

PREVALENCE OF BINGE DRINKING BY CAREGIVERS OF PERSONS WITH ALZHEIMER'S DISEASE OR RELATED DEMENTIA

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Some caregivers of persons with Alzheimer's Disease and related dementias (ADRD) are known to be under high levels of burden, which is associated with higher levels of anxiety, depression, and stress. Previous research has established anxiety, depression, and stress are associated with binge drinking, but little research has examined binge drinking rates among ADRD caregivers. Binge drinking could influence the ability of ADRD caregivers to provide care. The purpose of this study was to explore the prevalence and prevalence correlates of binge drinking among ADRD caregivers using the 2019 Behavior Risk Factor Surveillance Survey (BRFSS). We identified N = 1,642 persons who were the primary informal caregivers of a person with ADRD. Among them, the prevalence of binge drinking was 14 per 100 persons. Bivariable analyses suggested male caregivers and caregivers with 14 or more days of poor mental health in the past 30 days had the highest prevalence of binge drinking at 18 per 100 persons. Caregivers who were 65 or older or had the lowest prevalence at 3 per 100 persons. Caregiving characteristics revealed providing 20 to 39 hours of care per week had the highest prevalence of binge drinking (17 per 100) whereas spousal caregivers (9 per 100) had the lowest prevalence. Smoking status and hours per week providing care were associated with higher odds of binge drinking in multivariable analyses. Future research should examine if binge drinking by ADRD caregivers is related caregiver burden and the quality of care provided to the persons with ADRD.

RESILIENCE IN FAMILY CAREGIVERS OF ADULTS WITH AUTISM SPECTRUM DISORDER: AN INTEGRATIVE REVIEW OF THE LITERATURE

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Care of adults with Autism Spectrum Disorder (ASD) is a public health priority and costs are projected to be 549 billion US dollars by 2025. Middle and older adult FCGs of adults with ASD often provide lifelong care, experience chronic stress, consequently, are at risk of poor mental health and QOL. An integrative review examined factors associated with resilience in studies of middle and older adult FCGs of adults with ASD. A comprehensive literature search found 10 reports of 8 studies published in peer-reviewed scholarly journals before October 13, 2020. Studies and/or reports of factors associated with resilience in middle and older adult FCGs of adults with ASD were examined using PRISMA, and quality checklists. Some 340 articles met search criteria, 14 were fully reviewed, and 10 were included. Findings suggest FCGs of adults with ASD show capacity for resilience consistent with research on FCGs of children with ASD significant chronic stress. A broad range of resilience factors were studied, and resilience was associated with positive social support, higher QOL, self-efficacy, and problem and meaning-focused coping styles. There is a dearth of research on middle and older adult FCGs of adults with ASD. Increased reporting of social determinants of health and participation of underrepresented groups is needed. Future

research must address FGC heterogeneity and specify theoretically grounded conceptual and operational definitions of resilience. Identifying resilience factors is necessary for intervention studies to enhance resilience.

SLEEP QUALITY IN FAMILY CAREGIVERS AND MATCHED NON-CAREGIVING CONTROLS: THE REGARDS STUDY

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The high levels of stress experienced by family caregivers may affect their physical and psychological health, including their sleep quality. However, there are few population-based studies comparing sleep between family caregivers and carefully-matched controls. We evaluated differences in sleep and identified predictors of poorer sleep among the caregivers, in a comparison of 251 incident caregivers and carefully matched non-caregiving controls, recruited from the national REasons for Geographic and Racial Differences in Stroke (REGARDS) Study. Incident caregivers and controls were matched on up to seven demographic and health factors (age, sex, race, education level, marital status, self-rated health, and self-reported serious cardiovascular disease history). Sleep characteristics were self-reported and included total sleep time, sleep onset latency, wake after sleep onset, time in bed, and sleep efficiency. Family caregivers reported significantly longer sleep onset latency, before and after adjusting for potential confounders, compared to non-caregiving controls ($p < 0.05$). Depressive symptoms in caregivers predicted longer sleep onset latency, greater wake after sleep onset, and lower sleep efficiency. Longer total sleep time in caregivers was predicted by employment status, living with the care recipient, and number of caregiver hours. Employed caregivers and caregivers who did not live with the care recipient had shorter total sleep time and spent less time in bed than non-employed caregivers. Additional research is needed to evaluate whether sleep disturbances contributes to health problems among caregivers.

