AGING MACAQUE IMMUNE SYSTEM RESEMBLE THOSE OF AGING

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Social adversity can impact immune function and is associated with increased morbidity and mortality. Many of these immune-related changes resemble the effects of the natural aging process. To date, little is known about the effects of social adversity on the immune system change across the lifetime. Here, we investigated how aging and social adversity (measured as social status) impact immune cell proportions. We performed flow cytometry on peripheral whole blood from a population of free-ranging rhesus macaques to quantify changes on immune cell proportions across the lifespan (n=99) and across different social statuses (n=53). Overall, we found that high adversity recapitulated the effects of aging. We found significant shared decreases in CD3+/CD4+ T cell proportions and corresponding increases in CD3+/CD8+ T cell proportions between individuals of older ages and low social status. These findings suggest that social adversity has similar effects to aging on T cell proportions, possibly affecting the T cell component of the immune response. In contrast, CD3+/CD4+/CD25+ T regulatory cell proportions increased with age, which is typical of normal aging. Contrary to our expectations, these cells were less abundant among lower status individuals, indicating some overall regulatory immune deficits specific to lower status individuals. CD3+/CD8+ T regulatory cells, which contribute to self-tolerance, were higher in high status individuals, suggesting that overall primary immune regulatory cells can be affected by social adversity and impair the regulation of inflammation. We provide evidence that social adversity alters immune cell proportions, implicating it in the development of inflammatory and/or aging-related diseases.

THE LONG-TERM EFFECT OF JOB LOSS ON MORTALITY
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The associations between job loss and health were established. However, these associations were usually biased estimates of causality, as individuals with adverse health were self-selected into job loss. To address such selectivity, we take advantage of the case of massive layoffs of State-Owned Enterprise (SOE) workers in urban China, which was driven by policy change rather than individual characteristics and mimicked a quasi-experiment. We employ China Health and Nutrition Survey (1991-2015) that span more than two decades and survival analysis to analyze the effect of job loss on individual mortality. Our analyses with 3,494 SOE workers show that over the past twenty years, job loss has accelerated mortality (hazard ratio = 1.50; p<0.05) for SOE workers in urban China. Further, these accelerated mortalities occurred mostly for workers who lost their jobs between 30-39 years old, highlighting the adverse consequences of job loss for the young and middle-aged workers. Our analyses established the causality of job loss and mortality over an extended time, and identified the most vulnerable groups to job loss for policies to target to in an effort to improving the well-being of workers later in life.

THE ROLE OF COMMUNITIES OF RESIDENCE ON OLDER MEXICAN ADULTS’ LIKELIHOOD OF HIGH DEPRESSIVE SYMPTOMS
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Exposure to population- and individual-level poverty, poor health, and negative life-events contributes to overall life adversity that may increase older adults risk of depression. We hypothesize that increased neighborhood-level multidimensional poverty and decreased proportions of within-neighborhood health promoting socio-demographic characteristics will be positively associated with depression among older Mexican adults. This study uses data from Wave 1 (2001) and Wave 3 (2012) of the Mexican Health and Aging Study (MHAS). Wave 1 will be used for information for socio-demographic characteristics, including gender, female-headed households, rural settings, and employment status. Wave 3 will be used for information on self-reported
depressive symptoms. Information for neighborhood characteristics will come from the 2000 Mexican Census that has been linked with the 2001 MHAS wave. Older Mexican adult’s exposure to multidimensional poverty at the locality (city/town) level will be measured by the proportion of the population aged 15 and older with low education; the proportion of the population with low access to health care services; the percentage of homes with inferior construction materials; and the proportion of the population without sewage and running water. A multivariable logistic regression will be used to model the association between older Mexican adult’s neighborhood and community characteristics in 2001 on depression in 2012. The expected findings will inform government policies to increase access to affordable housing, the availability of health care services, educational and employment opportunities, and public infrastructures such as transportation, water, and sanitation services, and energy services to reduce mental health burden.

