

AH-49

Dysfunctional Coping Mediates the Effect of Negative Emotions on Physical Functioning in Cardiac Patients

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Background & Hypothesis:

Coronary heart disease (CHD) is the most common diagnosis in all cardiovascular diseases. Research has demonstrated that CHD patients often experience mental distress, which coincides with more severe physical limitations and complications. Negative emotions may activate dysfunctional coping styles that influence physical functioning. However, few studies have examined whether dysfunctional coping would mediate the influence of negative emotions on physical functioning among CHD patients.

Methods:

A total of 150 CHD patients participating in cardiac rehabilitation completed measures of coping, negative emotions (depression, anxiety, and worry) and physical functioning. Hierarchical regression analyses were conducted to examine the associations between each negative emotion, dysfunctional coping, and physical functioning, and to test whether dysfunctional coping was a mediator between negative emotion and physical functioning. All models were adjusted for covariates, including age, gender, education, and history of CABG and PTCA.

Results:

Depression ($\beta = -0.414$, $P < 0.001$), anxiety ($\beta = -0.403$, $P < 0.001$) and worry ($\beta = -0.472$, $P < 0.001$) each significantly predicted lower physical functioning. Dysfunctional coping significantly accounted for additional variance in physical functioning when added into the model with depression ($\beta = -0.226$, $P = 0.004$), anxiety ($\beta = -0.225$, $P = 0.004$), or worry ($\beta = -0.225$, $P = 0.003$). Bootstrap confidence intervals supported dysfunctional coping as a partial mediator of depression ($\beta = -0.04$, 95% CI -0.103,-0.006), anxiety ($\beta = -0.04$, 95% CI -0.107,-0.007), and worry ($\beta = -0.04$, 95% CI, -0.088,-0.002). Higher depression, anxiety, and worry were associated with more dysfunctional coping, which in turn, was associated with lower physical functioning.

Discussion & Conclusion:

Reducing dysfunctional coping may be an effective adjunctive intervention to alleviate the detrimental impact of negative emotions on physical limitation in CHD patients.