

REVIEW ARTICLE

Obesity stigma and its impact on health: A narrative review



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Abstract Weight stigma and weight bias are pervasive in our society and are based on wrong assumption that obesity derives basically from a lack self-discipline and personal responsibility, obviating recent evidence showing that obesity is a prevalent, complex, progressive, and relapsing chronic disease that results from the interaction between behavioural, environmental, genetic, and metabolic factors. This narrative review provides an overview of recent research on this problem, mainly focused on the negative impact of weight stigma on health. Overall, recent evidence shows that weight stigma can contribute to worsening obesity-related problems and creating additional barriers to effective obesity care and prevention. In addition, a brief description of some of the most important international initiatives to address the weight stigma is provided.

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PALABRAS CLAVE

Estigma de la
obesidad;
Prejuicios
relacionados con el
peso;
Obesidad

El estigma de la obesidad y su impacto en la salud: una revisión narrativa

Resumen El estigma de la obesidad está generalizado en nuestra sociedad y se basa en la suposición errónea de que la obesidad se deriva principalmente de una falta de autodisciplina y responsabilidad personal, obviando la evidencia reciente que muestra que la obesidad es una enfermedad crónica prevalente, compleja, progresiva y recidivante, que resulta de la interacción entre factores conductuales, medioambientales, genéticos y metabólicos. Esta revisión narrativa proporciona una visión general de la investigación reciente sobre este problema, situando el énfasis en su impacto negativo en la salud. En general, las evidencias recientes

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muestran que el estigma de la obesidad puede contribuir a empeorar los problemas asociados a la obesidad y a crear barreras adicionales para un tratamiento y prevención efectivos. Además, se facilita una breve descripción de algunas de las iniciativas internacionales más importantes para abordar el problema del estigma de la obesidad.

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Introduction to obesity stigma

Obesity is a complex, chronic disease characterised by abnormal excess body fat that negatively affects physical¹ and mental² health. It has also been associated with significant financial burdens in developed and developing countries.³ According to the World Health Organization (WHO), obesity is rising worldwide, and its global prevalence almost doubled between 1980 and 2014. In 2014, 11% of men and 15% of women over 18 years of age were living with obesity, and more than 42 million children under the age of 5 years were overweight.⁴ In Spain, it is estimated that 21.6% of people aged 25–64 are living with obesity and 39.3% are overweight, with these rates increasing with age.⁵ It is also estimated that more than 30% of people aged 3 to 24 years are living with overweight or obesity, depending on the different criteria used.⁶ This high prevalence and its impact on health have made obesity a grave public health problem, and its prevention and treatment have become a priority for health plans.

The treatment of patients and public health initiatives targeting this issue have tended to be implemented under what has been called a “weight normative approach”, which emphasises weight and weight loss and control when defining health and well-being.⁷ This focus on weight loss and control, with the great importance attributed to physical appearance and the slender ideal of beauty in westernised societies,⁸ has given rise to unwanted harmful effects, such as patients with obesity increasingly adopting unhealthy weight-control behaviours that can put their health at risk.⁹ A study conducted in the United Kingdom found that between 1986 and 2015, the prevalence of unhealthy weight-control behaviours increased significantly among adolescents.¹⁰ Moreover, and this was found to be particularly true among girls, those who perceived themselves to be overweight manifested more depressive symptoms than those who perceived themselves to be of normal weight. This difference has only increased over time. The authors warn of the possible relationship between these results and public health obesity campaigns focussed on body weight control.

A review of unintended harm associated with public health interventions found that one-third of published studies reported the possible harmful effects of public health initiatives addressing obesity.¹¹ In the specific case of children and adolescents, a recent article published in one of the world’s most important paediatric journals warned of

the risks and lack of benefits associated with weight-focused public health interventions.¹² Initiatives implemented in some countries, such as body mass index (BMI) screening in schools, and informing families of their children’s weight, have failed to reduce obesity rates and have even contributed to the increased percentage of young people experiencing stigmatisation and body dissatisfaction due to their weight.¹³

This review aims to provide a global overview of the issue of obesity stigma, with a particular focus on its impact on health.

