, these models lack robust empirical data and systematic research [5, 32]. This may be due to a general tendency to focus on individual vulnerabilities and characteristics, but also to difficulties inherent to the evaluation of families. Some of these obstacles relate to the lack of an unified theory of family function, the view by family therapists that structured assessment methods do not have a direct applicability or utility in clinical practice, and the generalized perspective that those

methods are only suitable for research contexts [33].

Indeed, more recent literature on family functioning in ED has reached contradictory results regarding Minuchin's theories, although, expectedly, the methods used have a significant impact in the observed variability [17, 32, 34]. It is also accepted that family dynamics may be different according to subtypes of ED [16]. Critics also mention that although providing an appealing conceptualization of clinically based observations, systemic theories do not satisfactory explain how dysfunctional patterns develop in families and how eating behavior becomes such a pervasive dimension of child's life [12, 35].

A substantial part of the studies on parental and family dynamics have been based in attachment theory [36]. This theory postulates that babies are born with a natural instinct to form attachment relationships, which may guarantee protection and comfort, through the development of basic behaviors (e.g. crying, smiling) that, in turn, may trigger a response from caregivers, usually the mother. Thus, a key issue in attachment theory is the assumption that the nature and quality of the attachment are based on patterns of interaction between the child and the caregiver [35, 37-39].

Attachment theory has been relatively successful in developing assessment tools suitable to current scientific orthodoxy, providing more robust data than other theoretical approaches, although those are often not rigorously linked to attachment constructs [35, 37, 39]. Available data is coherent with the focus on interpersonal dimensions and its impact on the individual. ED patients present high levels of separation anxiety, and appear to have difficulties in discriminating between brief and more permanent breaks, which is compatible with emotional dysregulations [35]. Issues related to unresolved trauma and loss are also relevant. However, this terminology has been used with different meanings, with several authors using it to describe the patients' perception of parental conflicts and family dysfunction [35, 37, 40-42]. There is little data addressing ED subtypes, evidencing contradictory results. It is suggested that levels of distress and severity of symptoms are more determinant for attachment patterns than diagnostic subtype [43, 44].

Interestingly, infants with food refusal or extreme food selectivity have also been associated with intense parental involvement, interpreted as an underlying conflict between their autonomy and dependence, with the mothers of those children evidencing less dyadic reciprocity and maternal contingency, and more dyadic conflict and struggle for control [45]. Those findings are consistent with the evidence that children with feeding problems are at a higher risk of developing ED later in life, contributing to a vulnerability model [45, 46].

Although research on the personality of parents of ED is scarce [27], obsessive-compulsive personality disorder (OCPD) appears to have higher rates in relatives of AN patients, raising the possibility that OCPD and AN may represent phenotypic expressions of the same genotype [47]. In fact, aspects regarding personality characteristics common to OCPD, such as perfectionism, have an important role in ED since early studies, and have been profusely studied [19]. However, at the individual level, there are still many questions regarding the dynamics of parental personality traits and the personality and symptoms of ED patients [13, 48].

Perfectionism, parenting and offspring

The concept of perfectionism has been a subject of thorough clinical and theoretical research and various attempts have been made to offer a suitable definition [18, 19, 49]. Current definitions of perfectionism focus on its psychopathological form [50]. While Hollender (1978) pictured it as "the practice of demanding of oneself or others a higher quality of performance than is required by the situation", Burns (1980) presented a broader definition, including a set of expectations, interpretations of events and evaluations of oneself and others linked in a "network of cognitions" (quoted in [18]). Frost et al (1990) have proposed "the setting of excessively high standards for performance accompanied by overtly critical self-evaluation (p. 451) [22].

However, several questions remain to be answered, such as determining which dimensions of perfectionism are adaptive and which are not. Some dimensions of perfectionism may promote individual's skills and ability to achieve personal goals, while others may decisively contribute to an emotional deregulation [51]. Indeed, while the focus has been set on its negative aspects and consequences, particularly the associated psychopathology and vulnerability to stress, the most important feature that seems to distinguish "positive" from "negative" perfectionism is the fact that high standards are set and pursued regardless of significant adverse consequences [50].

