

August 8, 2023

"RHD Hidden Diagnosis" NC Stroke Advisory Council

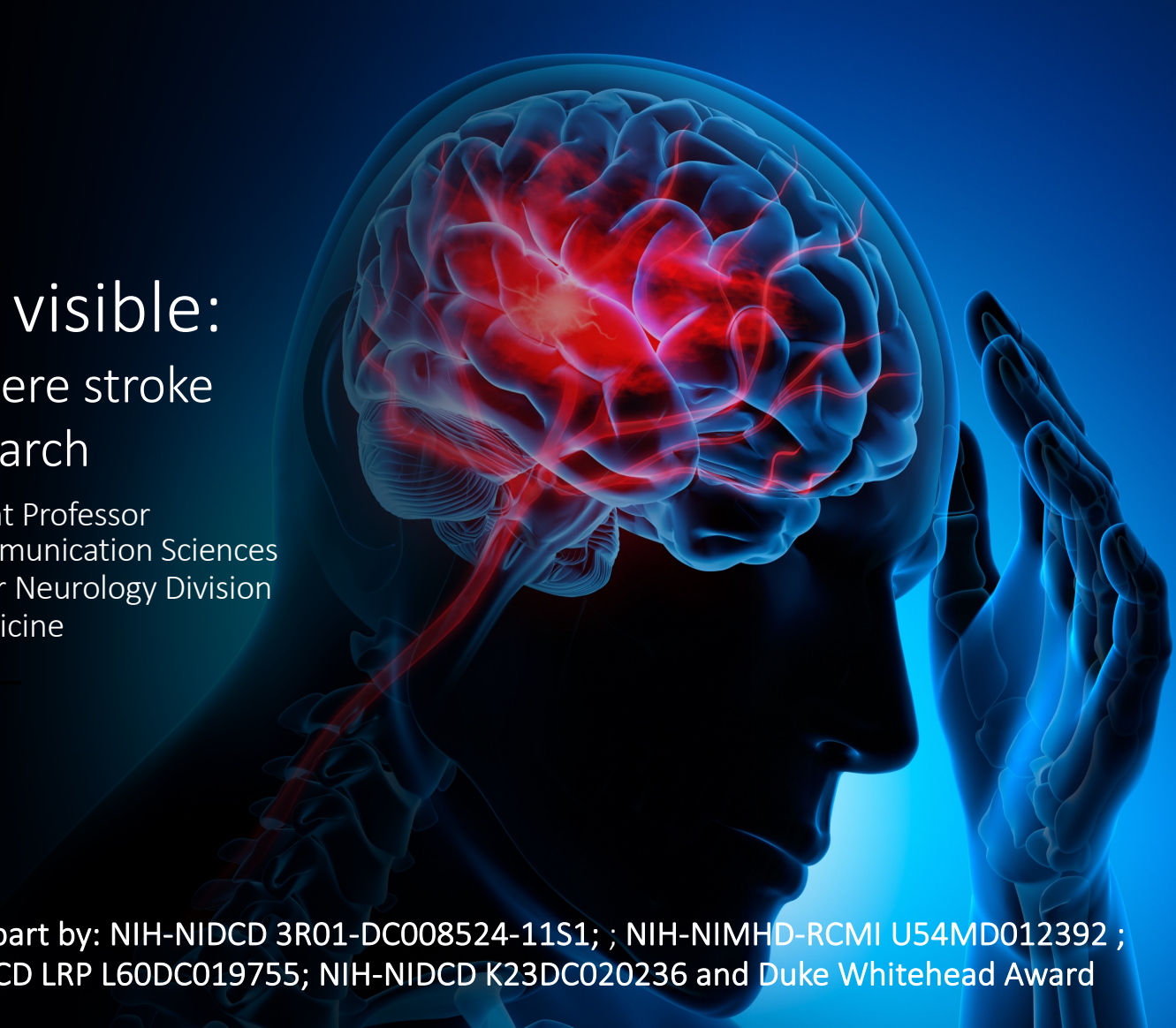


Jamila Minga, Ph.D., CCC-SLP
RHD Researcher and Producer
Assistant Professor
Duke University School of Medicine



