When the algorithm strikes against you

An analysis of the impact of diet culture content on TikTok on the development of eating disorders and body dissatisfaction among female undergraduates

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ABSTRACT

TikTok is a very popular platform among young adults, where content related to food, exercise and body in the context of diet culture is very common and has a large following. Many users create such videos, posting unverified, potentially harmful information. However, the effects they may have on users' relationships with their bodies are not well comprehended. The objective of this study was firstly to understand how diet culture beliefs are represented on food, weight and body-related TikTok; and then explore if those TikToks affect body image, comparison and fat phobia in female university students. 200 TikTok videos from 4 popular nutrition, food, and weight-related hashtags were analysed and coded following specific research questions to develop common themes. A 3 step experimental research study with a sample of (n=61) female undergraduates was also conducted to examine the relationship between the analysed TikTok and body image dissatisfaction and fat phobia. Three scales were chosen to retrieve the data: SATAQ-3 (Thompson et al., 2004), BIDQ (Cash et al., 2004) and Fat Phobia scale (Bacon et al., 2001). Key themes included glorification of weight loss and the positioning of food as a means to achieve health and thinness, not pleasure; and exercise as a tool to shape the body. Exposure to toxic diet-culture and weight normative content increases comparison and internalisation of pressures related to body image, which in turn worsen perceptions of one's self and increase insecurities both in number and intensity, and may contribute to disordered eating attitudes.

Keywords: TikTok, diet culture, eating disorders, body dissatisfaction, comparison, fat phobia

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INTRODUCTION

TikTok is one of the most important social media platforms of the moment, especially popular among generation Z and young millennials. This app, originally known as Musical.ly, allows its users to record and publish videos of up to 3 minutes with numerous functionalities, which are constantly evolving. TikTok stands out from its competitors for its complex algorithm, which constitutes the core of the user experience. Unlike in other platforms, users mainly consume the content that is suggested by the algorithm based on their previous interactions and other parameters, not the content that they have chosen to consume. This mechanism, besides being highly addictive for users as it ensures a constant flow of new and compelling content, democratises the possibilities of going viral. Everyone can create content and have a chance at gathering a lot of interaction on TikTok, regardless of their follower base. The videos we find are varied: choreographies, lip syncs, humour and pranks, beauty tutorials, recipes, educational videos... Any type of topic and content has its niche on TikTok.

Among these niches, some of the most popular are fitness/sports and nutrition. Within these categories, there are videos of all kinds: entertaining, prescriptive, documentary, educational, inspirational... There is a lot of content published that also responds to very different disciplines, experiences and opinions. However, they are all placed at the same level: there is no differentiation between videos from expert voices, from ordinary people, contrasted information or harmful information. This generates a context where there is a great saturation of messages and, given the open nature of the platform, a great deal of misinformation.

This climate is particularly worrying for several reasons. Firstly, TikTok is popular in developed societies which are immersed in a diet culture that contaminates all information related to health, food and physical exercise. Diet culture is "[...] a system of beliefs that equates thinness to health and moral virtue, that promotes weight loss as a means of attaining higher status, and that demonises certain ways of eating while elevating others" (Harrison, 2017). These beliefs and the behaviours that derive from them reinforce body dissatisfaction and weight stigma, fuel dieting and body surveillance practices, increase social comparison, especially among young women, and are associated with high levels of depression and pressure to be thin; a concerning fact considering that all of those constitute risk factors for eating disorders. (Arroyo & Harwood, 2012; Jovanovski, Jaeger, 2020; Mills, Fuller-Tyszkiewicz, 2017; Sares-Jaske et al., 2019; Tylka et al., 2014).

Secondly, the low average age of the users means that the people consuming this unfiltered content, with a significant impact on their health, are, most likely, very young and, therefore, impressionable.

Finally, the relevance and functioning of TikTok's algorithm mean that users cannot protect themselves from this type of content, as they cannot foresee when it will appear in their feed. If users cannot or do not realise the impact that this type of videos can have on them and interact with the content, it will be progressively presented in their feed more frequently.

Taking into consideration this reality perceived by the author as a consequence of being a frequent user of TikTok, this study was proposed with the main objectives of firstly, understanding how diet culture beliefs are represented on food, weight and body-related TikTok; and secondly, exploring if TikToks focusing on nutrition, exercise and featuring idealised bodies affect body image, comparison and fat phobia in female university students. This population

was selected due to its closeness to the author's reality, and the hypothesis that it could constitute a particularly vulnerable population that is often neglected by studies about Eating Disorders and body dissatisfaction in favour of the adolescent population. An all-female population was also chosen because of the higher prevalence of Eating Disorders among females than among males, the higher impact of diet culture on this gender and the stricter beauty ideals that are imposed on them.

It was hypothesised that food, exercise, and body-related posts are very popular on TikTok and perpetuate weight normative messages that align with diet culture beliefs, which harms young females' body image and mental and physical health. To test this hypothesis, a two-part qualitative methodology was followed: the initial part was a thematic analysis (Braun et al., 2016) of 200 TikToks of popular hashtags related to exercise, food and the body; and the second part was a three-step experimental analysis with a sample of (n=61) female undergraduates to examine the impact of the videos from the first part.

Determining the popular themes around exercise, food and body image on TikTok can help health professionals better understand what messages young females are consuming to better communicate with them to counteract misinformation with accurate data and to fight the impact toxic content regarding these themes may have on the developing of body and eating issues.

1. EATING DISORDERS

According to the 11th Revision of the International Classification of Diseases (ICD), feeding and eating disorders encompass abnormal eating or feeding behaviours that are not explained by other health conditions and are not developmentally appropriate or consistent with cultural norms. Feeding disorders include behavioural disturbances that are not associated with body weight and shape concerns such as the ingestion of non-edible substances or voluntary regurgitation of food; while eating disorders include abnormal behaviours related to eating as well as major worrying about food, weight and body shape.

Although the different diseases grouped under the concept of eating disorder or feeding disorder are classified under the same ICD code, for the purpose of this research, it will only be addressing eating disorders, as the preoccupation with physical appearance is not a major trigger for feeding disorders and that being the main differentiator between both concepts.

1.1. Types of eating disorders

1.1.1. Anorexia Nervosa

As defined by the 11th edition of the International Classification of Diseases (ICD 11, 2022):

> Anorexia Nervosa: "characterised by significantly low body weight for the individual's height, age and developmental stage that is not due to another health condition or to the unavailability of food. [...] Low body weight is accompanied by a persistent pattern of behaviours to prevent restoration of normal weight, which may include behaviours aimed at reducing energy intake, purging behaviours, and behaviours aimed at increasing energy expenditure, typically associated with a fear of weight gain. Low body weight or shape is central to the person's self-evaluation or is inaccurately perceived to be normal or even excessive."

The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) by the American Psychiatric Association also distinguishes between two subtypes of Anorexia Nervosa:

- Restricting type: individuals that fall in this category induce weight loss through fasting or reduction of intake combined or not with excessive expenditure of energy. They do not regularly engage in purging or binge-eating behaviours.
- Binge-eating/purging type: individuals that fall in this category restrict their intake and also regularly engage in binge-eating or purging behaviours to compensate for ingestion, such as self-induced vomiting and/or the use of laxatives or diuretics.

Therefore we can define Anorexia Nervosa (AN) as an eating disorder characterised by voluntary starvation leading to significant low weight for the individual's age and height, fueled by a profound fear of gaining weight or becoming fat. Some cases might be accompanied by episodes of binge-eating and or purging.

1.1.2. Bulimia Nervosa

As defined by the 11th edition of the International Classification of Diseases (ICD 11, 2022):

> Bulimia Nervosa: "characterised by frequent, recurrent episodes of binge eating. A binge eating episode is a distinct period of time during which the individual experiences a subjective loss of control over eating, eating notably more or differently than usual, and feels unable to stop eating or limit the type or amount of food eaten. Binge eating is accompanied by repeated inappropriate compensatory behaviours aimed at preventing weight gain. The individual is preoccupied with body shape or weight, which strongly influences self-evaluation."

Individuals with Bulimia Nervosa (BN) usually shift between dieting on low-calorie, *healthy* foods and binge-eating on high-calorie, *bad* foods. In those binging episodes, large quantities of food are consumed in a short period with a sense of loss of control in regard to what or how much is being eaten and at what pace. This kind of behaviour is typically accompanied by feelings of shame or embarrassment, forcing the individual to hide it; and usually followed by compensatory behaviours to prevent weight gain. As in AN, people with BN are severely preoccupied with weight or shape.

1.1.3. Binge Eating Disorder

As defined by the 11th edition of the International Classification of Diseases (ICD 11, 2022):

> Binge Eating Disorder: "characterised by frequent, recurrent episodes of binge eating. [...] Binge eating is experienced as very distressing and is often accompanied by negative emotions such as guilt or disgust. However, unlike in BN, binge eating episodes are not regularly followed by inappropriate compensatory behaviours aimed at preventing weight gain."

Binge eating episodes can be either *objective,* meaning the individual eats a larger amount of food than what is considered normal under certain circumstances, or *subjective*, meaning the amount of consumed food is considered objectively normal but is subjectively felt as large by the binger. In both cases, the common denominator is the experience of loss of control.

The binge eating is chronic and can lead to serious health complications, including obesity, diabetes, hypertension and cardiovascular diseases.

1.1.4. Non Diagnosed Eating Disorders: Orthorexia, bigorexia.

Although not recognized as official eating disorders in the ICD or the Diagnostic and Statistical Manual of Mental Disorders (DSM), other diagnoses such as Orthorexia or Bigorexia are on the rise. Despite having their own characteristics, these disorders are often incomplete cases of AN or BN, either because they are beginning or in the process of recovery. Therefore, we find similar symptoms though not complete. Subclinical eating concerns have prevalence rates significantly higher than those of diagnosed eating disorders (Littleton, & Ollendick, 2003; Loth, et al., 2014)

Orthorexia was first named in 1997 by Steven Bratman from the Greek *ortho*, meaning correct, and *orexi*, meaning appetite. It is characterised by an obsessive focus on healthy eating, defined by a dietary theory or doctrine whose principles may vary for each individual; accompanied by

acute emotional distress surrounding food choices perceived as unhealthy. Orthorexia often begins as a positive pursuit of a healthier lifestyle, but then transforms into an out-of-control fixation that can lead to malnourishment, loss of relationships and poor quality of life (Koven, Abry, 2015).

Unlike the previously described EDs, the restriction is based on the quality of food, not the quantity. As a result, weight loss may ensue but is not the primary goal.

Despite being a frequently observed behavioural pattern, there has been limited research on it and, therefore, there is little information on statistical data on Orthorexia. A major reason for the lack of knowledge is that it is not yet formally recognized as a psychiatric disorder thus sound diagnostic criteria have not been agreed upon. Exploration of diagnosis boundaries shows extensive symptoms' overlap between orthorexia and AN, obsessive-compulsive disorder (OCD), obsessive-compulsive personality disorder (OCPD), somatic symptom disorder, illness anxiety disorder and psychotic spectrum disorders (Koven, Abry, 2015).

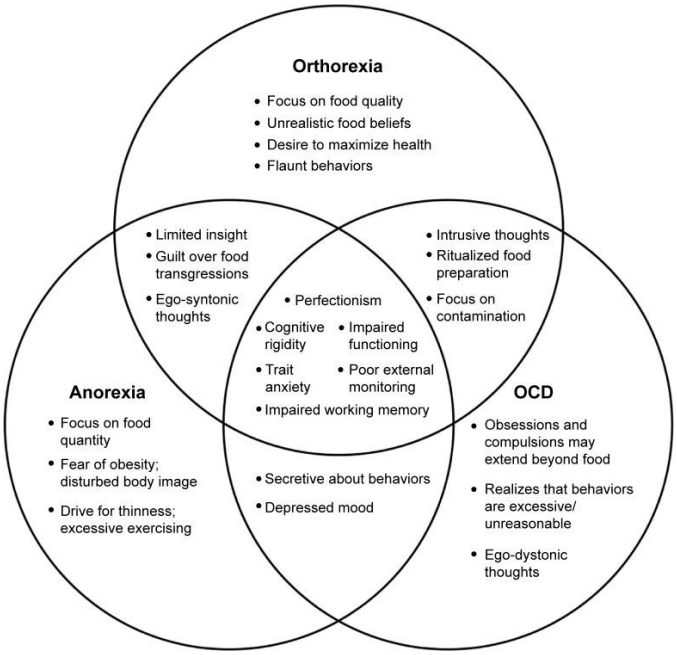


Figure 1. Venn diagram showing unique and overlapping features of Orthorexia Nervosa, anorexia nervosa, and obsessive–compulsive disorder (OCD). (Source: Koven, N., & Abry, A. (2015))

Bigorexia or Muscle Dysmorphic Disorder (MDD) is a subtype of body dysmorphic disorder where the individual is preoccupied with being insufficiently muscular or lean, regardless of actual appearance. This disorder is more common in men, in large part due to the equation of masculinity with muscularity portrayed by the media. It is a psychological disorder different from previously described ones as the ICD recognizes it as an obsessive-compulsive disorder, not an eating disorder, but it shares many symptoms such as figure obsession and body distortion through excessive physical exercise.

1.2. Risk factors for developing an eating disorder

Eating disorders are multidimensional disorders that affect physiological, psychosocial and family variables. As Gil (2001) declared, few illnesses encompass the somatic and the psychic, the individual and the social in such a crude way as EDs. It constitutes them as an authentic "social illness" that affects individuals, but whose origins must be found in society and its values.

Knowing the causes of EDs and identifying factors that increase the risk for eating pathologies is important for prevention and early intervention, especially among children and adolescents, given that mid-to-late adolescence is a peak period of risk for the onset of EDs (Abebe, Lien, & von Soest, 2012; Stice, Marti, & Rohde, 2013). Approximately 13% of young people will experience at least one ED by age 20 (Stice, Marti, & Rohde, 2013), and a large proportion (15-47%) of youth accredit important disordered eating cognitions and behaviours (Culbert, Burt, McGue, Iacono, & Klump, 2009; Jones, Bennett, Olmsted, Lawson, & Rodin, 2001).

The aetiology of EDs is intricate and does not differ from other psychiatric disorders in comprising the intersection of many causal factors. The term "risk factor" refers to a measurable characteristic, event or experience that precedes the onset of a disorder, and that "if present, is associated with an increase in the probability (risk) of a particular outcome over the base rate of the outcome in the general (unexposed) population" (Kazdin, Kraemer, Kessler, Kupfer, & Offord, 1997, p. 377). In the development of EDs, we find multiple risk factors that have been reviewed in isolation and in correlation, which can differ by sex and by age group in females (Field et al., 2008; Rohde et al. 2017). Risk factors for EDs can be classified as individual, psychosocial, or sociocultural factors (Schiltz, 1997), as seen in Table 1.

Table 1

Classification of Risk Factors by T. Schiltz

Individual Risk Factors
● Sexual abuse past experiences ● Body figure dissatisfaction ● Body weight dissatisfaction ● Dieting ● Loss of a loved person ● Loss of an important relationship
Psychosocial Risk Factors
● Affective disorders, both in the individual and in first-degree relatives ● Low self-esteem ● Need for approval for minimal activities ● Difficulty in expressing feelings ● Constant presence of anger ● Avoidance of conflicts. ● Rigid thinking pattern with great emphasis on the should be ● Feeling of an absence of self-control ● Perfectionism ● Basic identity problems

Sociocultural Factors
● Cultural ideals of beauty ● Family attitudes towards bodyweight ● Lack of boundary definition ● Rigidity and role confusion in the family ● Dysfunctionality and emotional abuse ● Peer group influence ● Involvement in activities that emphasize low weight ● Criticism of weight and shape ● Lack of awareness of weight and shape

Note. Adapted from "Risk Factor for Eating Disorders" by Monterrosa-Castro, A.; Ruíz-Martínez, J.; Cuesta-Fernández, G. (2012). Revista de Ciencias Biomédicas, 3(2), 300-305.

They also can be classified as biological, psychological, psychosocial or behavioural factors (Treasure, Duarte, & Schmidt, 2020). People suffering from EDs are believed to have a biological or genetic predisposition which is activated by environmental (e.g., sociocultural, psychosocial) factors, a phenomenon also known as a gene-environment interaction (Jacobi et al. 2004); and studies unveil communal developmental pathways among the EDs (Hilbert et al., 2014), data that supports a more dimensional approach to decoding ED aetiology, such as determining the existence and severity of symptom classes; in contrast to the classic categorical approach that emphasises discrete diagnoses.

Table 2

Aetiology diagram of restrictive-type eating disorders

Biological factors	**Psychosocial factors**
● Genetic predisposition ● Gender: female–male ratio=10:1 ● Obsessive-compulsive or autistic spectrum traits ● Behavioural susceptibility to appetite dysregulation ● Metabolic vulnerability ● Environmental influences in the perinatal period	● Parental eating problems ● Peer stress (e.g. bullying) ● Trauma (exposure) ● Culture (industrialised/western) ● Thin idealisation ● Middle-to-high socioeconomic status (high education of parents)
Psychological factors	**Behavioural factors**
● Personality traits (rigidity, attention to detail, intolerance of uncertainty and mistakes, perfectionism) ● Cognitive rigidity with high cognitive control over drives ● High ability to delay reward ● Decreased facial expressivity and ability to decode non-verbal signals from others ● Reduced theory of mind	● Overcontrol of weight and eating ● Weight control behaviours ● Overconcern with body-mass index ● Coping by avoidance or perfectionism ● Social isolation ● Impaired physical and mental quality of life

● Increased sensitivity to social ranking and threat ● Reduced ability to interpret and reciprocate in social interaction ● Body image disturbance ● Alexithymia	

Note. Adapted from "Eating Disorders" by Treasure, J., Duarte, T., & Schmidt, U. (2020). The Lancet, 395(10227), 899–911.

Table 3

Aetiology diagram of bulimic spectrum eating disorders

Biological factors	**Psychosocial factors**
● Genetic predisposition (uncertain) ● Gender: female–male ratio=3:1 ● Metabolic vulnerability ● Ethnicity: increased prevalence in Asians ● Behavioural susceptibility to appetite dysregulation	● Childhood adversity ● Attention-deficit hyperactivity disorder traits (impulsivity and difficulty paying attention) ● Inability to delay reward ● Social cognition problems with emotional avoidance ● Body image disturbance ● Alexithymia
Psychological factors	**Behavioral factors**
● Parental eating problems ● Peer pressure (e.g. bullying) ● Fat talk (i.e. conversations including negative and disparaging comments about body shape or eating behaviour) from peers, family, authority figures ● Trauma (exposure) ● Culture (industrialised/western) ● Thin idealisation	● Weight control behaviours ● Overconcern with body-mass index ● Coping by avoidance or perfectionism ● Social isolation ● Impaired physical and mental quality of life

Note. Adapted from "Eating Disorders" by Treasure, J., Duarte, T., & Schmidt, U. (2020). The Lancet, 395(10227), 899–911.

1.2.1. Particularities of the university population

The epidemiology of eating disorders in the university population has not been as rigorously studied as in the adolescent school population of primary or secondary education, despite it being considered an important at-risk group, especially due to the unhealthy weight gain that often occurs during this period of time and the associated body dissatisfaction (Bailey et al., 2014; Neumark-Sztainer et al., 2011). Several studies have been conducted on the adolescent population given its vulnerability to various risk factors, particularly negative body perception. However, although weight and body image become a concern since early adolescence,

disordered eating attitudes often occur later in life (Cooper, Goodyer, 1997), being peak onset age 19-20 for AN, 16-20 for BN, and 18-20 for BED (Stice, Marti, & Rohde, 2013).

Multiple studies show that the prevalence rate of population at risk of eating disorders in the university setting is high, determining a national average of 20% approximately in Spain (Martínez-González et al, 2014; Sepúlveda et al, 2008; Gómez et al 2010). However, there is great variability at the international level, with values ranging from 39.7% in Colombia (Fandiño et al., 2007) to 5.8% in Mexico (Álvarez, Licea, Pérez, 2009). Those studies' findings are aligned with the literature and show a predominance of the female gender in the population at risk of ED, and also in the presence of typical behaviours of ED (use of laxatives, dieting, bingeing) (Sepúlveda, 2002). Nevertheless, a high portion of those risk cases is underestimated, given that their BMI falls within the normal range, although we find in them abnormal eating behaviours and an altered perception of body image (Fandiño et al., 2007).

These disorders present high comorbidity with other psychiatric illnesses, especially depression and anxiety (Varela-Casal, Maldonado, Ferre, 2011; Ulfvebrand et al., 2015), substance use; and problematic internet usage (Claes et al., 2012; Martínez-González et al., 2014). Numerous authors have found a relationship between anxiety and eating disorders (Schwalberg et al, 1992; Gómez et al, 2010), finding overeating as a strategy to cope with anxiety-inducing situations (Blum, Liu, Shriner & Gold, 2011). These studies reference generalised anxiety, social phobia, and punctual anxiety generated by the experience of stressful events which generate a negative emotional state (a combination of boredom, anger, loneliness, anxiety, and depression).

However, it has been seen that anxiety usually presents before the ED, which leads to thinking it is an onset factor, and that anxious personality trait profiles are more susceptible to suffering from EDs (Gómez et al., 2010). The university environment fosters plenty of stressful situations that alter the psychological and somatic functioning of students, such as exams, deadlines, being away from home or meeting new people.

Moreover, the university population undergoes a series of sociological and cultural changes, given that many students move away from the family nucleus and become responsible for their eating habits and food purchase, the preparation of their meals and the organisation of their menus and time (Arroyo et al., 2006). These factors lead to skipping meals, continuous snacking, overconsumption of fast food, the consumption of damaging substances such as alcohol, cigarettes or illegal drugs (Varela-Mato et al., 2012); poor nutritionally valuable food choices (Arroyo et al., 2006) and, in some cases, favour the appearance of EDs.

It also could contribute to the high prevalence of EDs in females of this population the drop in physical activity that takes place from adolescence to early adulthood in women, but not males (Varela-mato et al., 2012); which brings some young women to turn to unhealthy weight control measures that characterise EDs, such as fasting or diuretic use. (Stice, Marti, & Rohde, 2013).

The first years of adulthood are a critical period for the development of dietary habits that play an important role in future health; in which we find the coexistence of general bad habits with high periods of stress and anxiety, and frequent discontent with the physical image; as body dissatisfaction and desire to achieve the thin-ideal seem to be universal among university women (Aparicio-Martínez et al., 2019). All this leads us to consider the university population as a highly vulnerable group to eating disorders.

1.3. The *Diet Culture* and *Disturbed Eating Attitudes* epidemic

There is a high frequency of body dissatisfaction across developed countries, with studies suggesting that as much as 84% of women in the United States feel unhappy with their body shape and weight and desire to change their physical state (Runfola et al., 2013). Body dissatisfaction is, in turn, associated with negative health outcomes like depression (Brechan & Kvalem, 2015), anxiety (Duchesne et al., 2017) or lower levels of self-esteem (Brechan & Kvalem, 2015).

Although men can also experience body dissatisfaction, it is more common and severe among women, who, in turn, are also more likely to associate their self-worth with their body's appearance (Neagu & Rainier, 2015).

Many factors can impact the way people feel about their bodies, but in developed societies, the worship of thinness as a signifier of status and moral value, the castigation of those whose bodies fail to comply and the demonisation of certain food choices in comparison to others; or, what is also known as *diet culture* (Harrison, 2019), plays a significant role in reinforcing body dissatisfaction, especially among young, white women (Harrison, 2017).

A commonly cited definition of diet culture is that suggested by anti-diet registered dietitian Christy Harrison, who describes it as "[...] a system of beliefs that equates thinness to health and moral virtue, that promotes weight loss as a means of attaining higher status, and that demonises certain ways of eating while elevating others" (Harrison, 2017).