Hence, perfectionism has then been conceptualized as a multidimensional construct, reflecting the complexity of intra and interpersonal dimensions. Accordingly, the most popular assessment of perfectionism in clinical settings and research has been done by two scales with the same designation—Multidimensional Perfectionism Scale (MPS)—by Frost and colleagues and by Hewitt & Flett [22, 23]. However, this perspective of perfectionism across different dimensions is not consensual. Critics argue that the widespread use of those multidimensional scales led to the concept of perfectionism being equated with its method of measurement, and that some of the variables measured, particularly interpersonal dimensions, assess items related to perfectionism but not the construct itself [18, 50]. Authors typically refer the role of parents and parental interaction as a major determinant in the development of perfectionism, and several attempts have been made to describe such interactions in order to know if there is a transgenerational transmission of perfectionism and how does it express itself in terms of family dynamics [52-54]. Frost's MPS even includes two dimensions exclusively re-

lated to parental criticism and parental expectations [22]. Parenting may be overtly critical and demanding, and expectations and standards may be excessively high. Perfectionistic parents may act as models for similar attitudes and behaviors, and parental approval may be absent, inconsistent or conditional, with indirect criticism [18].

Parental styles have been considered as standard patterns of parents' typical responses to childrearing contexts. Baumerind's typology of three major patterns has been widely adopted—Authoritarian, Authoritative and Permissive [55-57]. Authoritarian parents would act by power assertion without warmth, nurturance or two-way communication, building a style characterized by low warmth and high control. Authoritative parents would also be characterized by setting firm control boundaries on children's behavior, with a demanding style, although combined with warmth, nurturance and open communication even in punishment and restrictive interactions. Permissive parents, on the other hand, behave in a non-punitive, non-restrictive manner, allowing the child to self-regulate impulses, desires and actions. The exercise of control is avoided, and children are not bounded by parentally defined standards [55, 57].

Authoritative parenting has been considered the most favorable to good child development outcomes. Within this parenting style, children tend to be independent, self-assertive and cooperative with friends and parents, while children of authoritarian parents tend to present low self-esteem and spontaneity, engaging in social withdrawal and antisocial behaviors [57].

Regarding perfectionism, evidence shows that authoritarian and harsh parenting styles are more strongly linked to dysfunctional or maladaptive perfectionism than to adaptive perfectionism [54, 56, 58]. Parental approval of their child's behavior would depend on the degree of accomplishment of the parental set of demands for performance and behavior. The failure on such accomplishment would set off a stable pattern of parental criticism and guilt induction, inducing the child in adopting and internalizing those harsh and rigid standards. This, in turn, would make children prone to negative self-evaluations in contexts where they would not be able to meet such external and self-imposed standards [59].

Research on the link between parenting and perfectionism has focused substantially in authoritarian parental styles, and its constellation of characteristics, such as overt hostility, low warmth and high criticism [26, 53, 54, 58]. However, the construct of psychological control, as a form of parental style, has been addressed as a particular predictor for offspring's maladaptive perfectionism and as an intervening variable in the intergenerational transmission of perfectionism [26, 56, 59]. Parents exerting psychological control are described as being primarily focused on their own psychological and emotional issues and on their authority role as parent [60].

Psychological control differs from the description of authoritarian parental style in the sense that it is not about overt conflict, harsh criticism or neglect. On the contrary, parental control refers to indirect and analogical patterns, which get imposed in an implicit way, rather than in explicit conflict or emotional tension [59, 60]. It is a deliberate or non-deliberate intrusive parental pattern of interaction, which may include love-withdrawal, shame induction or conditional approval, making attention and care contingent of the children's response to parental demands, in a non-punitive, conflictive way [59, 61].

Furthermore, the construct of psychological control as a parenting style helps to discriminate between psychological and behavioral control. In fact, the authoritarian prototype includes aspects of both dimensions, which may have quite different effects. Psychological control is more often associated with internalized conflicts related to disturbed emotional autonomy, while behavioral control is linked to conformity to rules and response to demandingness [60].

Perfectionism and ED

As previously referred, perfectionism is particularly relevant in the context of ED. It is widely accepted that ED patients present higher levels of perfectionism than healthy controls, although results are more robust for AN than for BN [18, 19]. Intriguingly, there appear to be no differences between maladaptive and achievement striving dimensions of perfectionism [62, 63].

The question regarding the specificity of perfectionism in ED remains open. It has been considered a transdiagnostic entity, i.e., it is observed across different diagnostics, including ED, acting either as a risk factor for a particular disorder or as a maintenance mechanism [64]. Moreover, it has been linked to the most common psychiatric disorders, such as depressive and anxiety disorders, although there is also evidence that it may be a risk factor for mood swings in bipolar disorder and that may be associated to suicidal ideation and behavior [64-68]. However, it has been suggested that some dimensions of perfectionism may be specifically associated with ED, although there are methodological limitations to the studies [19, 68, 69].

