

INTERACTIONS BETWEEN GENES FROM AGING-RELATED PATHWAYS: IMPACT ON HUMAN LONGEVITY

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Role of genetic interactions (GxG) in human longevity remains poorly understood. We hypothesized that GxG between genes from biologically connected pathways involved in aging may impact longevity. To test this hypothesis, we selected 53 candidate genes from the aging-related pathways (IGF-1/AKT/FOXO3A, TP53/P21/P16, and mTOR/S6K mediated) that are known to jointly influence outcomes of cell responses to stress and damage, such as apoptosis, senescence, growth/proliferation, and autophagy. We evaluated the effects of interactions between SNPs in these genes on longevity in LLFS and CARE data. RESULTS: The IGF1R, PPARGC1A and BCL2 genes were consistently involved in top GxG effects ($p < 10^{-6}$) on survival in the oldest old (85+ and 95+). One SNP, rs2970870 in PPARGC1A gene, was broadly involved in significant interaction effects on survival 96+ ($p < 10^{-7}$) when paired with SNPs in IGF1R and NFKB1 genes. This SNP individually was associated with survival with nominal significance only; therefore, it would have not been selected in a GWAS. We conclude that interactions between genes from aging-related pathways that regulate cell responses and resilience to damage may have major impact on human longevity and contribute to its genetic heterogeneity. The research was supported by the NIA/NIH grants R01AG062623, U19AG063893, P01AG043352.

SOCIAL FRAILTY IN RECENTLY RELOCATED SEMI-INDEPENDENT OLDER ADULTS

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Although most older adults live outside of care institutions, not all seniors choose to live in traditional family homes. Among those who relocate, some relocate too early while others are pre-frail or frail when they relocate. Social frailty – the interaction between social vulnerability and frailty – could contribute to these untimely relocations. The goal of this study was to inform the concept of social frailty by examining a population of semi-independent older adults who recently relocated to a continuum of care community. The objectives of this study were to: 1) understand the influence of the social determinants of health on the relocation process; 2) explore whether relocation increases or reduces social frailty; and 3) measure the level of post-relocation frailty in

study participants. This mixed method study combined semi-structured interviews on the relocation process, the frailty identification tool PRISMA-7, and socio-demographic surveys. Twenty-nine recently relocated seniors were recruited with the assistance of a Citizens' Advisory Committee along with advertisements, presentations, information booths, and word of mouth. Qualitative descriptive thematic analysis and descriptive statistical analyses were used to examine the relationship between frailty, socio-demographic variables and relocation. Findings indicated that several social determinants contributed to frailty and that relocation into a continuum of care community could mitigate some aspects of social frailty. A conceptual framework on the influence of social frailty on relocation is discussed. More research is needed to inform the concept of social frailty and to better understand the impact of social factors on frailty.

THE EFFECT OF ACTIVITIES OF DAILY LIVING ON FAMILY CAREGIVER SOCIAL ISOLATION

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Social isolation has been shown to associate with negative health outcomes including depression and stress. For family caregivers of older adults, the demands on the caregiver often are associated with increasing feelings of loneliness and decreased social contact. The degree to which the caregiver's social isolation is related to the complexity of the caregiving situation remains unknown. Through a cross-sectional analysis of 526 family caregivers from the Family Caregiver Alliance client record database, an association has been established between care recipient functional decline and caregiver social isolation. Social isolation was measured through the Lubben Social Network Scale and functional decline was measured through ADL/IADL reporting. Covariates controlled for in the analysis included caregiver ethnicity, duration of caregiving, adult child status, caregiver education, care recipient income, and hours per week caregiving. Family caregivers of care recipients with higher functional decline experienced elevated odds of social isolation as compared to family caregivers of care recipients with little to no functional decline. The results from this study highlight the need for medical personnel and non-profit actors to anticipate social isolation as a risk factor for family caregivers of older adults given the care recipient is experiencing functional decline.

WHAT CONSUMERS SAY ABOUT HOSPICES IN ONLINE REVIEWS

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Until recently, consumers have had limited resources to assess quality of hospices agencies, contributing to growing numbers of consumers turning to online review sites, such as Yelp. Yet little is known about the content of hospice Yelp reviews and how these relate to recently available Center for Medicare and Medicaid Services'