Michael Pearce
Director
Assistant Professor
North Carolina Central University





Making *the hidden* visible:

Advances in right hemisphere stroke communication research

Jamila Minga, PhD., CCC-SLP, Assistant Professor
Department of Head and Neck Surgery & Communication Sciences
Department of Neurology, Stroke and Vascular Neurology Division
Duke University School of Medicine

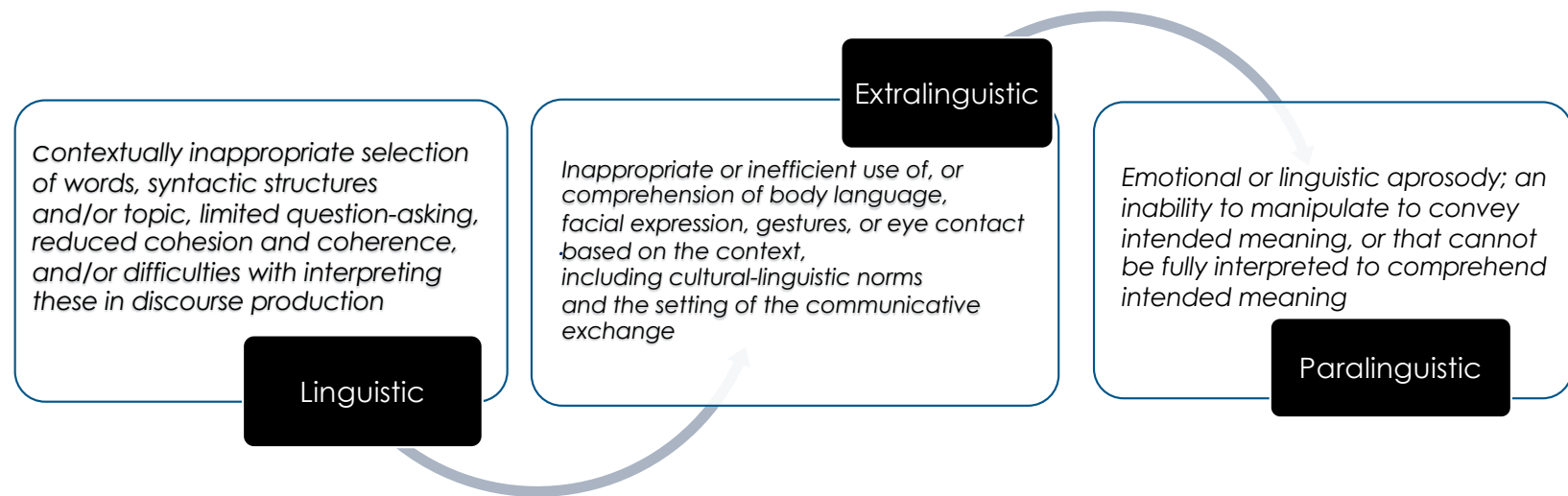
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When communication is

DISORDERED...

in nearly 80% of
right hemisphere
strokes

Apragmatism [*ei-præg'mə-tīz'əm*] a disorder in conveying and/or comprehending meaning or intent through **linguistic**, extralinguistic, and/or paralinguistic modes of context-dependent communication. The context includes (among other things) the conversational partner(s), environment, cultural considerations, and goal of the interaction.



RHDBank

Rhd.talkbank.org

Improve the rigor, quality, and reproducibility of RHD language production research by creating a large multi-site corpus for scientific inquiry and education.

1. Free Speech Samples -- Stroke Story and Coping
2. First Encounter Task
3. Picture Descriptions -- Cookie Theft & Cat Rescue
4. Story Narrative -- Cinderella
5. Procedural Discourse -- PB and J Sandwich
6. Question Production -- Unfamiliar Object Task

