

EDU WORLD 2022

Edu World International Conference Education Facing Contemporary World Issues

PERSONALITY TRAITS AND EATING DISORDERS

Călin Mariana Floricica (a)*, Sălceanu Claudia (b)

*Corresponding Author

(a) Ovidius University of Constanta, Mamaia Blvd, 124, Constanta, Romania, fmarianacalin@gmail.com
(b) Ovidius University of Constanta, Mamaia Blvd, 124, Constanta, Romania, claudiasalceanu@yahoo.com

Abstract

Eating disorders are concerning mental health problems in our today's society. A sample of 91 university students, aged between 23 and 41 years old, all of them female, 48.35% married or in a stable relationship, and 51.65% single, has accepted to be part of this research. We used Millon Clinical Multiaxial Inventory-III (MCMI-III) and the Inventory of Eating Behaviour Disorders (EDI-3) to assess the correlations between the wish to be slim and personality traits like anxiety, depression, and dependency, also considering the variable marital status. In the case of married subjects or subjects involved in stable relationships, no significant correlations were obtained between the variable desire to be slim and the dependency scales, anxiety, and depression. On the other hand, in the case of single subjects, significant correlations have been identified between the above-mentioned scales: the desire to be slim and the dependency ($\rho=0.719$, $p=.000$); the desire to be slim and the anxiety scale ($\rho=0.536$, $p=.000$); desire to be slim and the major depression scale ($\rho=0.697$, $p=.000$). Results are discussed in the context of the importance of marital status for mental health and wellbeing of young people.

2672-815X © 2023 Published by European Publisher.

Keywords: Adults, eating disorders, personality traits, youth

1. Introduction

With an estimated 20 million people across Europe, suffering from eating disorders, we are facing a real mental health crisis, with devastating effects on the lives of adolescents and young adults (according to European Parliament, 2021), no matter their age, gender, or social background.

Eating disorders (ED) are defined by “abnormal eating habits, that adversely affect a person’s physical or mental health” (APA, 2013), thus severely impacting the quality of life and social function (Hay et al., 2017), supporting the development of severe somatic complications, risk of suicide (Keski-Rahkonen & Mustelin, 2016) and increased mortality rates. Anorexia nervosa, bulimia nervosa and binge eating are related to persistent and abnormal eating habits that negatively influence health and psychosocial functioning (Salmen et al., 2021).

The interest in these disorders has greatly increased in the last 20 years, especially in the new cultural and economic context, in which, because of the industrialization and globalization, more and more countries report an increasing incidence (Qian et al., 2022). Both biological and environmental factors appear to play a role in the emergence of ED. The cultural idealization of a slim silhouette is considered to contribute (Rikani et al., 2013), as well as different personality traits (Podar et al., 1999).

Emerging in childhood and during adolescence, these features could be enhanced due to a variety of physiological and cultural influences, such as hormone changes associated with puberty, stress related to the close demands of maturity, socio-cultural influences, and perceived expectations, especially in areas of body image. ED have been associated with a fragile self-sense and disorderly maturation (Skårderud & Fonagy, 2012), with negative beliefs about the self, social isolation, and an overall poor quality of life (BEAT, 2015).

1.1. Eating disorders

Bulimia nervosa is a disturbance characterized by excessive feeding and purging, thus eliminating the extra calories in an unhealthy way (WebMD, 2021), with great impact on multiple organ systems (Mitchell & Crow, 2006). Purging may include self-imposed spills, excessive exercises, and the use of diuretics, enemas, and laxatives. Anorexia nervosa is characterized by an extreme restriction to food and an excessive weight loss, accompanied by fear of weight (Nolen-Hoeksma, 2013). The most notable difference between the type of compulsive anorexia nervosa and bulimia nervosa is the person’s body weight. Those diagnosed with anorexia nervosa have a low body weight compared to their reference value, while those with bulimia nervosa may have a body weight that ranges from normal to obese (NAMI, 2013).

Symptoms and complications vary according to the nature and severity of the dietary disorder (Strumia, 2005): acne, fines, tooth loss and cavities, constipation, water retention, lanugo, cardiac arrest, death, osteoporosis, electrolyte imbalance, hyponatremia, atrophy of the brain, renal insufficiency, suicide. Some physical symptoms of eating disorders are: feeling weak, tired, cold, low facial hair growth in men, decreased number of erections after waking up, decreased libido, weight loss (Treasure et al., 2010).

Many people with food disorders also have dysmorphic body disorders that change the way a person sees himself. Studies found that a large proportion of individuals diagnosed with dysmorphic disorders of the body also had a kind of food disorder, with 15% of individuals having nervous anorexia or nervous bulimia (Ruffolo et al., 2006). This link between the body dysmorphic disorder and anorexia results from the fact that both are characterized by a concern about the physical appearance and a distortion of the image of the body (Grant et al., 2002). There are also many other possibilities, such as environmental, social and people-to-people issues that could promote and support these diseases (Bulik et al., 2007).

The media is also often condemned for the increase in the phenomenon of ED because media images of the ideal thin physical form of people, such as models and celebrities, motivate or even force people to try to get this image themselves. The media is accused of distorting reality, in the sense that people portrayed in the media are weak in an unnatural way, forcing their bodies to appear as ideal by exerting excessive pressure on themselves to look in a certain way (Sarvananda, 2020). While some studies described the causes of food disorders as primarily psychological, environmental, and socio-cultural, other studies have found evidence that there is a genetic or predominantly hereditary aspect of the causes of food disorders (DeAngelis, 2002).

