



Characteristics of adults with dyslexia Why do people self report?

Ruth Leavett and Maggie Snowling

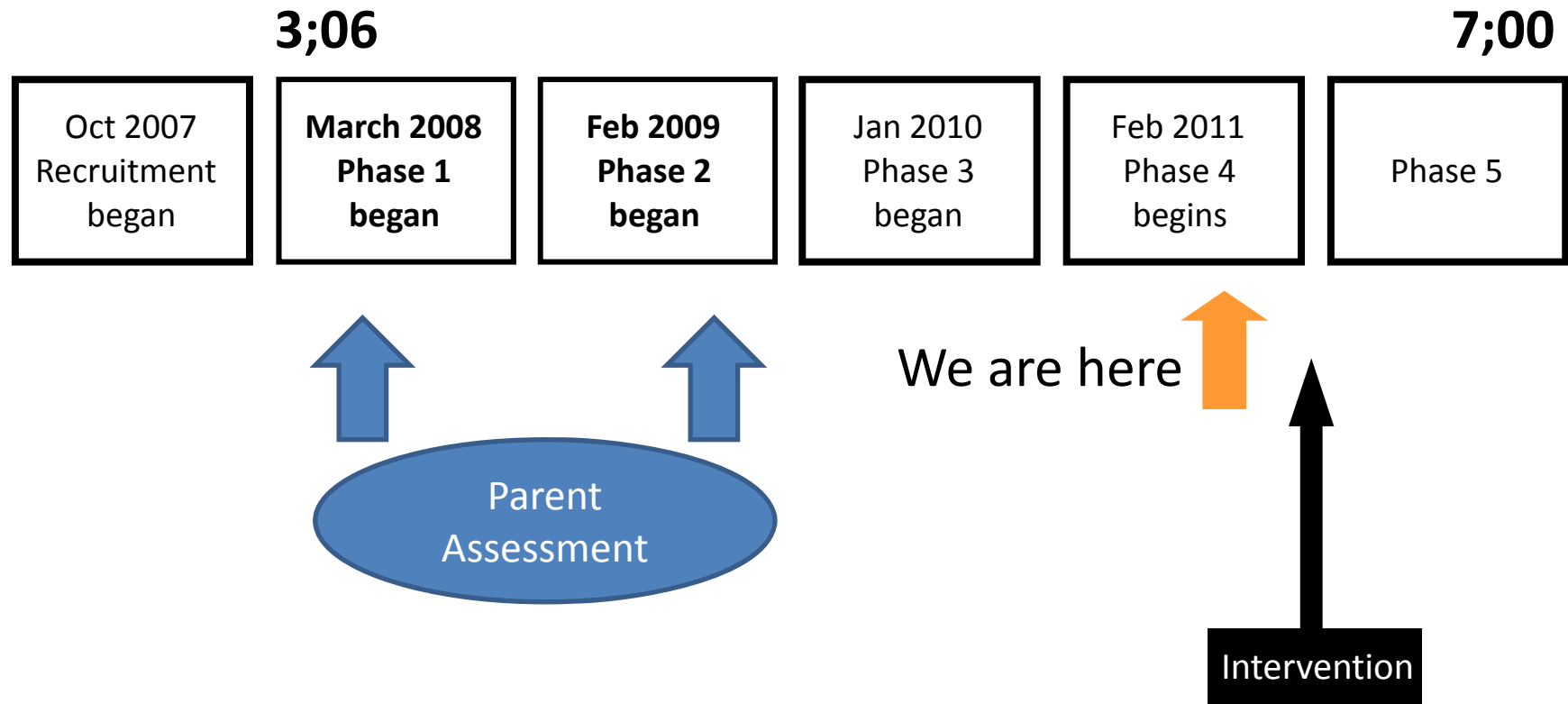


THE UNIVERSITY *of York*

Centre for Reading and Language

The Project - Timeline

9-12 months between assessments



Sample

- Parents of children in the Wellcome Language and Reading Project
- N = 334 (parents who completed both questionnaires and behavioural testing)
- 231 Female, 103 Male
- Age range = 20-60, Mean age = 36 years
- Still collecting data (at least 40 parents still to test)

Behavioural Tasks

Nonverbal Ability

- The Wechsler Abbreviated Scale of Intelligence (WASI, Wechsler, 1999)
- Block Design subtest