TELOMERE LENGTH AND THE TRANSITION TO FAMILY CAREGIVING IN THE REGARDS STUDY

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An increase in life expectancy and an aging population has resulted in increased risks and prevalence of age-related diseases. Previous studies have shown that factors, such as chronic stress, are associated with shorter telomere length. When telomeres become critically short, cells enter a state of senescence, which is a hallmark of aging. Several prior studies examining the relationship between caregiving and telomere length have reported mixed results. The present study utilized data from the Caregiving Transitions Study, an ancillary study to the Reasons for Geographic and Racial Differences in Stroke (REGARDS) study. The difference in telomere length across an average ~8.6 years was compared between 235 incident caregivers and 229 controls. Telomere length was determined using the qPCR telomere-to-single copy gene (IFNB1) ratio (T/S) for each participant at both baseline and follow-up timepoints. Regression models controlling for age, sex, race, and baseline telomere length examined the association between caregiving status (exposure) and the telomere length change (Δ T/S). Sensitivity models adjusted for potential lifestyle and socioeconomic factors, including income, education, BMI, cigarette smoking, and alcohol use. We did not observe a significant association between Δ T/S and caregiving ($\beta=0.041$, $p=0.615$). Adding lifestyle and socioeconomic factors did not change the null relationship ($\beta=0.062$, $p=0.455$). In conclusion, this study provides evidence against an association between caregiving and the change in telomere length. Ultimately, more research to address the complex relationship between caregiving and telomere attrition is needed in order to prevent or reduce adverse outcomes and improve the well-being of caregivers and care recipients.

Session 9295 (Poster)

Frailty

A NOVEL ALGORITHM FOR ANALYSIS OF MULTIPLE ENDPOINTS USING RISK-BENEFIT PROFILES

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Often it is necessary to evaluate effectiveness of an intervention on the basis of multiple event outcomes of variable benefit and harm, which may develop over time. An attractive approach is to order combinations of these events based on desirability of the overall outcome (e.g. from cure without any adverse events to death), and then determine whether the intervention shifts the distribution of these ordered outcomes towards more desirable (Evans, Follmann 2016). The win ratio introduced in Pocock et al 2012 was an earlier implementation of this approach. More recently Claggett et al 2015 proposed a more comprehensive method allowing nonparametric and regression-based inference in presence of competing risks. Key to the method is weighting observations by inverse probability of censoring (IPC) processes specific to participants and event types. The method has

seemingly great practical utility, but computation of weights is a non-trivial challenge with real-life data when each event can have its own censoring time. We present a novel recursive algorithm solving this problem for an arbitrary number of events ordered by clinical importance or desirability. The algorithm can be implemented in SAS or R software, and computes IPC weights, as well as nonparametric or parametric estimates and resampling-based measures of uncertainty. We illustrate the approach using data from the SPRINT trial of antihypertensive intervention, comparing risk-benefit profiles for robust, pre-frail, and frail subpopulations, and in analysis of fall as a function of progressive risk factors. More general use of the software tools deploying the method is described.

A NOVEL ELECTRONIC FRAILTY INDEX AS A PREDICTOR OF CLINICAL OUTCOMES AFTER TRANSCATHETER AORTIC VALVE IMPLANTATION

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Transcatheter aortic valve implantation (TAVI) is becoming the preferred therapeutic approach for older adults with severe aortic valve disease. Frailty portends increase mortality and adverse outcomes after TAVI. We sought to evaluate an electronic Frailty Index (eFI) as a predictor for increased healthcare utilization, adverse clinical and functional outcomes. We retrospectively studied 302 adults older than 65 years that underwent TAVI at our institution between October 2017 and September 2020. The mean age of the cohort was 79 ± 6.94 years old; 43% were female. Frail individuals ($eFI > 0.20$), as compared to Fit ($eFI < 0.10$) and Prefrail ($0.10 > eFI > 0.20$), were more likely to have a higher society of thoracic surgeons score and a greater burden of comorbidities. Subjects classified as Prefrail/Frail had longer intensive care unit stay post-TAVI than fit individuals (>24 hours: 17% vs 4%, respectively, $p = 0.02$); and trended toward longer hospitalization time and discharge to a setting different than home. The Prefrail/Frail group also had a higher proportion of subjects with persistent New York Heart Association Class III heart failure symptoms 30 days post-TAVI as compared to Fit (14% vs 2%, $p = 0.04$), however both groups demonstrated significant symptomatic improvement post-procedure. No significant differences in 30 day mortality, major adverse cardiovascular events or readmissions were found. TAVI is an effective treatment with a low incidence of early adverse clinical outcomes in older adults regardless of frailty status; eFI could help in identifying and targeting susceptible adults that may require additional resources to recover post-TAVI.

A RANDOMIZED PLACEBO-CONTROLLED TRIAL OF METFORMIN FOR FRAILTY PREVENTION IN OLDER ADULTS

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