

**The Institute of Gerontology  
&  
The Merrill Palmer Skillman Institute**

**LIFESPAN ALLIANCE RESEARCH DAY**

**February 25, 2022  
9 am – Noon  
Presented Virtually**



# Program

Zoom: <https://wayne-edu.zoom.us/j/95769513653?pwd=RStqZ0Q0NjN3aVlGOEJpRURMd1VPdz09>

- 9:00**            **Opening Remarks - Peter Lichtenberg, PhD**
- 9:05**            **Communicating Your Work Broadly**  
(Three Minute Thesis Competition in order of presentation)  
*Ajene Gailliard (MPSI)*  
*Emily Paskan (MPSI)*  
*Rachel Scott (IOG)*
- 9:30**            **Poster Session (1) Adversity & Resilience**  
(In order of presentation)  
*Faizun Bakth (MPSI)*  
*Alexandra Ehrhardt (MPSI)*  
*Emily Flores (IOG)*  
*Jess Goletz (MSPI)*  
*Nicole Kouri (MPSI)*  
*Anna Rushing (MPSI)*  
*Kimberly Shay (IOG)*
- 10:30**          **Break**
- 10:40**          **Poster Session (2) Health & Wellbeing Amidst Uncertainty**  
(In order of presentation)  
*Dwana Bass (IOG)*  
*Georgina Drury (MPSI)*  
*Kathryn Knoff (MPSI)*
- 11:10**          **Poster Session (3) Brain and Cognition**  
(In order of presentation)  
*Roya Homayouni (IOG)*  
*Youjin Jung (IOG)*  
*Allison Moll (IOG)*  
*Erika Squires (IOG)*  
*Qin Yin (IOG)*

**Judges:**

***Kelsey Canada, Ph.D., Katherine Kero, Ph.D.,  
Lucy McGoron, Ph.D., Lingfei Tang, Ph.D.***

**Program complete by noon**

**Awards announced by email at 4pm**

# The Lifespan Alliance

In 2008, Dr. Peter Lichtenberg and the leadership team of the Wayne State University (WSU) Merrill Palmer Institute for Child & Family Development (MPSI) and the Institute of Gerontology (IOG) created the Lifespan Alliance.

The Lifespan Alliance, while maintaining each institute's independence, promotes collaboration between institutes on research and research training, capitalizing on their shared experience in psychological and neurobehavioral research, as well as their unique combined expertise in developmental sciences and gerontology.

The Lifespan Alliance training programs bring together faculty and students from diverse disciplines including anthropology, education, health sciences (obstetrics, pediatrics, psychiatry & public health), infant mental health, behavioral, cognitive & developmental neuroscience, communication sciences & disorders, nursing, political science, developmental & clinical psychology, economics, social work, and sociology to study health, well-being, human development, and successful aging, from the earliest preconception stages through infancy, childhood, adolescence, parenthood, and older ages.

Today we showcase some of the basic, clinical, community-based, and translational research within and across these disciplines by the graduate and undergraduate students of the IOG and MPSI. Here the Lifespan Alliance presents work by individuals who are becoming the next generation of leading researchers and practitioners, soon-to-be professionals who will generate new scientific knowledge and develop best practices for improving health and well-being across the lifespan, in Detroit and beyond.

## **The Intersection of Attachment and Race/Ethnicity: Supporting Trauma Research that is Critical and Inclusive**

**Ajene M. Gailliard, LLMSW**

Trauma is a word and an experience that carries with it varying degrees of meaning and impact for all who encounter it. We know that for developing infants, the first 1,000 days are some of the most consequential and vulnerable but are often met with periods of chronic stress and trauma for those at significant risk. The ACE's study highlighted the long-term medical effects of adverse interpersonal experiences, but what are the effects of adverse environments on the developing infant? How do racial/ethnic disparities and inequities impact maternal and infant medical health, mental health, and infant neurodevelopment for children of color? How do these adverse community environments shape the developing infant and impact attachment relationships and parental representations? My research addresses systemic, institutional practices and histories for marginalized populations, reimagines the ecological context of racism and its impact on the parent-child relationships, and explores the promotive and protective factors that mitigate the transmission of trauma across generations and lead to healthy attachment bonds.