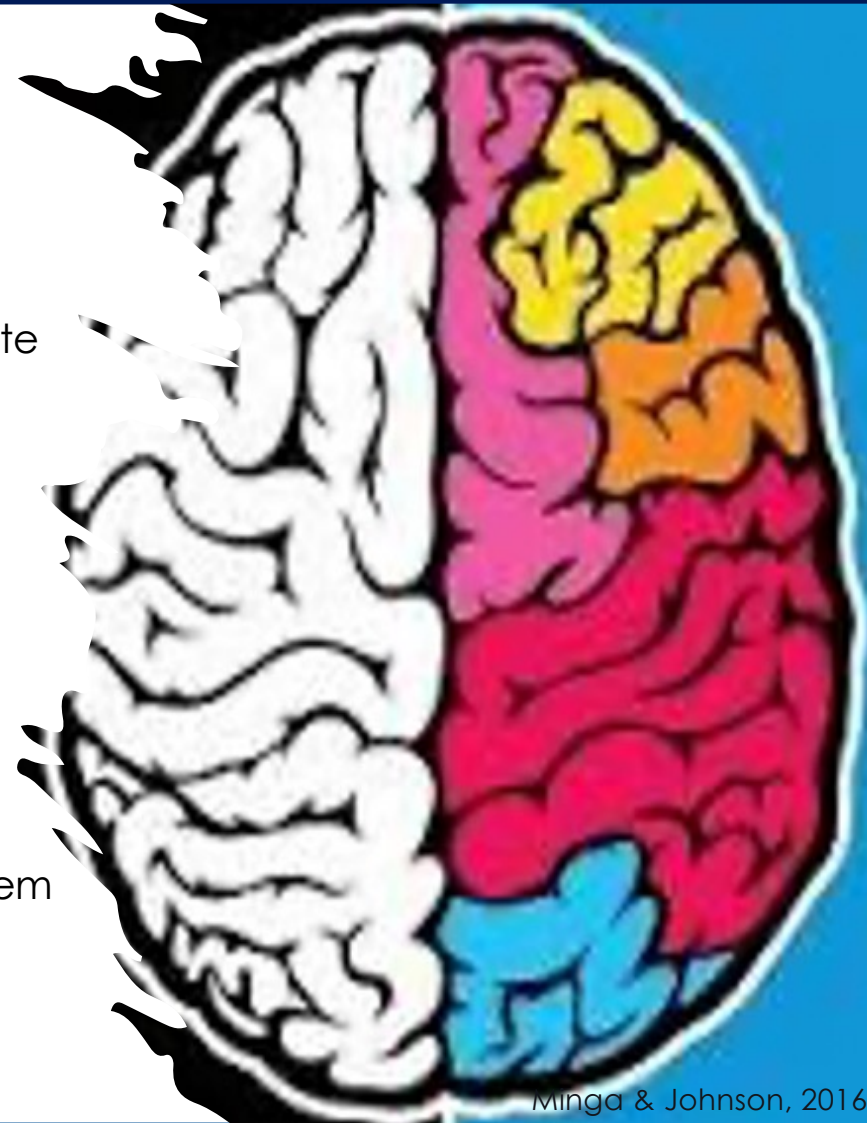
Cognitive Linguistic Quick Test (Helm-Estabrooks, 2001)

Apples Test (Bickerton, Samson, Williamson, & Humphreys, 2012)

General Short Form of the Communicative Participation Item Bank (Baylor et al., 2013)

Indented Paragraph Test (Caplan, 1987)