One important facet of diet culture is the belief that health can be equated directly with weight. Despite the emphasis in western culture on losing weight for health reasons, research shows that weight is not a definitive reflection of health and that dieting does not improve well-being (Bacon, 2010). Dieting for health is not a necessity for most of the population; however, restrictive rules surrounding food and intake are enforced in favour of obtaining an ideal body associated with health as a behaviour that everyone should practise (Bacon, 2010). The perpetuation of this myth fuels dieting and body surveillance practices, and masquerades as health advice through popular cultural, medical and health policy discourses. (Jovanovski, Jaeger, 2020). Dieting is presented as a moral, health, and social obligation (Bacon, 2010; Lelwica, Hoglund, & McNallie, 2009; Levinovitz, 2015). However, dieting has been associated with body dissatisfaction and the normalisation of weight stigma, or "the social rejection and devaluation [of] those who do not comply with prevailing social norms of adequate body weight and shape" (Tomiyama et al., 2018, p.123). The social obligation to diet has also been backed by the idea of the obesity "epidemic" in the U.S. In reality, when considering the distinctive characteristic of an epidemic (exponential patterns of growth), data on weight trends in the U.S. population do not evidence that pattern. "There is not an obesity epidemic, there's an epidemic of people fearing fat" (Harrison, 2016)

Another important component of diet culture is the idea that weight loss improves social status (Harrison, 2017). Research suggests that people in larger bodies experience stigma and prejudice (Hunger et al., 2015). In contrast, thinner people are praised for their self-restraint, discipline and health-consciousness. Women's food choices (given that diet culture puts greater pressure on women than men) are not limited to the private sphere; instead, their attitudes and actions towards food are a public performance that indicates social worth (Wolf, 1991). In this context, it is common for women to immerse in social comparison around food and exercise

practices and physical appearance (Fisher, Dunn, & Thompson, 2002; Rancourt, Leahey, LaRose, & Crowther, 2015), a phenomenon that plays a crucial role in fortifying the hierarchy within diet-culture (Davidson, 2020).

The third feature of diet culture is the moralization of food and bodies (and thinness) (Harrison 2017). Moralization is described as "the process through which preferences are converted into values, both in individual lives and at the level of culture" (Rozin, 1999, p.1). People usually classify foods as "good" or "bad" based on how that particular food is assumed to affect one's weight (Rozin, Ashmore, & Markwith, 1996), and, as a result, one's health. Western culture has historically demonised categories of food following a pattern similar to trends in other areas such as fashion, like food high in carbs (Atkins diet in the 90s), fat (in the 00s), gluten… In all cases, restricting certain foods and following strict rules regarding food intake has been linked with cleansing and preventing people from illness. The moralization of food choices and their labels go beyond food and are applied to their consumers (Chernev, 2011; Rozin, Ashmore, & Markwith, 1996; Steim & Nemeroff, 1995); making the expression "you are what you eat", more than just an expression. Women not only experience external judgement for their food choices, but also internal judgement regarding lack of restraint and overeating, which often triggers feelings of guilt and shame (Sheikh, Botindari, & White, 2013).

Although diet culture is omnipresent, it more directly influences women as women are frequently imprisoned to stricter appearance ideals and objectification (Sáez et al., 2019). Pressures rooted in diet culture also affect differently depending on racial or ethnic backgrounds (Striegel-Moore & Smolak, 200), and certain life periods (like late adolescence or early years of adulthood).

The system of beliefs and dominant cultural narratives rooted in diet culture that society assimilates manifests, in turn, in interpersonal interactions. Growing evidence suggests that women's feelings towards their bodies are influenced by the way they talk with others about their appearance (Mills & Fuller-Tyszkiewicz, 2017). The literature suggests that negative body talk is extensive across all ages and body types in the United States (Arroyo et al., 2017). This negative discussion, named *fat talk* (Arroyo & Harwood, 2012), involves derogatory comments about one's body or debating discomfort surrounding dieting or exercising to reduce body image concerns largely deriving from diet culture (Arroyo & Harwood, 2012). Recent research shows that fat talk both results in and reinforces body dissatisfaction (Mills & Fuller-Tyszkiewicz, 2017) and is associated with high levels of depression and pressure to be thin (Arroyo & Harwood, 2012).

The transformation of dieting into a ubiquitous cultural practice has translated into increased numbers of girls dieting across all shapes and sizes (Sares-Jaske et al., 2019). Research shows that 59% of teenage girls are actively dieting, 70% of women and girls report appearance anxiety and low body confidence and nine out of ten women reveal that despite knowing the risks linked to not eating, they still opt for restricting food in response to negative body image (Dove, 2016; The National Centre on Addiction and Substance Abuse, 2003). Moreover, studies indicate that as early as age five or six, little girls are conscious of the link between dieting and weight loss and declare that their ideal body is fairly thinner than their current body (Davison, Markey, & Birch, 2000; Lowes & Tiggeman, 2003); a concerning fact considering that dieting is an important risk factor for EDs and that has many negative health outcomes (Tylka et al., 2014), both physically (Calogero et al.,2019) and psychologically.

Dieting, body dissatisfaction, restriction and fat phobia are typical behaviours encouraged by the diet culture and also significant risk factors for developing eating disorders. Having societies immersed in this system of beliefs, it does not come as a surprise that the prevalence of diagnosed eating disorders has increased, but also the proportion of the population with disturbed eating attitudes. Despite not having official consequences, the latter is not to be underestimated, as subthreshold eating disorder syndromes are associated with similar levels of functional impairment and emotional distress as threshold eating disorders (Keel, Brown, Holm-Denoma, & Bodell, 2011; Stice, Marti, et al., 2013).

1.4. Eating disorders and social media usage

The link between media exposure, dissemination of the thin ideal, body dissatisfaction and eating disorders has been long studied, with research mainly focusing on traditional forms of media, such as television or magazines. Literature explained that the desire to achieve the beauty ideal arises with the internalisation of images in the media (Carrotte, Prichard, & Lim, 2017) and the connection between media exposure and body dissatisfaction and disordered eating has been backed by extensive research (for meta-analyses, see Grabe, Warth, & Hyde, 2008). With the digitalisation of the world and the increasing dominance of the internet and social media, research has shifted towards newer forms of media, such as Social Networking Sites (SNS) (Brandtzæg, & Heim, 2009). Various studies have highlighted that despite having their utility and benefits in nowaday's life, SNSs can also bring problems, especially pointing out the diminishing of people's satisfaction with their lives and the increase of feelings of depression and loneliness related to excessive use of SNSs (Spraggings, 2009; Valkenburg, & Peter, 2009; Das, & Sahoo, 2011).

Since 2018, studies focused on studying whether those outcomes existed in a possible link between social media usage and eating disorders have risen exponentially. Research has found a positive relationship between the time spent on social media and body shape and size concerns and disordered eating attitudes (Smith, Hames, & Joiner, 2013; Sidani et al., 2016; Holland and Tiggemann, 2017). Users with the highest social media use, both in volume of time spent and frequency of interaction, had significantly higher odds of having eating concerns compared to users with lower use by 2.2 and 2.6 respectively; an effect that was independent of age or gender (Sidani et al., 2016). High frequency and long-term use of SNS also was associated with increased regular participation in social comparison, body surveillance and decreased weight satisfaction (Ho, Lee, & Liao, 2016; Tiggemann & Miller, 2010; Tiggemann & Slater, 2013, 2014), a phenomenon that complicates the generation of positive body image and may also bring stress concerning appearance, inducing, in turn, different mental illnesses, such as disordered eating (Tylka, & Sabik, 2010).

The findings of these studies have been often questioned regarding their directionality, meaning the difficulty in discerning whether individuals with eating concerns have a higher tendency towards using social media or whether social media triggers eating concerns. However, a Dutch study is often cited to answer this question, which found that among high school-aged individuals social media use predicted body dissatisfaction 18 months later; but elevated body dissatisfaction at baseline did not predict greater social media use 18 months later (de Vries, et al., 2016), suggesting that the direction is effect is social media having an effect in disordered eating.

Image-based SNS such as Instagram, TikTok, Snapchat or Pinterest, where users engage in sharing and consuming pictures and videos, seem to have a higher impact on the development of eating and appearance concerns. These platforms expose users to influential visual material, like visuals that promote the thin ideal. A higher amount of time spent on social media translates into higher exposure to said visuals. On these platforms, studies reveal that users tend to post those pictures where they appear more attractive in line with current social ideals, therefore, thinner (Toma, Hancock, 2010; Manago et al., 2008); and choose to dismiss all other visuals of more "accurate" representation of themselves. This type of behaviour may result in users being exposed to unrealistic physical expectations that increase body dissatisfaction and seeking of unattainable body ideals (Sidani et al., 2016; Aparicio-Martínez et al., 2019). In fact, the thin ideal appears to be widespread in social media (Aparicio-Martínez et al., 2019).

Two relevant theoretical frameworks explain the relationship between body image and eating behaviours and SNSs. According to sociocultural theory (Thompson et al, 1999), the media exposes women to contemporary unrealistic beauty ideals, which they internalise and which lead them to engage in social comparison (Keery et al., 2004; Stice, 1994). The internalisation and comparison lead women to aspire to these ideals, but the inability to achieve the results, to body dissatisfaction (Ata, Ludden, & Lally, 2007; Keery, Van Den Berg, & Thompson, 2004). Another accepted framework is the "self-objectification" theory (Fredrickson & Roberts, 1997). This theory suggests that in western societies, the female body is conceived as an object to be looked at and evaluated based on appearance. The perpetuity of this objectification brings women to internalise an observer's viewpoint of their own bodies and auto-evaluate themselves based on their looks. Self-objectification is distinguished by continuous monitoring of the body's physical appearance and leads to growths in both shame and anxiety about the body. The global of these proceedings (internalisation, comparison, self-objectification, body surveillance, etc.) translate into body dissatisfaction and disordered eating across gender and age (Holland, Tiggemann, 2016).

2. TikTok

Since its release in 1016, the video-sharing platform TikTok has experienced exponential growth: as of March 2022, it has 1.1 billion users and is the most downloaded app in the world. The social media app has exceeded 3.5 billion downloads and no app has had more downloads than TikTok since the start of 2018 (Sensor Tower Q1 2022 Data Digest). Originally launched in China under the name "Douyin" (as it is still known in said country) by the company ByteDance, TikTok was introduced internationally in 2017 and merged to sister social media service, Musical.ly in 2018. Initially centred around lip-sync and dancing videos of 2-15s, TikTok allows now the creation of videos up to 3min long with many different functionalities, such as "duet" (a function that allows "you to build on another user's video on TikTok by recording your own video alongside the original as it plays" (TikTok, 2020)), "stitch" (which allows "users the ability to clip and integrate scenes from another user's video into their own" (TikTok, 2020)), "green screen" or live-stream content. TikTok is constantly evolving and introducing new features that create the perfect interface for creating videos that range from the original music and dance-oriented clips, to humorous tapes, beauty tutorials, educational videos or cooking recipes.

2.1. Functioning and algorithm

Initially TikTok seems to share many services with other previously established social media platforms centred around visual media. Both Instagram and Facebook allow users to live stream and share short videos in their feed and "stories" (a functionality first seen on Snapchat in 2013), and Youtube has offered the possibility of sharing long and short videos since it launched in 2005 and added live-streaming in 2011. There also is the precedent of the app Vine, which had a short but popular existence from 2012 to 2017 and that allowed users, mainly millennials, to share short (7s) humorous videos.

However, there is a key element that sets TikTok apart from other apparently similar social media platforms: the forefronted algorithm. Although we increasingly find recommendation algorithms across the social media landscape, on other platforms these mechanisms are just another complementary element to an otherwise user-driven experience. In contrast, TikTok unprecedentedly places its "For You" algorithm as the centre and moderator of the user experience: the algorithm determines what type of video is presented in the user's feed, and the viewing of these recommendations constitutes the majority of the experience on the platform (Xu et al., 2019).

TikTok is structured around the For You Page (FYP), an endless stream of videos specific to each user and moment of access to the app. TikTok describes the FYP algorithm as "A stream of videos curated to your interests, making it easy to find content and creators you love […] powered by a recommendation system that delivers content to each user that is likely to be of interest to that particular user." (2020). TikTok has publicly shared the outlines of its recommendation system, stating that it takes into account:

1. User interactions with content, such as likes, comments, followings, blocks, reports or shares.
2. Video information, which includes captions, hashtags, sounds used, effects or trending topics.
3. Device and account settings like language preference, country setting, or device type. These settings are included to ensure performance optimization of the system but don't have as much influence on the recommendations as the previous factors.

However, outside analysts have also investigated the algorithm to discover its basis. A recent Wall Street Journal (2021) report revealed the amount of time spent watching each video is an important metric for TikTok's recommendation system. An internal company document titled "TikTok Algo 101" revealed to The New York Times offered an equation for how videos are scored in order to recommend the videos with the highest scores, in which a prediction driven by machine learning and actual user behaviour is added up for each of three bits of data: likes, comments and playtime, as well as an indication that the video has been played (Smith, 2021):

$$(Plike \times Vlike) + (Pcomment \times Vcomment) + (Eplaytime \times Vplaytime) + (Pplay \times Vplay)$$

$$P = probability,\ V = value,\ E = expectation.$$

The internal TikTok document reports that their algorithm is designed to optimise for two metrics: retention (whether the user comes back) and time spent, creating an experience sometimes described as an addiction. As Guillaume Chaslot, founder of Algo Transparency,

said “This system means that watch time is key. The algorithm tries to get people addicted rather than giving them what they really want,” (by Smith, 2021).

What is particularly concerning for experts is the fact that while recommendation algorithms are excellently trained at ensuring a pleasurable experience from a user-interests point of view, they are not trained or able to make moral and health-related judgements about the kinds of content they recommend, something which can lead viewers down dangerous rabbit holes towards harmful content, such as suicide, self-harm or eating disorders.

2.2. Typical user profile

TikTok had, as of the fourth quadrimester of 2021, 1.2 billion monthly active users (Iqbal, Business Of Apps, 2022) and is expected to reach 1.5 billion by the end of 2022. Among those active users, the Generation Z (born between 1997 and 2012) has the highest representation. Globally, 63% of TikTok users are under 29 years old (Iqbal, Business Of Apps, 2022)). The Gen Z penetration is highest in America, with 37.3% using the social media platform at least once per month (Dean, Backlinko, 2022), the Chinese app having surpassed Instagram for popularity among this generation (Cyca, Hootsuite 2022). Of the global above 18 year old audience, roughly 43% is between 18 and 24 years old (Kepios, 2022). Therefore, and although adult users of the platform are increasing (Kepios, 2022), we can affirm that TikTok has a pretty young user base.

Regarding gender, approximately 59% of the users are women, with the difference increasing to a 2:1 ratio in some countries, like the U.S. (Iqbal, Business Of Apps, 2022))

Worldwide, the users spend an average time per day of 52 minutes, with 90% of them accessing the app on a daily basis, with sessions of about 10.85 minutes, which makes it the most engaging social media app available nowadays (Dean, Backlinko 2022).

2.3. User protection mechanisms against eating disorders

Users and experts say that TikTok’s algorithm and image-based content have created a significantly harmful environment for those struggling with an ED or body image issues. (Colleran, 2021). The forefronted algorithm experience promoted by TikTok can present videos about EDs, weight loss, dieting or with triggering content to those users even if they are not deliberately following those accounts. Anecdotal evidence from users says TIkTok’s FYP progressively presents videos about weight loss and EDs after they watch just one post on the topic (Willson, 2020).

TikTok’s community guidelines ban videos that “promote eating habits that are likely to cause health issues", specifying pro-anorexia content or that which encourages dangerous weight loss behaviours (Willson, 2020). The app uses human and AI moderation to remove videos that violate the ban on advocating or exalting EDs. Human moderators are instructed to remove content showing visible purging, calorie restriction, advice on enduring hunger and promoting dangerous weight goals. Videos about ED recovery are allowed but may be restricted from the FYP, therefore only visible to subscribed users or when searched (Colleran, 2021).

Moreover, from 2020 the platform bans any advertising activity related to weight-loss products or diets (Paul, 2021) and TikTok also collaborates with the National Eating Disorder Association and S.A.F.E. in its Safety Centre by providing wellness and educational resources. If the user looks for #proana, #anorexia, #skinnycheck, #thighgapworkout, #thinspo, #meanspo or other related hashtags they are connected to the Suicide Prevention Lifeline and a message suggesting users to reach out to people they trust for help appears (Gerson, 2020).

Unfortunately, TikTok's efforts are still unable to guarantee a safe environment. Despite banning some hashtags, many others popular among the disordered eating community, like #collarbones (13.3M views as of June 2022) or #weightloss (52.4B views as of June 2022), have managed to stay up (Paul, 2021) and do not show any support messages (Gerson, 2020). In addition, users intentionally misspell popular hashtags to get around bans and censorship, although TikTok regularly updates the banned hashtags to keep up with these modifications. For example, after the ban of #thinspo, the content under #thinspao or #thinsrpø (both now banned) increased. Some of those new hashtags are even suggested to the user when they type “thin” into the search bar (Paul, 2021).

However, most potentially harmful videos do not always reference EDs directly. Apparently inoffensive hashtags such as #WhatIEatInADay, #weightlossprogress or #caloriedeficitsnacks are full of content promoting restriction, calorie counting or unhealthy amounts of food. This content can be just as triggering and very difficult to recognize by human and AI moderators.

Aware of these difficulties and conflicts, TikTok encourages users to use the report button when encountering harmful videos.

3. Qualitative research methods

This study was divided into two different parts: the first stage included conducting a content analysis on a selection of TikTok hashtags centred on understanding how the diet culture is presented on TikTok, and the second consisted of a questionnaire survey to assess the impact of a curation of representative toxic TikTok videos on university female students.

3.1. Study 1: Content Analysis

Social media platforms use hashtags as a means to collect content related to a specific topic. On TikTok, users add hashtags to the caption of their posts, which allows a maximum of 300 characters. Clicking on those hashtags or specifically searching for them will lead viewers to a feed of videos containing the said hashtag. Videos posted under TikTok hashtags are not presented in chronological order but according to relevant factors for the algorithm like the popularity of the post itself (measured by views, likes, comments and shares), the popularity of the creator (measured by followers and engagement), previously liked or engaged with content, and the geographic location of the device accessing the TikTok app. A new TikTok account was created to download the analysed videos to suppress any bias derived from previous activity, and to provide a sample that reflected a common user's experience exploring the hashtag, although it is important to mention that no two experiences are ever going to be the same on TikTok.

Three hashtags related to body image and eating practices were selected as the subject of analysis by searching for food, nutrition, exercise, weight and body concerns content and noting which ones were more prevalent among creators and collected more useful content for the analysis. The final choice was motivated by the total of views, and hashtags with abbreviations were prefered given the character limitation in captions and a perceived preference among users through using TikTok for multiple months. The final selected hashtags were:

1. #wieiad: the abbreviated hashtag for What I Eat In a Day videos, which have a direct relation to diet, eating behaviours and experiences with food. Posts containing this hashtag had to feature what somebody ate in a day or in a defined amount of time to be selected.
2. #workoutroutine: directly related to physical exercise. Posts containing this hashtag had to show content related to physical exercise to be selected.
3. #weightlosstips: direct relation to the principle of diet-culture and the normalisation of weight-loss as a goal everybody should be seeking. Posts containing this hashtag had to communicate some kind of information that was relevant or related to weight loss and dieting and exercising for that means to be selected.

Additionally, a fourth hashtag was selected. The fourth hashtag was elected with the aim to see how diet culture beliefs and excessive fixation on physical appearance and dieting were featured in content apparently unrelated to diet culture, weight loss, EDs or body image. The chosen hashtag was #ThatGirl, a very popular trend on TikTok that focuses on achieving the best version of one's self by having everything under control and strong perfectionism. Posts containing this hashtag had to feature content along that description to be selected.

The first 50 posts under each hashtag that met the criteria for each hashtag and that were created in English and by females were downloaded as a prevaried sample that represented a common user's experience on the app. The sample was processed for a thematic analysis with a semantic focus following Braun et al.'s model (2016). In order to guide the analysis, different research questions were defined for each hashtag:

- #wieiad:
    - RQ1: How is intake justified?
    - RQ2: How is entitlement to make the video stated?
- #workoutroutine
    - RQ1: What is the focus of the videos?
    - RQ2: How is entitlement to make the video stated?
- #weightlosstips
    - RQ1: What is the focus of the videos?
    - RQ2: How is entitlement to advise about the topic stated?
- #thatgirl
    - RQ1: How is "diet culture" present in the trend?
    - RQ2: Who participates/is the protagonist of the videos?

The next table summarises the steps that were followed throughout the analysis and the measures that were taken to ensure its quality.

Table 4

Description of data collection and thematic analysis used for TikTok analysis

Thematic analysis steps	Description	Ensuring quality
Step 0: Data collection	● Hashtags related to diet culture on TikTok were explored to identify the most popular toxicity-filled ones and overall popularised content in each of them (e.g., #WhatIEatInADay, #wieiad, #workoutroutine, #detox, #wheightlosshack). ● TikTok's metric for hashtag popularity is total views. Different hashtags among each topic were compared based on their total views. ● Given the character limitation for TikTok captions, abbreviated hashtags were preferable. ● #wieiad, #workoutroutine, #weightlosstips and #thatgirl were selected for analysis for being the most popular hashtags gathering problematic content. ● The first-appearing 50 English, female-created TikToks catalogued under #wieiad, #workoutroutine, #weightlosstips, with content relevant to the hashtag and research were retrieved on May 3rd, 2022.	I reviewed hashtags related to diet culture, including those with spelling mistakes (e.g., #wieiaid), through the platform's own search engine and recommendations to ensure that the selected ones were the most popular on the platform and topic. To minimise the influence of previously engaged content on the display of videos under the selected hashtags, a new TikTok account was created solely for the purpose of data collection for this study The variability of factors involved in the final order in which the videos are presented ensures that the downloaded sample is a pre-varied one that represents a common user experience.
Step 1: becoming familiar with the data.	● Research questions related to each hashtag were established to guide the analysis. ● All 200 videos were watched a minimum of 5 times before coding. Important ideas or thoughts were noted and conformed a base for later preliminary coding. Metrics such as likes, comments or views were also checked as an indicator of engagement and popularity, which would be useful later to assess the relative importance of the codes. ● Videos were classified by type of content (prescriptive, entertaining, promotional or personal experience) and type of creator (Influencer, Business, Personal, RDN/PT/MD or unofficial certification)	
Step 2: generating preliminary codes	● The notes of significant themes were analysed to develop a first code book. ● Various terms were evaluated in order to find which specific wording accurately reflected the essence of the code and would be finally added to the code book. ● A second round of coding was conducted to ensure that a sufficient conceptual depth had been reached.	
Step 3: identifying themes	● All preliminary codes were considered within the context of the research question for each hashtag. ● Similarities and differences across the codes were mapped to facilitate their organisation into themes. ● Themes were identified based on their frequency across the data and the distinction from other themes. ● Sub-themes were identified if different categories could be extracted from videos sharing the same essence but having noticeable distinct characteristics that didn't allow them to be homogenised.	A Hybrid thematic approach was used to ensure that the identified codes and themes were true representations of the content, where all the videos were coded inductively, to later be deductively analysed against the identified themes (Braun et al., 2016).

Step 4: refinement of themes	● The codes within each theme and sub-theme were evaluated to assess if they were sufficiently conceptually similar and codes in different themes were evaluated to check if they were sufficiently conceptually distinct. ● After evaluation, primary themes and sub-themes were selected as final.	
Step 5: theme conceptualisation	● The themes were extensively described, named and exemplified through representative TikToks and captions. ● All 200 videos were re-watched to identify those that better embodied the essence of each theme.	

3.1.1. Results: #wieiad

Of the 50 analysed videos, most (58%) were created by personal accounts of users with no significant followers base nor official or unofficial titles related to health. Influencers without any professional knowledge about nutrition, exercise or health were also quite participative in the hashtag (36%). These two percentages show the casual and amateur character of this type of video.

As for the type of video, most of the sample (76%) was formed by videos which communicated the personal experiences of the creators, while others (14%) of them were recorded to entertain the viewers by ensuring them a fun time. Some videos (10%) had a prescriptive attitude and tried to educate or influence the behaviour of the viewer.

