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Personality Dimensions and Health-Related Quality of Life in Patients with Coronary Artery Disease

Juste Buneviciute,[1] Margarita Staniute,[2] and Robertas Bunevicius[2]
[1]North Carolina State University, Raleigh, NC, and [2]Institute of Psychophysiology and Rehabilitation, Kaunas University of Medicine, Palanga, Lithuania

Objective: Health-related quality of life (HRQoL) is an important outcome parameter in patients with coronary artery disease (CAD). The aim of the study was to examine the effects of personality dimensions on HRQoL in patients with CAD.

Methods: Five hundred fourteen consecutive patients attending a CAD rehabilitation program were invited to participated in the study. Patients completed the Ten-Item Personality Inventory (TIPI), and the 36-item Short Form Medical Outcome Questionnaire (SF-36). A stepwise linear regression analysis was used to examine whether personality dimensions determine HRQoL.

Results: Multivariate stepwise regression analyses revealed that when age, gender, and five TIPI personality dimensions were included in the model, TIPI personality dimension of emotional stability had an impact on seven of eight SF-36 subscales of quality of life in patients with CAD and strongly determined the scores on subscales for mental health ($\beta = .451$, $P = .000$), role limitations due to emotional problems ($\beta = .193$, $P = .000$), social functioning ($\beta = .118$, $P = .007$), energy/vitality ($\beta = .284$, $P = .000$), pain ($\beta = .123$, $P = .005$), and general health perception ($\beta = .276$, $P = .000$). Personality dimension of conscientiousness had an impact on the physical function subscale ($\beta = .093$, $P = .025$), the role limitations due to physical problems subscale ($\beta = .112$, $P = .010$), the social functioning subscale ($\beta = .157$, $P = .000$), and the energy/vitality subscale ($\beta = .092$, $P = .026$). Personality dimension of the extraversion had an impact only on the mental health subscale ($\beta = .097$, $P = .012$) and reverse impact on the general health perception subscale ($\beta = -.129$, $P = .002$). Another significant determinant was gender, which had an impact on the SF-36 subscales of physical function ($\beta = -.377$, $P = .000$), role limitations due to physical problems ($\beta = -.151$, $P = .001$), social functioning ($\beta = -.195$, $P = .000$), mental health ($\beta = -.107$, $P = .006$), energy/vitality ($\beta = -.247$, $P = .000$), pain ($\beta = -.116$, $P = .010$), and general health perception subscale ($\beta = -.118$, $P = .005$). Age was a significant determinant only in role limitations due to physical and emotional problems and pain. While significance was found in most of the regressions, the determination coefficients were rather low. Only on the subscale for mental health, it covered 25% of the variance; on other subscales it varied from 17% to 5%.

Conclusion: In patients with CAD , the personality trait of emotional stability has a significant effect on the HRQoL, especially on the mental aspects of the HRQoL. Psychologic interventions in CAD should be extended to the management of personality traits.