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Cognitive Symptom Trajectories Among Forensic Inpatients Diagnosed with Psychotic Disorders

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Cognitive Symptom Trajectories among Forensic Inpatients Diagnosed with Psychotic Disorders

CSU Student Research Competition
May 4th-5th, 2018

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Collaborator: David M. Glassmire, PhD

Patton State Hospital



California State University
MONTEREY BAY

Disclosures

- ▶ The statements and opinions expressed are those of the authors and do not constitute the official views or the official policy of DSH-Patton, the California Department of State Hospitals, or the State of California.

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- ▶ University of Minnesota Press: Test Division

Overview of Psychotic Disorders

Schizophrenia, Schizoaffective

Characterized by Hallucinations & Delusions

1% of U.S. population

Clinicians need accurate information for:

Assessment

Understanding patient experience

Treatment

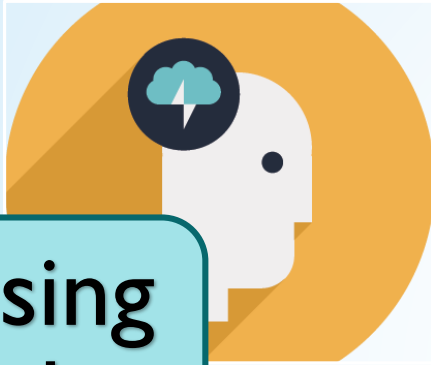
Two-Part Cross-Sectional Study

Overall Cognitive Symptom Trajectory

Impact of Comorbid Mood Disorders

Cognitive Symptoms

Processing Speed



Reasoning



Verbal Memory



Working Memory



Attention/Vigilance



Research Question 1



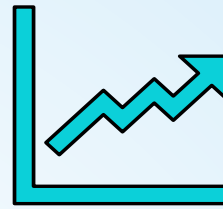
What is the trajectory of cognitive symptoms for patients as they age?

Research Question 2



How would comorbid mood disorders impact cognitive symptom severity?

Research So Far

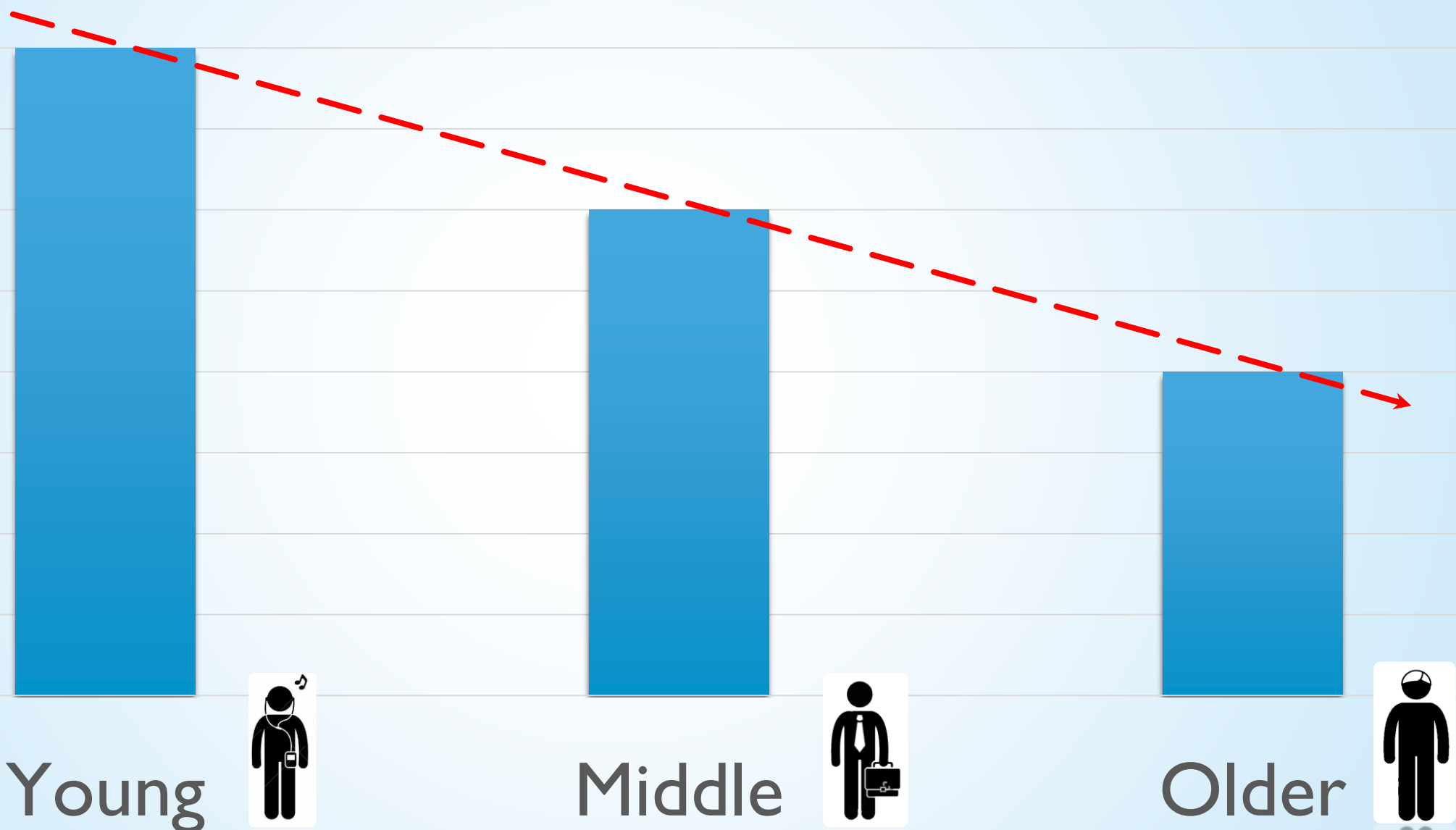


Follow Patients over Time

Compare across Age Groups

Neurodevelopmental Trajectory Model

Severity of Symptoms



Young



Middle



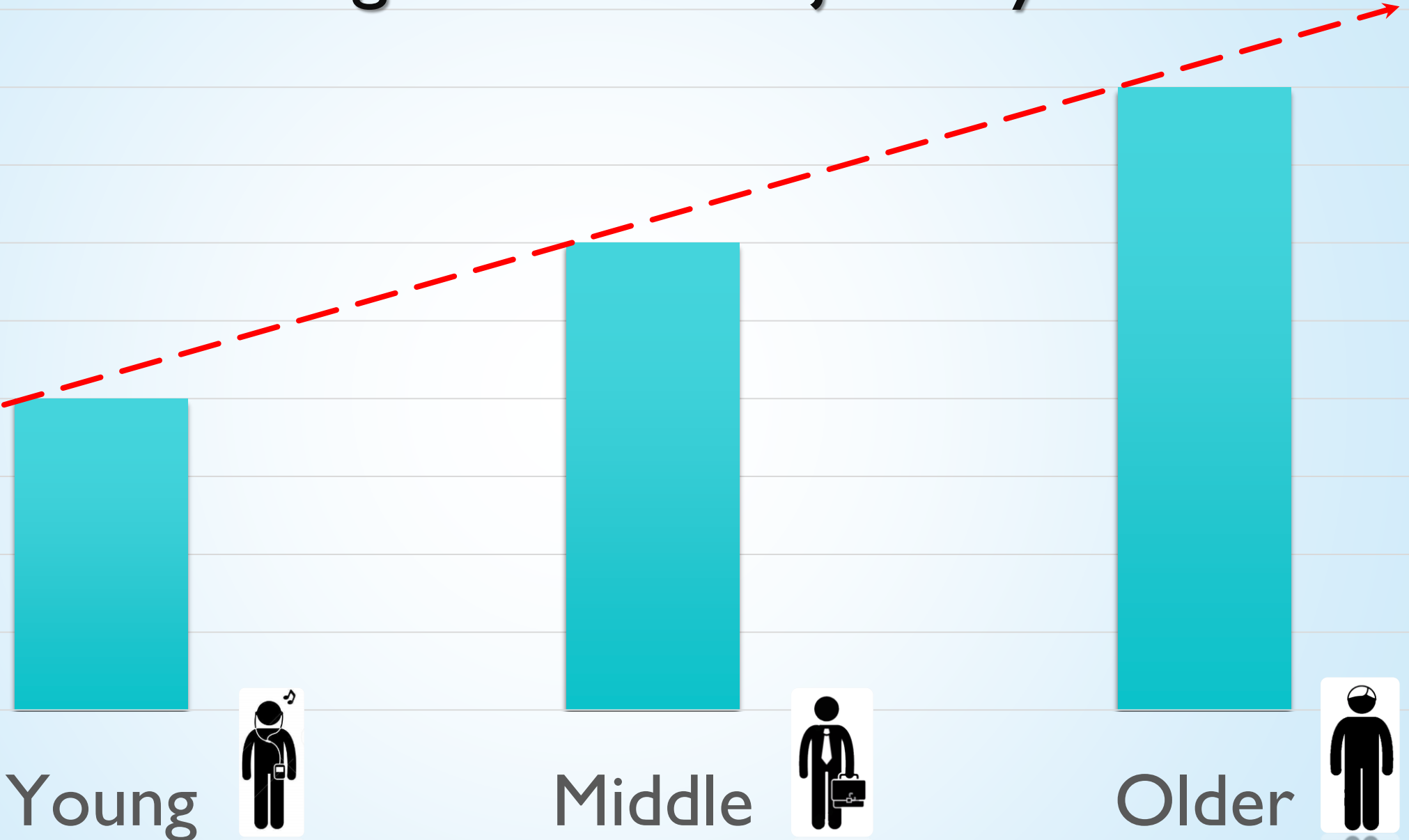
Older



(Heaton et al., 2001; Kurtz, 2005)

Neurodegenerative Trajectory Model

Severity of Symptoms



Young



Middle



Older

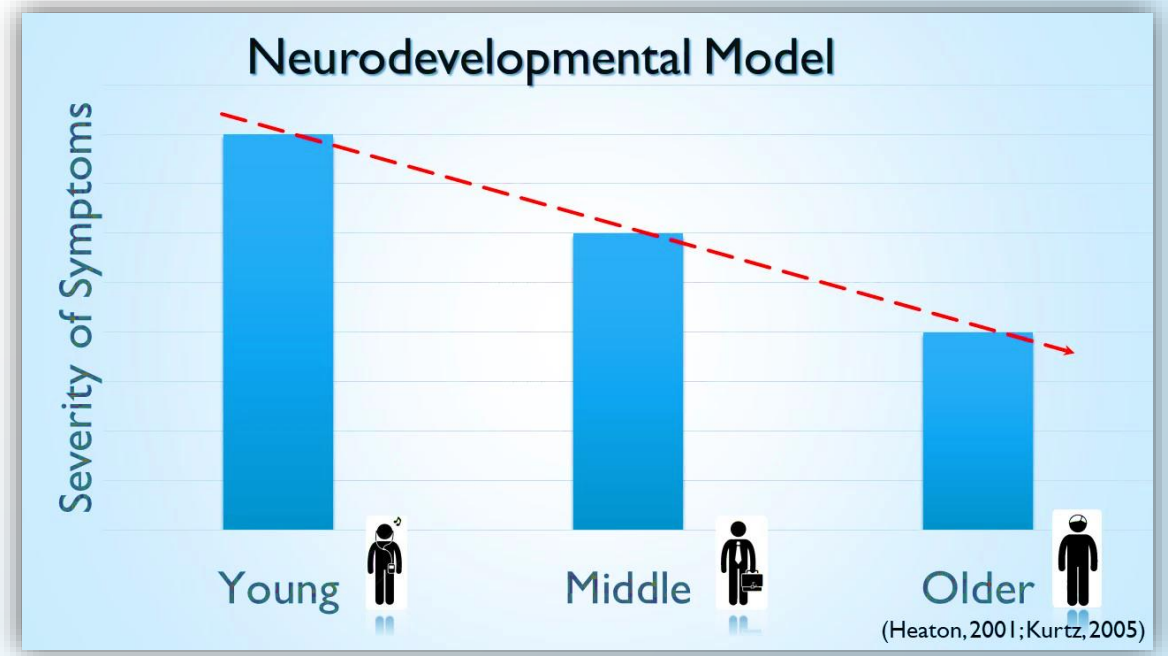
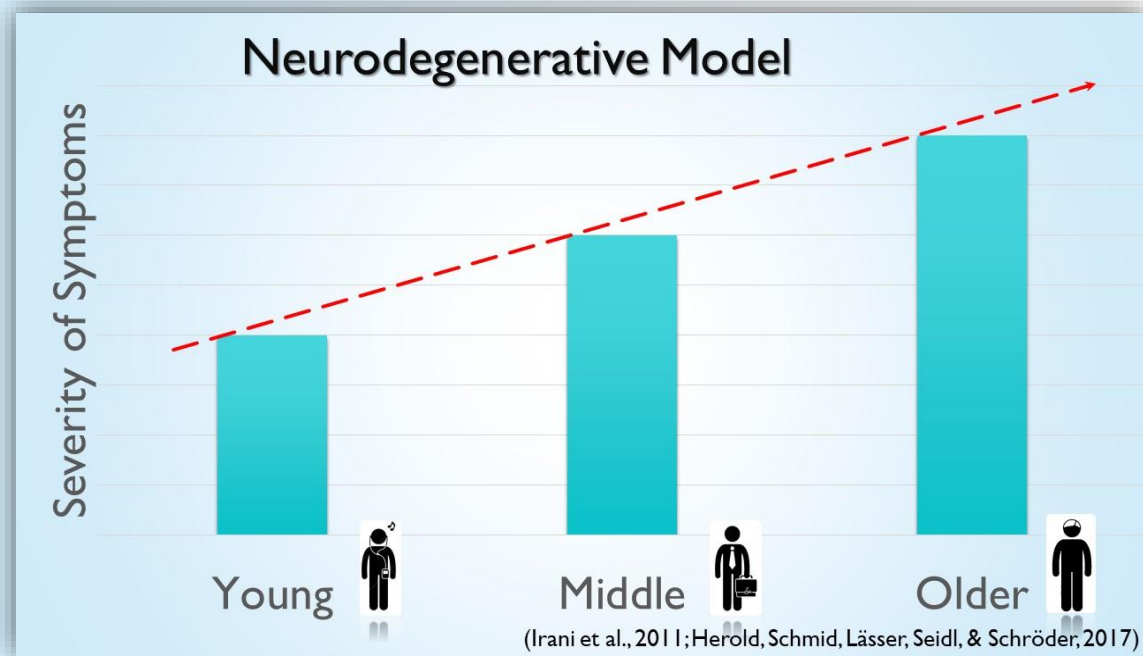