Table 5

Frequency of classifications of videos under #wieiad (n=50)

Type of creator	
Personal	29
RDN/PT/MD	0
Unofficial certificate	3
Influencer	18
Business	0
Type of creator	
Prescriptive	5
Promotional	0
Personal experience	38
Entertainment	7

3.1.1.1. RQ1: How is intake justified?

The content under the hashtag #wieiad was interpreted to form six primary themes (two of which have subthemes) in response to research question nº1, shown in Figure 2:

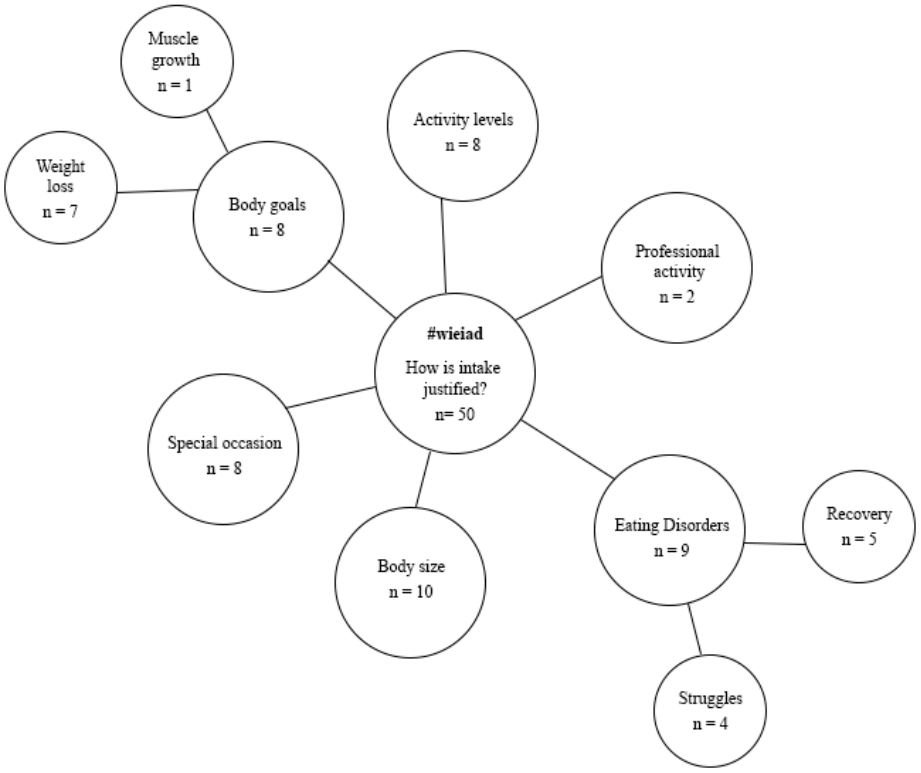


Figure 2. Themes identified across content posted under #wieiad on TikTok to answer research question 1. The six themes are shown in the large circles and include: (1) Body Size, (2) Eating Disorders, (3) Professional Activity, (4) Activity Levels, (5) Body Goals, and (6) Special Occasion. Within the theme (2) Eating Disorders, the sub-themes: (a) Struggles and (b) Recovery were identified. The theme (5) Body Goals was also broken down into two sub-themes: (a) Weight Loss, and (b) Muscle Growth.

- Body size: creators (20%; n = 10 posts) often justified the food that was going to be consumed in the video by stating their body volume either by voice or by showing a clip of their own body. In most videos (90%) under this theme, the owner of the post was a person with a larger body and used disclaimers such as "remember that I am fat" or "what I eat in a day as a fat person" to prevent comments that would highlight something about the video without taking this into account. Those creators often showed their faces while eating. On the other hand, no creator reminded the audience of their low weight.

- Eating disorders: some creators (18%; n = 9 posts) used TikTok to communicate their experiences with eating disorders, a reality that shaped their intake and acted as an explanation for the amount of food eaten.

    - ED Recovery: some creators (10%; n = 5) coopted this trend to document their food at different stages of recovery. They stated directly on the video or the

caption that they were in recovery by titling videos “What I eat in a day: ed recovery” or adding the hashtag #EDRecovery. Those videos often showed lots of snacks or multiple meals and descriptions of how those foods made them feel.

- ED Struggles: other creators (8%; n= 4) showed what they ate while suffering from an ED, either by restricting or bingeing. Not all the creators explicitly stated it. However, in some cases, it was inferable due to previously posted content or by the amount of food that was shown and their physical appearance. Those videos often furtherly explained their situation of feelings. One creator said in the caption “I hate bingeing”, and another justified herself “college is getting hard rn”.

- Professional activity: two creators of the sample (4%; n = 2) stated their professional occupation as an explanation of what was going to be seen during the video, implying that it was either of special interest because of it or that it would change if they had another job. One of them was a nutritionist and stated it by saying “what I eat in a day as a nutritionist”; and the other was a meteorologist that appears daily on TV News with an account dedicated to her routines and job implications. In this latter case, the occupation was not explicitly mentioned, but it was deducible that its time requirements shape the intake of the creator.

- Activity levels: a group of creators (16%; n = 8) shared their daily intake stating, either at the beginning or during the video, the physical activity they had endured during that day. Most of them disclosed a characteristic of theirs that generally entails known levels of physical activity (e.g., "what I eat in a day as a runner") while others added to this statement a specific situation (e.g., "what I eat in a day as a runner on a rest day" or "what I eat in a day as a ballerina on a performance day"). Most of these videos at some point showed the creator performing the activity. Other creators were not as explicit and chose to show their workout statistics on their wearable devices in the middle of the video, indirectly indicating that those numbers had relevance to their intake.

- Body goals: creators often (16%; n = 8) used this trend to document their eating habits while trying to achieve a certain goal regarding their appearance, a process in which eating has an important role.

  - Weight loss: most of the creators (87.5%; n = 7) under this subtheme were actively trying to lose weight, a goal they stated by adding to the title of the video “on a calorie deficit”. One creator did not title the video as so but as “what I eat in a day to reach my goals" but added the hashtag #caloriedeficit to her caption and disclosed the amount of weight she had already lost, revealing the nature of her goals. These videos often disclose either the total amount of calories consumed in the day or the specific calories of each meal.

  - Muscle growth: one creator (12,5%; n = 1) under this theme communicated her eating intentions as a “full day of eating for a juicy booty”, stating that she was actively trying to grow the volume of her glutes and, therefore, in a calorie surplus, something that was also deducible by the other hashtags she used in the captions: #musclefood and #glutegains.

- Special occasion: some creators (16%; n = 8) chose to document their intake given that they were experiencing a special occasion, such as a holiday, a festivity, trying a new restaurant or any other unusual situation, that creates a context in which the intake differs from the typical amount/kind. One TikTok reads "What I eat in a day, cheat day edition". Others focus on exceptional situations such as "what I eat in a day in a South Korea quarantine hotel" or "What my boyfriend and I eat in a day, all-inclusive 5* hotel edition". In all of the videos under this theme, the creators showed their faces while eating.

3.1.1.2. RQ2: How is entitlement to make the video stated?

The content under the hashtag #wieiad was interpreted to form four primary themes in response to research question nº2, shown in Figure 3:

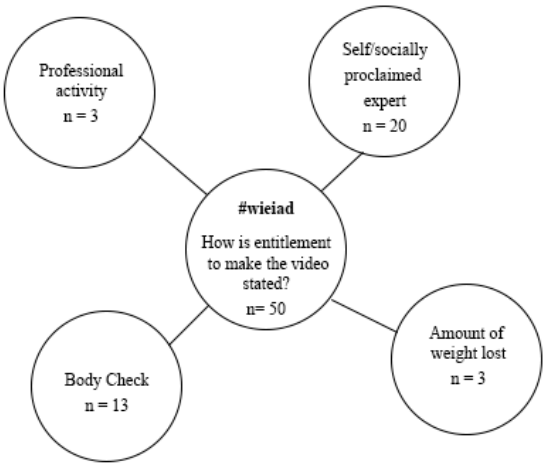


Figure 3. Themes identified across content posted under #wieiad on TikTok to answer research question 2. The four themes are shown in the large circles and include: (1) Self/Socially Proclaimed expert, (2) Body check, (3) Professional Activity, and (4) Amount of weight lost.

- Self/Socially proclaimed expert: creators often (40%; n = 20) published videos under this trend out of habit. Many of them had accounts dedicated exclusively to this type of video, to food in general or to the documentation of their healthy life (including nutrition and physical exercise). Others were not exclusively dedicated to one of these casuistries, but among the usual repertoire of published videos, some TikToks fit into this hashtag. The constant publication of this content elevates the creators, both in the eyes of the viewers and in the conscience of the own creator, to pseudo-experts and entitles them to publish about their intake constantly.
- Body check: a big part of the participating creators under this hashtag (26%; n = 13) followed the practice of showing a clip of their body where the size and figure of it could be easily appreciated before showing their intake of the day. This practice is known as body checking. Although it is not a direct declaration of entitlement, showing their body followed by their diet creates the narrative in the head of the viewer that their body appearance is a result of their diet (given the link between intake and body size) or, changing the focus, that if anybody was to follow the same diet, they would achieve the same looks. Most of those videos either showed the person in tight clothing in a

relaxed position standing in front of the camera or their reflection in the mirror, but two TikTok showed the creators while revealing and flexing their abdominal muscles; while one creator only showed their thighs. All of the videos that followed this entitlement statement featured skinny or normal-weight people.

- Professional activity: a group of creators (6%; n = 3) had a professional activity that could generate, either because of the knowledge involved or because of the particular nutritional requirements it may entail, a special interest for viewers to see what they eat on a given day. One TikTok under this theme read "what I eat as a nutritionist" implying that the expertise and knowledge that comes with the title would both make the video more useful for the viewer, and give authority to the creator to advise. Two other TikToks were created by professional ballerinas, who showed themselves dancing in the first clip of the video. Due to the physical activity levels of these professionals, they have to pay special attention to their diet in order to cover their energy demands, a context which gives them an experience which allows them to publish videos on the matter.

- Amount of weight lost: some creators (6%; n = 3) disclosed the amount of weight they had lost by writing it on the screen next to the title of the video following the format "-Xlbs". All of them also stated that they were on a calorie deficit. The narrative which constructs around this statement of entitlement is that the diet following the lost weight disclosure is partially or fully responsible for the achievement and, therefore, similar results could be obtained by following the guidelines.

3.1.2. Results: #workoutroutine

Of the 50 analysed videos, the biggest portion (40%) was created by influencer accounts (defined as users with more than 50k followers with a record of economic deals due to their presence on TikTok). The next big group of creators (30%) are personal accounts with no significant followers base nor official or unofficial titles related to health, while the group formed by RDN, CPT and MD comes third (14%). Creators with unofficial certifications in health were less participative (10%) in this hashtag, as well as businesses (6%).

Table 6
Frequency of classifications of videos under #workoutroutine (n=50)

Type of creator	
Personal	15
RDN/PT/MD	7
Unofficial certificate	5
Influencer	20
Business	3
Type of creator	
Prescriptive	25
Promotional	4
Personal experience	14
Entertainment	7

Regarding the type of video, half of the analysed clips had some kind of prescriptive attitude, understanding that the information that was given in the video had to educate or guide the viewer in some way. Several videos (28%) communicated the personal experiences of the creators, while others (14%) of them were recorded to entertain the viewers by ensuring them a fun time. Finally, some videos (8%) had the objective of promoting the services or products of the creator, either a person or a business.

3.1.2.1. RQ1: What is the focus of the video?

The content under the hashtag #workoutroutine was interpreted to form four primary themes (all of which have subthemes) in response to research question nº1, shown in Figure 4:

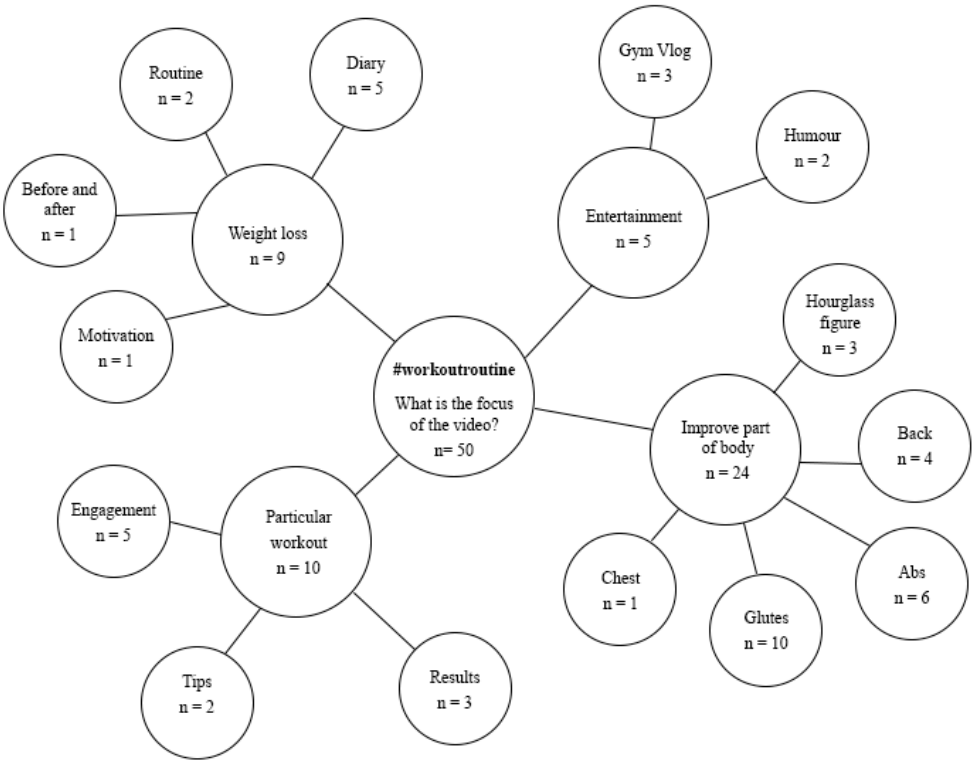


Figure 4. Themes identified across content posted under #workoutroutine on TikTok to answer research question 1. The four themes are shown in the large circles and include: (1) Improve part of body, (2) Particular Workout, (3) Weight Loss, and (4) Entertainment. Within the theme (1) Improve part of body, the sub-themes: (a) Glutes, (b) Abs, (c) Back, (d) Hourglass figure, and (e) chest were identified. The theme (2) Particular Workout was broken down into three sub-themes: (a) Engagement, (b) Results, and (c) Tips. The theme (3) weight-loss had four subthemes: (a) Diary, (b) Routine, (c) Before and After, and (d) Motivation. Finally, theme (4) Entertainment, was also broken down into two subthemes: (a) Gym Vlog and (b) Humour.

- Improve part of body: creators (48%; n = 24) often centred the content of their videos on improving a particular part of their body, for which they showed a set of exercises or gave some advice. Half of them (58.3%; n = 14) also gave specifications on how many repetitions of the exercises the viewer should be making. The part of the body that was being improved was disclosed either by showing the part of interest in a close shot (79.2%; n = 19), by stating it on the title (20.8%; n = 5) or both (79.2%; n = 19).
    - Glutes: several creators (41.7%; n = 10) focused on improving the strength or appearance of their glutes. The focus was on growing the volume of the muscles in most of the videos (70%; n = 7). Some TikToks (20%; n = 2) were more specific and addressed a region of the glute (upper, side). All of the videos showed the creators practising the exercises.
    - Abs: multiple creators (25%; n = 6) focused on working their abdominal muscles. The focus was on improving the appearance of the abdominal area in

all of them. Most of the creators (83.3%; n = 5) had defined abdominal muscles. While the majority of TikToks under this subtheme talked about or showed specific exercises, one read "my workout routine taking me from this (picture) to this (picture) in one week", but did not disclose the content of her routine. All of the videos were filmed at home.

- Back: some creators (16.7%; n = 4) focused on exercises to improve the appearance of the back muscles. Three Tiktoks show exercises to strengthen the back muscles, but one shows the creator practising those exercises but the message accompanying the images focuses on praising girls that work their back in the gym.

- Hourglass figure: a few creators (12.5%; n = 3) were centred on achieving an hourglass figure (characterised by a small waist and big hips and bust). Two of the TikToks showed exercises to achieve that look, and although the creators specifically expressed the goal, the moves that were shown targeted the abdominal muscles exclusively. One TikTok was created by a sculpting clinic, which showed several gadgets and procedures to redistribute fat to achieve the hourglass look.

- Chest: one creator (; n = 1) stressed the importance of working the chest muscles to reduce fat between the armpits and the breasts while showing herself doing chest flys in the gym.

- Particular workout: a group of creators (20%; n = 10) posted under the hashtag to share content centred around a particular workout. The focus was not on improving a part of the body like in the previous theme, but on communicating something about a special workout or type of exercise, although some of them (30%; n = 3) chose to stress about the results they had achieved with the workout.

  - Engagement: some creators (50%; n = 5) filmed themselves while working out doing different activities, which was the centre and point of the published video. While doing the exercise, the creators did not talk about the achieved or desired results, advise about the technique or make any further comments. Some of the videos (60%; n = 3) are created from personal accounts, while others (40%; n = 2) are posted by businesses that specialise in teaching the featured workout and, therefore, have a promotional goal.

  - Results: a few creators (30%; n = 3) posted the videos to talk about the results they had achieved by doing a particular workout. One of them shares the exact routine to encourage people to do it as well, while the other two directly show before and after videos for the viewers to see the transformation, but do not disclose the content of the workout, they simply cite it. Coincidentally, both videos followed the same workout created by a famous influencer.

  - Tips: some creators under this subtheme (20%; n = 2) shared tips to improve the performance of specific moves. In both of the analysed cases, tips were centred on improving squats and were created by influencers.

- Weight loss: a few creators (18%; n = 9) chose to create content under this trend that was centred around weight loss, overall. In this theme there was a high presence of body checks and before and after comparisons.
    - Diary: some creators (55.5%; n = 5) used TikTok as a diary to keep track and document their process of losing weight. They dedicated their accounts to regularly posting what they were eating, how they were exercising (videos under this hashtag), tips or their progress. Some TikToks (44.4%; n = 4) read "day X" to convey where the creators were on the journey. They often tagged their videos with other hashtags like #weightlossjourney.
    - Routine: two creators under this theme (22.2%; n = 2) used TikTok to share the workout routines that helped or made them lose weight. All of the videos started with before and after pictures to show the results, followed by the specifications of the workout (exercises, repetitions and frequency).
    - Before and after: although many of the videos under this theme showed before and after comparison videos or images to show the results, TikToks under this category (11.1%; n = 1) focused on showing the transformation, with no further information or objective. The TikTok also disclosed the amount of weight loss with numbers.
    - Motivation: a creator (11.1%; n = 1) used the hashtag to show her weight transformation while conveying a motivational message centred around how excuses may make today easier, but tomorrow much harder.
- Entertainment: creators sometimes (10%; n = 5) posted content that was made to entertain their viewers, even to make them laugh (606; n = 3). These videos do not try to educate, prescribe, advise or prove a point, they are only made to entertain.
    - Gym vlogs: some creators (60%; n = 3) documented their days at the gym. They are classified under the hashtag #workoutroutine because they appear working out on the TikTok, but it is a complementary element of it. These videos are more focused on the thoughts and feelings of the creators while working out.
    - Humour: two creators (40%; n = 2) created parody videos surrounding the world of fitness. One of them imitated types of girls in the gym and the other was a doctor who jokingly complained about patients lying about their cosmetic procedures and instead giving credit to their CPTs.

3.1.2.2. RQ2: How is entitlement to make the video stated?

The content under the hashtag #workoutroutine was interpreted to form five primary themes (one of which has subthemes) in response to research question nº2, shown in Figure 5:

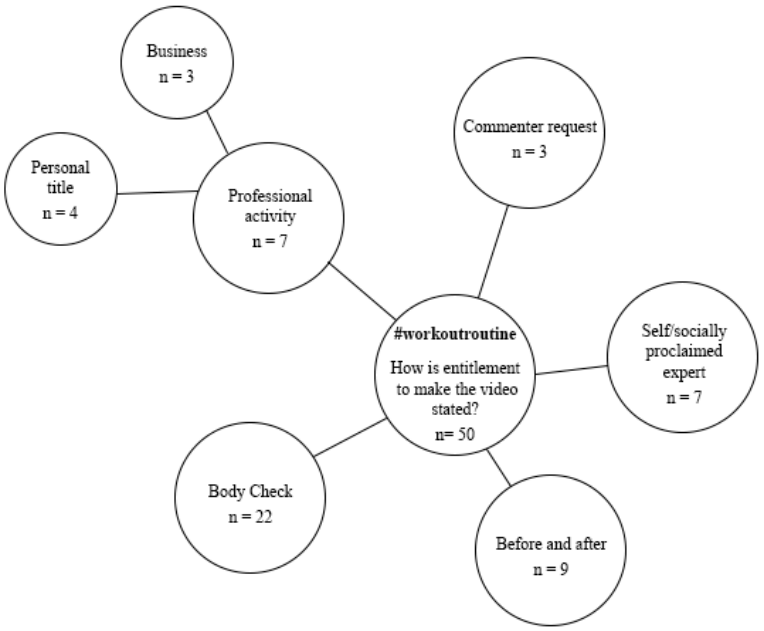


Figure 5. Themes identified across content posted under #workoutroutine on TikTok to answer research question 2. The five themes are shown in the large circles and include: (1) Body check, (2) Before and after, (3) Self/socially proclaimed expert, (4) Professional activity, and (5) Commenter request. Within the theme (4) Professional activity, the sub-themes: (a) Personal title, and (b) Business were identified.

- Body check: a big part of the participating creators under this hashtag (44%; n = 22) followed the practice of body checking showing a clip of their body where the size and shape of it could be easily appreciated at the beginning of the video. Although it is not a direct declaration of entitlement, showing their body followed by their workout routine or workout tips creates the narrative in the head of the viewer that their body appearance is a result of their physical activity or that if anybody was to follow the same diet, they would achieve the same looks. Most of those videos either showed the person in workout clothing while flexing their muscles or moving to show their figure from multiple angles. All of the videos that followed this entitlement statement featured skinny or muscular people, despite one of them, which was an overweight person on a weight loss journey.

- Before and after: participating creators under this theme (18%; n = 9) started their videos by showing either videos of pictures of themselves before losing weight or before getting in shape to illustrate and prove the transformation they have undergone. Having experienced this process themselves, it turns them into experts in the eyes of the viewers and to the creator itself, as they have a solution with "proven" efficacy.

- Self/socially proclaimed expert: creators sometimes (14%; n = 7) published videos under this trend out of habit. Many of them had accounts dedicated exclusively to fitness and to what is socially considered a healthy lifestyle, some of which even had

constructed their own digital identity around it. Others were not exclusively centred on fitness, but TikToks related to their workouts were among the usual repertoire of published videos. The constant publication of this content elevates the creators, both in the eyes of the viewers and in the conscience of the own creator, to pseudo-experts by repetition and entitles them to publish about their intake constantly.

- Professional activity: a group of creators (14%; n = 7) had a professional activity that brought a level of knowledge because of their specialisation that made their content seem more valuable or justifiable because they were acting in their field. However, none of them explicitly disclosed their title or activity. That information was obtained once you visited their account or checked the profile name and picture. However, one creator was easily identified as a doctor because of her clothing (hospital pyjamas).
    - Personal title: some TikToks (57.1%; n = 4) were posted by people with professional titles like CPT, MD or unofficial certifications, who appeared either working out or giving advice.
    - Business: three TikToks (42.9%; n = 3) were created by business profiles, not personal accounts. In those videos, the services provided by the company were promoted by showing people engaging in them.
- Commenter request: in some cases (6%; n = 3), creators created videos showing their personal workouts in response to a request to do so left in the comments of previous videos by viewers, which was the reason and explanation to why the videos were and could be made. These videos were always very specific to the workout, as it was what the commenter was asking for. One TikTok read "Can you do your gym routine? And what you eat in a day", while another read "That workout routine needs to be dropped" to which the creator responded "Y'all came to me for my workout routine, so here's how I got a dump truck".

3.1.3. Results: #weightlosstips

Of the 50 analysed videos, the biggest portion (40%) was created by personal accounts with no significant followers base nor official or unofficial titles related to health, although there was also strong participation (32%) of influencers. The following group of creators (18%) are people with unofficial certifications related to health, such as weight loss or health coaches and nutritionists. On the contrary, creators with official certifications like RDN, CPT and MD had a shy presence (4%), as well as businesses (6%).

Table 7
Frequency of classifications of videos under #weightlosstips (n=50)

Type of creator	
Personal	20
RDN/PT/MD	2
Unofficial certificate	9
Influencer	16
Business	3
Type of creator	
Prescriptive	31
Promotional	7
Personal experience	11
Entertainment	1

In terms of the typology of video, most of the analysed clips (62%) had some kind of prescriptive approach, which was expected due to the thematic of the hashtag. Multiple videos (22 %) shared personal experiences of the creators, while others (14%) were centred on promoting the services or products of the creator, either a person or a business. Just one video (2%) was focused on inducing a fun time for the viewer.

