

Thainá Richelli Oliveira Resende



WHAT ARE THE RISK FACTORS FOR EATING DISORDERS: ETIOLOGICAL MODELS

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SUMMARY

Eating disorders are disorders in eating or eating-related behavior that cause changes in the consumption or absorption of food, compromising the physical and psychological health of individuals. Diagnostic criteria for eating disorders are described: pica, rumination disorder, restrictive eating disorder, anorexia nervosa, bulimia nervosa and binge eating disorder. Understanding that eating disorders are psychopathologies with a high degree of mortality, the objective of this study was to describe the factors that precede their involvement, from the perspective of Modeling Structural Equations (SEM). Seven etiological models for eating disorders have been described. A relevant aspect that should be highlighted is the sociocultural influence (parents, friends and media) on the internalization of body ideals, which is an essential variable for the onset of eating disorders.

Keywords: eating disorders, modeling with Structural Equations, sociocultural influence.

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CHAPTER I

1. EATING DISORDERS

Eating disorders are disorders in eating or eating-related behavior that cause changes in the consumption or absorption of food, compromising the physical and psychological health of individuals (APA 2014). According to Cordás (2004), these psychopathologies are diseases that particularly affect female adolescents and young adults, leading to marked psychological and social and increased morbidity and mortality (Cordás 2004).

In addition, it is characterized by eating disorders, exaggerated preoccupation with body weight and shape, reduced or increased food intake, and purgative actions (Fortes et al. 2015). The etiology of eating disorders is multifactorial, they can last for a long time, being characterized by chronic syndromes, treatment and diagnosis are difficult to perform (Fortes et. al. 2016; Francisco, Alarcão, and Narciso 2012).

According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV), diagnostic criteria for eating disorders are described: pica, rumination disorder, restrictive eating disorder, anorexia nervosa, bulimia nervosa, and binge eating disorder.

1.1 PICA

It consists of the persistent ingestion of non-nutritive, non-food substances for a minimum period of one month, which is inappropriate for the individual's development. It is common to manifest during pregnancy, in addition to manifesting during the course of other mental disorders (eg, intellectual disability, autistic aspect disorder, schizophrenia) (APA 2014).

The substances ingested can vary, with the ingestion of paper, soap, fabric, hair, threads, earth, chalk, talc, paint, glue, metal, stones, charcoal, ash, detergent or ice being common (APA 2014).

1.1.1 Consequences

Pica can significantly impair physical functioning, but it is rarely the only cause of impaired social functioning. It often occurs along with other disorders (APA 2014).

1.2 RUMINATION DISORDER

It consists of the repeated regurgitation of food during a minimum period of one month, not being attributed to gastrointestinal conditions. This behavior does not occur exclusively during other types of eating disorders. Manifestation may occur in infants, childhood, adolescence, or adulthood. Being more common, between 3 and 12 months (APA 2014).

1.2.1 Consequences

Rumination disorder can lead to malnutrition, intellectual disability, or other neurodevelopmental disorders. In addition, some older individuals with the disorder deliberately restrict food intake due to the socially undesirable aspect of regurgitation, which can lead to low weight (APA 2014).

1.3 RESTRICTIVE EATING DISORDERS

Consists of restriction of food, due to lack of interest in food, avoidance based on sensory characteristics of food, or concern about aversive food consequences. It is not explained by the unavailability of food or a culturally accepted practice. It does not occur exclusively during anorexia nervosa or bulimia nervosa, as there is no concern about body weight or shape (APA 2014).

1.3.1 Consequences

Restrictive/ disorder can lead to significant weight loss, stunted growth in children, along with nutritional deficiency, need for enteral feedings or oral supplements, and inability to participate in normal social activities, such as eating with others or

maintaining relationships. As a result of the disturbance, it would indicate a marked interference in psychosocial functioning (APA 2014).

1.4 ANOREXIA NERVOSA

Anorexia nervosa is characterized by restriction of caloric intake relative to needs, leading to significantly low body weight for age, gender, developmental trajectory, and physical health. Individuals are intensely afraid of gaining weight, in addition to experiencing weight and body self-assessment that are not consistent with their current weight, where people feel completely overweight or perceive themselves to be thin, but still worry about certain parts, such as the abdomen, glutes and hips (APA 2014).

It can be subdivided into two classifications: 1) restrictive type: it consists of the presentation of weight loss, through diet, fasting and excessive physical exercise in the last three months. It does not involve binge eating episodes or purging behavior, such as self-induced vomiting, use of laxatives and diuretics. 2) binge-eating type: this is the case of those individuals who in the last three months involved episodes of binge eating or purging behavior, such as self-induced vomiting, use of laxatives and diuretics (APA 2014).

According to the systematic review carried out between the years 2000-2018, by Galmiche et al. (2019), the lifetime prevalence of anorexia nervosa is approximately 1.4% in women and 0.2% in men (APA 2014).

1.4.1 Consequences

Individuals with anorexia nervosa may present functional limitations, such social isolation, amenorrhea in women, constipation, abdominal pain, cold intolerance, hypothermia, bradycardia, anemia, leukopenia, with the loss of all types of cells and risk of suicide. Hospitalization may be necessary to regain weight and treat medical complications. Most individuals with anorexia nervosa remit within five years of the disorder's initial manifestation (APA 2014).

1.5 BULIMIA NERVOSA

Bulimia nervosa is characterized by episodes of binge eating, through the ingestion, in a specified period of time (for example, within each two-hour period), of an amount of food that is definitely greater than most individuals would consume in the same period of time (APA 2014).

There is a feeling of lack of control over ingestion during the episode. They have recurrent inappropriate compensatory behaviors in order to prevent weight gain, such as self-induced vomiting; use of laxatives, diuretics or other medications; or excessive exercise. The lifetime prevalence of BN is approximately 1.9% in women and 0.6% in men (Galmiche et al. 2019)

The severity level is based on how often the compensatory behaviors occur: 1) mild: average of 1 to 3 episodes per week. 2) moderate: average of 4 to 7 episodes per week. 3) severe: average of 8 to 13 episodes per week. 4) extreme: average of 14 or more inappropriate compensatory behaviors per week (APA 2014).

1.5.1 Consequences

Individuals with bulimia nervosa may have functional limitations such social isolation, hypokalemia (which can cause cardiac arrhythmias), hypochloremia and hyponatremia, significant and permanent loss of tooth enamel, dehydration due to laxative and diuretic abuse can cause metabolic acidosis and risk of suicide (APA 2014).

1.6 EATING COMPULSION DISORDER

It consists of recurrent episodes of binge eating, that is, eating excessively in a given period, with a lack of control over eating during the episode. Individuals with binge eating disorder may eat more quickly than normal, feel uncomfortably full, and eat even without feeling hungry. They also tend to eat alone, due to the feeling of shame, with feelings of depression and guilt (APA 2014).