(Irani et al., 2011; Herold, Schmid, Lässer, Seidl, & Schröder, 2017)

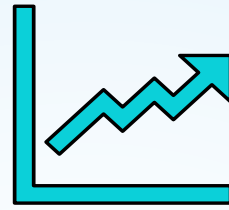
Research Question 1



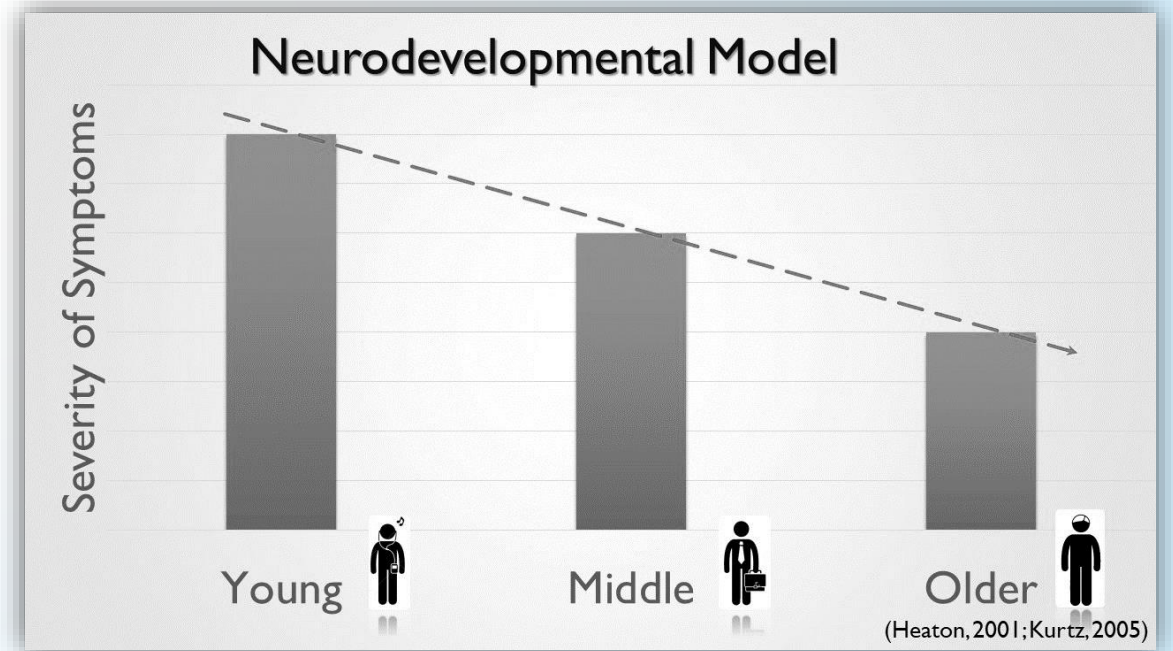
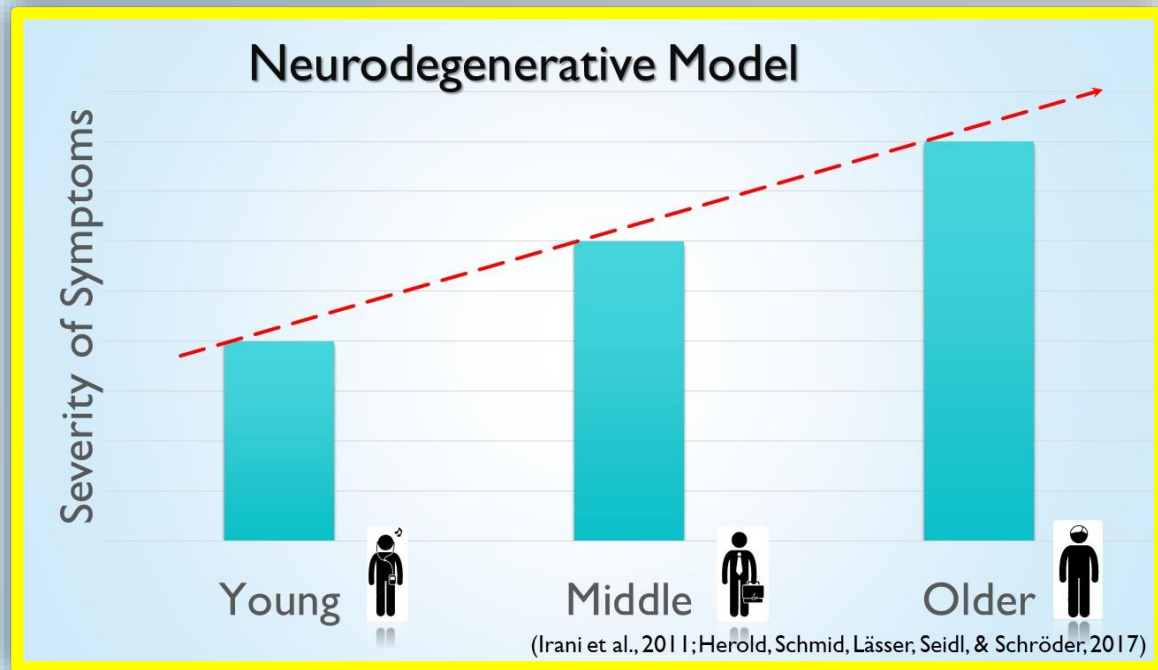
What is the trajectory of cognitive symptoms for patients as they age?



Research Question 1



Hypotheses: Neurodegenerative Trajectory



Mood Disorders



Anxiety

Depression

Mania

Research Question 2

How would comorbid mood disorders impact cognitive symptom severity?

Exploratory Analyses:

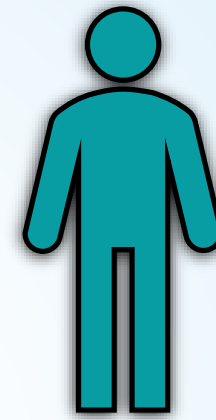
Due to the limited and mixed research, we could not form formal hypotheses



Method

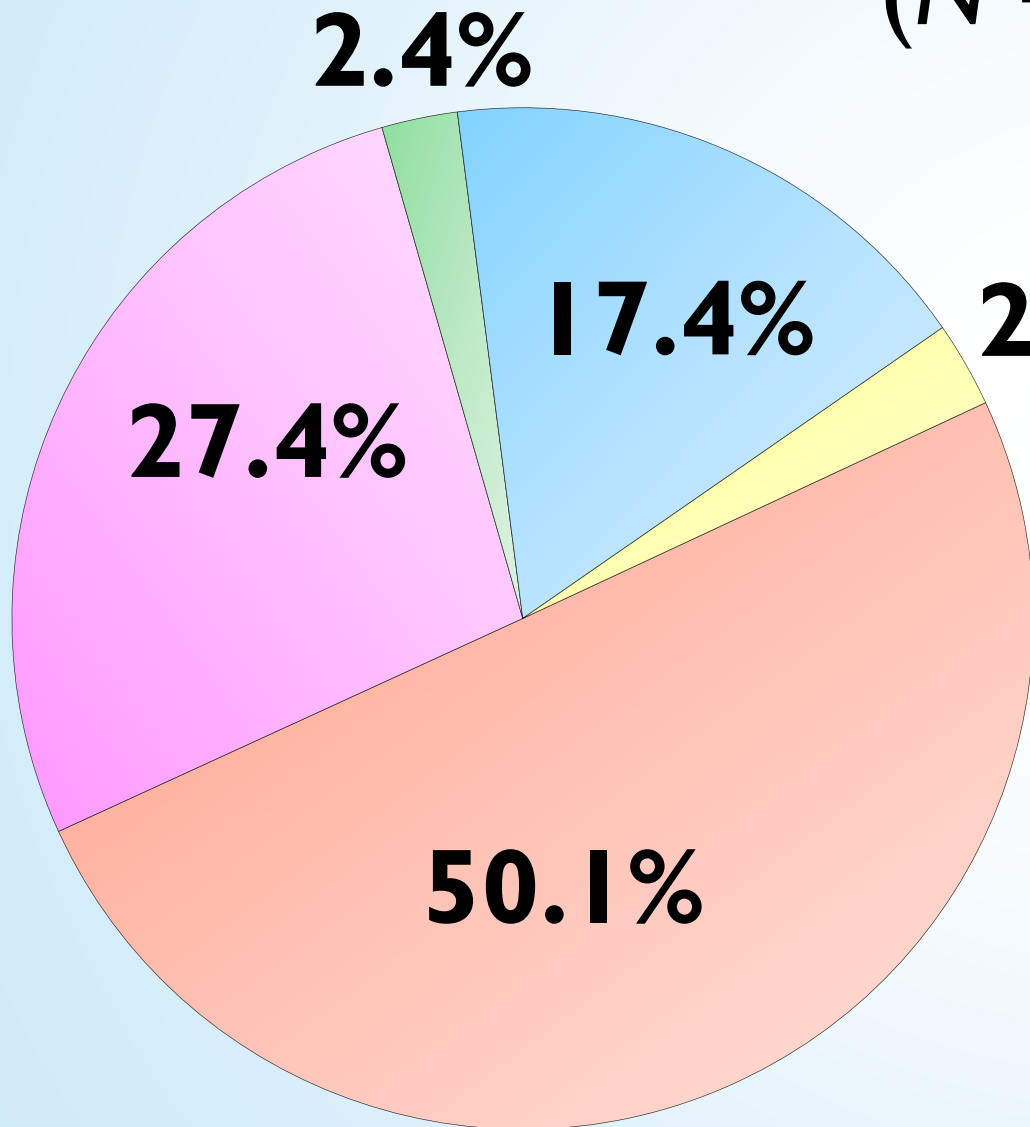
Sample

(N = 708)



73.7%

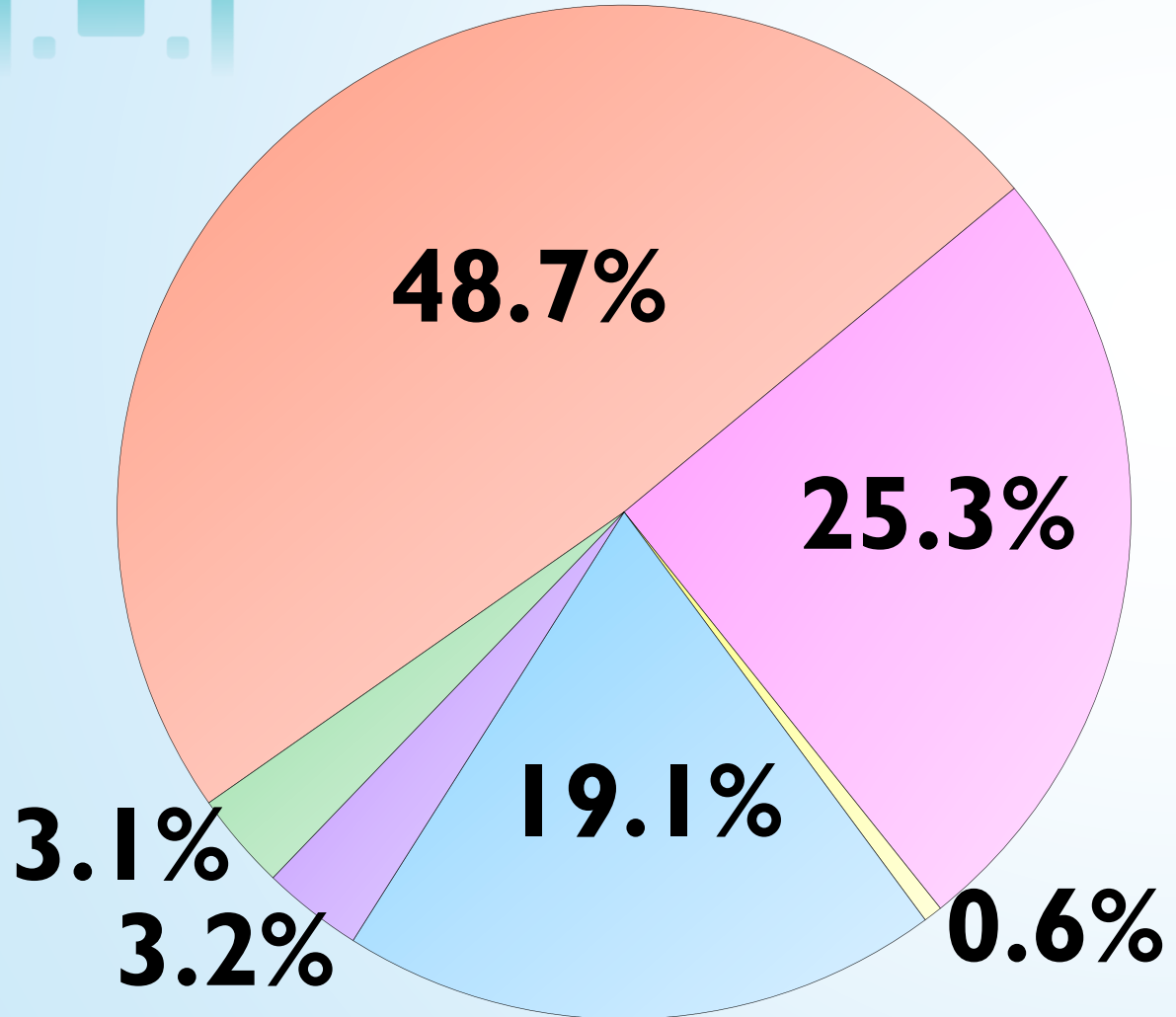
Male



- Caucasian
- African American
- Hispanic
- Asian American
- Other



Years at Hospital
 $M(SD) = 2.46(4.30)$



- Not Guilty by Reason of Insanity
- Mentally Disordered Offender
- Incompetent to Stand Trial
- Mentally Disordered Sex Offender
- Prison Transfer
- Other

Measures

Minnesota Multiphasic Personality Inventory –2 Restructured Form (MMPI-2-RF)