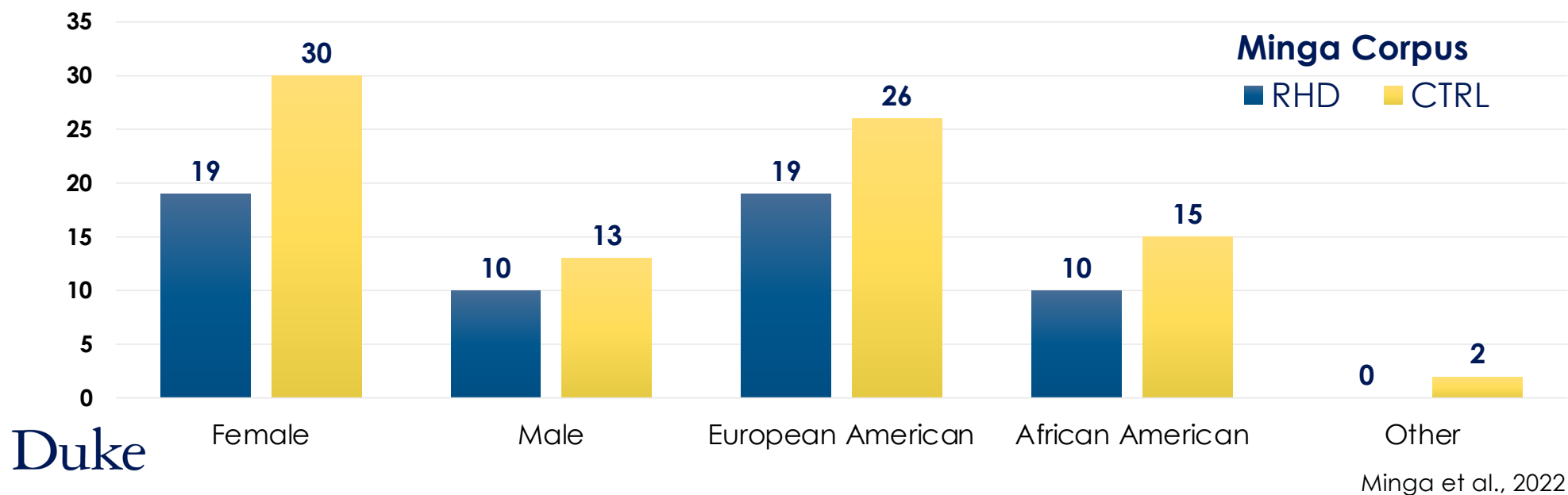
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Countries (# Members)

Start	2017	1 (3) : United States
Current	2023	19 (199) : United States, Australia, Austria, Belgium, Canada, China, Denmark, Finland, Germany, Greece, Hong Kong, Ireland, New Zealand, Poland, Russia, Spain, Sweden, Switzerland, United Kingdom

RHDBank is cited in more than 20 publications/presentations.