3.1.3.1. RQ1: What is the focus of the video?

The content under the hashtag #weightlosstips was interpreted to form six primary themes (two of which have subthemes) in response to research question nº1, shown in Figure 6:

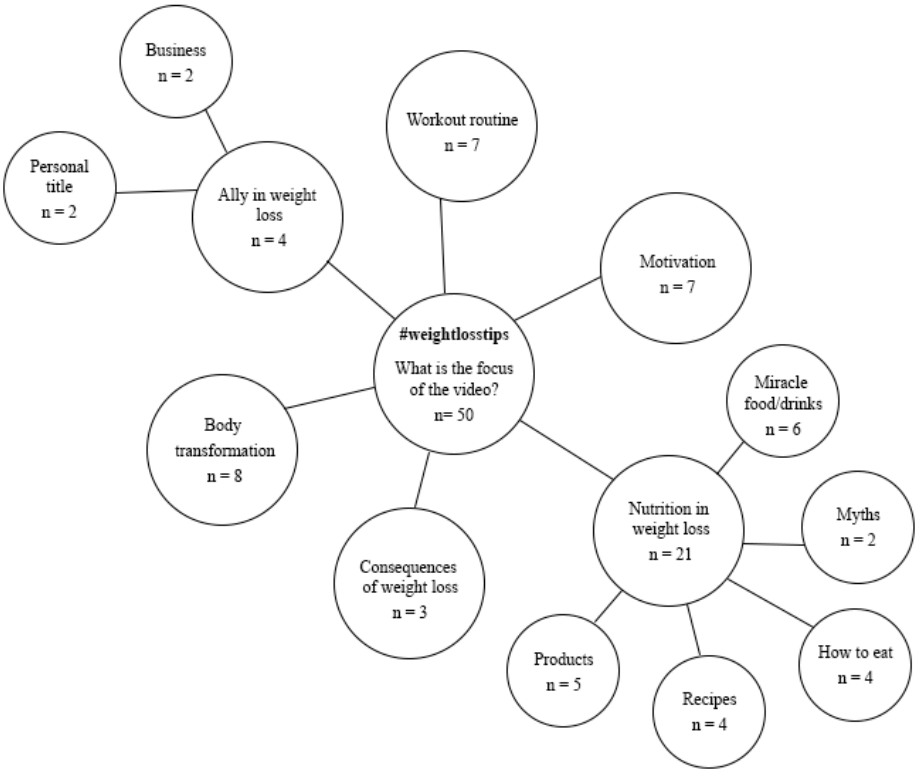


Figure 6. Themes identified across content posted under #weightlosstips on TikTok to answer research question 1. The six themes are shown in the large circles and include: (1) Nutrition in weight loss, (2) Body transformations, (3) Motivation, (4) Workout routine, (5) Ally in weight loss, and (6) Consequences of weight loss. Within the theme (1) Nutrition in weight loss, the sub-themes: (a) Miracle food/drinks, (b) Products, (c) Recipes, (d) How to eat, and (e) Myths were identified. The theme (5) Ally in weight loss was also broken down into two sub-themes: (a) Business, and (b) Personal title.

- Nutrition in weight loss: many creators (42%; n = 21) posted under this hashtag to convey messages about eating habits and tips while trying to lose weight.
    - Miracle food/drinks: A large portion of the creators (28.6%; n = 6)under this theme showed a recipe that was supposed to make people lose a certain amount of weight in a specific period of time just by taking it (hence miraculous). In most cases (83.3%; n = 5) it was a drink, whilst one TikTok showed a recipe for a meal. Two TikToks read something along the lines of "I have heard/I have found that..." before revealing the recipe, implying that the efficacy of the prescription was unproven. However, in the other TikToks (66.7%; n = 4), the miracle drink was presented as a direct cause of weight loss or maintenance of weight loss for the creator.
    - Products: A number of creators (23.8%; n = 5)presented specific products that had been or were being common in their weight loss journey. Most of the creators (80%; n = 4) speak from past experience, they have already lost weight

and tested the help of the products, while one creator speaks from the present, she is still in the middle of her process. Of the former group, three of the videos read "products that helped me lose X lbs," while one reads "products that made me lose." This verbalization creates the narrative that food, regardless of other factors and habits, can generate weight loss.

- Recipes: other creators (19%; n = 4) provided recipes for viewers to copy in order to lose weight. Most of the videos (75%; n = 3) recommended based on personal experience, sharing what they had apparently used or were using to lose weight and had proved to work. One creator, however, recommended a recipe from professional experience, as she was an RDN.

- How to eat: in this subtheme, creators (19%; n = 4) shared tips on how to organise meals, how to build those meals and how to balance different types of foods to optimise weight loss. Some (50%; n = 2) chose to focus on one specific tip, while one TikTok, under the title "Tips on how I lost weight the lazy way" proceeded to give a list of pieces of advice. One TikTok was centred on explaining how to eat for weight loss but did not disclose the tips, she encouraged viewers to follow her to discover them.

- Myths: a few creators (9.5%; n = 2) talked about nutrition in weight loss but instead of focusing on giving tips, they centred on dismantling some fake tips or unuseful tips which are often given on the internet. Both videos follow the typical structure used in the other TikToks of the theme, but the approach of the video can be read in the title ("useless weight loss tips you've probably been taught" or is revealed by voice at the end of the video. In the latter, the creator imitated common TikToks preparing miraculous detox drinks to reveal her true intentions at the end of the video and warn people to stop drinking this type of drink.

- Body transformation: A significant portion of creators (16%; n = 8) used TikTok to show the (weight loss) transformation their bodies had undergone. The focus of the videos was entirely on the obtained results and the contrast regarding their initial body. Thus, the vast majority (87.5%; n = 7) did not show any videos of the process, although some (50%; n = 4) used videos of them exercising to show the current body, but not the process. To show the change, some (62.5%; n = 5) used lifestyle videos in which, by showing them in succession, the transformation could be seen. Others (37.5%; n = 3) used videos created specifically to monitor physical progress, with little clothing and/or in front of a mirror. Among the latter, some chose to copy the same pose and wear the same clothes to better show the change. While all showed the lost weight, only a few (37.5%; n = 3) disclosed how long the process had taken.

- Motivation: A fraction of creators (14%; n = 7) communicated motivational messages to people trying to lose weight under this hashtag. Many of the videos (57.1%; n = 4) were explicitly intended to become a sign to continue or to get started on their journey. The other videos were also intended to motivate people to keep going, but their content was directed to other topics, such as excuses or fears that may appear in this process. Some creators (42.9%; n = 3) wrote their motivational reflections on the screen, accompanied by images of themselves doing exercise; while others (28.6%; n = 2)

paired the written reflection with a second reflection in the form of audio from a different creator. One creator communicated his message by speaking directly into the camera. Many of the videos also showed footage of the results they had achieved.

- Workout routine: A large group of creators (14%; n = 7) showcased their exercise routines for losing weight or toning certain areas. Nearly half of those in this theme focused on full-body routines (42.9%; n = 3), while others (28.6%; n = 2) targeted specific body parts and some (28.6%; n = 2) emphasized the type of exercise, rather than where the results would be seen. The vast majority (85.7%; n = 6) spoke from experience, recommending exercises that had worked for them in weight loss, while only one was still in the process of losing weight. Also, the vast majority (85.7%; n = 6) started the video either by showing a comparison of their transformation or by showing their current body.

- Ally in weight loss: some creators (8%; n = 4) used the hashtag to present themselves as allies for people trying to lose weight, introducing their services or tips to help them achieve their goals. The TikToks were entirely promotional.

    - Business: half of the creators were business accounts who promised results by working or interacting with their content.

    - Personal title: half of the creators posted from a personal account. These videos both used previously created audios to their advantage to fit the message into them, adapting to both trending and typical audios and to the TikTok format. The videos start by calling the attention of the viewer by either promising fast results or by presenting the goals the creator has achieved. Both of the creators were skinny and fit and talked from experience and ended the videos with a call to action to follow them.

- Consequences of weight loss: There were creators (6%; n = 3) who did not give any weight loss tips despite the hashtag title. Instead, they focused on highlighting unintended consequences of losing weight. Some of them (66.7%; n = 2) took a negative approach to the video by expressing implications that were not of their liking, such as loose skin, judgement from others, or excessive cold. Among this group, one creator took a humorous-passive-aggressive tone, the other a dramatic one. On the other hand, another creator took a neutral approach to the consequences, without emphasising her attitude towards them.

3.1.3.2. RQ2: How is entitlement to advise about the topic stated?

The content under the hashtag #weightlosstips was interpreted to form five primary themes (one of which has subthemes) in response to research question nº2, shown in Figure 7:

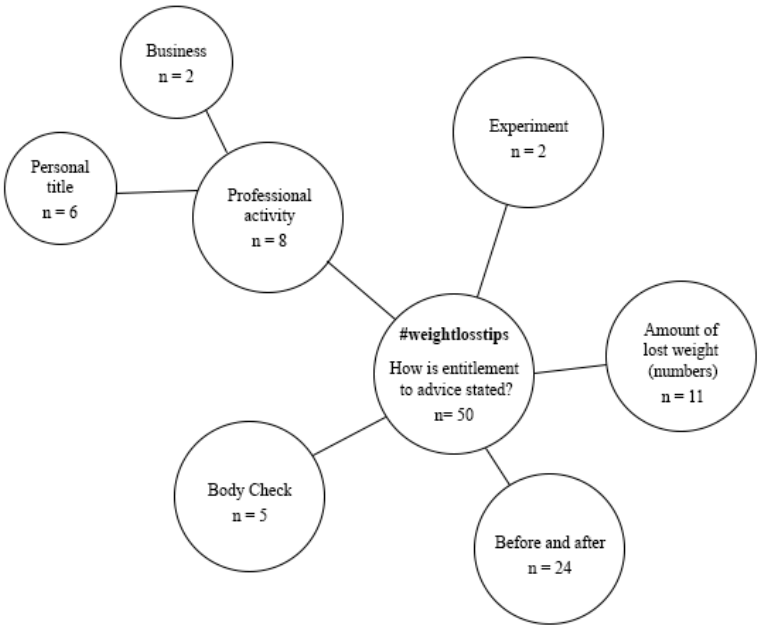


Figure 7. Themes identified across content posted under #weightlosstips on TikTok to answer research question 2. The five themes are shown in the large circles and include: (1) Before and after, (2) Amount of lost weight (numbers), (3) Professional activity, (4) Body Check and (5) Experiment. Within the theme (3) Professional activity, the sub-themes: (a) Personal title, and (b) Business were identified.

- Before and after: Many of the participants in this hashtag (42%; n = 21) started their content by graphically showing their body transformation through a comparison of images (videos and photographs). Some (42.9%; n = 9) used lifestyle videos in which, by showing them in succession, the transformation could be seen. Others (42.9%; n = 9) used videos created specifically to monitor physical progress, with little clothing in front of the camera or mirror. A small portion combined both types of footage. By presenting this transformation in such a graphic way as the first stimulus of the video, the viewer is more inclined to believe what the creator recommends and, at the same time, causes the creator to trust what they are advocating for.

- Amount of lost weight: Quite a few creators (22%; n = 11) started their videos by disclosing the exact amount of weight they had lost. Most of them (63.6%; n = 7) did so by writing it in the video or in the caption, while some (9.1%; n = 1) stated it by voice and a few (27.3%; n = 3) in both ways simultaneously. In some cases (18.2%; n = 2), the weight loss was illustrated with before and after pictures. Only a few (36.4%; n = 4) specified in how long they had lost that amount of weight. Revealing the exact amount of weight they had lost served as proof enough to demonstrate their entitlement to provide advice and the effectiveness of the tip while establishing the narrative in the viewer's mind that if someone were to follow the advice they were giving, they would attain the same results.

- Professional activity: Some creators (16%; n = 8) had a professional activity that entailed a certain level of knowledge, authorising them to make prescriptive content about weight loss. Most of them (75%; n = 6), however, did not disclose the professional activity in the video itself, but it could be figured out either in the username (50%; n = 3) or in the profile bio (50%; n = 3) upon entering it. Others did disclose the activity (25%; n = 2), whether by voice or by typing it into the video.
    - Personal title: within this theme, most of the creators (75%; n = 6) held a personal title certifying their professional activity.
    - Business: within this theme, some of the creators (25%; n = 2) were a business that offered services related to weight loss.
- Body check: Some creators (10%; n = 5) started their videos by showing their bodies as the central element of the video. Most of them (60%; n = 3) showed their entire body, while others (40%; n = 2) zoomed in on a specific body part to stress where the viewer's attention should be focused. However, of the former group, also some (66.7%; n = 2) stressed a part by lifting up their clothes. Showing their slim or toned body acted as sufficient proof to demonstrate their authority to give advice, while it created the narrative in the head of the viewer that if anybody was to follow the tip they were giving, they would achieve the same looks.
- Experiment: A few creators (4%; n = 2) published their content to document the process of experimenting on the reliability/effectiveness of weight loss tips they had found online. Their experiment could thus be of interest to followers who found themselves in the same situation. However, the videos did not disclose the results of the experiment, just shared the advice itself.

3.1.4. Results: #thatgirl

Of the whole sample, the majority (64%) was published by creators belonging to the influencer category, followed (30%) by personal accounts with no significant followers base nor official or unofficial titles related to health. There is weak participation of both businesses (4%) and creators with unofficial certifications (2%). There were no videos created by RDN, CPT or MDs.

Concerning the type of video, multiple posts (46%) were classified as prescriptive as they tried to educate the viewer; while others (36%) were focused on creating an entertaining moment for the viewer. Some videos (10%) were centred on promoting the products or services of the creators and just a few (8%) of the TikToks conveyed the personal experiences of the creators.

Table 8

Frequency of classifications of videos under #thatgirl (n=50)

Type of creator	
Personal	15
RDN/PT/MD	0
Unofficial certificate	1
Influencer	32
Business	2
Type of creator	
Prescriptive	23
Promotional	5
Personal experience	4
Entertainment	18

3.1.4.1. RQ1: How is "diet culture" present in the trend?

The content under the hashtag #thatgirl was interpreted to form six primary themes in response to research question nº1, shown in Figure 8:

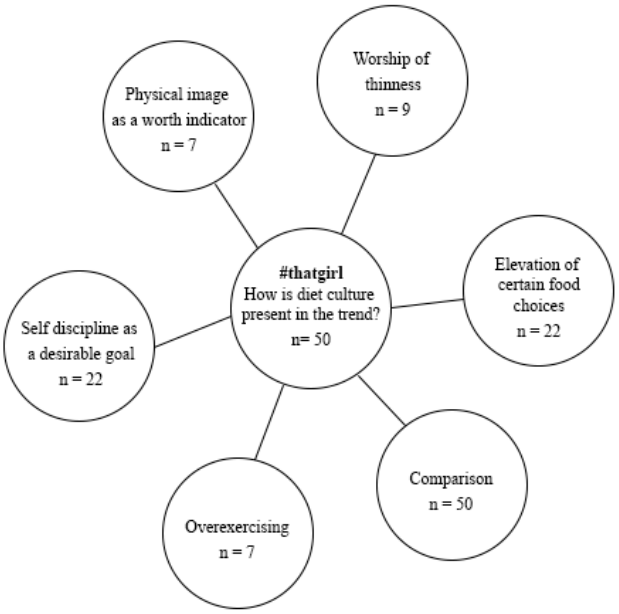


Figure 8. Themes identified across content posted under #thatgirl on TikTok to answer research question 1. The six themes are shown in the large circles and include: (1) Comparison, (2) Elevation of certain food choices, (3) Self discipline as a desirable goal, (4) Worship of thinness, (5) Overexercisind, and (6) Physical image as a worth indicator.

- Comparison: all videos under this hashtag were included in this theme regardless of the content of the TikTok, because the trend That Girl, in itself, arises from a comparison. "That Girl" is comparing one's own person to another supposed girl who has a certain set of desirable qualities that one wants to have. The content of the trend usually revolves around what it entails to be that girl and how to become that girl, it being understood that the comparison is negative (one's own person does not have the desired qualities). The comparison is inherent in this trend and cannot be detached, although some videos may contain messages that more explicitly convey this comparison.

- Elevation of certain food choices: All the other themes (discipline, worship of thinness) are always accompanied by a specific food group: food which is socially considered healthy and superior, with no exceptions or balance. It is not conceivable that That Girl, who has everything under control, who achieves her goals, who is in her best version, and who is enviable, does not eat healthy food. Therefore, having a series of desirable attributes is associated with eating in a certain way that, like everything that surrounds That Girl, is elevated to a superior lifestyle. The videos under this theme (44%; n = 22) emphasized more clearly the relationship between that girl and food choices.

- Self-discipline as a desirable goal: That Girl is a girl who has everything under control, who is never overcome by laziness or fear. She is very disciplined about what she wants, her goals, and her responsibilities. This obsession with self-discipline can be related to the diet culture because it is a belief that thin people (precisely those who

participate in this trend) have a lot of self-discipline to regulate themselves which is why they have such bodies. On the contrary, people in larger bodies have no self-control or discipline, which results in an “unhealthy” or “unattractive” body. The videos under this theme (44%; n = 22) emphasized more clearly the self-discipline of That Girl.

- Worship of thinness: Many videos start with images of the creator in front of the mirror, with their phone covering their face and showing a thin body. Thus, the first stimulus we associate with That Girl, because it is what accompanies the title, is that of a thin person. In addition to most of the participants of the trend being thin, in the mood boards with third-party content, very slim people always appear. The interest of these images is the body itself, therefore they are often detailed shots of body parts, such as a stomach, a collarbone, or legs, skinny and muscular. The focus is on the condition of those parts, not on thin bodies as subjects of an activity of interest. When the footage is their own, sometimes it is also common to intersperse detailed images of their bodies that do not add to the story of the video but add to the aesthetic. In more concrete cases, such as a makeup routine TikTok, this obsession with thinness appears in the objective of the makeup look: to look lifted and sculpted, characteristics of thinner faces where the bone structure is more visible.

- Overexercising: Many of the videos (14%; n = 7) under this trend put excessive focus on physical exercise. Many of the TikToks were compilation videos of the creator's lifestyle or third-party videos that communicated the That Girl lifestyle. The number of fitness videos shown was disproportionate in relation to other activities within a day, week, or life of the creators; sometimes even exercising multiple times a day. It was also very common to exercise at extreme hours of the day, such as between 5 and 6 a.m., even when the creator revealed that they didn't feel like it.

- Physical image as a worth indicator: In this theme's videos (14%; n = 7), there is a lot of emphasis on taking care of your physical image (makeup, skincare, body care...) as part of the That Girl aesthetic. To be that girl you have to take care of your physique and it has to be perceived. Therefore, as being that girl is something of value, the That Girl look is associated with a certain value. On the contrary, not having it stops you from being that girl. In some specific cases, the creator has specified that dressing up makes her feel herself again and is the solution to stop feeling sad, showing that this association of a good image with the value of a person is also something internal.

3.1.4.2. RQ2: Who participates/is the protagonist of the videos?

The content under the hashtag #thatgirl was interpreted to form four primary themes in response to research question nº1, shown in Figure 9:

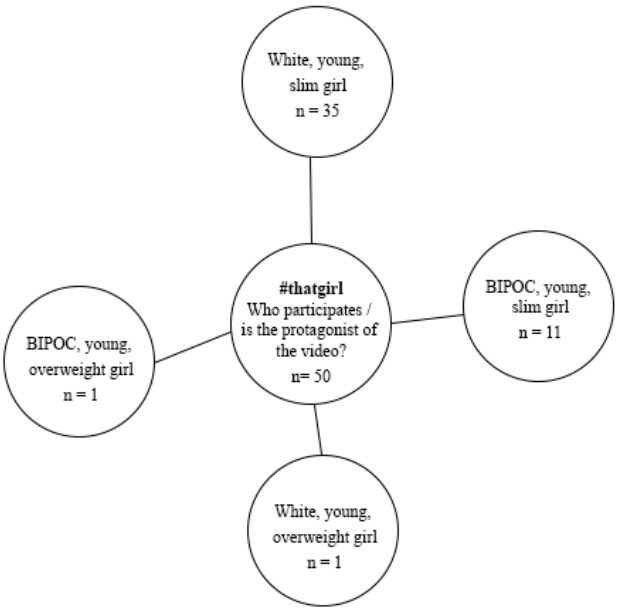


Figure 9. Themes identified across content posted under #thatgirl on TikTok to answer research question 2. The four themes are shown in the large circles and include: (1) white, young, slim girl; (2) BIPOC, young, slim girl, (3)White, young, overweight girl, and (4) Bipoc, young overweight girl.

In the majority of the videos (70%; n = 35) where there was a protagonist of the video or somebody who identified as *That Girl,* they were white, young and slim (normative weight) girls. This was either presented by showing the creator on screen or on her profile picture, who fell into the previously stated categories; or by the use of inspirational pictures that illustrate the concept which showed girls that were white, young and slim. Other creators (22%; n = 11) participating in the hashtag shared their petite body size and young age but were non-white. Most of the creators of this subtheme were Asian (54.5%; n = 6). All of them, though, followed western lifestyles. One creator (2%; n = 1) was white and young but overweight, and on her TikTok, she did not refer to anything related to body image or health; and another one (2%; n = 1) was BIPOC, young and overweight. In the latter, she was the famous rap singer Megan Thee Stallion, talking about *feeling* like *That Girl.*

3.2. Study 2: Survey

The second part of the research investigated the relationship between toxic diet-culture TikTok consumption and body image and fat phobia in female undergraduate students. The main objective was to explore if and to what degree videos focusing on nutrition, exercise and featuring idealized bodies perpetrated on TikTok affected body image, comparison practices and the level of fat phobia in female university students.

The method used to examine the hypothesised relationship was experimental research. The questionnaire was administered to n = 61 undergraduate female students, and it contained 3 previously established media use, body image and fat phobia scales.

The following table elaborates on the method and steps that were followed in the research study.

Table 9

Description of data collection and questionnaires used for population study

	Description	Justification
Participants	The population for the study was localised to female undergraduate students of Spanish universities.	Results collected from the Spanish population could be useful for future cross-cultural comparisons, as there have been multiple studies examining the relationship between social media and body image (Brown & Tiggemann, 2016; de Vries et al., 2016), but mostly centred on the Anglo-Saxon population. Also, the study focused on women as they are the demographic group with the highest prevalence of EDs and body image perception issues, as seen in past sections of this paper. Finally, this study centred on undergraduate students as their social environment is specifically prone to gathering ED risk factors (see section 1.2.1). Moreover, there have been multiple studies (de Vries et al.2016; Duchesne et al. 2016; Ho, Lee & Liao, 2016; Slatter & Tiggemann, 2015) examining the impact of social media on adolescents, but the young adult group remains rather unexplored.
Research procedure:	This was a three-part study with participants in an experimental research design. 1. Recruitment of participants was done through the study leader's contacts and contacting them via social media and messaging. Participants were required to disclose their study major. 2. In part 1 (pre-exposure), participants received the questionnaire to fill in. The survey included the Sociocultural Attitude towards Appearance Questionnaire-3 (SATAQ-3; Thompson et al., 2004), the Body Image Disturbance Questionnaire (BIDQ; Cash et al., 2004) and the Fat Phobia Scale (Bacon et al., 2001). 3. In part 2 (stimulus), participants were asked to spend 6 minutes viewing a selection of TikToks with content classifiable to the hashtags reviewed in section 3.1 and other videos of considered body image toxicity. 4. In part 3 (post-exposure), participants were asked to complete the survey again.	The research was designed to isolate the possible effects of TikTok on body image, comparison processes, and fat phobia and to create a clear link between this social media as a stimulus and the effects. Therefore, the questionnaire was repeated in the same way after exposure to the stimulus. The stimulus was presented respecting the vertical format of TikTok and displaying the content mimicking the swiping motion done in the app.
Data collection	The questionnaire was composed of three scales that had been chosen following the proposal of a previous study (Aziz, 2017): ● **Sociocultural Attitudes Towards Appearance Questionnaire-3**	Body Image dissatisfaction and fat phobia are two concerns that are becoming increasingly prominent in youth. The perceived influence of social media on body image was important to assess in order to

	(SATAQ-3): developed by Thompson et al. as a revision of their first two scales and seeks to show appearance-related pressures, influences and internalizations. It assesses the level of conformity (1 - disagree, 5 - definitely agree) to statements surrounding media influence related to TV, magazines, movies and the internalisation of athletic figures. The original statements were adjusted to better serve nowadays criteria and to focus on social media influence rather than traditional media. ● **Body Image Disturbance Questionnaire (BIDQ):** This Body Image-related Scale was designed by Thomas F. Cash (2004) and has been tested on Caucasian and African American women and is appropriate for late adolescents and adults. It contains seven scaled items plus five open-ended questions on "appearance-related concerns, mental preoccupation with these concerns, associated experiences of emotional distress, resultant impairment in social, occupational, or other important areas of functioning, interference with social life or with school, job, or role functioning, and consequential behavioral avoidance". (Cash, 2004). ● **Fat Phobia Scale:** this 14-item scale was originally 50-item long, but the shorter version was proved successful and reliable at measuring anti-fat attitudes by employing a Likert scale (1-5) to assess the level of conformity to fat-related stereotypes, such as level of laziness, insecurity and attractiveness, among others.	see, firstly, the extent of the pressures and secondly to detect the level of awareness among the students. If the respondents had a good level of awareness and sincerity, this scale was one of the most valuable to see the possible effects of the content shown in the stimulus. The level of satisfaction with body image is one of the most influential factors in the development of ED and disordered eating attitudes, as well as emotional distress. Social media have previously been shown to have a major impact on it. Fat phobia is one of the pillars of the diet culture, the fear and disdain of larger bodies, which fuels many of the social myths, and leads people to diet and fear any sort of weight gain.
Limitations	This research aims to prove the relationship between a specific type of content on TikTok and body image concerns, but no authentic user experience on the app is going to be as curated with toxic content as this stimulus. This is not a truthful representation of what six minutes spent on the TikTok app may provoke. Also, the stimulus was created by gathering content mainly viewed as toxic, but under the research developer's consideration. Users may have different opinions as to what content is toxic and triggering to them, which may affect the results. Finally, the stimulus was limited to approximately six minutes which is not a faithful representation of the usual amount of time that a person of this age spends on social media, and there have been links in previous studies between the amount of time spent on social media and body concerns levels.	

