DEVELOPMENT AND VALIDATION OF THE ANTIPSYCHOTIC MEDICATION RISK SCORE FOR NURSING HOME RESIDENTS

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Prevalence rates of antipsychotic medication (APM) use in U.S. long-stay nursing home (NH) residents, excluding those with approved diagnoses, range from 7.2% to 20.7%; Missouri's rate is 18.6%. This study developed an APM risk score for NH residents using variables from the Minimum Data Set 3.0 (MDS 3.0) assessment. Data from the most recent Missouri MDS 3.0 assessment, excluding admission and discharge, for each long-stay NH resident from November 2017–December 2018 were used to create development (n= 30,893) and validation (n= 7,651) data sets. Potential predictors of APM use were entered in a logistic regression model with variable selection via the least absolute shrinkage and selection operator (LASSO). In a final step, only variables with odds ratios > 1.2 were retained. A weighted score was created by assigning points relative to the maximum coefficient $[10*\beta i / max (\beta)]$ and rounded to integer values. APM rates were 17.29% and 17.70% in the development and validation data, respectively. The final model included 14 demographic and clinical indicators; assigned points (1-10) summed for total score (0-50). Areas under receiver operator characteristic curves were 0.801 and 0.798 for the development and validation models, respectively. Youden's index cut-point = 8, with sensitivity of .70 and specificity of .75. Our findings demonstrate it is possible to predict with good accuracy a NH resident's risk of APM use. Identifying residents at increased risk of receiving an APM, perhaps inappropriately, could position NH staff to proactively design and deliver nonpharmacological interventions individualized to each resident's needs and preferences.

DEATH ANXIETY AND FINANCIAL DECISION-MAKING IN AGING: A STUDY FROM THE HUMAN CONNECTOME PROJECT AGING (HCP-A)

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While research addressing late-life death anxiety (the fear of death or the dying process) has focused on end-of-life care decision-making, few have studied the effect of late-life death anxiety on financial decision-making. This is particularly relevant to financial decision-making as older adults are more vulnerable to fraud and deception. The aim of this study was to determine how age and death anxiety affect financial decision-making in a sample of older adults of 60-93 years of age (N = 102), who participated in the HCP-A project at UCLA. To study this relationship, we used a delayed reward discounting task to model financial decision-making, where higher rates of discounting indicate a greater preference for immediate, smaller monetary rewards and lower rates of discounting indicate more future-oriented planning. To account for age-related cognitive decline, cognitive functioning was assessed using the NIH Toolbox. We hypothesized that the presence of death anxiety will increase discounting of future rewards in older adults. Results from a univariate ANOVA showed an interaction between age, death anxiety, and delayed reward discounting. Specifically, older adults with self-reported death anxiety showed greater preference for immediate, smaller monetary rewards. By controlling for cognition, these findings suggest that death anxiety moderates decision-making in late-life adults and may add to our understanding of why older adults are more susceptible to financial abuse. These results suggest a need to consider death anxiety as a moderating variable when developing and implementing policies and services that are geared towards older adults.

USE OF SERVICES BY PEOPLE LIVING ALONE WITH COGNITIVE IMPAIRMENT: A SYSTEMATIC REVIEW

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At least one third of older adults with dementia live alone in the United States. Living alone may represent an opportunity to maintain independence and autonomy, while remaining in a familiar home environment. However, living alone with cognitive impairment is also associated with health risks and unmet needs. No systematic reviews on this population have been published. We systematically reviewed research on use of healthcare and long-term services and supports (LTSS) by people living alone with cognitive impairment. Following PRISMA guidelines, we searched six electronic databases for studies reporting quantitative findings on use of services by people living alone with cognitive impairment; 33 studies met inclusion criteria. Nine countries were represented, all high-income economies. Race/ethnicity data was reported in just five studies, and only one included a majority of racial/ethnic minorities. Overall, people living alone with cognitive impairment appear to use health services at similar or lower rates compared to those living with others; however, LTSS use is higher among people living alone. Representation of non-white participants was poor, but the evidence available suggests that among racial/ethnic minorities with cognitive impairment, there is no difference in LTSS use between those living alone and living with others. Findings highlight inconsistencies in access to and use of essential services by older adults living alone with cognitive impairment. As the populations of the US and other high-income countries become both older and more diverse, with increasing numbers living alone, researchers and service providers must consider the specific needs and preferences of this population.