Characterizing language use

QUESTION TYPES



Alternative

A or B;
A but not B



Polar

Elicit a
yes/no



Content

Wh-questions

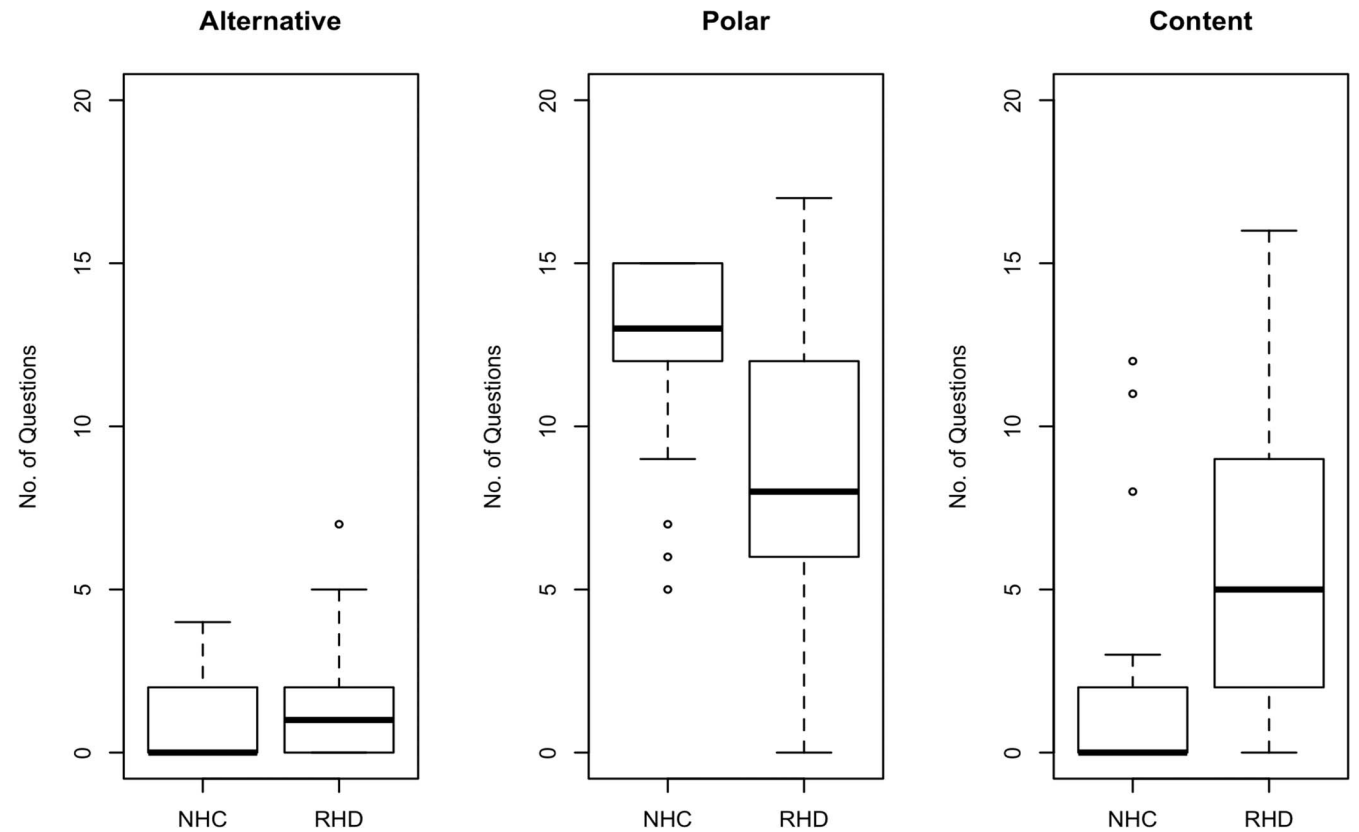
Characterizing language use

Question-production task EXPLICIT QUESTION REQUEST

