Financial Decision Making in Older Age

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NAPSA Scam Advice Forum
January 22, 2026

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Background

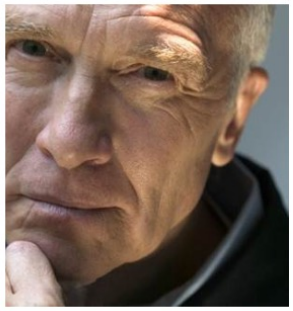
Protecting Older Consumers 2024–2025

- Total fraud losses reported by older adults (ages 60 and ove fourfold from 2020 to 2024, skyrocketing from about $600 r billion in 2024. This increase was largely driven by reports o often to investment scams, romance scams, or impersonatio

MENU AARP

AARP » AARP States » Colorado

AARP Report: $28.3 Billion a Year Stolen from Adults 60+



Older Americans lose an estimated $28.3 billion annually to elder financial exploitation (EFE), according to a new report from AARP. The report also shows that 87.5% of adults age 60 and older who are victimized by someone they know never report these incidents to authorities. In contrast, just one-third of victims of stranger-perpetrated EFE do not report it.

"While strangers often rely on quick and

Brain Structure Can Change With Age

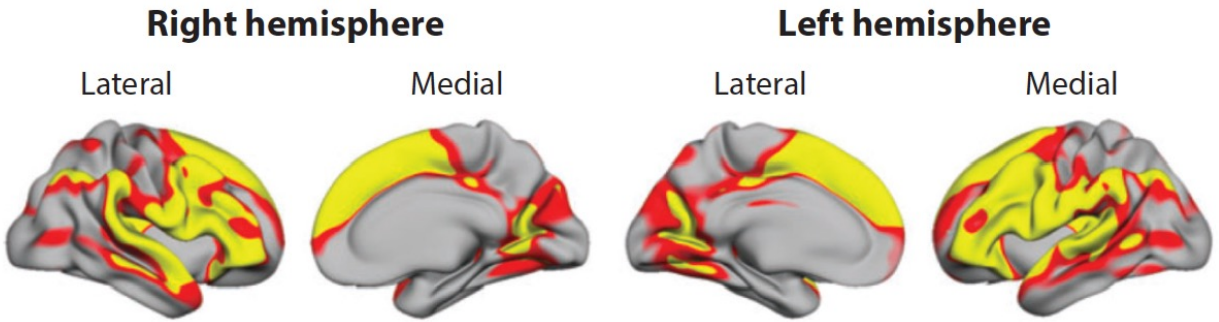
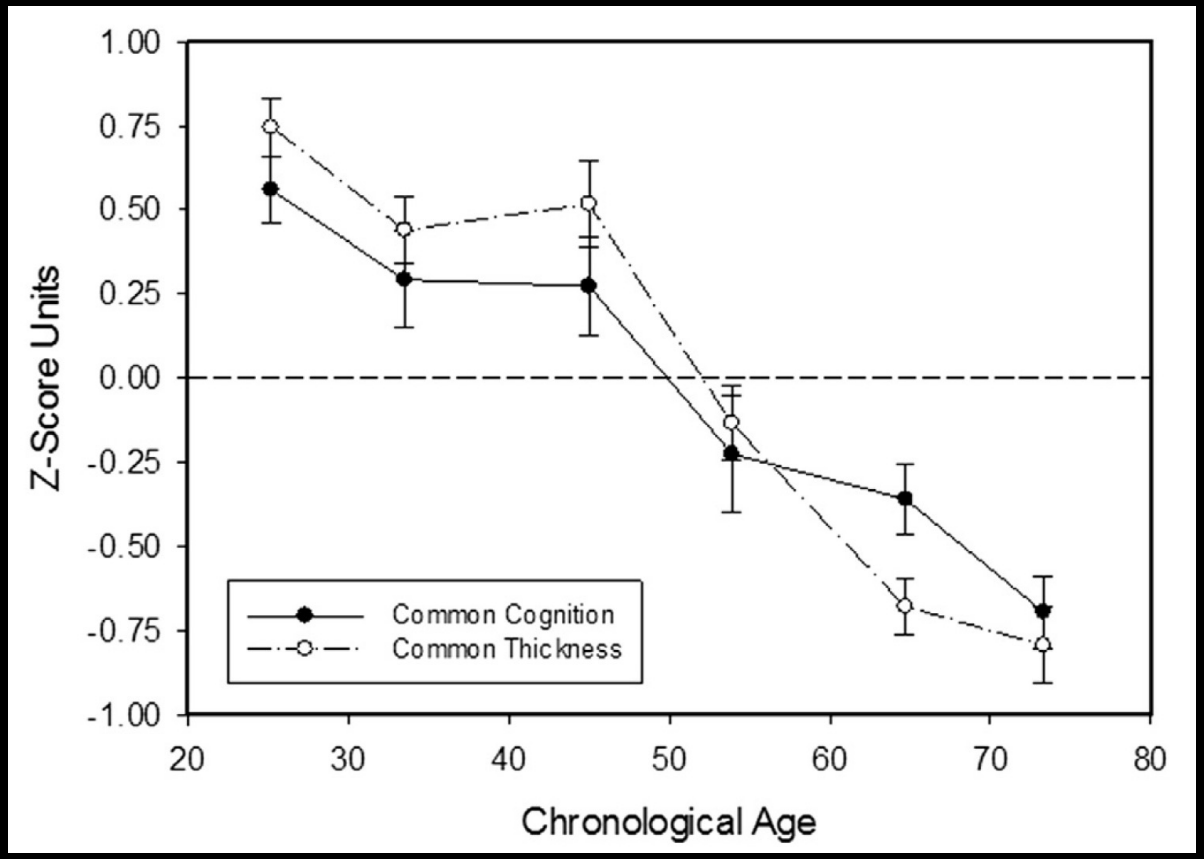


Figure 2

Brain regions shown in yellow are those that exhibited the largest decline in cortical thickness with age across a sample of 883 participants ranging in age from 18 to 94 (Fjell et al. 2009b).


1.00
0.75
0.50
0.25
0.00
-0.25
-0.50
-0.75
-1.00
Z-Score Units
20
30
40
50
60
70
80
Chronological Age
Common Cognition
Common Thickness

Cognitive Changes Are Not Inevitable With Age

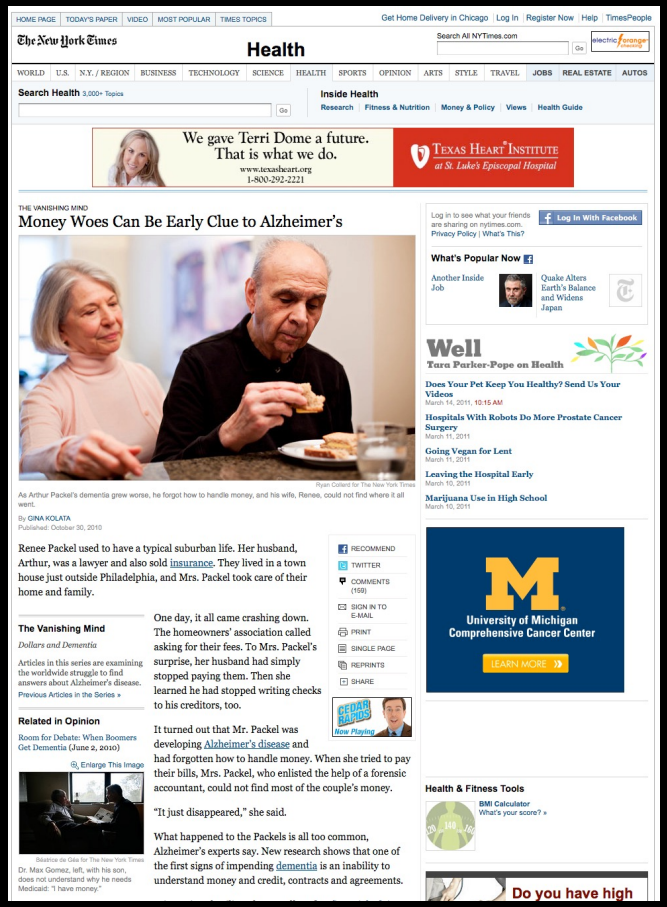
Prevalence of Alzheimer's Disease by Age:

- 5% -- Age 65 to 74
- 14% -- Age 75 to 84
- 35% -- Age 85-plus

Prevalence of Mild Cognitive Impairment by Age:

- 6.7% -- Age 60 to 64
- 8.4% -- Age 65 to 69
- 10.1% -- Age 70 to 74
- 14.8% -- Age 75 to 79
- 25.2% -- Age 80 to 84

Alzheimer's Association, 2021; Petersen et al., 2018



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THE VANISHING MIND

Money Woes Can Be Early Clue to Alzheimer's

As Arthur Packel's dementia grew worse, he forgot how to handle money, and his wife, Renee, could not find where it all went.

By GINA KOLATA
Published: October 30, 2010

Renee Packel used to have a typical suburban life. Her husband, Arthur, was a lawyer and also sold insurance. They lived in a town house just outside Philadelphia, and Mrs. Packel took care of their home and family.

One day, it all came crashing down. The homeowners' association called asking for their fees. To Mrs. Packel's surprise, her husband had simply stopped paying them. Then she learned he had stopped writing checks to his creditors, too.

It turned out that Mr. Packel was developing Alzheimer's disease and had forgotten how to handle money. When she tried to pay their bills, Mrs. Packel, who enlisted the help of a forensic accountant, could not find most of the couple's money.

"It just disappeared," she said.

What happened to the Packels is all too common, Alzheimer's experts say. New research shows that one of the first signs of impending dementia is an inability to understand money and credit, contracts and agreements.

The Vanishing Mind

Dollars and Dementia

Articles in this series are examining the worldwide struggle to find answers about Alzheimer's disease.

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Room for Debate: When Boomers Get Dementia (June 2, 2010)

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Béatrice de Géa for The New York Times

Dr. Max Gomez, left, with his son, does not understand why he needs Medicaid: "I have money."

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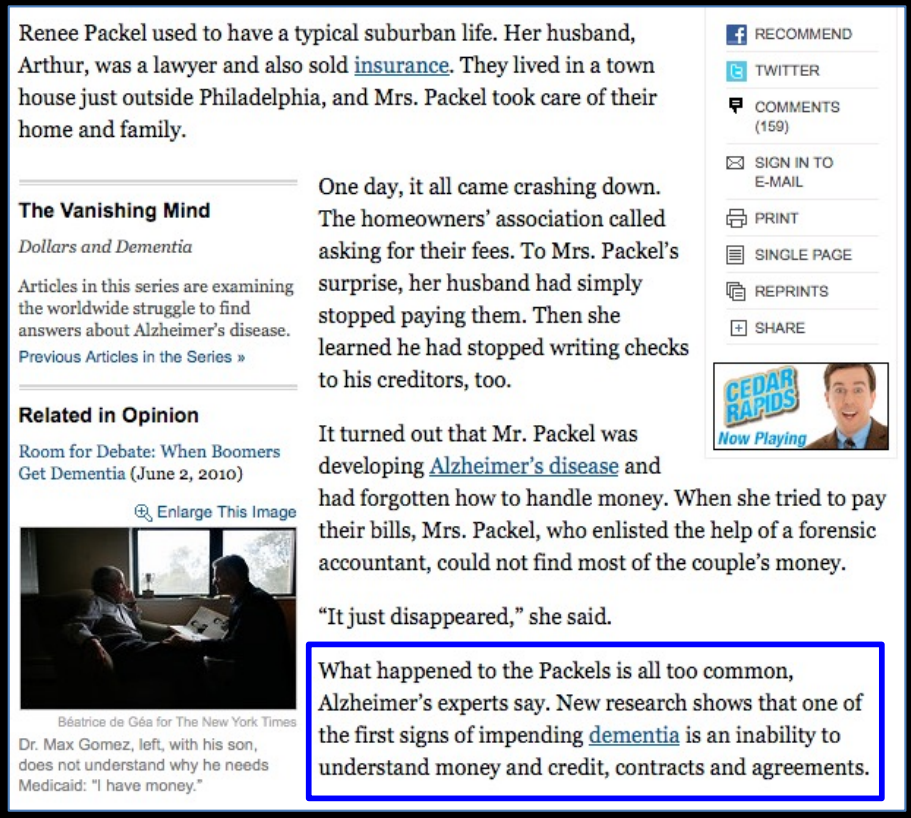

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Dr. Max Gomez, left, with his son, does not understand why he needs Medicaid: "I have money."

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JAMA Internal Medicine | Original Investigation

Financial Presentation of Alzheimer Disease and Related Dementias

Lauren Hersch Nicholas, PhD, MPP; Kenneth M. Langa, MD, PhD; Julie P. W. Bynum, MD, MPH; Joanne W. Hsu, PhD

IMPORTANCE Alzheimer disease and related dementias (ADRD), currently incurable neurodegenerative diseases, can threaten patients' financial status owing to memory deficits and changes in risk perception. Deteriorating financial capabilities are among the earliest signs of cognitive decline, but the frequency and extent of adverse financial events before and after diagnosis have not been characterized.

OBJECTIVES To describe the financial presentation of ADRD using administrative credit data.

DESIGN, SETTING, AND PARTICIPANTS This retrospective secondary data analysis of consumer credit report outcomes from 1999 to 2018 linked to Medicare claims data included 81 364 Medicare beneficiaries living in single-person households.