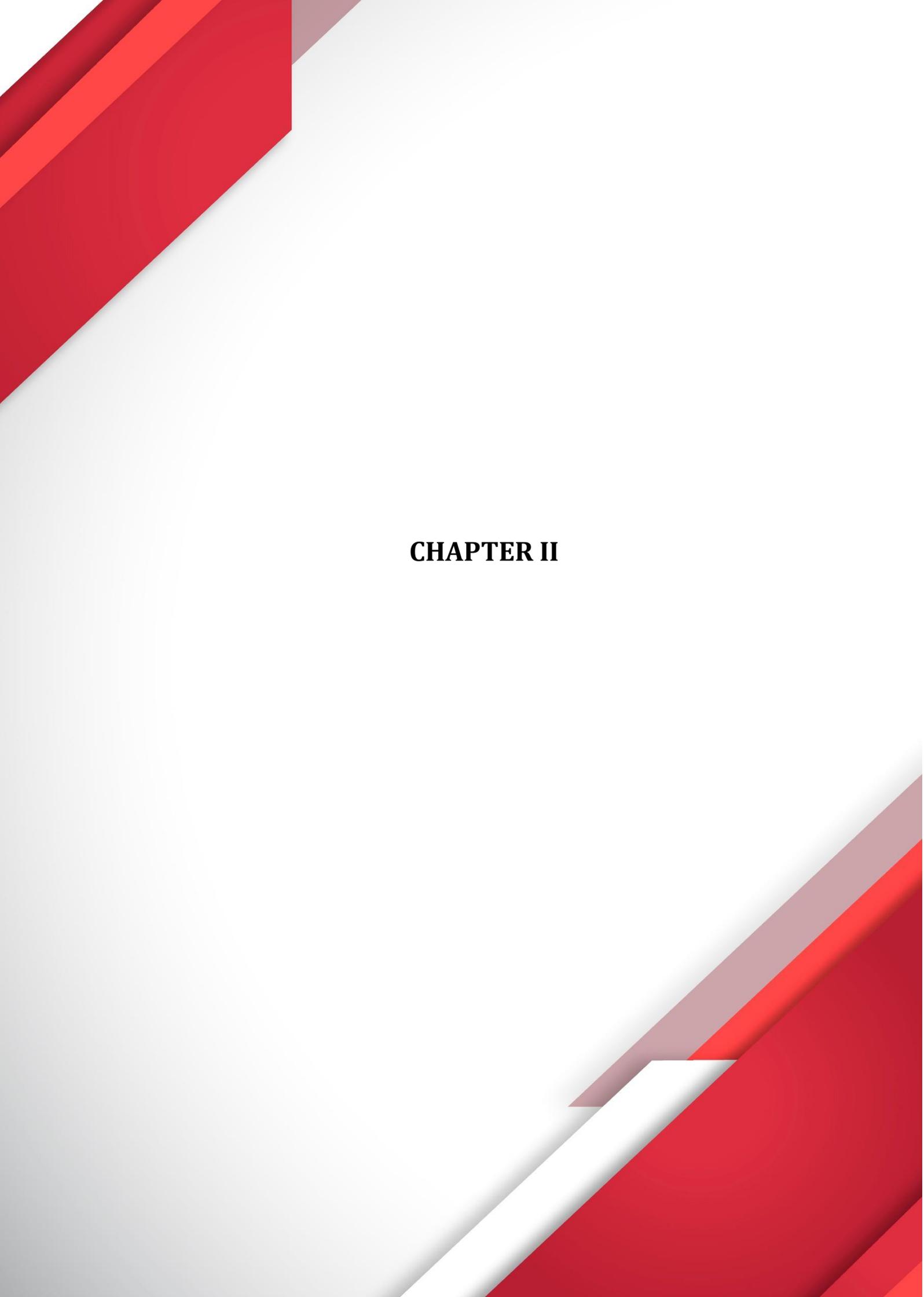
Binge eating episodes occur, on average, at least once a week for three months. It is not associated with recurrent use of inappropriate compensatory behavior in bulimia

nervosa and does not occur exclusively during the course of bulimia nervosa or anorexia nervosa. The lifetime prevalence is 2.8% for women and 1% for men (Galmiche et al. 2019).

The severity level is based on how often binge episodes occur: 1) mild: average of 1 to 3 episodes per week. 2) moderate: average of 4 to 7 episodes per week. 3) severe: average of 8 to 13 episodes per week. 4) extreme: average of 14 or more inappropriate compensatory behaviors per week (APA 2014).

1.6.1 Consequences

Individuals with binge eating disorder may have functional limitations, such social isolation, impaired quality of life and life satisfaction. Weight gain and development of obesity (APA, 2014).

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CHAPTER II

2. BODY IMAGE

In recent years, research related to body image has expanded and health, especially in the social fields, providing in the research Psychology, Sociology, Medicine and Nutrition, among other sciences (Cash and Smolak 2011; Laus et al. 2014). However it had its beginning in the 16th century, in the France, focusing mainly on pathological/neurological (Campana and Tavares 2009).

At the end of the 20th century, English researchers evaluated physiological and psychological factors that could explain a figuration hitherto empirical noticed in individuals, as the alteration of the perception that they portray in relation to their own body. Being able to cite thus, Fisher, who in 1990 (p. 5), pointed out that “individuals build a figure of themselves and thus, patterns are constructed against the judgments of posture and movements corporeal”.

However, a great advance for the concept of body image was granted by Paul Schilder in the 1930s, in the work entitled “The image of the body: the constructive energies of the psyche” (Schilder 1994). The author goes on to describe the process of building the body image, encompassing social, physiological and libidinal aspects. Describes the image body as a broad phenomenon, with several facets, and that involves not only biological, as well as psychological and social (Schilder 1994).

Schilder considers that the body image is built in layers, through the past and present experiences, so that it presents a strong intertwining between the world, body and mind. In its definition (Schilder, 1994, p. 11) the body image is “the figuration of our body formed in our mind”, being characterized by aspects physiological aspects, such as the brain organization of the body schema, sociological aspects, for through the influence of the social environment and, libidinal, related to drives, emotions and fantasies.

Another imposing researcher who sought to conceptualize body image was Slade in 1994. According to the author, the body image can be understood as the image that the individual has of body size, shape, and contour, as well feelings in relation to these characteristics and the parts that constitute it (Slade 1994). Most recently, contemporary scholars such as Cash and Pruzinsky (2002) and Cash and Smolak (2011) sought to complement the researchers previously mentioned in the description and in the

clarification about body image, given its intersubjectivity and complexity. It was extremely important so that evaluations on this topic could be carried out, mainly for the construction of robust studies around this theme.

Theories more recent studies, understand the construct as a complex, multifaceted and dynamic. It also includes the definition that the body image is divided into at least two dimensions, the perceptual and the attitudinal (Cash and Pruzinsky 2002; Cash and Smolak 2011). The perceptual dimension refers to the accuracy/inaccuracy in judging size, body shape and weight. The perception of one's own body results from the relationship between sensory and non-sensory components. The first comprises visual, tactile and kinesthetics, as well as the intensity of the stimuli received and the attention devoted to them. Already the second is the cerebral interpretation of the information generated, through beliefs and the knowledge that the individual has of his own body (Cash, Santos and Williams 2005; McCabe et al. 2006). There are few studies aimed at evaluating this component (CASH 2012). For that, many turn to measure the attitudinal dimension, referring to the aspects cognitive, behavioral and affective behaviors of individuals (Cash 2011; Campana and Tavares 2011).

In this sense, the attitudinal dimension with regard to the affective component is relative to the experiences that individuals have when feeling emotions related to the body. It is about the feelings that they experience due to their physical appearance. The cognitive component refers to thoughts that reveal a critical mental sense about the body, as well as beliefs related to the body. The behavioral component, on the other hand, relates to actions on or related to the own body, such as self-defensive behaviors (Cash and Smolak 2011) and body checking (Menzel et al. 2011). As well as actions aimed at changes body, mainly aiming at the ideal body.