VRIN-r

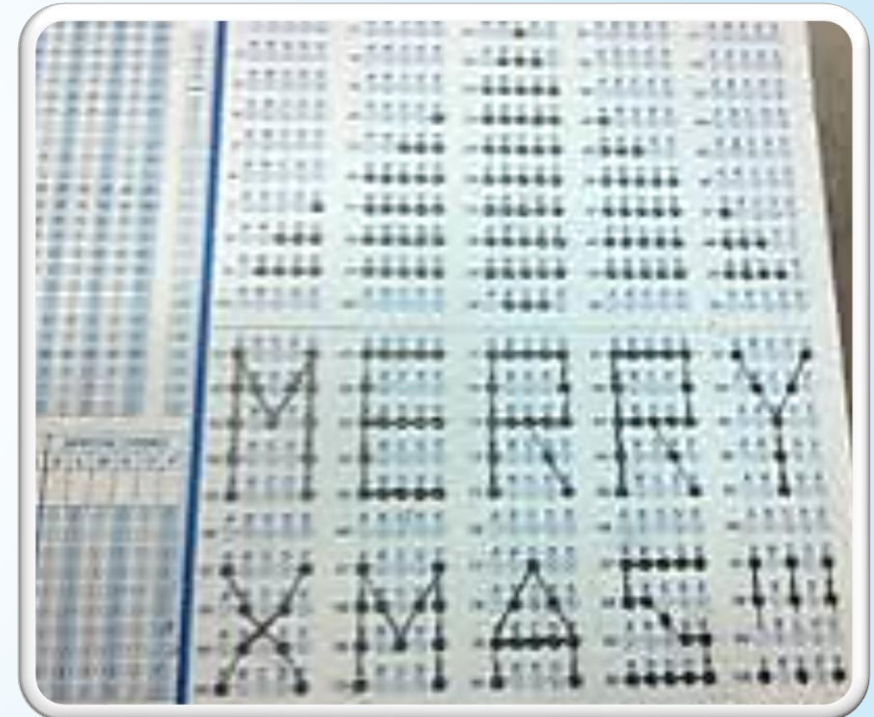
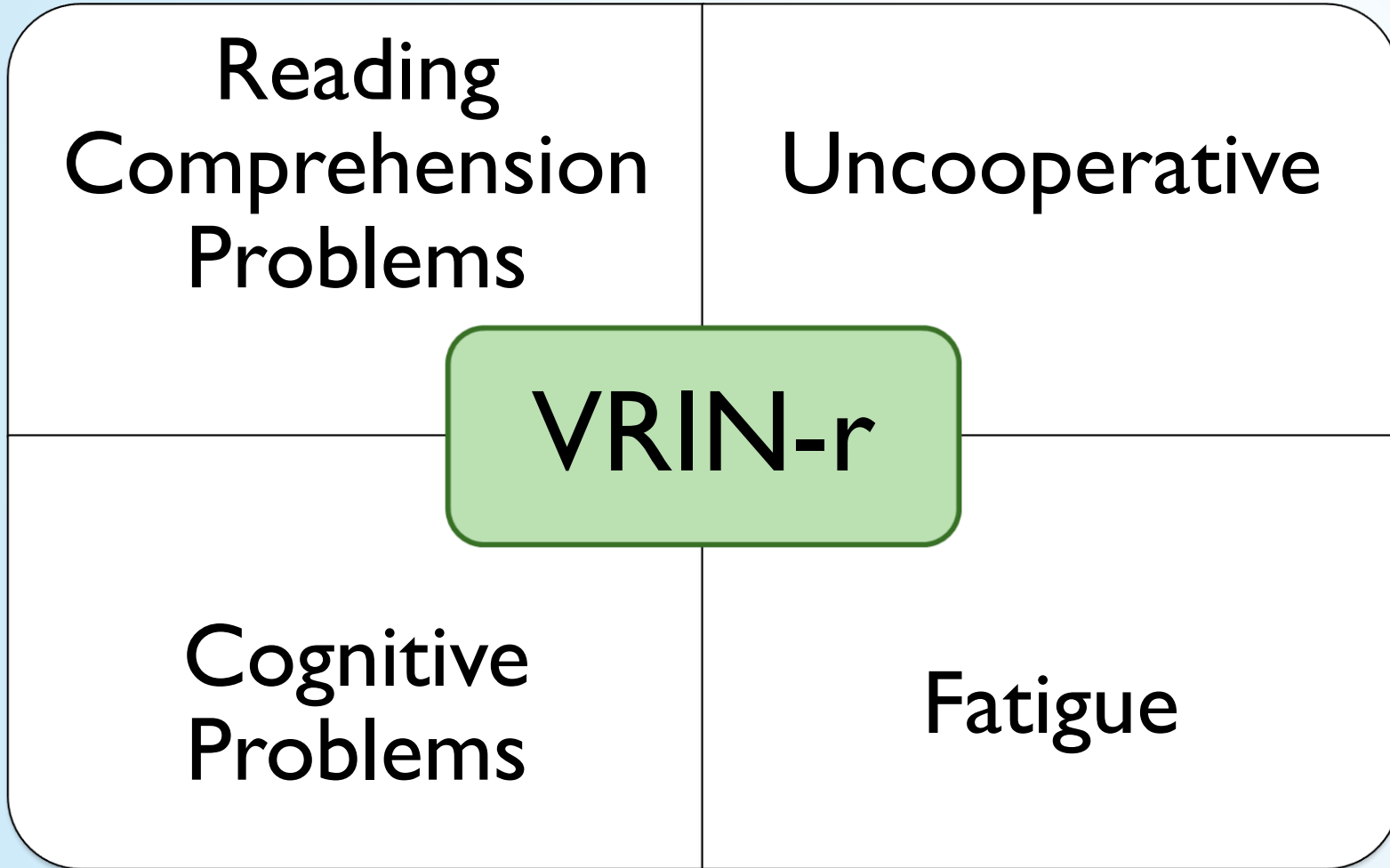


COG



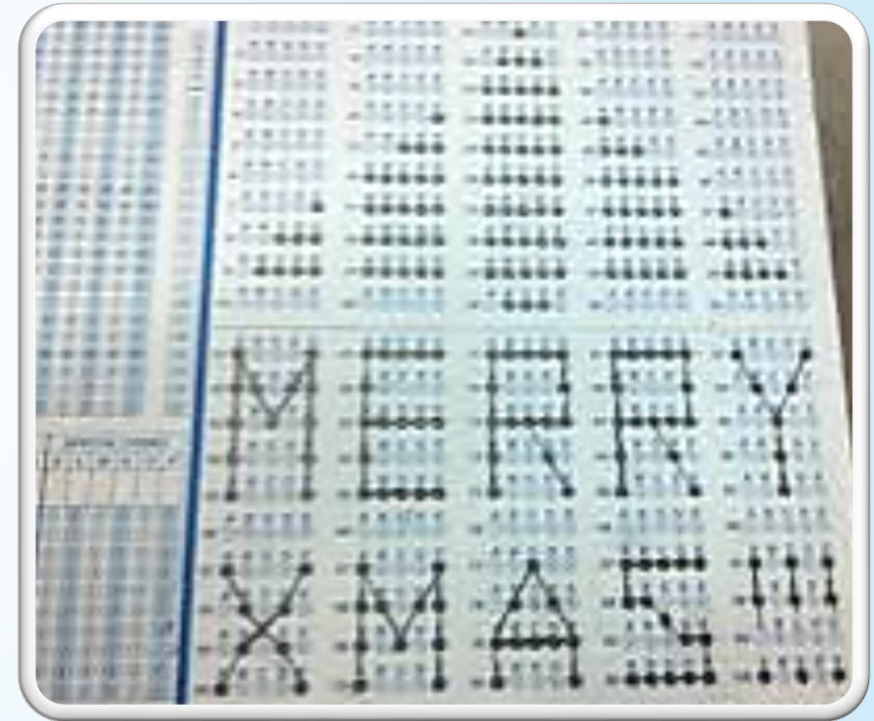
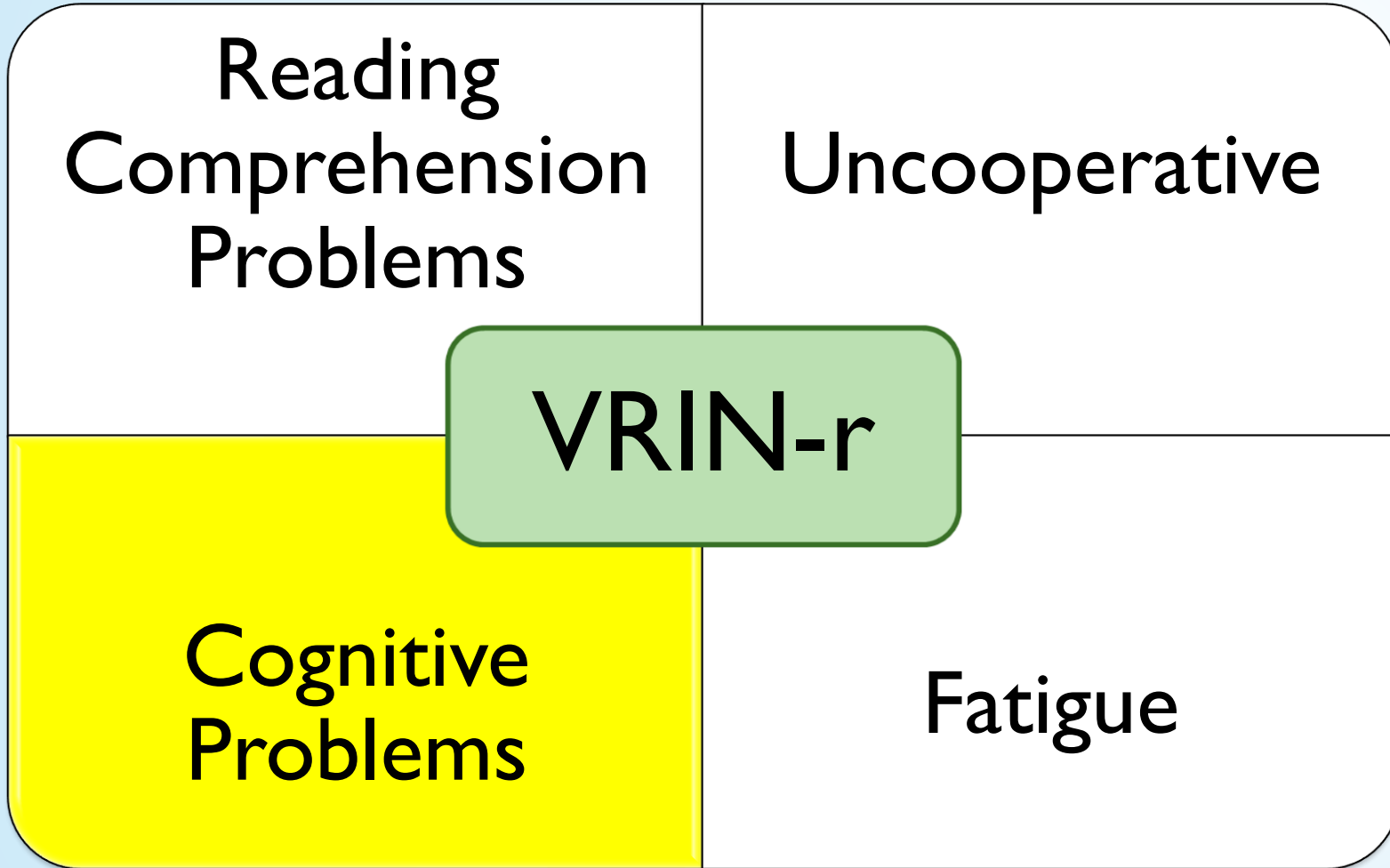
Variable Response Inconsistency – Revised

(VRIN-r) 