EXPOSURES Occurrence of adverse financial events in those with vs without ADRD diagnosis and time of adverse financial event from ADRD diagnosis.

MAIN OUTCOMES AND MEASURES Missed payments on credit accounts (30 or more days late) and subprime credit scores.

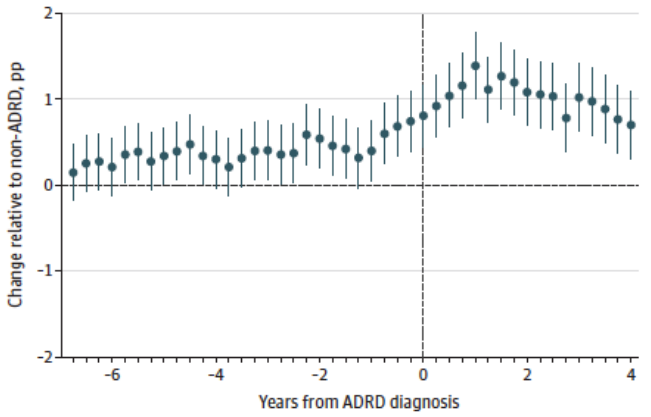
RESULTS Overall, 54 062 (17 890 [33.1%] men; mean [SD] age, 74 [7.3] years) were never diagnosed with ADRD during the sample period and 27 302 had ADRD for at least 1 quarter of observation (8573 [31.4%] men; mean [SD] age, 79.4 [7.5] years). Single Medicare beneficiaries diagnosed with ADRD were more likely to miss payments on credit accounts as early as 6 years prior to diagnosis compared with demographically similar beneficiaries without ADRD (7.7% vs 7.3%; absolute difference, 0.4 percentage points [pp]; 95% CI, 0.07-0.70;) and to develop subprime credit scores 2.5 years prior to diagnosis (8.5% vs 8.1%; absolute difference, 0.38 pp; 95% CI, 0.04-0.72). By the quarter after diagnosis, patients with ADRD remained more likely to miss payments than similar beneficiaries who did not develop ADRD (7.9% vs 6.9%; absolute difference, 1.0 pp; 95% CI, 0.67-1.40) and more likely to have subprime credit scores than those without ADRD (8.2% vs 7.5%; absolute difference, 0.70 pp; 95% CI, 0.34-1.1). Adverse financial events were more common among patients with ADRD in lower-education census tracts. The patterns of adverse events associated with ADRD were unique compared with other medical conditions (eg, glaucoma, hip fracture).

CONCLUSIONS AND RELEVANCE Alzheimer disease and related dementias were associated with adverse financial events years prior to clinical diagnosis that become more prevalent after diagnosis and were most common in lower-education census tracts.

Invited Commentary page 227
Multimedia
Supplemental content

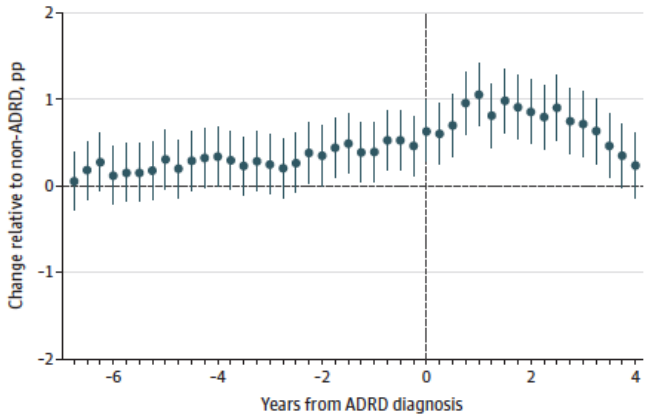
Author Affiliations: Johns Hopkins School of Public Health & School of Medicine, Institute for Social Research, Baltimore, Maryland (Nicholas); University of Colorado School of Public Health (Nicholas);

Figure 1. Change in Proportion With Missed Credit Payments Before and After Alzheimer Disease and Related Dementias (ADRD) Diagnosis Relative to Never Diagnosed, 1999 to 2018



Medicare beneficiaries who eventually developed ADRD experienced higher rates of delinquency than those who never developed ADRD, and these elevated rates were detectable years before diagnosis. Circles are regression coefficients representing the percentage point (pp) increase in payment delinquency at each time point in comparison to payment delinquency rates among Medicare beneficiaries who were never diagnosed with ADRD. The mean rate of missed payment (payment delinquency) was 7.8%. Vertical lines represent 95% CIs. Data sources: Federal Reserve Bank of New York Consumer Credit Panel/Equifax, and Medicare Beneficiary Summary File.

Figure 2. Change in Proportion With Subprime Credit Scores Before and After Alzheimer Disease and Related Dementias (ADRD) Diagnosis Relative to Never Diagnosed, 1999 to 2018



Medicare beneficiaries who eventually developed ADRD experienced higher rates of subprime credit scores (Equifax risk scores) than those who never developed ADRD, and these elevated rates were detectable roughly 2 years before diagnosis. Circles are regression coefficients representing the percentage point (pp) increase in subprime credit scores associated with each time point relative to no ADRD. The mean rate of subprime credit scores in our sample was 9.1%. Vertical lines represent 95% CIs. Data sources: Federal Reserve Bank of New York Consumer Credit Panel/Equifax, and Medicare Beneficiary Summary File.

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Nicholas et al., 2021

Han Research Lab

Mild Cognitive Impairment Is Associated with Poorer Decision-Making in Community-Based Older Persons

S. Duke Han, PhD,†‡§ Patricia A. Boyle, PhD,*† Bryan D. James, PhD,*‖ Lei Yu, PhD,*† and David A. Bennett, MD*†*

JAGS 63:676–683, 2015

N=730; MCI=144

Table 2. Relationship Between Mild Cognitive Impairment (MCI) and Decision-Making, Adjusted for Age, Education, and Sex

	Model 1	Model 2
Model Term	Estimate (Standard Error) *P*-Value	
Total decision-making		
Age	–0.11 (0.01) <.001	–0.10 (0.01) <.001
Education	0.28 (0.03) <.001	0.28 (0.03) <.001
Male	0.82 (0.22) <.001	0.89 (0.21) <.001
MCI		–1.35 (0.23) <.001
Financial decision-making		
Age	–0.06 (0.01) <.001	–0.05 (0.01) <.001
Education	0.11 (0.02) <.001	0.12 (0.02) <.001
Male	0.52 (0.12) <.001	0.55 (0.11) <.001
MCI		–0.61 (0.12) <.001
Healthcare decision-making		
Age	–0.06 (0.01) <.001	–0.05 (0.01) <.001
Education	0.16 (0.02) <.001	0.16 (0.02) <.001
Male	0.30 (0.13) .02	0.34 (0.13) .007
MCI		–0.74 (0.13) <.001

Table 4. Relationship Between Individual Cognitive Function Measures and Decision-Making in Individuals with Mild Cognitive Impairment

Cognitive System	Estimate (Standard Error)	*P*-Value	R^2 Change
Total decision-making			
Global cognition	3.20 (0.47)	<.001	0.16
Episodic memory	0.70 (0.32)	.03	0.02
Semantic memory	1.34 (0.33)	<.001	0.13
Working memory	0.65 (0.31)	.04	0.02
Perceptual speed	1.87 (0.22)	<.001	0.26
Visuospatial ability	0.60 (0.23)	.01	0.09
Financial decision-making			
Global cognition	1.61 (0.25)	<.001	0.14
Episodic memory	0.30 (0.17)	.08	0.01
Semantic memory	0.69 (0.18)	<.001	0.12
Working memory	0.49 (0.16)	.003	0.04
Perceptual speed	0.95 (0.12)	<.001	0.25
Visuospatial ability	0.24 (0.13)	.06	0.05
Healthcare decision-making			
Global cognition	1.59 (0.30)	.003	0.12
Episodic memory	0.39 (0.20)	.05	0.02
Semantic memory	0.65 (0.21)	.003	0.09
Working memory	0.16 (0.20)	.41	0.00
Perceptual speed	0.91 (0.15)	<.001	0.17
Visuospatial ability	0.36 (0.15)	.02	0.06

Journal of Alzheimer's Disease 94 (2023) 1607–1615
DOI 10.3233/JAD-230222
IOS Press

Mild Cognitive Impairment Is Associated with Poorer Everyday Decision Making

Laura Fenton[a], S. Duke Han[a,b,c,d,e,f,*], Carolyn G. DiGuiseppi[g], Nicole R. Fowler[h], Linda Hill[i], Rachel L. Johnson[j], Ryan A. Peterson[j], Christopher E. Knoepke[k,l], Daniel D. Matlock[k,m,n], Ryan Moran[i], Jason Karlawish[o] and Marian E. Betz[p,q]
[a]*Department of Psychology, USC Dornsife College of Letters, Arts, and Sciences, Los Angeles, CA, USA*
[b]*Rush Alzheimer's Disease Center, Rush University Medical Center, Chicago, IL, USA*
[c]*Department of Family Medicine, Keck School of Medicine of USC, Alhambra, CA, USA*

N=301; MCI=28

	Points missed on SPACED score	
Predictor variable	Mean ratio (95% CI)	*p*
Age (z-score)	1.34 (1.04, 1.73)	**0.025**
Education (ref: high school or less)		**0.034***
Some college/vocational/tech	0.67 (0.27, 1.64)	0.379
College graduate	0.97 (0.40, 2.35)	0.952
Any post-graduate work	0.38 (0.16, 0.93)	**0.034**
Gender (ref: female)		
Male	1.34 (0.79, 2.29)	0.277
Randomization group (ref: control)		
DDA	0.70 (0.41, 1.18)	0.18
MCI type (ref: BTACT)		
RBANS	1.02 (0.53, 1.98)	0.956
Site (ref: CU)		**0.003***
IU	2.92 (1.52, 5.60)	**0.001**
UCSD	1.35 (0.65, 2.79)	0.416
Cognitive status (ref: CN)		
MCI	2.17 (1.02, 4.61)	**0.044**

Significant differences ($p < 0.05$) are bolded. SPACED, the Short Portable Assessment of Capacity for Everyday Decision making; CN, cognitively normal; MCI, mild cognitive impairment; DDA, driving decision aid; BTACT, the Brief Test of Adult Cognition by Telephone; RBANS, the Repeatable Battery for the Assessment of Neuropsychological Status. CU, Colorado University; IU, Indiana University; UCSD, University of California San Diego. Asterisks (*) refer to a joint likelihood ratio test for categorical variables.

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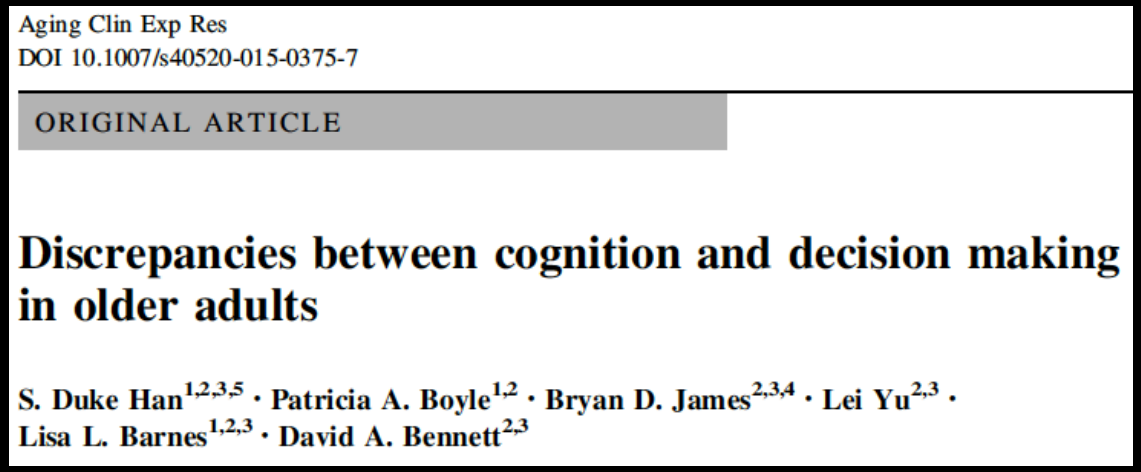
Not Just About Cognitive Ability