Vocabulary

- The Wechsler Abbreviated Scale of Intelligence (WASI, Wechsler, 1999)
- Vocabulary subtest

Reading

- The Test of Word Reading Efficiency (TOWRE; Torgesen, Wagner, & Rashotte, 1999)
- Word (Sight Word Efficiency)
- Nonword (Phonemic Decoding Subtest)

Spelling

- Wide Range Achievement Test (WRAT 4; Wilkinson & Robertson, 2006)
- Spelling subtest

Nonword Repetition

- Adult Nonword Repetition (ANRep; Gathercole & Baddeley, 1996)

Grammar

- The Test of Adolescent and Adult Language – 4th Edition (TOAL-4; Hammill et al., 2007)
- 10 items from the Sentence Combining Subtest

Questionnaires

Adult Reading Questionnaire (ARQ)

- Self Report Questionnaire
- Based on the Adult Dyslexia Checklist (Smythe & Everatt, 2001)
- Used to confirm family risk status in child groupings

Adult ADHD Self Report Scale (ASRS)

- 6 item screener assessing ADHD symptoms
- World Health Organisation (Kessler et al., 2005)
- Consistent with DSM-IV criteria

Communication Checklist – Self Report (CC-SR)

- Bishop, Whitehouse & Sharp (2009)
- Language structure
- Pragmatic skills
- Social engagement

SES

- **Occupation**
 - ONS Standard Occupation Classification (2000)
 1. **Managers and senior officials**
 2. **Professional occupations**
 3. **Associate professional and technical occupations**
 4. **Administrative and secretarial occupations**
 5. **Skilled trades occupations**
 6. **Personal service occupations**
 7. **Sales and customer service occupations**
 8. **Process, plant and machine operatives**
 9. **Elementary occupations**
 10. *(Student)*
 11. *(Full time mum)*
 12. *(Unemployed)*
- **Deprivation Rank**
 - ONS Indices of Deprivation
 - Postcode ranking
 - 1 = most deprived
 - 10 = least deprived
- **Level of Education**
 1. No formal
 2. GCSE
 3. GCE A level
 4. Further education
 5. Degree
 6. Higher degree

Classification

Self Report

“Dyslexia is a difficulty with reading and writing in people who:

- do OK in other aspects of life (their difficulty is mostly with reading and writing)*
- have had the chance to learn to read, but were not able to learn like others*

Based on this, do you think you are dyslexic?”

