

## The Associations between Self-Determined Motivation and Physical Activity in Patients with Coronary Heart Disease

**Authors :** I. Hua Chu, Hsiang-Chi Yu, Hsuan Su

**Abstract :** Purpose: To examine the associations between self-determined motivation and physical activity in patients with coronary heart disease (CHD) in a longitudinal study. Methods: Patients with CHD were recruited for this study. Their motivations for exercise were measured by the Behavioral Regulation in Exercise Questionnaire-2 (BREQ-2). Physical activity was assessed using the 7-day physical activity recall questionnaire. Duration and energy expenditure of moderate to vigorous physical activity (MVPA) were used in data analysis. All outcome measures were assessed at baseline and 12 months follow up. Data were analyzed using Pearson correlation analysis and regression analysis. Results: The results of the 45 participants (mean age 60.24 yr; 90.2% male) revealed that there were significant negative correlations between amotivation at baseline and duration ( $r=-.295$ ,  $p=.049$ ) and energy expenditure ( $r=-.300$ ,  $p=.045$ ) of MVPA at 12 months. In contrast, there were significant positive correlations between calculated relative autonomy index (RAI) at baseline and duration ( $r=.377$ ,  $p=.011$ ) and energy expenditure ( $r=.382$ ,  $p=.010$ ) of MVPA at 12 months. There was no significant correlation between other subscales of the BREQ-2 and duration or energy expenditure of MVPA. Regression analyses revealed that RAI was a significant predictor of duration ( $p=.011$ ) and energy expenditure ( $p=.010$ ) of MVPA at 12 months follow-up. Conclusions: These results suggest that the relative degree of self-determined motivation could predict long-term MVPA behaviors in CHD patients. Physical activity interventions are recommended to target enhancing one's identified and intrinsic motivation to increase the likelihood of physical activity participation in this population.

**Keywords :** self-determined motivation, physical activity, coronary heart disease, relative autonomy index (RAI)

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