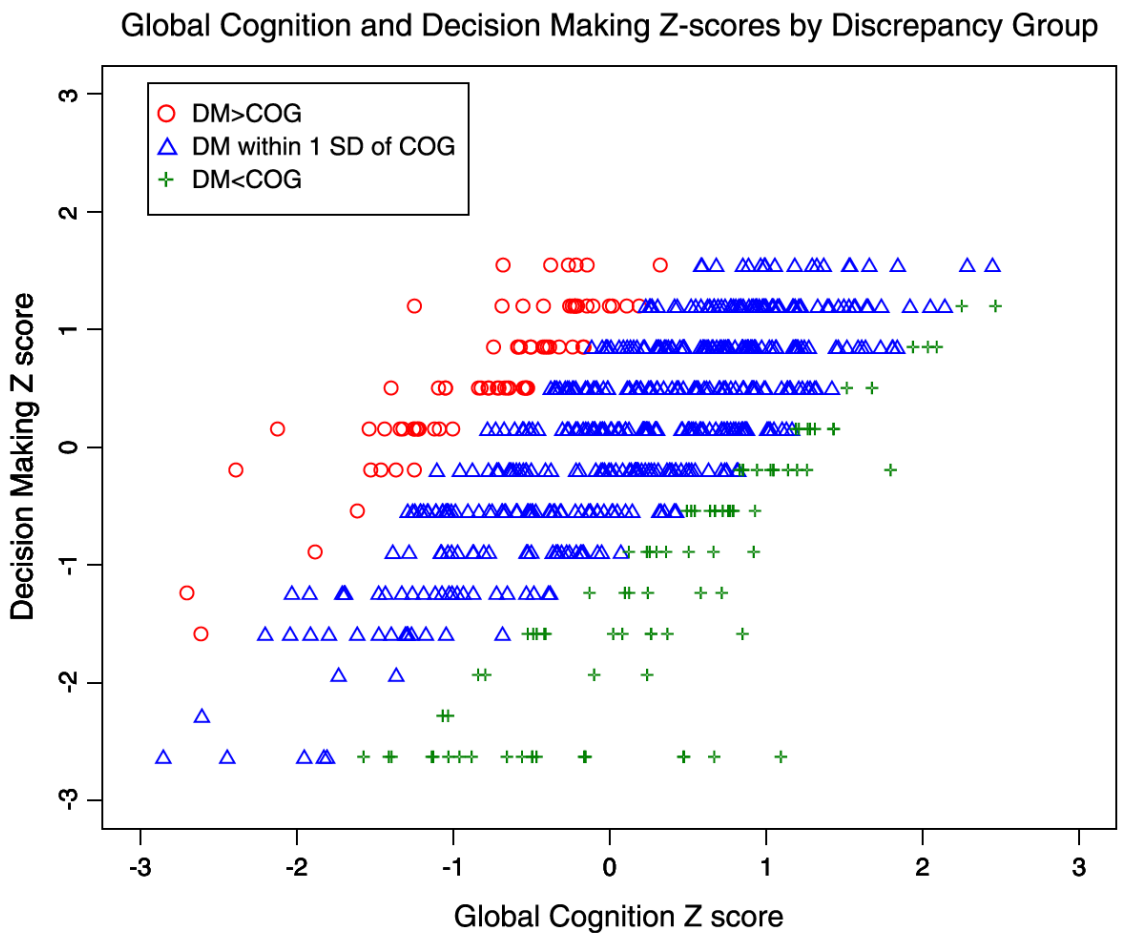
Aging Clin Exp Res
DOI 10.1007/s40520-015-0375-7

ORIGINAL ARTICLE

Discrepancies between cognition and decision making in older adults

S. Duke Han[1,2,3,5] · Patricia A. Boyle[1,2] · Bryan D. James[2,3,4] · Lei Yu[2,3] · Lisa L. Barnes[1,2,3] · David A. Bennett[2,3]

- N=648 older adults without dementia
- Mean age=81.8, s.d.=7.6; mean number of years of education=15.2, s.d=3.1; 76.8% female


Global Cognition and Decision Making Z-scores by Discrepancy Group
DM>COG
DM within 1 SD of COG
DM<COG
Decision Making Z score
Global Cognition Z score
3
2
1
0
-1
-2
-3

Rationale

If an older adult shows impaired financial decision making or becomes a victim of a scam, the burden is not only experienced by the older adult, but is often displaced upon family members, caregivers, or society.

Reduced scam awareness and poor financial decision making may be early signs of Alzheimer's Disease (Boyle et al., 2019; Stewart et al., 2019; Nicholas et al., 2021), but can occur without cognitive impairment.

- *How can we understand this?*

18008 • The Journal of Neuroscience, November 13, 2013 • 33(46):18008–18014

Neurobiology of Disease

Changes in Brain Function Occur Years before the Onset of Cognitive Impairment

Lori L. Beason-Held,[1] Joshua O. Goh,[1,2] Yang An,[1] Michael A. Kraut,[3] Richard J. O'Brien,[4] Luigi Ferrucci,[1] and Susan M. Resnick[1]

[1]Intramural Research Program, National Institute on Aging, National Institutes of Health, Baltimore, Maryland 21224, [2]Graduate Institute of Brain and Mind Sciences, National Taiwan University College of Medicine, Taipei 100, Taiwan, [3]Department of Radiology, Johns Hopkins Hospital, Baltimore, Maryland 21287, and [4]Department of Neurology, Johns Hopkins University School of Medicine, Baltimore, Maryland 21224

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Importance of Age-Associated Neuropathology

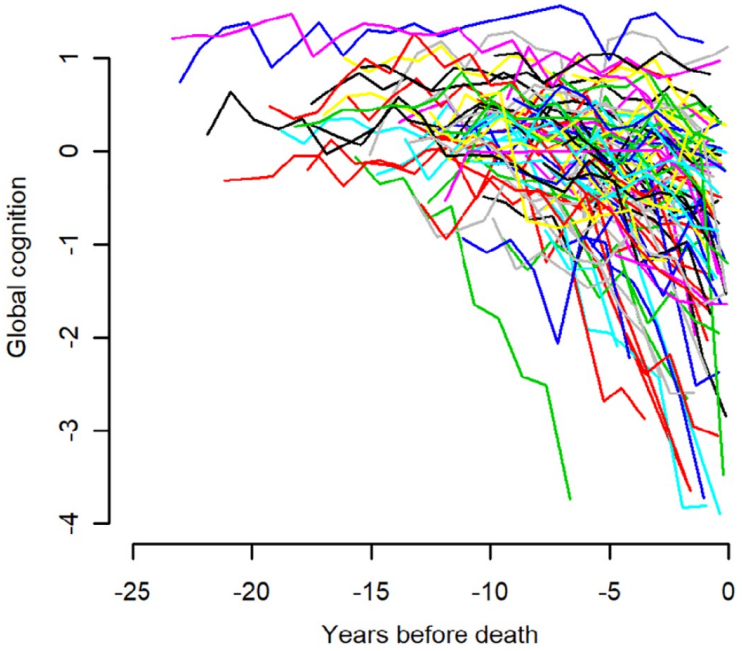
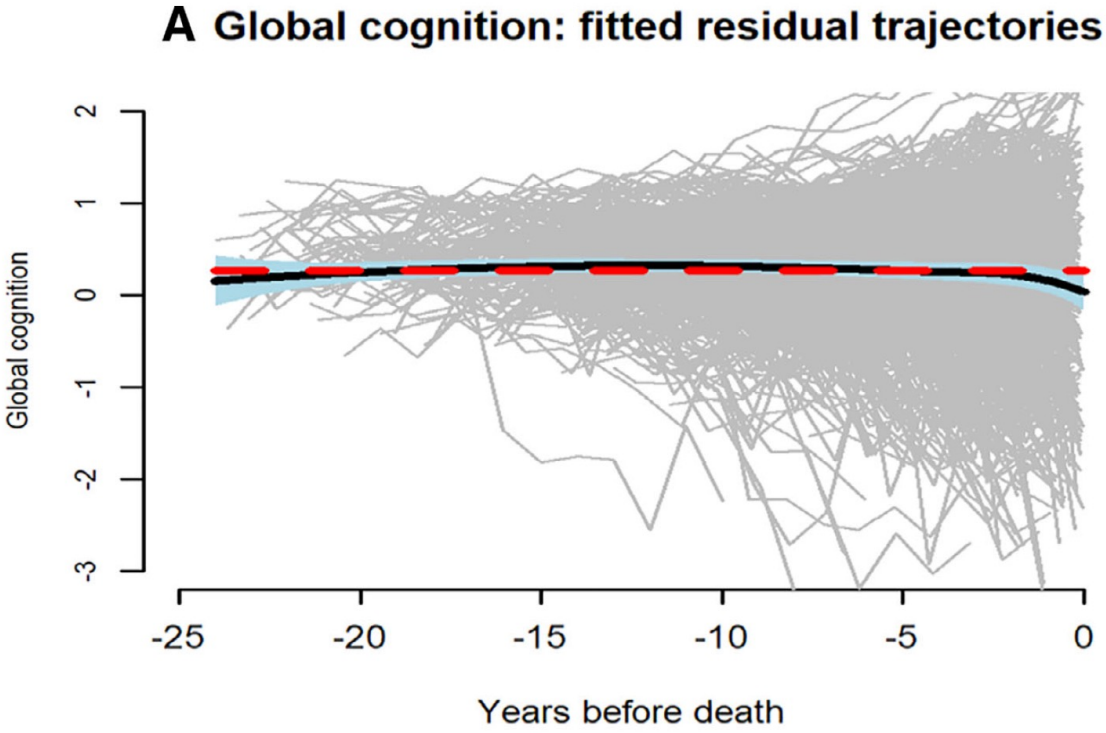


FIGURE 1: Crude trajectories of change in global cognition in 100 randomly selected participants.



Wilson et al., 2020

Normative Cognitive Decline in Old Age

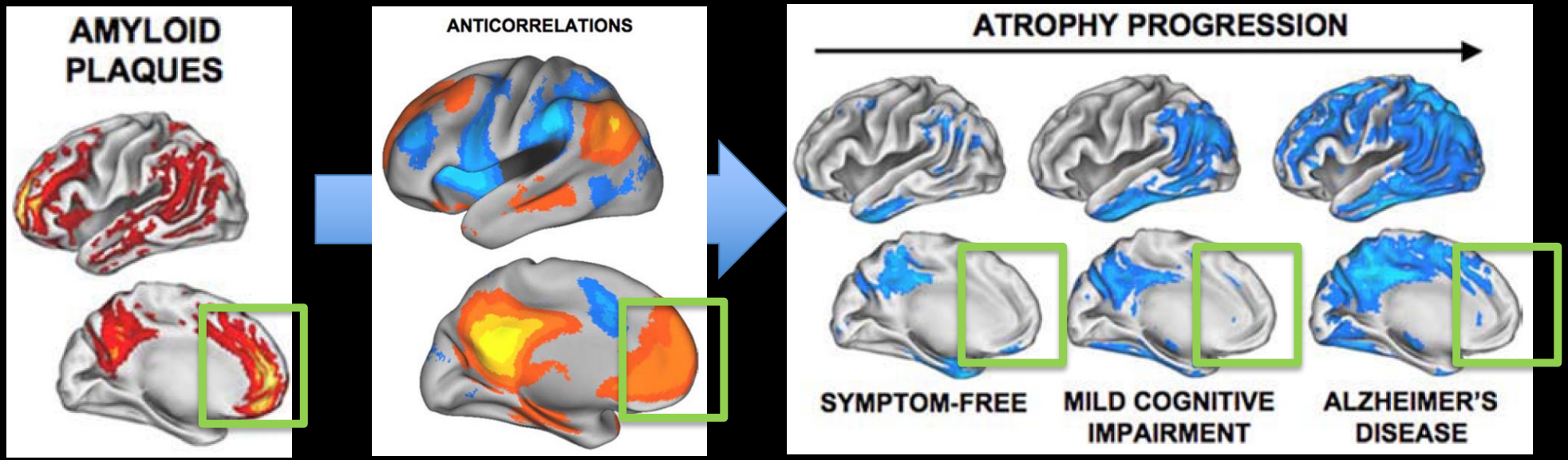
Robert S. Wilson, PhD,[1,2,3] Tianhao Wang, PhD,[1,2] Lei Yu, PhD,[1,2]
David A. Bennett, MD,[1,2] and Patricia A. Boyle, PhD[1,3]

Objective: To characterize trajectories of normative cognitive aging.
Methods: Older persons without dementia at study enrollment (n = 1,010) had annual cognitive testing for up to 24 years (mean = 9.9 years, standard deviation = 5.0), died, and underwent a neuropathologic examination to quantify 9 postmortem markers of common neurodegenerative and cerebrovascular conditions. To accommodate the heterogeneity in cognitive trajectories, we used functional mixed effects models, which allow individuals to have different patterns of cognitive decline under a unified model structure.
Results: In a functional mixed effects model, postmortem markers (Alzheimer disease pathology, Lewy bodies, transactive response DNA-binding protein 43 pathology, hippocampal sclerosis, atherosclerosis, gross infarcts) were associated with global cognitive decline. Residual global cognitive decline after adjustment for neuropathologic burden was weakly related to age at death; it occurred in only about one-third of participants, mostly proximate to death. Results were comparable after eliminating the initial cognitive assessments to minimize retest learning or controlling for frailty proximate to death. Analyses were also conducted with composite measures of episodic memory and perceptual speed. Residual decline not attributable to neuropathologic burden was confined to a subset for each outcome and was most evident proximate to death. Age at death was unrelated to residual decline in episodic memory but was related to residual decline in perceptual speed.
Interpretation: Late life cognitive loss mainly reflects non-normative pathologic and mortality-related processes rather than normative age-related processes.