High levels of perfectionism seem to persist in ED patients after recovery, and they do not appear to accompany a reduction in the severity of ED symptoms [19, 70]. However, these results must be taken cautiously, as they are limited by the many questions related to the absence of a standard definition of recovery in ED, often too reliant on weight restoration [4, 71]. Such persistence supports the hypothesis of perfectionism as a risk factor for ED, although many of the studies are retrospective and, therefore, limited by methodological issues [19].

The question of whether relatives of ED patients have higher levels of perfectionism has also been addressed. Such question concerns the hereditability of personality traits and the aggregation of ED in families, translated in the hypothesis of a shared familial liability [72]. However, support for the predisposition and scar models involving

perfectionism, particularly maladaptive dimensions, is weak, with the everlasting problem of knowing to which degree predispositions should be accounted to genetics or environment and how they interact epigenetically [19, 27, 47, 70, 73]. A limited number of studies have addressed the relationship between parental and offspring's perfectionism, yet the existing data is contradictory [27, 52, 74, 75].

Perfectionism, parental styles and ED

Considering all the available data on ED, and the growing body of evidence in perfectionism, parenting and child development, it is striking to acknowledge the limited number of studies aimed at building bridges between those dimensions.

Some researchers have addressed this issue by considering perfectionism as an intervening variable between parenting styles, family environment and offspring's symptoms or characteristics outside the scope of ED. Perfectionism has been described as a mediator between psychologically controlling parents and achievement goal orientations, accentuating maladaptive concerns [76]. It has also been referred as linking psychological control and depressive symptoms in adolescents—psychological control predicting increases in maladaptive perfectionism which, in turn, predicts increases in depressive symptoms [59].

Other studies have evaluated ED symptoms in non-clinical samples. Miller-Day and Marks [2], focusing on parental communication patterns, perfectionism and ED symptoms, suggests that perfectionism may be treated less as an individual trait and more as an outcome of interaction in family relationships. These authors also addressed the difference between conformity and conversation communication patterns in parents-offspring interactions [2]. Parental power and control have also been described as dominant in families with a conformity orientation, whereas a more open and supportive environment is patent in families with a conversation orientation. Moreover, results showed that paternal conformity communication directed to high paternal standards may increase the risk of maladaptive eating behaviors in offspring [2].

Perfectionism has also been identified as mediating depressive symptoms and ED [77] and more recently, Dakanalis et al [78] also found perfectionism to be a mediator between insecure attachment patterns and ED symptomatology, as well as interacting with insecure attachment to predict higher levels of ED symptoms.

Research addressing the relation between perfectionism and parenting styles in ED patients is also very scarce. Woodside et al [27] shows that parents, particularly mothers, of ED patients had higher levels of perfectionism and more concerns regarding weight and shape compared to controls. Soenens et al [25] reported that ED patients, particularly bulimic patients, showed higher levels of paternal—but not maternal—psychological control, as well as higher levels of maladaptive perfectionism, compared to controls. They also reported that maladaptive perfectionism may mediate parental psychological control and ED symptoms. Others reported that perfectionism may mediate perceived criticism and drive for thinness [28], obsessive-compulsive symptoms [79] and alexithymia [80].

Conclusions

ED remains a field of Psychiatry with many questions to be answered. However, much has been attained, and there is profuse available data on many different dimensions, from psychopathology to environmental risk factors. However, this represents an opportunity to build more robust theoretical frameworks and to provide a better integration of such data.

The relevance of issues regarding child development and parental styles and attitudes in the onset and maintenance of ED is consensual. Although the pathways involved are not clear, the most plausible hypothesis point out to dysfunctional family dynamics and patterns of communication, leading to disturbed attachment, thus representing important factors in building vulnerability for ED. However, current theories do not explain satisfactorily how those dysfunctional patterns develop in families and how they translate into disordered eating behavior.

The construct of perfectionism is particularly relevant for the study of ED. It has long been mentioned as an important feature of ED patients, with consensual reports throughout research describing perfectionism as part of the core psychopathology, in its intra and interpersonal dimensions. Furthermore, perfectionism shares with ED the importance attributed to the dynamics involved in its development, including parental roles and family environment, despite the lack of studies addressing the relationship between both entities.