Many studies show a possible genetic predisposition to dietary disorders because of the hereditary legacy (Mazzeo & Bulik, 2009). A person who is a first-degree relative to someone who has had or currently has a food disorder is seven to twelve times more likely to have an ED (Patel et al., 2002). There are other neurobiological factors at stake related to emotional reactivity and impulsiveness that could lead to compass and purge behaviour (Iarovici, 2014).

Alongside environmental factors, the complex human personality traits are shaped by a genetic component. The maladaptive levels of certain traumatic or anoxic cerebral lesions, neurodegenerative diseases, neurotoxicity, bacterial infections, or parasitic infections, as well as hormonal influences can be inherited. These features were found to originate in different regions of the brain (Gardini et al., 2009), such as amygdala (Marsh et al., 2008) and the prefrontal cortex (Rubino et al., 2007), and are proved to affect the dietary behaviour (Sinai et al., 2009).

1.2. Psychological factors of eating disorders

While some people have an earlier disturbance that may increase their vulnerability to the development of a food disorder (Kaye et al., 2004), others may develop it later (Braun et al., 1994). Studies show that the level and type of symptoms of dietary disorders drive its comorbidity (Spindler & Milos, 2007).

Abuse of children, including physical, psychological, and sexual abuse and neglect, has proven to be threefold in the risk of food disturbance. Although in the case of anorexia the association is not particularly clear, for bulimia it seems that sexual abuse doubles the risk (Caslini et al., 2016).

Another contributing factor is social isolation, which has a negative impact on both physical and emotional, causing a higher mortality rate in the case of socially isolated people. Thus, the risk of mortality is significantly increased for people with pre-existing medical or psychiatric problems. Thus social isolation is equally dangerous and can be associated with the effects of smoking and psychosocial

risk factors (Brummett et al., 2001). Social isolation can be stressful, depressing and may cause anxiety, thus, to deal with the painful feelings, a person can use food as a source of comfort. The loneliness of social isolation and the inherent stress associated with it were involved as triggers for compulsive consumption (Nonogaki et al., 2007).

Waller et al. (2007) state that people resort to repressing emotions in different situations. For example, the person in question resorts to restrictions to avoid any emotional activation, while another person may compulsively consume various things after an emotion has been activated (Fox, 2009).

The development of children's dietary behaviour is also influenced by parents, through a variety of factors, like family genetic predisposition, cultural or ethnic dietary choices, parents' own eating habits, the degree of involvement and expectations of their children's dietary behaviour, the interpersonal relationships between parent and child, and the presence or absence of a stable childcare environment. Eating disorders may be shaped by maladaptive parental behaviour, especially in early childhood, with a close connection between weight gain and the habit of making the child eat everything from the plate. While dietary restrictions do not yield results in controlling a child's eating behaviour. It is necessary to communicate and make child understand the importance of a diversified diet that helps him to develop harmoniously (Savage et al., 2007).

Adams and Crane (1980) emphasize a negative stereotypical influence in parent's perception of their child's body, which affects the child's self-image and satisfaction with his or her own body. Anorexia nervosa often appears in obedient girls with high performances, who always try to satisfy their parents, who tend to overcontrol and do not encourage the expression of emotions, thus inhibiting girls in accepting their feelings and wishes. Such adolescents do not have the capacity to be independent, although they feel the need to become autonomous, which often results in acts of rebellion. Control of food consumption can make them feel better because it gives them a sense of control (Nolen-Hoeksema, 2013).

A significant contribution also comes from peer pressure, in terms of concerns about body image and attitude to food consumption. Teenagers' concerns about their own weight, how they are perceived by others and their own thoughts about what they believe their colleagues want them to be, are significantly related to weight control behaviour (Mackey & La Greca, 2006).

The cultural focus on being slim, the perception about the external pressure to reach an ideal body that is represented by the media, predicts dissatisfaction with the body image, dysmorphic body disorder and an eating disturbance (Knauss et al., 2007). This cultural pressure, on both men and women, to be "perfect" is a predisposing factor for the development of ED (Garner & Garfinkel, 1980). In addition, when women of all races base their self-assessment on what the ideal body is culturally considered, the incidence of eating disorders increases.

Economic well-being has been seen as a danger to ED, especially because people full of resources can easily diversify their diet and resort to various solutions to reduce body weight (Nevonen & Noring, 2004). In various studies we can observe a direct link between the socio-economic well-being of people and the desire to look as good as possible by any method (Polivy & Herman, 2002). However, it can be observed, with the achievement of socio-economic well-being, this relationship is reduced and, in some cases, even disappears (Soh et al., 2006).

Having a central role in negative emotions (Chorpita & Barlow, 1998), anxiety is a pervasive problem in modern society (Zeidner & Matthews, 2011), correspondent to a state of uncertainty, accompanying concerns over possible disasters that a person anticipates. Anxious people tend to feel nervous, tensed, or worried. Studies show that anxiety disorders are significantly more frequent in people with ED (Swinbourne & Touyz, 2007), because there are potential mechanisms, such as safety behaviours and cognitive avoidance linking the disorders. Individuals seem to be more susceptible to appraising situations as threatening if they already have schemas that represent the world as unsafe and themselves as vulnerable (Pallister & Walker, 2008). We can argue that one of the common factors influencing these schemas, is the familial environment, which plays an important part in shaping cognition and in modelling young people's view of the world and of themselves. Children who overeat with a sense of losing control, deal with stress, have poor coping skills, are tensed and worried and thus, they learn that eating lowers the anxiety. Considering that ED are progressive conditions, often starting with an intentional and controlled manner that allows a certain sense of control, during adolescence, when young people compare themselves to their peers and recognize differences in physical appearance, anxiety and fear of social rejection begin to develop. Furthermore, having to cope to different stressors, adolescents may consume food for comfort, which offers them a short-term relief (Toledo Center for Eating Disorders, 2021).