## **Roadblocks and Pathways to Higher Education for People in Recovery**

**Emily Pasman, MSW, Mike Broman, MSW, & Stella Resko, PhD**

If your college application required a statement about the worst thing you'd ever done, would you be admitted? If going to college meant jeopardizing your health, would you apply? These are questions people in recovery from a substance use disorder must consider when applying to college. Because initiation of substance use often occurs in adolescence, many people in recovery have not yet completed a college degree. For many, once a foundation of recovery has been established, educational goals become important. However, prospective students in recovery are effectively screened out of higher education through complex application processes, selective admissions criteria, and social pressure to participate in activities involving substance use. Many also receive and internalize oppressive messages related to their pursuit of educational goals. Still, data indicate a growing number of US college students in recovery. While acknowledging the structural barriers that students in recovery face, my research highlights the strengths of these individuals. Through interviews with undergraduate students in recovery, my research explores both the barriers prospective students in recovery face, and the process by which students overcome these barriers. Findings will inform efforts to support people in recovery on their pathway to higher education.

## **Cognitive Healthspan During Aging: Age-Related Cognitive Changes and Metacognitive Beliefs**

**Rachel Scott, MA**

**Introduction:** This review integrates nonpathological cognitive aging, metacognition, and control beliefs literature in order to highlight the potential influence that metacognitive ability and control beliefs may have on the cognitive healthspan of aging adults.

**Methods:** Literature review with commentary on three features affecting cognitive healthspan during aging: metacognitive beliefs, cognitive aging, and cognitive training.

**Results:** Measurable changes in cognitive function occur within normal aging. The most notable shifts are declines in cognitive tasks that necessitate quick processing or transformation of information in order to make a decision, as well as measures of working memory, processing speed, and executive function. Experiential skills and cumulative knowledge are well maintained as individuals age. Moreover, there are structural and functional changes in the brain that correlate with these age-related cognitive changes, including alterations in hippocampal and prefrontal cortex volume and cortical thickness. There is increasing evidence that healthy lifestyles, inclusive of metacognitive monitoring and internal locus of control, may lower the rate of cognitive decline observed during aging in addition to helping delay the onset of age-related diseases.

**Conclusion:** Assisting older adults in strengthening their metacognitive monitoring and improving their internal locus of control through cognitive training can a new avenue to mitigating cognitive deficits observed during aging.

## The Longitudinal Relationship Between Peer Victimization and Academic Efficacy across Ninth Grade: Indirect Effects via Sleep

Faizun N. Bakth, BA<sup>1</sup>; Hannah L. Schacter, PhD<sup>1</sup> & Adam Hoffman, PhD<sup>2</sup>

Wayne State University<sup>1</sup>  
Cornell University<sup>2</sup>

**Introduction:** Adolescents often experience increases in peer victimization following school transitions (Kann et al., 2018), which can negatively impact their academic efficacy. Sleep is also important for learning but can be undermined by peer stress (Chang et al., 2018). In the current study, we hypothesized that adolescents' peer victimization experiences at the beginning of high school would elevate the risk for insufficient sleep, which, in turn, would predict poorer academic efficacy by the end of the academic year.

**Methods:** Participants consisted of 388 9th graders (Mage = 14.05, SD = .41; 61% female) who completed online surveys containing self-report measures of demographics, peer victimization frequency, sleep quality, and sleep disturbances (e.g., nighttime awakenings), and academic efficacy in November 2020 (T1), February 2021 (T2), and May 2021 (T3).

Bootstrap mediation analyses were conducted and we controlled for ethnicity/race, gender, age, and sexual orientation.

**Results:** Adolescents reporting greater experiences of peer victimization at the beginning of ninth grade reported poorer sleep quality and more sleep disturbances by mid-year, which then predicted lower academic efficacy at the end of the school year.

**Conclusion:** The findings show how the cascading effects of social and biological factors may be detrimental to adolescents' academic success.