3. CONCEPTUALIZATION OF TERMS RELATED TO BODY IMAGE

3.1 SOCIOCULTURAL INFLUENCE OF BODY IDEALS

Direct or indirect messages related to attitudes, values or behaviors that influence a person to conform to the norms of a certain group. Of how individuals are pressured to

achieve culturally adopted ideals of appearance. (Thompson et al. 1999). The sociocultural influence on appearance ideals is mainly due to the internalization by the internalization of thinness/low body fat and the pressure of four structural components of society: 1) family, 2) peers, 3) other important people, 4) media (Thompson et al. 1999).

3.2 PRESSURE FOR THIN

The propagation of body ideals was and remains in evidence, mainly for women, where the thin body is considered desirable and ideal for this public. A relevant aspect of high pressure for thinness in women is the sexual objectification of their bodies, which consists of:

“Whenever a woman's body, body parts, or sexual functions are separated from her person, reduced to mere instruments, or regarded as capable of representing her” (Fredrickson and Roberts 1997 p. 175)

Researchers in the field consider that society strongly influences the objectification and sexualization of the female body, causing a considerable increase in the tendency to monitor one's own body and to value observable and appearance-related aspects more than unobservable aspects (Mckinley and Hyde 1996).

In addition, the pressure to have a thin body occurs concomitantly with a stigmatization of the fat body, which is culturally associated with laziness, lack of control, low social status, failure, disorganization and unattractiveness (Pinto-Gouveia 2000; Puhl and Heuer, 2009; Puhl et al. 2008).

However, the thin body was not always considered the ideal, depending on the history of humanity, the body represented relevant aspects of the time, as can be seen in Chart 1.

Chart 1 – Representation of the body in different historical periods

REPRESENTATION OF THE BODY	
Ancient Greece	He appreciated the delineated and muscular, athletic body, having a conception of good shape, agility, healthy and fertile.
Medieval Period	The body was seen from two perspectives, economic (agriculture in which the physical structure stipulated the activities performed by individuals) and religious (affection towards the body was considered profane, illicit, evil action that must be overcome, seeking liberation from penalty, sacrifice and suffering).
Middle Ages	Food consumption was for few, in that period, wealth and health corresponded to a full belly and corpulence.
Industrial Revolution	Thought of eradicating the supposed excess of weight, originating the discrimination and marginalization of the fat body.
Year 1990	From the pharmaceutical industries, drugs appear that promise weight loss, concomitantly, diets and surgical procedures, fundamental factors for the search for the perfect body.

3.3 INTERNALIZATION OF THE IDEAL BODY

The internalization of the body ideal consists of the cognitive acceptance of sociocultural patterns of body and appearance in one's own belief system. And as a consequence the adoption of behaviors and attitudes in search of these patterns are present (Cash 2000). Or even, it consists of acceptance as an appreciation and desire to have a body similar to body standards, defined around thinness, muscle mass and definition and rejection of fat, varying according to sex (Hirata et al. 2012).

When this body ideal is internalized, individuals feel pressured to follow it, and may begin to perceive discrepancies between themselves and shared standards, which can trigger worsening in affective assessments of themselves (Ford et al. 2002).

The ideal male pattern is a muscular body, with broad shoulders, a well-developed upper body, and narrow hips (Cash and Smolak 2012). While the ideal female appearance standard encompasses a slim body, with a defined abdomen, slim waist and broad hips (Calogero, Boroughs and Thompson, 2007).

3.4 SOCIAL COMPARISON

According to Festinger (1954), individuals, especially women, evaluate their own appearance by comparing themselves with sociocultural ideals of beauty. It can be classified into ascending and descending, depending on the target or focus of analysis. Ascending when comparing behavior with other individuals who are perceived as better than oneself. Descendant occurs when comparison is made with subjects perceived as worse than themselves (Festinger 1954).

3.5 BODY DISSATISFACTION

Body dissatisfaction consists of the negative evaluation that the subject makes in relation to his body, it is qualified by the degree of depreciation in relation to his appearance, mainly by weight and body shape (Garner and Garfinke 1981). And this negative feeling about body image can involve the body as a whole or only specific parts of it (Menzel et al. 2011; Slade 1994).

Women are more affected than men by body dissatisfaction, which may be associated with pressure and the internalization of body stereotypes (Anixiadis et al. 2019; Dondzilo et al. 2019; Fitzsimmons-Craft et al. 2016). Body dissatisfaction can cause a lot of damage to health in individuals who have it to a high degree, such as low self-esteem, negative affects and depressive symptoms (Murray, Rieger and Byrne 2018; Rufino et al. 2018; Uchôa et al. 2020).

3.6 RESTRICTIVE DIETS

Eating behavior based on caloric restriction, through the reduction of macronutrients (carbohydrates, lipids and proteins) from the usual diet, has main

objective weight loss. Still, And yet, it can be mentioned that food restriction implies conscious attempts to reduce food intake to control body weight (Bernardi, Cichelero and Vitolo 2005).

Food restriction can be classified into two specific categories: rigid restriction and flexible restriction. The first involves an all-or-nothing approach, with dietary rules such as: counting calories, fasting, skipping meals. The second involves allowing behaviors in eating a wide variety of foods, not forgetting to pay attention to weight, rating the healthiest foods as being the best for their bodies, and being aware of whether they ate more than what was considered appropriate for them. (Westenhofer et al. 1999).

3.7 NEGATIVE AFFECT

Negative affect is a general dimension of distress and dissatisfaction, which includes a variety of aversive mood states, including anger, guilt, disgust, and fear (Watson, Clark and Tellegen 1988). It consists of intense episodes of unpleasure. Individuals who display high levels of negative affect perceive themselves to be sad, discouraged, and worried (Watson 2005). Depressive and irritability symptoms may be present.

CHAPTER III

4. MODELING STRUCTURAL EQUATIONS

To assess the involvement of a phenomenon, that is, the reason why a certain situation happens, studies are carried out. These studies tend to verify the existence of predictors and their consequences. As is the case of research developed and evaluated by statistical methods, including Structural Equation Modeling (SEM), which considers various types of statistical procedures to evaluate relationships between observed variables, in order to allow the performance of quantitative analyzes on models theories hypothesized by researchers.

SEM began to be developed with Bentler (1980) and since then, it has been increasingly used in research fields such as behavioral genetics, social sciences, psychology and the educational field (Baumgartner and Homburg 1996).

SEM can be seen as a combination of factor analysis and regression (or the expansion of these to the analysis of trajectories or paths). In which the factor analysis consists of a multivariate statistical technique that allows the measurement of latent variables (constructs not directly observed) from a set of manifest variables (observed directly). And path or path analysis is an extension of least squares linear regression analysis. This extension allows the decomposition of statistical effects between: direct effect and indirect effects (Neves 2018).