It is important to differentiate between several relevant terms associated with this issue. An important international consensus statement on the stigma of obesity¹⁴ offers the following definitions: “weight stigma”, which is used synonymously with “obesity stigma”, refers to social devaluation and denigration of individuals because of their excess body weight and can lead to negative attitudes, stereotypes, prejudice, and discrimination. “Weight-based stereotypes” include generalisations that overweight or obese individuals are lazy, gluttonous, lacking in willpower and self-discipline, incompetent, unmotivated to improve their health, non-compliant with medical treatment, and are personally to blame for their higher body weight. “Weight discrimination” refers to overt forms of weight-based prejudice and unfair treatment (biased behaviours) toward overweight or obese individuals. “Explicit weight bias” refers to overt, consciously held negative attitudes that can be measured by self-report. “Implicit weight bias” consists of automatic, negative attributions and stereotypes existing outside of conscious awareness (they can also be evaluated by instruments such as implicit association tests). Finally, “weight bias internalization” occurs when individuals engage in self-blame and self-directed weight stigma because of their weight. Internalisation includes agreement with stereotypes and application of these stereotypes to oneself and self-devaluation.

Method

To provide a general overview of this issue, a narrative literature review of obesity stigma and its impact on health was performed, following the recommendations of Green et al.,¹⁵ one of the most widely cited and used guidelines for this type of review. According to the classification of these authors, this is a narrative overview. A literature search in

the ISI Web of Science and PsychINFO databases focused on articles published between January 2010 and June 2021. However, earlier articles were not discounted if relevant publications were identified during the search. Web of Science has gained great prestige and a highly notable standing in recent years as a research tool and database in many scientific fields.¹⁶ The issue of obesity stigma is multidisciplinary, encompassing highly relevant psychological aspects. PsychINFO is the most important database in psychology, and it has been recognised¹⁷ that its use can add unique references to reviews whose topic of interest is related to the focus of this database, such as in this case. The keywords used were weight stigma, weight bias, obesity stigma, health and quality of life, which were crossed with the words review and meta-analysis in the following combinations; 1) to acquire global information on the issue of obesity stigma, ([weight stigma] OR [weight bias] OR [obesity stigma]) AND ([review] OR [meta-analysis]); 2) to acquire information on the impact of obesity stigma on health, ([weight stigma] OR [weight bias] OR [obesity stigma]) AND ([health] OR [quality of life]) AND ([review] OR [meta-analysis]). The search was conducted on titles and abstracts. Studies covering the issues raised in the aims of this publication were included; that is, reviews focussed on the impact of obesity stigma on health, as well as general reviews on obesity stigma. When several reviews and/or articles on the same topic were identified, the most recent and/or most cited were prioritised. The reference sections of the selected articles were examined to check for potential additional studies. Reports from prestigious international organisations, relevant consensus statements and documents, and empirical studies of particular relevance on the topic (such as multinational studies with large samples) were also included. These addressed such issues as the prevalence of obesity stigma in different settings, its impact on health and proposals to tackle this problem. Finally, given that the author is a member of an international group of more than one thousand investigators that focuses on sociocultural and prevention factors linked to eating- and weight-related problems, including obesity stigma, in which publications and initiatives on the issue are shared, pertinent articles and publications shared by the group that were deemed relevant given the aims of this review were also included. A summary of each selected article was drafted, the references were entered in the Mendeley reference manager, and the main results were grouped into four themed sections: 1) Prevalence of obesity stigma; 2) Settings where obesity stigma occurs; 3) The impact of obesity stigma and weight bias internalisation on health, and 4) International initiatives to address the problem of obesity stigma. A section on the limitations of the study and some final conclusions have also been included.

Prevalence of obesity stigma

Obesity stigma is extremely relevant in our society and has become a global health challenge.¹⁸ Despite the increased prevalence of obesity in recent years, obesity stigma seems to have increased.¹⁹ A significant proportion of obesity-related costs could be due to obesity stigma.²⁰ A recent report published by the WHO revealed that school-aged

children with obesity experience a 63% higher chance of being bullied, 54% of adults with obesity reported being stigmatised by their co-workers, and 69% of adults with obesity reported experiencing stigmatisation from health-care professionals.²¹ This issue was primarily studied with samples from the USA and from English-speaking countries. A multinational study conducted in the USA, Canada, Iceland and Australia found that the extent of weight bias was similar across the four countries, suggesting that the magnitude of the problem is similar in all Western countries.²² In Europe, there is very little data on the prevalence of this issue gathered from large samples. A German study found that 67% of individuals living with obesity had experienced episodes of weight-based discrimination, with the likelihood of experiencing such discrimination increasing as obesity class increases (10.2% in people with class I obesity, 18.7% in class II and 38% in class III).²³ A recent multinational study conducted in Australia, Canada, France, Germany, the United Kingdom and the USA revealed that 56–61% of adults with obesity engaged in weight-loss programmes reported having experienced weight stigma.²⁴

Settings where obesity stigma occurs

Obesity stigma is prevalent in many areas of people's lives, including health, work, education, family, the media, public health and society in general.