## Exploring Longitudinal Associations between Adolescent Peer Victimization, Friendship Instability, and Internalizing Symptoms

Alexandra Ehrhardt, MS; Adam J. Hoffman, PhD & Hannah L. Schacter, PhD

From a poster accepted to the Society for Research on Adolescence (SRA)'s 2022 Biennial Meeting, Ehrhardt, A., Hoffman, A. J., & Schacter, H. L. (2022). Best friends for never? Examining longitudinal associations between adolescent peer victimization, friendship instability, and internalizing symptoms. Poster session to be presented at SRA 2022 Biennial Meeting in New Orleans, LA on March 5, 2022.

**Introduction:** Prospective associations between peer victimization, friendship instability, and internalizing symptoms were explored in a sample of 188 9<sup>th</sup> grade students assessed across three timepoints.

**Methods:** Friendship instability between both T1/T2 and T2/T3 was calculated using a modified nomination system from Chan and Poulin (2010) with higher scores indicating greater friend turnover. Participants completed validated self-report measures of peer victimization and somatic,

## Adversity & Resilience

depressive, and anxiety symptoms at all three timepoints. Bivariate correlations were used to assess the associations among the variables of interest. Multiple regression models were used to assess whether friendship instability moderates the association between peer victimization and internalizing symptoms.

**Results:** Friendship instability across the 9<sup>th</sup> grade school year was negatively correlated with peer victimization and somatic, anxiety, and depressive symptoms at all timepoints. Friendship instability at the beginning of 9<sup>th</sup> grade predicted greater somatic symptoms over and above baseline somatic symptoms, peer victimization, and covariates. Peer victimization at the beginning of 9<sup>th</sup> grade predicted greater depressive symptoms over and above baseline depressive symptoms, friendship instability, and covariates. Friendship instability did not moderate any associations between peer victimization and internalizing symptoms.

**Conclusion:** The findings of this exploration suggest that the emotional toll of friend turnover across the school year may manifest somatically.

### Cross-Validation of the Lichtenberg Financial Decision Rating Scale

Emily Flores, MS; Peter Lichtenberg, PhD

**Introduction:** This study examines the cross-validation of the short and long form of the Lichtenberg Financial Decision Rating Scale in relation to decision making abilities and suspected financial exploitation.

**Methods:** Ninety-five older adult community participants underwent an assessment session which included the LFDRS, cognitive tests and the Independent Living Scale financial management subtest. The LFDRS has four subscales including an intellectual factor that measures choice, understanding, appreciation, and the rationale of decisions. Demographic information was also collected.

The concurrent validity of the subscales and LFDRS were examined by Pearson correlations in order to be able to examine the relationship between cognitive test scores, ILS money management scores and LFDRS risk scores. Hierarchical regression analysis was conducted to determine whether cognitive and financial management tests were contributed to the prediction or risk scores greater than demographic variables.

**Results:** Our results have not been finalized. Data have not yet been analyzed.

**Conclusion:** Rates of older adult exploitation have increased at a significant rate in the previous years with 60% of financial exploitation incidents occurring from family member's misuse of money. Yet, there is a lack of validated measures to evaluate financial judgement and the capacity for financial decision-making.

## **“More of a Man”: Exploring the Postnatal Fatherhood Experience and Masculinity**

**Jess Goletz, MA; Dayna Carlton, MSW; Carolyn Dayton, PhD**

**Introduction:** The current study assessed fathers’ perceptions of the expectations and experience of fatherhood in the postnatal period. The data collected were part of a larger study of mothers and fathers in both the prenatal and postnatal period.

**Methods:** A sample of 21 fathers completed a semi-structured interview during the postnatal period. The interviews were transcribed verbatim. A team of researchers identified themes within the data, and two trained researchers coded the interviews in NVivo. The themes presented in this poster were identified in an iterative process and emerged from the data organically after initial coding.

**Results:** Almost half of fathers (43%) described that having a baby positively affected their masculinity, such that having a baby has made them “feel like more of a man.” Additionally, some respondents suggested that they were more able to engage in activities seen as typically “unmanly” or feminine while caring for their child.

**Discussion:** The data suggest that the fatherhood experience affects men uniquely, influencing their perceptions of self and connection to masculinity. Furthermore, this experience of “feeling more masculine” may allow them to feel more secure in engaging in emotional or nurturing activities which may be perceived as typically “unmanly” or feminine.