Closely related to anxiety, depression is an emotional expression characterized by helplessness or powerlessness to live up to certain aspirations (Bibring, 1953), influenced by multiple stressors supported by the effects of contexts and personal characteristics (Hammen, 2005). From feelings of sadness, boredom, discomfort, inner pressure, and physical symptoms, such as pain, dizziness, and fatigue (Kleinmann, 2004), depression manifestations tend to cover a wide range of individual experiences, thus being a world-wide phenomenon.

Significant comorbidity between ED and depression was found (Keel et al., 2005), different studies arguing that serotonin dysregulation, implicated in major depression, also plays a significant part in the prevalence of patients with ED (Jimerson et al., 1990). Because dieting-induced weight loss seems to be the principal trigger, especially women with self-critical or depressive features may also develop ED (Casper, 1998). Thus, ED and depression are interdependent on each other (Saleem et al., 2014), arguments being offered in support of the idea that depression and compulsivity are related to ED (Berkman et al., 2006). Santos et al. (2007) argue that disordered eating attitudes are responsible for a significant variance in self-reported depressive symptoms, also considering the effects of body dissatisfaction, poor social support, and low self-esteem. Also, a decreased physical activity contributes to the use of unhealthy weight control behaviours (Becker et al., 2014).

Other studies argue that a cultural ideal of thinness causes depression in women, starting with puberty, since it has been found that the average age of onset for depression is younger in today's society than it was in the past (McCarthy, 1990). Becker et al. (2014) also state that the internalization of the thin-ideal standard in women beauty increases the risk for body dissatisfaction, which increases the risk of dietary restraint and negative affect, especially in terms of depressed mood.

2. Problem Statement

Monitoring the ED in Romania is difficult because statistics are not always updated. Some studies show a 24.2% prevalence (Tavolacci et al., 2018), particularly addressing university students. This raises the question, why are students more predisposed to ED? How personality traits such as anxiety, depression and dependence may affect the development of ED or increase the risk for such disruptive behaviours.

3. Research Questions

The main hypothesis of our study assumes the existence of significant correlations between the wish to be slim and anxiety, depression, and dependency, also considering the variable marital status.

4. Purpose of the Study

In the context of so many variables influencing the development of ED, we tried to address the problem of identifying the relationship between ED and personality traits, namely anxiety, depression, and dependence on a sample of Romanian university students.

5. Research Methods

A sample of 91 students, aged between 23 and 41 years old, all of them female, 48.35% married or in a stable relationship, and 51.65% single, has accepted to be part of this research.

We used Millon Clinical Multiaxial Inventory-III (MCMI-III), designed to provide information about psychopathology for emotional, behavioural, and interpersonal difficulties, and the Inventory of Eating Behaviour Disorders (EDI-3), a widely used self-assessment tool for traits or psychological constructs that have proven to be clinically relevant to the development and maintenance of eating behaviour disorders, also standardized for Romanian population.

6. Findings

Our hypothesis assumed that there is a significant correlation between the desire to be weak and personality disorders such as anxiety, major depression, and addiction, which is influenced by marital status. Our data is not distributed normally for any of the variables considered, and applied the Spearman test of the correlation, with the results available in Table 1:

Table 1. Correlation between the desire to be weak and the dependent scales, anxiety, major depression

Marital status		Desire to be slim	Dependency	Anxiety	Depression	
Married	Desire to be slim	Correlation Coefficient	1.000	.155	.056	.048
		Sig.(2-tailed)	.	.315	.719	.759
		N	44	44	44	44

		Dependency	Correlation Coefficient	.155	1.000	.486**	.444**
			Sig.(2-tailed)	.315	.	.001	.003
	Spearman's rho		N				
		Anxiety	Correlation Coefficient	.056	.486**	1.000	.495**
			Sig.(2-tailed)	.719	.001	.	.001
			N				
		Depression	Correlation Coefficient	.048	.444**	.495**	1.000
			Sig.(2-tailed)	.759	.003	.001	.
			N				
Unmarried	Spearman's rho	Desire to be slim	Correlation Coefficient	1.000	.719**	.536**	.697**
			Sig.(2-tailed)	.	.000	.000	.000
			N	43	43	43	43
		Dependency	Correlation Coefficient	.719**	1.000	.824**	.719**
			Sig.(2-tailed)	.000	.	.000	.000
			N	43	43	43	43
		Anxiety	Correlation Coefficient	.536**	.824**	1.000	.747**
			Sig.(2-tailed)	.000	.000	.	.000
			N	43	43	43	43
		Depression	Correlation Coefficient	.697**	.719**	.747**	1.000
			Sig.(2-tailed)	.000	.000	.000	.
			N	43	43	43	43

In the case of married subjects, no significant correlations were obtained between the variable desire to be slim and the dependency scales, anxiety, depression. On the other hand, in the case of single subjects, significant correlations have been identified between the above-mentioned scales: 1) the desire to be slim and the dependency scale ($\rho=.719$, $p=.000$); 2) the desire to be slim and the anxiety scale ($\rho=.536$, $p=.000$); 3) the desire to be slim and the major depression scale ($\rho=.697$, $p=.000$).