- Yes / No / Maybe**

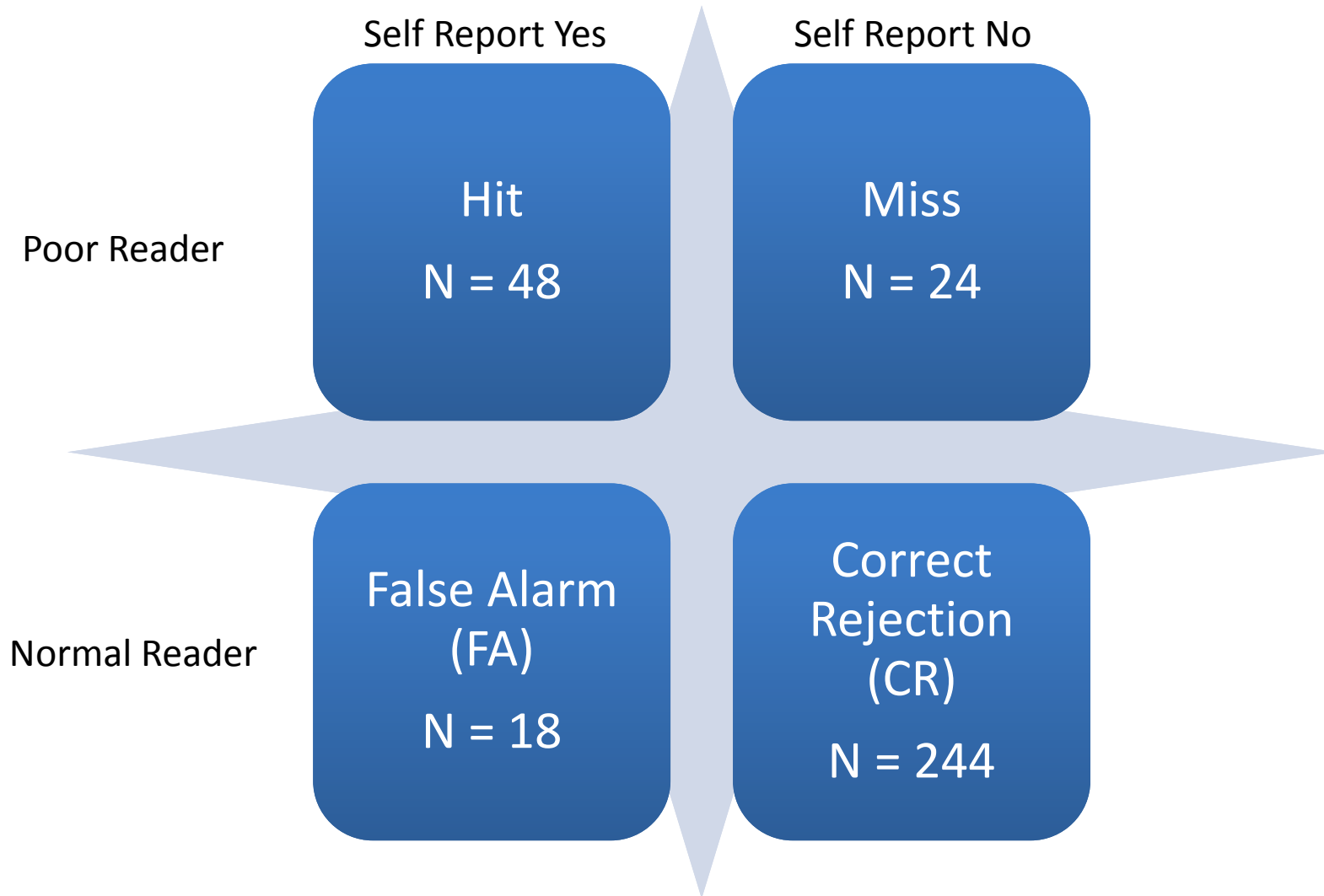
66/334 = 20% of sample

Reading Ability

- Performance on standardised literacy measures
- Composite of Nonword Reading and Spelling
- Classified as a poor reader if score on composite fell below 90