## **Dissociation: A Mechanism of Risk for Polyvictimization Across Adolescence**

**Nicole Kouri, MA; Valerie Simon, PhD & Robert Partridge, PhD**

**Introduction:** Self-report data from a longitudinal study of 93 violence-exposed adolescent girls from Detroit, MI was analyzed to assess whether dissociation increases individual risk for polyvictimization or exposure to multiple types of interpersonal violence (“IPV”) across adolescence.

**Methods:** Participants’ mental and interpersonal health was assessed at four in-person lab visits scheduled at 9-month intervals (i.e., T1–T4). Dissociation was calculated as the sum of four items from the UCLA Child/Adolescent PTSD Reaction Index for DSM-5. Polyvictimization was operationalized as a composite score of items from the UCLA PTSD Reaction Index Trauma Screener, the Conflict in Adolescent Dating Relationships Inventory, and the Peer Victimization Scale.

A cross-lagged autoregressive panel model was used to test the bidirectional relationships between dissociation and polyvictimization longitudinally. Cross-lagged regressions were analyzed to determine whether dissociation and polyvictimization predicted subsequent dissociation symptoms and IPV.

**Results:** Concurrent and previous dissociation significantly accounted for polyvictimization at T2 and T3. Polyvictimization did not significantly predict dissociation 9 months later.

**Conclusion:** The model provides support for dissociation's unique contribution to polyvictimization across adolescence. Violence begets violence; yet within this well-documented cycle there are individual risk factors, like dissociation that need to be examined to best interrupt it.

## **Dyadic Cooperation Moderates the Effects of Family Conflict on later Child Executive Functioning**

**Anna Rushing**

From my master's thesis (2021), Early Childhood Self-Regulation in the Context of Family Conflict and Parent-Child Cooperation

**Introduction:** This study investigated the relationship between family conflict at age 3 and child executive functioning at age 5 as moderated by mother-child dyadic cooperation at age 3 in a predominantly Black and low-income sample.

**Methods:** Mothers filled out questionnaires related to family environment and their child's executive functioning skills. Both mother and child completed video-recorded free-play and teaching-tasks. Demographic information was also collected.

Moderation analyses were conducted using hierarchical regressions with family conflict at age 3 predicting multiple kinds of executive functioning abilities and free-play dyadic cooperation and teaching-task dyadic cooperation tested as moderators.

**Results:** Dyadic cooperation during the teaching task significantly attenuated the relationship between family conflict and the executive function skills of shifting, emotion control, and planning/organizing skills.

**Conclusion:** The results of this study suggest that the potentially negative influence of increased family conflict in early childhood on later executive functioning ability can be mitigated by the quality of the parent-child relationship. This emphasizes the importance of family-focused interventions for improving child outcomes and preparing children for school.

## COVID Challenges to Fulfilling Generativity By Volunteering To Re-engaging Community

Kimberly Shay MA

**Introduction:** The COVID pandemic undermines social resources known to preserve health and well-being for older adults. Developmental tasks suffer too as traditional paths to fulfilling generative needs through volunteering are impaired. Gaps exist in our knowledge of challenges and adaptations to generativity and meaningful social engagements.

**Methods:** A community-based depth-interview study of older volunteers study using observations, and participant observation at public events with 14 key informants, was conducted at four key sites of engagement by older adults during 2021. This was a novel study period, post-vaccine, when hopes were raised, but not achieved for return to generative activities.

**Results: Three key themes were identified:** spheres and elements of generative expression enacted through volunteering; difficulties and successes using new modes to reestablishing prior social ties; threats to maintaining full personhood. These themes were linked to altered capacities to participate with and contribute to the community.

**Conclusion:** Fulfilling late life generativity is intrinsically linked to the ability to participate in community social life, but the pandemic limited opportunities and prompted new challenges and solutions. Attention is needed to prepare for threats from future disasters and pandemics that threaten meaningful participation and generativity.