As mentioned before, there is a striking paucity of research focusing on the relationship between parental styles, perfectionism and ED. To our knowledge, only three studies specifically addressed this subject [2, 25, 78], with only one of them focusing on a clinical sample of ED patients. They all provide data suggesting that perfectionism may be considered as an outcome of interaction in family relationships, providing an important marker for disturbed attachment patterns and controlling parenting styles. It also meets with classical approaches from systemic theories and family therapy, whose variations are currently gold standards of treatment.

The available data on the relevance of familial and developmental factors both in the genesis of perfectionism and onset of ED in young people, makes it a crucial research field for a better understanding and clinical management of ED patients. In fact, perfectionism may share a common pathway, in which the latter precedes the former, opening a thrilling new path of research and clinical intervention.

The clarification of some issues may also open new grounds of research. The study of the construct of per-

fectionism, as some authors note [18], particularly interpersonal, maladaptive dimensions, may shed light over the dynamics involved in its development, particularly family communication.

Similarly, clearer measures of parental nurturance and parental psychological control, as well as its effects in system-context dynamics, may strengthen some current theoretical frameworks [56, 57]. Specifically, studies regarding differences between psychological and behavioral control, authoritative and authoritarian parental styles, and conformity and conversation patterns of parental communication show common descriptions of pathways determining offspring's autonomy and self-concept. Furthermore, they show how internalizing patterns of dysfunction may lie predominantly on indirect and analogical interactions which are implicitly imposed way aside from overt conflict or emotional turmoil [26, 60].

Therefore, there is sound evidence of a common ground between perfectionism and ED, not in a linear perspective of maladaptive striving for high achievement and unreasonably rigorous standards, but as an inadequate sense of self-efficacy and personal autonomy, poorly defined by parental styles and family dynamics. The unfolding of perfectionism, both as a core feature of ED patients, and as marker of parental and familial characteristics, can be taken as the missing bridge between family environment and ED, for a long time theorized in many different frameworks, and observed in everyday practice.

Abbreviations

ED: Eating disorders; MPS: Multidimensional Perfectionism Scale; OCPD: Obsessive-compulsive personality disorder

Competing interests

The authors declare that there are no conflicts of interests.

