Dementia awareness training alone does not improve care or outcomes for patients living with dementia. Effective dementia education programs for family caregivers and healthcare providers can lead to improved care practices and patient outcomes. The Dementia Immersion Simulation Experience (DISE) is a face-to-face 2-hour educational program that includes simulation, videos, a virtual reality station, group debriefing, and a didactic session delivered by faculty with dementia caregiving expertise. The purpose of this project was to evaluate the effectiveness of DISE in a group of 48 interdisciplinary healthcare providers, trainees and administrative staff. A program evaluation and pre and post knowledge questionnaires were administered. Prior to the activity, the mean score of all participants was 8.85. After the activity, the mean score was 10.1 (p<0.0001). 35.4% of all participants were well informed on dementia before DISE and 70.8% were well informed after the activity (p<0.0005).

Qualitative analysis of the comments section of the program evaluation showed that 95% of the participants mentioned empathy for those living with dementia. Participants rated DISE on a scale of 1 (Strongly Disagree) to 5 (Strongly Agree) across ten categories, covering objectives, relevance, effectiveness, and value of the learning experience. Over 95% of respondents agreed or better (score = 4 or 5) with each evaluation statement and at least 85% strongly agreed with each statement. The evaluation scores are further evidence of an effective program. DISE is an effective tool to teach and support family caregivers, healthcare workers, and healthcare professionals and trainees.

CHILDHOOD SOCIOECONOMIC STATUS AND SENSE OF CONTROL OVER COGNITIVE AGING: DO GENES MODERATE?
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Individuals who lack a sense of control over cognitive aging (SOC-CA) believe little can be done to optimize their cognitive functioning. While prior research indicates that higher SOC-CA is a protective factor against age-related cognitive decline, few studies have examined predictors of change in SOC-CA. To address this gap, we used data from the Midlife in the United States (MIDUS) study. Guided by prior research on linkages between socioeconomic status (SES) and control beliefs, we examined childhood SES as an early life course influence on changes in SOC-CA. The analytic sample consisted of 663 White participants, ages 34 to 81, who were interviewed in 2004 and approximately nine years later. SOC-CA was measured by using three items from the Personality in Aging Context scale, and childhood SES encompassed retrospective reports of parental education and occupational status. A hierarchical linear model was estimated, which modeled SOC-CA at baseline, as well as change over the study period, controlling for gender, age, ancestry, and adult SES. While childhood SES was not associated with SOC-CA at baseline nor over time, a statistically significant gene-environment interaction was found over the 9-year study period. Specifically, participants who scored high on a polygenic measure for cognitive ability and reported high childhood SES demonstrated a faster rate of decline in SOC-CA. These findings indicate that inter-individual differences stemming from early life influence people’s SOC-CA as they age. Overall, results suggest the importance of subgroup differences within efforts to engage individuals in preventive measures to optimize healthy brain aging.

FAMILY CONFLICT: A WELL KEPT SECRET IN LATINO DEMENTIA CAREGIVING
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The number of Latino older adults living with Alzheimer’s disease and related dementias (ADRD) could increase more than six-fold, from fewer than 200,000 in 2004 to more than 1.3 million by 2050. One-third of Hispanic households report having at least one family caregiver (36%). 63% of Latino family caregivers are in high burden situations compared to 51% of non-Latino caregivers. Although in recent years research with Latino caregivers has increased, studies examining the family as a unit in a culture in which familismo is a central value, remain limited. The purpose of this study was to describe the experience of Latino families caring for loved ones living with ADRD along the illness trajectory. Group interviews were conducted with families caring for individuals in different stages of dementia. Interviews were conducted in English or Spanish, transcribed verbatim, and analyzed in the source language by bilingual investigators. In contrast to the numerous positive aspects of caregiving reported by individual Latino caregivers in previous studies, preliminary analysis of family group interviews revealed predominantly negative perceptions of the family caregiving experience. Families reported conflict between family members, feelings of resentment, lack of family member involvement, and uneven distribution of caregiving duties. The complex nature of fulfilling family duties as dictated by familismo appears to have idealistic and realistic consequences for families. Further exploration of Latino family dynamics in the context of dementia caregiving is needed.

