

Social integration of neighborhoods and social network properties are associated with better cognitive function but the two factors are often investigated separately. This study examines the interaction between neighborhood social integration and quantity and composition of social network on cognitive domains by analyzing Population Study of Chinese Elderly, a population-based epidemiological study of over 3000 US Chinese older adults aged 60 and above in Chicago metropolitan. Regression results show that larger network size, volume of contact and smaller proportion kin and proportion co-resident were associated with higher level of global cognition. Higher sense of community was associated with higher level of global cognition. The interaction term of volume of contact and neighborhood cohesion was negative and statistically significant, suggesting the protective effect of volume of contact may decrease in high cohesion neighborhoods. Similar moderation effects were observed in specific cognitive domains, including episodic memory, working memory and executive function.

PERCEIVED STRESS, SOCIAL SUPPORT, AND DRY MOUTH AMONG U.S. OLDER CHINESE ADULTS

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Dry mouth is a common condition among older adults that negatively influences oral health, general health, and quality of life. The role of psychosocial factors in oral health conditions and diseases remains largely unknown. We examined the relationship between perceived stress and dry mouth among US older Chinese adults and further investigated the moderating role of social support from different sources in the relationship. Data came from baseline of the Population Study of Chinese Elderly in Chicago between 2011 and 2013 (N = 3,157). Stepwise logistic regression models with interaction terms were used. More perceived stress was significantly associated with a higher likelihood of reporting dry mouth. Friend support was protective against dry mouth. The effect of perceived stress on dry mouth varied by levels of family and friend support. To prevent or reduce dry mouth, interventions need to consider perceived stress and social support in this growing population.

FACTORS ASSOCIATED WITH UNMET HEALTHCARE NEEDS IN OLDER ASIAN AMERICANS

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Older Asian Americans are the fast-growing but understudied population in health disparities research. Using a sample that reflects cultural/linguistic diversity, the present study explored general (health insurance, usual place for care, income) and immigrant-specific (nativity, length of stay in the US, English proficiency, acculturation) risk factors of unmet healthcare needs in older Asian Americans. Data were drawn from the Asian American Quality of Life survey (N = 533). With the inclusion of a considerable number of non-English-speaking individuals, the present sample presented a high rate of unmet healthcare needs. Those with a shorter stay in the US, limited English proficiency, and lower level of acculturation had increased odds of having unmet healthcare needs than their counterparts after controlling for background characteristics. Challenging the myth of model minority, findings highlight the importance of immigrant-specific factors in identifying risk groups of unmet healthcare needs and demonstrate vulnerability in access to healthcare.

DIFFERENT ASPECTS OF ACCULTURATION AND COGNITIVE HEALTH AMONG MINORITY OLDER IMMIGRANTS

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Immigration and acculturation process in host society have been closely linked to health consequences among the immigrant populations. However, it has been inadequately examined regarding its relationships with cognitive outcomes. Data were drawn from PINE Study. Linear regression analyses were used to examine associations between acculturation levels (media use, ethnic social relations, and language proficiency) and cognitive performance. After adjusting for potential confounding variables, higher levels of acculturation were associated with better cognitive performance. More specifically, higher levels of acculturation in aspects of media use and ethnic social relations were associated with better cognitive performance, whereas it has no significant association with the language preference aspect. Research and practice addressing health disparities and cognitive impairment should leverage efforts to provide culturally relevant resources to less acculturated populations in the US. More longitudinal studies are needed to clarify the influence of acculturation on cognitive performance and its mechanism.

SESSION 620 (SYMPOSIUM)

DESIGNING TECHNOLOGY TO SUPPORT HEALTHCARE FOR AGING ADULTS

Chair: Neil H. Charness, *Florida State University, Tallahassee, Florida, United States*

Discussant: Scott R. Beach, *University of Pittsburgh, Pittsburgh, Pennsylvania, United States*