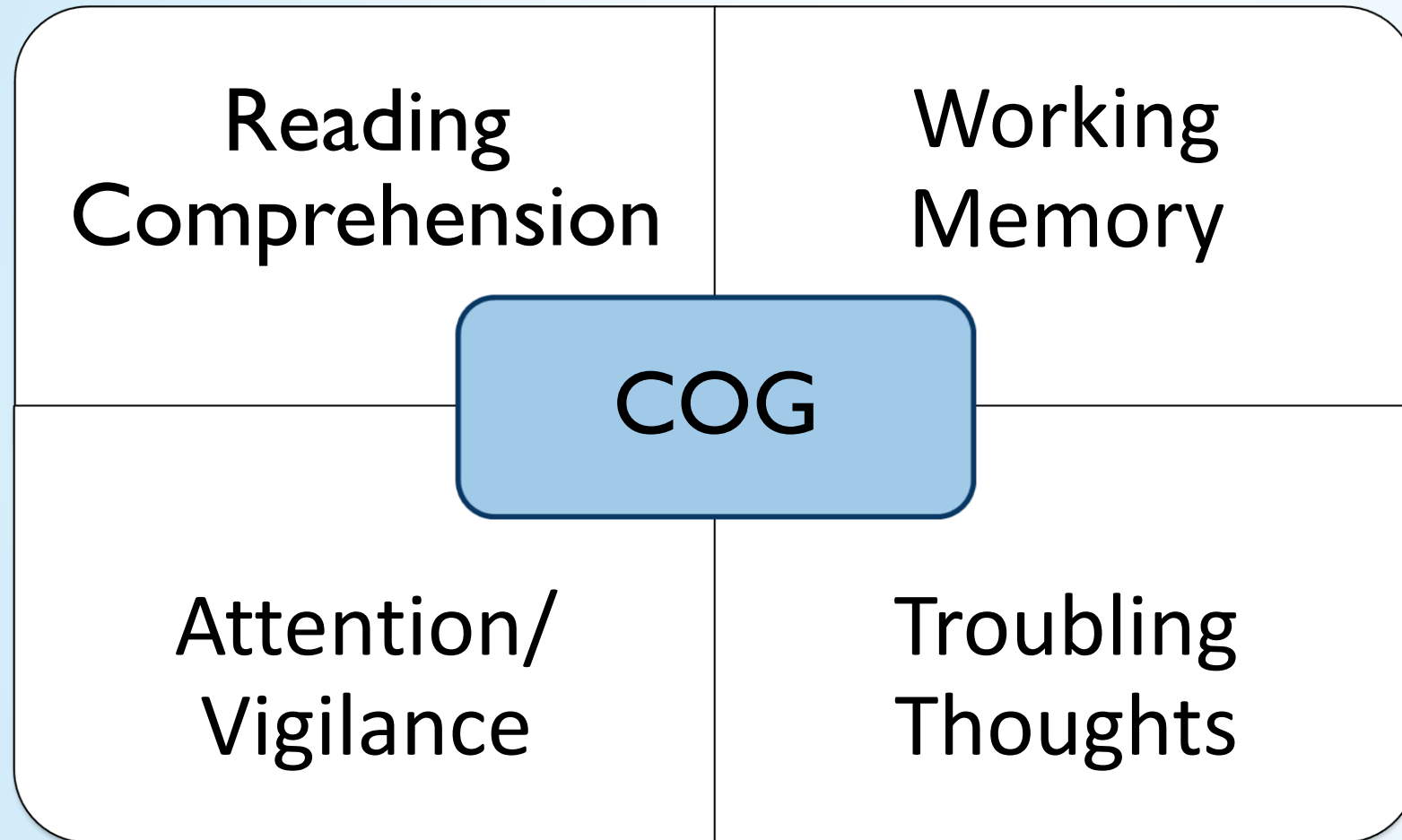


Variable Response Inconsistency – Revised

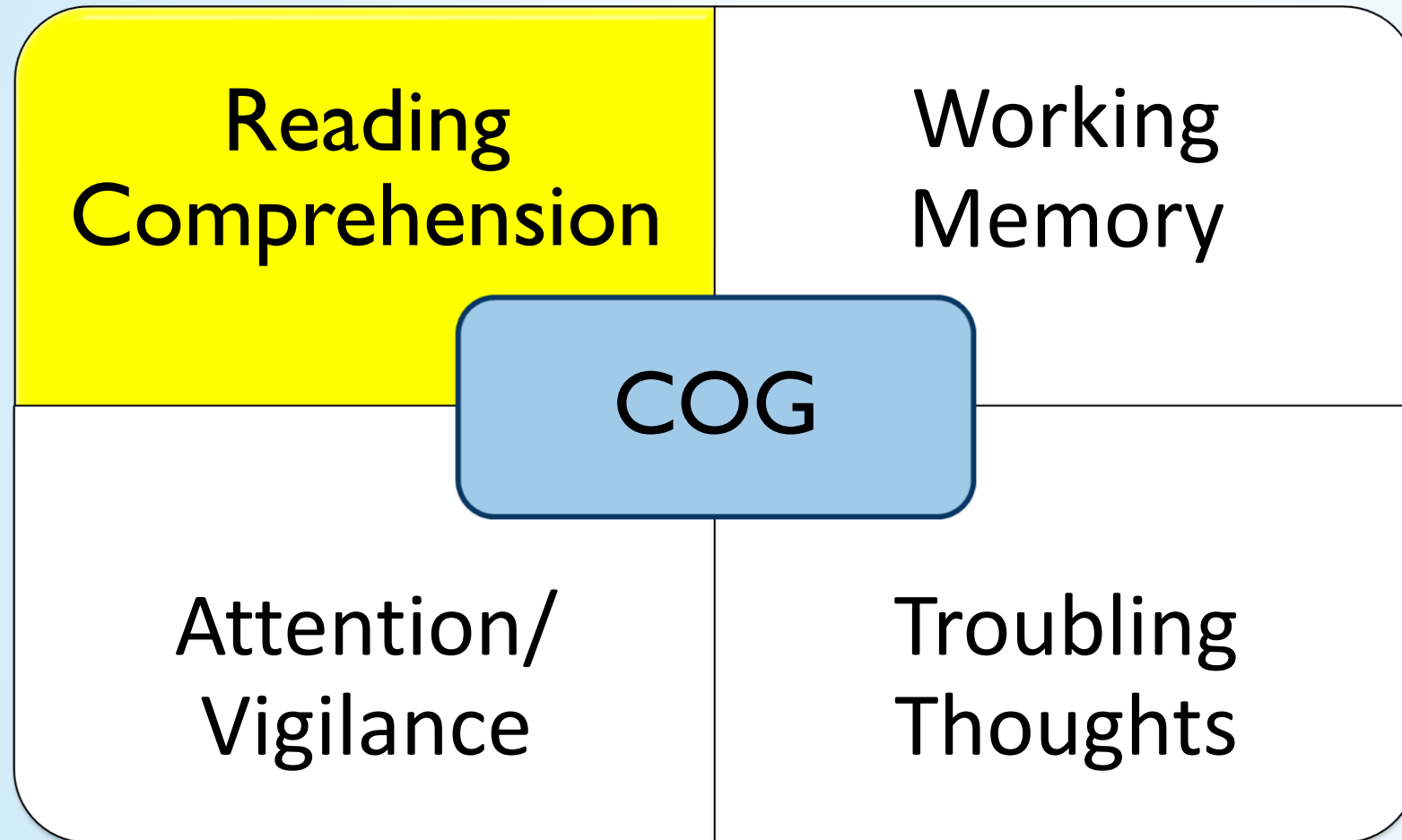
(VRIN-r) 



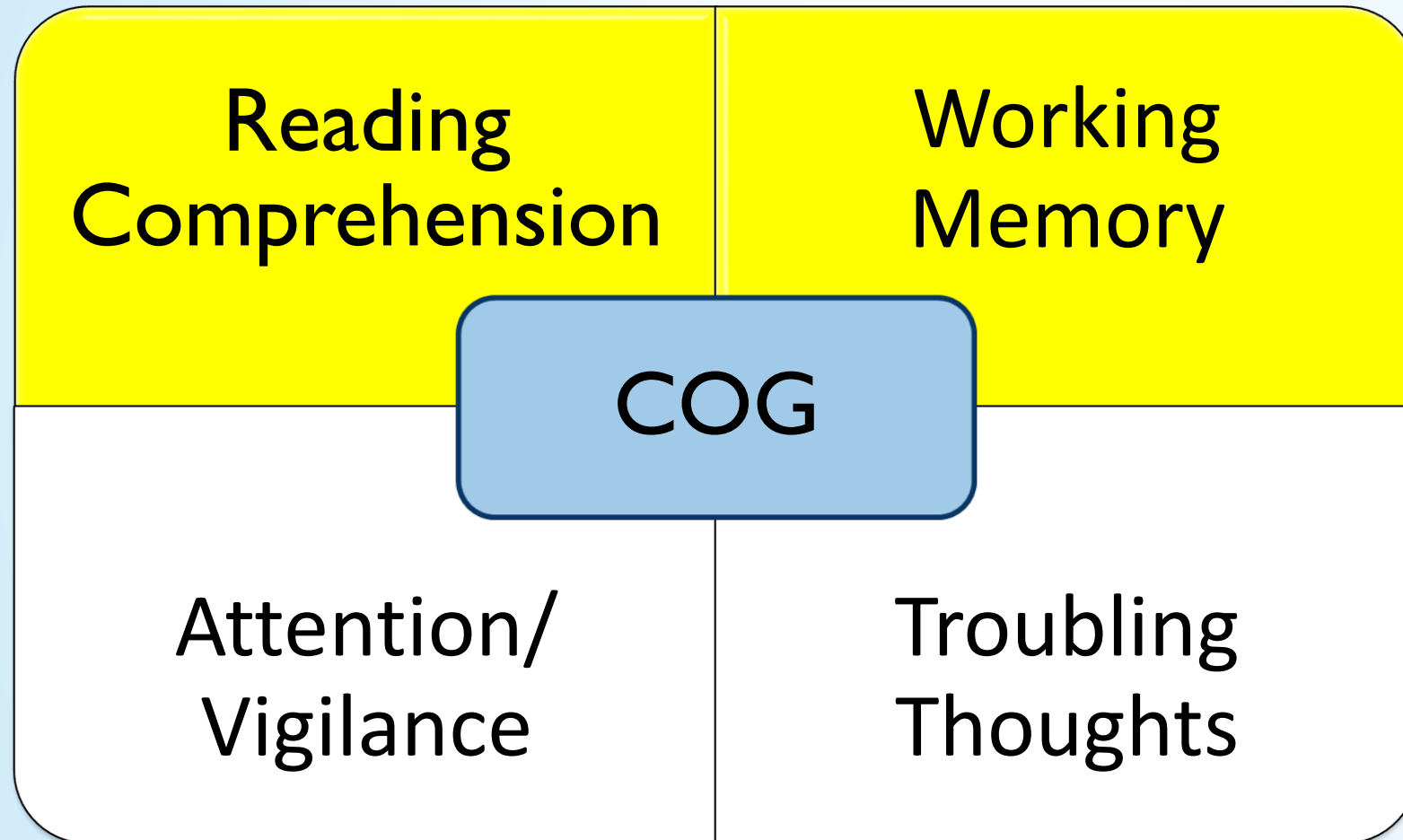
Cognitive Complaints (COG) Scale



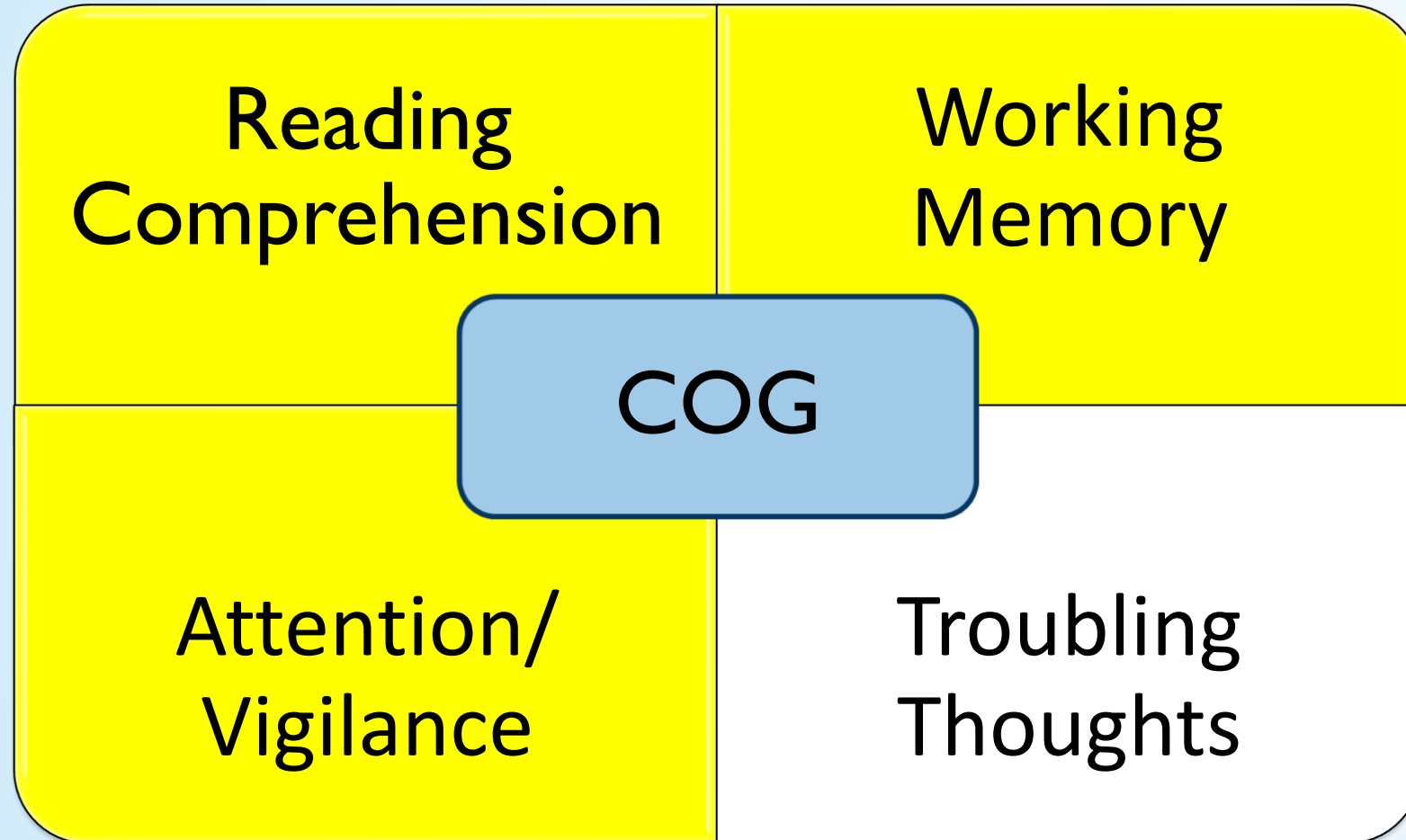
Cognitive Complaints (COG) Scale



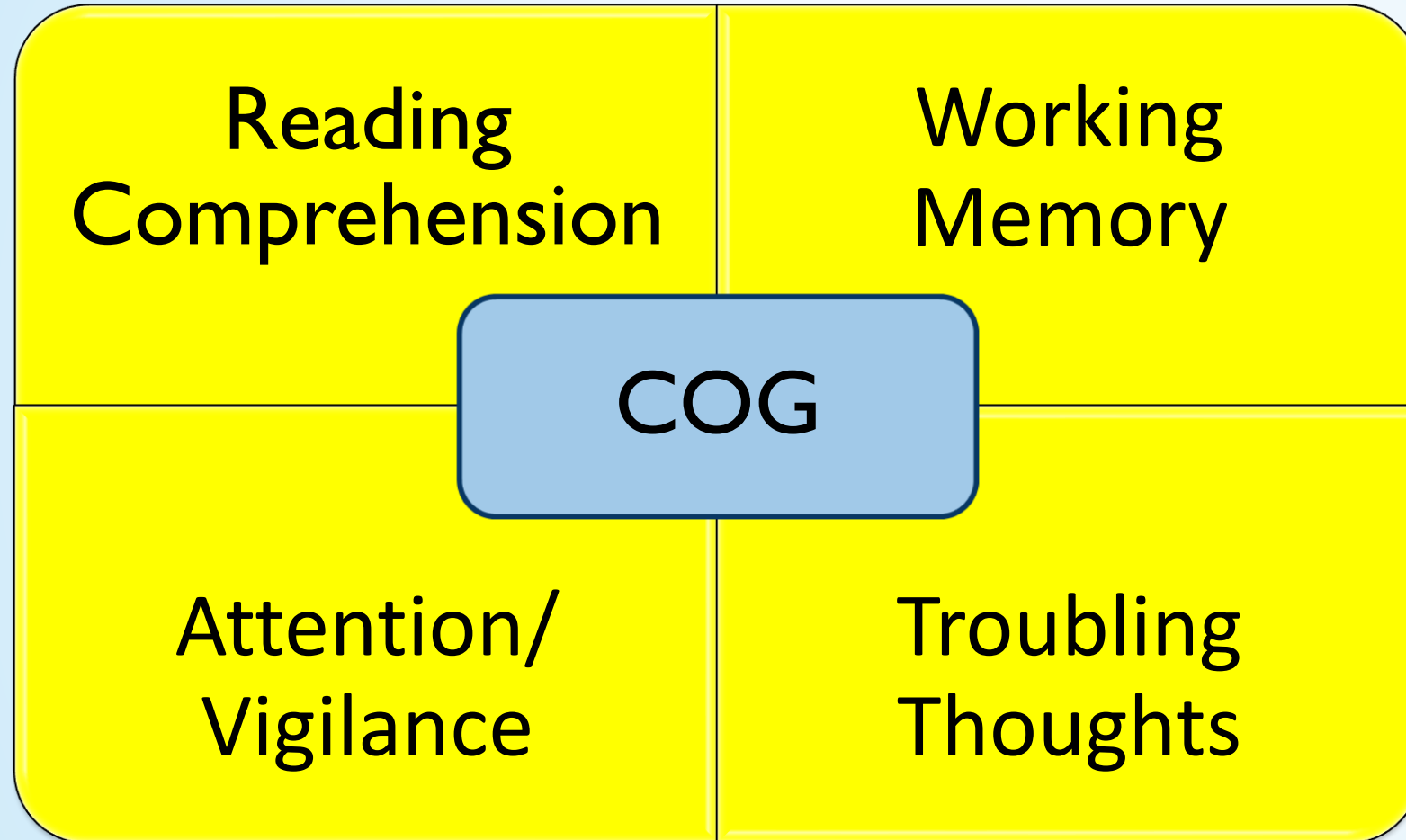
Cognitive Complaints (COG) Scale



Cognitive Complaints (COG) Scale



Cognitive Complaints (COG) Scale



Procedures: RQ I



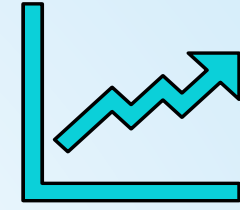
Young
(18-34 years)