Prospective studies have shown that the desire to be slim scale is a good predictor of compulsive eating and the occurrence of eating disorders in adolescents and adults. The belief that “weak is beautiful” is ubiquitous in our culture. This has been documented in humans since the age of three (Harriger et al., 2010). At a time when young people focus on developing their individual identity (Slater & Tiggemann, 2002), they are also highly disposed to both social pressure and media imagery (Tiggemann & Pickering, 1996), which can have a profound impact on how they see their own bodies (Clark & Tiggemann, 2007).

The dependent prototype shapes the image of a person evading adult responsibilities, characterized by docility and passivity, deprivation in of functional skills and avoidance of self-affirmation. Such people are in excessive need of advice and reassurance, they feel unsettled, alone, and helpless. They are afraid of being abandoned and having to take care of themselves. They can be easily convinced, are naive, and gullible. As internalization mechanisms, they are strongly devoted to another person, and sacrifice their own perspectives to others to exclude the possibility of conflicts or threats to their relationship.

From the perspective of structural attributes, they have an inappropriate self-image, they see themselves as weak, fragile, and inadequate, demonstrating a lack of self-confidence, minimizing their own attitudes and competencies, and demonstrating minimal skills to manage and solve stressors. They entrust others with the responsibility to meet their needs, showing a mixture of relatively undeveloped and undifferentiated adaptive abilities and an elementary system of independent functioning.

The results of the analysis showed a correlation between the desire to be slim and the dependent prototype in subjects without a partner, which is not the case for subjects in a relationship. This may be based on the explanation that the presence of a reliable person in personal life, both in good or bad situations, regarding emotional health or the body's own perception, facilitates comfort and satisfaction with one's own body, thus eliminating the permanent need for validation, which single people probably feel.

It is known that a high-quality romantic relationship is associated with low body dissatisfaction for both men and women (Friedman et al., 1999; Goins et al., 2012; Juarez & Pritchard, 2012). Several aspects of intimate relationships were shown to influence image on one's body (Laus et al., 2018). The duration of the relationship turned out to be a significant predictor of much higher body dissatisfaction in both sexes. This result has not been found in previous research (Goins et al., 2012) and contradicts the hypothesis of the 2018 study, but it is possible that with the evolution of their relationships, people gradually begin to receive less positive feedback about their appearance from their partners, which could lead to a dissatisfaction with the elevated body (Markey & Markey, 2006).

In addition, both societal and media judgment leads females to believe in a "fit and healthy" body concept. An 18-year-old H University student said, "now it is considered that a weight of less than 50 kg is suitable." Indeed, comparisons with idealized stitches in the media and in social contexts have been shown to be associated with dissatisfaction with body image, especially in young women (Dittmar & Howard, 2004).

The theory of objectivity (Fredrickson & Roberts, 1997) holds that women are constantly objectified, and that body image is often used in evaluating their personal value by others. Girls and women are used to internalizing an observer's perspective as a primary vision of their physical self. This self-insight can lead to a body monitoring as a frequent habit, which in turn can enhance women's tendencies to develop feelings of shame and anxiety.

The results of the analysis showed a correlation between the desire to be slim and anxiety in single subjects, which is not true for subjects in a relationship. In addition to our results, Weller and Dziegielewski (2004) found that partner's support is inversely proportional to body image disorders and anxiety about physical appearance among women. Of all the styles of providing support, support for self-esteem (e.g., compliments received from a partner) is more predictive of positive body images among females than other types of support for partners (emotional support, informational support, etc.).

Dissatisfaction with the body is a risk factor for eating disorders behaviour, depression (Ferreiro et al., 2011) and low self-esteem (Paxton et al., 2006).

Depressive episodes are characterized by prolonged depressive moods, loss of pleasure in most activities, or both simultaneously. Experiences of depression, ranging from mild to severe, debilitating,

are common in both women and men. Even so, women are twice as likely as men to become depressed (Nolen-Hoeksema, 1990).

The results of the analysis showed a correlation between the desire to be weak and depression in subjects without a partner, which is not true for those in a relationship.

Therefore, understanding the nature and extent of bodily dissatisfaction throughout life could have a positive impact on these areas by informing about the development of age-appropriate interventions for women.

7. Conclusions

Eating disorders are real, complex medical, psychological, and psychiatric illnesses with serious consequences for health, productivity, and relationships. Unhealthy eating behaviours appear, and, in this case, these disorders can become life-threatening, especially if not recognized and treated appropriately. Eating disorders often occur due to underlying causes, including low self-esteem, mental health disorders, substance abuse disorders, or a history of trauma or neglect.

Our objective was to verify the existence of significant correlations between the wish to be slim and anxiety, depression, and dependency, also considering the variable marital status, on a sample of Romanian university students. In the case of married subjects or subjects involved in stable relationships, we identified no significant correlations between the variable desire to be slim and the dependency scales, anxiety, and depression. On the other hand, in the case of single subjects, significant correlations have been identified between the above-mentioned scales: the desire to be slim and the dependency ($\rho=0.719$, $p=.000$); the desire to be slim and the anxiety scale ($\rho=0.536$, $p=.000$); desire to be slim and the major depression scale ($\rho=0.697$, $p=.000$).

