Older adults are faced with an increased risk of comorbid chronic disease such as diabetes. While multiple health behavior change interventions (MHCIs) are known to improve clinical outcomes more than targeted interventions, less is known whether such effects persist in older populations. The objective of the study was to examine the effects of multiple chronic condition (CC) remote monitoring program enrollment and mental health program enrollment on glucose and blood pressure reduction, adjusting for self-monitoring behaviors. In a sample of 594 older adults (age 55+, 14% 65+ years, 46.8% female) evaluated over a 12-month period, statistical models showed that older adults with uncontrolled diabetes (A1c >= 7.0%) had a 7.9 pt. reduction in blood glucose for each additional program enrolled and a 22.7 pt. reduction in blood glucose when enrolled in mental health compared to those not enrolled. Similarly, older adults with uncontrolled hypertension (BP >= 130/80) had a 4.8 pt. reduction in systolic blood pressure for each additional program enrolled and a 7.2 pt. reduction in systolic blood pressure when enrolled in mental health compared to those not enrolled. The findings indicate the potential for multiprogram digital health interventions that incorporate mental health to further improve clinical outcomes in older adults suffering from multiple chronic diseases, namely diabetes and hypertension.

EFFECTS OF OBESITY REDUCTION ON PHYSICAL FUNCTION, INFLAMMATION AND OSTEOARTHRITIS IN OLDER ADULTS

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Age-related increases in chronic inflammation lead to reduced physical function via damage to muscle and joints and contribute to osteoarthritis (OA) risk. Obesity in older adults with OA further exacerbates inflammatory damage. Whether obesity reduction can lessen inflammation and improve OA is unknown; however, novel biomarkers may provide an answer. We completed a 6-mo. weight loss intervention (-500 kcal/day), studying blood biomarkers of inflammation and cartilage damage along with physical function in obese older adults with OA+ (n=39) and without an OA diagnosis (OA-; n=20). Participants were aged > 60 yrs (mean = 70.2±6.0) and obese (BMI =34.6±4.7 kg/m2). At endpoint, weight loss was -6.3±4.0% and -5.8±4.1% in OA+ and OA-, respectively, without any group difference. Change scores for function for OA+ and OA- were: Short Physical Performance Battery score (+1.7±1.3 and +2.1±1.5), 8 ft up and go (-0.7±1.0 and -0.9±1.2 sec) and 6 min walk (+31.4±105.1 and +39.5±57.4 meters). All improved from baseline (p<0.05), with no group difference. Concerning blood biomarkers, there was a decrease (p<0.05) in cartilage oligomeric matrix protein (COMP: OA biomarker), indicating a potential benefit for OA. Change in COMP also differed between groups; OA- had a greater (p<0.05) reduction than OA+. Pooled results showed improved adiponectin (p<0.05), with no group difference. There were no changes for CRP, CTX-1, IL-6 and TNF-α. Our novel findings link early intervention with better reduction of OA risk and inflammation in obese older adults and also show important benefits for improved physical function regardless of OA status.

EXAMINING DIFFERENT TYPES OF SLEEP AMONG CUSTODIAL GRANDPARENTS DURING COVID-19

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Sleep is associated with healthy living. With increased age, sleep is harder to initiate and maintain. Currently, over two million grandparents have become primary caregivers to their grandchildren and are at risk for poor sleep outcomes. Research shows that grandparent caregivers are at risk for depression due to poor sleep quality. Thus, this study aimed to identify the sleep quality of custodial grandparents to gain a better understanding of sleep patterns during COVID-19 in 2020. Thirty-four custodial grandparents were recruited from the Georgia Division of Aging Kinship Care Support Groups from September through October 2020. Participants were between 42 to 78 years old with a mean age of 57. Participants completed the Pittsburgh Sleep Quality Index. Stata statistical software was used to analyze the relationship between the sleep quality subscales. Results showed a significant positive relationship for custodial grandparents between sleep quality and daytime dysfunction (γ2=25.993, p=0.002; Γ=0.495, p=0.039) as well as sleep quality and sleep disturbance (γ2=11.129, p=0.084; Γ=0.751, p<0.001). There is a significant positive relationship between daytime dysfunction and sleep duration (γ2=14.984, p=0.091; Γ=0.681, p<0.001), where grandparents with daytime dysfunction have longer sleep duration. Findings suggest grandparents with poor sleep quality are more likely to experience daytime dysfunction and have more sleep disturbances in the COVID-19 environment. Our study will benefit researchers and practitioners caring for custodial grandparents and contribute to future research focused on custodial grandparents and sleep quality.