References

1. Furnham A, Adam-Saib S. Abnormal eating attitudes and behaviours and perceived parental control: a study of white British and British-Asian school girls. Social psychiatry and psychiatric epidemiology 2001; 36(9):462-70. https://doi.org/10.1007/s001270170025
2. Miller-Day M, Marks JD. Perceptions of parental communication orientation, perfectionism, and disordered eating behaviors of sons and daughters. Health communication 2006; 19(2):153-63. https://doi.org/10.1207/s15327027hc1902_7
3. Smink FR, van Hoeken D, Hoek HW. Epidemiology of eating disorders: incidence, prevalence and mortality rates. Current psychiatry reports 2012; 14(4):406-14. https://doi.org/10.1007/s11920-012-0282-y
4. Steinhausen H-C. The outcome of anorexia nervosa in the 20th century. American Journal of Psychiatry 2002; 159(8):1284-93. https://doi.org/10.1176/appi.ajp.159.8.1284
5. Polivy J, Herman CP. Causes of eating disorders. Annual review of Psychology 2002; 53(1):187-213. https://doi.org/10.1146/annurev.psych.53.100901.135103
6. Ghaemi SN. The rise and fall of the biopsychosocial model. The British journal of psychiatry : the journal of mental science 2009; 195(1):3-4. https://doi.org/10.1192/bjp.bp.109.063859
7. Moura E. Anorexia Mental Coimbra, Portugal: Universidade de Coimbra; 2005. https://doi.org/10.14195/978-989-26-0333-9
8. Selvini-Palazzoli M. Self-starvation: From individual to family therapy in the treatment of anorexia nervosa. New York: Jason Aronson. 1978.
9. Minuchin S, Baker L, Rosman BL, Liebman R, Milman L, Todd TC. A conceptual model of psychosomatic illness in children: Family organization and family therapy. Archives of general psychiatry 1975; 32(8):1031. https://doi.org/10.1001/archpsyc.1975.01760260095008
10. Minuchin S. RB, Baker, L. . Psychossomatic families: Anorexia Nervosa in context. Cambrigde, MA: Harvard University Press. 1978. Cambrigde, MA: Harvard University Press. https://doi.org/10.4159/harvard.9780674418233
11. Bruch H. The Golden Cage: The enigma of Anorexia Nervosa. Cambrigde, MA: Harvard University Press. 1978. Cambrigde, MA: Harvard University Press.
12. Laliberte M, Boland FJ, Leichner P. Family climates: family factors specific to disturbed eating and bulimia nervosa. Journal of clinical psychology 1999; 55(9):1021-40. https://doi.org/10.1002/(SICI)1097-4679(199909)55:9<1021::AID-JCLP1>3.0.CO;2-G
13. Fassino S, Amianto F, Abbate-Daga G. The dynamic relationship of parental personality traits with the personality and psychopathology traits of anorectic and bulimic daughters. Comprehensive psychiatry 2009; 50(3):232-9. https://doi.org/10.1016/j.comppsych.2008.07.010
14. Lock J. Evaluation of Family Treatment Models for Eating Disorders. Current opinion in psychiatry 2011; 24(4):274-9. https://doi.org/10.1097/YCO.0b013e328346f71e
15. Calam R, Waller G, Slade P, Newton T. Eating disorders and perceived relationships with parents. International Journal of Eating Disorders 1990; 9(5):479-85. https://doi.org/10.1002/1098-108X(199009)9:5<479::AID-EAT2260090502>3.0.CO;2-I
16. Humphrey LL. Observed family interactions among subtypes of eating disorders using structural analysis of social behavior. Journal of Consulting and Clinical Psychology 1989; 57(2):206. https://doi.org/10.1037/0022-006X.57.2.206
17. Benninghoven D, Tetsch N, Kunzendorf S, Jantschek G. Body image in patients with eating disorders and their mothers, and the role of family functioning. Comprehensive psychiatry 2007; 48(2):118-23. https://doi.org/10.1016/j.comppsych.2006.08.003
18. Shafran R, Mansell W. Perfectionism and psychopathology: A review of research and treatment. Clinical psychology review 2001. https://doi.org/10.1016/S0272-7358(00)00072-6
19. Bardone-Cone AM, Wonderlich SA, Frost RO, Bulik CM, Mitchell JE, Uppala S, et al. Perfectionism and eating disorders: current status and future directions. Clinical psychology review 2007; 27(3):384-405. https://doi.org/10.1016/j.cpr.2006.12.005
20. Fairburn CG, Cooper Z, Shafran R. Cognitive behaviour therapy for eating disorders: a "transdiagnostic" theory and treatment. Behaviour research and therapy 2003; 41(5):509-28. https://doi.org/10.1016/S0005-7967(02)00088-8
21. Boone L, Soenens B, Braet C, Goossens L. An empirical typology of perfectionism in early-to-mid adolescents and its relation with eating disorder symptoms. Behaviour research and therapy 2010; 48(7):686-91. https://doi.org/10.1016/j.brat.2010.03.022
22. Frost RO, Marten P, Lahart C, Rosenblate R. The dimensions of

perfectionism. Cognitive therapy and research 1990; 14(5):449-68. https://doi.org/10.1007/BF01172967