We stress the importance of prevention of eating disorders in the context in which the cultural factors we are constantly exposed to through media messages suggest that beauty means thinness (for women) and muscular (for men). Thus, a thin shape becomes a struggle that women face, in order to feel good with themselves, to feel accepted, while men tend to over-exercise. Education can be extremely helpful, with health professionals that can provide information about disorders and suggest different ways to handle it. Also, acknowledging the complications that may occur, may help young women to make positive changes in their lives.

Acknowledgments

We would like to express our gratitude to Mrs. Oncescu Nicoleta Gena, who participated in this research project, providing help in collecting the data and interacting with the respondents throughout this research.

References

- Adams, G., & Crane, P. (1980). An Assessment of Parents' and Teachers' Expectations of Preschool Children's Social Preference for Attractive or Unattractive Children and Adults. *Child Development*, 51(1), 224-231. <https://doi.org/10.2307/1129610>

- American Psychiatric Association. (APA). (2013). *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.). American Psychiatric Publishing.
- BEAT. (Beating Eating Disorders). (2015). *The costs of eating disorders. Social, health and economic impacts*. Pricewaterhouse Coopers LLP. https://www.basw.co.uk/system/files/resources/basw_54403-3_0.pdf
- Becker, C. B., Plasencia, M., Kilpela, L. S., Briggs, M., & Stewart, T. (2014). Changing the course of comorbid eating disorders and depression: what is the role of public health interventions in targeting shared risk factors? *Journal of Eating Disorders*, 2, 15. <https://doi.org/10.1186/2050-2974-2-15>
- Berkman, N. D., Bulik, C. M., Brownley, K. A., Lohr, K. N., Sedway, J. A., Rooks, A., & Gartlehner, G. (2006). *Management of Eating Disorders. Evidence Report/Technology Assessment* No. 135. (Prepared by the RTI International-University of North Carolina Evidence-Based Practice Center under Contract No. 290-02-0016.) AHRQ Publication No. 06-E010. Rockville, MD: Agency for Healthcare Research and Quality.
- Bibring, E. (1953). The mechanism of depression. In P. Greenacre (Ed.), *Affective disorders; psychoanalytic contributions to their study* (pp. 13–48). International Universities Press.
- Braun, D., Sunday, S., & Halmi, K. (1994). Psychiatric comorbidity in patients with eating disorders. *Psychological Medicine*, 24(4), 859-867. <https://doi.org/10.1017/s0033291700028956>
- Brummett, B. H., Barefoot, J. C., Siegler, I. C., Clapp-Channing, N. E., Lytle, B. L., Bosworth, H. B., Williams, R. B. Jr., & Mark, D. B. (2001). Characteristics of socially isolated patients with coronary artery disease who are at elevated risk for mortality. *Psychosomatic Medicine*, 63, 267–272. <https://doi.org/10.1097/00006842-200103000-00010>
- Bulik, C., Hebebrand, J., Keski-Rahkonen, A., Klump, K., Reichborn-Kjennerud, T., Mazzeo, S., & Wade, T. (2007). Genetic epidemiology, endophenotypes, and eating disorder classification. *International Journal of Eating Disorders*, 40(S3), S52-S60. <https://doi.org/10.1002/eat.20398>
- Caslini, M., Bartoli, F., Crocamo, C., Dakanalis, A., Clerici, M., & Carrà, G. (2016). Disentangling the Association Between Child Abuse and Eating Disorders. *Psychosomatic Medicine*, 78(1), 79-90. <https://doi.org/10.1097/PSY.0000000000000233>
- Casper, R. C. (1998). Depression and eating disorders. *Depression and Anxiety*, 8(51), 96-104. [https://doi.org/10.1002/\(SICI\)1520-6394\(1998\)8:1+<96::AID-DA15>3.0.CO;2-4](https://doi.org/10.1002/(SICI)1520-6394(1998)8:1+<96::AID-DA15>3.0.CO;2-4)
- Chorpita, B. F., & Barlow, D. H. (1998). The development of anxiety: The role of control in the early environment. *Psychological Bulletin*, 124(1), 3-21. <https://doi.org/10.1037/0033-2909.124.1.3>
- Clark, L., & Tiggemann, M. (2007). Sociocultural Influences and Body Image in 9- to 12-Year-Old Girls: The Role of Appearance Schemas. *Journal of Clinical Child & Adolescent Psychology*, 36(1), 76-86. https://doi.org/10.1207/s15374424jccp3601_8
- DeAngelis, T. (2002). A genetic link to anorexia. Groundbreaking research supports the theory that anorexia is more than a psychosocial illness: genes are likely responsible, too. *Monitor of Psychology*, 33(3), 34.
- Dittmar, H., & Howard, S. (2004). Professional hazards? The impact of models' body size on advertising effectiveness and women's body-focused anxiety in professions that do and do not emphasize the cultural ideal of thinness. *British Journal of Social Psychology*, 43(4), 477-497. <https://doi.org/10.1348/0144666042565407>
- European Parliament. (2021). *Eating disorders: the situation in the European Union*. https://www.europarl.europa.eu/doceo/document/P-9-2021-005594_EN.html
- Ferreiro, F., Seoane, G., & Senra, C. (2011). A Prospective Study of Risk Factors for the Development of Depression and Disordered Eating in Adolescents. *Journal of Clinical Child & Adolescent Psychology*, 40(3), 500-505. <https://doi.org/10.1080/15374416.2011.563465>
- Fox, J. R. E. (2009). Eating disorders and emotions [Editorial]. *Clinical Psychology & Psychotherapy*, 16(4), 237-239. <https://doi.org/10.1002/cpp.625>
- Fredrickson, B., & Roberts, T. (1997). Objectification Theory: Toward Understanding Women's Lived Experiences and Mental Health Risks. *Psychology of Women Quarterly*, 21(2), 173-206. <https://doi.org/10.1111/j.1471-6402.1997.tb00108.x>