PERCEPTIONS, ACCEPTABILITY, EXPECTATIONS, AND CONCERNS OF SMART HOME TECHNOLOGIES AMONG OLDER ADULTS
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Optimal aging in place has become a common preference among older adults to maintain identity and independence, thus smart home technologies are increasingly utilized to achieve these goals. However, disconnect may exist between potential technological benefit and perceptions of acceptability and usability (Lee & Coughlin, 2015). We assessed perceptions of adults aged 50+ (range 50-90 years) to analyze their priorities and ultimate acceptability of smart home technology. Data were collected through surveys, focus groups, and case study interviews. Three major themes emerged regarding smart home utilization: benefits, concerns, and expectations. Participants endorsed smart home technologies (e.g., sensors, telehealth devices) and identified benefits, such as the promotion of optimal aging (e.g., maintaining independence, staying active, safety). However, responses also reflected concerns about privacy, ease of use, and amount of control. Expectations regarding smart homes included more mobility, efficiency, and safety within the home. One participant described technology as having “options [that] are exhausting, but also exciting.” Survey responses (n=30) were analyzed to understand participants’ familiarity with smart home technologies, including: nanotechnology (10.7%), smart showers (42.9%), home sensors (70.4%), telehealth (74.1%), smart appliances (71.4%), personal sensors (81.5%), and voice-activated devices (96.4%). Additionally, respondents indicated their willingness to implement these technologies to maintain and/or improve their daily functioning: nanotechnology (53.8%), smart showers (28.6%), home sensors (66.6%), telehealth (81.5%), smart appliances (40.0%), personal sensors (55.5%), voice-activated devices (64.3%). Discussion focuses on the priorities and needs older adults express regarding technology utilization and the implications for person-centered design and implementation of future smart home technologies.

PARENTING ALL OVER AGAIN: HISPANIC “ABUELTAS” RAISING GRANDCHILDREN IN THE CONTEXT OF SUBSTANCE ABUSE DISORDERS
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Around 7 million grandparents in the U.S live with grandchildren under 18 and 39% have primary caregiving responsibilities. In Texas, more than 313,499 children under age 18 live with a grandparent who is responsible for them. Hispanic grandparents are disproportionately more likely to care for grandchildren compared to non-Hispanic whites. In San Antonio, Texas, 36.6% of grandparents are the primary caregivers for their grandchildren. Parental substance abuse disorders have been identified as one of the causes prompting child removal from parental custody. To understand the experience of custodial Hispanic grandmothers raising their grandchildren, three focus groups were conducted in English and Spanish by three bilingual investigators. Twenty-three grandmothers, mean age 60, caring for an average of 3.2 children, 2 months to 17 years of age participated in the focus groups. The narratives were transcribed and analyzed in the source language. The following overarching themes were identified: Family is family, parenting all over again, this is a struggle but a blessing, what did I do wrong? , fear of losing the children to foster care, I do not trust anybody with my children, financial and legal challenges, role captivity, aging as a limitation, and hope for the future. The findings from the study contribute to the body of knowledge necessary to foster urgent policy changes aimed at supporting these grandparent who feel unjustly treated by human services agencies and the legal system. Programs to support custodial Hispanic grandmothers need to be linguistically congruent and culturally competent.

CARDIAC TROPONIN T MEDIATED AUTOIMMUNE RESPONSE AND ITS ROLE IN SKELETAL MUSCLE AGING
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Cardiac troponin T (cTnT), a key component of contractile machinery essential for muscle contraction, is also expressed in skeletal muscle under certain conditions (e.g. neuromuscular diseases and aging). We have reported that skeletal muscle cTnT regulates neuromuscular junction denervation preferentially in fast skeletal muscle of old mice. Here, we further report that cTnT is also enriched within some myofibers, and/or along microvascular walls in old mice fast skeletal muscle. Strikingly, immunoglobulin G (IgG), together with markers of complement system activation, cell death (necroptosis or apoptosis), and macrophage infiltration, were all found to be co-localized with cTnT and IgG in those areas. In addition, elevated cTnT and IgG are associated with lower dystrophin expression on muscle fiber membrane, lower muscle capillary density, and reduced muscle performance (wire hanging test). Using purified recombinant TnT proteins, we confirmed that only cTnT, but not slow or fast skeletal muscle TnT1 or TnT3, was detected by immunoblotting using sera from old (but not young) mice with pre-determined elevated cTnT and IgG in their skeletal muscle, indicating the existence of anti-cTnT autoantibodies in sera (previously found in human blood) and skeletal muscle of old mice. Immunoblotting further revealed that the age related changes in skeletal muscle cTnT and IgG are more prominent in fast skeletal muscle than in slow. Importantly, elevated cTnT and IgG were also detected in skeletal muscles from 4 older adults (65-70 yrs, IMFT). Our finding suggests a novel autoimmune mechanism mediated by cTnT that underlies age related skeletal muscle abnormalities and dysfunction.

AGE-RELATED DECLINES IN SOCIAL COGNITIVE PROCESSES OF OLDER ADULTS
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