23. Hewitt PL, Flett GL. Perfectionism in the self and social contexts: Conceptualization, assessment, and association with psychopathology. Journal of personality and social psychology 1991; 60(3):456-70. https://doi.org/10.1037/0022-3514.60.3.456
24. Hewitt PL, Flett GL, Besser A, Sherry SB, McGee B. Perfectionism Is Multidimensional: a reply to Shafran, Cooper and Fairburn (2002). Behaviour research and therapy 2003; 41(10):1221-36. https://doi.org/10.1016/S0005-7967(03)00021-4
25. Soenens B, Vansteenkiste M, Vandereycken W, Luyten P, Sierens E, Goossens L. Perceived parental psychological control and eating-disordered symptoms: maladaptive perfectionism as a possible intervening variable. The Journal of nervous and mental disease 2008; 196(2):144-52. https://doi.org/10.1097/NMD.0b013e318162aabf
26. Soenens B, Elliot AJ, Goossens L, Vansteenkiste M, Luyten P, Duriez B. The intergenerational transmission of perfectionism: parents' psychological control as an intervening variable. J Fam Psychol 2005; 19(3):358-66. https://doi.org/10.1037/0893-3200.19.3.358
27. Woodside DB, Bulik CM, Halmi KA, Fichter MM, Kaplan A, Berrettini WH, et al. Personality, perfectionism, and attitudes toward eating in parents of individuals with eating disorders. International Journal of Eating Disorders 2002; 31(3):290-9. https://doi.org/10.1002/eat.10032
28. Sassaroli S, Apparigliato M, Bertelli S, Boccalari L, Fiore F, Lamela C, et al. Perfectionism as a mediator between perceived criticism and eating disorders. Eating and weight disorders: EWD 2011; 16(1):e37.
29. Woodside DB, Shekter-Wolfson L, Garfinkel PE, Olmsted MP, Kaplan AS, Maddocks SE. Family interactions in bulimia nervosa I: Study design, comparisons to established population norms, and changes over the course of an intensive day hospital treatment program. International Journal of Eating Disorders 1995; 17(2):105-15. https://doi.org/10.1002/1098-108X(199503)17:2<105::AID-EAT2260170202>3.0.CO;2-P
30. Strober M, Humphrey LL. Familial contributions to the etiology and course of anorexia nervosa and bulimia. Journal of Consulting and Clinical Psychology 1987; 55(5):654-9. https://doi.org/10.1037/0022-006X.55.5.654
31. Kog E, Vandereycken W, Vertommen H. The psychosomatic family model. A critical analysis of family interaction concepts. Journal of family therapy 1985; 7(1):31-44. https://doi.org/10.1046/j..1985.00663.x
32. Kog E, Vandereycken W. Family characteristics of anorexia nervosa and bulimia: A review of the research literature. Clinical psychology review 1985; 5(2):159-80. https://doi.org/10.1016/0272-7358(85)90020-0
33. Bray JH. Family assessment: Current issues in evaluating families. Family Relations 1995; 469-77. https://doi.org/10.2307/585001
34. Kog E, Vertommen H, Vandereycken W. Minuchin's Psychosomatic Family Model Revised: A Concept-Validation Study Using a Multitrait-Multimethod Approach. Family Process 1987; 26(2):235-53. https://doi.org/10.1111/j.1545-5300.1987.00235.x
35. O'Shaughnessy R, Dallos R. Attachment research and eating disorders: a review of the literature. Clinical child psychology and psychiatry 2009; 14(4):559-74. https://doi.org/10.1177/1359104509339082
36. Bowlby J. Attachment and Loss: Vol. 1: Attachment. New York: Basic Books. 1969.
37. Ward A, Ramsay R, Treasure J. Attachment research in eating disorders. British Journal of Medical Psychology 2000; 73(1):35-51. https://doi.org/10.1348/000711200160282