3.2.1. Results

The survey was answered by 61 participants (female undergraduate students of Spanish universities). Respondents were mainly students of communication-related degrees, such as Advertising or journalism, although there was also a strong presence of health students (medicine, nursing, psychology) and a moderate presence of students of different engineering fields (chemical, data, biological…). Finally, some of the respondents had a background in business sciences.

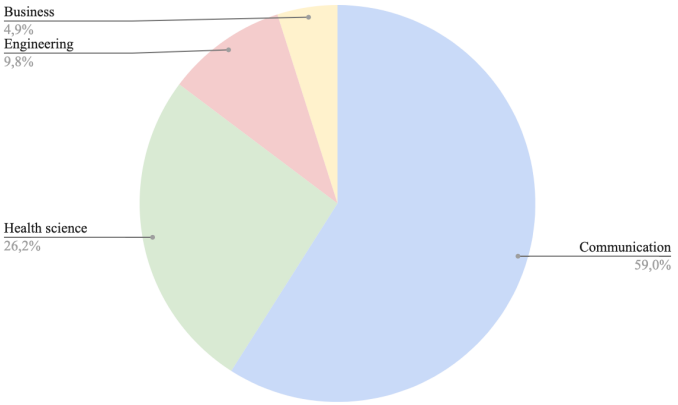


Figure 10. Respondents' current studies.

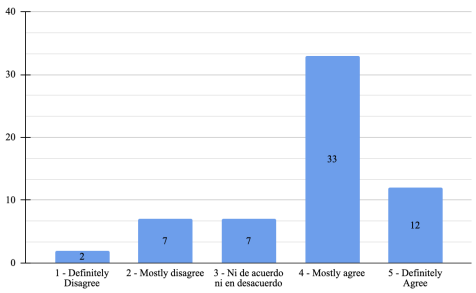
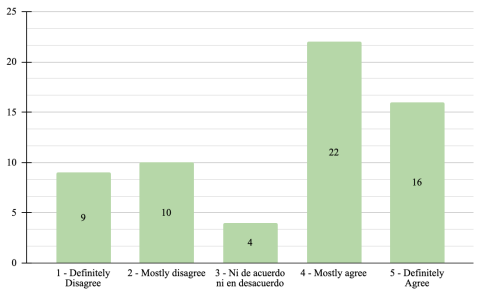
The interest of this study was in observing the changes between the responses obtained in the first pre-stimulus round and those obtained in the post-stimulus round, and not so much in detecting individual responses of interest. The focus was on response trends, rather than on detail. With this approach, the results of the different questionnaires are collected and analysed.

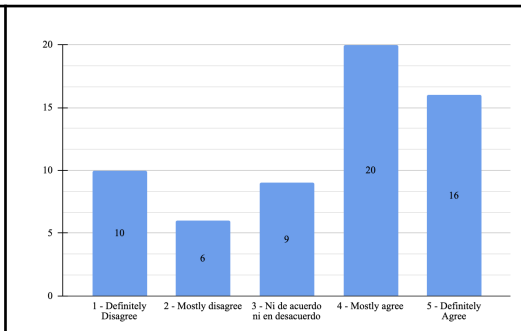
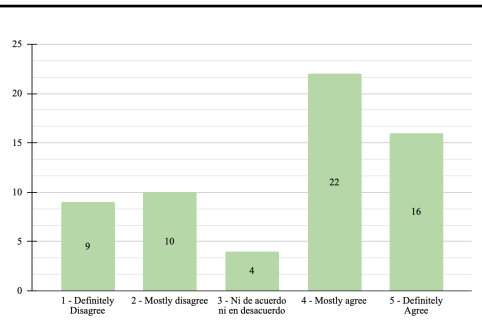
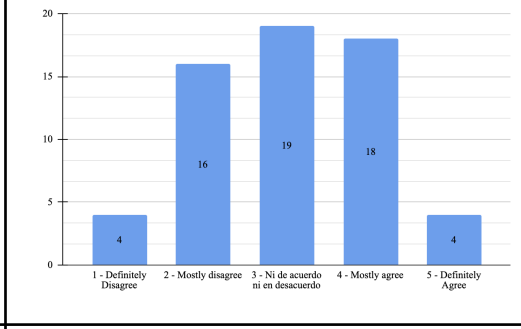
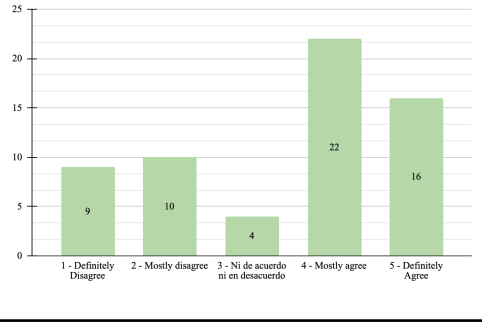
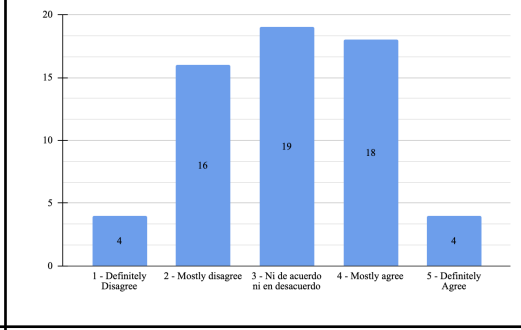
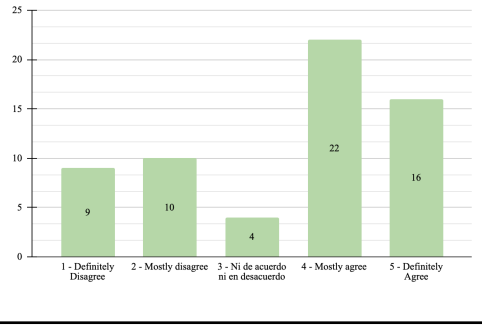
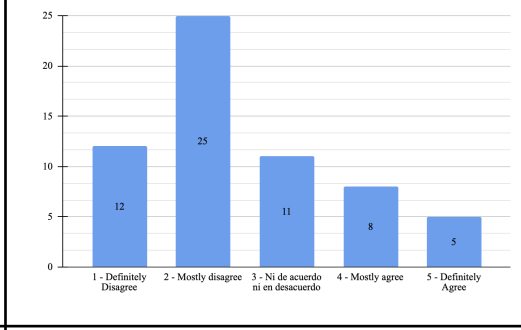
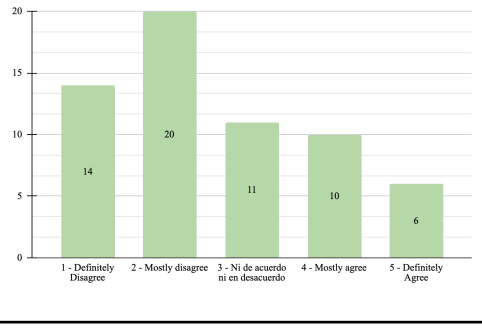
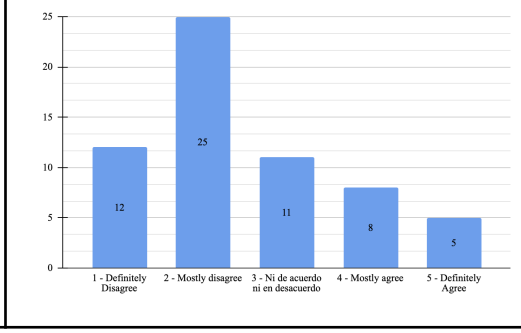
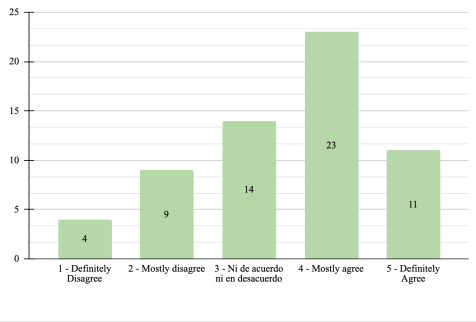
3.2.1.1. SATAQ-3

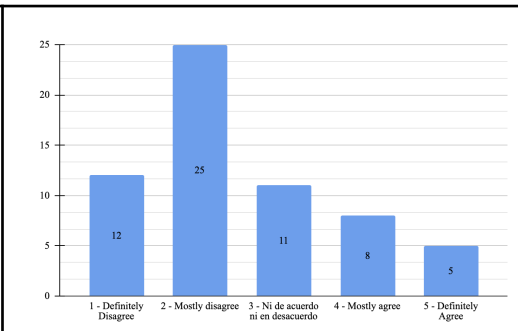
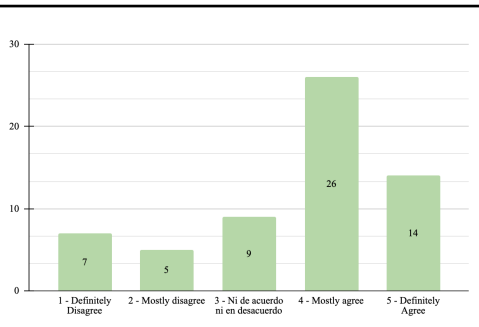
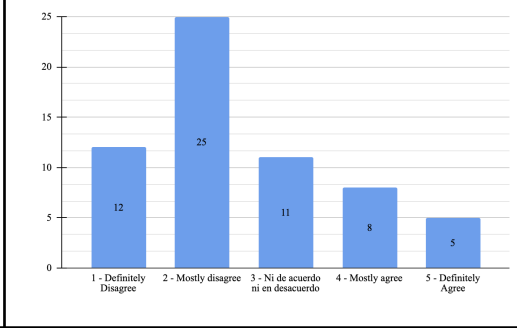
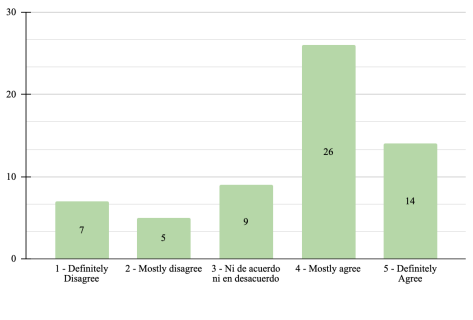
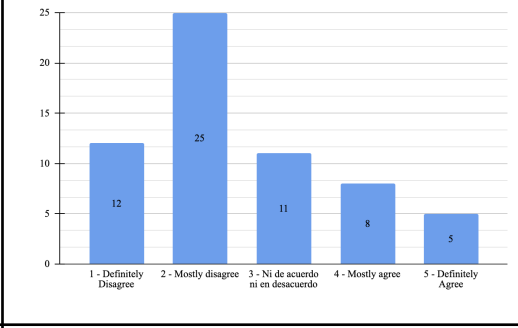
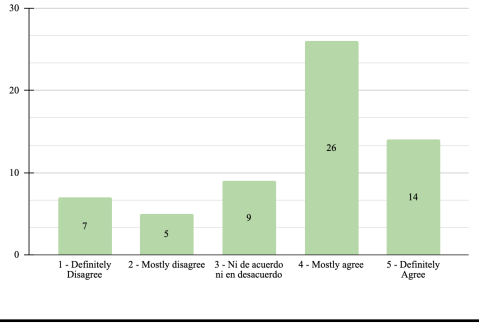
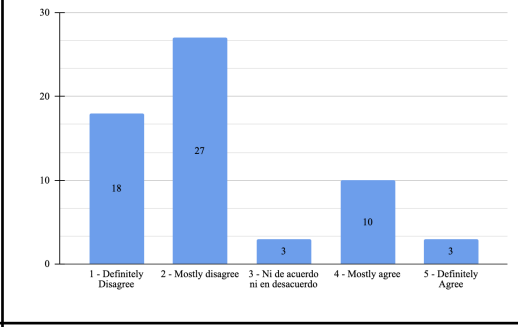
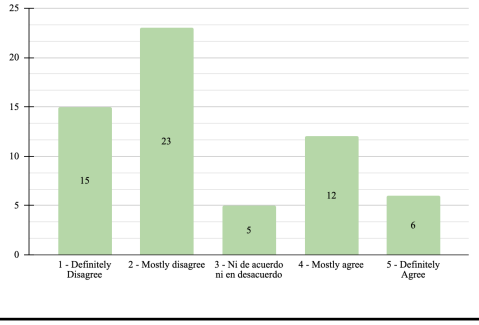
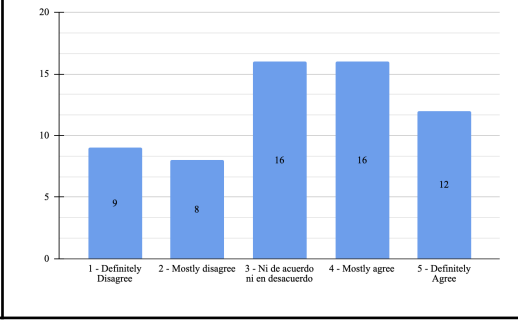
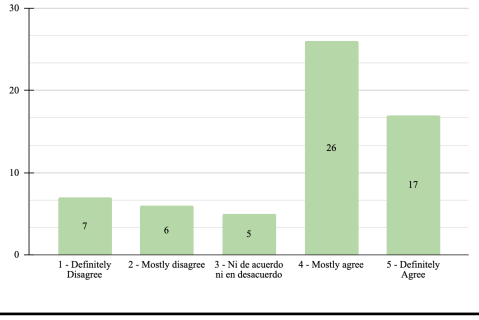
In table 10 below there is a side-to-side comparison of the aggregate of answers to the different questions of the adapted version of the SATAQ-3 used in the survey, pre and post-stimulus.

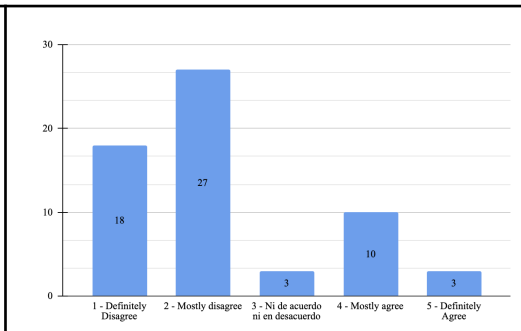
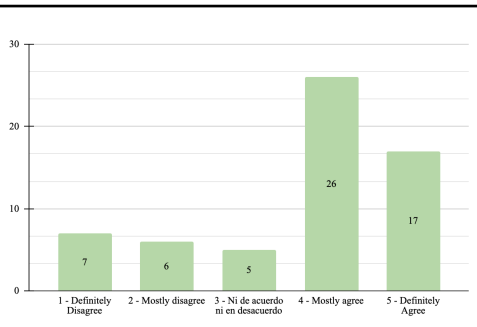
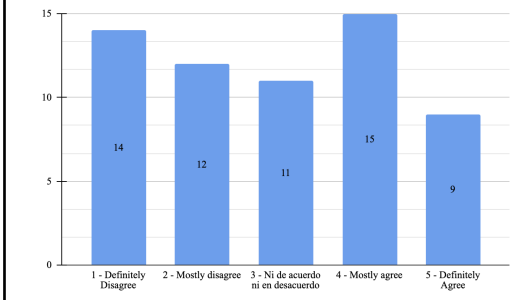
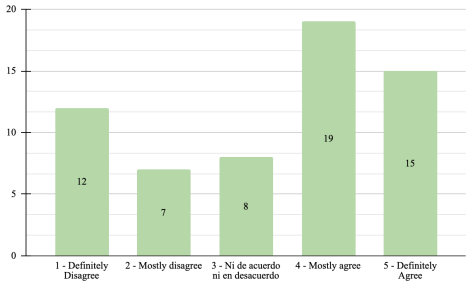
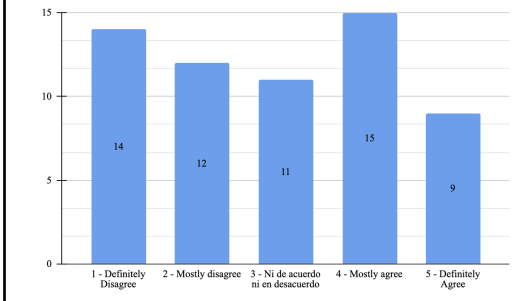
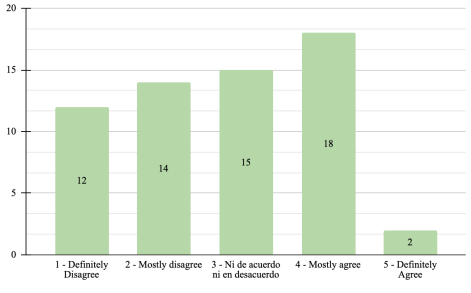
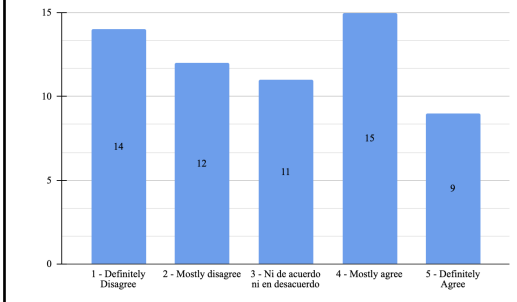
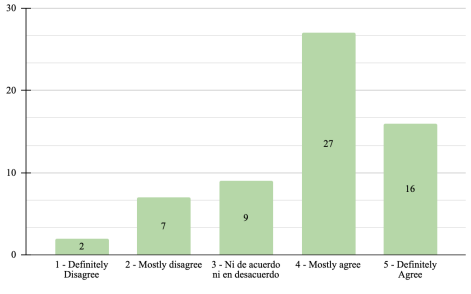
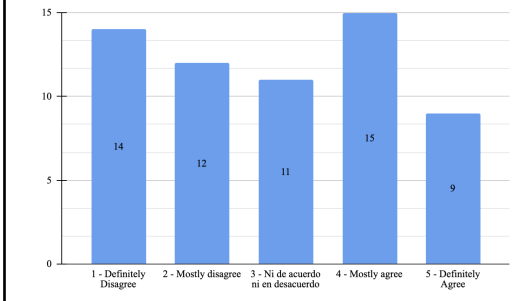
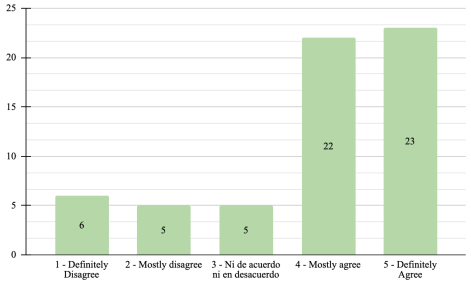
Table 10

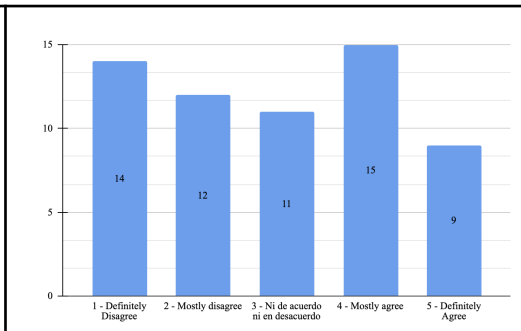
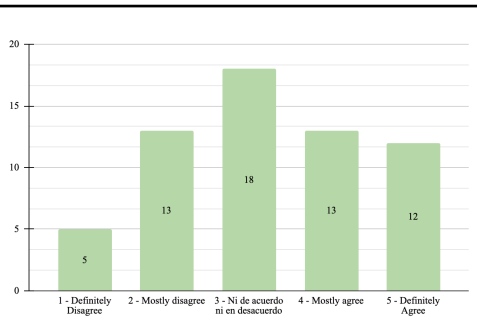
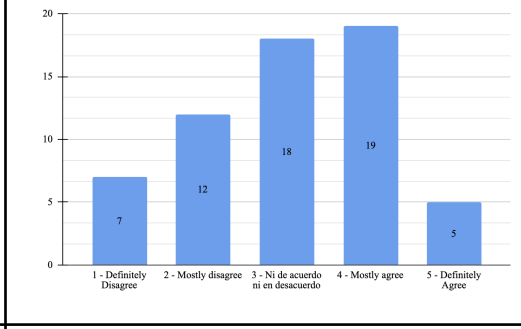
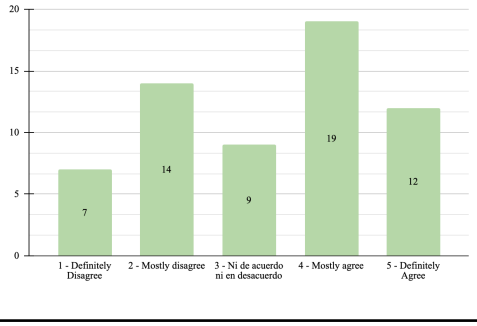
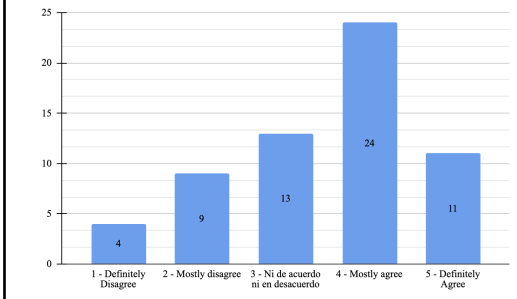
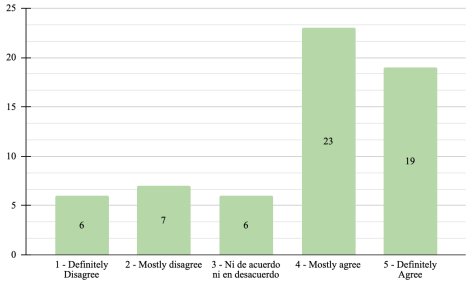
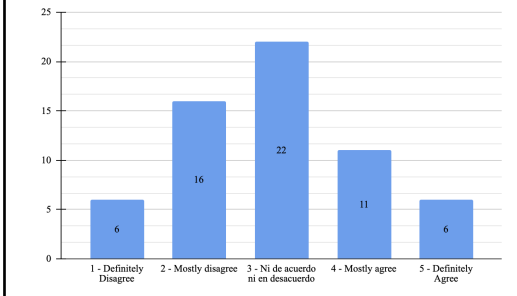
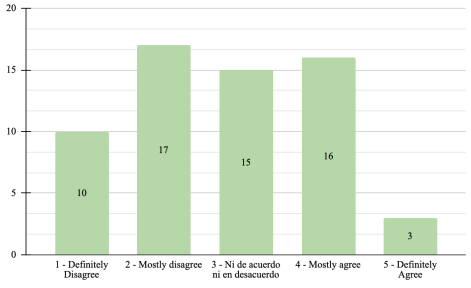
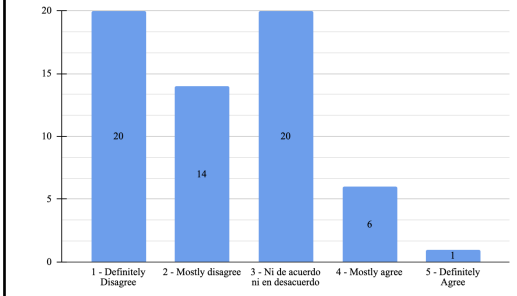
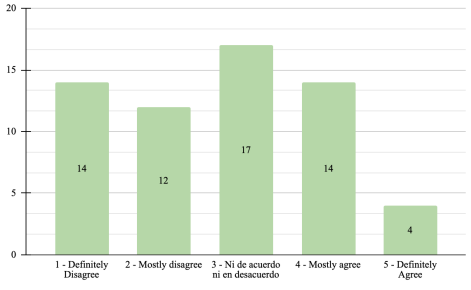
Graphic comparison of responses to the SATAQ-3 questionnaire pre and post-stimulus.