- Friedman, M., Dixon, A., Brownell, K., Whisman, M., & Wilfley, D. (1999). Marital status, marital satisfaction, and body image dissatisfaction. *International Journal of Eating Disorders*, 26(1), 81-85. [https://doi.org/10.1002/\(sici\)1098-108x\(199907\)26:1<81::aid-eat10>3.0.co;2-v](https://doi.org/10.1002/(sici)1098-108x(199907)26:1<81::aid-eat10>3.0.co;2-v)
- Gardini, S., Cloninger, C. R., & Venneri, A. (2009). Individual differences in personality traits reflect structural variance in specific brain regions. *Brain Research Bulletin*, 79(5), 265-270. <https://doi.org/10.1016/j.brainresbull.2009.03.005>
- Garner, D., & Garfinkel, P. (1980). Socio-cultural factors in the development of anorexia nervosa. *Psychological Medicine*, 10(4), 647-656. <https://doi.org/10.1017/s0033291700054945>
- Goins, L. B., Markey, C. N., & Gillen, M. M. (2012). Understanding Men's Body Image in the Context of Their Romantic Relationships. *American Journal of Men's Health*, 6(3), 240-248. <https://doi.org/10.1177/1557988311431007>
- Grant, J. E., Kim, S. W., & Eckert, E. D. (2002). Body dysmorphic disorder in patients with anorexia nervosa: Prevalence, clinical features, and delusional quality of body image. *International Journal of Eating Disorders*, 32(3), 291-300. <https://doi.org/10.1002/eat.10091>
- Hammen, C. (2005). Stress and Depression. *Annual Review of Clinical Psychology*, 1, 293-319. <https://doi.org/10.1146/annurev.clinpsy.1.102803.143938>
- Harriger, J. A., Calogero, R. M., Witherington, D. C., & Smith, J. E. (2010). Body Size Stereotyping and Internalization of the Thin Ideal in Preschool Girls. *Sex Roles*, 63(9-10), 609-620. <https://doi.org/10.1007/s11199-010-9868-1>
- Hay, P., Mitchison, D., Collado, A. E. L., González-Chica, D. A., Stocks, N., & Touyz, S. (2017). Burden and health-related quality of life of eating disorders, including Avoidant/Restrictive Food Intake Disorder (ARFID), in the Australian population. *Journal of Eating Disorders*, 5(1), 21. <https://doi.org/10.1186/s40337-017-0149-z>
- Iarovici, D. (2014). *Mental health issues and the university student*. Johns Hopkins University Press.
- Jimerson, D. C., Lesem, M. D., Kaye, W. H., Hegg, A. P., & Brewerton, T. D. (1990). Eating disorders and depression: Is there a serotonin connection? *Biological Psychiatry*, 28(5), 443-454. [https://doi.org/10.1016/0006-3223\(90\)90412-U](https://doi.org/10.1016/0006-3223(90)90412-U)
- Juarez, L., & Pritchard, M. (2012). Body Dissatisfaction: Commitment, Support, and Trust in Romantic Relationships. *Journal of Human Behavior in the Social Environment*, 22(2), 188-200. <https://doi.org/10.1080/10911359.2012.647478>
- Kaye, W. H., Bulik, C. M., Thornton, L., Barbarich, N., Masters, K., & the Price Foundation Collaborative Group. (2004). Comorbidity of Anxiety Disorders With Anorexia and Bulimia Nervosa. *American Journal of Psychiatry*, 161(12), 2215-2221. <https://doi.org/10.1176/appi.ajp.161.12.2215>
- Keel, P. K., Klump, K. L., Miller, K. B., McGue, M., & Iacono, W. G. (2005). Shared transmission of eating disorders and anxiety disorders. *International Journal of Eating Disorders*, 38(2), 99-105. <https://doi.org/10.1002/eat.20168>
- Keski-Rahkonen, A., & Mustelin, L. (2016). Epidemiology of eating disorders in Europe: prevalence, incidence, comorbidity, course, consequences, and risk factors. *Current Opinion in Psychiatry*, 29(6), 340-345. <https://doi.org/10.1097/YCO.0000000000000278>
- Kleinman, A. (2004). Culture and Depression. *New England Journal of Medicine*, 351(10), 951-953. <https://doi.org/10.1056/nejmp048078>
- Knauss, C., Paxton, S. J., & Alsaker, F. D. (2007). Relationships amongst body dissatisfaction, internalisation of the media body ideal and perceived pressure from media in adolescent girls and boys. *Body Image*, 4(4), 353-360. <https://doi.org/10.1016/j.bodyim.2007.06.007>
- Laus, M. F., Almeida, S. S., & Klos, L. A. (2018). Body image and the role of romantic relationships. *Cogent Psychology*, 5(1), 1496986. <https://doi.org/10.1080/23311908.2018.1496986>
- Mackey, E., & La Greca, A. (2006). Adolescents' Eating, Exercise, and Weight Control Behaviors: Does Peer Crowd Affiliation Play a Role? *Journal of Pediatric Psychology*, 32(1), 13-23. <https://doi.org/10.1093/jpepsy/jsl041>
- Markey, C. N., & Markey, P. M. (2006). Romantic Relationships and Body Satisfaction Among Young Women. *Journal of Youth and Adolescence*, 35(2), 256-264. <https://doi.org/10.1007/s10964-005-9013-6>