Many healthcare professionals manifest bias and negative attitudes towards patients with obesity.²⁵ A report published by the WHO stating that almost 70% of adults living with obesity have reported experiencing stigmatisation from healthcare professionals has already been alluded to above.²¹ The multinational study conducted in six countries spread across three continents found that two-thirds of participants living with obesity in each country reported having suffered stigmatisation by healthcare professionals.²⁴ These negative attitudes may reduce the quality of care offered to patients with obesity, despite the best intentions of healthcare professionals to provide quality care. As a result, patients with obesity tend to experience healthcare stress and are more reluctant to seek medical care, postponing or not attending appointments, losing trust in healthcare professionals manifesting poor adherence to treatments, with very negative repercussions on their health.^{14,24} These negative attitudes held by healthcare professionals are closely linked to beliefs that obesity is essentially a problem of individual responsibility,²⁶ which goes against recent evidence showing that obesity is a complex, chronic problem.²⁷ A study conducted with Spanish healthcare professionals found that stigmatising attitudes towards obesity and the attribution of the main causes of obesity to personal responsibility are also fairly common among Spanish professionals, which can lead to the inadequate treatment of patients with obesity.²⁸

In the workplace, people with overweight and obesity face stereotypical attitudes from employers, for example, that they are lazy, less hard-working and lacking in motivation, self-control and interpersonal skills, which leads to them being treated unfairly in the workplace. This has an impact on hiring decisions, on lower salaries and on fewer promotions/less favourable job prospects compared

to employees who are not living with obesity, despite being equally qualified.²⁹ People with obesity are often perceived as being less capable and successful, making it less likely for them to be offered an interview or hired.³⁰ Workplace health promotion programmes tend to put constant emphasis on individual responsibility, contributing to the perception that weight is controllable and supporting the stigmatisation and discrimination of employees living with obesity.³¹ The report published by the WHO states that 54% of adults with obesity report having been stigmatised by co-workers.²¹

Weight-based victimisation and bullying is common in schools, primarily by other children, but also by sports coaches and teachers. This applies both to trainees and established staff, who may harbour lower expectations of overweight pupils' physical, social and academic abilities, thereby having a negative impact on the health of these pupils and generating inequalities.^{32,33,34} The report published by the WHO highlighted that school-aged child living with obesity experience a 63% higher chance of being bullied than children of normal weight.²¹

This problem has manifested itself within the families themselves. Young Americans with a higher BMI receive less financial support from their parents to be able to go to university.³⁵

Overweight and obese people, particularly women, are disadvantaged when forming romantic relationships compared to people of normal weight. They are also more likely to experience weight-based stigmatisation from other people towards their partners and their own partners. Stigmatisation from one's partner, in particular, is associated with body dissatisfaction, sexual dissatisfaction, dissatisfaction with the relationship, and disordered eating behaviours.³⁶

The media underpin the stigma of obesity,³⁷ both in terms of how people with obesity are represented, as well as by portraying obesity essentially as a problem of individual responsibility.³⁸ An analysis of TV programmes and films aimed specifically at children and adolescents found that characters with larger bodies tended to be portrayed as aggressive, unpopular, evil, unhealthy and the butt of jokes or ridicule.³³ Obesity stigma is also found on social media, where people with obesity and overweight are humiliated using stereotypes portraying them as lazy, irresponsible and overly benevolent, and where they are mocked by the general public, generating further body dissatisfaction and lower psychological well-being in these people.³⁹

Finally, as already mentioned, one-third of unintended harm caused by public health interventions is associated with tackling obesity.¹¹ It has recently been quantified that in the USA, 44% of all obesity prevention campaigns contain stigmatising messages or images against people with obesity.⁴⁰ These types of messages or images that show stereotypes associated with people with obesity place the focus of the problem on people's individual responsibility, with an emphasis on weight loss and control. Moreover, they perpetuate slender ideals of beauty and the desire to lose weight and slim down, causing different problems such as adversely affecting the eating behaviour of the very people they target.⁴¹