## **Predictors of Older Black Americans Intent to Receive the COVID-19 Vaccine**

**Dwana Bass, MSN, RN; Sophie Hanna, BS; Sarah Shair, MA; Loraine M. DiCerbo, BA; Bruno Giordani, PhD; and Voyko Kavcic, PhD**

**Intro:** The COVID-19 pandemic devastated the nation, disproportionately older Black Americans. It became clear that health officials needed to better understand the importance of older Black Americans beliefs about COVID-19 to successfully vaccinate this population.

**Methods:** We analyzed COVID-19 experiences of 167 older Black Americans, ages  $\geq 65$ , from Wayne State Institute of Gerontology Healthier Black Elders Center and surrounding communities. Participants were called from September 2020 through May 2021, given the GAD-7 anxiety scale and COVID-19 questionnaire measuring demographics, stressors, and emotional responses to the COVID-19 pandemic. In addition, a scale adapted from the Health Belief Model to measure susceptibility, severity, conspiracy beliefs about COVID-19 (e.g., man-made), and intent to be vaccinated was administered.

**Results:** Of 167 participants, 112 (67%) would agree to vaccination, 24 (14%) were ambivalent, and 31(19%) declined the vaccination. Comparing pro and anti-vaccination, t-tests showed those who expressed the intent to decline vaccination expressed greater anxiety, lower COVID-19 fear, lower concerns of vaccination safety, and greater belief COVID-19 is man-made.

**Conclusion:** This study is a snapshot of Black American older adults who are in general eager to get vaccinated for COVID-19. However, more research is needed to understand the beliefs of this underserved population regarding COVID-19.

## **Saving Teens: Peer Lead Food Allergy Intervention in Schools**

**Georgina Drury, MS; Ty Partridge, PhD; Marjorie Beeghly PhD**

**Introduction:** About 200 fatalities in the United States each year are due to food allergy (FA) reactions. Recent studies show adolescents are at the highest risk for fatal anaphylaxis. Currently, 2.3% of teens have a FA. Understanding the intersection of this developmental period and management of care is pertinent to developing effective and potentially life-saving interventions.

**Methods:** A literature review was performed on current practices in teen FA management (with emphasis on school exposure), peer vs. parental influence, and adolescent risk-taking behaviors. Developmental theory of adolescent ideals and cognitive processes guided development of a proposed intervention.

**Results:** School is one of the most common places for FA exposure, with 80% of reactions occurring outside the cafeteria. Current practices are ineffective and lead to lower socioemotional well-being. Surveyed teens indicated a need for education within schools and focused instruction on transitioning care from parent to teen management.

**Conclusion:** Using current peer lead interventions in adolescent Type 1 diabetes programs as a guide, a school-based, peer lead intervention is proposed to capitalize on the importance of peer influence and food allergy management in a high exposure environment with the goal of empowering teens with FA in management and increasing adherence.

## **Weight Gain Anxiety, COVID-19, and Health Behaviors in Emerging Adulthood**

Authors: Kathryn Knoff, PhD(c), CHES; Noel Kulik, PhD, CHES  
3-minute thesis submission

**Introduction:** Weight Gain Anxiety (WGA) is a novel concept used to examine psychological factors contributing to healthy weight-related behaviors. Little is known about how Emerging Adults (EA) have shifted in their mental health status and weight-related behaviors since the onset of COVID.

**Methods:** A nationally representative sample of EA ages 18-25 (n= 450) participated in an online survey. Confirmatory Factor Analysis and two-way MANOVA followed by Descriptive Discriminant Analysis (DDA) were run to (1) Examine WGA as a measure and relationships with health behaviors and COVID-19 related behaviors, (2) to examine intrinsic health beliefs related to BMI and WGA.

**Results:** Overall, healthy behaviors decreased during the pandemic ( $M=-3.88$ ). CFA demonstrated good model fit (CFI=.95, TLI=.93, RMSEA= .076(.062-.089), SRMR=.060). WGA was negatively correlated with healthy diet ( $R=-.14$ ) and positively related to food acceptance ( $R=.59$ ). There was a significant interaction effect between BMI and WGA ( $p=.027$ ) explained by perceived benefits of healthy behaviors ( $r_s=93, B=.87$ ).

**Conclusion:** WGA is a novel construct that impacts health behaviors and health beliefs. Changes in health behaviors and mental health are two components of emerging adulthood that should be examined further in the context of WGA, diet, and COVID-19 to ensure appropriate supports are developed and implemented.

