



WICHITA STATE  
UNIVERSITY

COLLEGE OF  
HEALTH PROFESSIONS

*Aging Studies, Department  
of Public Health Sciences*

# Health Literacy and Older Adults: What do we know?

---

**Amy Chesser, Ph.D.**

Aging Studies, Department of Public Health Sciences

College of Health Professions

Wichita State University

March 13, 2018

# Agenda

---

Older Adults

Ageism

Current Research

# Health Literacy Toward Solutions

---



Definition

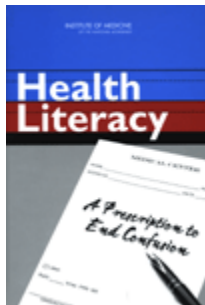
Assessment

Intervention

# What is Health Literacy?

---

“The degree to which individuals have the capacity to **obtain, process, & understand** basic health information & services needed to make appropriate **health decisions.**”



# Effects of Ageing and Health Literacy

---

The 2003 National Assessment of Adult Literacy (NAAL) estimated **only 3% of older adults, 65 and older, were proficient** with health literacy skills

# **Age-Related Changes and Health Literacy**

---

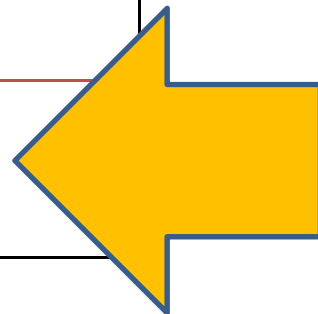
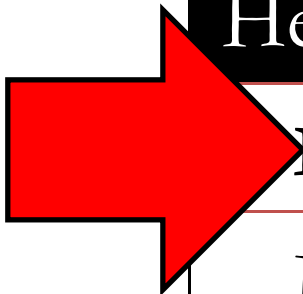
There are several different age-related changes that could contribute to the decrease in health literacy in older adults.

- Decline in cognitive ability
- Physical impairments (i.e. hearing and vision loss)
- Psychosocial factors
- Sense of shame and embarrassment



# State of Kansas Health Literacy Rates (BRFSS 2014)

Health Literacy Rate	Weighted %
Low Health Literacy	7.5%
Moderate Health Literacy	61.1%
High Health Literacy	31.4%





# Older Adult Groups



# Older Adult Groups

---

## Older Adults

- Typically seen as a large group age 65 and older
- Arbitrarily set by researchers
- We did not locate any studies using these three groups

# Older Adult Groups cont. 1

---

Several studies have divided older adults into subgroups.

Forman, Bermand et al (1992)<sup>1</sup> identified

- the young old (60 to 69),
- the middle old (70 to 79),
- and the very old (80+).

1. Forman, D. E.; Berman, A. D.; McCabe, C. H.; Baim, D. S.; Wei, J. Y. (1992). "PTCA in the elderly: The "young-old" versus the "old-old". *Journal of the American Geriatrics Society*. **40** (1): 19–22. [doi:10.1111/j.1532-5415.1992.tb01823.x](https://doi.org/10.1111/j.1532-5415.1992.tb01823.x). [PMID 1727842](https://pubmed.ncbi.nlm.nih.gov/1727842/).

## Older Adult Groups cont. 2

---

Others<sup>1,2</sup> have identified the subgroups according to significant life changes

- the young-old (65 to 74),
- middle-old (75–84),
- and oldest-old (85+).

1. Zizza, C. A.; Ellison, K. J.; Wernette, C. M. (2009). "Total Water Intakes of Community-Living Middle-Old and Oldest-Old Adults". *The Journals of Gerontology Series A: Biological Sciences and Medical Sciences*. **64A** (4): 481–486. [doi:10.1093/gerona/gln045](https://doi.org/10.1093/gerona/gln045).