ANN NEUROL 2020;87:816–829

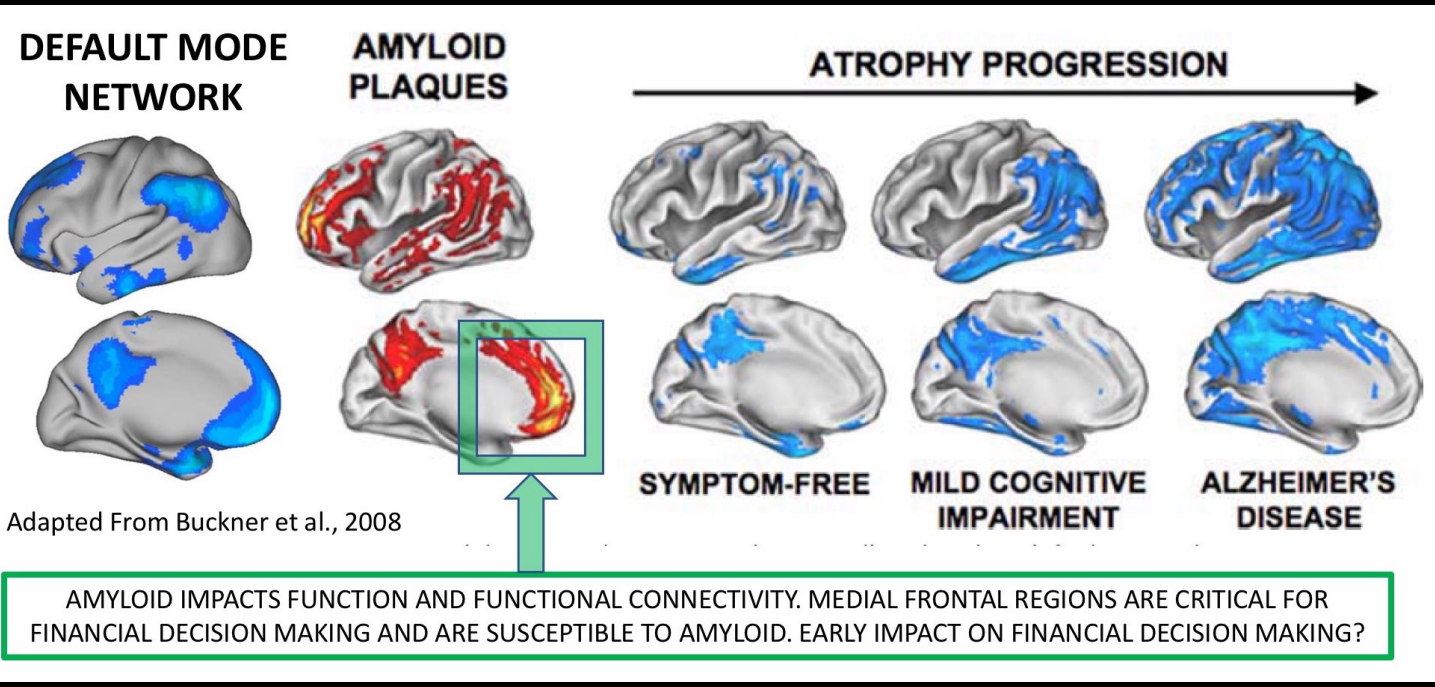
Interpretation: Late life cognitive loss mainly reflects non-normative pathologic and mortality-related processes rather than normative age-related processes.

Age-Associated Alzheimer's Neuropathology



Buckner et al., 2003; Buckner et al., 2005; Lustig et al., 2003

Age-Associated Alzheimer's Neuropathology



Peters and Buchel, 2011
+ Age-Associated Alzheimer's Neuropathology

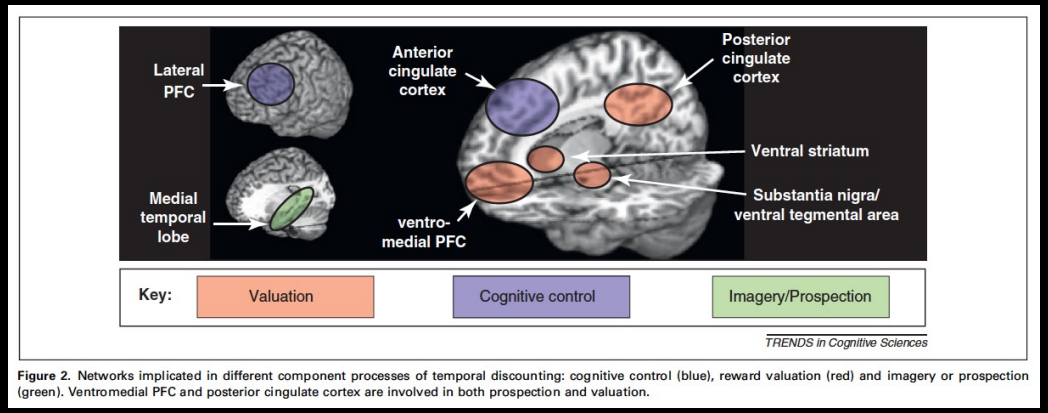
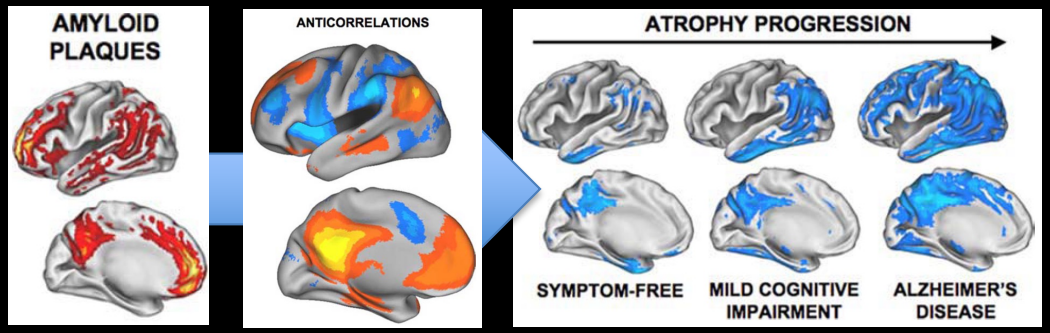
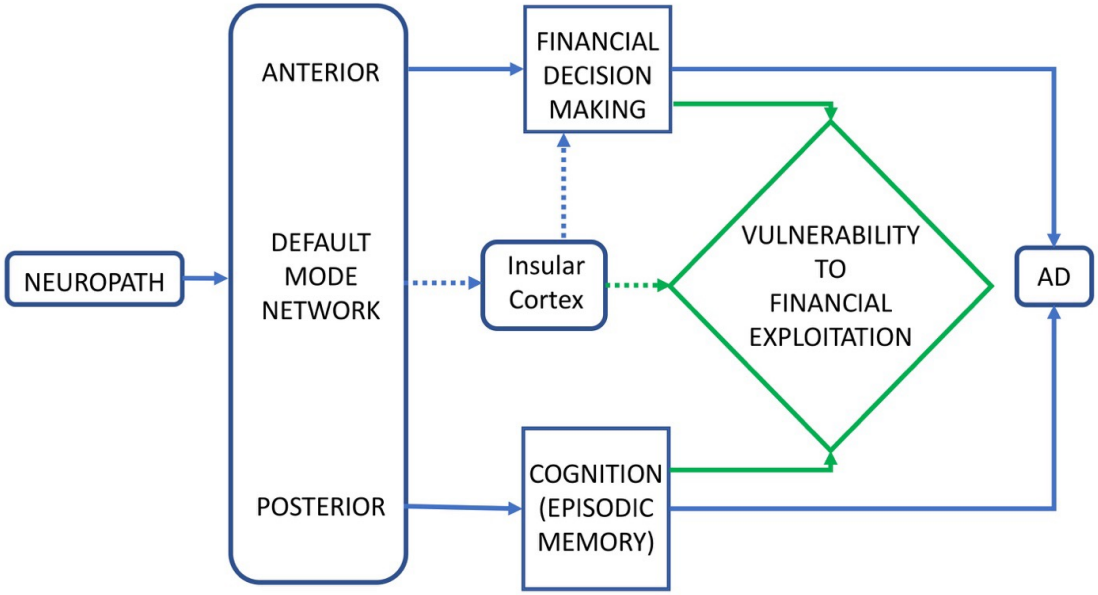


Figure 2. Networks implicated in different component processes of temporal discounting: cognitive control (blue), reward valuation (red) and imagery or prospection (green). Ventromedial PFC and posterior cingulate cortex are involved in both prospection and valuation.

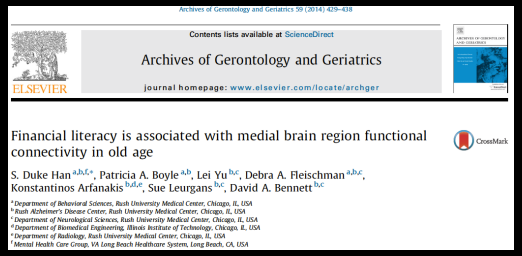


Current Working Model



Han, S.D. Vulnerability to financial exploitation in older age: A neuropsychology perspective. *A Fresh Look at Fraud: Theoretical and Applied Perspectives.* Routledge Taylor & Francis Group, United Kingdom, 2022.

Neuroimaging Work to Date



Archives of Gerontology and Geriatrics 59 (2014) 429–438

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Archives of Gerontology and Geriatrics

journal homepage: www.elsevier.com/locate/archger

Financial literacy is associated with medial brain region functional connectivity in old age

S. Duke Han [a,b,f,*], Patricia A. Boyle [a,b], Lei Yu [b,c], Debra A. Fleischman [a,b,c], Konstantinos Arfanakis [b,d,e], Sue Leurgans [b,c], David A. Bennett [b,c]

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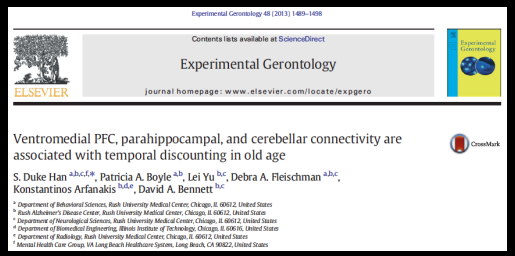

Experimental Gerontology 48 (2013) 1489–1498

Contents lists available at ScienceDirect

Experimental Gerontology

journal homepage: www.elsevier.com/locate/expgero

Ventromedial PFC, parahippocampal, and cerebellar connectivity are associated with temporal discounting in old age

S. Duke Han [a,b,c,f,*], Patricia A. Boyle [a,b], Lei Yu [b,c], Debra A. Fleischman [a,b,c], Konstantinos Arfanakis [b,d,e], David A. Bennett [b,c]

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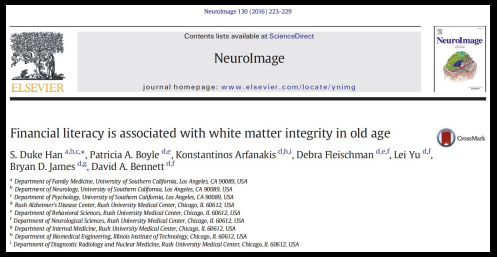

NeuroImage 130 (2016) 223–229

Contents lists available at ScienceDirect

NeuroImage

journal homepage: www.elsevier.com/locate/ynimg

Financial literacy is associated with white matter integrity in old age

S. Duke Han [a,b,c,e], Patricia A. Boyle [d,e], Konstantinos Arfanakis [d,h,i], Debra Fleischman [d,e,f], Lei Yu [d,f], Bryan D. James [d,g], David A. Bennett [d,f]

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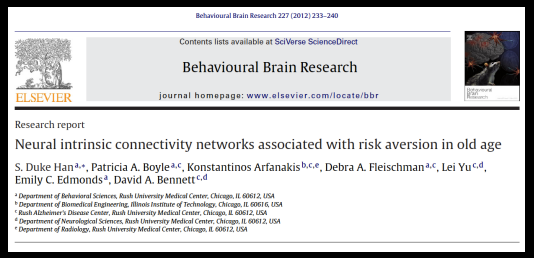

Behavioural Brain Research 227 (2012) 233–240

Contents lists available at SciVerse ScienceDirect

Behavioural Brain Research

journal homepage: www.elsevier.com/locate/bbr

Research report

Neural intrinsic connectivity networks associated with risk aversion in old age

S. Duke Han [a,*], Patricia A. Boyle [a,c], Konstantinos Arfanakis [b,c,e], Debra A. Fleischman [a,c], Lei Yu [c,d], Emily C. Edmonds [a], David A. Bennett [c,d]

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Brain Imaging and Behavior
https://doi.org/10.1007/s11682-019-00079-7

ORIGINAL RESEARCH

White matter correlates of scam susceptibility in community-dwelling older adults

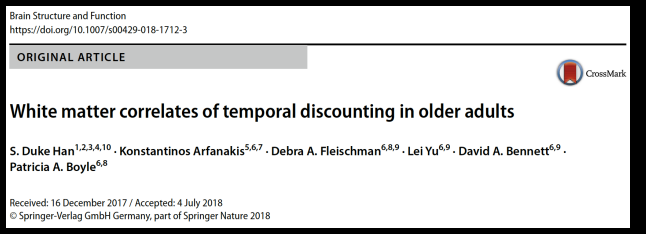
Melissa Lamar [1,2] · Konstantinos Arfanakis [1,3,4] · Lei Yu [1,5] · Shengwei Zhang [1] · S. Duke Han [1,2,5,6,7,8,9] · Debra A. Fleischman [1,2,5] · David A. Bennett [1,5] · Patricia A. Boyle [1,2]

Brain Imaging and Behavior (2016) 10:524–532
DOI 10.1007/s11682-015-9422-4

ORIGINAL RESEARCH

Grey matter correlates of susceptibility to scams in community-dwelling older adults

