designed to help caregivers understand the nature of specific dementia-related issues and designed to help the caregiver build some personal strategy to help better manage their caregiving role. Based upon a Framework that uses the Perceived Self-Efficacy Theory, each webinar provides educational materials, and resources and is designed to help build an action plan for the caregiver. Topics include "What is Caregiving?", "Caregiving and Compassion Fatigue and Self-Care" and topics address coping and communication strategies. The webinar sessions were administered monthly and semi-monthly to consumers through a local Alzheimer's Association network in the rural Midwest of the United States.

Results: Feedback from consumers who have used the materials suggest that the materials have provided some measure of information and helpful educational materials. The workbooks have also been an effective tool to help guide and empower the caregivers.

Conclusions: The Caregiver Literacy Series provides some effective and needed materials to help equip caregivers living with a loved one that has Dementia or Alzheimer's disease with some measure of health literacy and empowers them to feel some sense of empowerment and comfort in the process.

P29: Exploring aging trajectories using neurocognitive age

Authors: Élise Roger[1,2], Olivier Potvin[3], Simon Duchesne[3], Yves Joanette[1,2]

1. Research Center of the Montreal Institute of Geriatrics, Montreal, Quebec, Canada
2. School of Speech-Language Pathology and Audiology, Faculty of Medicine, Montreal University, Montreal, Quebec, Canada
3. Department of Radiology and Nuclear Medicine, Faculty of Medicine, Laval University, Quebec City, Quebec, Canada

Summary: The aging of the population poses significant challenges in healthcare, necessitating innovative approaches. Advancements in brain imaging and artificial intelligence now allow for characterizing an individual's state through their brain age,'' derived from observable brain features. Exploring an individual's biological age'' rather than chronological age is becoming crucial to identify relevant clinical indicators and refine risk models for age-related diseases. However, traditional brain age measurement has limitations, focusing solely on brain structure assessment while neglecting functional efficiency.

Our study focuses on developing neurocognitive ages'' specific to cognitive systems to enhance the precision of decline estimation. Leveraging international (NKI2, ADNI) and Canadian (CIMA- Q, COMPASS-ND) databases with neuroimaging and neuropsychological data from older adults [control subjects with no cognitive impairment (CON): n = 1811; people living with mild cognitive impairment (MCI): n = 1341; with Alzheimer's disease (AD): n = 513], we predicted individual brain ages within groups. These estimations were enriched with neuropsychological data to generate specific neurocognitive ages. We used longitudinal statistical models to map evolutionary trajectories. Comparing the accuracy of neurocognitive ages to traditional brain ages involved statistical learning techniques and precision measures.

The results demonstrated that neurocognitive age enhances the prediction of individual brain and cognition change trajectories related to aging and dementia. This promising approach could strengthen diagnostic reliability, facilitate early detection of at-risk profiles, and contribute to the emergence of precision gerontology/geriatrics.

Keywords: Aging population, brain age, biological age, neurocognitive age, neuroimaging, neuropsychological data, artificial intelligence, cognitive decline, aging trajectories, dementia, geriatrics, precision medicine, longitudinal study, risk assessment, diagnostic reliability