

Pessimism associated with risk of death from coronary heart disease

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Pessimism seems to be a strong risk factor for death from coronary heart disease (CHD), while optimism does not protect from it, according to a study published in the open access journal *BMC Public Health* that involved 2,267 middle aged and older Finnish men and women.

Researchers at the Department of Psychiatry, Päijät-Häme Central Hospital, Finland, found that people with high levels of pessimism seemed to have a higher risk of CHD-induced mortality, even after adjusting for known physiological risk factors. Optimism did not seem to have any effect on that risk.

Optimism and pessimism in the scientific sense focus on people's attitude towards their future - whether or not they generally expect a greater number of desirable or undesirable things to happen. Dr. Mikko Pänkäläinen, lead author of the study said: "High levels of pessimism have previously been linked to factors that affect cardiac health, such as inflammation, but data on the connection between risk of death from CHD and optimism and pessimism as personality traits are

relatively scarce."

Dr. Pänkäläinen added: "Levels of pessimism can be measured quite easily and pessimism might be a very useful tool together with other known risk factors such as diabetes, hypertension or smoking to determine the risk of CHD-induced mortality."

This is the first study to examine CHD mortality and its association with optimism and pessimism as independent variables. Previous research that treated optimism and pessimism as opposites on a continuous scale rendered conflicting results, particularly regarding associations between optimism and CHD-related deaths.

The researchers found that the 121 men and women who died from CHD during the study's eleven-year follow-up period had been more pessimistic at baseline than people who were still alive at follow-up. However, there was no difference between the groups in optimism, suggesting that pessimism alone mediates the effect on CHD mortality. Comparing the highest and lowest quartiles of pessimism, people in the highest quartile had a 2.2-fold higher risk of dying from CHD than those in the lowest quartile.

To investigate possible associations between optimism, pessimism and CHD mortality, the researchers used baseline data, collected in 2002 as part of the GOAL (Good Ageing in Lahti region) study, on 2,267 Finnish men and women who, at the start of the study period, were between 52 and 76 years old. The GOAL data provided information on socioeconomic status, psychosocial background, and lifestyle, as well as health data including blood glucose levels, blood pressure, use of hypertension or diabetes drugs, and prior diagnoses of CHD.

At baseline, study subjects also filled out the revised version of the Life Orientation Test (LOT-R), a questionnaire that includes six statements,

three of which indicate optimism - for example "in uncertain times, I usually expect the best" - and three of which indicate pessimism, for example "if something can go wrong for me, it will". Respondents were asked to indicate how well these statements described them, as expressed on a scale from 0 (not at all) to 4 (very much so).

Observational studies like this one can show possible links between risk of death from CHD and [pessimism](#), but they cannot show cause and effect because other factors may play a role. While this prospective cohort study investigated a randomly selected group of people with even numbers of both sexes and representatives of all invited age groups across a long follow-up period, it may be limited by its use of self-reported data which may have caused inconsistencies between people's answers and the reality of some physiological [risk factors](#) such as smoking habits or use of medications.

More information: Mikko Pänkäläinen et al, Pessimism and risk of death from coronary heart disease among middle-aged and older Finns: an eleven-year follow-up study, *BMC Public Health* (2016). [DOI: 10.1186/s12889-016-3764-8](https://doi.org/10.1186/s12889-016-3764-8)

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