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**Education about genetic causes of eating behavior affects attitudes toward
people with higher weight**

New study published in the Journal of Nutrition Education and Behavior investigates if genetics education could positively affect empathy and weight stigma

Philadelphia, January 9, 2023 – Education about gene-by-environment interaction (G X E) causes of eating behaviors can have beneficial downstream effects on attitudes toward people with higher weight. A recent [study](#) included in the [Journal of Nutrition Education and Behavior](#), published by Elsevier, found that participants who received education about G X E concepts reported higher empathy and held fewer stigmatizing attitudes toward individuals with higher weight. G X E is when two different genotypes respond to variations in the environment in two different ways.

“Discriminatory attitudes against people with higher weight have been observed at comparable rates to racial and gender discrimination and are often more overt because weight stigma is viewed as a more socially acceptable form of negative bias,” says corresponding author Susan Persky, PhD, Social and Behavioral Research Branch, National Human Genome Research Institute, National Institutes of Health, Bethesda, MD. “However, weight has a sizable genetic component. Our study found that increasing education about the role of genetics in eating behavior may therefore help to alleviate weight stigma by reducing the extent to which individuals are blamed for their weight.”

Participants were recruited via the online platform Prolific and were randomly assigned to watch an educational or a control video. Participants then watched a set of vignette scenarios that depicted what it is like to have a predisposition toward obesogenic eating behaviors from either a first-person or third-

person perspective. Participants completed questionnaires measuring G X E knowledge, causal attributions, weight stigma, and empathy post intervention.

Participants who watched the educational video demonstrated greater G X E knowledge, reported higher empathy toward the characters in the vignette scenarios and held fewer stigmatizing attitudes (notably blame) toward individuals with higher weight. Exploratory mediation analyses indicated that the educational video led to these positive downstream effects by increasing the extent to which participants attributed genetic causes to eating behaviors.



Caption: New study published in the *Journal of Nutrition Education and Behavior* showed individuals scenarios that depicted what it is like to have a predisposition toward obesogenic eating behaviors such as the tendency to overeat cookies (Credit: Максим Галінский /stock.adobe.com).

Communicating G X E causes of eating behaviors to the public is a useful way to improve attitudes toward people with higher weight. Therefore, the authors envision the potential for similar G X E education to be broadly disseminated as part of public health campaigns. Moreover, a greater understanding of these concepts may help improve patient-provider interactions around healthy eating and weight.

“Focusing on G X E causes of eating may help tackle entrenched weight stigma among the general public and health care providers,” suggests the study’s lead author Alison Jane Martingano, PhD, National Human Genome Research Institute, National Institutes of Health. “This research provides initial evidence that future educational interventions may benefit from focusing on eating behaviors, specifically, when attempting to improve attitudes toward people with higher weight.”

Notes for editors

The article is “Using Educational Videos and Perspective-Taking to Communicate Gene-By-Environment Interaction Concepts about Eating Behavior: Effects on Empathy and Weight Stigma,” by Alison Jane

Martingano, PhD; Sydney H. Telaak, BA; Emma M. Schopp, BS; Christopher Fortney, BFA; Alexander P. Dolwick, BS; Susan Carnell, PhD; Sapna Batheja, PhD; and Susan Persky, PhD (<https://doi.org/10.1016/j.jneb.2022.09.005>). It appears in the *Journal of Nutrition Education and Behavior*, volume 55, issue 1 (January 2023), published by [Elsevier](#).

The article is openly available at [https://www.jneb.org/article/S1499-4046\(22\)00531-0/fulltext](https://www.jneb.org/article/S1499-4046(22)00531-0/fulltext).

Full text of the article is also available to credentialed journalists upon request; contact Eileen Leahy at 732 238 3628 or jnebmmedia@elsevier.com to obtain a copy. To schedule an interview with the author(s), please contact Susan Persky, PhD, at perskys@mail.nih.gov.

An audio podcast featuring an interview with Dr. Susan Persky and other information for journalists are available at <https://www.jneb.org/content/media>. Excerpts from the podcast may be reproduced by the media with permission from Eileen Leahy.

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The *Journal of Nutrition Education and Behavior* features articles that provide new insights and useful findings related to nutrition education research, practice, and policy. The content areas of JNEB reflect the diverse interests of health, nutrition, education, Cooperative Extension, and other professionals working in areas related to nutrition education and behavior. As the Society's official journal, JNEB also includes occasional policy statements, issue perspectives, and member communications. www.jneb.org

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