RHD: N=29, 52±12.39 years

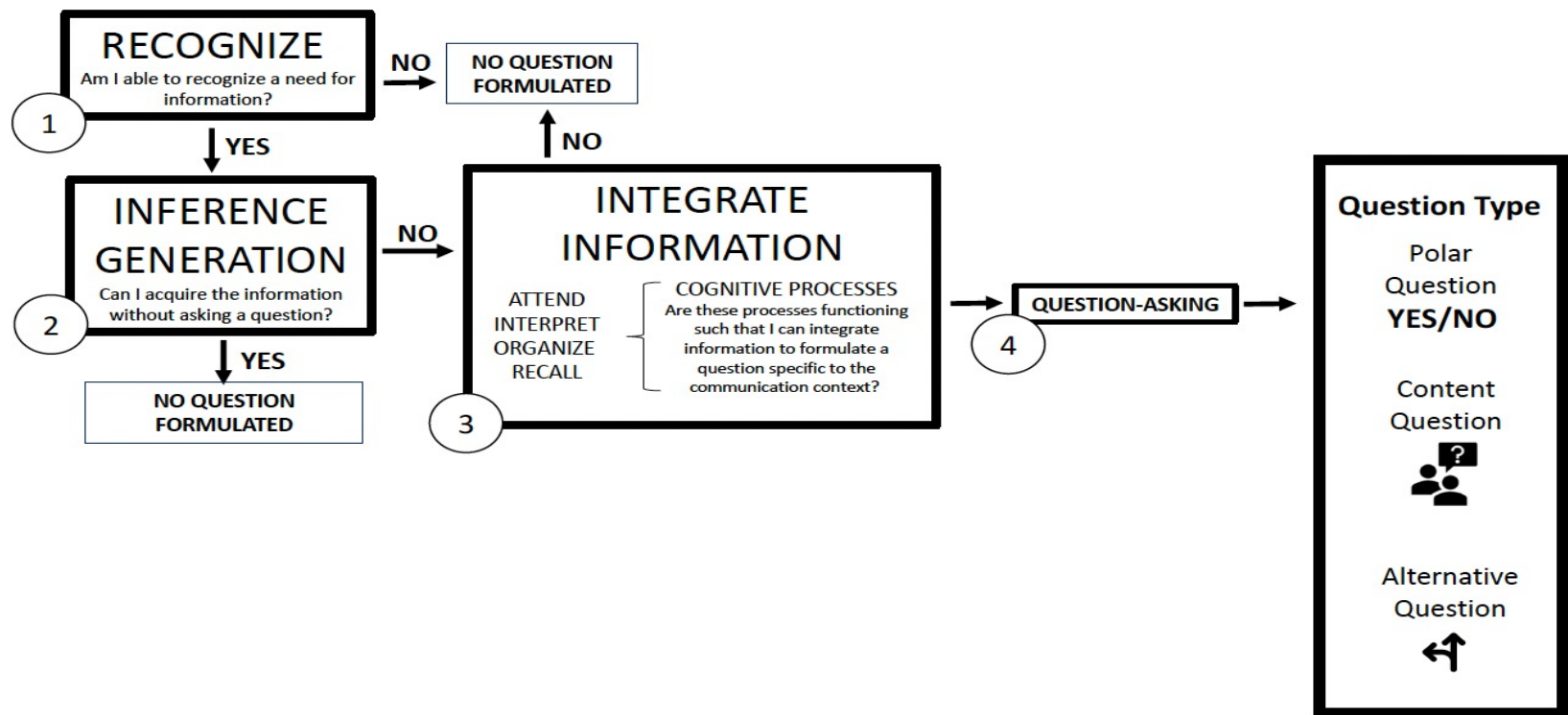
Control: N=21, 49±9 years

$p < 0.005$



Characterizing language use

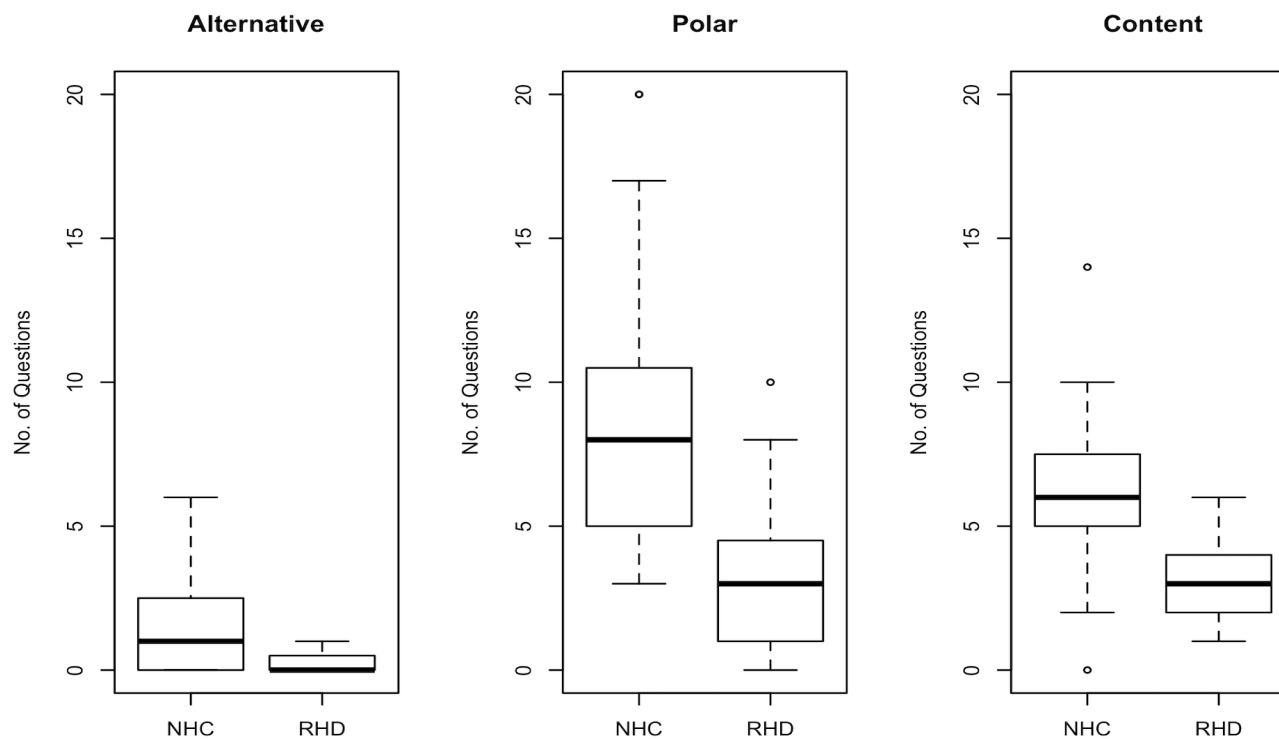
Right hemisphere Framework for Asking Questions (R-FAQs)



