Quick Thinking and Feeling Healthy Predict Longer Life

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Suffering from chronic medical conditions and engaging in unhealthy behaviors are known risk factors for early death, but findings from a longitudinal study of over 6,000 adults suggests that certain psychological factors may be even stronger predictors of how long we'll live.

The findings are published in *Psychological Science*, a journal of the Association for Psychological Science.

"Our study shows that two psychological variables, lower self-rated health and age-related decrements in processing speed, appear to be especially important indicators of elevated mortality risk in middle-age and older adults," says psychological scientist Stephen Aichele of the University of Geneva in Switzerland. "This information may facilitate diagnostic accuracy and timely interventions."

Aichele and colleagues Patrick Rabbitt (University of Oxford, UK) and Paolo Ghisletta (University of Geneva, Switzerland) were interested in investigating the relative influence of cognitive, demographic, health, and lifestyle variables in predicting mortality risk. While previous research had provided some clues as to the roles played by these variables, comprehensive longitudinal studies were few and far between.

"It has been long known that particular factors such as illnesses, socio-economic disadvantage, cognitive decline, and social support determine how long we survive in old age," explains Aichele. "The problem has been that these and other markers for mortality have been tested separately, rather than together. Given that they are strongly associated with each other, it makes it difficult to determine which variables most influence mortality risk."

To address this gap in the available research, Aichele and colleagues turned to the Manchester Longitudinal Study of Cognition, examining 29 years' worth of data collected from 6,203 adults who

ranged in age from 41 to 96 years old when they began the study.

Aggregating data from 15 different tasks, the researchers looked at participants' cognitive performance across five domains of ability: crystallized intelligence, fluid intelligence, verbal memory, visual memory, and processing speed. The tasks—all well-established measures of cognitive ability—were administered up to four times over a 12-year period, allowing the researchers to assess participants' baseline performance and change in performance over time for each domain.

To gauge participants' health, the researchers used the Cornell Medical Index, a measure that includes detailed checklists of a total of 195 pathological symptoms related to physical and psychological disorders.

Finally, the researchers looked at participants' subjective reports of various lifestyle factors, including perceived health, number of prescribed medicines, sleep patterns, hobbies, leisure activities, and social interactions.

Using two types of statistical analysis, the researchers were able to assess the relative importance of a total of 65 different variables in predicting participants' mortality risk.

The results revealed subjective health and mental processing speed to be two of the strongest predictors – that is, better perceived health and smaller decreases in processing speed over time were associated with reduced mortality risk.

Being a woman was also associated with reduced mortality risk, while years of smoking tobacco was linked with an increased risk of early death.

The influence of the two psychological factors relative to known medical risk factors, such as cardiovascular symptoms, came as a surprise:

"The result that psychological variables are so strongly linked to mortality risk is very surprising because much extant evidence supports the hypothesis that the strongest predictors of survival in old age are of medical or physiological nature," explains Aichele.

These findings may provide useful insights to health professionals, who need better methods for identifying individuals at risk of early death.

"Addressing the needs of an aging global population will require accounting for numerous morbidity and mortality risk factors, such as demographic variables, health conditions, functional capacities, mental abilities, and social support," the researchers conclude.