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**Socioeconomic disparities in gait speed and associated characteristics in early old age**

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**ABSTRACT**

**BACKGROUND** - A few studies have documented associations between socioeconomic position and gait speed, but the knowledge about factors from various domains (personal factors, lifestyle, occupation...) which contribute to these disparities is limited. Our objective was to assess socioeconomic disparities in usual gait speed in a general population in early old age in France, and to identify potential contributors to the observed disparities, including occupational factors. **METHODS** - The study population comprised 397 men and 339 women, aged 55 to 69, recruited throughout France for the field pilot of the CONSTANCES cohort. Gait speed was measured in meters/second. Socioeconomic position was based on self-reported occupational class. Information on personal characteristics, lifestyle, comorbidities and past or current occupational physical exposure came either from the health examination, from interview or from self-administered questionnaire. Four groups were considered according to sex-specific distributions of speed (the two slowest thirds versus the fastest third, for each gender). Logistic regression models adjusted for health screening center and age allowed to the study of cross-sectional associations between: 1- slower speed and occupational class; 2- slower speed and each potential contributor; 3- occupational class and selected potential contributors. The association between speed and occupational class was then further adjusted for the factors significantly associated both with speed and occupational class, in order to assess the potential contribution of these factors to disparities. **RESULTS** - With reference to managers/executives, gait speed was reduced in less skilled categories among men (OR 1.21 [0.72-2.05] for Intermediate/Tradesmen, 1.95 [0.80-4.76] for Clerks, Sale/service workers, 2.09 [1.14-3.82] for Blue collar/Craftsmen) and among women (OR 1.12 [0.55-2.28] for Intermediate/Tradesmen, 2.33 [1.09-4.97] for Clerks, 2.48 [1.18-5.24] for Sale/service workers/Blue collar/Craftsmen). Among men, occupational exposure to carrying heavy loads explained a large part of socioeconomic disparities. Among women, obesity and occupational exposure to repetitive work contributed independently to the disparities. **CONCLUSIONS** - This study suggests that some potentially modifiable occupational and personal factors explain at least part of the differences in gait speed between occupational classes, and that these factors differ between men and women. Longitudinal studies are needed to confirm and complement these findings.

**KEYWORDS:** Occupational exposure; Socioeconomic position; Usual gait speed

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