72/334 = 22% of sample

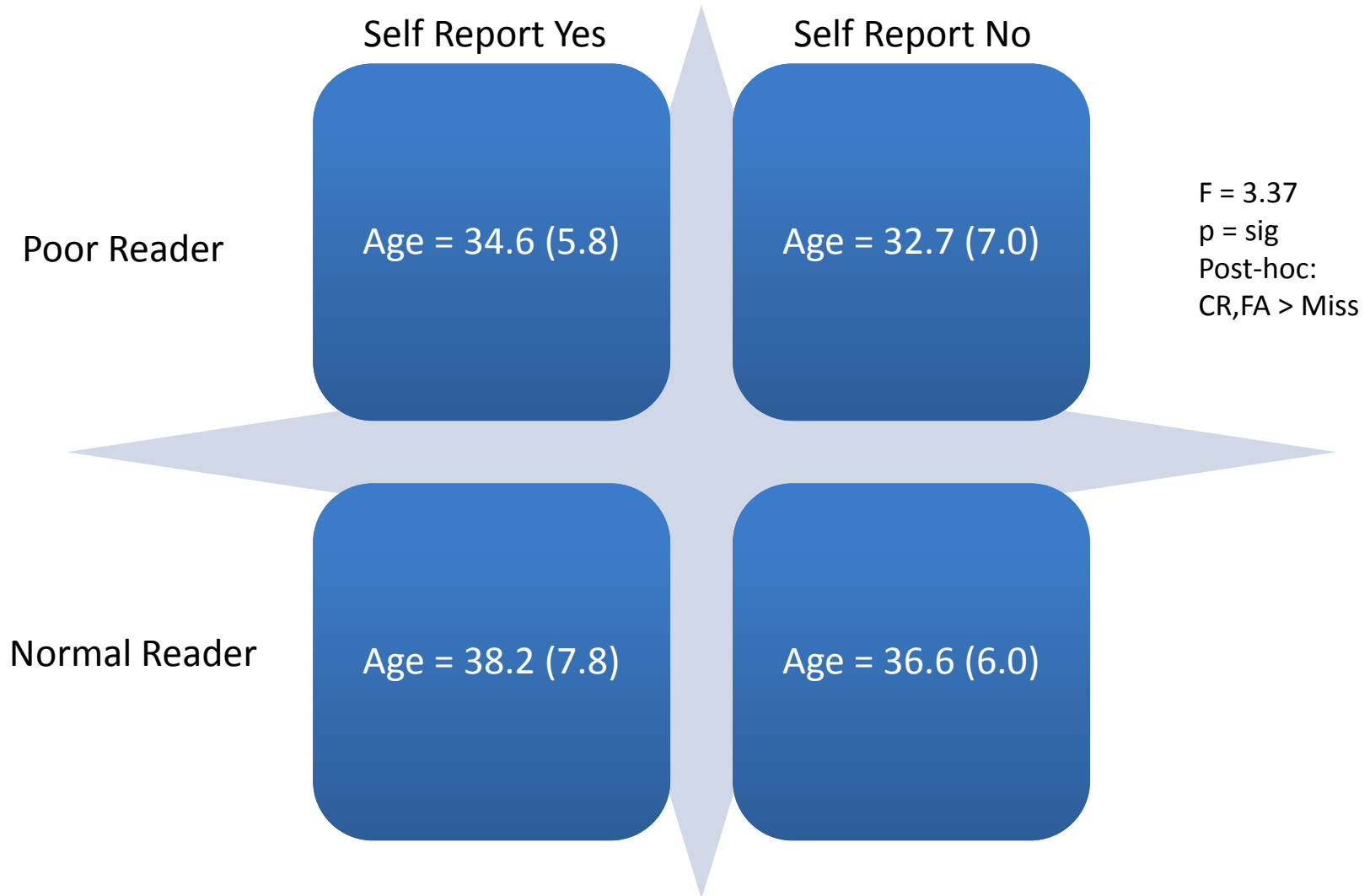
ARQ Validation



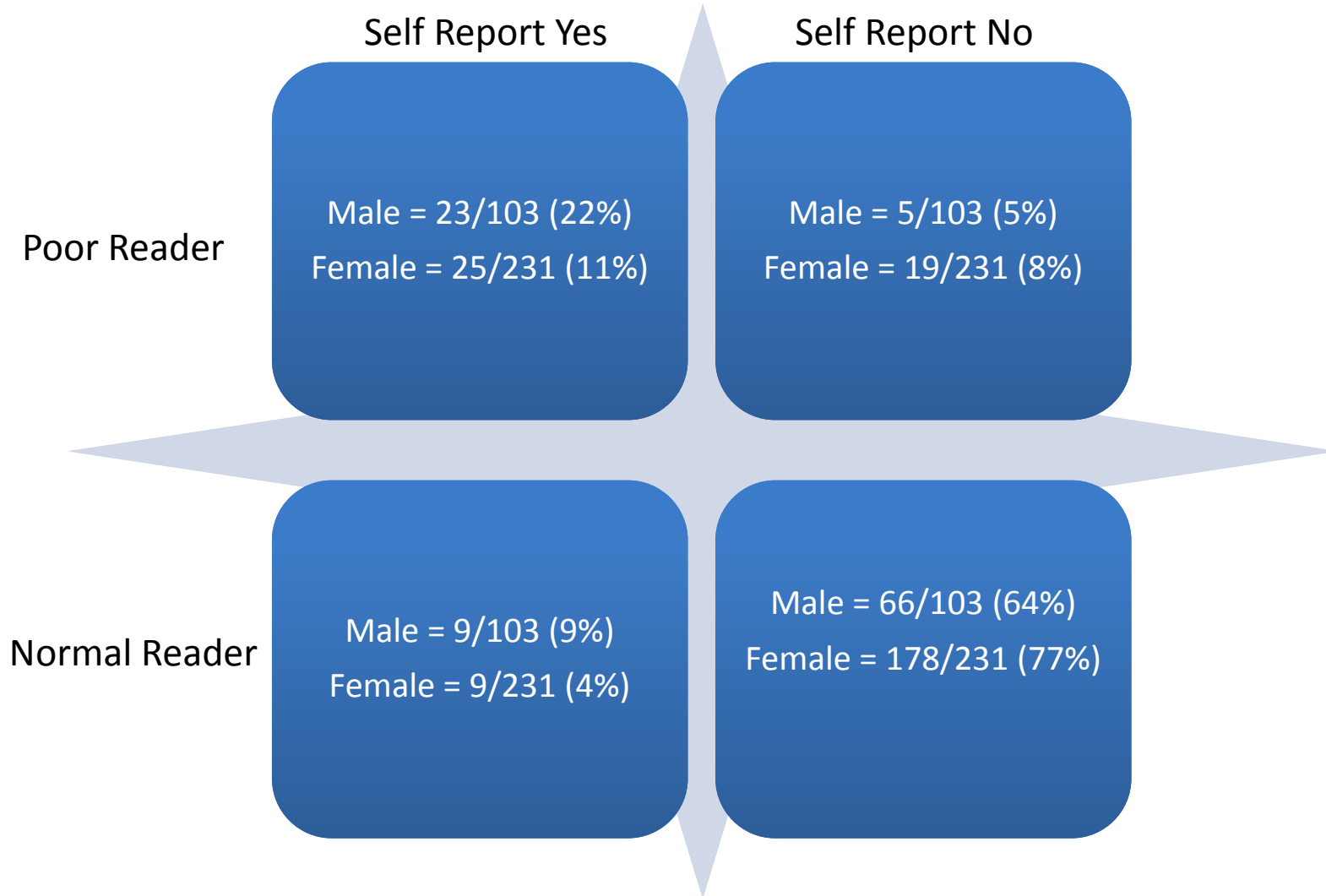
Why Do People Self Report?