Characterizing language use

Conversational Discourse NO EXPLICIT QUESTION REQUEST

RHD: N=15, 52±9.5 years; AA
RHD N= 7; Controls: N=15,
45±11 years; AA Controls N=7
p = 0.001



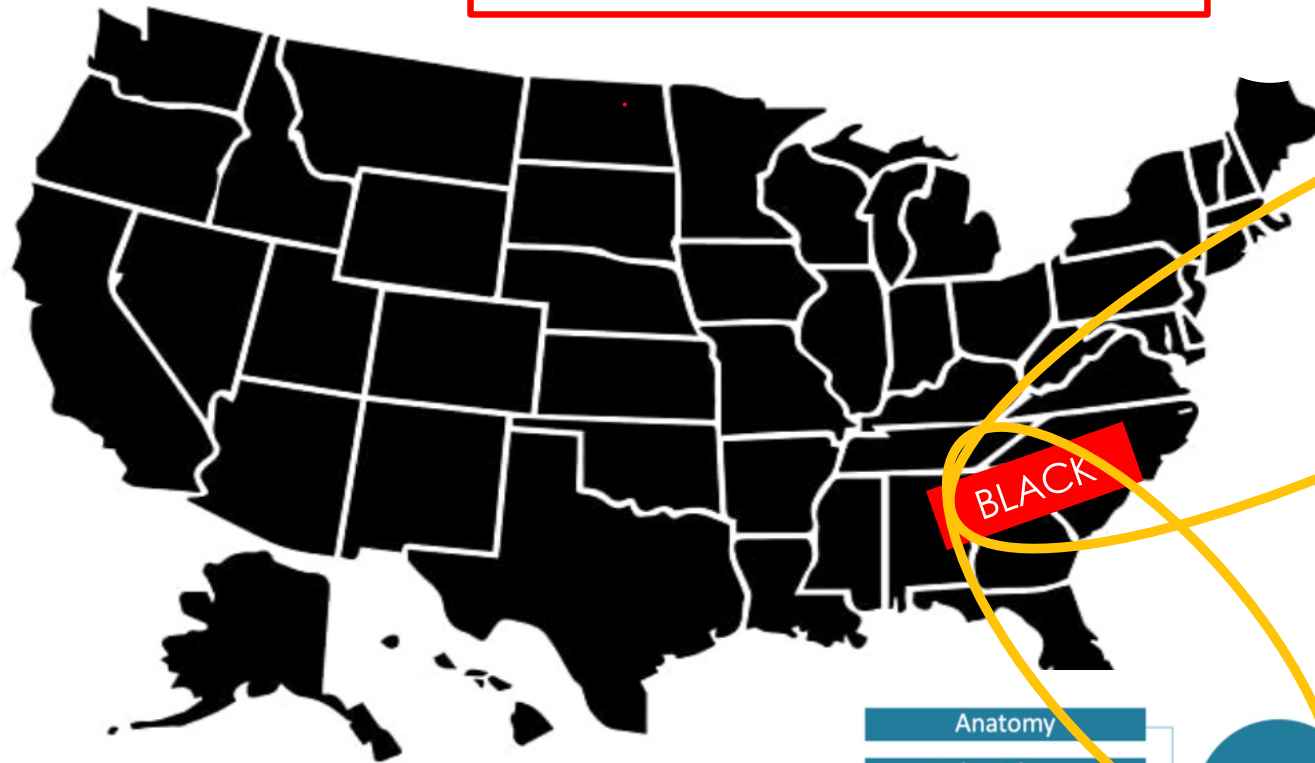
Characterizing language use



		Attention	Memory	Executive Function	Language	Visuospatial
Conversational Discourse Moderate correlations between question types & CLQT EF and spatial skills,	Content	0.27*	0.12	0.39**	0.25	0.34*
	Control	0.12	0.10	0.26	0.32	0.12
	RHD	0.30	0.11	0.52*	0.13	0.38
	Polar	0.23	0.18	0.35*	0.23	0.31*
	Control	0.14	0.16	0.17	0.26	0.09
	RHD	0.09	0.33	0.45*	0.19	0.20
	Total	0.23	0.15	0.41**	0.22	0.35**
	Control	0.09	0.15	0.29	0.28	0.22
	RHD	0.16	0.28	0.44*	0.11	0.27