2. "[Demographics of Aging](https://www.transgenerational.org/)". *Transgenerational.org*. Retrieved 2018/17/01

# Published Screening Tools

#	Tool	Year	Type
1.	WRAT-R3	1965,1995	Word recognition
2.	REALM*	1991, 1993	Health word recognition
3.	TOFHLA*	1995	Comprehension of health materials
4.	S-TOFHLA*	1999	Comprehension of 2 health forms
5.	HALS	2004	Use of print materials to accomplish health tasks
6.	NVS	2005	Comprehension, numeracy interpretation of food label
7.	MART	1997	Medical word recognition
8.	LAD	2001	Diabetes word recognition
9.	REALM-R	2003	Health word recognition
10.	REALM-SF	2006	Health word recognition
11.	REALM-Teen	2006	Adolescent health word recognition
12.	SAHLSA	2007	Spanish word recognition and comprehension

# Health Literacy: Single Item Screener

---

**(1) How confident are you in filling out medical forms by yourself? For example insurance forms, questionnaires, and doctor's office forms. Would you say...**

Response choices:

- Not at all
- A little
- Somewhat
- Quite a bit
- Extremely

# Health Literacy and Older Adults: The literature (2016)

---

- No study reported the **validation** of health literacy tools for use in an ***older adult population***.
- The use of the Single Item Screener (SIS) in comparison with results from the S-TOFHLA reported ***mixed results***.
- The ***validation and standardization of tools*** has important implications as the call for an ***integrated health literacy*** screening tool ***in primary care*** settings increases.

# Ageism





# Ageism

---

- Per Merriam Webster: Ageism is:
  - prejudice or ***discrimination*** against a particular age-group and especially the ***elderly***
- Ageism: negativism toward older adults; irrational prejudice toward the overall aging population

# Ageism: Current Research

---

Current publications were (1986-2017) were  
Searched in PubMed (Medline)

U.S. studies only

Search Terms:

“Ageism” AND “Older Adults”

“Ageism” AND “Elderly”

“Ageism” AND “Geriatrics”

“Aged”

N=38

# **Ageism: Current Research cont.**

---

The majority of research falls within 3 categories:

1. Education, Ageism and Health Professionals (Nursing, PT, MD)
2. Ageism and Adults
3. Ageism within the older adult population

# Ageism and Health Literacy

---

- To date, our team was unable to locate any peer-reviewed published articles on ***Health Literacy*** and **Ageism**.

# **Ageism and Knowledge Study**

---

- We conducted a pilot study to investigate whether a relationship exists between the level of knowledge of aging and ageist attitudes
- Convenience sample of students enrolled in the fall semester at Wichita State University
- Fraboni Scale of Ageism (FSA).
- Palmore Facts on Aging Quiz.

# Ageing and Knowledge Study cont. 1

---

N=123 respondents

Mostly women (79%), age 19-60, white (71), and a senior in undergraduate studies (53%)

Overall score of knowledge was low ( $M = 10.65$ ,  $SD = 2.99$ ), possible score range 0-25

Overall attitudes towards older adults was positive ( $M = 51.70$ ,  $SD = 8.2$ ), possible score range 23-92, neutral score 57.5

## Ageing and Knowledge Study cont. 2

---

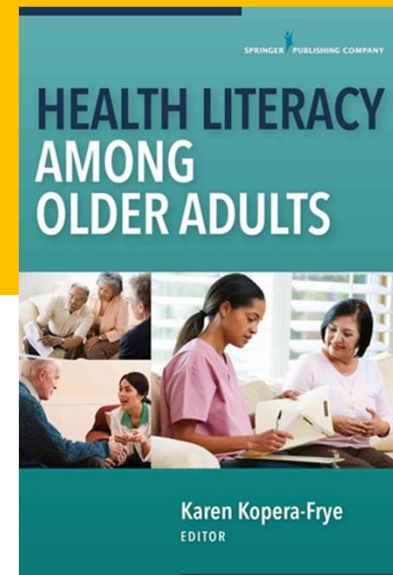
Results indicated a significant negative relationship between knowledge and ageism,  $r(117) = -.216$ ,  $p < .05$ ; higher knowledge score, lower FSA score,

- more positive attitudes in students of greater knowledge.

A significant negative relationship between age and ageism was also found,  $r(114) = -.234$ ,  $p < .05$ ; greater age, lower FSA score,

- implying more positive attitudes in students of greater age.