S. Duke Han [1,2,3,4] · Patricia A. Boyle [1,2] · Lei Yu [1,3] · Konstantinos Arfanakis [6,7] · Bryan D. James [1,5] · Debra A. Fleischman [1,2,3] · David A. Bennett [1,3]



Brain Structure and Function
https://doi.org/10.1007/s00429-018-1712-3

ORIGINAL ARTICLE

White matter correlates of temporal discounting in older adults

S. Duke Han [1,2,3,4,10] · Konstantinos Arfanakis [5,6,7] · Debra A. Fleischman [6,8,9] · Lei Yu [6,9] · David A. Bennett [6,9] · Patricia A. Boyle [6,8]

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frontiers in Aging Neuroscience

ORIGINAL RESEARCH
published: 12 November 2020
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Functional Connectivity Correlates of Perceived Financial Exploitation in Older Adults

Gali H. Weissberger [1,2], Laura Mosqueda [1,3], Annie L. Nguyen [1], Jenna Axelrod [1], Caroline P. Nguyen [1], Patricia A. Boyle [4,5], Nathan Spreng [6,7,8] and S. Duke Han [1,3,4,5,9,10]*

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Susceptibility to Scams

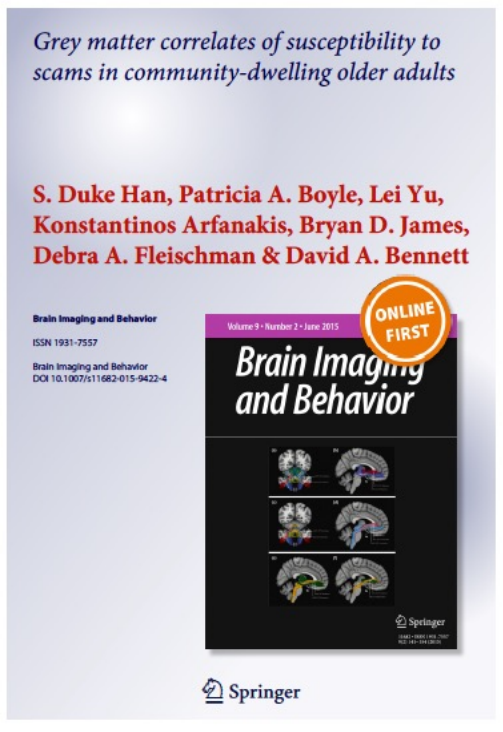
Brain Imaging and Behavior
DOI 10.1007/s11682-015-9422-4

ORIGINAL RESEARCH

Grey matter correlates of susceptibility to scams in community-dwelling older adults

S. Duke Han [1,2,3,4] · Patricia A. Boyle [1,2] · Lei Yu [1,3] · Konstantinos Arfanakis [6,7] · Bryan D. James [1,5] · Debra Fleischman [1,2,3] · David A. Bennett [1,3]

Susceptibility to Scams

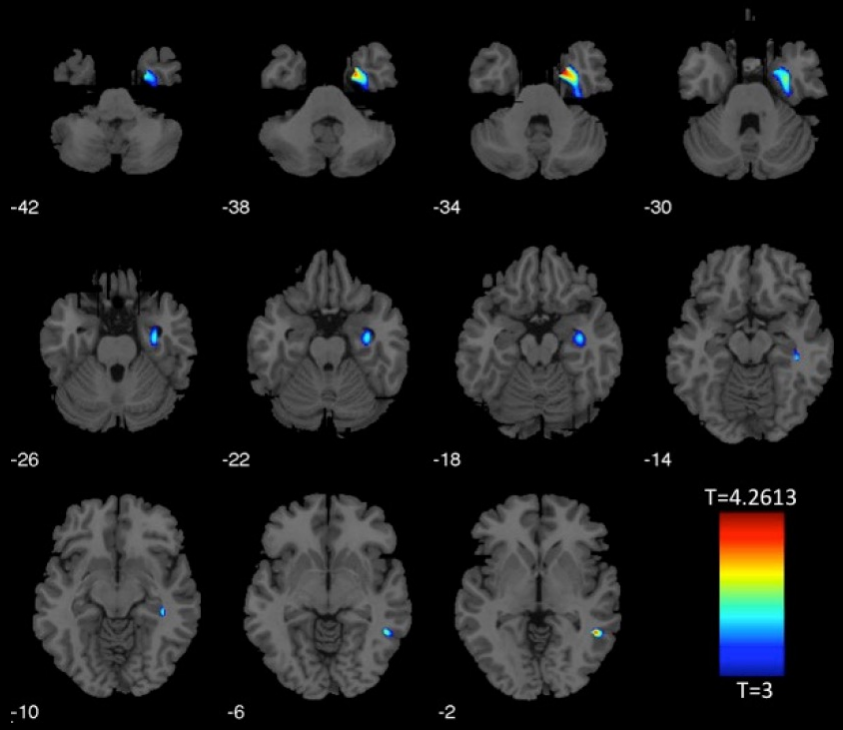


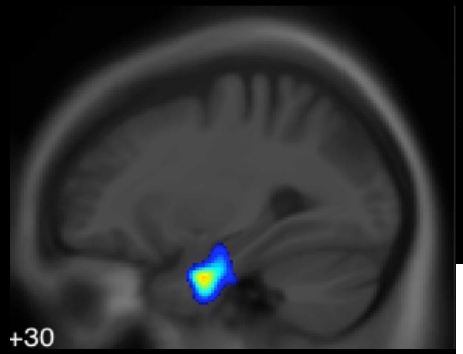
Assessment of susceptibility to scams

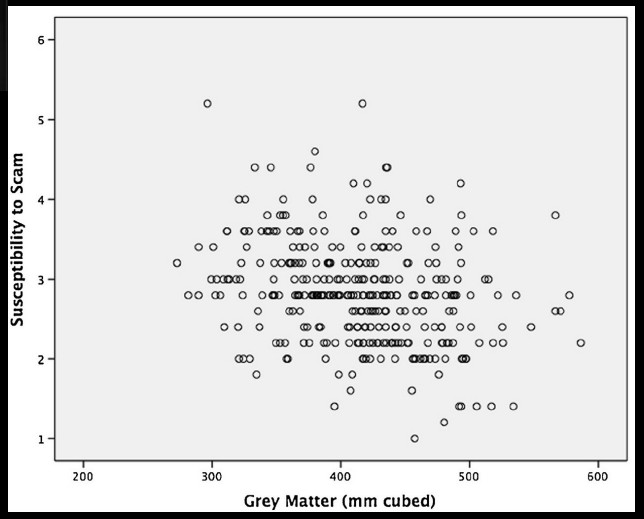
The susceptibility to scams scale is a five-item self-report measure in which participants rated their agreement to a statement according to a 7-point Likert scale (strongly agree to strongly disagree). The five statements included in the measure have been previously reported (James et al. 2014) and address topics such as telemarketing behaviors, older adults being targeted by con-artists, and suspiciousness of claims that seem too good to be true. The statements are:

1. I answer the phone whenever it rings, even if I do not know who is calling.
2. I have difficulty ending a phone call, even if the caller is a telemarketer, someone I do not know, or someone I did not wish to call me.
3. If something sounds too good to be true, it usually is.
4. Persons over the age of 65 are often targeted by con-artists.

Susceptibility to Scams – Grey Matter Density







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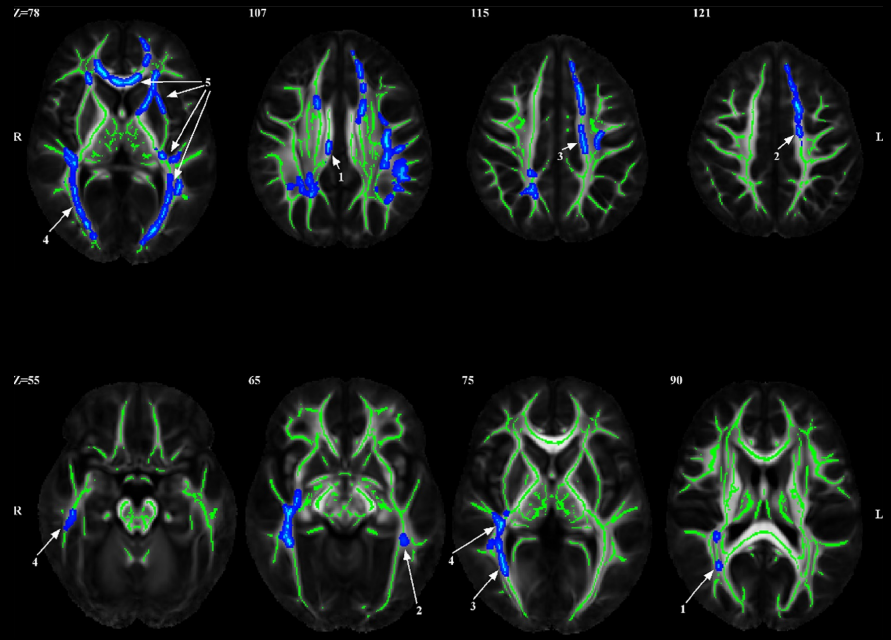
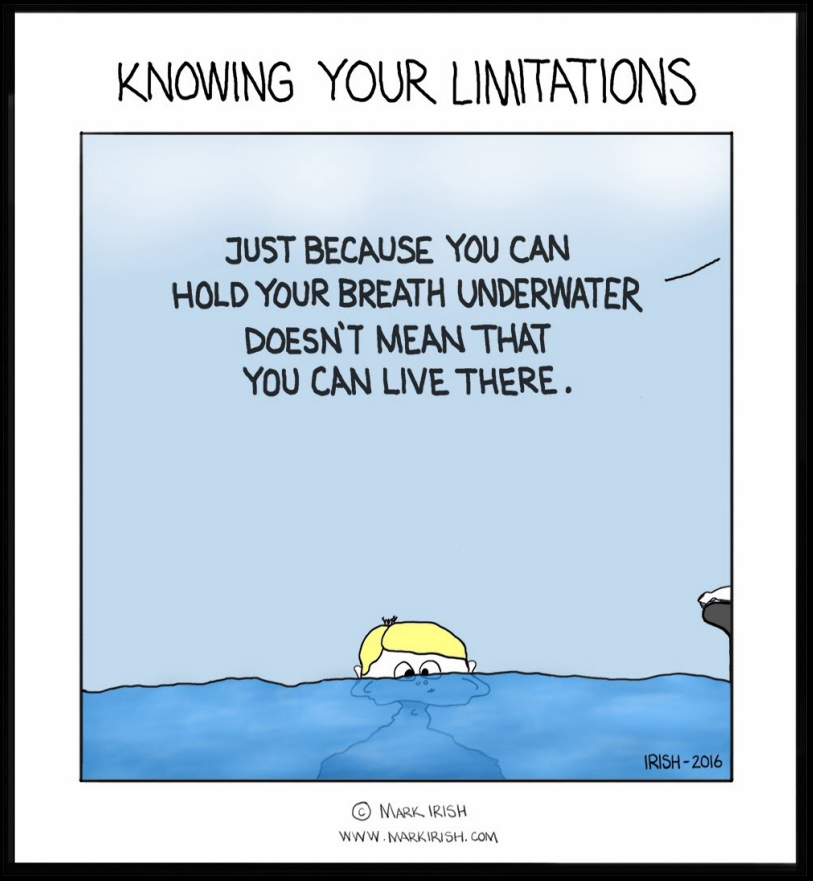
Susceptibility to Scams – White Matter Integrity



FA (age, education, sex)

FA (age, education, sex, global cognition)


KNOWING YOUR LIMITATIONS
JUST BECAUSE YOU CAN HOLD YOUR BREATH UNDERWATER DOESN'T MEAN THAT YOU CAN LIVE THERE.
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WELL, MY PRAYERS FOR A MIRACLE WERE ANSWERED. UNFORTUNATELY, NOW I CAN'T REPLICATE IT.

Some Thoughts…

- Very few behavioral economic or neuroimaging decision making studies have a diverse representation of participants.
  - Racial differences in cognitive and affective factors have been suggested.
  - Racial differences in decision making are suggested by a limited number of studies in financial planning and healthcare treatment options.