The impact of obesity stigma and weight bias internalisation on health

Weight bias internalisation and the stigmatisation of people living with obesity have spread throughout society based on the belief that the stigma and blame will motivate them to lose weight.⁴² Yet research has shown that this approach is counterproductive, as these biases and stigmatisation, especially when internalised by the individual, rather than acting as a driver for change, could harm the physical and psychosocial health of sufferers and worsen their quality of life. Several recent systematic reviews and meta-analyses support this issue conducted in adults, children, and adolescents.^{43,44,45,46,47,48,49,50} Weight bias internalisation, in particular is a key mediator between experiences of stigma and their negative impact on health.⁵¹

Research has shown that obesity stigma is associated with increased psychological distress and mental health issues, including symptoms of depression and anxiety, low self-esteem and social isolation, as well as increased use of alcohol or other circumstances.^{46,52,53,54}

A clear link has been established between weight bias internalisation and changes in eating behaviour,⁵⁵ particularly binge-eating behaviour in different types of samples, including adult patients with obesity,^{56,57} adolescents on weight-loss programmes,⁵⁸ male and female university students,^{59,60} and women who perceive themselves to be overweight.⁶¹ This internalisation has also particularly been associated with greater compulsive and emotional eating.^{57,62}

Body dissatisfaction is a significant public health issue that has not been given the attention it warrants. It has been associated with a wide range of problems, such as poor psychological health (e.g., depression), eating disorders and obesity.⁶³ A link has been established between experiences of discrimination and stigmatisation that people living with obesity experience and body dissatisfaction.⁶⁴

An association between obesity stigma and eating disorders (EDs) has also been identified. People with EDs are two to three times more likely to be mocked or bullied due to their appearance and body weight before the onset of the disorder.⁶⁵ The prevalence of ED-associated obesity has increased in recent years, an association that is linked to greater clinical severity and worse prognosis. The prevalence of lifetime obesity in patients with eating disorders is approximately 30%, ranging from 5% in anorexia nervosa to 87% in binge eating.⁶⁶ The association between obesity and binge eating is particularly well-established.^{67,68}

Obesity stigma and its internalisation have also been associated with other problems that could worsen the prognosis of obesity-related health problems. As well as the increased risk of binge eating and emotional eating mentioned above, research has found an association with greater physiological stress, reduced physical exercise,^{69,70} the creation of additional obstacles to maintaining weight loss⁷¹ and putting off seeking medical care.^{24,72} Paradoxically, experiencing and internalising weight stigmatisation could contribute to worsening obesity-related problems and cre-

ating additional barriers to behaviour change.⁴⁹ A recent meta-analysis showed for the first time that, in paediatric obesity, the relationship with obesity stigma is bidirectional, such that living with obesity predicts experiencing stigmatisation and viceversa.⁷³

Arguably one of the most concerning findings is the relationship between obesity stigma and a higher risk of suicide and mortality.^{74,75} In the specific case of adolescents, being a victim of ridicule and discrimination for difficult-to-control personal characteristics like body weight makes it more likely for the victim to blame themselves for receiving this abuse. This, in turn, leads to increased feelings of uneasiness and distress, resulting in a greater risk of self-harm and increased suicidal behaviour.⁷⁶

Many of these adverse effects of weight bias internalisation, such as poor mental health and health-related quality of life, lower self-efficacy to control eating and physical activity, greater use of food as a coping mechanism, greater avoidance of going to the gym, worse body image and greater perceived stress, have been shown to be a robust effect in a recent multinational study conducted with samples from six Western countries (Australia, Canada, France, Germany, the United Kingdom and the USA).⁷⁷

Worthy of special mention are the studies performed with patients who undergo bariatric surgery. This group, together with children and adolescents, are most vulnerable to experiencing obesity stigma.⁷⁸ These studies show that weight bias internalisation by these patients is associated with greater body dissatisfaction, greater restrictive eating and emotional eating, depression, anxiety and poor quality of life before surgery,⁷⁹ poor dietary adherence lower weight loss,^{80,81} loss-of-control eating after surgery⁸² and more post-surgical depressive symptoms.⁸¹