# Current Research: 2000-2017





# Health Literacy and Older Adults: The literature

---

Landmark Study: Baker, et. al (2000) **The association between age and health literacy among elderly persons**

- **S-TOFHLA AND MMSE**
- **N=2,774**
- **Mean S-TOFHLA scores declined 1.4 points (95% CI 1.3-1.5) for every year increase in age (p < .001).**
  - After adjusting for sex, race, ethnicity, and education, the S-TOFHLA score declined 1.3 points (95% CI 1.2-1.4) for every year increase in age.
  - Even after adjustment for performance on the MMSE, the S-TOFHLA score declined 0.9 points (95% CI 0.8-1.0) for every year increase in age (p < .001).
  - Differences in newspaper reading frequency, visual acuity, chronic medical conditions, and health status, did not explain the lower literacy of older participants.

# **Health Literacy and Older Adults: WSU study**

---

- Data was collected by the State of Kansas Health Department BRFSS survey.
- 3 question screening tool
- Cognitive function was assess through a series of self-report questions.

## Health Literacy and Older Adults: WSU study cont.

---

- Having **high** health literacy or **moderate** health literacy after the age of 65 years **decreases with each subsequent year of life**, relative to those with low health literacy.
- **Cognitive decline alone** was the single most important predictor of health literacy in older adults.

# Health Literacy and Older Adults: The literature

---

Current publications were (2000-2017) were  
Searched in PubMed (Medline)

Search terms:

- “Health Literacy” AND “Older Adults”
  - “Health Literacy” AND “Elderly”
  - “Health Literacy” AND “Oldest Old”
  - “Health Literacy” AND “Geriatrics”
- 
- 1 book
  - 127 total published articles
  - 0 publications with title including “Oldest Old”

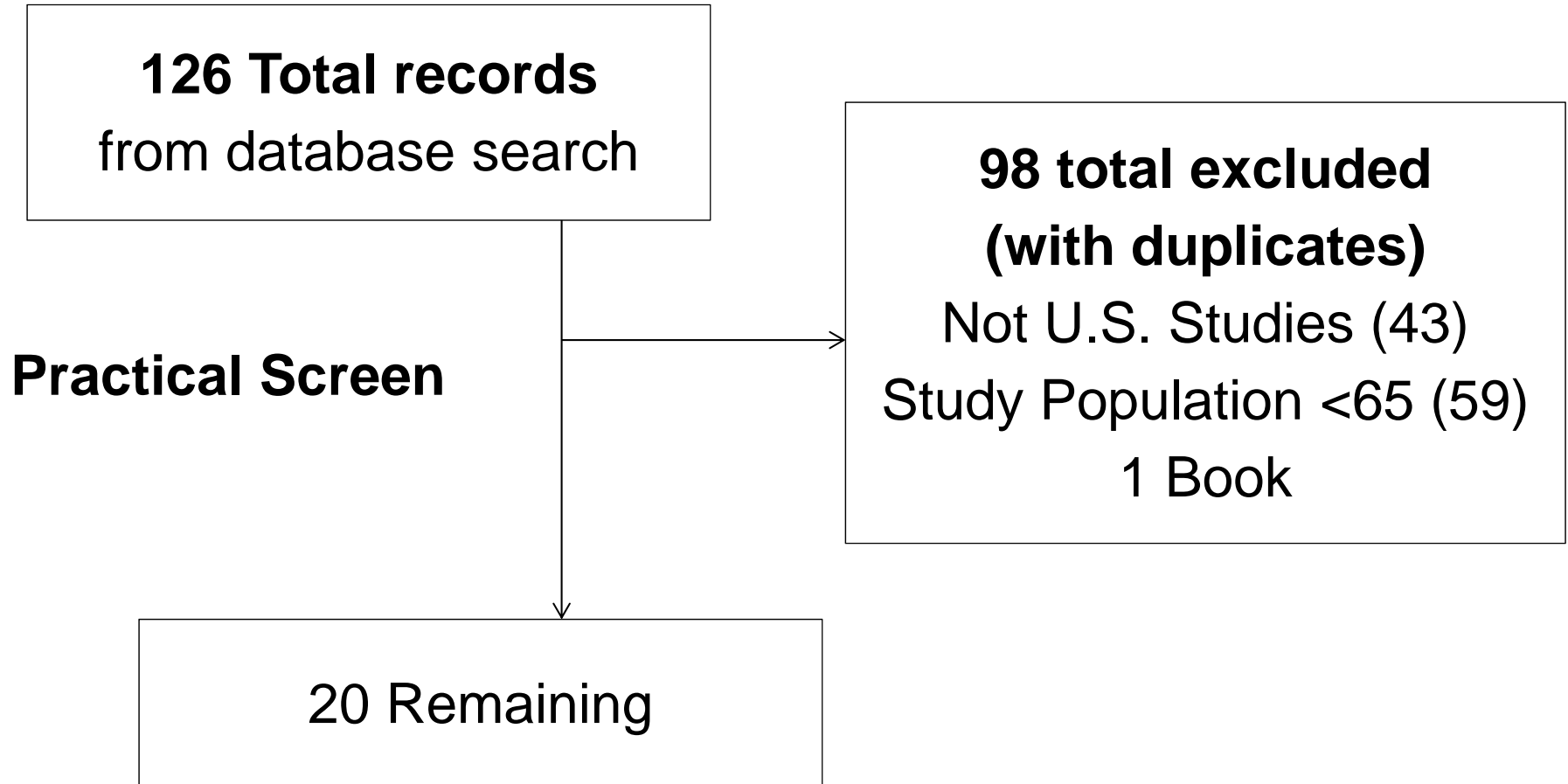
# Health Literacy and Older Adults: The literature