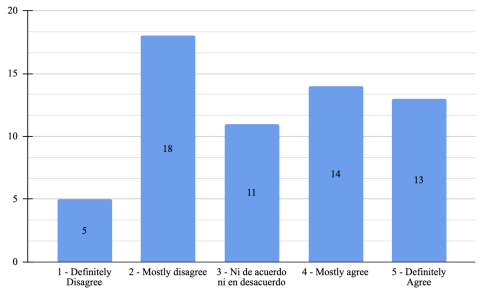
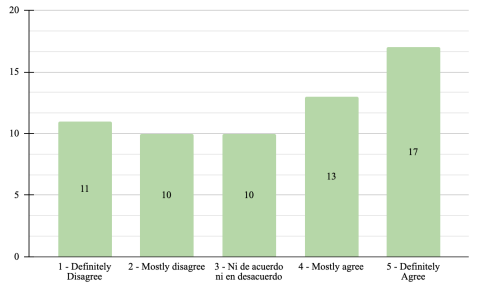
Question	Pre-stimulus	Post-stimulus
1. Social media platforms are an important source of information about fashion and "being attractive."		

2. I've felt pressure from social media to lose weight.		
3. I do not care if my body looks like the body of people who are on social media.		
4. I compare my body to the bodies of people who are on social media.		
5. I do not feel pressure from social media to look pretty.		
6. I would like my body to look like the people on social media.		

7. I compare my appearance to the appearance of models, influencers and celebrities on social media.		
8. I've felt pressure from social media to be thin.		
9. I do not compare my body to the bodies of people who appear on social media.		
10. Social media platforms are not an important source of information about fashion and "being attractive."		
11. I've felt pressure from social media to have a perfect body.		

12. I compare my appearance to the appearance of people on social media.		
13. I've felt pressure from social media to diet.		
14. I do not wish to look as athletic as the people on social media.		
15. I compare my body to that of people in "good shape."		
16. I've felt pressure from social media to exercise.		

17. I wish I looked as athletic as sports stars on social media.		
18. I compare my body to that of people who are athletic.		
19. I've felt pressure from social media to change my appearance.		
20. I do not try to look like the people on social media.		
21. I try to look like people who are openly very sporty.		

22. Influencers are an important source of information about fashion and "being attractive."		

All questions underwent a shift (to a varying degree) when answered before and after the stimulus. Most of them experienced a positive relation, meaning that after the stimulus the responses increased towards the extreme end of the scale which was in line with the stated hypothesis and which clearly showed the negative impact of the stimulus on the respondents' pressures, beliefs and comparative behaviours.

This positive relation was especially strong in questions 2, 11, 13, 16, and 19, which are related to the internalised pressure exerted by social media to lose weight, have the perfect body, diet, exercise and change one's appearance, respectively. Other questions related to internalised pressure also experienced a positive shift, although more subtle. In many of the statements related to pressures, people who strongly disagreed (1) continued to resist the social media influence, which could be seen in similar levels in column 1 both pre and post-stimulus; however, people in the middle grown (2-3) felt an increase in pressure and shifted towards the extreme.

The positive relation was very prevalent also in statements 4, 7, 9, 12, and 15, which ask directly about comparison with people's bodies on social media bodies and appearances. When asking about comparison but in more indirect ways, with phrasings like "I wish I looked like" or "I would like [...] to look like", the positive relation is more subtle but present.

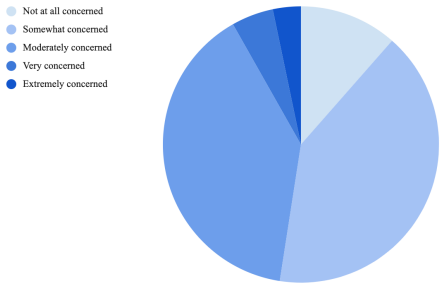
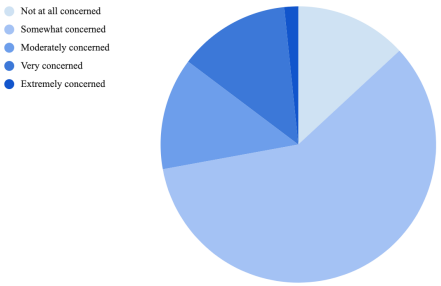
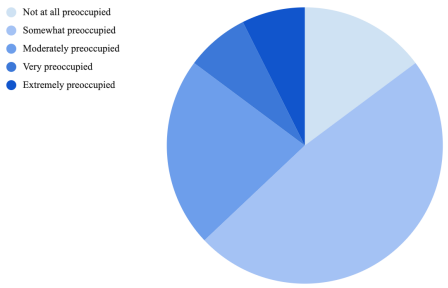
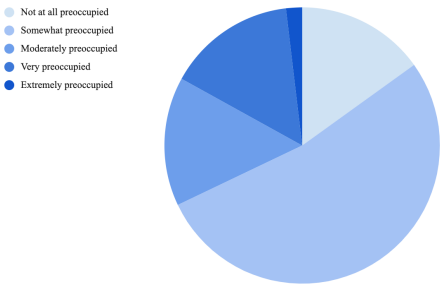
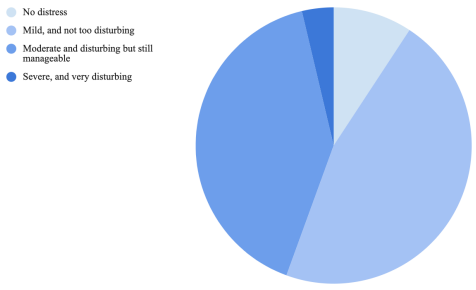
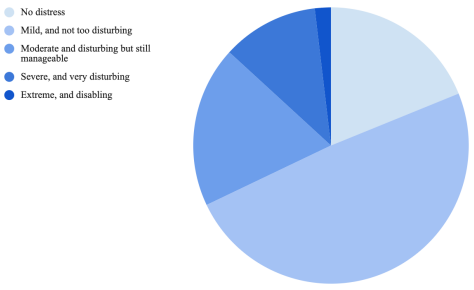
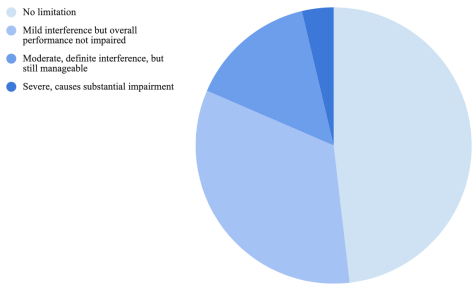
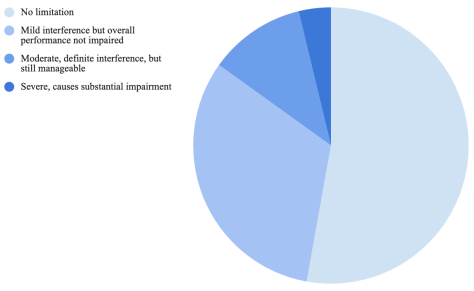
The only questions that experienced a negative relation were 1 and 10, which refer to social media being an important source of information for trendiness and attractiveness, an idea to which, most respondents, disagree, even after the stimulus. However, they mostly do agree in influencers being an important source of information for trendiness and attractiveness, an opinion that intensifies after the stimulus.

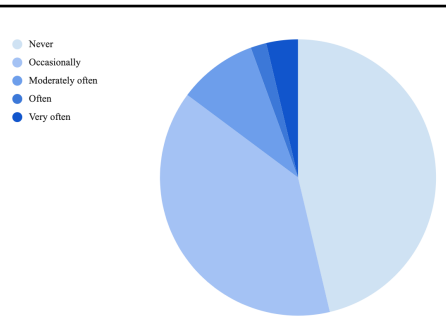
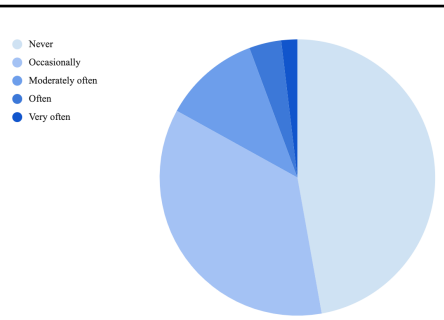
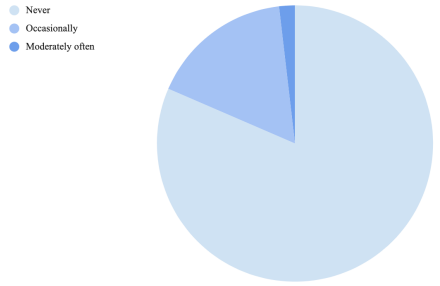
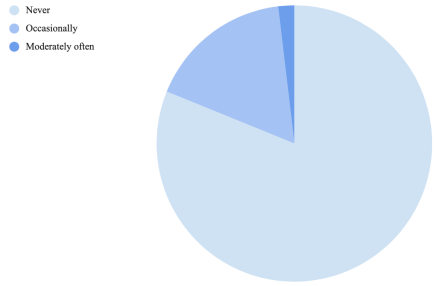
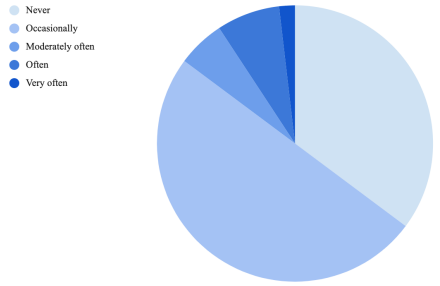
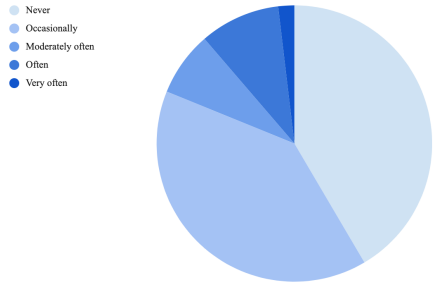
3.2.1.2. BIDQ

In table 11 below there is a side-to-side comparison of the aggregate of answers to the different closed questions of the BIDQ, pre and post-stimulus.

Table 11

Graphic comparison of responses to the BIDQ questionnaire pre- and post-stimulus..

Question	Pre-stimulus	Post-stimulus
1. Are you concerned about the appearance of some part(s) of your body, which you consider especially unattractive?		
2. If you are at least somewhat concerned, do these concerns preoccupy you? That is, you think about them a lot and they're hard to stop thinking about?		
3. Has your physical "defect" often caused you a lot of distress, torment, or pain? How much?		
4. Has your physical "defect" caused you impairment in social, occupational or other important areas of functioning? How much?		

5. Has your physical "defect" significantly interfered with your social life? How much?		
6. Has your physical "defect" significantly interfered with your schoolwork, your job, or your ability to function in your role? How much?		 q
7. Do you ever avoid things because of your physical "defect"? How often?		

The stimulus effects in this questionnaire were mostly insignificant or very subtle. In the majority of the questions, the distribution of responses was the same before and after the stimulus. Only in the first and third questions, there was a more noticeable variation.

In the first one, which refers to the existence of insecurities, the group of people who chose the middle-value shrink and lean toward one of the extremes. Still, the majority of people lean toward more positive situations. Finally, in the third question, which asks about the discomfort caused by insecurities, the extremes, both positive and negative, increased.

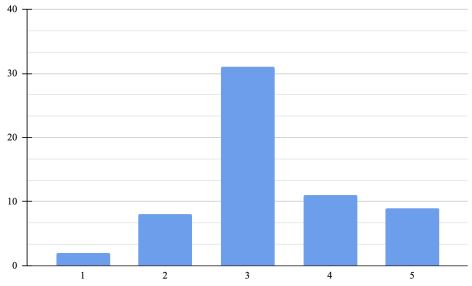
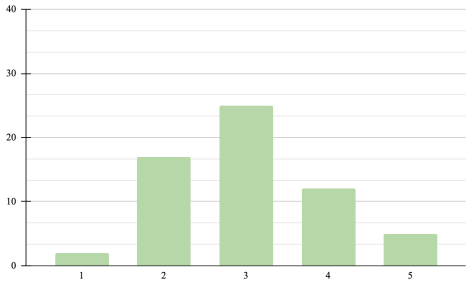
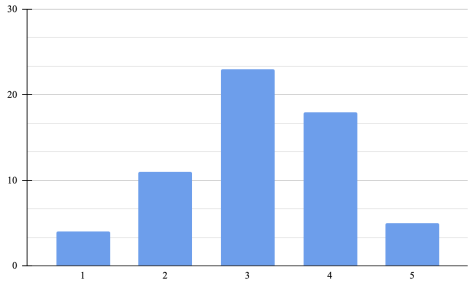
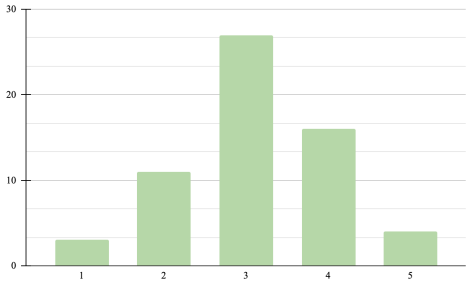
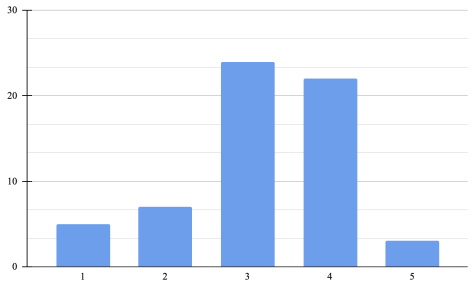
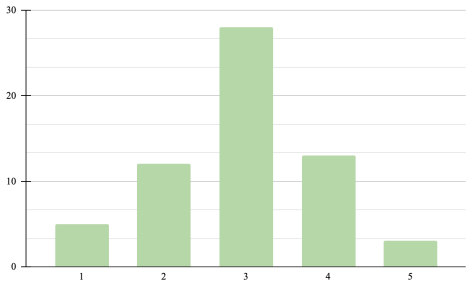
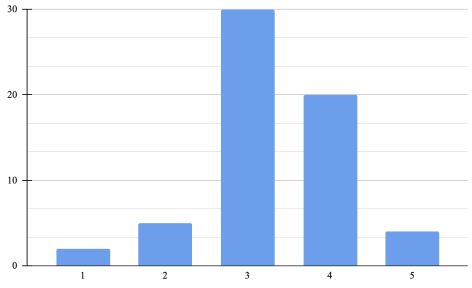
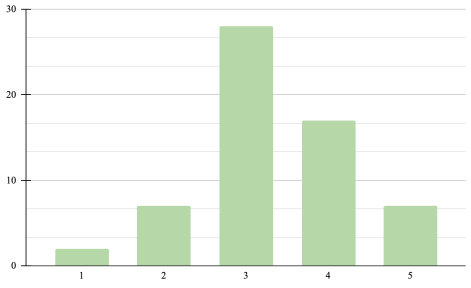
This questionnaire also had open-ended questions which asked about the insecurities (what were they) and the consequences they entailed. Comparing the answers, before and after the exposure to the stimulus, we see that they remain mostly the same, although some of them became more specific ("not having a conventionally attractive body" became "flat-chested and not a flat stomach"), more emphasised ("my weight and not defined arms" became "my weight and especially my not defined arms") or added more insecurities after the exposure. In one case, a respondent specified that after watching the video, she also felt insecure about her stomach.

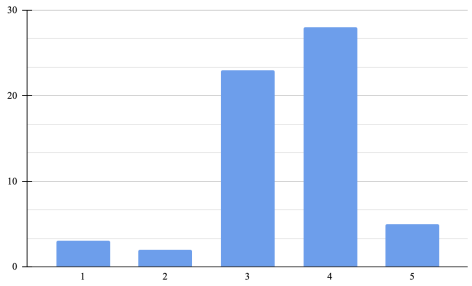
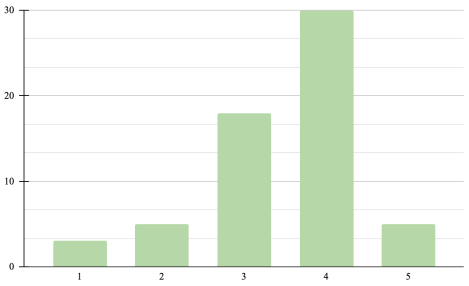
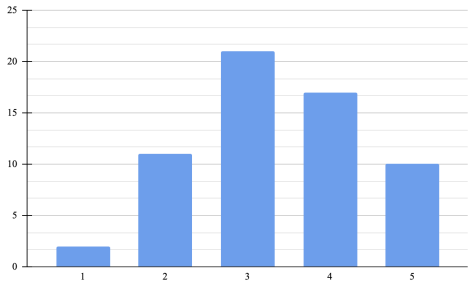
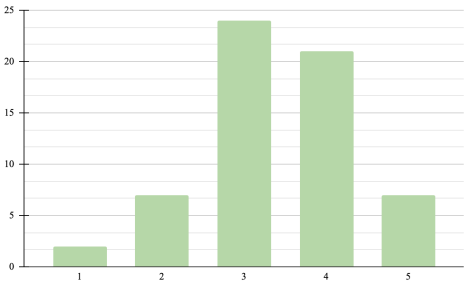
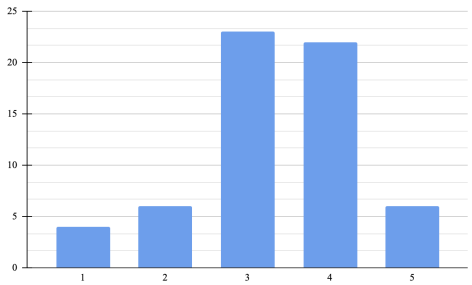
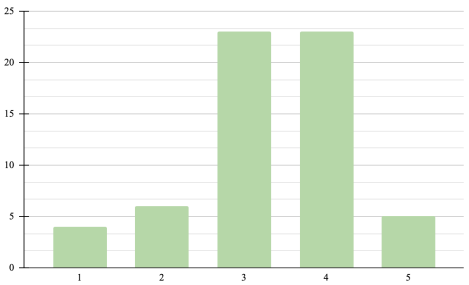
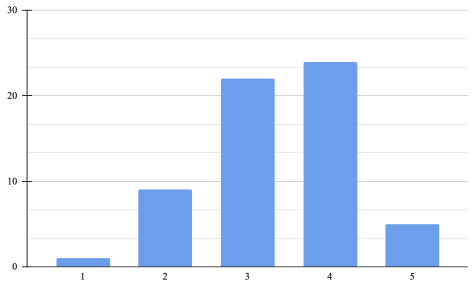
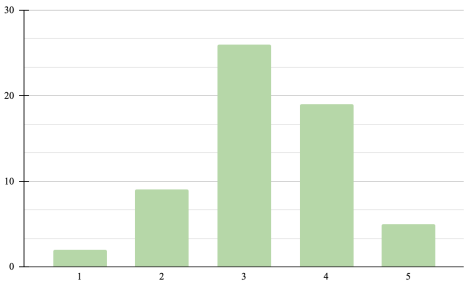
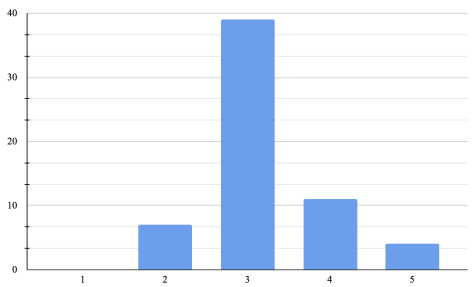
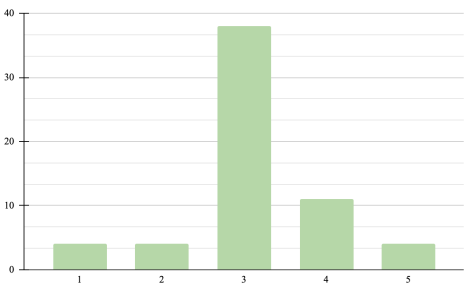
3.2.1.3. Fat Phobia Scale

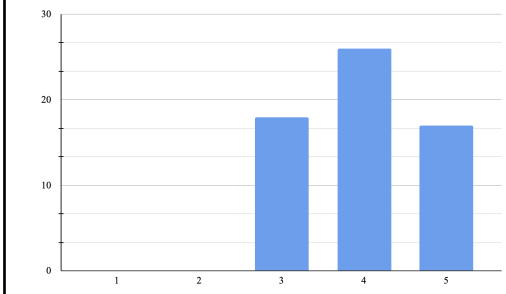
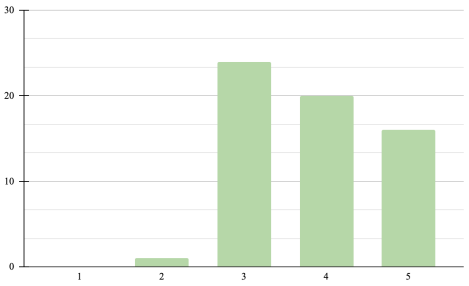
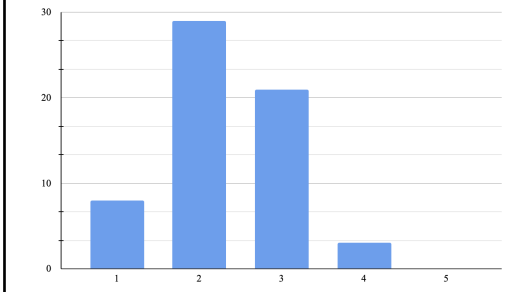
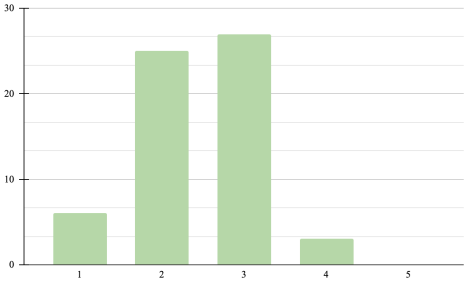
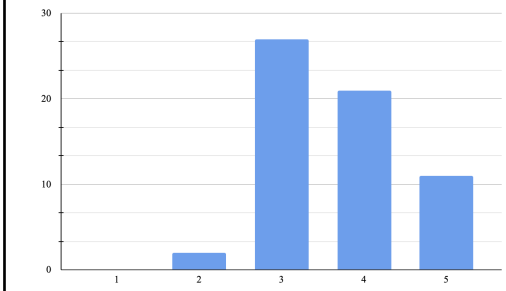
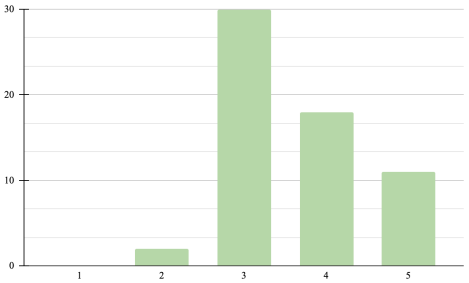
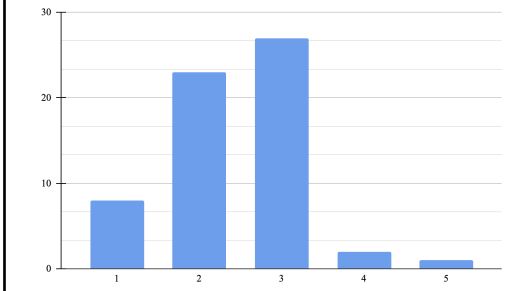
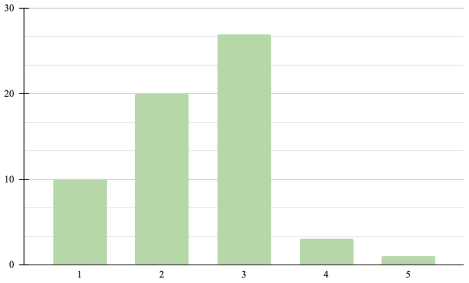
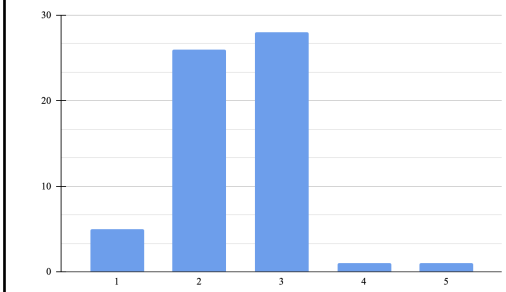
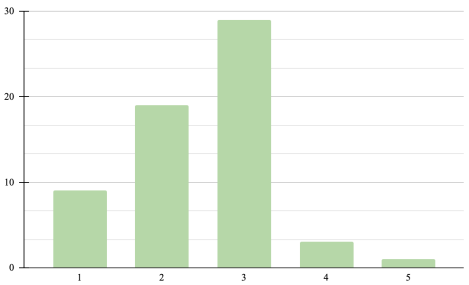
In table 12 below there is a side-to-side comparison of the aggregate of answers to the different questions of the Fat Phobia Scale used in the survey, pre and post-stimulus.