Middle
(35-49 years)

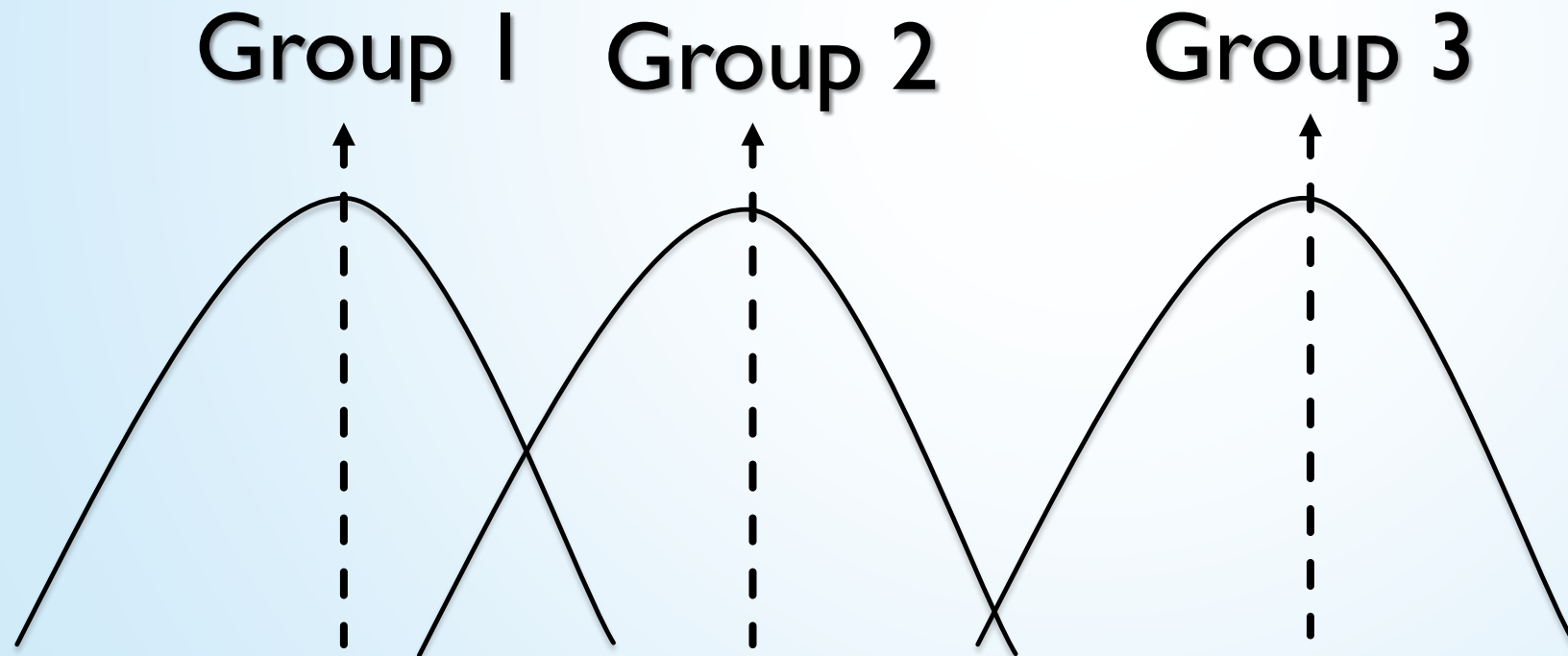
Older
(≥ 50 years)

Removed Invalid Protocols for COG analyses

Procedures for Research Question 1



- ➔ Analysis of Variance (ANOVA) to compare mean scores across 3 groups



Procedures: RQ 2



Schizophrenia (Sz)

Sz Only

Sz + Mood

Young

Young

Middle

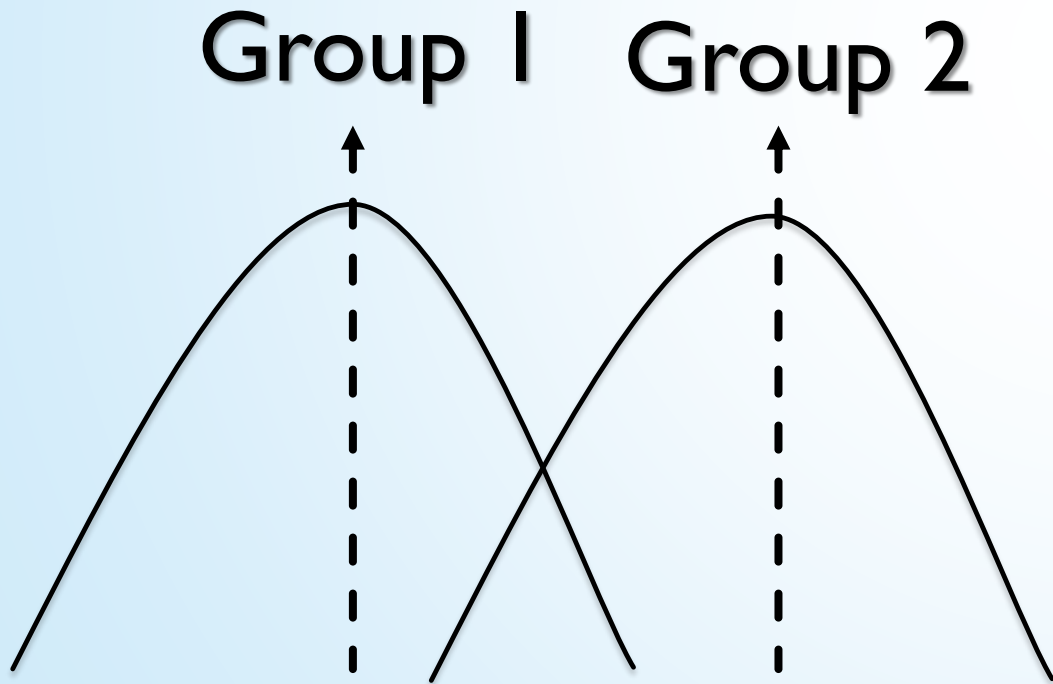
Middle

Older

Older

Procedures for Research Question 2 🙄

- ➔ Independent Samples *t*-tests to compare mean scores across 2 groups



Procedures for Research Question 2



Sz Only

Sz Mood

Young

Young

Middle

Middle

Older

Older

Procedures for Research Question 2



Sz Only

Sz Mood

Young

Young

Middle

Middle

Older

Older

Procedures for Research Question 2



Sz Only

Sz Mood

Young

Young

Middle

Middle

Older

Older

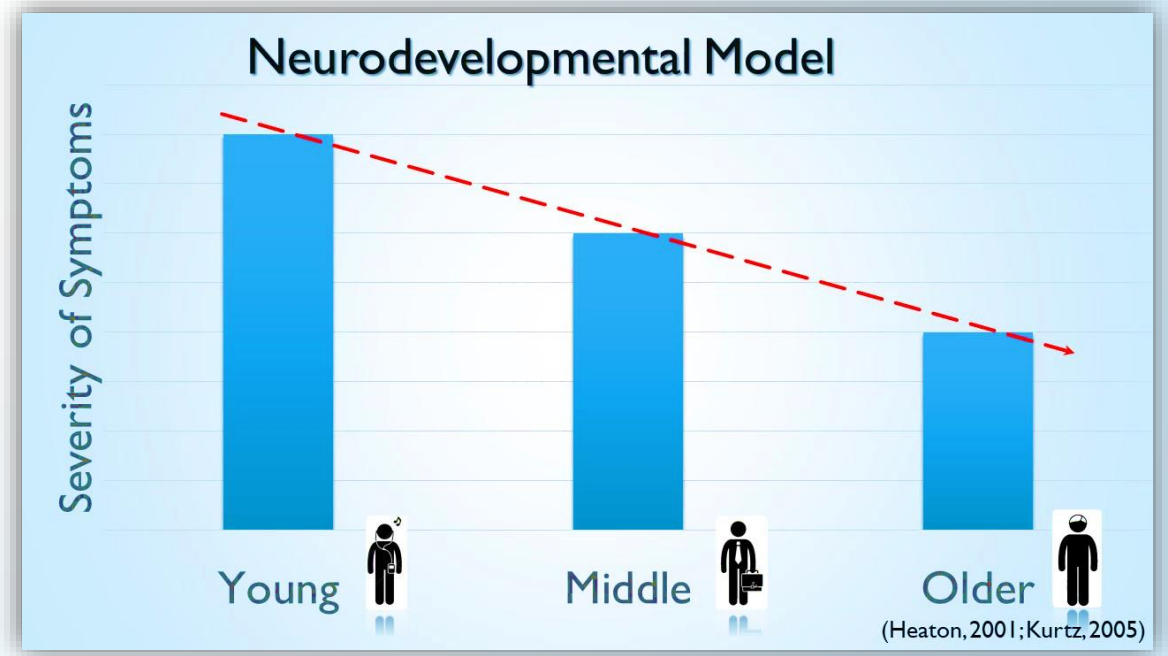
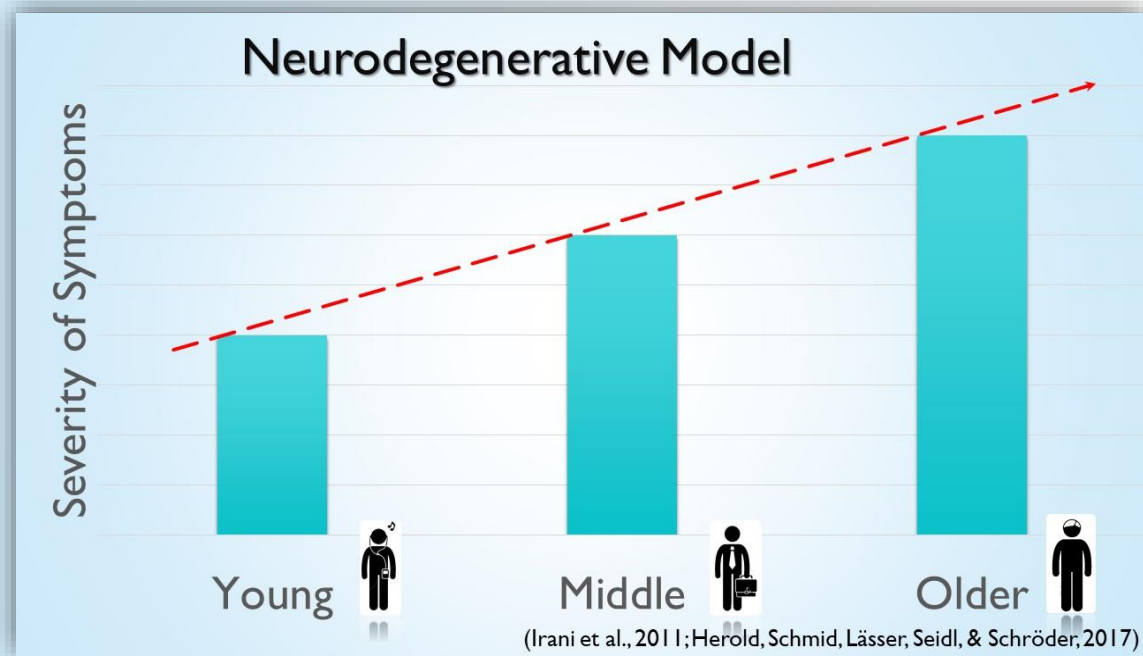