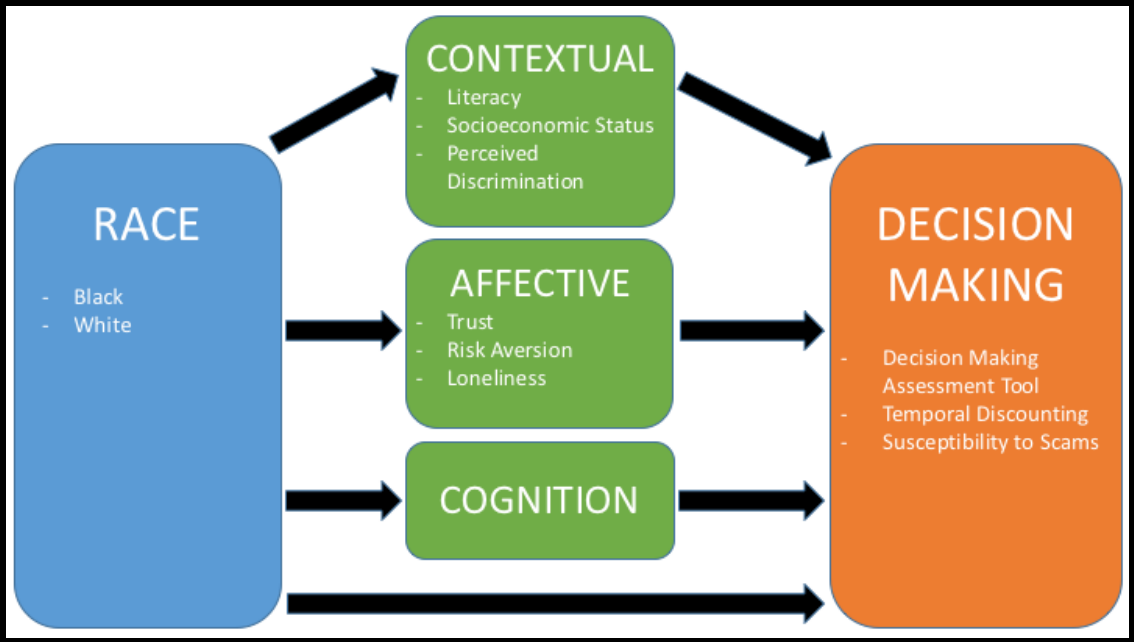
➢ However, whether (or the extent to which) decision making abilities, specifically, may vary by race is largely unknown.

➢ **Contextual factors (e.g., literacy, socioeconomic status) may explain a significant portion of any racial differences observed due to historically documented unequal access to supportive resources.**

Ferguson et al., 1998; Doescher et al., 2000; Gutter & Fontes, 2006; Li et al., 2009; Isamah et al., 2010, LaVeist, 2005

Racial Differences in Decision Making among Older Adults

(R01AG055430; PI: Han along with Co-I: Barnes)



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CLINICAL INVESTIGATION

Literacy Mediates Racial Differences in Financial and Healthcare Decision Making in Older Adults

S. Duke Han, PhD,†‡§¶‖** Lisa L. Barnes, PhD,¶‖** Sue Leurgans, PhD,‖** Lei Yu, PhD,‖** David A. Bennett, MD,‖** and Patricia A. Boyle, PhD¶‖*

Table 1. Demographic, Cognitive, and Other Descriptive Data

	Black (N = 138)		White (N = 138)			
Variable	Mean	SD	Mean	SD	*t*, *Z*, or χ^2	*P* Value
Age, y	76.85	6.07	77.30	6.38	0.60	.55
Education, y	14.91	3.12	14.99	2.98	−0.32	.75
Sex (male:female ratio)	27:111		27:111		0	1
Global cognition	0.11	0.53	0.15	0.50	0.59	.56
Total decision making	6.89	2.52	7.75	2.58	−2.99	<.01
Financial decision making	3.20	1.23	3.58	1.38	−2.53	.01
Healthcare decision making	3.70	1.67	4.17	1.51	−2.45	.01
Total literacy	60.37	13.52	68.97	14.01	5.18	<.01

Note. Global cognition is a mean of z-scores. Literacy is percentage correct, and decision making is total score correct. For age, global cognition, and literacy, *t*-values are reported. For sex, χ^2 is reported. For education and decision making, Wilcoxon *Z*-values are reported.

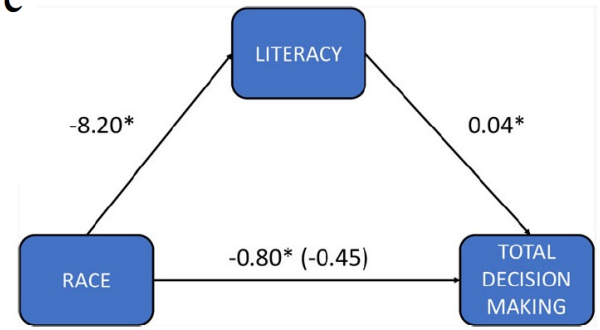

Figure 1. Mediation of race association with total decision making by literacy. Standardized regression coefficients for the association between race and literacy (−8.20) and literacy and total decision making (0.04), after multiplication, estimate the indirect effect of race on total decision making through literacy. The direct effect of race on total decision making is estimated by standardized regression coefficient for the association between race and total decision making after controlling for literacy (−0.45). Regression models were adjusted for age, education, sex, and global cognition. *$P < .05$.

frontiers in Psychology

ORIGINAL RESEARCH
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Susceptibility to Scams in Older Black and White Adults

S. Duke Han[1,2,3,4,5,6,7], Lisa L. Barnes[5,6,7], Sue Leurgans[6,7], Lei Yu[6,7], Christopher C. Stewart[8], Melissa Lamar[5,6], Crystal M. Glover[5,6,7], David A. Bennett[6,7] and Patricia A. Boyle[5,6]*

TABLE 1 | Demographic, cognitive, and other descriptive data.

	Black ($N = 296$)		White ($N = 296$)			
	Mean	SD	Mean	SD	*t*, *Z*	*p*
Age	77.903	6.614	78.190	6.703	$t = 0.52$	0.6014
Education	15.128	3.236	15.149	3.054	$Z = 0.3932$	0.6942
Global cognition	0.061	0.541	0.120	0.511	$Z = 1.2219$	0.2217
Susceptibility to scams	2.386	0.865	2.616	0.797	$Z = 4.0428$	<0.0001
Self-reported discrimination	1.881	2.152	0.739	1.257	$Z = 6.9496$	<0.0001
Socioeconomic status	6.144	2.700	6.981	2.450	$Z = 3.6025$	0.0003
Financial and health literacy	60.608	12.825	67.918	13.055	$t = 6.8600$	<0.0001
Trust	20.836	4.051	24.054	3.465	$Z = 8.6692$	<0.0001
Risk aversion	0.438	0.313	0.292	0.299	$Z = -8.0460$	<0.0001
Loneliness	2.022	0.631	2.160	0.607	$Z = -2.6904$	0.0071

Age and education are presented in years. Global cognition is a mean of z-scores. Susceptibility to scams is total score. For age and financial and health literacy, t-values are reported. For education, global cognition, susceptibility to scams, self-reported discrimination, socioeconomic status, trust, risk aversion, and loneliness, Wilcoxon Z-values are reported.

TABLE 2 | Association of race with susceptibility to scams.

	Model 1	Model 2	Model 3
Estimate (standard error, *p*-value)			
Age	0.0263 (0.0051, <0.0001)	0.0164 (0.0053, 0.0020)	0.0155 (0.0052, 0.0031)
Sex (male = 1, female = 0)	0.1462 (0.0877, 0.0959)	0.0901 (0.0865, 0.2976)	0.0878 (0.0855, 0.3045)
Education	−0.0363 (0.0107, 0.0007)	−0.0158 (0.0112, 0.1560)	−0.0149 (0.0110, 0.1783)
Global cognition		−0.3698 (0.0705, <0.0001)	−0.3891 (0.0699, <0.0001)
Race (Black = 1, White = 0)			−0.2496 (0.0649, 0.0001)

Dependent variable is susceptibility to scams total score. For sex, male is coded as 1 and female is coded as 0. For race, Black is coded as 1 and White is coded as 0.

TABLE 3 | Susceptibility to scams item response by race.

	Black ($N = 296$)		White ($N = 296$)			
	Mean	SD	Mean	SD	*Z*	*p*
Item 1: I feel I have to answer the phone whenever it rings, even if I do not know who is calling.	3.490	2.055	4.676	2.062	6.8043	<0.0001
Item 2: I have difficulty ending a phone call, even if the caller is a telemarketer, someone I do not know, or someone I did not wish to call me.	2.135	1.455	2.182	1.438	0.5724	0.5670
[illegible]	2.000	1.083	1.882	0.885	−1.0539	0.2919
Item 4: Persons over the age of 65 are often targeted by con-artists.	1.747	0.689	1.909	0.695	3.3736	0.0007
Item 5: If a telemarketer calls me, I usually listen to what they have to say.	2.557	1.672	2.432	1.512	−0.3073	0.7586

Wilcoxon Z-values are reported. Items 1, 2, and 5 are flipped scoring statements, meaning that higher scores indicate higher agreement. Items 3 and 4 are non-flipped scoring statements, meaning that lower scores indicate higher agreement.

**"Of course we'll make a decision ...
once we have considered the 5243 factors."**

Annals of Internal Medicine

Age-Associated Financial Vulnerability: An Emerging Public Health Issue

Mark S. Lachs, MD, MPH, and S. Duke Han, PhD

Various processes common in the aging brain may affect an older adult's ability to manage personal finances, the most recognized of which are dementing illnesses (1). These conditions can affect cognitive abilities, which may jeopardize an older adult's financial well-being over their longitudinal course. However, recent studies suggest that even cognitively intact older adults can have "functional" changes that may render them financially vulnerable. Social isolation also increases dramatically with age, which places older persons at risk for exploitation from predators. Furthermore, capitalistic enterprises can threaten the financial security of this group, which is perceived to be a large untapped market and, in an era of information overload, is often presented with a dizzying array of products and services.

We propose the concept of age-associated financial vulnerability (AAFV) and discuss aspects of its epidemiology from the vantage of a neuropsychologist (S.D.H) and geriatrician–epidemiologist (M.S.L) who are both researchers and clinicians working in the field of elder abuse. We believe that considering AAFV a clinical syndrome may be advantageous to further critical research, promote public policy work, and encourage physicians to recognize it.

need not be associated with cognitive impairment differentiates research on this condition from previous work that has focused on cognitive impairment as the driving force for financial vulnerability (3).

Age-associated financial vulnerability and financial exploitation (4, 5) can be linked–AAFV may predispose an older adult to financial exploitation–however, we perceive them as conceptually different. Age-associated financial vulnerability focuses on a potential condition that may have multiple causes and ultimately may or may not lead to exploitation. We view financial exploitation as focusing on specific mechanisms that drive a particular outcome, often consisting of intentional or forceful methods of exploitation. In this sense, persons who do not show AAFV can be victims of financial exploitation. More is known about the effects of financial exploitation; less is known about AAFV because we believe that this concept is new.

Epidemiology of AAFV: Prevalence and Risk Factors

Although a precise determination of the prevalence of AAFV would require assessment of a large population-based sample of older adults, community-

Table. Possible Factors Contributing to Age-Associated Financial Vulnerability

Domain Factor	Mechanism
Cognitive/emotional	
Executive dysfunction	Reduced ability to multitask, organize by time, and abstractly comprehend future ramifications of current financial actions
Acalculia	Inability to quickly calculate figures mentally to verify numbers or to perform numerical calculations
Frontal disinhibition	Reduced ability not to commit to financial courses of action with potentially negative consequences
Anxiety	May increase pressure to take bad financial risks or not pursue appropriate financial safeguards
Reduced ability to discern trustworthy persons	Results in having less information by which to discern good financial opportunities from bad financial risks
Medical and functional	
Serious progressive illness	Serious underlying medical illness unresponsive to traditional therapy may motivate patients to seek expensive and unproven treatments, creating susceptibility to fraud
Impaired mobility	Reduced ability to extricate themselves from an environment in which they are being pressured to make financial decisions
Vision and hearing loss	Decreased likelihood that complex financial transactions and/or documents are fully comprehended before execution
Polypharmacy	May contribute to delirium, directly influencing vulnerability; expense of medication may also lead to inadvisable risk-taking
Psychosocial	
Depression	Associated with executive dysfunction (7); shame and guilt may also preclude older persons from revealing their predicament to trusted friends and family who could extricate them from exploited role
Social isolation	No beneficent person within the older person's social network to recognize, mitigate, or report financial exploitation
Loneliness	Patients may engage potential exploiters as a mechanism of fostering social connectedness
Environmental/societal	
Wealth concentration	High concentration of wealth in older populations makes them targets of potential exploiters
Information overload	Complex offering of products and services may paradoxically reduce sound decision making in the aging brain
Sophisticated marketing	The aging brain may be more susceptible to increasing use of behavioral economics and cognitive neuroscience to sway consumers

The Finance, Cognition, and Health in Elders Study: Toward Preventing Financial Exploitation of Older Adults

by Gali H. Weissberger and S. Duke Han

February 28, 2018

Why is financial exploitation so common in the elderly population? Why do some older adults fare better than others when making financial decisions? What factors protect or place one at greater risk of being financially exploited? These are just some of the questions that a multidisciplinary team of investigators hope to answer through the Finance, Cognition, and Health in Elders Study (FINCHES) being carried out through USC's Department of Family Medicine.

AGING & MENTAL HEALTH
https://doi.org/10.1080/13607863.2019.1571020

Routledge
Taylor & Francis Group

Check for updates

Physical and mental health correlates of perceived financial exploitation in older adults: Preliminary findings from the Finance, Cognition, and Health in Elders Study (FINCHES)

Gali H. Weissberger[a], Laura Mosqueda[a], Annie L. Nguyen[a], Anya Samek[b], Patricia A. Boyle[c,d], Caroline P. Nguyen[a] and S. Duke Han[a,c,e,f,g]

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ABSTRACT

Objectives: Financial exploitation (FE) in old age is poorly understood, particularly among those without significant cognitive impairment. The Finance, Cognition, and Health in Elders Study (FINCHES) aims to identify factors associated with FE among cognitively-healthy older adults. Preliminary findings regarding physical and mental health correlates in the pilot phase of FINCHES are reported.

