

## Life satisfaction may not enhance cognitive functioning among some older adults

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Numerous studies have shown that leading a fulfilling and satisfying life may improve cognitive function by encouraging health-protective behaviors such as physical activity and reduced stress. Many of these studies assess this relationship from a population level, rather than



among individuals.

But a closer look within the <u>general population</u> suggests that <u>life</u> <u>satisfaction</u> may not have a positive effect on all people, according to a new study led by Boston University School of Public Health researchers.

Published in the journal *SSM-Mental Health*, the <u>new study</u> examined psychological well-being among older individuals in the United States and United Kingdom. High life satisfaction was associated with increased cognitive functioning among most individuals, but it was less beneficial for people of low socioeconomic status, in <u>poor health</u>, or experiencing adverse psychological conditions.

The study is the first to examine the effects of psychological well-being on cognitive functioning among older adults. It is important to note that the researchers observed no association of average cognitive effects from psychological well-being at a <u>population level</u>, so without this more granular analysis, the potentially adverse effects of life satisfaction would have been overlooked.

"It was impressive to observe how a relationship with no associations on population average showed underlying differences based on sociodemographic factors, <u>physical health</u>, and psychosocial elements," says study lead author Toshiaki Komura, a master of public health student at BUSPH.

This new insight emphasizes the importance of considering heterogeneities in <u>public health research</u> to understand who benefits from life satisfaction and who does not.

"Our results indicate that the health benefit of experiencing high life satisfaction may be smaller among socially marginalized groups, so further research is needed to ensure potential interventions have



equitable health impacts," says study senior author Dr. Koichiro Shiba, assistant professor of epidemiology at BUSPH.

For the study, the team used a novel machine-learning method to analyze nationally representative survey data on life satisfaction and cognitive functioning among more than 15,000 adults ages 50 and older in the US and UK, for four-year periods between 2010 and 2016.

The health-promoting effect of life satisfaction in <u>older adults</u> was only evident among participants with higher SES, fewer pre-existing health problems, and better psychological functioning, which was about half of the survey participants.

The researchers surmise that the physical, mental, or socioeconomic challenges that low-SES individuals or adults in poorer health experience may have outweighed any possible cognitive benefits from life satisfaction. For example, life satisfaction could boost cognitive functioning by promoting <u>physical activity</u>, but exercise is not achievable if an individual is not in basic good health or does not have access to resources to exercise, such as residential green space or a gym.

This counterintuitive finding of the adverse effects of life satisfaction may also be explained by a concept called <u>"response shift,"</u> which involves changing internal standards, values and the conceptualization of quality of life.

"Response shift is the adjustment of one's internal view of their quality of life when facing challenging circumstances in which their health status is severely deteriorated," Komura explains. "In such situations, their standard of quality of life may shift to maintain a favorable psychological environment."

According to this theory, individuals with disadvantaged socioeconomic,



health, and psychosocial conditions might have reported life satisfaction that had been "adjusted" to their circumstances. "Our findings suggest such adjusted subjective feelings might have limited health-promoting effects on cognitive functioning," he says.

At BUSPH, the study was coauthored by Ruija Chen, postdoctoral fellow in the Department of Epidemiology, and Ryan Andrews, research scientist in the Department of Epidemiology. The study was also coauthored by Richard Gowden, psychology research associate for the the Human Flourishing Program at Harvard University's Institute for Quantitative Social Science.

**More information:** Toshiaki Komura et al, Estimating the heterogeneous effect of life satisfaction on cognitive functioning among older adults: Evidence of US and UK national surveys, *SSM—Mental Health* (2023). DOI: 10.1016/j.ssmmh.2023.100260

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