



Validation of the weather sensitivity questionnaire in patients with coronary artery disease

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Weather sensitivity questionnaire need to be validated in specific populations including patients with coronary artery disease (CAD).

Objective. To provide initial validation of the new instrument, Palanga Weather Sensitivity Inventory (PWSI) in CAD patients.

Methods. The PWSI was developed as 18 items questionnaire to evaluate an association between subjective wellbeing and meteorological-heliophysical factors. Eight hundred and sixty six consecutive patients with CAD (mean age 60 years; 30%, women) were recruited from the cardiac rehabilitation program at the Rehabilitation Clinic in Palanga, Lithuania from June 2008 to February 2012. Each patient filled PWSI every day during 21 day of stay (average 15.5 days) in the program. Severity of symptoms for weather sensitivity was rated as 0 (not expressed at all), 1 (expressed) or 2 (strongly expressed). The methods of data analysis included exploratory factor analysis (EFA), internal consistency, reliability and factor score. Then using MANOVA scores on three factors of the PWSI were compared in patients positive versus negative for symptoms of depression or anxiety assessed using two subscales of the Hospital Depression and Anxiety Scale (HADS).

Results. EFA resulted in reduction from 18 to 11-item on the PWSI and suggested three factors solution (Psychological, Cardiological, Physical symptoms) explaining 68% of variance. The internal consistency evaluated by the Cronbach's alpha was 0.86, 0.80 and 0.64 for respective factor. Item-factor correlations indicated that each item correlated significantly stronger with its own factor than with other factors (all differences $p < 0.001$) suggesting strong convergent and discriminant construct validity. Symptoms of depression and/or anxiety had an impact on scores on three factors of the PWSI

Conclusion. The PWSI is an appropriate instrument for measuring weather sensitivity in the CAD patients.