selected based on cancer diagnosis at any stage with at least 36 months of data prior to diagnosis to identify ADRD. We analyzed breast, lung, prostate, cervix, head & neck(HNC), and colorectal(CRC) cancers(CA). We found a prevalence of 2.8% (9549 cases of ADRD+CA) using the NCI-index compared with a prevalence of 5.6% (18989 cases) with the CCW-index. ADRD+CA numbers differed significantly in all cancers for all races, however, we observed the greatest magnitude of difference among Latino/a and African-American patients. The NCI index significantly underestimated prevalence compared with the CCW: 1.21% vs 3.28% Breast; 2.29% vs 4.60% CRC; 2.88% vs 6.44% Lung; 1.36% vs 8.62% Prostate, and 4.21% vs 11.61% HNC. Our findings suggest a need to develop validated algorithms for classification, using an evidence-base generated by incorporating information and decision-making theories from the expertise of clinicians currently diagnosing ADRD using clinical assessments in diverse populations.

EATING DIFFICULTIES AMONG OLDER ADULTS WITH DEMENTIA IN SOUTH KOREAN LONG-TERM CARE FACILITIES: A SCOPING REVIEW

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This study aims to synthesize existing literature concerning eating difficulties among older adults with dementia in long-term care facilities. A scoping review, using the framework proposed by Arksey & O'Malley (2005) and improved and supplemented by Levac et al. (2010), was conducted. Literature was searched from five bibliographic databases—Research Information Sharing Service (RISS), Korean studies Information Service System (KISS), National Digital Science Library (NDSJ), Korean Medical Database (KMBASE), DataBase Periodical Information Academic(DBPia), Google Scholar, and gray literature. Literature selection and characteristics were approved by two independent reviewers, using pre-tested forms to determine final inclusion. Eventually, 111 articles from 2012–2020 were identified, and the 11 articles were used for the final analysis. We found that primarily utilized Eating behavior scale (EBS) and Edinburgh feeding evaluation in dementia scale (EdFED) had utilized as measurement tools for evaluating eating behavior. The most common factors related to eating behavior of older adults with dementia included cognitive and physical functions in the individual domain, the caregiver's attitude toward eating in the inter-individual domain, and types of meal in the environmental domain. Therefore, it is essential to develop measurement tools that reflect the eating behavior of older adults with dementia, a comprehensive understanding of the eating behavior of old adults with dementia, and create effective interventions that can be implemented in the specificity of long-term care facilities in Korea. The results of this analysis are intended to be used as basis to develop a meal support programs for older adults with dementia.

FACTORS DRIVING THE TRANSITION OF ALZHEIMER'S DISEASE PATIENTS TO INSTITUTIONAL LONG-TERM CARE

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Progression of Alzheimer's disease (AD) may ultimately lead to costly institutional long term care (ILTC) so its avoidance is often a goal of care management. We studied predictors of AD patients transitioning to ILTC in the Veterans Affairs healthcare system (VA). We identified 30,017 Veterans at least 50 years old, with ≥2 ICD-9/10-CM diagnosis codes for AD on separate days, with first AD code in 2013-2018, at least 2 years of prior continuous VA service use, and no prior ILTC. Patients who subsequently transitioned to ILTC (cases) were matched to other AD patients with the same time since first AD code but no ILTC (controls) (median of 13 months; mean age of 80.2 years). The 8,261 matched sets were split randomly to a training sample, where logistic and random forest regressions were used to develop models, and a validation sample, where final models were evaluated. Predictors of ILTC initiation included measures of (1) poor health, such as high morbidity counts (Elixhauser score of 15+, odds ratio=1.31) and weight loss (1.29), (2) heavy service use, such as hospitalization (2.25) and home health care (1.54), and (3) dementia symptoms, such as a diagnosis code for dementia not-otherwise-specified recorded well before the AD code (1.93), functional/mobility difficulties (1.35), and lifestyle or psychosocial problems (1.53). The full model C statistic was 0.78. Transition to ILTC in AD patients is driven by many factors, including comorbidities, need for acute care, nonspecific symptoms of dementias, and functional challenges. Targeted interventions may delay transitions to ILTC.

GAIT SPEED AND GRIP STRENGTH ARE PREDICTORS OF COGNITIVE DECLINE AND DEMENTIA IN OLDER INDIVIDUALS.

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Lower gait speed and grip strength are common in older adults. However, the results of lower motor function on cognitive outcomes have been mixed. We examined the longitudinal association between baseline slow gait speed and weak grip strength, alone and in combination, with risk of incident dementia or cognitive decline in a cohort of older adults. Participants (n=19,114) aged 70 and over (65 if U.S. minority) without documented evidence of dementia, significant cognitive impairment, physical disability or previous cardiovascular disease at baseline, were recruited from community settings. Incident dementia was adjudicated by an expert panel using DSM-IV criteria. Incident cognitive decline was defined as a persistent intra-individual decline in score

of >1.5 SD from baseline on any of the cognitive tests. Using cox proportional hazard models, slow gait speed at baseline was associated with an increased risk of dementia (63%) and cognitive decline (43%), over a median 4.7 years. Weak grip strength was not as strong a predictor, but was also associated with risk (43% and 11%, respectively). Both outcomes showed higher risk for dementia than cognitive decline. There was no gender-specific interaction. When considered together (adjusted for one another), gait speed and grip strength were both independently associated with cognitive decline and dementia. The synergistic association of these physical measures, each of which is readily administered in the clinic or home, serve as effective early markers of increasing risk of cognitive decline and incident dementia and thus, should be considered for routine health assessments for older adults.