---

<b>Year</b>	<b>Number of Published Articles</b>
2000 -2005	3 publications
2006-2010	26 publications  2009: 1 book: Ruby Brougham: New directions in aging research: health and cognition
2011-2015	59 publications
2016-2017	37 publications
<b>TOTAL</b>	<b>127</b>

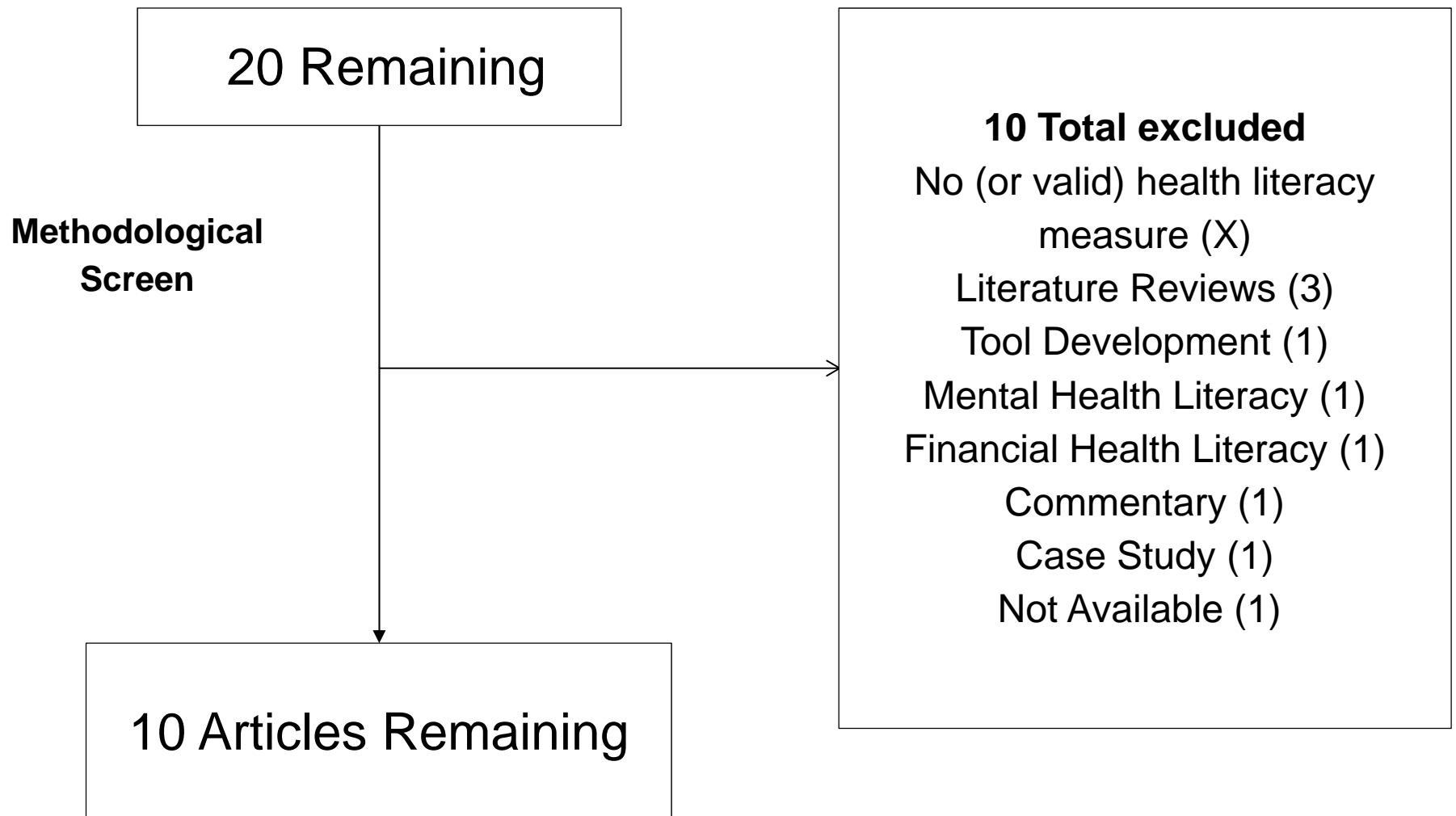
# Health Literacy and Older Adults: The literature

