

Education and Profession are Associated with Incidence of Congestive Heart Failure among Men and Women with Coronary Heart Disease

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Background: Congestive heart failure (CHF) is associated with poor outcome among patients (pts) with coronary heart disease (CHD). Little is known about the association of socioeconomic status (SES) and CHF among CHD pts. Education and profession are good indicators of SES.

Methods & results: 2922 pts included in the BIP study without CHF at baseline (2672 men 250 women) were followed for a median of 8 year; Profession was classified by decreasing level of education or skill required as: I. Free profession, management, teaching; II. Desk-job, trade, or Technical, services, industry job with more than elementary education; III. Blue-collar profession; IV. Housewives & pensioners. During the study 459 (17%) men and 50 (20%) women developed CHF. Pts who had CHF were slightly older (61.6 vs. 60.7) compared to counterparts who did not ($p < 0.0001$). after age adjustment, pts who developed CHF were more likely to have past MI (85 vs. 75%), PVD, diabetes (9 vs. 13%), hypertension, higher pulse pressure, functional limitation, or obesity (22 vs. 12%) at baseline. Additionally, CHF occurred more frequently among pts who had MI during follow-up. CHF rate/1000 PY gradually decreased with education level and profession class (Figure). Adjusted for: obesity, number of MIs, history of diabetes, hypertension, peripheral vascular disease, NYHA class, treatment with lipid lowering drug, and baseline pulse pressure, CHF hazard compared to elementary education among men was 0.95 (95% CI:0.77-1.16) for high school education, and 0.83 (0.62-1.09) for academic education. The corresponding hazards for women were 0.31 (0.15-0.66) and 0.37 (0.08-1.66). Similarly, compared to housewives and pensioners, highest classes 1 & 2 were associated with 33% decreased CHF risk (0.53-0.86) among men and a similar 69% decrease among women (NS). **Conclusion:** Academic education and higher profession class are associated with decreased risk of CHF onset among male and female CHD pts.