* $p < 0.05$, ** $p < 0.01$

STROKES are the LEADING CAUSE of
DISABILITY in the United States



1 in 5 WOMEN have strokes



Social Determinants of Health

Neighborhood
Environment

Social &
Community
Context

Economic
Stability

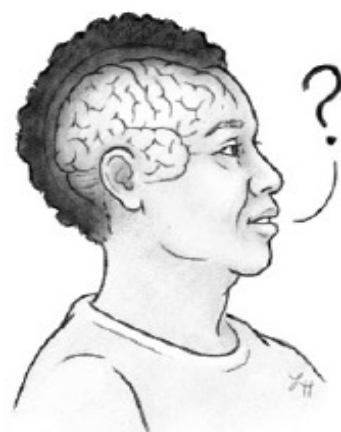
Healthcare &
Education
Access & Equity

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CDC, 2022; Chinn et al., 2021; Davis et al., 2014; Ellis et al., 2015; Harris, 2006; Howard, 2005; Jones, 2000; Katz et al., 2007; USDHHS, 2022

Characterizing language use

Does race influence question-asking in patients with right hemisphere damage (RHD)?



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32
women
from the
RHD Bank

Black & White

with RHD
without RHD

were asked
to

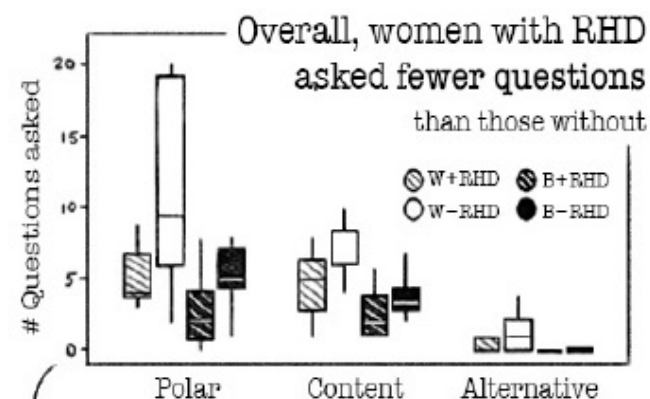
get to know
an unfamiliar
person

via an
informal 5 min
conversation

Questions were coded
into 3 categories:

- 1 polar (yes / no)
- 2 content (wh- / how)
- 3 alternative (either / or)

then analyzed by
type & frequency



Black women, regardless of RHD status, asked fewer questions than white participants, averaging:

59%
fewer
overall

58% fewer polar
questions
61% fewer content
questions

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Kasambira-Fannin...Minga, J. (2023)



Clinical Implications

- Question-asking is different after right hemisphere stroke
 - Polar questions & EF processes important to differentiation
- Culture is inseparable from pragmatic communication
- Offer more information during clinical interactions
- Ask questions to facilitate information exchange
 - Are there question that you wish your patients would ask?
- Serve as advocates for RH stroke survivors to receive referrals to speech-language pathology
- Help to recruit for representative research samples

THANK YOU!



Right Hemisphere Stroke
Research & Education Fund

Right Brain Stroke
Research Registry



We're
recruiting!

PARTICIPANTS:
Adults (18+ years)
< 2 years post single right hemisphere stroke
and
People with no history of stroke

Jamila Minga, PhD., CCC-SLP
Jamila.minga@duke.edu

QUESTIONS?

Visit RHDBank at rhd.talkbank.org – MingaRHClab@duke.edu

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Neyla Kirby, UG Duke

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- Jada Elleby, MS
- Megan Hollembaek, MS
- Mallory Park, MS
- Joyah Morris MS
- Kayla Valentine, MS
- Taravia McLawhorn, MS
- Jennifer Nelthropp, CCC-SLP

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