The preliminary results of the only study conducted to date in the Spanish adolescent population on the effects of weight bias internalisation are consistent with international findings, showing that greater weight bias internalisation is associated with higher body dissatisfaction, a greater desire to lose weight/slim down, more symptoms of bulimia, more binge eating episodes and a higher overall risk of EDs, regardless of age, BMI and socioeconomic status, with this association being more significant in girls.⁸³ A positive association with worse general health and subjective well-being, greater healthcare avoidance and related stress, as well as worse psychological well-being in terms of self-esteem, depression, anxiety and stress has also been replicated.⁸⁴

International initiatives to address the problem of obesity stigma

In the field of public health, the stigma associated with diseases such as HIV/AIDS, various types of cancer, alcoholism and drug use has been an important barrier to treatment and prevention. Significant efforts by healthcare professionals were required to break down this barrier that had a negative impact on intervention efficacy.⁸⁵

In contrast, obesity stigma has not yet received sufficient attention from those responsible for health and public policy. However, as has been shown, its effects are so evident and harmful that interesting international initiatives and

proposals have started to be developed to end this stigma. Some of the most important of these are as follows:

- 1 In 2016, the WHO issued a call to end discrimination in healthcare,⁸⁶ publishing one year later a 'report with recommendations to address the problem of obesity stigma'.²¹
- 2 'The call to the media to reduce the stigma of obesity by different British associations' linked to the study of obesity.³⁸
- 3 The publication of guidelines about how to draft a communication about obesity to change the narrative of this issue, including British parliamentary guidelines⁸⁷ and guidelines from the Government of Western Australia's East Metropolitan Health Service.⁸⁸ The guidelines include recommendations such as:

- The importance of using person-first language (put people before the characteristic or condition) instead of the usual identity-first language. For example, say 'people with obesity like...' instead of 'obese people like...'.

- Use respectful images of people with obesity in the media and in public health campaigns (there are catalogues of these types of image, access to which is facilitated by these guidelines). Break the stereotypes that show people with obesity as lazy, uneducated or lacking willpower.

- Recognise the complexity of the causes and solutions of obesity. Spread messages acknowledging that obesity is a complex condition influenced by many factors outside an individual's control. A British government report identified around 100 factors that could contribute to the onset of obesity, reporting that regulating body weight is not entirely under voluntary control and that the causes of obesity are immersed in a highly complex biological system with an equally complex social framework.⁸⁹ A recent review also found that paediatric obesity is a chronic multifactorial disease arising from the interaction between behavioural, environmental, genetic and metabolic factors.⁵⁰ However, the belief that weight is under the control of the individual, incorrectly attributing being overweight or obese to a lack of willpower or individual responsibility, still prevails.⁹⁰

- Change the messages of obesity prevention campaigns so that they help people adopt healthy behaviours instead of promoting weight loss.

- The guidelines also include a set of recommendations on what to avoid, such as: using humour or ridicule when talking about body weight; stereotyping people based on their body weight; avoiding colloquial or combative language and using scientific or neutral language (instead of terms like 'fat' or 'war against obesity', choose terms like 'body weight', 'body mass index' or 'health priority'); blaming individuals, groups or families.

- 4 'The political declaration of the American Pediatric Society' outlines recommendations for clinical practice and political actions to reduce obesity stigma.³³
- 5 The recent 'Obesity in adults: a clinical practice guideline', co-developed by the association Obesity Canada and the Canadian Association of Bariatric Physicians and Surgeons,²⁷ which recognises obesity to be a chronic, complex, progressive and relapsing disease requiring care based on the principles of chronic disease management

and moving beyond simplistic approaches of “eat less, move more”, and also recognises that people with obesity face stigmatisation that can contribute to increased morbidity and mortality, and which calls for a change in how obesity is tackled towards a patient-centred health improvement, rather than isolated weight loss.

