

Junk food marketing on videogame livestreaming platforms increases purchases and consumption among teens, study finds

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Food and drink advertisements on videogame livestreaming platforms (VGLSPs) like Twitch are associated with more positive attitudes towards, and purchases and intake of, unhealthy foods that are high in fat, salt and/or sugar (HFSS) like energy drinks among adolescents aged 18 or younger, according to new research presented at this year's [European Congress on Obesity](#) (ECO) in Venice, Italy (12–15 May).

The concerning findings prompt researchers to call for stronger regulations on digital marketing of [unhealthy foods](#) to young people on these platforms, where there is currently no effective regulation and minimal efforts to control it.

Although the causes of obesity are complex, junk food marketing is associated with overweight and obesity in young people of all ages. As major users of digital media, adolescents (aged 12–18 years) are particularly exposed to their potential benefits and harms.

VGLSPs are a growing form of digital media where individuals can watch streamed videogame footage and communicate via a live chat. They can be accessed via PC, tablets, mobiles, and gaming consoles.

The top VGLSPs globally at the time of the research were Twitch (with 77% of the [market share](#) by hours watched), YouTube Gaming (15%), and Facebook Gaming Live (7%). However, a relatively new platform, Kick, has now replaced Facebook Gaming in third spot. The use of VGLSPs is rapidly growing with nearly 30 billion hours of content viewed on the top three platforms in 2023.

Because VGLSPs are popular with young people, they offer an opportunity for food and drink brands seeking to engage with teenagers.

As lead author Dr. Rebecca Evans from the University of Liverpool explains, "Endorsement deals for prominent streamers on Twitch can be worth many millions of dollars, and younger people, who are attractive to advertisers, are moving away from television to these more interactive forms of entertainment. These deals involve collaborating with brands and promoting their products, including foods that are high in fats, salt and/or sugar."

To study this possibility, Dr. Evans and her University of Liverpool colleagues investigated the extent and nature of food marketing via VGLSPs, and its impact on eating behavior in teenagers.

They started by conducting a [content analysis](#) to examine the extent and nature of food cues displayed in 52 Twitch videos (52 hours of video content) uploaded to the platform during October 2020 to September 2021 by three influencers popular with adolescents.

Then they systematically reviewed the evidence for a link between exposure to digital game-based (e.g., in-game advertising, advergames) or influencer food marketing (two key techniques used on VGLSPs), and food-related outcomes (attitudes, preferences, purchase, consumption) in young people (aged 18 years or younger).

They went on to survey 490 young people (average age 17 years, 30% female, 76% white, recruited via social media, schools, and a youth research panel) to further explore the link between recall of food marketing on top VGLSPs (i.e., Twitch, YouTube Gaming, and Facebook Gaming Live) and relevant food-related outcomes. Participants were asked about their age, gender, ethnicity, VGLSP viewing habits, their recall of food marketing on VGLSPs, and their

food and drink attitudes, preferences, purchase, and consumption of marketed foods.

Finally, the researchers conducted a lab-based randomized controlled trial to explore associations between HFSS food marketing via a mock Twitch stream and subsequent snack intake.

In total, 91 young people (average age 18 years, 69% female, 81% white) took part in an experiment in which they viewed a mock Twitch stream containing either an advert (an image overlaid on the video featuring a brand logo and product) for an unhealthy snack brand or a non-food brand.

Participants were told that they would be completing a memory task about what happened in the stream, to disguise study aims. They then had a "snack break" during which they were offered the branded snack from the stream and a supermarket brand version of the snack. They were also asked about their age, gender, ethnicity, and VGLSP viewing habits.

Viewers exposed to 52 minutes of food advertising every hour

Overall, the analyses found that food cues on Twitch appeared at an average rate of 2.6 every hour, and the average duration of each cue was 20 minutes.

Overall, this amounts to 52 minutes of exposure per hour (including overlapping exposure from multiple food cues on-screen at the same time). Most (71%) of the cues were for HFSS foods, and among these, energy drinks were the most featured category, accounting for 62%. Most food cues (81%) were branded (e.g., an image overlaid on the

video featuring a food brand logo) and only 2% had an advertising disclosure.

Most food cues appeared as either product placement (44%) or looping images (41%), and several features that would appeal to adolescents (e.g., tie-ins, logos, offers, slogans) were used. The nature of this advertising means that it is always visible on screen (i.e., viewers cannot "skip" or "close" it).

Familiarity with junk-food ads influences adolescents' unhealthy diet

The researchers also found that the digital game-based marketing was associated with more positive attitudes and greater preferences toward marketed food and drink brands, with young people twice as likely to prefer these products. Additionally, influencer and digital game-based marketing were associated with eating more HFSS food post-marketing exposure (~37 additional kcals in one sitting).

Further analyses found that recall of HFSS food marketing on VGLSPs was associated with more [positive attitudes](#) towards advertised HFSS food categories (e.g., fast food, [energy drinks](#)), and in turn purchases and consumption of marketed HFSS foods.

Nevertheless, in the randomized trial, acute exposure to HFSS food marketing in a mock Twitch stream was not associated with immediate consumption of unhealthy foods. This may be because participants were only exposed to one type of advert (a static image), and this was presented in isolation (i.e., no other adverts were present). However, the more time young people reported spending watching VGLSPs each week, the more of the marketed snack they ate, suggesting that habitual exposure is impactful.

According to Dr. Evans, "Our findings provide crucial new information on the extent, nature, and impacts of HFSS food marketing via VGLSPs on [young people](#)'s eating behavior. The high level of exposure to digital marketing of unhealthy food could drive excess calorie consumption and weight gain, particularly in adolescents who are more susceptible to advertising. It is important that digital food marketing restrictions encompass innovative and emerging digital media such as VGLSPs."

The authors acknowledge that some of their findings show observational differences rather than evidence of cause and effect, and cannot be generalized to all teenagers. They also note that some of the findings are based on a self-reported survey of viewing and eating habits that can lead to problems of recall and bias, which could have affected the results.

Provided by European Association for the Study of Obesity

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