## **Age-Related Differences in Hippocampal Subfield Volumes Across the Human Lifespan: A Meta-Analysis**

**Roya Homayouni, MA; Kelsey L. Canada, PhD; Ana M. Daugherty, PhD; Noa Ofen, PhD**

**Introduction:** Volumetric studies of hippocampal subfields – dentate gyrus (DG), cornu ammonis sectors (CA1-3 sectors), and subiculum – document correlations between age and volumes in samples of children and adults and, when compared across studies, a non-linear age trajectory for CA regions and DG across the lifespan. Nevertheless, the human lifespan studies are rare, and the evidence on age-subfield associations is inconsistent. A meta-analysis is required to test age-related differences of hippocampal subfield volumes by compiling the reported effect sizes while adjusting estimates for sample sizes.

**Methods:** A meta-analysis was used to examine the associations between Hc subfield volumes and age across the lifespan ( $n=25$ ).

**Results:** Results yielded a positive association between age and DG - CA volumes across development and a negative association between age and all subfields across adulthood, with no difference on age trajectories across subfields. Across the lifespan, age moderated the associations between age and subfield volumes with a stronger positive association early development, modest relation across mid-adulthood, followed by a strong negative association in late adulthood.

**Conclusion:** Volumes of hippocampal subfields differ as a function of age. This puts forward a intriguing possibility when constructing theoretical models of lifespan memory development.

## **Plasma NfL predicts default mode network functional connectivity in the early stages of Alzheimer's disease**

**Youjin Jung and Jessica Damoiseaux, PhD**

**Introduction:** We investigated the relation between plasma NfL and default mode network (DMN) functional connectivity (FC), and the role of APOE  $\epsilon 4$  carriership along the continuum of Alzheimer's disease (AD).

**Method:** Plasma NfL was measured using a Simoa assay for 17 demented and 86 non-demented middle-aged to older adults. DMN FC was calculated as the averaged FC between the posterior cingulate cortex (PCC) and the time-series of 29 other DMN ROIs. Multiple regression was run with DMN FC as the outcome variable, plasma NfL as the predictor, and age and sex as covariates.

**Results:** Across all participants, plasma NfL did not predict DMN FC ( $B = 0.0045$ ,  $p = 0.4830$ ). Plasma NfL and DMN FC showed a trend of positive association in the demented group ( $B = 0.0045$ ,  $p = 0.0657$ ) but were not associated in the nondemented group ( $B = 0.0021$ ,  $p = 0.3160$ ). However, within the

nondemented group, higher plasma NfL predicted higher DMN FC in APOE  $\epsilon$ 4 carriers ( $B = 0.0079$ ,  $p = 0.0312$ ) but not in APOE  $\epsilon$ 4 noncarriers ( $B = 0.0023$ ,  $p = 0.4871$ ).

**Conclusion:** The initial increase of DMN FC in early AD is associated with more neuronal damage in nondemented APOE  $\epsilon$ 4 carriers and individuals with dementia.

## **Measurements of Blood Pressure and Cognition are Related in Older Adults**

**Allison C Moll, BS & John L Woodard, PhD**

**Introduction:** The purpose of this study was to assess the presence and magnitude of any relationships between blood pressure, self- and clinician-reported hypertension status, and cognition in older adults.

**Methods:** 10,036 participants came from the National Alzheimer's Coordinating Center database. Bayesian correlations examined associations between systolic and diastolic blood pressure and cognition. Bayesian independent t-tests compared the performance of persons with ( $n=4,543$ ) and without ( $n=5,493$ ) a hypertension diagnosis on each cognitive measure for self-reported and for clinician-reported hypertension.

**Results:** Bayesian correlations showed associations between higher systolic blood pressure and worse performance on all cognitive measure ( $r$  range=.063-.107). Compared to participants without hypertension, Bayesian independent samples t-tests showed worse performance on all cognitive measures for participants with a self-reported hypertension diagnosis and for participants with a clinician-reported hypertension diagnosis. However, the magnitudes of all standardized mean difference effect sizes were in the small range (0.134 –0.242).