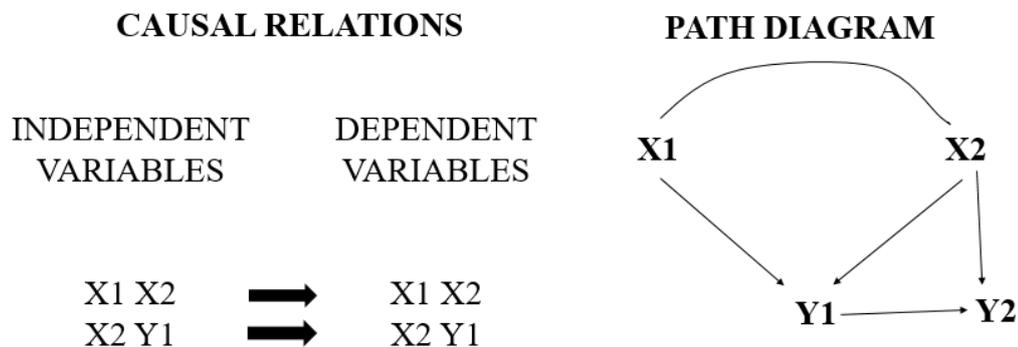
Structural equation models, as Neves (2018) indicates, are relevant because: a) they allow one to work simultaneously with estimation and measurement; b) allow the estimation of direct and indirect effects of explanatory variables on response variables; c) they are robust, due to the relaxation of assumptions, when compared with the least squares regression model; d) present interpretive ease arising from their graphical interfaces (Neves 2018).

According to Hair et al. (1998), to develop a structural equation model (SEM) some paths or sequences need to be developed. Starting with the development based on a Theory (phase 1), in which aspects of the researcher's expertise in the area need to be taken into account, together with sufficient studies that demonstrate an association between the variables, temporal advance of the cause over the effects and careful observation of covariates (Hair et al. 1998).

Next, you must build a diagram of Paths of Causal Relationships (phase 2), in which it is possible to graphically visualize the relationship between the variables. This step not only allows for the identification of cause and effect relationships between constructs (relationships between dependent and independent variables), but also for derived relationships (correlations) between constructs and even indicators (Hair et al. 1998).

The basic elements of a path diagram are the construct and arrows: straight arrows indicate a direct causal relationship from one construct to another, while curved arrows between any variables indicate correlations between them, as can be seen in figure 1. The independent variables in a model are called exogenous variables because they are not caused or predicted by any other variable in the model. Endogenous or dependent variables are predicted by other exogenous constructs (Hair et al. 1998).

Figure 1 - Construction of a Causal Relationship Paths diagram

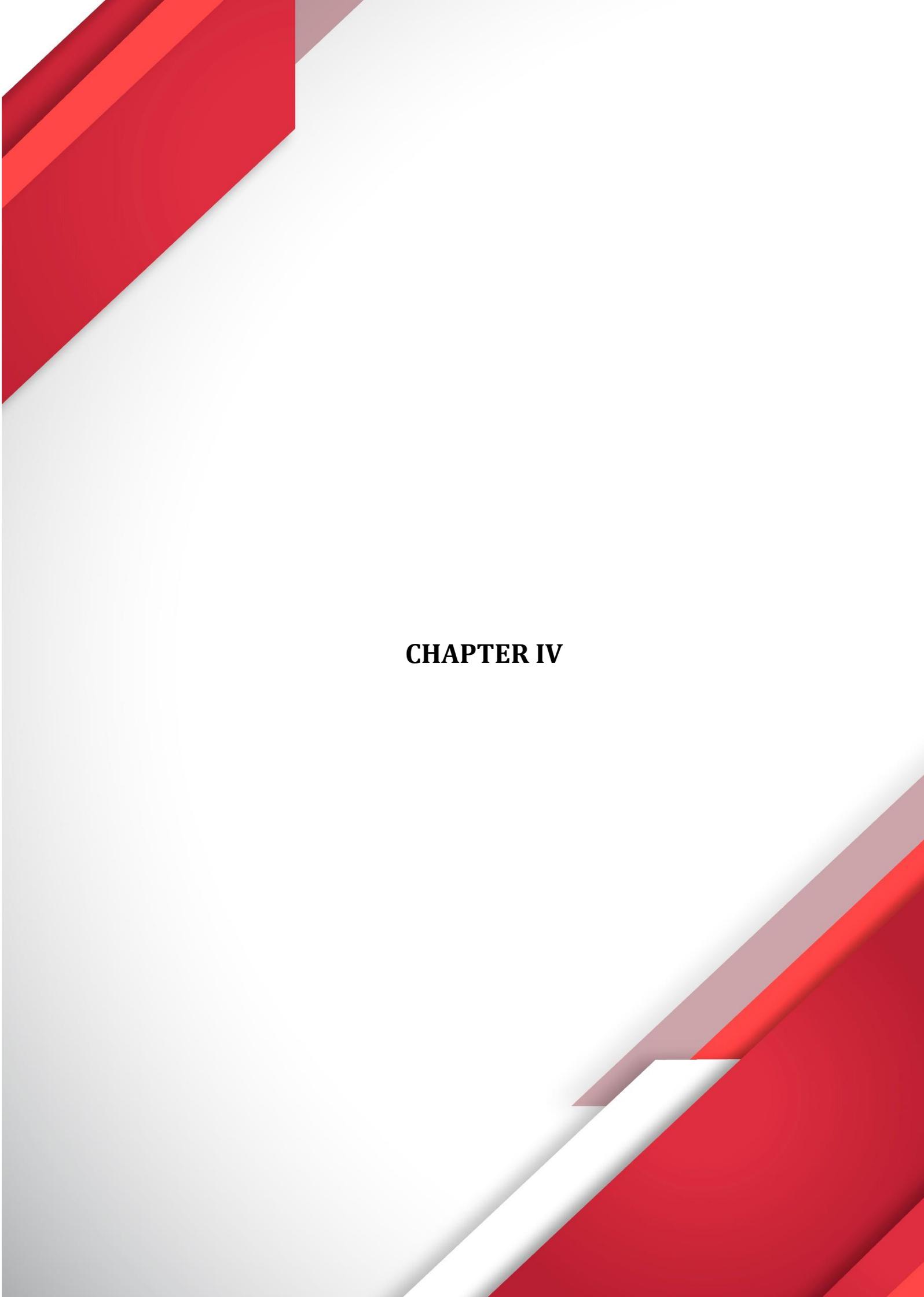


Campana and Silva 2009

Subsequently, the Conversion of the Path Diagram to a set of Measurement and Structural Models (phase 3) must be carried out, in which the main purpose of the measurement model is to verify if the items used to measure the constructs are significant and actually measure what they were expected to measure, checking for construct validity. And to test whether the operational items used to measure the constructs have reached acceptable levels of reliability and logical validity, Confirmatory Factor Analysis (CFA) can be performed.

And after defining the measurement model, the structural model must be estimated through the parameters or coefficients of the path diagram. This estimation is the result of converting this diagram into a set or system of equations, which mathematically represent the graphic (or structural) relationship between the variables.

After this phase, the type of matrix that will be used for data entry (phase 4) must be chosen, as well as verification of the identification of the structural model (phase 5) and evaluation of the model adjustment criteria (phase 6). The latter can be evaluated through three groups of adjustment measures: absolute, incremental and parsimony. If the model adjustments are considered adequate, the results can then be answered according to the hypotheses raised.

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CHAPTER IV

5. ETIOLOGICAL MODELS OF EATING DISORDERS

The etiology of eating disorders occurs through the factors that precede this outcome, that is, the risk factors (JACOBI; ABASCAL; TAYLOW, 2004). For this, as mentioned in the previous chapter, it is necessary that causal theoretical models are carried out and validated. Below in Table 1 are the models found, with author, year, evaluated public and nationality.