- 6 “The position statement of The Obesity Society”,⁹¹ which advocates a change in the public narrative about obesity, considering it to be a multifactorial chronic disease rather than a lifestyle choice or a behavioural issue.
- 7 “The new definition of obesity proposed by the European Commission” as a chronic relapsing disease.⁹²
- 8 “The recent joint international consensus statement for ending the stigma of obesity”, supported by around 60 prestigious international organisations concerned with the study of, and approach to, obesity, first-tier international medical and scientific journals, prestigious academic institutions and hospitals, and even a parliamentary committee of the British government.¹⁴ This statement comprises a comprehensive review of this issue and its effects and proposes different ways to end obesity stigma. The following is a summary of the commitment detailed in this statement to end weight bias and obesity stigma:

Note: Translated into Spanish by Rubino et al. (2020)¹⁴ Reproduced with permission and licence <http://creativecommons.org/licenses/by/4.0/>

Limitations

This review has a series of limitations. Firstly, it is a narrative literature review, not a systematic review that would be less biased. However, systematic reviews focus on research aims and questions that are much more specific than the aim of this review, which would be very difficult to tackle by systematic review. Despite following guidelines and recommendations to reduce bias associated with narrative literature reviews,¹⁵ the inclusion of studies and reports selected based on the author’s knowledge of the subject matter of the study and contacts with other researchers and international teams may make it difficult to fully replicate the review. The inclusion of reviews or meta-analyses already published on different topics associated with obesity stigma was prioritised, resulting in a significant selection bias. The reason for choosing to prioritise these types of study was the large volume of studies on this issue published in recent years, including several reviews tackling different questions linked to the study of obesity stigma. However, relevant empirical studies were also included (large samples, multinational studies), as well as reports from prestigious international organisations and consensus statements and documents from international organisations. There are also significant methodological limitations in this field of research: the vast majority of studies on the impact of obesity stigma on health are cross-sectional, and more longitudinal studies in this field are required; there is still no real consensus about how to evaluate experiences of stigma or internalisation; many studies have small and unrepresentative samples; more objective measures are required to evaluate some of the important variables studied (e.g.,

We recognise that

- Individuals affected by overweight and obesity face a pervasive social stigma based on the typically unproven assumption that their body weight derives primarily from a lack of self-discipline and personal responsibility.
- Such portrayal is inconsistent with current scientific evidence demonstrating that body-weight regulation is not entirely under voluntary control and that biological, genetic and environmental factors critically contribute to obesity.
- Weight bias can result in discrimination, and undermine human rights, social rights and the health of afflicted individuals.
- Weight stigma and discrimination cannot be tolerated in modern societies.

We condemn

- The use of stigmatising language, images, attitudes, policies, and weight-based discrimination, wherever they occur.

We pledge

- To treat individuals with overweight and obesity with dignity and respect.
- To refrain from using stereotypical language, images and narratives that unfairly and inaccurately depict individuals with overweight and obesity as lazy, gluttonous and lacking willpower or self-discipline.
- To encourage and support educational initiatives aimed at eradicating weight bias through dissemination of current knowledge of obesity and body-weight regulation.
- To encourage and support initiatives aimed at preventing weight discrimination in the workplace, education and healthcare settings.

physical activity, healthcare avoidance, etc.); further studies are required to clarify the mechanisms through which experiencing or internalising obesity stigma can have a negative impact on health. Finally, although well founded, many of the international proposals to combat stigma and limit its effects have still not been implemented, meaning that data on their efficacy are not yet available.

Conclusions

- 1 Obesity stigma is widespread in our society and occurs in many different settings, including health, education, work, family, the media and public health.
- 2 Obesity stigma has a very negative impact on the health and health-related behaviours of people with obesity.

- 3 Obesity stigma can exacerbate obesity-associated problems and create additional barriers to effective treatment and prevention.
- 4 Obesity stigma is based on the typically erroneous assumption that obesity derives primarily from a lack of self-discipline and personal responsibility, ignoring recent evidence that shows that obesity is a prevalent, complex, progressive and relapsing chronic disease driven by the interaction of behavioural, environmental, genetic and metabolic factors.
- 5 Obesity stigma must be reduced on several levels, requiring the involvement of different agents ranging from healthcare professionals to the media, public health campaigns to society in general.

To conclude, we would like to cite one of the conclusions of the joint international consensus statement for ending the stigma of obesity:

“Weight stigma represents a major obstacle in efforts to effectively prevent and treat obesity and type 2 diabetes. Tackling stigma is not only a matter of human rights and social justice, but also a way to advance prevention and treatment of these diseases. Academic institutions, professional organisations, media, public health authorities and government should encourage education about weight stigma and facilitate a new public narrative of obesity, coherent with modern scientific knowledge”.¹⁴

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Conflicts of interest

The authors declare that they have no conflicts of interest.

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