

Gender and age differences in the impact of marital status on genetic and environmental influences on subjective health

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Subjective health (SH) is typically assessed using a single item asking individuals to rate their overall health. The simplicity of the item can be misleading as research indicates that SH is a complex variable tapping personality and cognitive status, as well as physical health. Moreover, individuals who are married report better SH than those living alone. Behavior genetic approaches allow us to examine GxE interplay in contributions to SH. Three measures of SH are collected by 9 twin studies participating in the Consortium on Interplay of Genes and Environment across Multiple Studies (IGEMS). Data are available from over 16,000 individuals aged 24 to 95 on 3 subjective health items: overall self-rated health (SRH), health compared to others (COMP), and impact of health on activities (ACT). Marital status, coded as either married/cohabitating or living alone, was used as a marker of environmental resources that may impact subjective health perceptions. Results differed for the 3 SH items, indicating that they do not tap the same underlying construct. The strongest impact of marital status on SH was found for ACT in men. Heritability of ACT was higher in single men (40 %) than married men (30 %) up to age 70, then the pattern reversed and heritability was higher in married men (26 %) than single men (10 %). Conversely, unique environmental influences increased for single men after age 70, but were relatively stable for married men. A similar pattern was found for SRH, but not COMP. Although the impact of marital status was smaller for women than for men, there was some suggestion of similar changes in genetic and environmental influences on ACT and SRH for women, but in the 50–60 age range. Results suggest gender differences in the role of marriage as a source of environmental resources and in the age of greatest impact.