

# Quantitative Relationship between Positive Affect and Mortality Risk in Older People

**P**ositive affect (PA) such as joy, happiness, and energy and positive characteristics, such as life satisfaction, hopefulness, and optimism have been found to be related to older adults' health and longevity. Previous studies showed that higher level of positive affect was correlated with better health and lower mortality risk in older adults. However, previous reviews do not provide quantitative information on the association between PA and mortality risk, and there is a possibility that there were differences in the relationships across the different types of PA and longevity.

Lately, Prof. HAN Buxin and his team at the CAS Institute of Psychology in Beijing have performed a meta-analysis on the relationship between PA and mortality risk in older adults. They examined the different effects of different PAs on mortality risk, and reviewed evidence on the Main Effect Model and the Stress-buffering Model of PA.

In the study, four databases were used to identify potential studies on PA and mortality risk in older adults, and 22 studies that met the criteria entered into the data analysis. Researchers calculated the Hazard ratios (HR) and analyzed the data within a random effects model. The results showed that the mortality

risk in older adults with higher levels of positive affect was lowered by 1/4 than those with lower positive affect; after controlling for the effects of covariates, the mortality risk in older adults with higher levels of positive affect was lowered by 15% than those with lower positive affect. Negative affect was less likely to be responsible for the association between PA and mortality risk. However, the association could be explained by both the Main Effect and Stress-buffering Models. The Main Effect Model suggested a mediating role of physiological, behavioral, and social factors between PA and health. And the Stress-buffering Model suggested a moderating role of PA between

stress and health. This study also revealed that compared to other PAs (such as optimism, cheerfulness), the mortality risk associated with life satisfaction was lower (HR = 54%,  $p < 0.05$ ).

The study offers quantitative information on the ESs of PA on mortality risk and qualitative evidence on the Main Effect and Stress-buffering Models of PA, and provides new insights into the cumulative results of current studies on PA and mortality. The results indicated effective methods to improve longevity, and eventually achieve healthy aging.

This study has been published by *PsyCh Journal* and is now available online.