Results

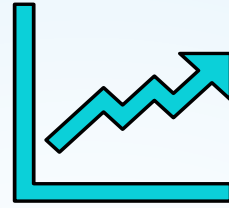
Research Question 1



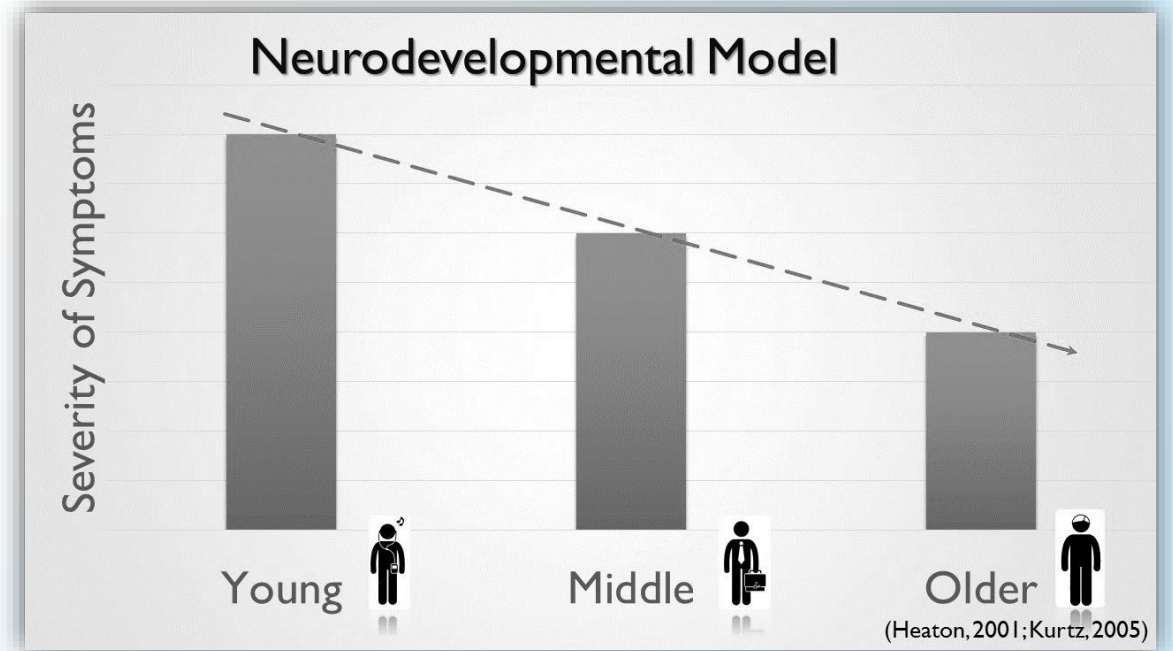
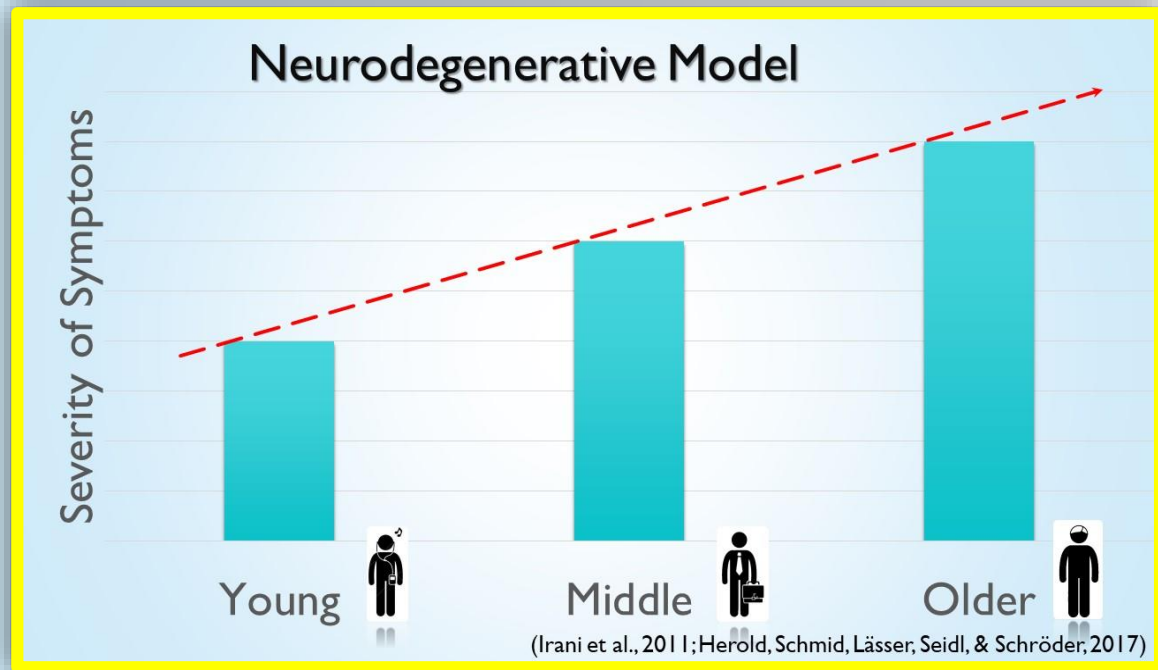
What is the trajectory of cognitive symptoms for patients as they age?



Research Question 1



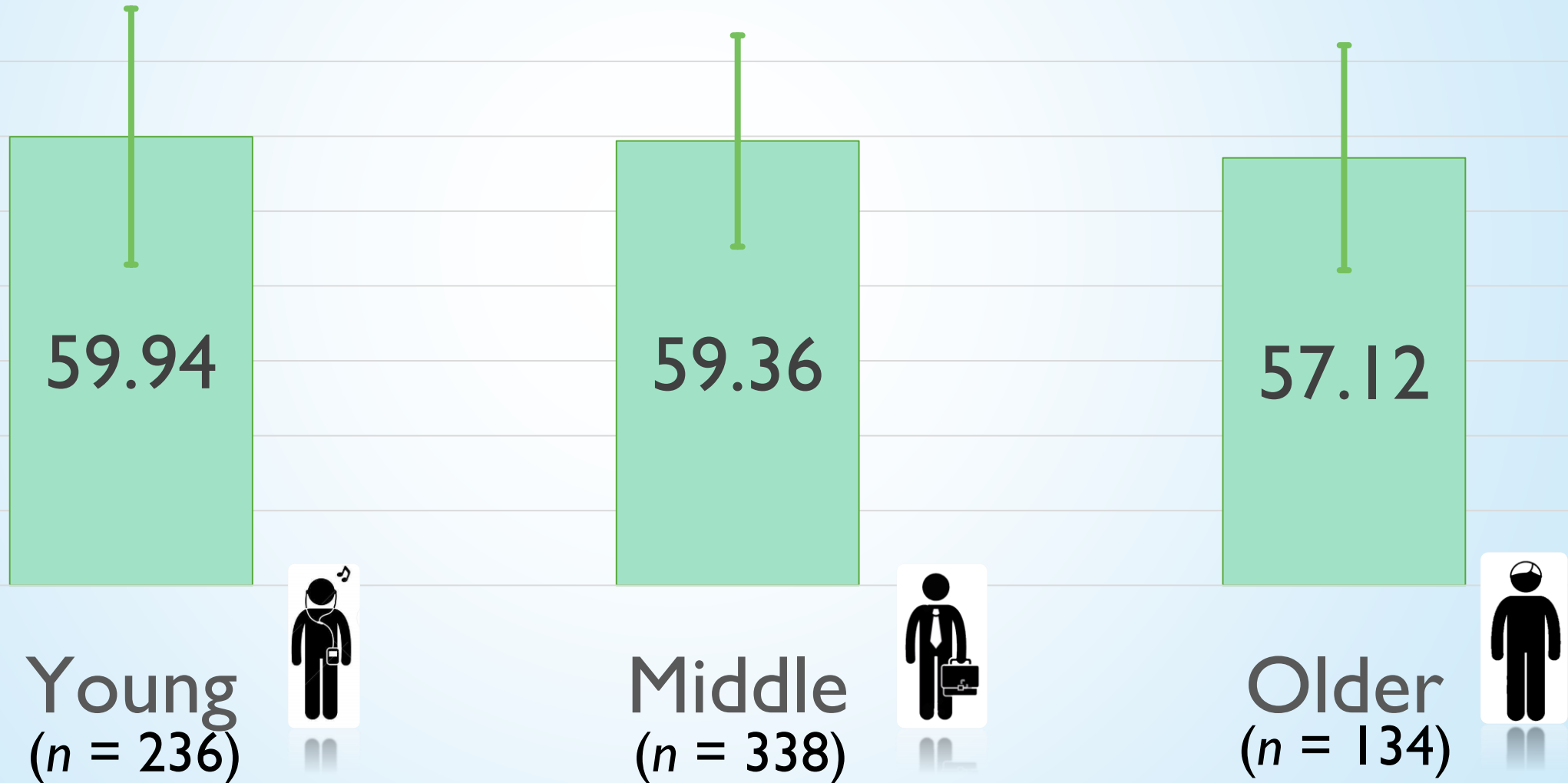
Hypotheses: Neurodegenerative Trajectory