---



# Health Literacy and Older Adults: The literature

---



# Health Literacy and Older Adults: The literature

---

10 Articles Remaining

**10 Total  
(with Duplicates)**

REALM (3)

S-TOFHLA (3)

TOFHLA (3)

SAHLSA (1)

CAPS (1)

- 0 Articles Testing **Interventions with participants 65+**
- 0 Articles breaking analysis into **3 groups**



# **Health Literacy and Older Adults: Where Are We Now?**

---

- The majority of the articles that passed practical and methodological screening were assessment studies.
- The case study (Cutilli et al. 2011) tests an intervention in geriatrics
- More than 190,000 articles on “Health Literacy” we have a great opportunity to advance Health Literacy and Older Adult interventions.

# Final Articles

---

1. An, S. and N. Muturi, *Subjective health literacy and older adults' assessment of direct-to-consumer prescription drug ads*. J Health Commun, 2011. **16 Suppl 3**: p. 242-55.
2. Baker, D.W., et al., *Health literacy, cognitive abilities, and mortality among elderly persons*. J Gen Intern Med, 2008. **23**(6): p. 723-6.
3. Chin, J., et al., *Cognition and Health Literacy in Older Adults' Recall of Self-Care Information*. Gerontologist, 2017. **57**(2): p. 261-268.
4. Cordasco, K.M., et al., *Health literacy screening of geriatric monolingual Spanish-speaking patients using single-item literacy screening questions and education*. Health Educ J, 2012. **71**(5): p. 597-605.
5. Ganzer, C.A., K.C. Insel, and L.S. Ritter, *Associations between working memory, health literacy, and recall of the signs of stroke among older adults*. J Neurosci Nurs, 2012. **44**(5): p. 236-43.
6. Garcia, C.H., et al., *Health literacy associations between Hispanic elderly patients and their caregivers*. J Health Commun, 2013. **18 Suppl 1**: p. 256-72.
7. Howard, D.H., T. Sentell, and J.A. Gazmararian, *Impact of health literacy on socioeconomic and racial differences in health in an elderly population*. J Gen Intern Med, 2006. **21**(8): p. 857-61.
8. MacLeod, S., et al., *The impact of inadequate health literacy on patient satisfaction, healthcare utilization, and expenditures among older adults*. Geriatr Nurs, 2017. **38**(4): p. 334-341.
9. Mosher, H.J., et al., *Association of health literacy with medication knowledge, adherence, and adverse drug events among elderly veterans*. J Health Commun, 2012. **17 Suppl 3**: p. 241-51.
10. Sequeira, S.S., et al., *Limited health literacy and decline in executive function in older adults*. J Health Commun, 2013. **18 Suppl 1**: p. 143-57.

# What do **you** think?



# Contact: Amy K. Chesser

---



.....  
*Amy K. Chesser, PhD, Assistant Professor  
Aging Studies,  
Department of Public Health Sciences  
College of Health Professions*

.....  
Office: Ahlberg Hall, Room 323  
Phone: 978-3145  
Email: [amy.chesser@wichita.edu](mailto:amy.chesser@wichita.edu)