Method: Sixteen older adults who self-reported FE were demographically-matched on age, education, sex, and race/ethnicity to eighteen older adults who did not report past FE.

Results: Those who believed they were exploited endorsed significantly greater symptoms of depression ($p = 0.014$) and marginally greater symptoms of anxiety ($p = 0.062$). Participants trended towards lower perceived successful aging ($p = 0.094$). Perceived FE participants also endorsed greater medical conditions ($p = 0.047$), but follow-up individual item analyses suggest that this was driven by problems with sleep ($p = 0.030$).

Conclusions: These preliminary findings from the pilot phase of FINCHES highlight negative mental health factors associated with perceived FE among cognitively-intact older adults.

ARTICLE HISTORY
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Accepted 2 January 2019

KEYWORDS
Financial exploitation; aging; mental health; physical health; sleep

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Physical Frailty and Reported Financial Exploitation in Older Adults

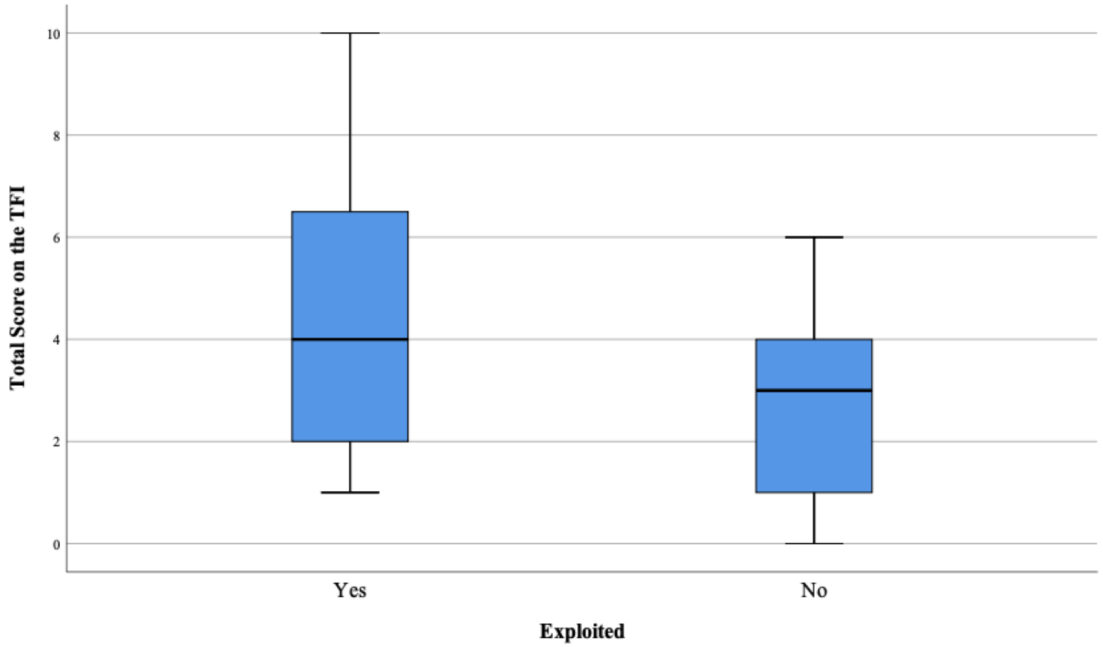

Figure 1. Boxplot display of total scores on the 15-item Tilburg Frailty Inventory (TFI) for perceived financially exploited (n = 24) and non-exploited (n = 13) older adults.

Qualitative Interviews of Financial Exploitation in Older Adults

THE GERONTOLOGICAL SOCIETY OF AMERICA®

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Advance Access publication January 10, 2021

OXFORD

Research Article

Perceived Types, Causes, and Consequences of Financial Exploitation: Narratives From Older Adults

Annie L. Nguyen, PhD, MPH,[1,*] Laura Mosqueda, MD,[1] Nikki Windisch, MSG,[1] Gali Weissberger, PhD,[2] Jenna Axelrod, PhD,[1] and S. Duke Han, PhD[1]

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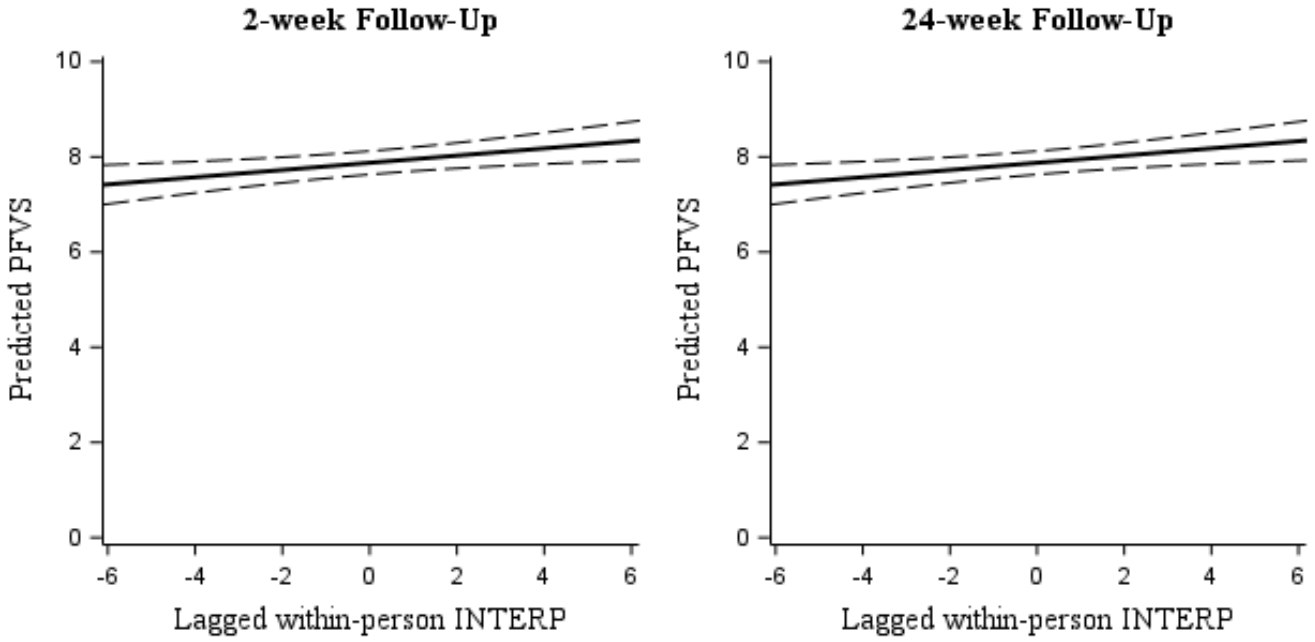
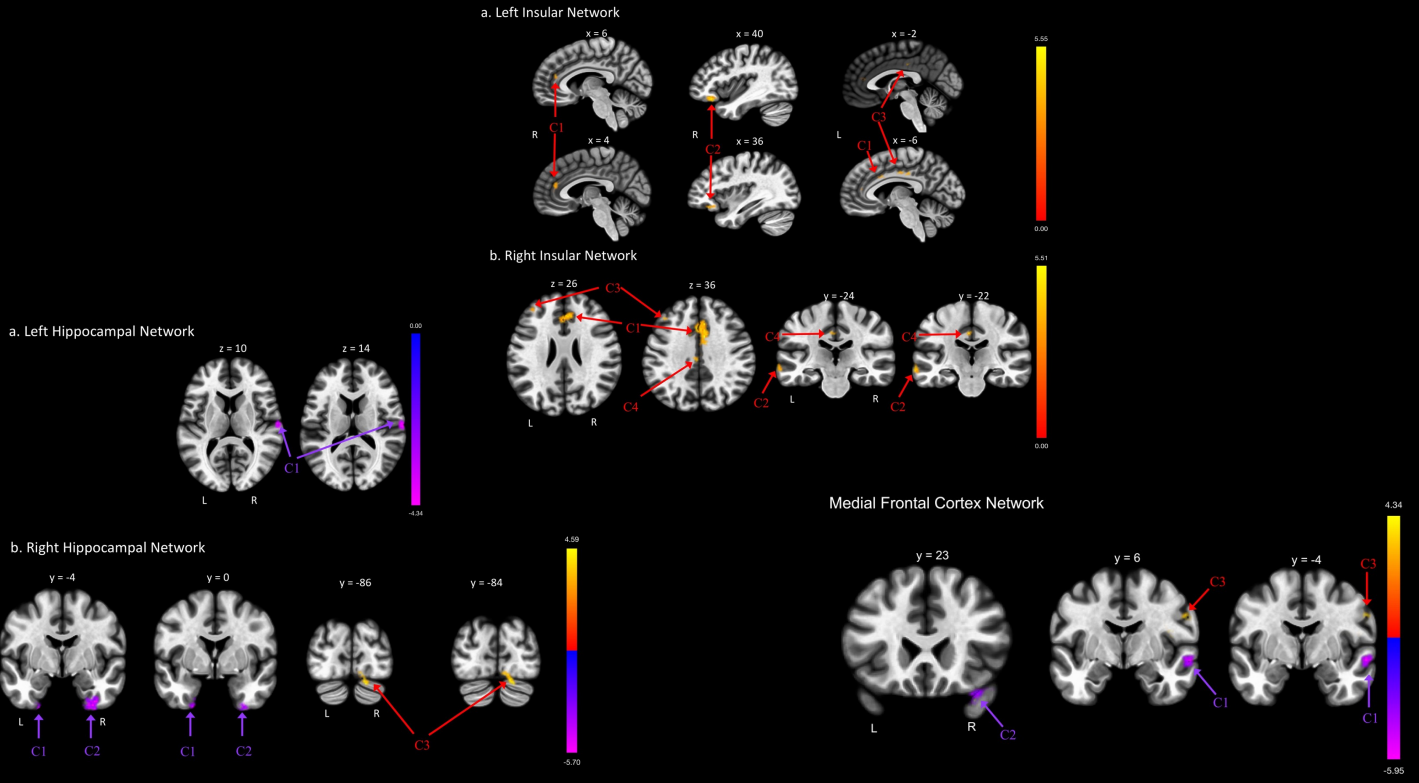
*Selected as Editor's Choice

Han Research Lab

Interpersonal Relationships Predict Financial Exploitation Vulnerability in Older Adults