Healthcare costs are rising in industrialized countries, partly as a function of managing costly chronic care conditions associated with aging populations. Of roughly 3 trillion USD expended in the U.S., almost 90% is spent on those

with chronic conditions. Technology is touted as one tool to manage healthcare efficiently. However, human factors research has shown that technological systems that do not take human capabilities into account will fail to be adopted, or if adopted, will be abandoned by users. The Center for Research and Education on Aging and Technology Enhancement (CREATE) will describe research findings for four different facets of healthcare technology. Sara Czaja will provide an overview, describing technology for healthcare support. Caregiver needs are projected to rise rapidly, in part due to aging of the baby boom cohorts. We need new solutions for future generations of older adults as there will be insufficient numbers of caregivers to care for the increased number of older adults given changes in social structures. Wendy Rogers will discuss research on the design and use of televideo and robots to assist with healthcare. Neil Charness will discuss home monitoring technology, particularly practical issues around design, deployment, and maintenance, drawing on studies of heart failure patients and older adult controls. Walter Boot will discuss how gamification of healthcare interventions can help to address the adherence problem for behavior change. Scott Beach, Associate Director & Director of Survey Research Program, University Center for Social and Urban Research, University of Pittsburgh, will serve as discussant.

TECHNOLOGY FOR HOME MONITORING

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Healthcare is increasingly moving away from expensive hospitals into the home. Although there are advantages to managing chronic health conditions in homes, there are also a number of disadvantages, beginning with aging adults' unfamiliarity with the technologies being deployed. Too often, designs and instructional materials are not developed with aging users' capabilities in mind. Health technology also confronts users with significant challenges including just-in-time learning when users are under significant stress. Technology support is often lacking. Also, care coordination for multiple chronic conditions is challenging. For instance, patients are often provided with multiple electronic health record portals. I discuss the reliability of and some of the practical challenges for a home health monitoring system used by older adults and those with heart failure over a 6-month interval. The system featured components such as a wrist-worn sensor package, daily tablet surveys, blood pressure cuff, weight scale, and bed sensors.

THE HEALTHCARE CHALLENGE FOR AN AGING POPULATION: THE ROLE OF TECHNOLOGY

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Although many older adults enjoy relatively good health into their later years, many have one or more chronic conditions, diseases, or disabilities, and need help with disease management activities or activities important to independent living. With the increase in numbers of aging adults there is a concomitant strain on the healthcare system. Models of healthcare are also changing and moving towards a more partnership model where consumers are supposed to assume a more collaborative role in health decision making and a more active role in health management. This presentation will discuss the continuing and increasing role of technology

in meeting the healthcare challenges for an aging population. The discussion will focus on technology applications to support the health and well-being of older adults as well as family caregivers. Challenges and barriers that currently limit the full potential of technology to be realized for these populations will also be discussed.

THE POTENTIAL AND PITFALLS OF GAMIFICATION TO SUPPORT OLDER ADULTS' ADHERENCE TO HEALTHCARE INTERVENTIONS

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The addition of video game-like elements to non-game activities, known as gamification, holds promise with respect to encouraging engagement with, and adherence to, health behaviors and healthcare interventions. Elements of gamification include the introduction of points systems, leaderboards, achievement badges, stories and themes, rewards, progress tracking, and challenges. However, a lack of enthusiasm for, and experience with, video game play by older adults has important implications for the effectiveness of these techniques across the lifespan. Specifically, the age-related "digital divide" must be considered before applying these approaches to improving the wellbeing, cognition, and health of older adults. This talk will build on the body of research conducted by the Center for Research and Education on Aging and Technology Enhancement (CREATE) focused on gaming and interventions to present best practice guidelines for implementing gamification with older adults.

DESIGN AND USE OF ROBOTS TO ASSIST OLDER ADULTS WITH HEALTHCARE TASKS

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There is much potential for robots to support the needs of older adults, in general, and particularly in healthcare. Older adults are quite open to the idea of interacting with robots, although they have preferences for the nature of the task they want the robot to do as well as what they want the robot to look like. These preferences should be considered in the process of design and deployment. Older adults should be involved throughout the design process from formative to summative evaluation and even beyond to the integration of the robot into their everyday activities. The extant research provides guidance regarding older adults' capabilities and limitations that might influence their ability to interact with a robot. Our goal in this presentation will be to focus on robots being designed to support older adults with healthcare tasks in the context of enhanced, instrumental, and basic activities of daily living.

SESSION 625 (SYMPOSIUM)

DNA METHYLATION: CAUSE OR CONSEQUENCE OF AGING?

Chair: Morgan E. Levine, *Yale University School of Medicine, New Haven, Connecticut, United States*

Co-Chair: Sara Hagg, *Karolinska Institutet, Stockholm, Sweden*

Epigenetic changes are one of the Hallmarks of Aging. DNA methylation is a key epigenetic mark that has been