EXPLORE THE ROLE OF ABETA IN AXONAL TRAFFICKING DEFICITS INDUCED BY ALPHA SYNUCLEIN IN PARKINSON DISEASE MOUSE MODEL

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Alpha synuclein (ASYN) is a neuronal protein that is observed in significant amounts in the brain and is encoded for by the SNCA gene, it functions as a regulator for the trafficking of synaptic vesicles. It has been noted that the buildup of alpha synuclein has been found in the form of Lewy bodies in studies involving patients with Parkinson's diseases (PD). Gathering an understanding for the manner in which alpha synuclein affects the synaptic structure and the movement of axonal trafficking will help further our understanding towards the formation of Lewy bodies. Experimenting with the
way in which ASYN affected the intervention of Abeta was important, to see the toxicity of Abeta in axonal trafficking. The PD and SynKO mouse models treated with Abeta both showed an effect on the anterograde moving speed of both the PD and SynKO neurons. Synaptic formation was examined, and it was found that ASYN had a large negative influence on the synapse formation in PD neurons. This was due to the significantly reduced colocalization that was found in the treated neurons. It was confirmed that ASYN caused neuron-  

EXPLORING THE ECOLOGY OF THIRD AGE INFORMAL LANGUAGE LEARNER GROUPS

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This research explores the factors involved in the emergence of an independently organized Third Age informal language learner group in a community centre in Japan. The methodology applies PPCT (Process-Person-Context-Time) from Bronfenbrenner’s biocological approach to provide a detailed perspective of the people, the environment and settings over time to show how these factors interact to construct an emergent learner group. The analysis looks at how and why this specific learner ecology emerges and ultimately, how it can benefit the Third Age and inform healthy ageing policy. The findings show that by engaging in second language learning, the participants find meaningful and active involvement in the group by creating a setting that welcomes language learning, the participants find meaningful and active involvement in the group by creating a setting that welcomes self-expression, while balancing limiting and facilitating factors of resilience and reciprocal support, self-management, sage-ing, interest, agency, and responsibility. The result is the creation of a multilingual, multicultural, and multigenerational place of inclusion within the community. The study highlights the heterogeneity of the 3rd Age and illustrates the interplay of contexts outside of the learner group from micro to macro, individual and group resources, and the influence of the specific social time period. It also shows the social importance of creating opportunities for autonomous informal language learning settings in the community while highlighting the impact of Third Age agency.

FALLS AMONG OLDER ADULTS IN THE PHILIPPINES AND VIETNAM: RESULTS FROM NATIONALLY REPRESENTATIVE SAMPLES

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Falls are a major public health issues globally. However, no study with nationally representative samples, previously, had been done to understand falls among older adults in the Philippines and Vietnam. Using a biopsychosocial perspective, this study investigated the prevalence of falls and their associated factors among community-dwelling older adults in these countries. Cross-sectional data were drawn from the Longitudinal Study of Ageing and Health in the Philippines (N = 4,606) and the Longitudinal Study of Ageing and Health in Vietnam (N = 4,378). The outcome variables were any falls in the past year. Independent variables included biophysical factors (vision/chronic conditions/functional impairments/pain locations/insomnia symptoms/sleep medications/grip strength/walking speed/postural control), psychological factors (depressive symptoms), and sociodemographic factors (age/sex/education/living in urban area/living alone/social network size). Descriptive analysis and logistic regression analysis were used to analyze data. The results showed that 17.7% of the Filipino older adults fell in the past year and it was 7.3% among Vietnamese older adults. Significant factors that increased the odds of any falls among Filipino older adults were having a higher level of education, living in urban area, living with others, experiencing more functional impairments, reporting one or more pain locations, and having poor grip strength. In Vietnam, having more chronic conditions, experiencing more functional impairments, and reporting two or more pain locations were found to increase the odds of any falls. Population in the Philippines and Vietnam are aging rapidly. Findings from this study are timely in identifying at-risk individuals and preparing for effective falls prevention strategies.

FEAR OF FALLING, FALL RISK, DEPRESSION, AND ANXIETY IN COMMUNITY-DWELLING OLDER ADULTS

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Fear of falling is common in the older adult population with an estimated 43% being affected. We aimed to examine the associations among fear of falling, fall risk, depression, and anxiety in community-dwelling older adults. For this study 124 participants ranging from 60 to 96 years of age were recruited from the community settings in Central Florida. Fear of falling, fall risk, depression and anxiety were assessed using the Falls Efficacy Scale International (FES-I), the CDCSTEADI fall risk assessment, the Patient Health Questionnaire (PHQ) for depression, and the Geriatric Anxiety Inventory Short Form (GAL-SF) for anxiety respectively. Data was collected via the Qualtrics survey. Comparisons were made for those below age 75 and those aged 75 and older, with 51.6% being under 75. Four ethnicity categories were also used: African American (8.1%), Asian (2.4%), Hispanic (14.5%), and non-Hispanic white (75%). All participants scored above 4 on the STEADI scale indicating fall risk. 42 scored positive for fear of falling on the FES-I scale and of that 42, 35.7% had a history of one or more falls in the last year (p < .01). 46.8% of the participants screened positive for depression and 100% of participants were positive for anxiety. Using one-way ANOVA analysis, we found significant relationships between (1) depression (p < .01); (2) STEADI (p < .01) and FES-I.