38. Ward A, Ramsay R, Turnbull S, Benedettini M, Treasure J. Attachment patterns in eating disorders: Past in the present. International Journal of Eating Disorders 2000; 28(4):370-6. https://doi.org/10.1002/1098-108X(200012)28:4<370::AID-EAT4>3.0.CO;2-P
39. O'Kearney R. Attachment Disruption in Anorexia Nervosa and Bulimia Nervosa: A Review of Theory and Empirical Research. 1995.
40. Ringer F, Crittenden PM. Eating disorders and attachment: the effects of hidden family processes on eating disorders. European eating disorders review : the journal of the Eating Disorders Association 2007; 15(2):119-30. https://doi.org/10.1002/erv.761
41. Zachrisson H, Kulbotten G. Attachment in anorexia nervosa: an exploration of associations with eating disorder psychopathology and psychiatric symptoms. Eat Weight Disord 2006; 11(4):163-70. https://doi.org/10.1007/BF03327567
42. Ward A, Ramsay R, Turnbull S, Steele M, Steele H, Treasure J. Attachment in anorexia nervosa: A transgenerational perspective. British Journal of Medical Psychology 2001; 74(4):497-505. https://doi.org/10.1348/000711201161145
43. Broberg AG, Hjalmers I, Nevonen L. Eating disorders, attachment and interpersonal difficulties: a comparison between 18-to 24-year-old patients and normal controls. European Eating Disorders Review 2001; 9(6):381-96. https://doi.org/10.1002/erv.421
44. Troisi A, Massaroni P, Cuzzolaro M. Early separation anxiety and adult attachment style in women with eating disorders. The British journal of clinical psychology 2005; 44(Pt 1):89-97. https://doi.org/10.1348/014466504X20053
45. Patel P, Wheatcroft R, Park RJ, Stein A. The children of mothers with eating disorders. Clinical Child and Family Psychology Review 2002; 5(1):1-19. https://doi.org/10.1023/A:1014524207660
46. Park RJ, Senior R, Stein A. The offspring of mothers with eating disorders. European child & adolescent psychiatry 2003; 12 Suppl 1:I110-19. https://doi.org/10.1007/s00787-003-1114-8
47. Lilenfeld LR, Kaye WH, Greeno CG, Merikangas KR, Plotnicov K, Pollice C, et al. A controlled family study of anorexia nervosa and bulimia nervosa: psychiatric disorders in first-degree relatives and effects of proband comorbidity. Archives of general psychiatry 1998; 55(7):603. https://doi.org/10.1001/archpsyc.55.7.603
48. Murray C, Waller G, Legg C. Family dysfunction and bulimic psychopathology: The mediating role of shame. International Journal of Eating Disorders 2000; 28(1):84-9. https://doi.org/10.1002/(SICI)1098-108X(200007)28:1<84::AID-EAT10>3.0.CO;2-R
49. Stairs AM, Smith GT, Zapolski TC, Combs JL, Settles RE. Clarifying the construct of perfectionism. Assessment 2012; 19(2):146-66. https://doi.org/10.1177/1073191111411663
50. Shafran R, Cooper Z, Fairburn CG. Clinical perfectionism: A cognitive–behavioural analysis. Behaviour research and therapy 2002; 40(7):773-91. https://doi.org/10.1016/S0005-7967(01)00059-6
51. Bieling PJ, Israeli AL, Antony MM. Is perfectionism good, bad, or both? Examining models of the perfectionism construct. Personality and Individual Differences 2004; 36(6):1373-85. https://doi.org/10.1016/S0191-8869(03)00235-6
52. Frost RO, Lahart CM, Rosenblate R. The development of perfectionism: A study of daughters and their parents. Cognitive therapy and research 1991; 15(6):469-89. https://doi.org/10.1007/BF01175730
53. Enns MW, Cox BJ, Clara I. Adaptive and maladaptive perfectionism: Developmental origins and association with depression prone-