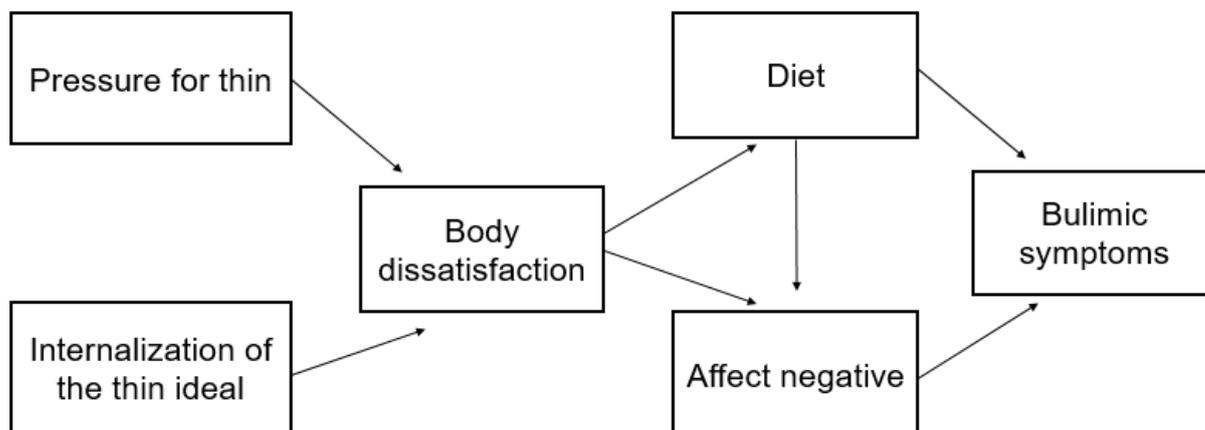
Table 1 - Etiological Models for Eating Disorders

Author	year	Public	Nationality
Stice et al.	1994	Young adult women	United States
Thompson et al.	1999	Young adult women	United States
Van Den Berg et al.	2002	Young adult	United States
Karazsia and Crowther	2009	Young adult	United States
Rodgers, Paxton and McLean	2013	Teenagers women	Australia
Carvalho, Alvarenga and Ferreira	2017	Young adult women	Brazil
Carvalho and Ferreira	2020	Young adult	Brazil

Author herself 2022

Stice et al. (1994) developed and validated the Dual-Pathway Model (Figure 2), which seeks to explain the development of risk behaviors for eating disorders in women. According to the authors, women internalize the body ideal characterized as the “ideal of thinness” and feel social pressure to achieve this body stereotype. This pressure can trigger body dissatisfaction, which in turn can stimulate the adoption of restrictive diets, aiming at weight loss and increase negative affect, which is mainly caused by the importance of seeking the body as a standard.

Figura 2 - Dual-Pathway Model (Stice et al. 1994)



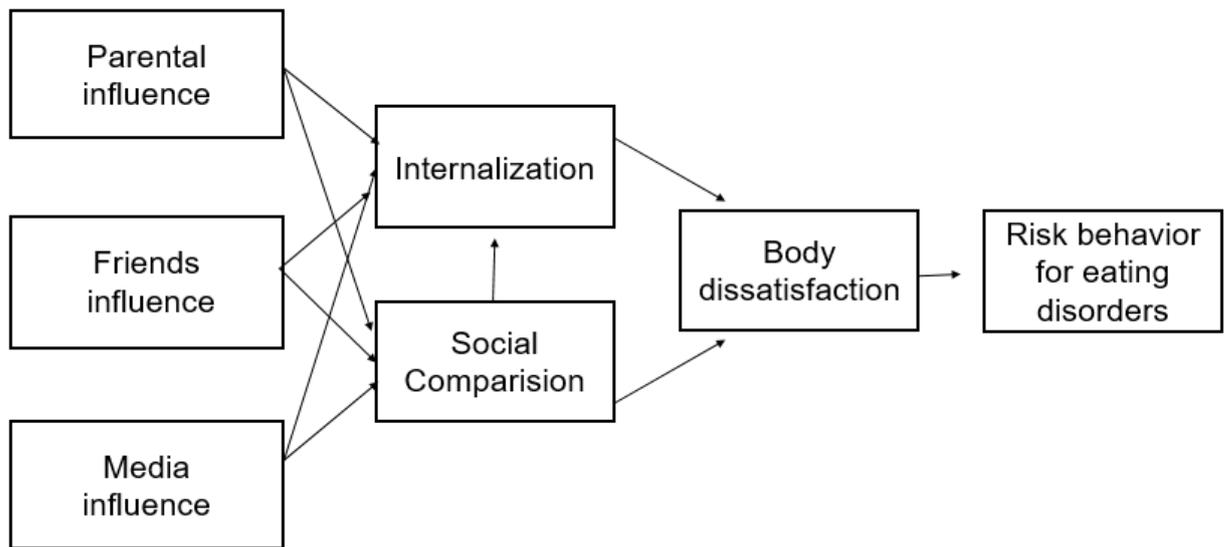
These two factors, dieting and negative affect alone, lead to disordered eating. The model also indicates that dieting can also increase negative affect and thus indirectly lead to disordered eating. Therefore, for the authors, the key point for the involvement of disordered eating is the pressure for thinness and internalization of the thin body (Stice et al. 1994).

Thompson et al. in 1999, they developed a theoretical model to assess the symptomatology of bulimia nervosa through the Sociocultural Perspective. This considers that society has body stereotypes to be followed, through the valorization of certain types of bodies, being then called the body ideal. Individuals then begin to seek this ideal of body, with the adoption of behaviors, such as the practice of diets and physical exercise (Thompson et al. 1999). With this sociocultural perspective, the Tripartite Influence Model was developed (figure 3).

For the authors, the primary sociocultural influence of parents, friends and the media can influence dissatisfaction with body weight and risk behaviors for eating disorders, such as the symptomatology of bulimia nervosa. And this influence occurs through the internalization of bodily ideals and social comparison (see the concepts in Chapter X). According to the authors, parents, friends and the media have the role of perpetuating the body ideal, through the reinforcement and appreciation of these bodies, through conversations, pressures to achieve the ideal appearance, social comparisons,

information and provocations so that individuals begin to internalize the body ideal as a truth for themselves. In addition, another mediating path can be observed, where sociocultural factors, mediated by social comparison, lead to greater internalization and ultimately, body dissatisfaction and bulimic symptoms (Thompson et al. 1999).