- Marsh, A., Finger, E., Mitchell, D., Reid, M., Sims, C., Kosson, D., Towbin, K., Leibenluft, E., Pine, D., & Blair, R. (2008). Reduced Amygdala Response to Fearful Expressions in Children and Adolescents With Callous-Unemotional Traits and Disruptive Behavior Disorders. *American Journal of Psychiatry*, 165(6), 712-720. <https://doi.org/10.1176/appi.ajp.2007.07071145>
- Mazzeo, S. E., & Bulik, C. M. (2009). Environmental and Genetic Risk Factors for Eating Disorders: What the Clinician Needs to Know. *Child and Adolescent Psychiatric Clinics of North America*, 18(1), 67-82. <https://doi.org/10.1016/j.chc.2008.07.003>
- McCarthy, M. (1990). The thin ideal, depression and eating disorders in women. *Behaviour Research and Therapy*, 28(3), 205-214. [https://doi.org/10.1016/0005-7967\(90\)90003-2](https://doi.org/10.1016/0005-7967(90)90003-2)
- Mitchell, J. E., & Crow, S. (2006). Medical complications of anorexia nervosa and bulimia nervosa. *Current Opinion in Psychiatry*, 19(4), 438-443. <https://doi.org/10.1097/01.yco.0000228768.79097.3e>
- NAMI (National Alliance of Mental Illness). (2013). *Mental Illnesses. Bulimia nervosa*. <https://web.archive.org/web/20150108102838/>
- Nevonen, L., & Norring, C. (2004). Socio-economic variables and eating disorders: A comparison between patients and normal controls. *Eating and Weight Disorders: EWD*, 9(4), 279-284. <https://doi.org/10.1007/BF03325082>
- Nolen-Hoeksema, S. (1990). *Sex differences in depression*. Stanford University Press.
- Nolen-Hoeksema, S. (2013). *Abnormal Psychology*. 6th Ed. McGraw-Hill Higher Education.
- Nonogaki, K., Nozue, K., & Oka, Y. (2007). Social Isolation Affects the Development of Obesity and Type 2 Diabetes in Mice. *Endocrinology*, 148(10), 4658-4666. <https://doi.org/10.1210/en.2007-0296>
- Pallister, E., & Walker, G. (2008). Anxiety in the eating disorders: Understanding the overlap. *Clinical Psychology Review*, 28(3), 366-386. <https://doi.org/10.1016/j.cpr.2007.07.001>
- Patel, P., Wheatcroft, R., Park, R. J., & Stein, A. (2002). The children of mothers with eating disorders. *Clinical Child and Family Psychology Review*, 5(1), 1-19. <https://doi.org/10.1023/A:1014524207660>
- Paxton, S., Neumark-Sztainer, D., Hannan, P., & Eisenberg, M. (2006). Body Dissatisfaction Prospectively Predicts Depressive Mood and Low Self-Esteem in Adolescent Girls and Boys. *Journal of Clinical Child & Adolescent Psychology*, 35(4), 539-549. https://doi.org/10.1207/s15374424jccp3504_5
- Podar, I., Hannus, A., & Allik, J. (1999). Personality and Affectivity Characteristics Associated With Eating Disorders: A Comparison of Eating Disordered, Weight-Preoccupied, and Normal Samples. *Journal of Personality Assessment*, 73(1), 133-147. <https://doi.org/10.1207/s15327752jpa730109>
- Polivy, J., & Herman, C. P. (2002). Causes of Eating Disorders. *Annual Review of Psychology*, 53(1), 187-213. <https://doi.org/10.1146/annurev.psych.53.100901.135103>
- Qian, J., Wu, Y., Liu, F., Zhu, Y., Jin, H., Zhang, H., Wan, Y., Li, C., & Yu, D. (2022). An update on the prevalence of eating disorders in the general population: a systematic review and meta-analysis. *Eating and Weight Disorders - Studies on Anorexia, Bulimia and Obesity*, 27, 415-428. <https://doi.org/10.1007/s40519-021-01162-z>
- Rikani, A. A., Choudhry, Z., Choudhry, A. M., Ikram, H., Asghar, M. W., Kajal, D., Waheed, A., & Mobassarrah, N. J. (2013). A critique of the literature on etiology of eating disorders. *Annals of Neurosciences*, 20(4), 157-161. <https://doi.org/10.5214/ans.0972.7531.200409>
- Rubino, V., Blasi, G., Latorre, V., Fazio, L., d'Errico, I., Mazzola, V., Caforio, G., Nardini, M., Popolizio, T., Hariri, A., Arciero, G., & Bertolino, A. (2007). Activity in medial prefrontal cortex during cognitive evaluation of threatening stimuli as a function of personality style. *Brain Research Bulletin*, 74(4), 250-257. <https://doi.org/10.1016/j.brainresbull.2007.06.019>
- Ruffolo, J., Phillips, K., Menard, W., Fay, C., & Weisberg, R. (2006). Comorbidity of body dysmorphic disorder and eating disorders: Severity of psychopathology and body image disturbance. *International Journal of Eating Disorders*, 39(1), 11-19. <https://doi.org/10.1002/eat.20219>
- Saleem, M., Sattar, S., Zafar, M., & Bin Ismail, R. (2014). Link between eating disorders and depression. *Pakistan Journal of Commerce and Social Sciences*, 8(3), 925-937.