Table 12

Graphic comparison of responses to the Fat Phobia Scale questionnaire pre and post-stimulus.

Adjectives	Pre-stimulus	Post-stimulus
Lazy - Industrious		
No willpower - has willpower		
Attractive - unattractive		
Good self-control -poor self-control		

Fast - slow		
Having endurance - having no endurance		
Active - inactive		
Weak - strong		
Self-indulgent - self-sacrificing		

Dislikes food - likes food		
Shapeless - Shapely		
Undereats - overeats		
Insecure - secure		
Low self-esteem - high self-esteem		

The effects of the stimulus in this questionnaire are very limited and subtle. The response patterns shown in the graphs maintain approximately the same distribution in almost all questions, with some but not striking migrations.

The respondents do not show high levels of fat phobia, which they maintain throughout the whole questionnaire. Most sets of adjectives experience a negative relation with the stimulus, with more people shifting towards the *positive* adjective. The only considerations where a shift towards negative adjectives is a little more clearly identified are those of people in larger bodies as lazy, weak and self-indulgent, but still without changing the overall distribution of responses.

4. Conclusions

The research has highlighted that TikTok is a social network where image and physical perceptions are very meaningful and can mark the virality of content. Most of the analysed TikToks that did not make specific reference to weight loss featured thin women, and the fact of being skinny was often sufficient reason to make recommendations on health-related aspects, whether nutrition or exercise, clearly finding the association of thinness with health, a characteristic of the diet culture.

Even so, these thin women continue to interact with hashtags related to diets, weight loss, exercise, etc. It is striking the extensive amount of interaction that these hashtags, such as the ones analysed in the study, gather, either in the form of views, likes, comments, saves, etc. These figures show that large numbers of users are interested enough in these topics to interact with the hashtags. Due to this interaction, these users are most likely consuming a lot of body, weight or food-related content, because of TikTok's characteristic algorithm, which has proven to be potentially very dangerous (Gerrard, 2020; Kaufman, 2020). Especially, given that these users who interact with weight or food-related content on TikTok are also consuming similar content on other media, creating significant overexposure; and that they may have body image difficulties and disordered eating attitudes.

If we focus on the content of the videos, we see that many follow the same format and structure, sharing hashtags, filters and sounds, a common situation in TikTok where there are cycles of trends in the type and form of content. The prevalence of weight-related messages across all the hashtags analysed is striking, even when they are not directly related to weight loss.

The clearest case is the hashtag thatgirl, which focuses on achieving the best version of oneself to become an admirable person. This idea would fit in with content focused on improving emotional intelligence, self-contemplation and inner work to become a strong, focused, kind and self-confident person. Instead, we find content focused on appearance, with a high prevalence of messages related to physical exercise and diet. There is a strong association between a person's value (your best version) and their physical image. Therefore, most of the participants and protagonists of this trend are young, white and thin girls, who are very disciplined and as such, only consume food that is socially classified as healthy. It is not conceivable that That Girl, who has everything under control, achieves her goals, is in her best version, and is enviable, does not eat healthy food.

Regarding videos focusing on workout routines, 72% presented physical activity as a means to achieve a specific body image, either to lose weight or to modify a part of the body (stomach and glutes predominantly). The focus was on the outcome, not on the physical and mental health benefits of physical activity, which helps to reinforce the concept of weight as an important indicator of health and personal value.

Likewise, the wieiad hashtag could have had a neutral approach to weight and focused on showing recipes, different styles of food, cultures... However, the hashtag is saturated with people showing how they eat to lose weight, in caloric deficits and counting calories. Often, eating is not presented as an activity of pleasure, shareable, a social act influenced by culture, but as a way to achieve health, wellbeing, or a specific goal. When it was shown as a pleasurable activity, it was always under the premise of a special situation: a festivity, a holiday,

trying a new restaurant, a “cheat” day... But the daily routine of eating is not for pleasure, it's for health, as if they were opposite and excluding concepts.

Diet culture is based on classifying food as good or bad, which brings emotion and morality to the act of eating. On TikTok this is perpetuated, always showing the same foods under the category of healthy, showing substitutes for unhealthy foods, or with comments such as "remember I don't eat healthy" or "remember to treat yourself" accompanied by unhealthy foods. Verbalisations such as "products that helped me lose X lbs," or "products that made me lose" are also common, which attribute different foods the power to modify your appearance, without taking into account other factors and habits. We internalise the emotions that this moralising entails and they surface in our daily lives and when we eat, provoking negative perceptions of ourselves when we consume foods classified as socially unhealthy; provoking an over-fixation in food choices and restrictive behaviours with respect to food groups in order to gain weight or improve our health; risk factors that can lead to EDs such as AN, restrictive BN or orthorexia.

Both the hashtag wieiad and its full verbalization whatieatinaday have become so weight-focused that participants have to constantly justify what and how much they are eating, whether by their body size ("remember I'm fat"), life circumstances (ED recovery), the physical activity (showing workout statistics) or their profession (“wieiad as a ballerina”). Eating has ceased to be a natural and practical process and has become an overthought activity, subject to many conditions and, above all, open to the judgement of others. This overexposure to and over-fixation of food makes these videos potentially harmful, which is why they are now accompanied by an ED trigger warning (TW) and a link to the National Eating Disorder Association helpline, with some creators even adding TW to the beginning of their videos. The latter denotes awareness of the dangers of making this content by the creators, but even so, they continue to participate in it.

Among the videos that referred to weight loss collected under the hashtag weightlosstips, the most common theme was nutrition for weight loss, within which we find representations of all of the previously described, with the difference that the content collected under this hashtag had a clear prescriptive objective, as they focused on giving advice. These revolved around what products or recipes to consume to lose weight, recommending from past experience (achieved weight loss) or present experience (in the process of losing weight). A common pattern observed was to show their transformation together with the explanation of what they were eating/ate in their process, with verbalisations such as "products that helped/made me lose X lbs," which again gives food the power to manipulate the body and increases the discourse that food serves to shape our body, and not to generate pleasure and enjoy social situations. Some of the advice was particularly worrying and dangerous because it took this food empowerment to the next level, presenting miraculous food or drink substitutes to which they attributed their weight loss.

All these tips are particularly pernicious not only because of their content, but also because of their context, as they often come from attractive, thin people who have achieved their physical goals, but who have no scientific knowledge to back up their advice. Nevertheless, their image and transformation is sufficient reason for their advice to be recognised as true and followed. In general, across all the analysed hashtags, there was very little presence of qualified professionals giving advice. The prescriptive content regarding health on TikTok is highly amateurish, but it is not presented or considered as such by users.

Among the weightlosstips videos there was also a lot of content dedicated to exercise routines following the same structure of presenting advice preceded by before and after pictures, again presenting physical exercise with a focus on results in appearance, rather than in mental or physical health benefits. Another common structure takes one of TikTok's characteristic features which is the possibility for users to add a sound created by another user to their videos. Many videos contained the same "motivational" sounds: speeches, similar to those that a coach or trainer might give, with phrases such as “keep showing up”, “no excuses”, “where there’s determination, there’s success”, “do it for you”, “this is time I’m not going to let food win”, “stop feeling sorry for yourself”; which, in general, presented weight loss as a form of self-care, paramount and practically compulsory. Moreover, they imply that not losing weight is a consequence of not being determined enough or not wanting it enough, while not trying to lose weight is lazy. These videos can be very seductive, especially in a context of repeated overexposure to diet culture messages, provided by an algorithm and complemented by other media and society. They give the idea that body transformations are not only achievable but desirable, a form of physical and mental self-care. Videos focus on the positive side of losing weight, but not on the frustration, anxiety and other negative feelings that can result from the constant fixation with body image, diet and exercise and which have a strong impact on physical and mental health.

This impact is what was tried to capture in the second part of the research. Thanks to the first questionnaire, it could be seen that the internalisation of the typical pressures of the diet culture (to lose weight, do more exercise, go on a diet, improve certain parts of the body...) is very common among the analysed population, as well as the normalisation of processes of comparison with the images that are perceived on social media. Comparison is so established that we have trends based entirely on it, such as the analysed hashtag That Girl. "That Girl" is comparing one's own person to another supposed girl who has a certain set of desirable qualities that one wants to have to be like that girl. The comparison is inherent in this trend and cannot be detached.

The levels of identification with these internalisation processes were high before exposure to the stimulus, an expected reality due to the exposure of the university population to multiple social networks, which has previously demonstrated their relationship with these phenomena. Despite starting from high levels, after the exposure to the stimulus consisting of videos emphasising the thinness of their protagonists, focusing on nutrition, exercise, the best version of oneself, etc. Levels increased and there was a noticeable migration of users to the extreme end of the scale that indicated problematic situations. Above all, the respondents expressed the guilt of not doing enough to achieve the perfect figure, as if it were an obligation that was being neglected. One phenomenon that was observed was that those users who in the round prior to the stimulus had declared that they were further away from the problematic situation, remained there after the stimulus; while those who were in the intermediate, less clear and polarised options, tended to move towards the problematic extreme after the stimulus. This highlights the importance of strong self-esteem as a preventive and protective mechanism against the internalisation of pressures and comparison.

Unfortunately, body image problems are frequent and increasing. Among those surveyed, only about 12% said they were not worried about the appearance of some part of their body. When delving deeper into these insecurities, the most problematic parts of the body were the weight in general, the stomach, the glutes and the breasts; concerns that coincide with the most common

focus of the videos analysed under the hashtag workoutroutine. There is probably not a unidirectional relationship between these stimuli and these insecurities, but this discovery leads us to wonder whether the videos focus on these parts of the body because they are where the most insecurities are found, or whether insecurities are found in these parts due to the repetition of stimuli referring to the need and importance of achieving a certain image in these parts.

However, these were not the only insecurities that were detected. Each respondent who expressed insecurities did so in the plural, with multiple insecurities coexisting. With regard to the impact of the stimulus, it caused the answers in reference to the existence of complexes to become more specific. Thus, respondents who said that their insecurity was not having a normative body shape in general or not looking attractive enough, after viewing the video, specified their insecurities in parts of the body. Others, after the stimulus, added new insecurities or stressed previous ones by adding emphasising adverbs. The relationship between the internalisation of pressures and comparison detected in the first questionnaire and the insecurities that arise, especially after a stimulus with a body-related content, is clear, and the results coincide with those expected.

An important concern about weight and fear of weight gain was detected. Thus, a strong presence of fat phobia was expected. However, it was not detected in the third questionnaire. Nevertheless, fears associated with fat phobia can be irrational and exist while rationally and consciously rejecting the stereotypes and prejudices associated with people in larger bodies, especially in the studied population, which in recent years has seen the rise of the body positivity movement on social media. The repetition of messages that these movements have generated means that with a brief stimulus it is not possible to change the rational beliefs that have been built up over the years. Even so, taking into account the answers to the other questions, fat phobia is still very present in the subconscious of the population.

This research found that TikTok videos related to nutrition, exercise, body, and weight-loss are heavily influenced by the diet culture and full of content glorifying weight loss, positioning food as a means to achieve health and thinness, exercise as a means to improve physical appearance, and advice provided by people without any professional expertise. Instead, they prove their authority to advise by showing their bodies or their transformation, positioning people with thinner, normative and socially desirable bodies as superior, with valuable knowledge, and worth listening to; and portraying weight loss as paramount, achievable and desirable to all.

The attention this type of content gathers is huge and problematic and puts young audiences at risk of developing internalised pressures to constantly change their appearance and lose weight, comparing themselves to what they see on the platform, and worsening their own insecurities, resulting in dangerous behaviours and situations, like bad body image, disordered eating attitudes and over fixation on food and exercise, all risk factors that can contribute to the developing of an ED.

5. Further Research

Future research should evaluate the extent to which exposure to this type of content, and the resulting comparison and poor body image, can lead to the development of disturbed eating attitudes or a full eating disorder, and how it differs from similar content posted on other types of media, such as Instagram. Understanding the specific effects of diet culture content is essential for developing effective resources for people who are impacted by it. Moreover, it could also be interesting to analyse the differences in the impact of this content on people with a past of disturbed eating attitudes or eating disorders, people with present struggles, and individuals with a healthy relationship regarding food and exercise.

Furthermore, future studies on this field and social media platform could modify their feed by intentionally interacting with content related to diet culture to consider the effects that a user with body-related concerns' typical experience might have, without having to generate a tailored stimulus or focus on a few hashtags.

Additionally, future investigations should focus on how the dissemination of diet-culture content on TikTok can be countered and how health experts can best engage with youth on platforms like TikTok to provide reliable information and help young users discern expert from unqualified advice.

6. Limitations

Though the development of both studies was fairly good and did not meet any major difficulties, there are some limitations to them

For the first methodology, it is important to note that the videos were analysed based on subjective observations of one coder. The established themes and subthemes, therefore, are not meant to be definitive, but to paint a general picture of the content that is being published, and would be up for discussion. Additionally, the videos displayed on the hashtags are presented according to TikTok's algorithm, which, as it has been stated, follows different parameters to sort the order in which the content is presented, meaning that the analysed videos were not necessarily the most recent ones. Thus, content being currently posted under those hashtags could be different, although it is important to note that old videos can still show up in users' feeds.

Regarding the second methodology, it aimed to prove the link between diet culture content on TikTok and body image concerns, but the saturation of this kind of content that the stimulus had is hardly achievable on the feed through normal interaction with the app. The stimulus was not a truthful representation of what six minutes spent on the TikTok app may cause. Also, the stimulus was created once more under the subjective judgement of the author to discern which content was toxic, while each user could have different triggers.

Another limitation could be the size of the sample, which, while being diverse and big enough for the purpose of the study, could have been larger and thus provide more truthful results. The fidelity of the results could have also been affected by the impossibility of ensuring honest answers from the respondents, as it is possible that participants struggled to answer the questions honestly when their opinion differed from socially desirable ones.

Finally, due to the short timing of the study, it was not possible to continue to monitor the effects that toxic diet culture content on TikTok had on the respondents to see if the body dissatisfaction it generated ended in disturbed eating attitudes or diagnosed eating disorders.

7. References

1. Abebe, D., Lien, L., & von Soest, T. (2012). The development of bulimic symptoms from adolescence to young adulthood in females and males: a population-based longitudinal cohort study. *The International journal of eating disorders, 45*(6), 737–745. https://doi.org/10.1002/eat.20950

2. American Psychiatric Association. (2016). Orthorexia: Can Healthy Eating Become Unhealthy? [Blog Entry]. https://www.psychiatry.org/news-room/apa-blogs/apa-blog/2016/06/orthorexia-can-healthy-eating-become-unhealthy

3. American Psychiatric Association. (2016). What are eating disorders? *https://www.psychiatry.org/patients-families/eating-disorders/what-are-eating-disorders*

4. Aparicio-Martinez, P., Perea-Moreno, A., Martinez-Jimenez, M., Redel-Macías, M., Pagliari, C., & Vaquero-Abellan, M. (2019). Social Media, Thin-Ideal, Body Dissatisfaction and Disordered Eating Attitudes: An Exploratory Analysis. *International journal of environmental research and public health, 16*(21), 4177. https://doi.org/10.3390/ijerph16214177

5. Arroyo, A., & Harwood, J. (2012). Exploring the causes and consequences of engaging in fat talk. *Journal of Applied Communication Research, 40*(2), 167–187. https://doi.org/10.1080/00909882.2012.654500

6. Arroyo, A., Segrin, C., Harwood, J., & Bonito, J. (2017). Co-rumination of fat talk and weight control practices: An application of confirmation theory. *Health Communication, 32*(4), 438–450. https://doi.org/10.1080/10410236.2016.1140263

7. Arroyo, M., Rocandio, A., Ansotegui, L., Pascual, E., Salces, I., & Rebato, E. (2006). Calidad de la dieta, sobrepeso y obesidad en estudiantes universitarios. *Nutrición Hospitalaria, 21*(6), 673-679. http://scielo.isciii.es/scielo.php?script=sci_arttext&pid=S0212-16112006000900007&lng=es&tlng=es

8. Ata, R., Ludden, A. & Lally, M. (2007). The Effects of Gender and Family, Friend, and Media Influences on Eating Behaviors and Body Image During Adolescence. *Journal of Youth and Adolescence, 36*(8), 1024–1037 (2007). https://doi.org/10.1007/s10964-006-9159-x

9. Aziz, J. (2017). *Social Media and Body Issues in Young Adults: An Empirical Study on the influence of Instagram use on Body Image and Fatphobia in Catalan University Students.* [Dissertation, Universitat Pompeu Fabra]. Repositori Digital de la Universitat

Pompeu Fabra. https://repositori.upf.edu/bitstream/handle/10230/33255/Aziz_2017.pdf?sequence=1&isAllowed=y

10. Bacon, J., Scheltema, K., & Robinson, B. (2001). Fat phobia scale revisited: the short form. I*nternational journal of obesity and related metabolic disorders: journal of the International Association for the Study of Obesity*, *25*(2), 252–257. https://doi.org/10.1038/sj.ijo.0801537

11. Bacon, L. (2010). *Health at every size: The surprising truth about your weight.* BenBella Books.

12. Bailey, A., Parker, A., Colautti, L., Hart, L., Liu, P., & Hetrick, S. (2014). Mapping the evidence for the prevention and treatment of eating disorders in young people. *Journal of Eating Disorders, 2*, 5. https://doi.org/10.1186/2050-2974-2-5

13. Blum, K., Liu, Y., Shriner, R., & Gold, M. S. (2011). Reward circuitry dopaminergic activation regulates food and drug craving behavior. *Current pharmaceutical design, 17*(12), 1158–1167. https://doi.org/10.2174/138161211795656819

14. Brandtzæg, P., & Heim, J. (2009). "Why people use social networking sites," in *Paper Presented at the International Conference on Online Communities and Social Computing (Oslo)*. https://doi.org/10.1007/978-3-642-02774-1_16

15. Brechan, I., & Kvalem, I. (2015). Relationship between body dissatisfaction and disordered eating: Mediating role of self-esteem and depression. *Eating Behaviors, 17*, 49–58. https://doi.org/10.1016/j.eatbeh.2014.12.008

16. Brown, Z., & Tiggemann, M. (2016). Attractive celebrity and peer images on Instagram: Effect on women's mood and body image. *Body image, 19*, 37–43. https://doi.org/10.1016/j.bodyim.2016.08.007

17. Calogero, R., Tylka, T., Mensinger, J., Meadows, A., & Danielsdottir, S. (2019). Recognising the fundamental right to be fat: A weight-inclusive approach to size acceptance and healing from sizeism. *Women & Therapy, 42*(1/2), 22-44. https://doi.org/10.1080/02703149.2018.1524067

18. Carrotte, E., Prichard, I., & Lim, M. (2017). "Fitspiration" on Social Media: A Content Analysis of Gendered Images. *Journal of medical Internet research, 19*(3), e95. https://doi.org/10.2196/jmir.6368

19. Cash, T., Phillips, K., Santos, M., & Hrabosky, J. (2004). Measuring "negative body image": validation of the Body Image Disturbance Questionnaire in a nonclinical population. *Body Image, 1*(4), 363-372. https://doi.org/10.1016/j.bodyim.2004.10.001

20. Cash, T. (2004). Body image: past, present, and future. *Body Image, 1*(1), 1-5. https://doi.org/10.1016/s1740-1445(03)00011-1

21. Chernev, A. (2011). The dieters paradox. *Journal of Consumer Psychology, 21*(2), 178-183. https://doi.org/10.1016/j.jcps.2010.08.002

22. Claes, L., Müller, A., Norré, J., Van Assche, L., Wonderlich, S., & Mitchell, J. E. (2012). The relationship among compulsive buying, compulsive internet use and temperament in a sample of female patients with eating disorders. *European eating disorders review: the journal of the Eating Disorders Association*, *20*(2), 126–131. https://doi.org/10.1002/erv.1136

23. Colleran, K. (2021, December 17). 'The Corpse Bride Diet': How TikTok Inundates Teens With Eating-Disorder Videos. *Techilive.* https://techilive.in/the-corpse-bride-diet-how-tiktok-inundates-teens-with-eating-disorder-videos/

24. Cooper, P., & Goodyer, I. (1997). Prevalence and significance of weight and shape concerns in girls aged 11–16 years. *British Journal of Psychiatry, 171*(6), 542-544. https://doi.org/10.1192/bjp.171.6.542

25. Culbert, K., Burt, S., McGue, M., Iacono, W., & Klump, K. (2009). Puberty and the genetic diathesis of disordered eating attitudes and behaviors. *Journal of abnormal psychology, 118(*4), 788–796. https://doi.org/10.1037/a0017207

26. Culbert, K., Racine, S., & Klump, K. (2015). Research Review: What we have learned about the causes of eating disorders - a synthesis of sociocultural, psychological, and biological research. *Journal of child psychology and psychiatry, and allied disciplines, 56*(11), 1141–1164. https://doi.org/10.1111/jcpp.12441

27. Cyca, M. (2022, March 9). 24 Important TikTok Stats Marketers Need to Know in 2022. *Hootsuite Blog.* https://blog.hootsuite.com/tiktok-stats/

28. Das, B., & Sahoo, J. (2011). Social networking sites–a critical analysis of its impact on personal and social life. *International Journal of Business and Social Science 2*(14), 222–228. https://ijbssnet.com/journal/index/561

29. Davidson, K. (2020). *The Development of a Scale to Measure Diet-Culture Beliefs.* [Dissertation, Colorado State University]. ProQuest Dissertations Publishing. https://www.proquest.com/openview/38d74bee7e111ac1fb423ee29db7582c/1?pq-origsite=gscholar&cbl=51922&diss=y

30. Davison, K., Markey, C., & Birch, L. (2000). Etiology of body dissatisfaction and weight concerns among 5-year-old girls. *Appetite, 35*(2), 143-151. https://doi.org/10.1006/appe.2000.0349

31. de Vries, D., Peter, J., de Graaf, H. & Nikken, P. (2016). Adolescents' Social Network Site Use, Peer Appearance-Related Feedback, and Body Dissatisfaction: Testing a Mediation Model. *Journal of Youth and Adolescence, 45*, 211–224. https://doi.org/10.1007/s10964-015-0266-4

32. Dean, B. (2022, January 5). TikTok User Statistics (2022). *Backlinko.* https://backlinko.com/tiktok-users#tiktok-user-demographics

33. Dove. (2016). *The Dove Global Beauty and Confidence Report*.

34. Duchesne, A., Dion, J., Lalande, D., Bégin, C., Émond, C., Lalande, G., & McDuff, P. (2017). Body dissatisfaction and psychological distress in adolescents: Is self-esteem a mediator? *Journal of Health Psychology, 22*(12), 1563–1569. https://doi.org/10.1177/1359105316631196

35. Fandiño, A., Giraldo, S., Martínez, C., Aux, C., & Espinosa, R. (2007). Factores asociados con los trastornos de la conducta alimentaria enestudiantes universitarios en Cali, Colombia. *Colombia Médica, 38*(4),344-351. https://www.redalyc.org/articulo.oa?id=28338402

36. Field, A., Javaras, K., Aneja, P., Kitos, N., Camargo, C., Jr, Taylor, C., & Laird, N. (2008). Family, peer, and media predictors of becoming eating disordered. *Archives of pediatrics & adolescent medicine, 162*(6), 574–579. https://doi.org/10.1001/archpedi.162.6.574

37. Fisher, E., Dunn, M., & Thompson, J. K. (2002). Social comparison and body image: An investigation of body comparison processes using multidimensional scaling. *Journal of Social and Clinical Psychology, 21*(5), 566-579. https://doi.org/10.1521/jscp.21.5.566.22618

38. Fitzgerald, Q. *TikTok Statistics 2022: How Many People Use TikTok?* (2022, March). Quantum Marketer. https://quantummarketer.com/tiktok-statistics/

39. 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

40. Gerrard, Y. (2020, March 9). TikTok Has a Pro-Anorexia Problem. *Wired.* https://www.wired.com/story/opinion-tiktok-has-a-pro-anorexia-problem/

41. Gerson, J. (2020, March 9). The Hidden Ways Pro-Ana Content Flourishes On TikTok. *Bustle*. https://www.bustle.com/p/pro-ana-content-on-tiktok-is-hidden-in-plain-sight-22598389

42. Gil, E. Anorexia, enfermedad y mal social. (2001). *Index de Enfermería*, 32-33. http://www.index-f.com/index-enfermeria/32-33revista/32-33_articulo_7-8.php

43. Gómez, R., Gómez, R., Díaz, A., Fortea, M., & Salorio, P. (2010). Prevalencia de los trastornos alimentarios en una muestra universitaria. Ansiedad como factor de modulación. *Index de Enfermería, 19*(2-3), 124-128. http://scielo.isciii.es/scielo.php?script=sci_arttext&pid=S1132-12962010000200011&lng=en.