HIPPOCAMPAL VOLUME IS SMALLER IN FEMALE DOUBLE CARRIERS OF TWO STRONGEST AD GENETIC RISK FACTORS

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Genetic risk factors for Alzheimer's disease (AD) may facilitate AD-related changes in the brain long before AD clinical manifestation. While APOE4 was linked to a reduced hippocampal volume (HV) in a number of studies, the impact of rs2075650, another polymorphism strongly associated with AD, on HV is less clear. The rs2075650 (in TOMM40) is only in moderate to low LD with APOE4, and may have independent effects on HV or interact with APOE4. We studied associations of rs2075650 (G allele, risk factor for AD), rs429358 (C allele, proxy for APOE4), and their combinations, with right HV measured by MRI, among 10,738 women and 9,775 men aged 60-75, from UK Biobank. We found that right HV was significantly ($p<0.02$) smaller in women who carry both AD risk variants (rs2075650(G) and rs429358(C)), than in non-carriers of both of these variants, while having only one risk variant (G or C) didn't clearly affect HV. The studied associations didn't reach statistical significance in men. Our results suggest that rs2075650(G) and rs429358(C) may contribute synergistically to a reduction in hippocampus volume, in females only, and support the role of interactions between genetic risk factors for AD in sex differences in preclinical biomarkers of AD pathology.

HYPERTENSIVE DISORDERS OF PREGNANCY AND RISK OF ALZHEIMER'S DISEASE, VASCULAR DEMENTIA, AND OTHER RELATED DEMENTIA

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Several recent studies have examined whether hypertensive disorders of pregnancy (HDP) are associated with an increased risk for Alzheimer's disease (AD) and other related dementias (RD) with conflicting findings. Limitations to prior studies include lack of assessing risk by dementia subtype, inadequate sample sizes, and not fully exploring the role of mid-life factors. We performed a retrospective matched cohort study among women with >1 singleton pregnancy (1939–2013) using the Utah Population Database. HDP-exposed women (n=19,989) were one-to-two matched with unexposed women (n=39,679) by 5-year age groups, year of childbirth (within 1 year), and parity (1, 2, 3, 4, ≥5) at the time of the pregnancy. HDP pregnancies were complicated by preeclampsia (62%), gestational hypertension (34%), and eclampsia (4%). Women with a history of HDP had a higher hazard of all-cause dementia (HR=1.37; 95% CI: 1.26, 1.50) compared to women without a history of HDP after adjustment for maternal age, year of childbirth, and parity. The hazard doubled after additionally accounting for pre-pregnancy BMI (HR=2.31; 95% CI: 1.24, 4.32). Stratifying by dementia subtype, we found HDP to be associated with a higher hazard of vascular dementia (HR=1.64; 95% CI: 1.19, 2.26) and other related dementia (HR=1.49; 95% CI: 1.34, 1.65) but not Alzheimer's disease (HR=1.04; 95% CI: 0.87, 1.24) after accounting for competing risks. Mid-life hypertension and stroke were found to have the greatest mid-life impact, mediating 43% and 41% of dementia risk, respectively, highlighting women who may most benefit from close surveillance and early preventive and clinical interventions.

INFORMATION AND COMMUNICATION TECHNOLOGY USE IN COMMUNITY-DWELLING PERSONS LIVING WITH DEMENTIA

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Although many persons living with dementia still remain living in the community, they encounter many difficulties due to cognitive and physical impairment. Information and Communication Technology (ICT) could be helpful to protect persons living with dementia from risky events and monitor changes in physical function. This study aimed to review studies regarding ICT usage to monitor physical activity and safety in community-dwelling persons living with dementia. We searched quantitative studies that utilized ICT to monitor physical activity and safety published from 2011 to 2020 through five databases; 24 studies were included in the systematic review. Most studies (79%) were observational studies and conducted in North America or Europe (75%). In terms of ICT usage, the most frequently used type was a wearable device (96%); data such as physical activity, gait, and circadian rhythms were gathered. The ICT data were utilized for: 1) comparing ICT data within dementia group or with normal cognition group; 2) exploring a relationship with other variables in observational studies; 3) measuring an outcome of the experimental studies; and 4) determining feasibility of a sensor itself. Less than half of the studies met all five criteria in quality assessment. We found the ICT is being used in various ways in research for community-dwelling persons living with dementia. However, we are uncertain about the effectiveness of ICT use and the quality of studies. Future studies with rigorous study design are needed to provide better evidence for ICT use in persons living with dementia.

LONGITUDINAL ASSOCIATION OF FALL RISK FOR COMMUNITY DWELLING ELDERLY WITH AND WITHOUT ADRD

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Falls amongst elderly with ADRD and are a major cause of functional impairment and increased mortality. The