- Salmen, T., Mihai, B. M., Grigoriu, C., Ducu, I., Berceanu, C., Vladareanu, I. T., Dima, V., & Bohiltea, R. E. (2021). Eating disorders in pregnancy. *Romanian Journal of Medical Practice*, 16(4), 447-450. <https://doi.org/10.37897/RJMP.2021.4.8>
- Santos, M., Richards, S. C., & Bleckley, K. M. (2007). Comorbidity between depression and disordered eating in adolescents. *Eating Behaviors*, 8, 440-449. <https://doi.org/10.1016/j.eatbeh.2007.03.005>
- Sarvananda, L. (2020). A Review of Causing Factors of Sociology Food: Eating Disorder. *International Journal of Celiac Disease*, 8(1), 5-9.
- Savage, J. S., Fisher, J. O., & Birch, L. L. (2007). Parental Influence on Eating Behavior: Conception to Adolescence. *Journal of Law, Medicine & Ethics*, 35(1), 22-34. <https://doi.org/10.1111/j.1748-720x.2007.00111.x>
- Sinai, C., Hirvikoski, T., Vansvik, E. D., Nordström, A.-L., Linder, J., Nordström, P., & Jokinen, J. (2009). Thyroid hormones and personality traits in attempted suicide. *Psychoneuroendocrinology*, 34(10), 1526-1532. <https://doi.org/10.1016/j.psyneuen.2009.05.009>
- Skårderud, F., & Fonagy, P. (2012). Eating Disorders. In A. Bateman, & P. Fonagy (Eds). *Handbook of mentalizing in Mental Health Practice* (pp. 347-383). American Psychiatric Publishing.
- Slater, A., & Tiggemann, M. (2002). A test of objectification theory in adolescent girls. *Sex Roles*, 46(10), 343-349.
- Soh, N. L., Touyz, S. W., & Surgenor, L. J. (2006). Eating and body image disturbances across cultures: a review. *European Eating Disorders Review*, 14(1), 54-65. <https://doi.org/10.1002/erv.678>
- Spindler, A., & Milos, G. (2007). Links between eating disorder symptom severity and psychiatric comorbidity. *Eating Behaviors*, 8(3), 364-373. <https://doi.org/10.1016/j.eatbeh.2006.11.012>
- Strumia, R. (2005). Dermatologic Signs in Patients with Eating Disorders. *American Journal of Clinical Dermatology*, 6(3), 165-173. <https://doi.org/10.2165/00128071-200506030-00003>
- Swinbourne, J. M., & Touyz, S. W. (2007). The co-morbidity of eating disorders and anxiety disorders: a review. *European Eating Disorders Review*, 15(4), 253-274. <https://doi.org/10.1002/erv.784>
- Tavolacci, M. P., Brumboiu, I., Ciobanu, E., Porrovecchio, A., Croituru, C., & Ladner, J. (2018). Eating disorders among healthcare students in three European countries. *Revue d'Épidémiologie et de Santé Publique*, 66(5), S415. <https://doi.org/10.1016/j.respe.2018.05.487>
- Tiggemann, M., & Pickering, A. S. (1996). Role of television in adolescent women's body dissatisfaction and drive for thinness. *International Journal of Eating Disorders*, 20(2), 199 - 203. [https://doi.org/10.1002/\(sici\)1098-108x\(199609\)20:2<199::aid-eat11>3.0.co;2-z](https://doi.org/10.1002/(sici)1098-108x(199609)20:2<199::aid-eat11>3.0.co;2-z)
- Toledo Center for Eating Disorders. (2021). *The Connection Between Anxiety and Eating Disorders*. <https://toledocenter.com/social-media/the-connection-between-anxiety-and-eating-disorders/>
- Treasure, J., Claudino, A. M., & Zucker, N. (2010). Eating disorders. *The Lancet*, 375(9714), 583-593. [https://doi.org/10.1016/s0140-6736\(09\)61748-7](https://doi.org/10.1016/s0140-6736(09)61748-7)
- Waller, G., Kennerley, H., & Ohanian, V. (2007). Schema-focused cognitive behavioural-therapy for eating disorders. In: L. P. Riso, P. L. Du Toit, D. J. Stein, & J. E. Young (Eds.), *Cognitive schemas and core beliefs in psychological problems: A scientist-practitioner guide* (pp.139-175). American Psychological Association. <https://doi.org/10.1037/11561-007>
- WebMD. (2021). *Bulimia: Symptoms, Treatments, and Prevention*. <https://www.webmd.com/mental-health/eating-disorders/bulimia-nervosa/mental-health-bulimia-nervosa>
- Weller, J. E., & Dziegielewska, S. F. (2004). The relationship between romantic partner support styles and body image disturbance. *Journal of Human Behavior in the Social Environment*, 10(2), 71-92.
- Zeidner, M., & Matthews, G. (2011). *Anxiety 101*. Springer Publishing Company LLC.