

Elderly will take medical risks given large enough benefits, study shows

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Credit: University of Plymouth

Older people are more likely to take medical risks than younger adults if they perceive the benefits to be high enough, according to new research led by Plymouth University.

Yaniv Hanoch, Professor of Decision Science, said that the findings of the study *Does Medical Risk-Perception and Risk-Taking Change with Age?* challenge the traditional view of [older people](#) being risk averse.

The study, carried out alongside Jonathan J. Rolison of the University of Essex, and Alexandra M. Freund of the University of Zurich, involved 317 adults, ages 20 to 77, comparing decisions among different age groups about risky medical treatments, such as vaccines and chemotherapy.

The authors gave the participants four different scenarios to read, and Professor Hanoch explains: "Increasing age was associated with a higher likelihood of passive risk taking, whereby [older adults](#) avoided options, such as accepting a treatment or vaccine, that could lower their chance of dying.

"Beliefs about the elderly taking fewer risks are based mainly on financial risk-taking studies that do confirm elderly people's financial risk aversion. However, older adults do not seem to be as generally averse to taking risks as that literature on financial risk-taking suggests. Instead, when it comes to the essential domain of health or medical decision making, older adults also focus strongly on the benefits of a given procedure."

In the study's first two scenarios, participants were asked to imagine that their local area had been sealed off due to a highly contagious and deadly flu – which would kill 10 in 100 people. They were then asked whether they would take the risk of getting a preventative vaccine which, although effective in 95 per cent of cases, brought with it a 5 per cent chance of dying. After reading the scenarios, participants indicated whether they would accept the vaccine for themselves (Scenario 1) or have the vaccine administered to their child (Scenario 2).

A similar design was followed for Scenarios 3 and 4, but the participants were asked to imagine that either they (Scenario 3) or their child (Scenario 4) had been diagnosed with a deadly, slow-growing cancer.

The study also used a psychological measurement instrument, the Domain-Specific Risk-Taking Scale – Medical (DOSPERT-M) to gauge whether a participant would 'immediately go to the doctor's when something in my body is aching or bothering me'. The DOSPERT-M recorded responses on a seven-point scale ranging from one (very unlikely) to seven (very likely).

Results showed that if a participant expected greater benefits they would be more willing to take a risk. Conversely, if they perceived higher risks, they would be less likely to take the risk.

Professor Hanoch added:

"Our data revealed no age-related differences in medical risk-taking tendencies, which stands in contrast to the prevailing notion that older adults are more risk averse than younger ones. Taken together, our study provides important insights about changes in medical risk taking across adulthood when people face an increasing number of complex and risky medical decisions.

"The findings have important implications for medical decisions by the elderly. When giving such patients medical and health information, then, of course the potential risks need to be communicated to older patients, but also the potential benefits. Given the high financial and personal costs associated with medical-related risk behaviour, gaining better insights into adult lifespan changes in medical risk-taking tendencies and perceptions is paramount."

More information: Yaniv Hanoch et al. Does Medical Risk

Perception and Risk Taking Change with Age?, *Risk Analysis* (2016).
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