**Conclusion:** These results suggest that hypertension and cognition are negatively related in late-life. However, the magnitudes of all effect sizes are small, indicating that these associations are quite minor and unlikely to be practically consequential. Systolic blood pressure was associated with cognitive performance while diastolic blood pressure was not related to performance on cognitive measures.

## **Hearing and other factors influencing memory performance in remote assessment**

**Erika Squires, MA, CCC-SLP; Margaret Greenwald, PhD, CCC-SLP; Shelly Jo Kraft, PhD, CCC-SLP; Derek Daniels, PhD, CCC-SLP; Lori A. Pakulski, PhD, CCC-A**

**Introduction:** With the revitalization of aural rehabilitation (AR) and increased use of telepractice, there is a paucity of research on remote assessment. Memory measures are commonly included in AR assessment because newer programs include auditory-based cognitive activities. This investigation explored the effect of presentation modality on speech discrimination and whether self-reported hearing ability was associated with remote memory performance.

**Methods:** Older adults self-reported their hearing abilities and completed speech discrimination and memory tasks. Data were collected remotely via a telephone and optional videoconferencing session. A quantitative design was used to explore the associations between primary outcome measures and a paired samples t-test was used to examine the effect of presentation modality on speech discrimination.

**Results:** Self-reported hearing ability and remote speech discrimination were not significantly associated with memory performance. Speech discrimination did not differ significantly for live voice versus recorded voice.

**Conclusion:** Findings from this study support the use of audio-recorded stimuli for remote assessment, which increases the reliability of administration and the variety of tasks appropriate for telepractice. The lack of a significant association between self-reported hearing ability and memory performance conflicts with research conducted face-to-face. Therefore, future investigations should explore potential reasons for this finding, as it could impact remote assessment strategies.

### **Pediatric intracranial EEG recordings reveal age differences in occipital alpha oscillations and aperiodic activity**

**Qin Yin, MS, MA; Elizabeth L. Johnson, PhD; Lingfei Tang, PhD; Kurtis I. Auguste, MD; Robert T. Knight, MD; Eishi Asano, MD, PhD; Noa Ofen, PhD**

**Introduction:** Intracranial EEG recordings provide invaluable information about the neurophysiological mechanisms of cognitive development. Electrophysiological data consist of oscillatory and aperiodic activity and developmental differences in these two signals are largely unknown.

**Methods:** We investigated age differences in these two signals using data from 154 electrodes implanted in the occipital cortex of 25 children and adolescents (6.20-20.50 years) who were undergoing direct cortical monitoring for seizure management. Subjects studied pictures of scenes in preparation for a memory recognition test. The power spectrum was calculated using Welch's method then entered into the FOOOF algorithm to estimate neural oscillations (central frequency, power, bandwidth) and aperiodic activity (offset, exponent) from 1-30 Hz. Linear mixed-effects models were used to test age-related effects.

**Results:** The detected dominant oscillations overlapped with alpha range (4.39-11.68 Hz). Critically, age-related increases were observed in the central frequency ( $F_{(1,456)}=14.02$ ,  $p<.001$ ) and bandwidth ( $F_{(1,456)}=14.02$ ,  $p<.001$ ), but not in power ( $F_{(1,456)}=1.57$ ,  $p=.21$ ). Furthermore, modest age-related decreases were observed in the offset ( $F_{(1,456)}=4.12$ ,  $p<.05$ ) and exponent ( $F_{(1,456)}=4.20$ ,  $p<.05$ ) of the aperiodic activity.

**Conclusion:** These results highlight the age differences in narrow-band oscillation frequency and broad-band power, suggesting the importance of isolating oscillatory and aperiodic activity when studying the neurophysiological mechanisms of cognitive development.

# **THANK YOU!**

## **Lifespan Alliance Research Day Judges**

Kelsey Canada, Ph.D  
Post-Doc Fellow, Institute of Gerontology

Katherine Kero, Ph.D  
Post-Doc Fellow, Institute of Gerontology

Lucy McGoron, Ph.D.  
Assistant Professor, Merrill Palmer Skillman Institute

Lingfei Tang, Ph.D.  
Research Associate, Institute of Gerontology