VRIN-r ANOVA Results



Severity of Symptoms



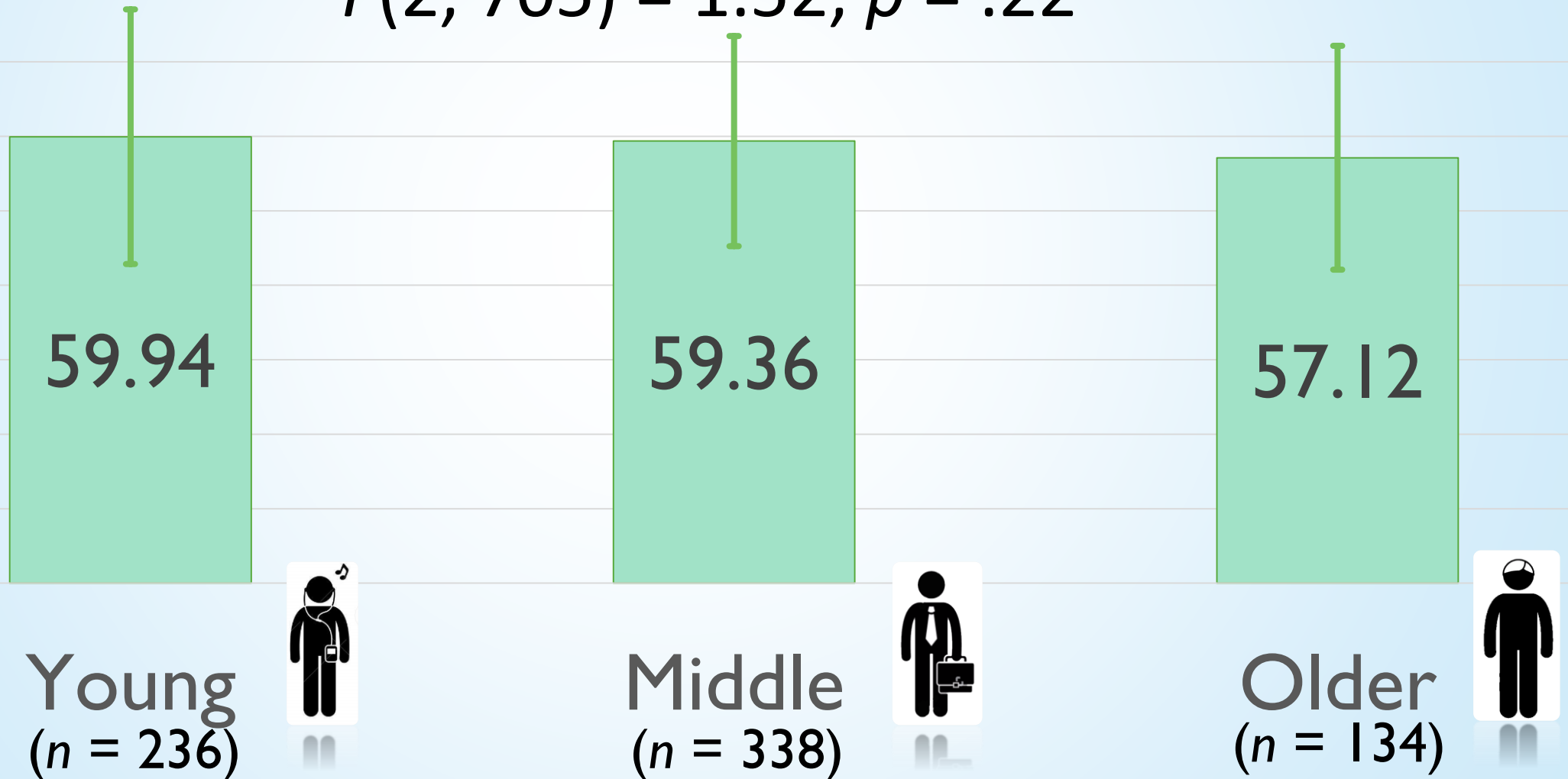
VRIN-r ANOVA Results



No significant differences were found

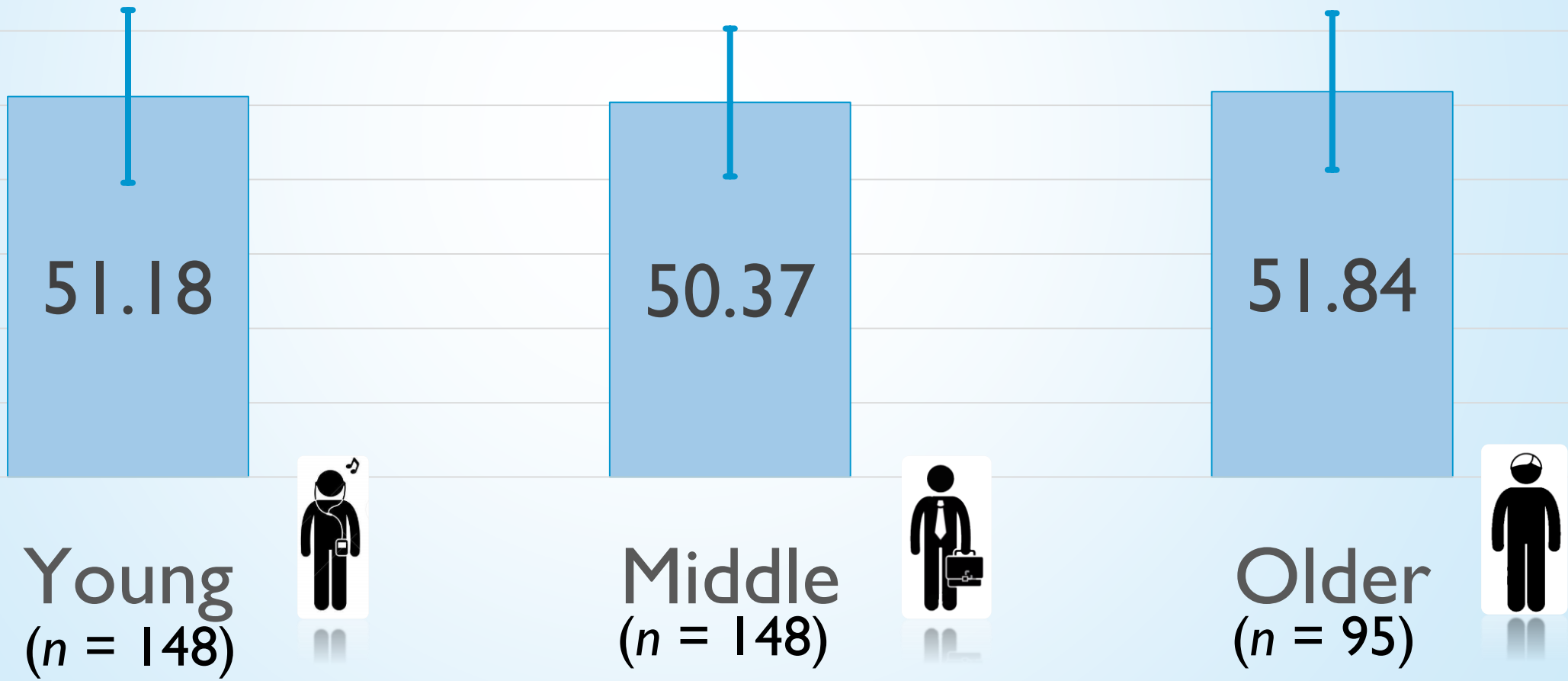
$$F(2, 705) = 1.52, p = .22$$

Severity of Symptoms



COG ANOVA Results

Severity of Symptoms

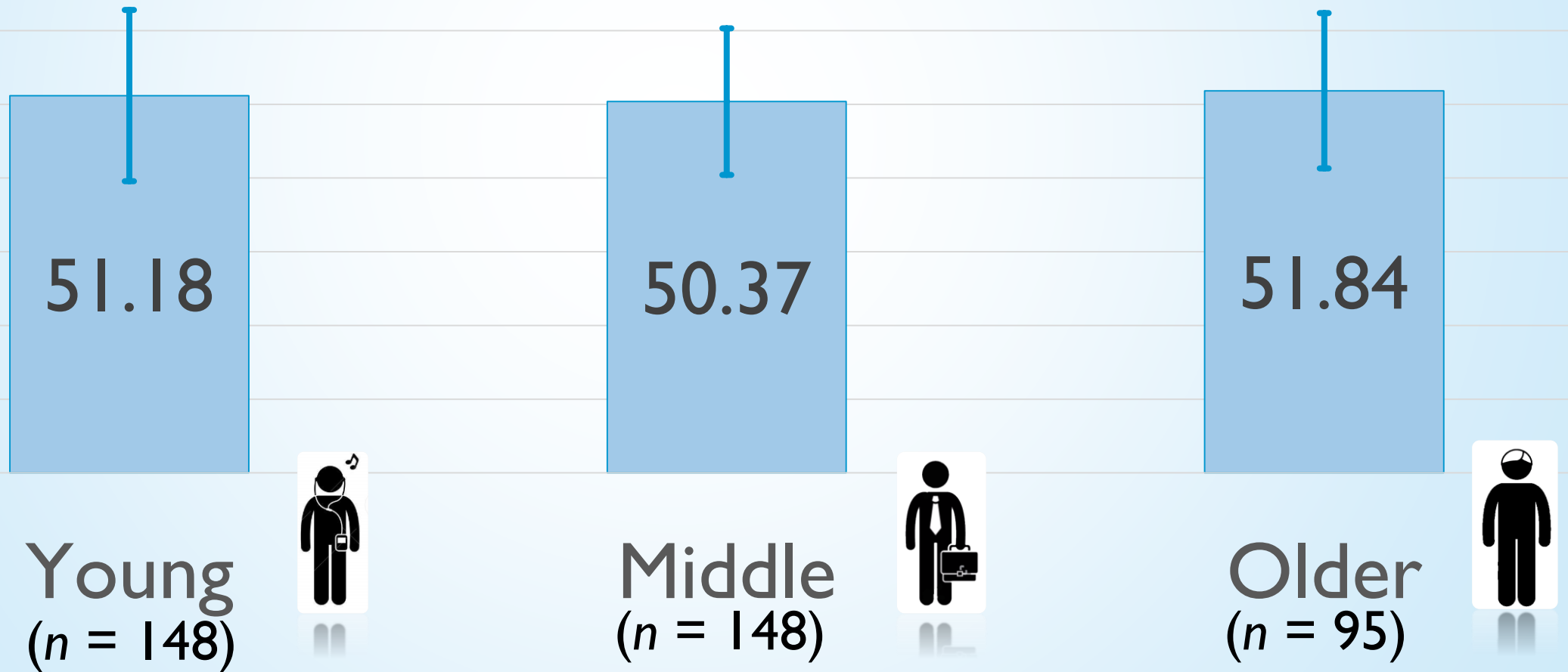


COG ANOVA Results

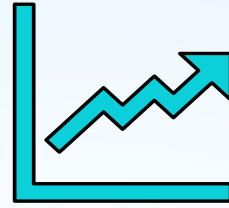
No significant differences were found

$$F(2, 456) = .69, p = .51$$

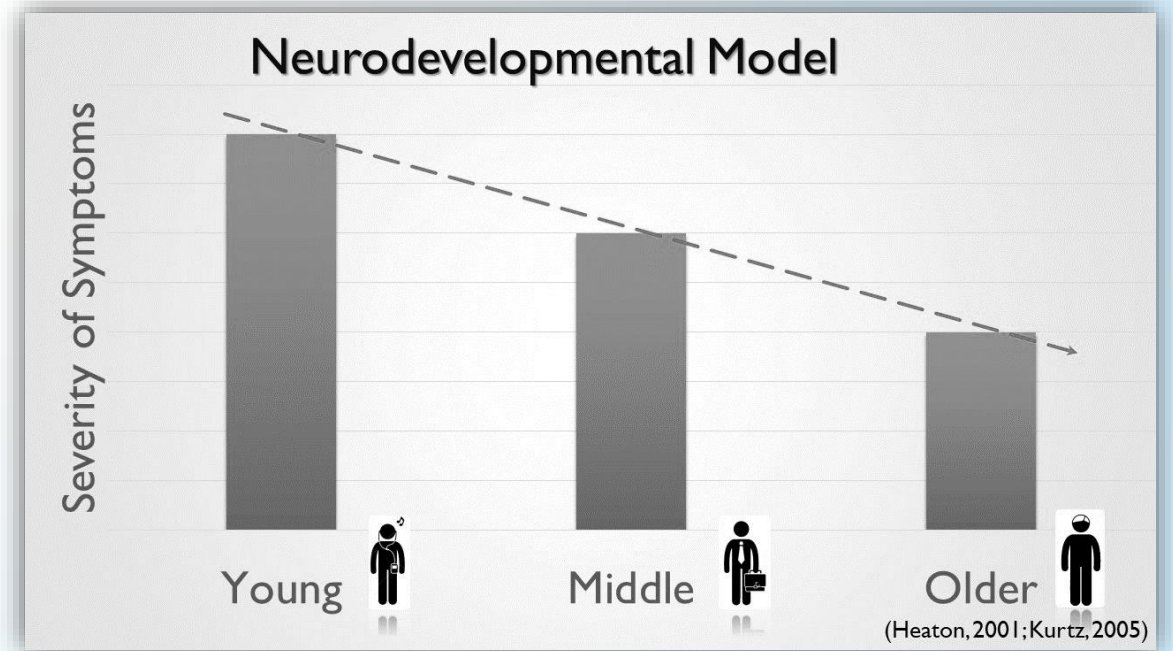
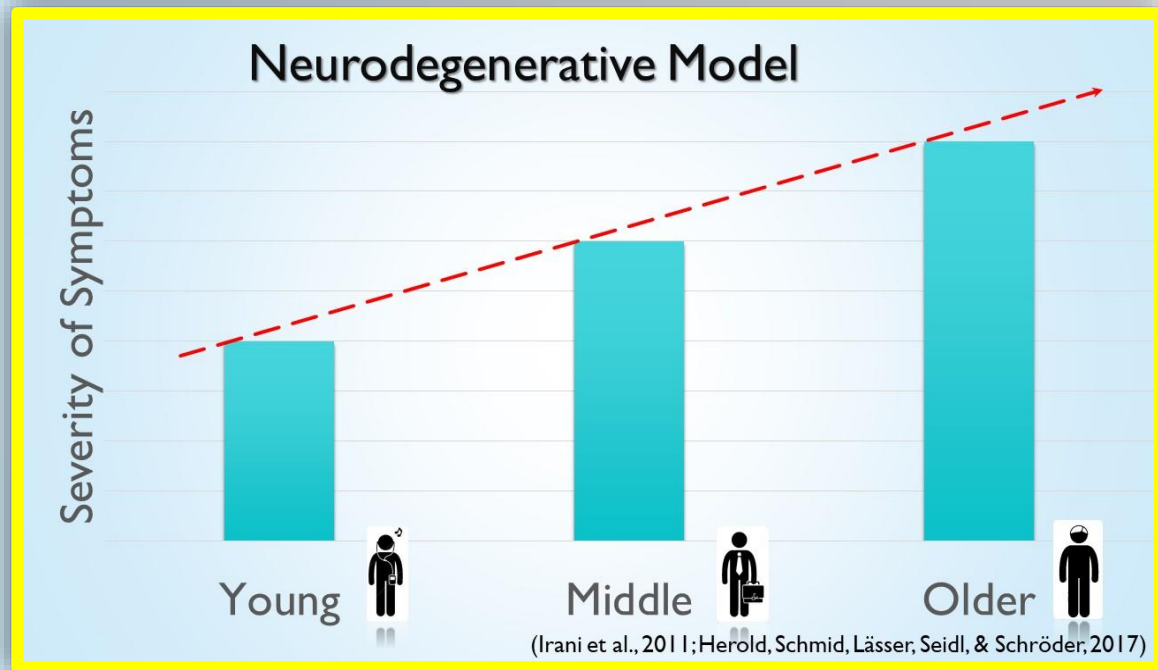
Severity of Symptoms



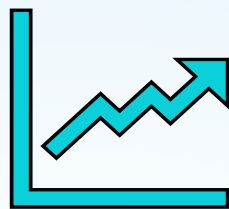
Research Question 1



Hypotheses: Neurodegenerative Trajectory



Research Question 1



Results: Neither Trajectory



Research Question 2

How would comorbid mood disorders impact cognitive symptom severity?

Exploratory Analyses:

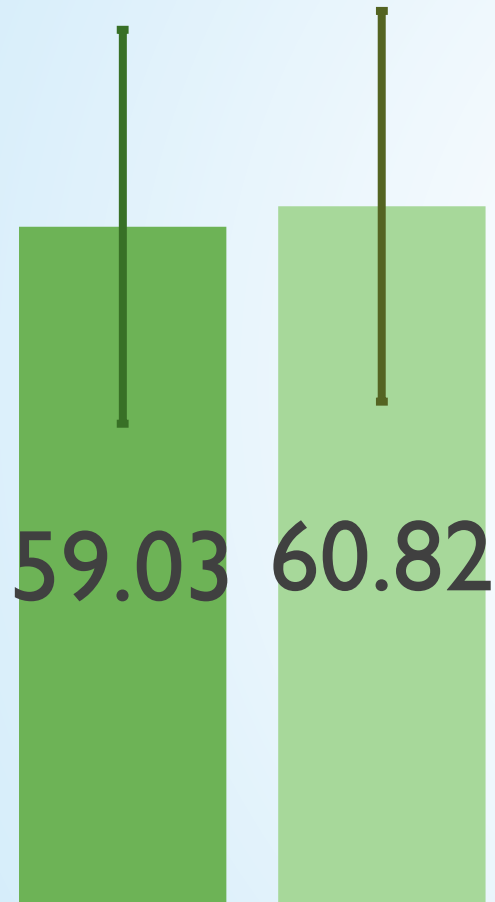
Due to the limited and mixed research, we could not form formal hypotheses

VRIN-r Independent Samples *t*-test Results



■ Sz Only ■ Sz + Mood

VRIN-r Mean Scores



(n = 116)(n = 120)