SESSION 10380 (LATE BREAKING POSTER)

SOCIAL ISOLATION AND LONELINESS

LONELINESS, ISOLATION AND LIVING ALONE ASSOCIATE WITH PSYCHOLOGICAL WELL-BEING AMONG THE OLDER ADULTS IN TAIPEI

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Purpose: The purpose of this study was to examine the clustering of loneliness, isolation, and living alone, the risk factors and the associations with psychological wellbeing.

Methods: The data were from the 2019 Taipei City Senior Citizen Condition Survey collected by face-to-face interviews, which included aged 60 and above community-based and institution-based samples. The completed sample was 3,853 persons. Loneliness, isolation, and living arrangement were analysed by cluster analysis to define the Loneliness-Isolation-Living Alone clusters. Multinomial logistic regression was used to examine the related factors to LIL clusters. Results: Four clusters of the older adults were identified and named as following: Connected (44.1%), Alone/Institutionalized (9.2%); Lonely (10.7%); and Isolated (22.0%). Compared with the Connected cluster, the Alone/Institutionalized cluster was more likely to have higher education, more IADL difficulties, more diseases, lower economic satisfaction, more likely to be males, having no spouse, and no children; the Lonely cluster was more likely to poor self-rated health, lower financial satisfaction, feeling less age-friendliness, more likely to be older, female, and no spouse; the Isolated cluster was more likely to have lower education, reported poorer self-rated health, lower economic satisfaction, and being older. The Alone/Institutionalized cluster and the Lonely cluster had higher depressive symptoms; the Alone/Institutionalized, Lonely, and Isolated clusters reported lower life satisfaction and had higher risks of cognitive impairment. Discussion: Loneliness, isolation, and living alone jointly associate with psychological health and well-being. High risk older populations may need social care and encourage social participation to promote health and wellbeing.

OWNERS’ PERCEPTIONS OF PET INFLUENCE: RELATION TO HEALTH OUTCOMES & PET ATTACHMENT IN COMMUNITY-LIVING OLDER ADULTS

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Pet ownership (PO) has been linked to better health outcomes in older adults, particularly those with chronic health conditions. It is suggested that pets influence their owners lives both by encouraging social interaction and by interfering with owners’ willingness or ability to seek care for themselves. We use data from 6 questions about the positive and negative influence of pets on community dwelling older adults’ administered to pet owners (N=223, age >=50 years) in the Baltimore Longitudinal Study of Aging. We use principal components analysis (oblique rotation) to extract dimensions of owner’s perceptions of pet influences (PPI) and examine the relationship of these dimensions to owners’ cognitive, physical functional, and psychological status. Three dimensions of PPI include: fiscal/health challenges (F1: 3 items, alpha=0.70), wellness promotion (F2: 2 items, alpha=0.80); and reason for social/travel constraints (F3: 1 item). In regression analysis with all factors entered simultaneously, after controlling for age, higher magnitude of F1 significantly independently predicted poor physical quality of life (p=.0007), greater perceived stress (p=0.041), and lower happiness (p=0.014); F2 did not independently predict any health outcome; higher F3 significantly independently predicted lower emotional vitality (p=0.048). Controlling for age, all three factors were independent predictors of pet attachment (p’s=0.001, 0.010, 0.047, respectively). F1 and F3 were positively and F2 was negatively correlated with attachment. PPI was associated with owners’ physical and mental health. Perhaps older adults with higher attachment to pets are more likely to keep them despite higher challenges.

SENSORY LOSS AND COGNITIVE DECLINE AMONG OLDER ADULTS: AN ANALYSIS OF MEDIATION AND MODERATION EFFECTS OF LONELINESS

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Multiple studies have reported that hearing and vision loss are linked to cognitive decline. Yet little is known about factors that may influence the association between sensory loss and cognitive decline. This study examined if loneliness mediates or moderates the impact of sensory loss on