THE EFFECTS OF SOCIAL NETWORK ON RESILIENCE OF COMMUNITY-DWELLING OLDER ADULTS LIVING ALONE

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Resilience is one of the components for successful aging and is related to wellbeing in late life. Studies have shown that older people living alone have low resilience. However, most of these studies were mainly conducted on unhealthy participants. The aim of this study is to examine the factors that contribute to resilience of healthy older adults living alone. Older people living alone who are not subject to public health care service provided to the economically or physically challenged or depressed people were recruited. Data collected from 295 participants were used to conduct hierarchical multiple regression analyses, controlling demographic characteristics, level of cognitive and physical functions, and emotional status. A self-reported questionnaire, UCLA Loneliness Scale, Lubben Social Network Scale(LSNS), and Multidimensional Individual and Interpersonal Resilience Measure(MIIRM) were used to measure study variables. A hierarchical model accounted for 48.8% of the variance in resilience. In model 1(demographics), the religion(β=.178, p<.001) and the perceived economic status(β=-.176, p<.001) variables were significantly related to resilience. The subjective health(β=-.109, p=.038) in model 2(level of function) and the loneliness(β=-.379, p<.001) in model 3(emotional status) had a significant effect on resilience. In model 4, the size(β=-.115, p=.029) and the frequency(β=.160, p=.003) of social networks significantly predicted resilience. The results showed that protecting older adults' social networks could lead to promote their health and wellbeing. What can be inferred from this finding is that even though the members are small, the social network they often have contact with is important for the resilience of older adults living alone.

CANCER: ARE OFFSPRING OF LONG-LIVED SIBLINGS BOTH ROBUST AND RESILIENT?

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Background: The mechanisms underlying clustering of longevity in families are unclear. We have previously shown a low cancer incidence in offspring of long-lived siblings, i.e. cancer robustness. Here we test whether such offspring are also more resilient in terms of survival after cancer diagnosis. Methods: Identification of offspring from long-lived families was undertaken in three nationwide, consecutive Danish studies (DOS, GeHA, LLFS). Cancer cases were identified through linkage with the Danish Cancer Registry. Each offspring cancer case was matched with two control cancer cases from the 5% random sample of the Danish population. Matching criteria were birth year, sex, year of diagnosis and cancer site. The main outcome was overall survival. Factors studied were sociodemographic, health-related and cancer-related. Survival analyses were performed using stratified Cox proportional hazards models based on the matching data. Results: Among the 5,377 offspring of the 634 families, 465 offspring of long-lived siblings with first primary cancer were included, along with 930 controls. Offspring of long-lived siblings had a significantly better survival than controls (HR=0.64 95%CI=[0.52-0.78]). The association attenuated only slightly after adjustment of marital status, education, Charlson Comorbidity Index, and number of prescribed drugs (HR=0.66 95%CI=[0.54-0.81]). Conclusion: Our results suggest that in addition to being more robust to cancer risk, offspring of long-lived siblings are also more resilient to cancer after its diagnosis and show better overall survival compared to individuals with cancer from general Danish population. Funding: The LLFS study is funded by the US National Institute on Aging / National Institutes of Health.

BIOLOGICAL AGING IS ASSOCIATED WITH INCREASED MONOCYTE INFLAMMATORY ACTIVITY IN OLDER ADULTS

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Chronic inflammation is thought to play a central role in biological aging. However, the causes of chronic inflammation are not fully elucidated. We hypothesized that a dysregulation in monocyte inflammatory activity may contribute to chronic inflammation and biological aging. There are no validated methods for Biological Age (BA) estimation. Therefore, we also hypothesized that older adults with a recent ED (Emergency Department) admission had a higher BA compared to age-matched older adults without a recent ED admission. Two groups of older adults were enrolled: a "high BA"-group who were discharged from the ED four weeks preceding data collection (n=52), and a "low BA"-group consisting of age and sex matched participants without ED admission within the two years preceding data collection (n=52). We assessed NF-κB phosphorylation (Ser529) and NLRP3 inflammasome levels in monocytes using flow cytometry staining of whole blood. Preliminary analyses showed that participants had a median age of 74.8 (IQR: 70.7–82.0) years, 48% were women. Participants in the high-BA group had reduced lower body strength (30 seconds chair stand test p=0.02 and 4 meters gait speed p=0.001) and cognitive function (Digit Symbol Substitution Test p=0.001 and Trail Making Test p=0.002) compared to the low-BA group. Monocytes of participants in the low BA group had lower constitutive p-NF-κB (p< 0.0001) and NLRP3 (p=0.0001) median fluorescence intensity compared to the high BA group. Increased monocyte inflammatory activity assessed by p-NF-κB and NLRP3 was associated with a higher BA. We will investigate associations between monocyte inflammatory activity and markers of chronic inflammation.