

# Vast majority of tweets about obesity are negative, study finds

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New research to be presented at next week's [European Congress on Obesity](#) (ECO) in Dublin, Ireland (May 17-20), has found that tweets about obesity are predominantly negative.

The analysis, by researchers in Switzerland and the UK, also found that Twitter activity spiked around the time of significant political events.

These included comments about Donald Trump's weight when he was U.S. president and the launch of an [obesity](#) campaign in the UK by Boris Johnson.

"Obesity can lead to serious physical, mental, and social health problems and its prevalence is increasing worldwide among people of all age groups," says researcher Dr. Jorge Correia, of the Division of Endocrinology, Diabetes, Nutrition and Therapeutic Patient Education, WHO Collaborating Centre, University Hospitals of Geneva, Geneva, Switzerland.

"Understanding the public's attitudes to and perceptions of obesity is key to the formulation of effective health policies, prevention strategies, and treatment approaches.

"In this study, we have leveraged the wealth of information available on Twitter to explore the sentiments of the public, celebrities and other influential people and important organizations such as the World Health Organization and the Centers for Disease Control and Prevention (CDC)."

Open-source software (the Tweepy library in Python) was used to download obesity-related [tweets](#) from Twitter. Cutting-edge AI methods were then used to perform sentiment analysis and classify the tweets into positive, negative and neutral sentiments. Modeling techniques were used to identify the major topics being discussed.

Researchers extracted and analyzed 25,580 tweets about obesity that were posted between December 2019 and December 2021.

The sentiment analysis revealed a significantly higher percentage of tweets (72.97%) represented negative sentiments, followed by neutral (18.78%) and positive (8.25%).

Spikes in Twitter activity were associated with significant political events such as when the Speaker of the House of Representatives in the US, Nancy Pelosi, described then-President Donald Trump as "morbidly obese" (May 19, 2020).

A total of 1,003 tweets were posted on this topic over several days. Around 94% of the tweets were negative in sentiment.

Dr. Correia says, "The negative portrayal of obesity by influential politicians and celebrities in may increase stigma against people living with obesity, and also harm [public health](#) by spreading misinformation."

The launch of an obesity strategy in the UK on July 27, 2020, by then-Prime Minister Boris Johnson attracted a lot of criticism from the public. Around 73.9% of the tweets about the campaign during this spike held negative sentiments.

The 25,580 tweets included in the analysis covered 243 topics. These included [childhood obesity](#), COVID-19 vaccination, racism and high obesity rates among minorities, smoking, illicit substance use and [alcohol consumption](#) among people with obesity, environmental risk factors for obesity (such as unavailability of green spaces), polycystic ovary syndrome and surgical treatments.

The largest number of tweets related to the issue of COVID-19 vaccination for people with obesity, followed by Nancy Pelosi's comments on Donald Trump.

The third-largest group of tweets wasn't composed of tweets from the

public but of tweets from research teams about their work on obesity. Racism towards Black people was the fourth-most tweeted topic.

In addition, negative tweets often talked about increased hospitalizations and death due to COVID-19 among people with obesity and about how people living with obesity are responsible for their weight.

The researchers say that their results emphasize the need to view obesity through a holistic lens.

Dr. Correia explains, "We need investments in various aspects of health care for obesity in order to achieve better health outcomes for the population. This includes improving health information regarding obesity, promoting awareness and reducing stigma, as well as development of effective interventions.

"Campaigns should be run on platforms like Twitter to improve the information about obesity available to the public. This could be done with partnerships between the [social media platforms](#), public and third sector organizations."

Provided by European Association for the Study of Obesity

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