ness. Personality and Individual Differences 2002; 33(6):921-35. https://doi.org/10.1016/S0191-8869(01)00202-1

54. Flett GL, Singer A. Perfectionism and parental authority styles. Individual Psychology 1995; 51:50.
55. Azizi K, Besharat MA. The Relationship Between Parental Perfectionism And Parenting Styles. Procedia - Social and Behavioral Sciences 2011; 15:1484-7. https://doi.org/10.1016/j.sbspro.2011.03.315
56. Craddock AE, Church W, Sands A. Family of origin characteristics as predictors of perfectionism. Australian Journal of Psychology 2009; 61(3):136-44. https://doi.org/10.1080/00049530802239326
57. Coplan RJ, Hastings PD, Lagacé-Séguin DG, Moulton CE. Authoritative and Authoritarian Mothers' Parenting Goals, Attributions, and Emotions Across Different Childrearing Contexts. Parenting 2002; 2(1):1-26. https://doi.org/10.1207/S15327922PAR0201_1
58. Kawamura KY, Frost RO, Harmatz MG. The relationship of perceived parenting styles to perfectionism. Personality and Individual Differences 2002; 32(2):317-27. https://doi.org/10.1016/S0191-8869(01)00026-5
59. Soenens B, Luyckx K, Vansteenkiste M, Luyten P, Duriez B, Goossens L. Maladaptive perfectionism as an intervening variable between psychological control and adolescent depressive symptoms: a three-wave longitudinal study. J Fam Psychol 2008; 22(3):465-74. https://doi.org/10.1037/0893-3200.22.3.465
60. Barber BK. Parental psychological control: Revisiting a neglected construct. Child development 1996; 67(6):3296-319. https://doi.org/10.2307/1131780
61. Mantzouranis G, Zimmermann G, Biermann Mahaim E, Favez N. A Further Examination of the Distinction Between Dependency-Oriented and Achievement-Oriented Parental Psychological Control: Psychometric Properties of the DAPCS with French-Speaking Late Adolescents. Journal of Child and Family Studies 2011; 21(5):726-33. https://doi.org/10.1007/s10826-011-9525-5
62. Bastiani AM, Rao R, Weltzin T, Kaye WH. Perfectionism in anorexia nervosa. International Journal of Eating Disorders 1995; 17(2):147-52. https://doi.org/10.1002/1098-108X(199503)17:2<147::AID-EAT2260170207>3.0.CO;2-X
63. Halmi KA, Sunday SR, Strober M, Kaplan A, Woodside DB, Fichter M, et al. Perfectionism in anorexia nervosa: variation by clinical subtype, obsessionality, and pathological eating behavior. American Journal of Psychiatry 2000; 157(11):1799-805. https://doi.org/10.1176/appi.ajp.157.11.1799
64. Egan SJ, Wade TD, Shafran R. Perfectionism as a transdiagnostic process: a clinical review. Clinical psychology review 2011; 31(2):203-12. https://doi.org/10.1016/j.cpr.2010.04.009
65. Klibert JJ, Langhinrichsen-Rohling J, Saito M. Adaptive and Maladaptive Aspects of Self-Oriented versus Socially Prescribed Perfectionism. Journal of College Student Development 2005; 46(2):141-56. https://doi.org/10.1353/csd.2005.0017
66. Saboonchi F, Lundh L-G, Öst L-G. Perfectionism and self-consciousness in social phobia and panic disorder with agoraphobia. Behaviour research and therapy 1999; 37(9):799-808. https://doi.org/10.1016/S0005-7967(98)00183-1
67. Maia BR, Soares MJ, Gomes A, Marques M, Pereira AT, Cabral A, et al. Perfectionism in obsessive-compulsive and eating disorders. Revista Brasileira de Psiquiatria 2009; 31(4):322-7. https://doi.org/10.1590/S1516-44462009005000004
68. Macedo AF, editor. Ser ou não ser (perfeito)? Perfeccionismo e psicopatologia. Lisboa: Portugal: Lidel; 2012.
69. Bulik CM, Tozzi F, Anderson C, Mazzeo SE, Aggen S, Sullivan PF. The relation between eating disorders and components of perfectionism. American Journal of Psychiatry 2003; 160(2):366-8. https://doi.org/10.1176/appi.ajp.160.2.366
70. Lilenfeld L, Stein D, Bulik C, Strober M, Plotnicov K, Pollice C, et al. Personality traits among currently eating disordered, recovered and never ill first-degree female relatives of bulimic and control women. Psychological medicine 2000; 30(6):1399-410. https://doi.org/10.1017/S0033291799002792
71. Quadflieg N, Fichter MM. The course and outcome of bulimia nervosa. European child & adolescent psychiatry 2003; 12 Suppl 1:I99-109. https://doi.org/10.1007/s00787-003-1113-9
72. Lilenfeld LR, Wonderlich S, Riso LP, Crosby R, Mitchell J. Eating disorders and personality: a methodological and empirical review. Clinical psychology review 2006; 26(3):299-320. https://doi.org/10.1016/j.cpr.2005.10.003
73. Steiger H, Thaler L. Eating disorders, gene-environment interactions and the epigenome: Roles of stress exposures and nutritional status. Physiology & behavior 2016; 162:181-5. https://doi.org/10.1016/j.physbeh.2016.01.041
74. Soenens B, Vansteenkiste M, Luyten P, Duriez B, Goossens L. Maladaptive perfectionistic self-representations: The mediational link between psychological control and adjustment. Personality and Individual Differences 2005; 38(2):487-98. https://doi.org/10.1016/j.paid.2004.05.008
75. Ablard KE, Parker WD. Parents' achievement goals and perfectionism in their academically talented children. Journal of Youth and Adolescence 1997; 26(6):651-67. https://doi.org/10.1023/A:1022392524554
76. Fletcher KL, Serena Shim S, Wang C. Perfectionistic concerns mediate the relationship between psychologically controlling parenting and achievement goal orientations. Personality and Individual Differences 2012; 52(8):876-81. https://doi.org/10.1016/j.paid.2012.02.001
77. Garcia-Villamisar D, Dattilo J, Del Pozo A. Depressive mood, eating disorder symptoms, and perfectionism in female college students: a mediation analysis. Eating disorders 2012; 20(1):60-72. https://doi.org/10.1080/10640266.2012.635569
78. Dakanalis A, Timko CA, Zanetti MA, Rinaldi L, Prunas A, Carra G, et al. Attachment insecurities, maladaptive perfectionism, and eating disorder symptoms: a latent mediated and moderated structural equation modeling analysis across diagnostic groups. Psychiatry Res 2014; 215(1):176-84. https://doi.org/10.1016/j.psychres.2013.10.039
79. Bernert RA, Timpano KR, Peterson CB, Crow SJ, Bardone-Cone AM, le Grange D, et al. Eating disorder and obsessive–compulsive symptoms in a sample of bulimic women: Perfectionism as a mediating factor. Personality and Individual Differences 2013; 54(2):231-5. https://doi.org/10.1016/j.paid.2012.08.042
80. Marsero S, Ruggiero G, Scarone S, Bertelli S, Sassaroli S. The relationship between alexithymia and maladaptive perfectionism in eating disorders: A mediation moderation analysis methodology. Eating and weight disorders: EWD 2011; 16(3):e182.