Figure 3 - Tripartite Influence Model (Thompson et al. 1999)

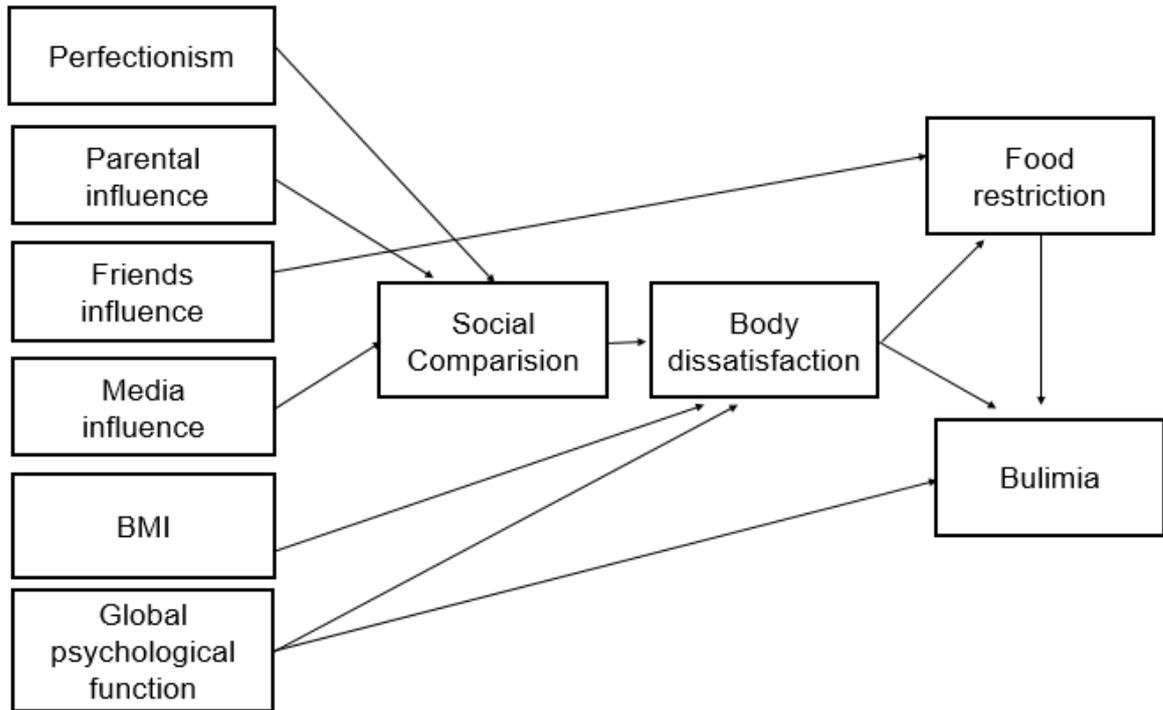


Van Den Berg et al. (2002) proposed to assess the sociocultural influence of parents, friends and the media on the development of eating disorders through social comparison (Figure 4). The authors excluded the internalization of the Thompson et al. (1999) and incorporated variables such as perfectionism, BMI and global psychological function. In this study, comparison of appearance was examined as a mediating link between sociocultural influence variables and measures of disturbance outcome of eating dysfunction and body image dissatisfaction (Van Den Berg et al. 2002).

The results indicated that the comparison of appearance mediated the effects of family and media influences on body dissatisfaction, which in turn influenced restrictive and bulimic behaviors. In addition, peer influence had a direct influence on food restriction, perfectionism seems to influence the comparison of appearance. Associations

were found between: BMI and body weight, psychological function, and bulimic behaviors/body dissatisfaction (Van Den Berg et al. 2002).

Figure 4 - Tripartite Influence Model (Van Den Berg et al. 2002).



Based on the theoretical model of the Three Factors, Karazsia and Crowther (2009), evaluated a model in the male audience (Figure 5) that incorporated the encouragement to practice physical exercise as a predictor variable for dissatisfaction with muscularity, through internalization and social comparison. The results of hierarchical regression analyzes revealed that internalization and body comparisons had unique relationships with dissatisfaction with muscularity in men. Thus, both constructs mediated the relationship between physical exercise and dissatisfaction with muscularity (Karazsia and Crowther 2009).

In 2013, tripartite model by Thompson et al. (1999) was adapted by Rodgers, Paxton and McLean (2014) to test a hypothetical model in which internalization and comparison would mediate the effect of negative affect and sociocultural influences on

body image concerns and eating disorders, in particular, bulimic symptoms and practice of restrictive diets (Figure 6). Furthermore, the model proposed that BMI would impact body image concerns. In fact, the final model supports the inclusion of negative affect and BMI in a biopsychosocial model of predictors of body image concerns and eating disorders among young adolescents (Rodgers, Paxton and McLean 2014).

Figure 5 - Tripartite Influence Model (Karazsia and Crowther 2009)

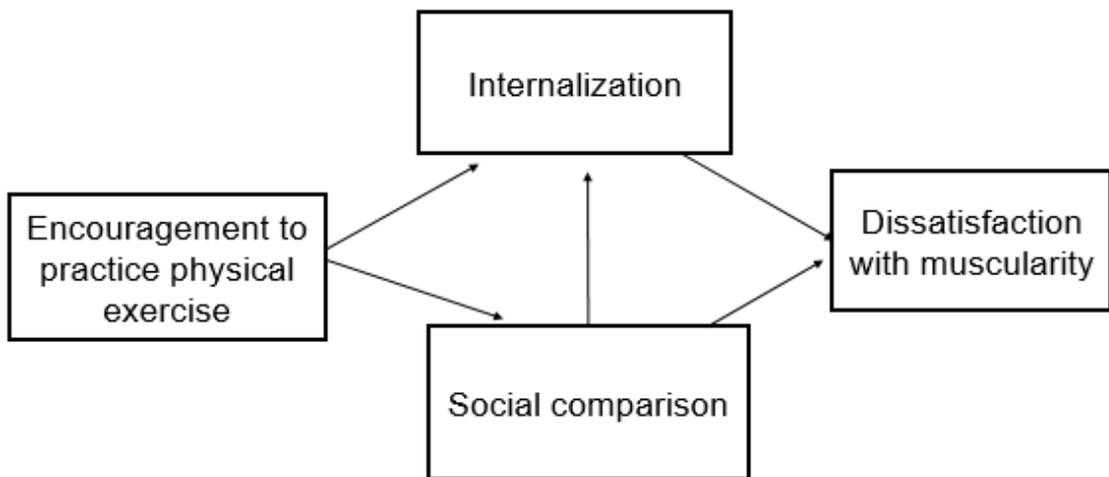
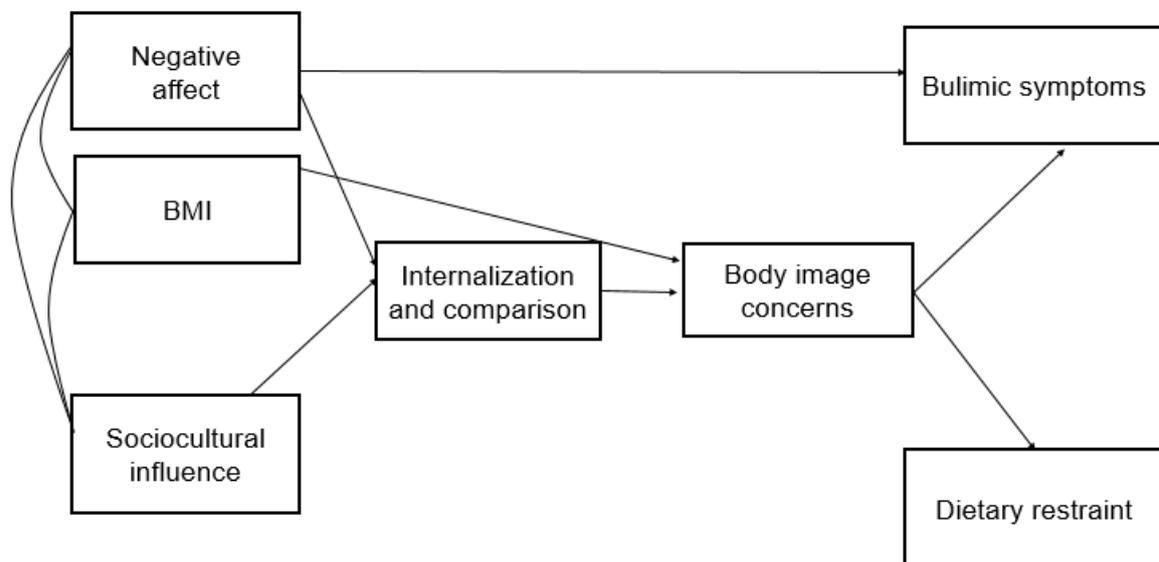
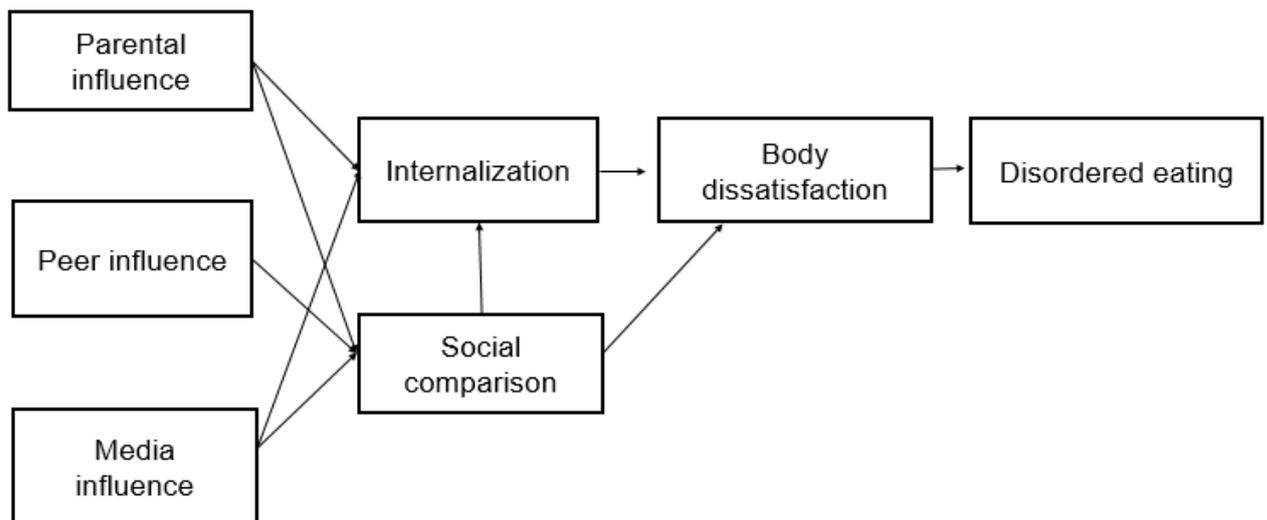