Brain Connectivity and Reported Financial Exploitation in Older Adults



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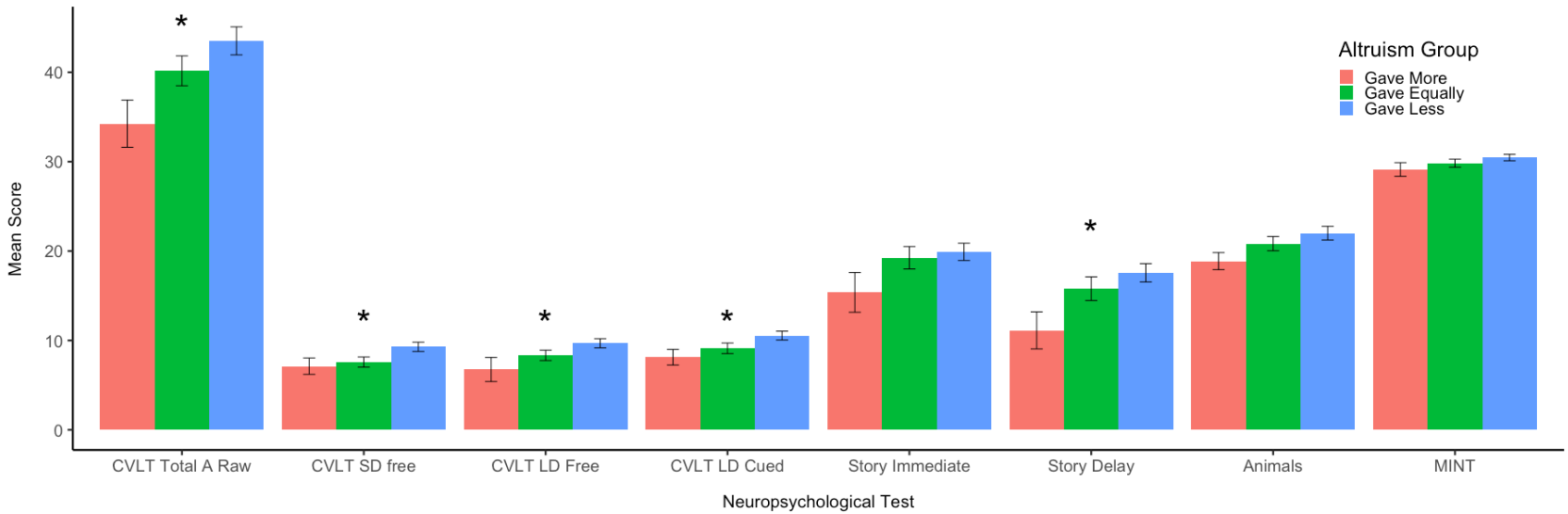
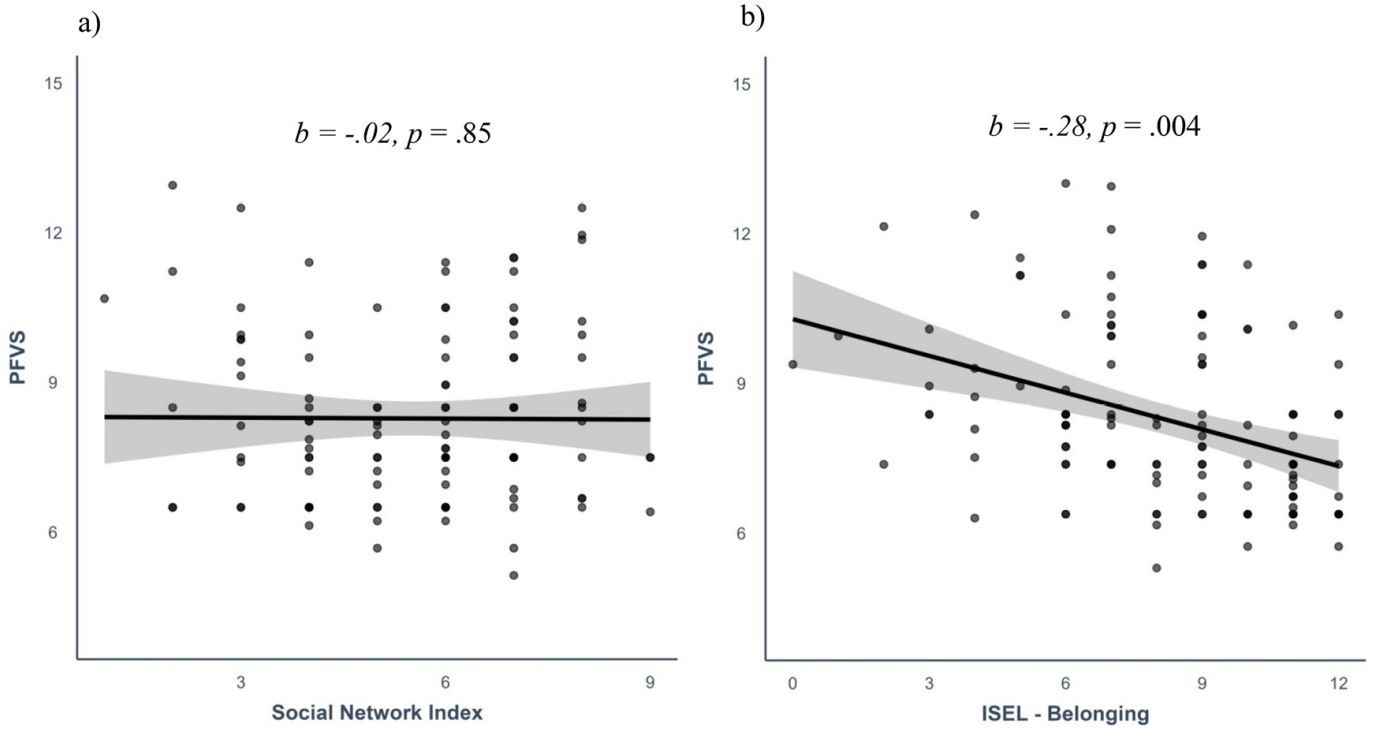
Financial Altruism and Alzheimer's Disease Neurocognitive Profile

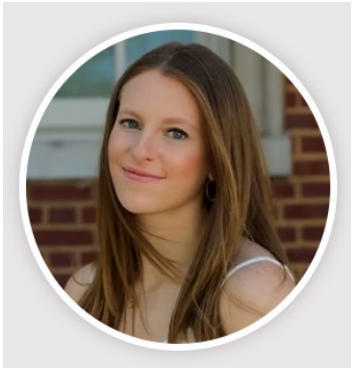


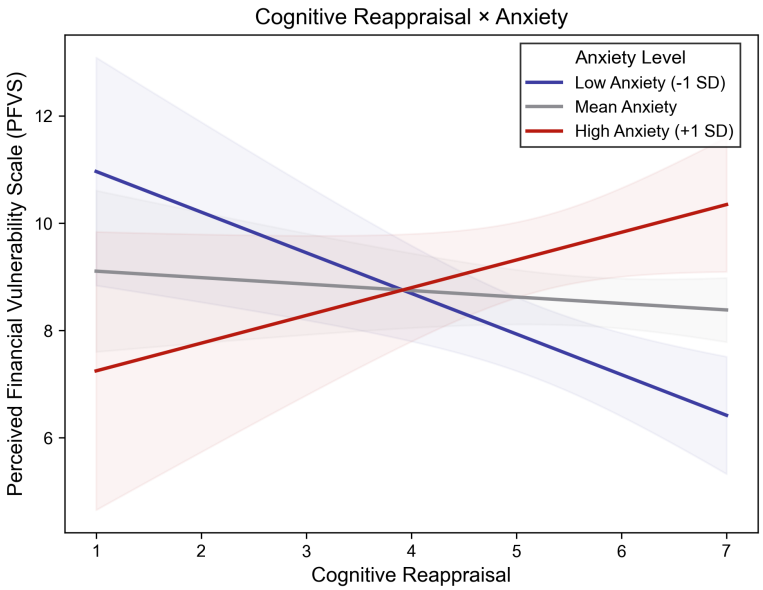

No Food
Or Drinks
Allowed
In the
Control Room

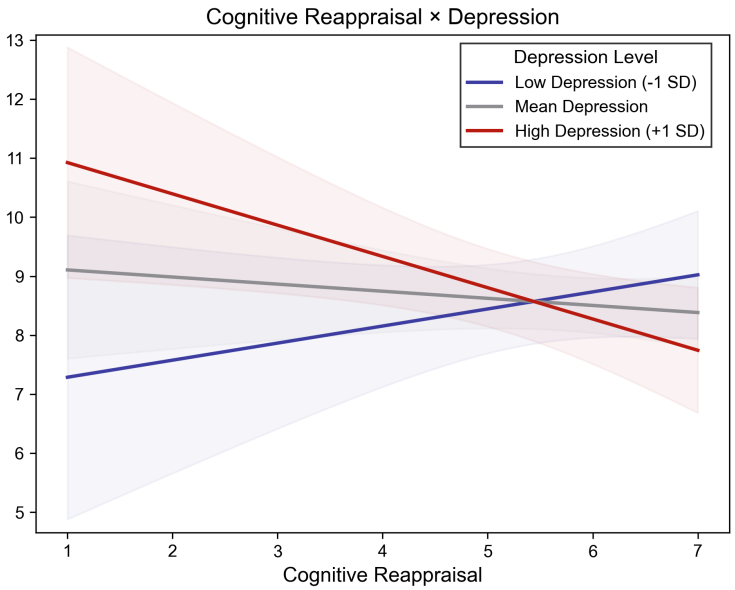
Social Connectedness and Financial Vulnerability in Older Age



Cognitive Reappraisal and Financial Vulnerability in Older Age







JOURNAL OF THE AMERICAN GERIATRICS SOCIETY

AGS Geriatrics Healthcare Professionals
Leading Change, Improving Care for Older Adults.

Letter to the Editor | Free Access

Elder Abuse in the COVID-19 Era

S. Duke Han PhD | Laura Mosqueda MD

First published: 20 April 2020 | https://doi.org/10.1111/jgs.16496 | Citations: 34

Abuse Invention/Prevention Model (AIM). AIM describes three core intersecting considerations in elder abuse: (1) the vulnerable older adult, (2) the trusted other, and (3) the context in which the abuse occurs. Tailored approaches that consider each of these can be developed to mitigate risks for elder abuse in the coronavirus disease 2019 (COVID-19) era.

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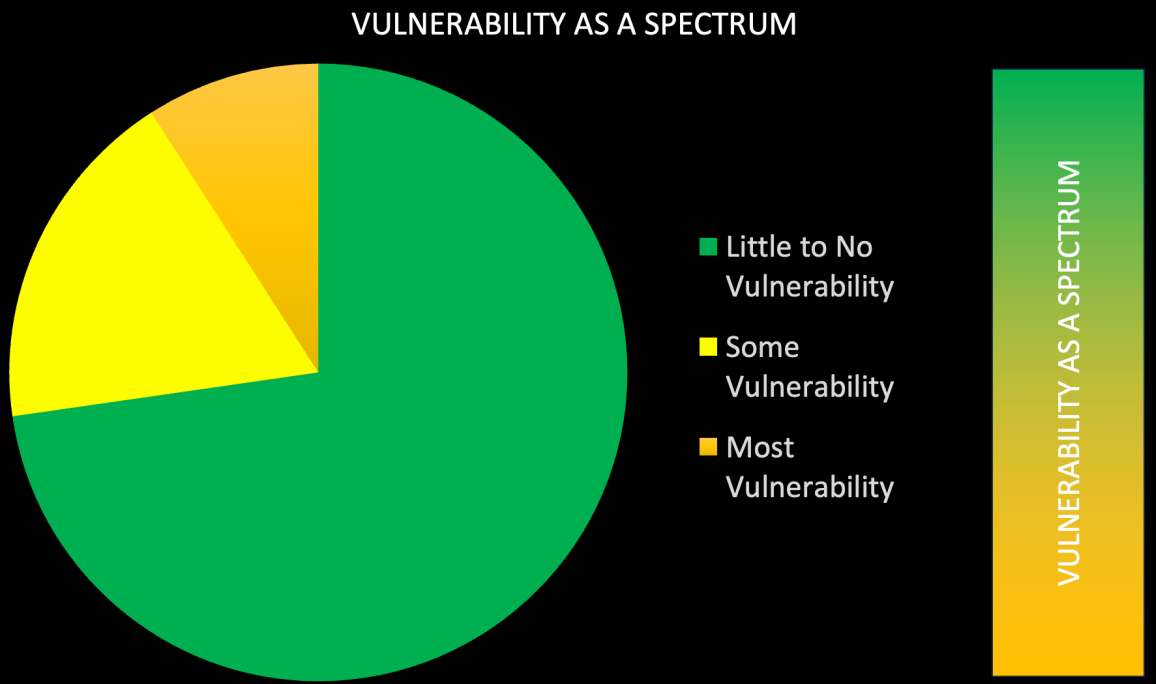
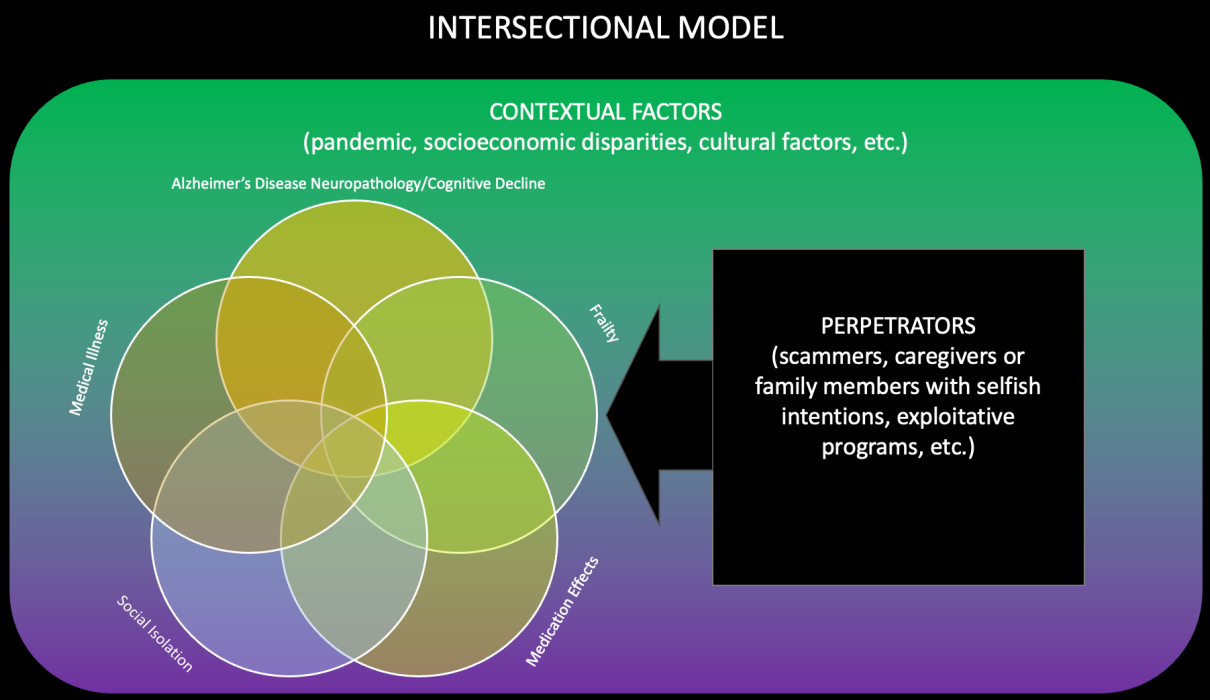
Main Points (So Far)

- Age-related cognitive decline could make an older adult more susceptible to scams and impact decision making.
- Although poor cognition is associated with poor decision making, poor decision making may not be solely due to poor cognition.
- A complex network of brain regions susceptible to age-related AD neuropathology may be involved in poor decision making in older age.
- More research needs to be done with diverse samples and to better understand the contextual factors surrounding decisions.
- Measures of financial exploitation vulnerability need to be developed that are sensitive to implicated brain networks as these may have relevance for AD detection as well as independence and wellbeing.

Some Final Thoughts…



Some Final Thoughts…



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