

Construction of trajectories of work complexity and their association with subsequent health

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Objectives: This study was designed to evaluate the predictive validity of occupational trajectories with health outcomes. **Methods:** Occupational and health data from the National Longitudinal Survey of Youth (NLSY, 1979-1998) and the O*NET (v13) were used to construct trajectories of the substantive complexity (SC) of work from ages 19 to 32, using growth mixture modeling (GMM). Associations of occupational trajectories with health outcomes at age 40 were modeled with generalized linear equations, contrasting results with education and income. **Results:** GMM produced a 5-class solution for trajectories of work SC. Trajectory slopes were linearly associated with SF-12 physical component scores at age 40, indicating association of better health with continued increase in work complexity. Contrasted with a normative average-growth class, the trajectory class with little growth (flattened slope) was associated with an increased risk of poorer self-rated health (OR 1.6, $p < 0.001$) while the sharpest trajectory was associated with significantly reduced risk for poor health (OR 0.49, $p < 0.001$). These results were robust to the inclusion of educational attainment and income into the model. Stratification by race and ethnicity indicates a higher proportion of Hispanic subjects without postsecondary education in high-trajectory classes than whites, while fewer university-educated black subjects were seen in high-trajectory classes. **Conclusions:** Categorical trajectories of work characteristics may be useful in assessing associations of occupation and health outcomes. Evidence that Hispanic subjects may have more favorable occupational trajectories with reduced educational attainment may be a factor in the 'Hispanic paradox' of better health despite lower socioeconomic status.