Figure 6 - Tripartite Influence Model (Rodgers, Paxton, McLean 2014)



In 2017, in Brazil, the Tripartite Influence Model was tested on young women (Figure 7; Carvalho, Alvarenga and Ferreira 2017). The authors found similar results to previous studies, in which they evaluated this adapted model of body dissatisfaction and disordered eating behaviors among Brazilian women. Parental and media influences were related to internalization and social comparison, while peer influence was related to social comparison (Carvalho, Alvarenga and Ferreira 2017).

Figure 7 - Tripartite Influence Model (Carvalho, Alvarenga and Ferreira 2017)

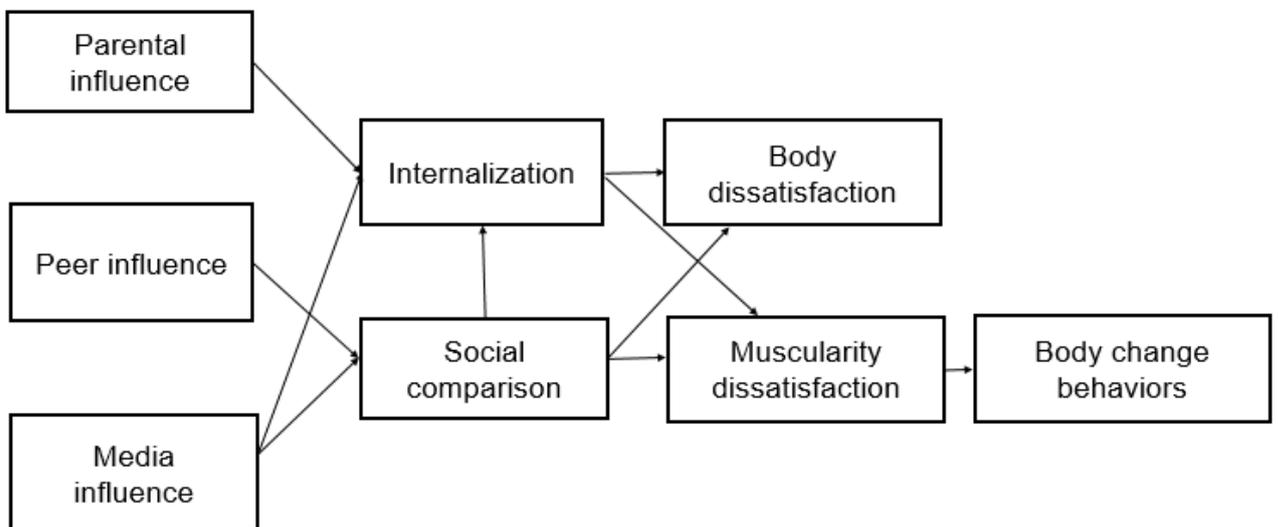


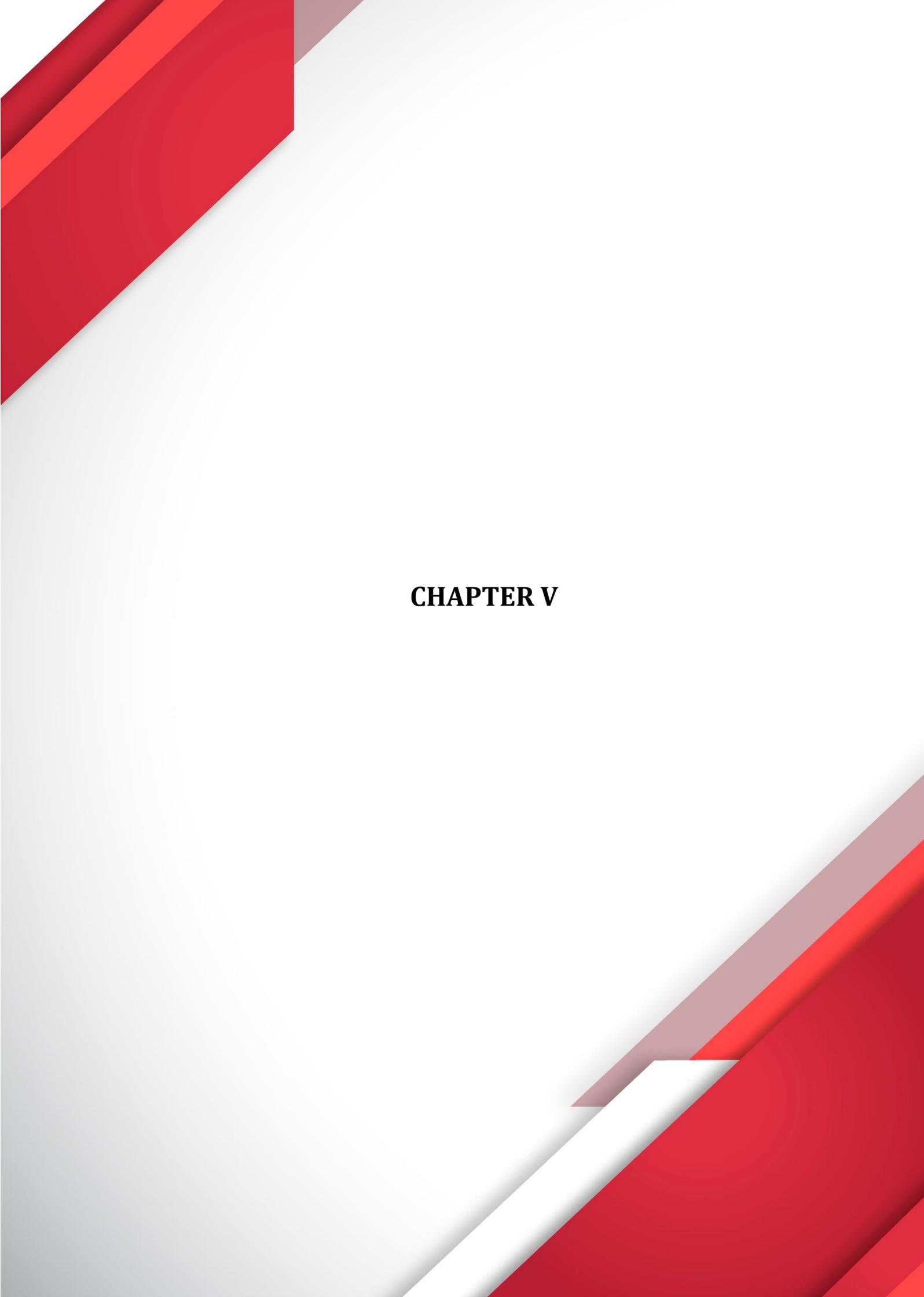
A full mediation model was found, with internalization and social comparison contributing to body dissatisfaction. Finally, body dissatisfaction was associated with disordered eating behaviors. The authors conclude that the findings inform the importance of considering cultural aspects that influence body image and eating behaviors, and highlight the validity of the etiological model proposed for Brazilian women (Carvalho, Alvarenga and Ferreira 2017).

Subsequently, authors also evaluated the Tripartite Influence Model in males (Carvalho and Ferreira 2020). The authors found that parental influence was related to