Young

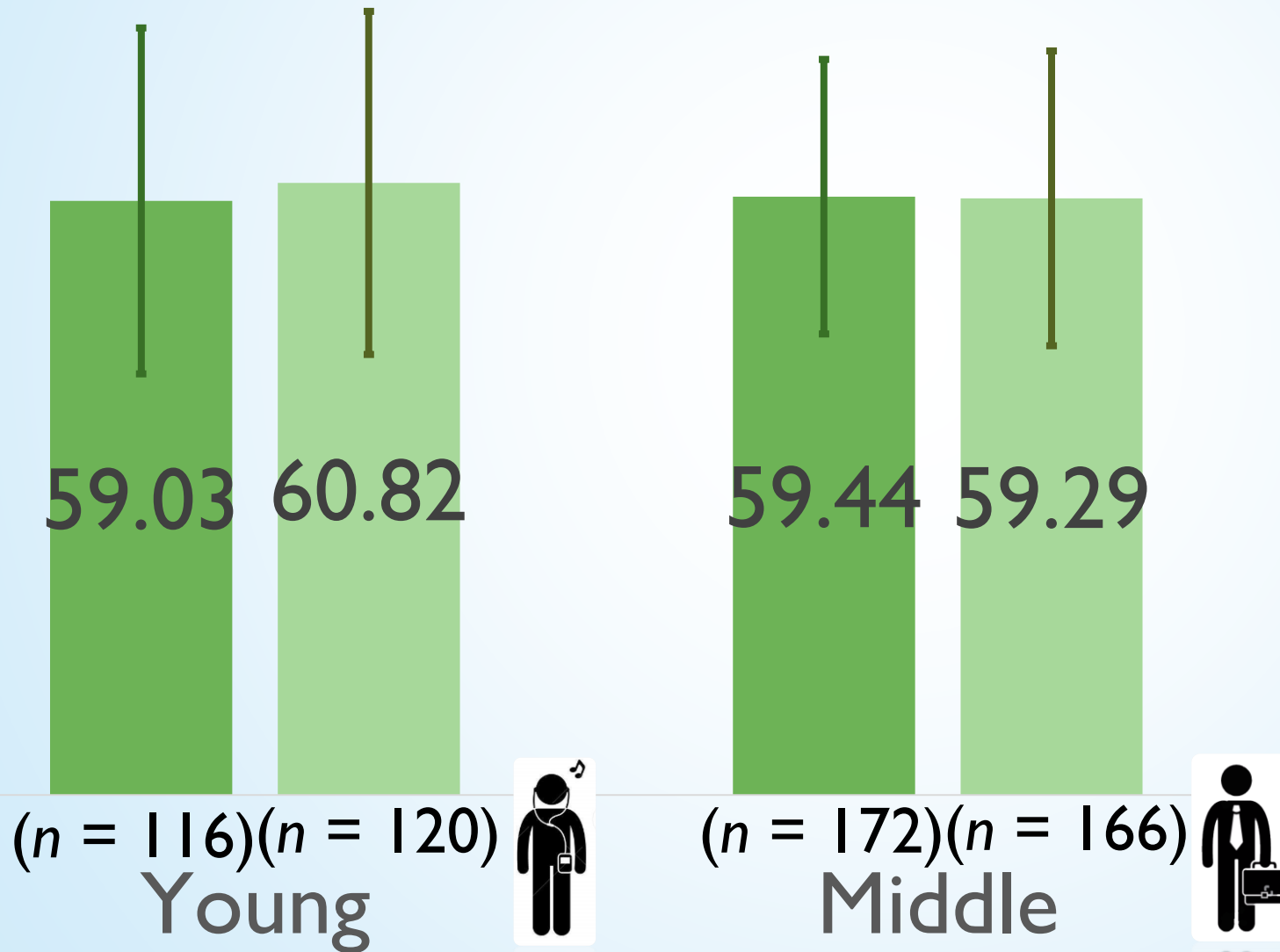


VRIN-r Independent Samples *t*-test Results



■ Sz Only ■ Sz + Mood

VRIN-r Mean Scores



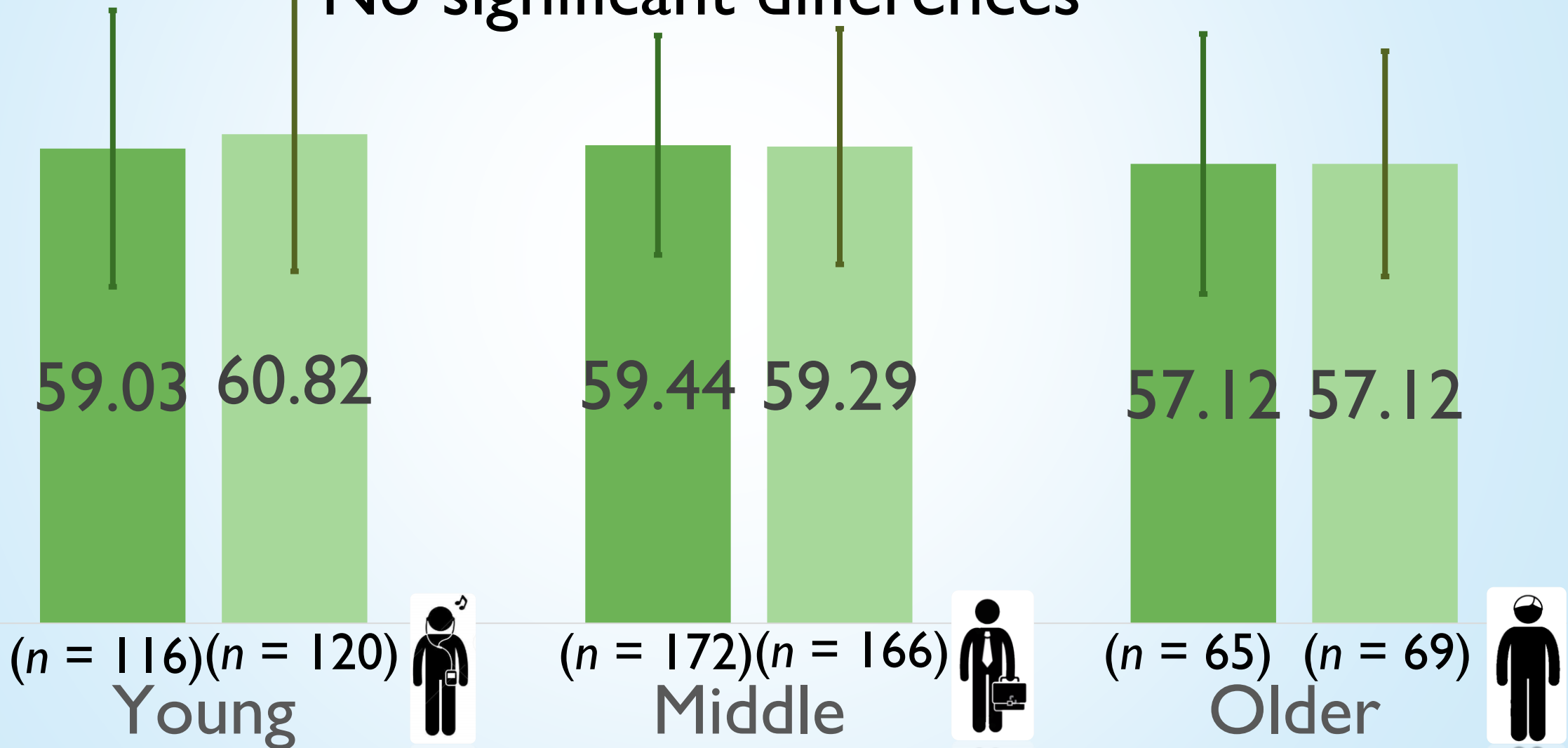
VRIN-r Independent Samples *t*-test Results



■ Sz Only ■ Sz + Mood

No significant differences

VRIN-r Mean Scores

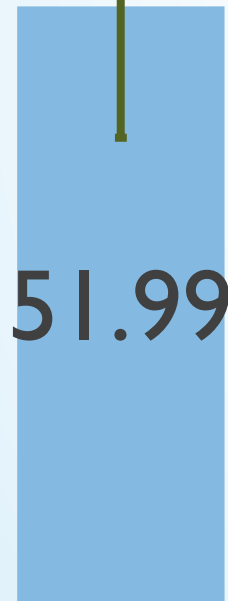


COG Independent Samples *t*-test Results



■ Sz Only ■ Sz + Mood

COG Mean Scores



(n = 81) (n = 67)

Young

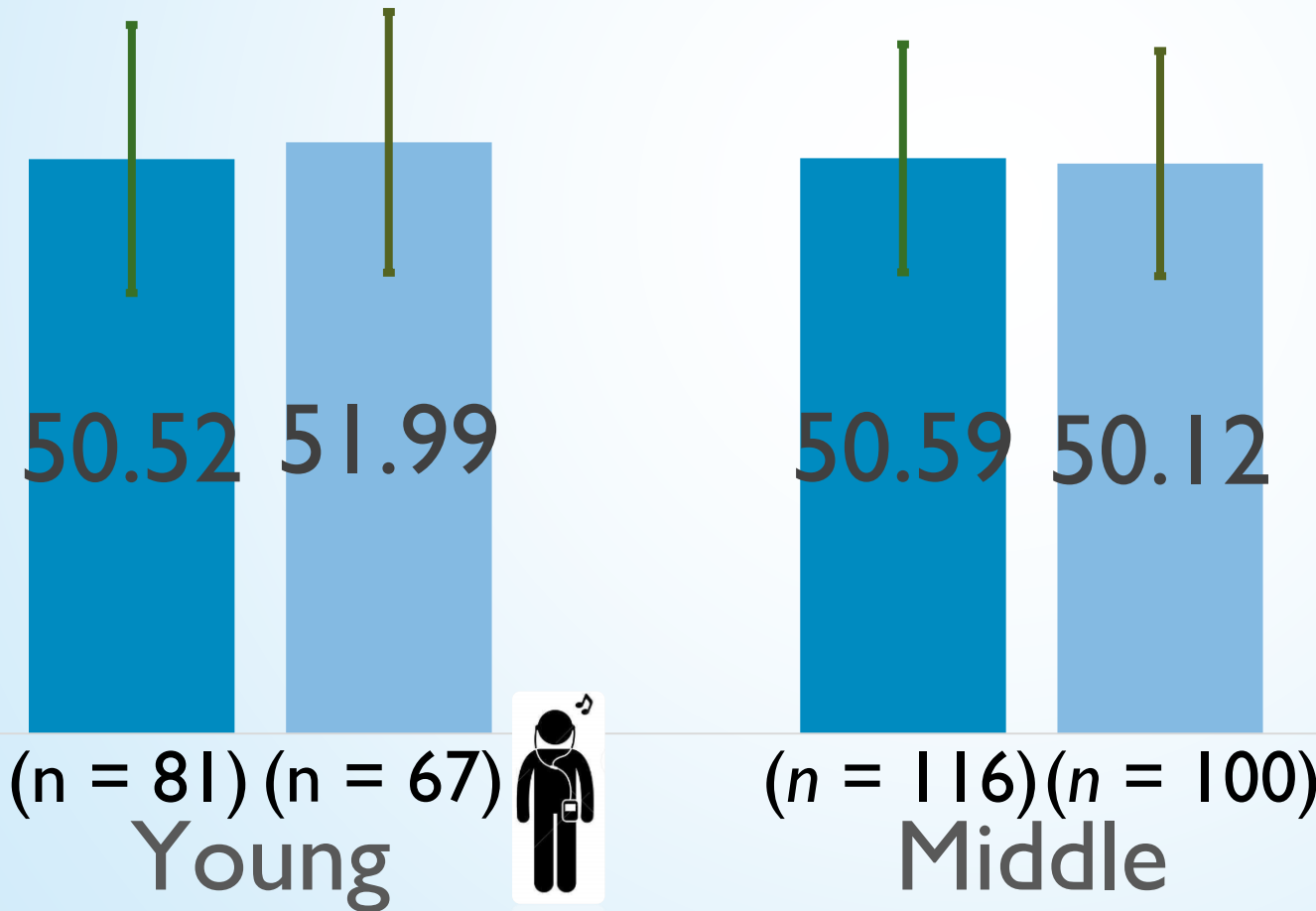


COG Independent Samples *t*-test Results



■ Sz Only ■ Sz + Mood

COG Mean Scores

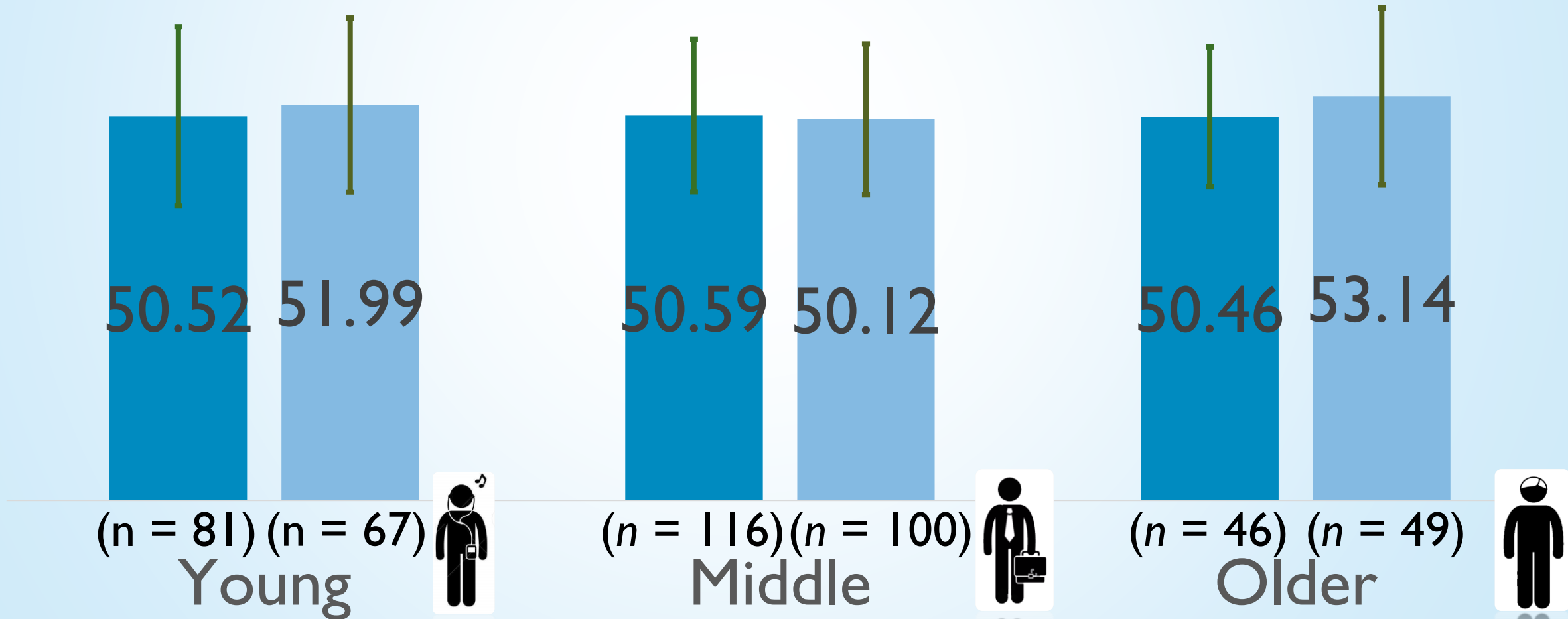


COG Independent Samples *t*-test Results



■ Sz Only ■ Sz + Mood
No significant differences

COG Mean Scores



Research Question 2

Results:

Comorbid mood disorders did not significantly impact cognitive symptom severity.



Conclusions & Future Directions

Research Question 1



Patients may not experience increased cognitive symptom severity as they age

Research Question 2



Having mood disorders may not impact cognitive dysfunction

How does this inform Clinicians?

Clinicians may not have to worry about cognitive symptoms worsening over time due to age

Comorbid mood disorders may not impact the level of treatment needed for cognitive symptoms

Future Directions in Research

Use more direct and specific measures of cognitive symptoms

Among larger samples and younger age groups

Controlling for additional variables

Acknowledgements

➔ **Mentor:** Danielle Burchett, PhD

Department of Psychology

➔ **Collaborator:** David M. Glassmire, PhD, APPB



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Thank you!

Questions?

DSM-IV-TR Diagnostic Codes

Schizophrenia Only

Schizophrenia Disorders: 295.10, 295.30, 295.40, 295.50, 295.60, 295.90

Schizophrenia with Mood

Schizoaffective Disorder: 295.70, 295.770

Depressive/Anxiety Disorders: 296.22, 296.24, 296.30, 296.31, 296.32, 296.34, 296.35

Bipolar Disorders: 296.00, 296.40, 296.41, 296.42, 296.43, 296.44, 296.45, 296.46, 296.50, 296.51, 296.52, 296.53, 296.54, 296.55, 296.60, 296.7, 296.70, 296.62, 296.64

Excluded from Analyses:

Drug-Induced Psychotic Disorders: 291.3, 291.50, 292.10, 292.11, 292.12

Psychotic Disorders due to Medical Condition: 293.81, 293.82

Mood Disorders due to Medical Condition: 293.83

Delusional Disorders, Brief Psychotic Disorder, Psychotic Disorder NOS: 297.10, 298.8, 298.9