44. Grabe, S., Ward, L., & Hyde, J. (2008). The role of the media in body image concerns among women: a meta-analysis of experimental and correlational studies. *Psychological bulletin, 134(*3), 460–476. https://doi.org/10.1037/0033-2909.134.3.460

45. Harrison, C. (2016, October 16). *Food Pysch Podcast #74: The truth about emotional eating with Isabel Foxen Dunken, Anti-Diet Health Coach* [Audio podcast]. https://podcasts.apple.com/es/podcast/74-the-truth-about-emotional-eating-with-isabel-foxen/id700512884?i=1000376801338

46. Harrison, C. (2017, October 23). *Food Pysch Podcast #127: Intuitive Eating & Health At Every Size FAQs with Ashley Seruya & Christy Harrison* [Audio podcast]. https://open.spotify.com/episode/4Rgymgkgt99BZR7HhxaF3u?si=nqRetl6zSweLRQjic_J1Uw&utm_source=copy-link&nd=1

47. Harrison, C. (2019). *Anti-diet: Reclaim your time, money, well-being and happiness through intuitive eating*. Great Britain: Yellow Kite.

48. Hilbert, A., Pike, M., Goldschmidt, A., Wilfley, D., Fairburn, C., Dohm, F., Walsh, B., & Striegel Weissman, R. (2014). Risk factors across the eating disorders. *Psychiatry Research, 220*(1), 500–506. https://doi.org/10.1016/j.psychres.2014.05.054

49. Ho, S., Lee, E., & Liao, Y. (2016). Social Network Sites, Friends, and Celebrities: The Roles of Social Comparison and Celebrity Involvement in Adolescents' Body Image Dissatisfaction. *Social Media + Society*. https://doi.org/10.1177/2056305116664216

50. Holland, G., & Tiggemann, M. (2016). A systematic review of the impact of the use of social networking sites on body image and disordered eating outcomes. *Body image, 17*, 100–110. https://doi.org/10.1016/j.bodyim.2016.02.008

51. Holland, G., & Tiggemann, M. (2017). "Strong beats skinny every time": Disordered eating and compulsive exercise in women who post fitspiration on Instagram. *The International journal of eating disorders, 50*(1), 76–79. https://doi.org/10.1002/eat.22559

52. Hunger, J., Major, B., Blodorn, A., & Miller, C. (2015). Weighed down by stigma: How weight-based social identity threat contributes to weight gain and poor health. *Social and Personality Psychology Compass, 9*(6), 255–268. https://doi.org/10.1111/spc3.12172

53. Iqbal, M. (2022, April 20). TikTok Revenue and Usage Statistics (2022). *Business of Apps*. https://www.businessofapps.com/data/tik-tok-statistics/

54. Jacobi, C., Hayward, C., de Zwaan, M., Kraemer, H., & Agras, W. (2004). Coming to terms with risk factors for eating disorders: application of risk terminology and suggestions for a general taxonomy. *Psychological bulletin, 130*(1), 19–65. https://doi.org/10.1037/0033-2909.130.1.19

55. Jones, J., Bennett, S., Olmsted, M., Lawson, M., & Rodin, G. (2001). Disordered eating attitudes and behaviours in teenaged girls: a school-based study. *CMAJ : Canadian Medical Association journal = journal de l'Association medicale canadienne, 165*(5), 547–552. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC81412/

56. Jovanovski, N. & Jaeger, T. (2022). Demystifying 'diet culture': Exploring the meaning of diet culture in online 'anti-diet' feminist, fat activist, and health professional communities. *Women's Studies International Forum, 90(*102558). https://doi.org/10.1016/j.wsif.2021.102558

57. Kaufman, S. (2020, July 19). "It's not worth it": Young women on how TikTok has warped their body image. *NBC News*. Retrieved from https://www.nbcnews.com/tech/tech-news/it-s-not-worth-it-young-women-how-tiktok-has-n1234193

58. Kazdin, A., Kraemer, H., Kessler, R, Kupfer, D., & Offord, D. (1997). Contributions of risk-factor research to developmental psychopathology. *Clinical psychology review, 17*(4), 375–406. https://doi.org/10.1016/s0272-7358(97)00012-3

59. Keel, P., Brown, T., Holm-Denoma, J., & Bodell, L. P. (2011). Comparison of DSM-IV versus proposed DSM-5 diagnostic criteria for eating disorders: reduction of eating disorder not otherwise specified and validity. *The International journal of eating disorders, 44*(6), 553–560. https://doi.org/10.1002/eat.20892

60. Keery, H., van den Berg, P., & Thompson, J. K. (2004). An evaluation of the Tripartite Influence Model of body dissatisfaction and eating disturbance with adolescent girls. *Body image, 1*(3), 237–251. https://doi.org/10.1016/j.bodyim.2004.03.001

61. Kepios. (2022, 28 February). TikTok Stats and Trends. *DataReportal.* https://datareportal.com/essential-tiktok-stats

62. Koven, N., & Abry, A. (2015). The clinical basis of orthorexia nervosa: emerging perspectives. *Neuropsychiatric disease and treatment*, *11*, 385–394. https://doi.org/10.2147/NDT.S61665

63. Lelwica, M., Hoglund, E., & McNallie, J. (2009). Spreading the religion of thinness from California to Calcutta: A critical feminist postcolonial analysis. *Journal of Feminist Studies in Religion, 25*(1), 19-41. https://doi.org/10.2979/fsr.2009.25.1.19

64. Levinovitz, A. (2015). *The Gluten Lie: And Other Myths about what You Eat.* Simon and Schuster.

65. Littleton, H., Ollendick, T. (2003) Negative body image and disordered eating behavior in children and adolescents: What places youth at risk and how can these problems be prevented? *Clinical Child and Family Psychology Review. 6*(1), 51-66. https://doi.org/10.1023/a:1022266017046

66. Loth, K., MacLehose, R., Bucchianeri M., Crow, S., Neumark-Sztainer, D. (2014) Predictors of dieting and disordered eating behaviors from adolescence to young adulthood. *Journal of Adolescent Health. 55*(5), 705-712. https://doi.org/10.1016/j.jadohealth.2014.04.016

67. Lowes, J., & Tiggemann, M. (2003). Body dissatisfaction, dieting awareness and the impact of parental influence in young children. *British Journal of Health Psychology, 8*(2), 135-147. https://doi.org/10.1348/135910703321649123

68. Manago, A., Graham, M., Greenfield, P., & Salimkha, G. (2008). Self-presentation and gender on MySpace. *Journal of Applied Developmental Psychology, 29*(6), 446-458. https://doi.org/10.1016/j.appdev.2008.07.001

69. Martínez-González, L., Fernández, T., Molina, A., Ayán, C., Bueno, A., Capelo, R., Mateos, R., & Martín, V. (2014). Prevalencia de trastornos de la conducta alimentaria en universitarios españoles y factores asociados: proyecto uniHcos. *Nutrición Hospitalaria, 30*(4), 927-934. https://doi.org/10.3305/nh.2014.30.4.7689

70. Mills, J., & Fuller-Tyszkiewicz, M. (2017). Fat talk and body image disturbance: A systematic review and meta- analysis. *Psychology of Women Quarterly, 41*(1), 114–129. https://doi.org/10.1177/0361684316675317

71. Monterrosa-Castro, A.; Ruíz-Martínez, J.; Cuesta-Fernández, G. (2020). Risk Factor for Eating disorders. *Revista Ciencias Biomédicas, 3(*2), 300-305. https://doi.org/10.32997/rcb-2012-3119

72. Morán, I., Cruz, V., & Iñárritu, M. (2009). Prevalencia de factores y conductas de riesgo asociados a trastornos de la alimentación en universitarios. *Revista Médica del Hospital General de México, 72*(2), 68-72. https://www.medigraphic.com/cgi-bin/new/resumen.cgi?IDARTICULO=21687

73. National Eating Disorders Association. Orthorexia. *National Eating Disorders.* https://www.nationaleatingdisorders.org/learn/by-eating-disorder/other/orthorexia

74. Neagu, A., & Rainier, F. (2015). Body image: A theoretical framework. *Proceedings of the Romanian Academy, 17*(1), 29–38. https://acad.ro/sectii2002/proceedingsChemistry/doc2015-1/Art04Neagu.pdf

75. Neumark-Sztainer, D., Wall, M., Larson, N. I., Eisenberg, M. E., & Loth, K. (2011). Dieting and disordered eating behaviors from adolescence to young adulthood: findings from a 10-year longitudinal study. J*ournal of the American Dietetic Association, 111*(7), 1004–1011. https://doi.org/10.1016/j.jada.2011.04.012

76. Newberry, C. *How the TikTok Algorithm Works in 2022 (and How to Work With It)*. (2022, February 11). Hootsuite Blog. https://blog.hootsuite.com/tiktok-algorithm/

77. Paul, K. (2021, October 16). 'It spreads like a disease': how pro-eating-disorder videos reach teens on TikTok. *The Guardian.* https://www.theguardian.com/technology/2021/oct/16/tiktok-eating-disorder-thinspo-teens

78. Rancourt, D., Leahey, T., LaRose, J., & Crowther, J. (2015). Effects of weight- focused social comparisons on diet and activity outcomes in overweight and obese young women. *Obesity, 23*(1), 85-89. https://doi.org/10.1002/oby.20953

79. Rohde, P., Stice, E., Shaw, H., Gau, J., & Ohls, O. (2017). Age effects in eating disorder baseline risk factors and prevention intervention effects. *The International journal of eating disorders, 50*(11), 1273–1280. https://doi.org/10.1002/eat.22775

80. Rozin, P. (1999). The process of moralization. *Psychological Science, 10*(3), 218-221. https://doi.org/10.1111/1467-9280.00139

81. Rozin, P., Ashmore, M., & Markwith, M. (1996). Lay American conceptions of nutrition: Dose insensitivity, categorical thinking, contagion, and the monotonic mind. *Health Psychology, 15*(6), 438-447. https://doi.org/10.1037//0278-6133.15.6.438

82. Runfola, C., Von Holle, A., Trace, S., Brownley, K., Hofmeier, S., Gagne, D., & Bulik, C. (2013). Body dissatisfaction in women across the lifespan: Results of the UNC-SELF and gender and body image (GABI) studies. *European Eating Disorders Review, 21* (1), 52–59. https://doi.org/10.1002/erv.2201

83. Sáez, G., Valor-Segura, I., & Expósito, F. (2019). Interpersonal sexual objectification experiences: Psychological and social well-being consequences for women. *Journal of Interpersonal Violence, 34*(4), 741–762. https://doi.org/10.1177/0886260516645813

84. Sares-Jaske, L., Knekt, P., Mannisto, S., Lindfors, O., & Heliovaara, M. (2019). Self-report dieters: Who are they? *Nutrients, 11*(8), 1789–1810. https://doi.org/10.3390/nu11081789

85. Scarff, J. (2017). Orthorexia Nervosa: An Obsession With Healthy Eating. *Federal practitioner: for the health care professionals of the VA, DoD, and PHS*, *34*(6), 36–39. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6370446/

86. Sepúlveda, A., Gandarillas, A., & Carrobles, J. (2003). *Prevalencia de los trastornos del comportamiento alimentario en la población universitaria.* [Doctoral Thesis, Universidad Autónoma de Madrid]. http://psiqu.com/2-6554

87. Sheikh, S., Botindari, L., & White, E. (2013). Embodied metaphors and emotions in the moralization of restrained eating practices. *Journal of Experimental Social Psychology, 49*(3), 509-513. https://doi.org/10.1016/j.jesp.2012.12.016

88. Sidani, J., Shensa, A., Hoffman, B., Hanmer, J., & Primack, B. (2016). The Association between Social Media Use and Eating Concerns among US Young Adults. *Journal of the Academy of Nutrition and Dietetics, 116*(9), 1465–1472. https://doi.org/10.1016/j.jand.2016.03.021

89. Slater, A., & Tiggemann, M. (2015). Media Exposure, Extracurricular Activities, and Appearance-Related Comments as Predictors of Female Adolescents' Self-Objectification. *Psychology of Women Quarterly, 39*(3), 375–389. https://doi.org/10.1177/0361684314554606

90. Smith, A., Hames, J., & Joiner, T. (2013). Status update: maladaptive Facebook usage predicts increases in body dissatisfaction and bulimic symptoms. *Journal of affective disorders, 149*(1-3), 235–240. https://doi.org/10.1016/j.jad.2013.01.032

91. Smith, B. (2021, December 5). How TikTok Reads Your Mind. *The New York Times*. https://www.nytimes.com/2021/12/05/business/media/tiktok-algorithm.html

92. Spraggins, A. (2009). Problematic Use of Online Social Networking Sites for College Students: Prevalence, Predictors, and Association With Well-Being. [Dissertation, University of Florida]. ProQuest Dissertations Publishing https://www.proquest.com/openview/69269cafc0e3fd2d5bab677291a2652e/1?pq-origsite=gscholar&cbl=18750

93. Steim, R. I., & Nemeroff, C. J. (1995). Moral overtones of food: Judgments of others based on what they eat. *Personality and Social Psychology Bulletin, 21*(5), 480-490. https://doi.org/10.1177/0146167295215006

94. Stice, E. (1994). Review of the evidence for a sociocultural model of bulimia nervosa and an exploration of the mechanisms of action. *Clinical Psychology Review, 14*(7), 633–661. https://doi.org/10.1016/0272-7358(94)90002-7

95. Stice, E., Marti, C. N., & Rohde, P. (2013). Prevalence, incidence, impairment, and course of the proposed DSM-5 eating disorder diagnoses in an 8-year prospective community study of young women. *Journal of abnormal psychology, 122*(2), 445–457. https://doi.org/10.1037/a0030679

96. Striegel-Moore, R., & Smolak, L. (2000). The influence of ethnicity on eating disorders in women. In R. M. Eisler & M. Hersen (Eds.), *Handbook of gender, culture, and health* (pp. 227–253). Lawrence Erlbaum Associ- ates Publishers.

97. The National Center on Addiction and Substance Abuse (CASA). (2003). *Food for thought: substance abuse and eating disorders*. The National Center on Addiction and Substance Abuse at Columbia University, New York.

98. Thompson, J., Heinberg, L., Altabe, M., & Tantleff-Dunn, S. (1999). Exacting beauty: Theory, assessment, and treatment of body image disturbance. *American Psychological Association*. https://doi.org/10.1037/10312-000

99. Tiggemann, M., & Miller, J. (2010) The Internet and Adolescent Girls' Weight Satisfaction and Drive for Thinness. *Sex Roles 63*(1-2), 79–90. https://doi.org/10.1007/s11199-010-9789-z

100. Tiggemann, M., Slater, A., Bury, B., Hawkins, K., & Firth, B. (2013). Disclaimer labels on fashion magazine advertisements: Effects on social comparison and body dissatisfaction. *Body Image 10*(1), 45–53. https://doi.org/10.1016/j.bodyim.2012.08.001

101. TikTok. *Feature highlight: new layouts for Duet.* (2020, September 30). TikTok Newsroom. https://newsroom.tiktok.com/en-us/feature-highlight-new-layouts-for-duet

102. TikTok. *How TikTok recommends videos #ForYou.* (2020, June 18). TikTok Newsroom. https://newsroom.tiktok.com/en-us/how-tiktok-recommends-videos-for-you

103. TikTok. *New on TikTok: Introducing Stitch.* (2020, September 3). TikTok Newsroom. https://newsroom.tiktok.com/en-us/new-on-tiktok-introducing-stitch

104. Toma, C., & Hancock, J. (2010). Looks and Lies: The Role of Physical Attractiveness in Online Dating Self-Presentation and Deception. *Communication Research, 37*(3), 335–351. https://doi.org/10.1177/0093650209356437

105. Tomiyama, A., Carr, D., Granberg, E., Major, B., Robinson, E., Sutin, A., & Brewis, A. (2018). How and why weight stigma drives the obesity 'epidemic' and harms health. *BMC Medicine, 16,* 123–129. https://doi.org/10.1186/s12916-018-1116-5

106. Treasure, J., Duarte, T., & Schmidt, U. (2020). Eating disorders. *The Lancet, 395*(10227), 899–911. https://doi.org/10.1016/S0140-6736(20)30059-3

107. Tylka, T., Annunziato, R., Burgard, D., Daníelsdóttir, S., Shuman, E., Davis, C., & Calogero, R. (2014). The weight-inclusive versus weight-normative approach to health: Evaluating the evidence for prioritizing well-being over weight loss. *Journal of Obesity*, 1-18 (983495). https://doi.org/10.1155/2014/983495

108. Tylka, T., & Sabik, N. J. (2010). Integrating social comparison theory and self-esteem within objectification theory to predict women's disordered eating. *Sex Roles 63*(1), 18–31. https://doi.org/10.1007/s11199-010-9785-3

109. Ulfvebrand, S., Birgegård, A., Norring, C., Högdahl, L., & von Hausswolff-Juhlin, Y. (2015). Psychiatric comorbidity in women and men with eating disorders results from a large clinical database. *Psychiatry research, 230*(2), 294–299. https://doi.org/10.1016/j.psychres.2015.09.008

110. Valkenburg, P., & Peter, J. (2009). Social Consequences of the Internet for Adolescents: A Decade of Research. *Current Directions in Psychological Science, 18*(1), 1–5. https://doi.org/10.1111/j.1467-8721.2009.01595.x

111. Varela-Casal, P., Maldonado, M., & Ferré, F. (2011). Estudio de los perfiles clínicos de los pacientes con trastorno de la conducta alimentaria en dispositivos específicos. *Actas españolas de psiquiatría, 39*(1), 12-9. https://actaspsiquiatria.es/repositorio/13/69/ESP/13-69-ESP-12-19-187522.pdf

112. Varela-Mato, V., Cancela, J. M., Ayan, C., Martín, V., & Molina, A. (2012). Lifestyle and health among Spanish university students: differences by gender and academic discipline. *International journal of environmental research and public health*, *9*(8), 2728–2741. https://doi.org/10.3390/ijerph9082728

113. Wall Street Journal. (2021, July 21). Investigation: How TikTok's algorithm figures out your deepest desires. *The Wall Street Journal.* https://www.wsj.com/video/series/inside-tiktoks-highly-secretive-algorithm/investigation-how-tiktok-algorithm-figures-out-your-deepest-desires/6C0C2040-FF25-4827-8528-2BD6612E3796?mod=hp_lead_pos5&mod=article_inline

114. Willson, C. (2020, February 17). TikTok Is Filled With Pro-Eating Disorder Content, Despite Its Own Rules. *Buzzfeed News.* *https://www.buzzfeed.com/cameronwilson/tiktok-eating-disorder-videos-algorithm-for-you-page*

115. Wolf, N. (1991). *The beauty myth: How images of women are used against women.* London: Vintage.

116. World Health Organization (2019). International Statistical Classification of Diseases and Related Health Problems (11th ed.). https://icd.who.int/

117. Xu, L., Yan, X., & Zhang, Z. (2019). Research on the Causes of the "Tik Tok" App Becoming Popular and the Existing Problems. *Journal of Advanced Management Science, 7*(2), 59-63. https://doi.org/10.18178/joams.7.2.59-63

118. Zaydling, M. The stigma surrounding men with eating disorders [Blog Entry]. *National Eating Disorders Association.* https://www.nationaleatingdisorders.org/blog/stigma-surrounding-men-eating-disorders

8. Appendix A

SCALES

1. **Sociocultural Attitudes Towards Appearance Questionnaire-3 (SATAQ-3; Thompson et al., 2004)**

Please read each of the following items carefully and indicate the number that best reflects your agreement with the statement.

Definitely Disagree = 1 Mostly Disagree = 2 Neither Agree Nor Disagree = 3 Mostly Agree = 4 Definitely Agree = 5

1. Social media platforms are an important source of information about fashion and "being attractive."

2. I've felt pressure from social media to lose weight.

3. I do not care if my body looks like the body of people who are on social media.

4. I compare my body to the bodies of people who are on social media.

5. I do not feel pressure from social media to look pretty.

6. I would like my body to look like the people on social media.

7. I compare my appearance to the appearance of models, influencers and celebrities on social media.

8. I've felt pressure from social media to be thin.

9. I do not compare my body to the bodies of people who appear on social media.

10. Social media platforms are not an important source of information about fashion and "being attractive".

11. I've felt pressure from social media to have a perfect body.

12. I compare my appearance to the appearance of people on social media.

13. I've felt pressure from social media to diet.

14. I do not wish to look as athletic as the people on social media.

15. I compare my body to that of people in "good shape".

16. I've felt pressure from social media to exercise.

17. I wish I looked as athletic as sports stars on social media.

18. I compare my body to that of people who are athletic.

19. I've felt pressure from social media to change my appearance.

20. I do not try to look like the people on social media.

21. I try to look like people who are openly very sporty.

22. Influencers are an important source of information about fashion and "being attractive."

2. Fat phobia Scale Revisited (Bacon et al., 2001)

Listed below are 14 pairs of adjectives sometimes used to describe obese or fat people. For each pair of adjectives, please select the grade on the line closest to the adjective that you feel best describes your feelings and beliefs towards them.

1.	lazy	5	4	3	2	1	industrious
2.	no will power	5	4	3	2	1	has will power
3.	attractive	1	2	3	4	5	unattractive
4.	good self-control	1	2	3	4	5	poor self-control
5.	fast	1	2	3	4	5	slow
6.	having endurance	1	2	3	4	5	having no endurance
7.	active	1	2	3	4	5	inactive
8.	weak	5	4	3	2	1	strong
9.	self-indulgent	5	4	3	2	1	self-sacrificing
10.	dislikes food	1	2	3	4	5	likes food
11.	shapeless	5	4	3	2	1	shapely
12.	undereats	1	2	3	4	5	overeats
13.	insecure	5	4	3	2	1	secure
14.	low self-esteem	5	4	3	2	1	high self-esteem

Scoring Instructions:
Step 1: For items 3, 4, 5, 6, 7, 10, and 12, score as follows:
1 2 3 4 5
Step 2: For items 1, 2, 8, 9, 11, 13, and 14, score as follows:
5 4 3 2 1
Step 3: Add up the score for each item to get the total score. Then divide by 14 (or the number of items answered, whichever is less). The range of scores is 1 – 5. High scores = more 'fat phobia'. Low scores = less 'fat phobia'.

9. Appendix B

Visual stimulus used in Study 2:

https://drive.google.com/file/d/1Uqm2l1zNrFUiC_Un0ZZfwX4kgDVb1taT/view?usp=sharing