
INTERHEART study: stress, depression increase heart attack risk



A South African study supports evidence showing that stress, depression and other psychosocial factors can increase the risk of developing cardiovascular disease. Significant financial stress, for instance, is associated with a 13-fold higher odds of having a heart attack, according to the INTERHEART study presented at the 18th Annual Congress of the South African Heart Association.

"The INTERHEART study (1,2) showed that psychosocial factors are independently associated with acute myocardial infarction (heart attack) in Africa but as far as we are aware there are no other published local data," said Professor Pravin Manga, professor of cardiology, University of the Witwatersrand, Johannesburg and one of the study's authors.

The study included 106 patients with acute myocardial infarction who presented to a large public hospital in Johannesburg. A control group of 106 patients without cardiac disease was matched for age, sex and race. All participants completed a questionnaire about depression, anxiety, stress, work stress, and financial stress in the previous month. The Likert scale was used to grade the experience of each condition.

Regarding financial stress, patients were graded with no financial stress if they were coping financially; mild financial stress if they were coping financially but needed added support; moderate financial stress if they had an income but were in financial distress; and significant financial stress if they had no income and at times struggled to meet basic needs.

Levels of psychosocial conditions were compared between groups and used to measure associations with having a heart attack. The study's key findings include:

- 96% of heart attack patients reported any level of stress and 40% had severe stress levels
- Both work stress and financial stress were associated with a higher risk of acute myocardial infarction: 5.6 times higher risk in patients with moderate or severe work stress compared to those with minimal or no stress; and 13-fold increased risk for those with significant financial stress
- There was a three-fold increased risk of myocardial infarction if a patient had experienced any level of depression (from mild to extremely severe) in the previous month compared to those with no depression

"The role of psychosocial factors in causing disease is a neglected area of study in South Africa, perhaps because there are so many other pressing health challenges such as tuberculosis and HIV," said lead author Dr. Denishan Govender, associate lecturer, University of the Witwatersrand.

Often patients receive counselling about stress after a heart attack but there needs to be more emphasis prior to an event, the doctor points out. "Few doctors ask about stress, depression or anxiety during a general physical and this should become routine practice, like asking about smoking. Just as we provide advice on how to quit smoking, patients need information on how to fight stress."

Professor Fausto Pinto, immediate past president of the European Society of Cardiology (ESC) and course director of the ESC programme in South Africa, said: "Psychosocial factors including stress at work, depression and anxiety contribute to the risk of developing cardiovascular disease and having a worse prognosis. European prevention guidelines say that psychosocial risk factor assessment should be considered in people with, or at high risk of, cardiovascular disease to identify possible barriers to lifestyle change or adherence to medication." (3)

Source: [European Society of Cardiology](#)

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