internalization, while peer influence was related to social comparison (Figure 8). Media influences were related to both internalization and social comparison. Internalization and social comparison were mediating variables that are related to body dissatisfaction and dissatisfaction with muscularity. Finally, dissatisfaction with muscularity was associated with body change behaviors (Carvalho and Ferreira 2020).

Figure 8 - Tripartite Influence Model (Carvalho and Ferreira 2020)

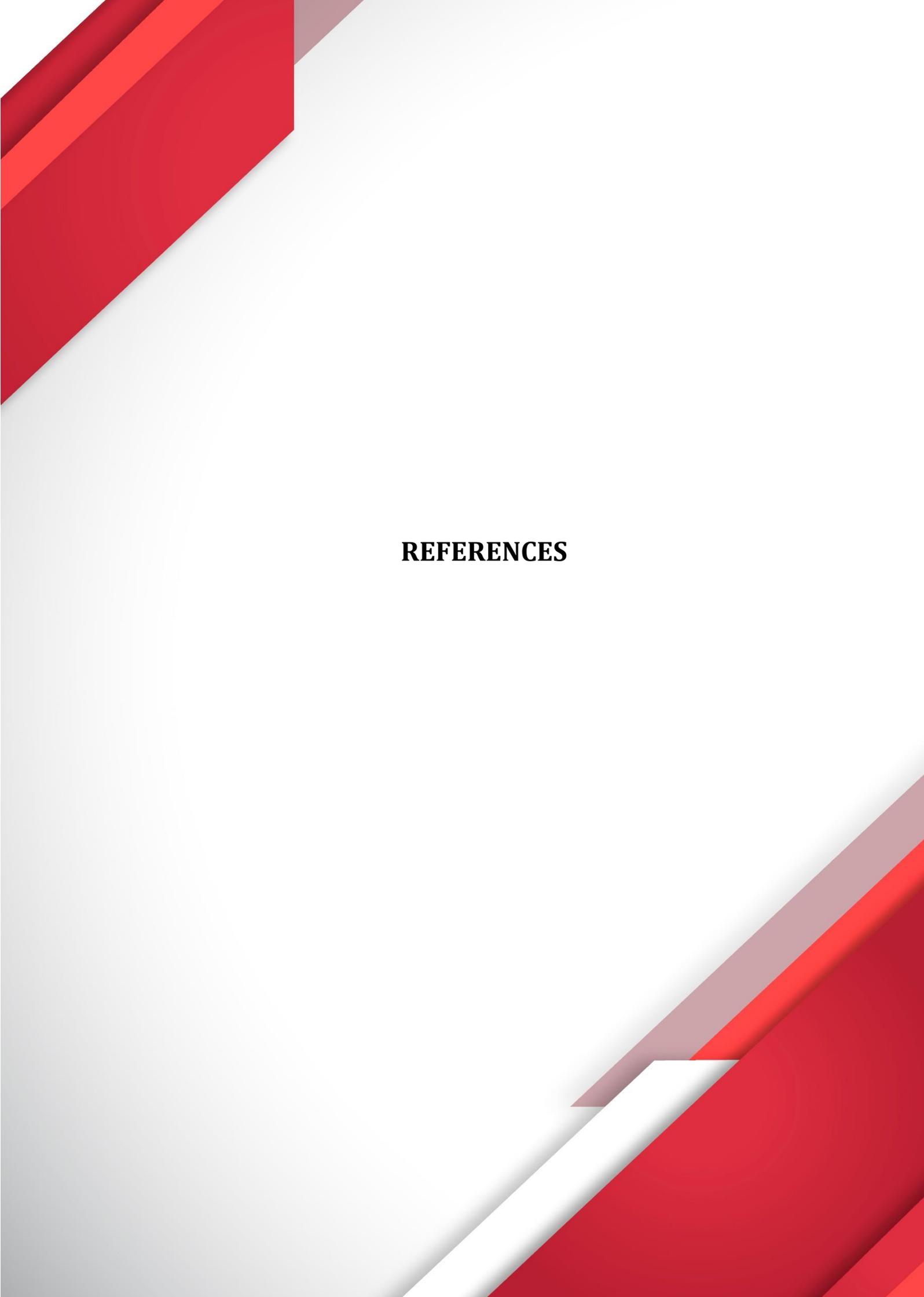


The page features a white background with red geometric shapes in the corners. In the top-left corner, there are several overlapping red rectangles of varying shades, creating a layered effect. A similar arrangement of overlapping red rectangles is located in the bottom-right corner. The text 'CHAPTER V' is centered in the middle of the page.

CHAPTER V

6. CONCLUSION

Seven etiological models for eating disorders have been described. A relevant aspect that should be highlighted is the sociocultural influence (parents, friends and media) on the internalization of body ideals, which is an essential variable for the onset of eating disorders. Therefore, intervention studies to prevent these psychopathologies should focus on the variables that have been described in the etiological models, especially on the internalization of the ideal of body beauty.

The page features decorative red geometric shapes in the corners. In the top-left corner, there are several overlapping red triangles and trapezoids. In the bottom-right corner, there are similar overlapping red shapes, including a large triangle and a trapezoid. The central area of the page is white.

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