WHY SOCIAL SCIENCE?

Because It Provides Empirical Answers to Critical Public Health Questions

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What do the opioid and obesity epidemics have in common? For starters, they are both public health crises in which the disease model is used to describe the condition and, theoretically, promote intervention and health behavior change. Although the American Medical Association (AMA) recognized addiction as a disease in 1987, it did not label obesity a disease until 2013. The identification of these epidemics as diseases garnered more medical attention and contributed to the way the medical community tackled the problems. As social scientists, we pondered if these labels also had any potential psychological consequences for the way the public and those living with these conditions confronted the issues.

Do labels matter?

The famous Shakespearean quote from Romeo and Juliet "a rose by any other name would smell as sweet" suggests that labels do not matter. Is this statement accurate? As social scientists, we incorporated current methodological approaches to empirically investigate consequences of public health messages labeling addiction and obesity as diseases. For example, *does the disease message increase or reduce the likelihood that someone will seek treatment?*

Considering the costs of drug addiction and obesity, understanding how labels impact outcomes is critical. To examine this, we use the lens of mindset theory, which outlines the importance of beliefs about the nature of human traits, attributes, and experiences. People typically fall on a continuum from *fixed mindsets*, or the belief in the static nature of human attributes to *growth mindsets*, or the belief in the malleability of human attributes.

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Drug addiction as a disease

To investigate the effects of an addiction-as-disease message, we conducted a study with participants who had a history of problematic substance use. We randomly assigned them to one of two groups. In the first group, participants read an article that described addiction as a disease (or fixed attribute) and discussed changes in the brain that occur as a result of substance abuse—the "disease-fixed" condition. In the second group, participants read an article that described various factors that can contribute to substance abuse, and that also emphasized the potential to change in the future—the "growth mindset" condition. Our results showed that participants who read about addiction as a disease, relative to those who read the changeable message, reported weaker beliefs in their potential to change their substance abuse and were less confident in their ability to stop misusing alcohol and drugs. They also reported weaker intentions to seek psychosocial treatment. However, there was no difference between the groups in terms of the extent to which participants blamed themselves for their addiction or the likelihood they would seek pharmacological treatment.

Obesity as a disease

We also conducted two studies that examined the consequences of viewing obesity as a disease. We randomly assigned participants to read an article describing obesity as a disease or to read either a standard public health message (Study 1) or an article arguing that obesity is not a disease (Study 2). Participants who read about obesity as a disease, relative to the control articles, reported weaker growth mindsets about body-weight and placed less value on their health. Additionally, the reduced personal value placed on health predicted higher calorie food choices. The participants in the obesity is a disease condition also reported less body-dissatisfaction than those in the control condition. Thus, "obesity is a disease" messages may help body image but can negatively impact self-regulatory processes.

Follow-up work using similar methods continues to confirm that disease messages, relative to messages that focus on the mechanisms of change, have costs and benefits. Namely, disease messages weaken growth mindsets and efficacy, which can lead individuals to internalize stigma and to be less motivated. However, more recent work also highlights benefits of disease messaging: these messages also weaken blame, which reduces internalized stigma and prejudice.

Solutions

Overall, research across multiple studies suggests that when targeting public health epidemics such as addiction or obesity, it is misguided to paint the problem in the broad strokes of a single disease or to only highlight individuals' need to take responsibility and action. Drug addiction and obesity require more than individual willpower and good intentions to overcome.

Public health message framing requires a reliance on scientific findings. And researchers need to continue to incorporate new methods, theories, and discoveries in order to contribute to the empirical understanding of the consequences of different labels. The appeal of social science is that it can contribute to the discourse of how to best address public health epidemics.

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