

Disability disparities may be explained by obesity, smoking, physical labor

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Excess body mass, smoking and manual labor explain a large proportion of disability disparities in the United States, according to a new University of Michigan study.

While it's well documented that those with less education, and especially those without a [high school diploma](#), are more likely to become disabled, less is known about the mechanisms behind that link, U-M researchers say.

"We know that smoking, obesity and manual labor are heavily shaped by educational attainment, and that they in turn increase the risk of disability," said lead author Tarlise Townsend, who conducted the work while a doctoral student at U-M's School of Public Health.

"So we wanted to know at the U.S. population level, how much of the educational disparities in disability are explained by those three factors? We wanted to better understand the pathways by which education 'gets under the skin' to influence disability risk."

Townsend and colleagues found that those three factors accounted for 60% of educational disparities in disability in [younger women](#) (65 and younger), 65%-70% in younger men, 40% in [older women](#) and 20%-60% in older men.

They followed more than 3,000 individuals at risk for disability from 2003 to 2015 by using data from the nationally representative Panel Study of Income Dynamics—the longest running longitudinal household survey in the world—housed at the U-M Institute for Social Research.

To define disability, the researchers utilized a standard set of survey indicators that ask about people's ability to carry out everyday life activities such as bathing or showering, preparing meals and doing heavy housework.

While previous research looked at prevalence of disability, which provides a snapshot of who has a disability at a given time, the U-M study increased methodological rigor by looking at incidence, or the

switch from not having a disability to having a disability.

"Then we said, 'OK, what is the role of these three factors in explaining educational disparities in disability?' Townsend said. "If, for example, nobody had smoked in the population, how much smaller would the disability gap be? If nobody were overweight or obese in the population, how much smaller would the disability gap be?"

"That allowed us to estimate how much of the disability gap in the U.S. population is explained by those risk factors, versus how much of it has to be explained by other mechanisms."

The researchers found that smoking and manual labor were the main drivers of disparities in disability in men under 65. Whereas for both younger and older women, the main driver was overweight and obesity.

"If we want to reduce disparities in disability, we need to understand the mechanisms by which educational attainment translates into disability," Townsend said. "It's crucial to remember that changing these risk factors requires much more than individual-level volition."

"These behaviors, as well as the type of work people do, are shaped by a range of powerful societal forces. If we want to reduce disparities in disability, we need to think hard about how we can both improve educational attainment and 'unlink' education from these risk factors: occupational opportunity, obesity and smoking."

For a long time, disability seemed to be falling in the American population, but that trend ended in the early 2000s, Townsend said. Now, Americans are becoming disabled at younger ages, and educational disparities in disability seem to be growing.

"We don't understand why disability levels in the U.S. have plateaued

and why disparities in disability by [educational attainment](#) are so large," said co-author Neil Mehta, assistant professor of health management and policy at U-M's School of Public Health. "Our study helps shed some light in understanding these troubling patterns."

The study is published in the *Journal of Gerontology Social Sciences*.

More information: Pathways to educational disparities in disability incidence: The contributions of excess BMI, smoking, and manual labor involvement, doi.org/10.1093/geronb/gbaa085 , [fdslive.oup.com/www.oup.com/pdf ... tion in progress.pdf](https://fdslive.oup.com/www.oup.com/pdf/.../geronb/gbaa085.pdf)

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