- Gilger (1992)
 - Accuracy of self report is better in females, normal achievers and middle age range
 - Retrospective self report of educational achievement compared to actual test scores
- Snowling et al (in preparation)
 - Factors which increase likelihood of self report include:
 - Literacy skills
 - Age
 - Gender
 - Education Level
- Other factors to consider
 - Occupation
 - Nonverbal ability
 - Comorbidity: LI or ADHD

Age



Gender



Standardised Tests

| | | Self Report Yes | | Self Report No | |
|---------------|-------------------|-----------------|-------|----------------|-------|
| | | Mean | SD | Mean | SD |
| Poor Reader | Word Reading | 77.60 | 8.28 | 82.58 | 6.83 |
| | Nonword Reading | 73.94 | 8.77 | 81.17 | 6.81 |
| | Spelling | 84.25 | 8.60 | 87.88 | 5.10 |
| | Nonverbal Ability | 110.85 | 15.20 | 106.63 | 13.24 |
| | Vocabulary | 96.47 | 15.99 | 85.83 | 13.98 |
| Normal Reader | Word Reading | 86.44 | 8.89 | 96.78 | 11.63 |
| | Nonword Reading | 90.89 | 5.61 | 106.00 | 11.26 |
| | Spelling | 101.61 | 6.49 | 109.13 | 10.49 |
| | Nonverbal Ability | 116.17 | 11.01 | 115.39 | 10.61 |
| | Vocabulary | 106.00 | 14.07 | 108.32 | 14.93 |

Nonword Reading

| | | Self Report Yes | | Self Report No | | |
|---------------|-------------------|-----------------|-------|----------------|-------|--|
| | | Mean | SD | Mean | SD | |
| Poor Reader | Word Reading | 77.60 | 8.28 | 82.58 | 6.83 | |
| | Nonword Reading | 73.94 | 8.77 | 81.17 | 6.81 | |
| | Spelling | 84.25 | 8.60 | 87.88 | 5.10 | |
| | Nonverbal Ability | 110.85 | 15.20 | 106.63 | 13.24 | F = 190.0 |
| | Vocabulary | 96.47 | 15.99 | 85.83 | 13.98 | p = sig Post-hoc: CR>FA>Miss>Hit |
| Normal Reader | Word Reading | 86.44 | 8.89 | 96.78 | 11.63 | |
| | Nonword Reading | 90.89 | 5.61 | 106.00 | 11.26 | |
| | Spelling | 101.61 | 6.49 | 109.13 | 10.49 | |
| | Nonverbal Ability | 116.17 | 11.01 | 115.39 | 10.61 | |
| | Vocabulary | 106.00 | 14.07 | 108.32 | 14.93 | |

Spelling

Self Report Yes

Self Report No

Poor Reader

Normal Reader

| | Mean | SD | Mean | SD |
|-------------------|--------|-------|--------|-------|
| Word Reading | 77.60 | 8.28 | 82.58 | 6.83 |
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F = 137.22

p = sig

Post-hoc:

CR>FA>Miss,Hit

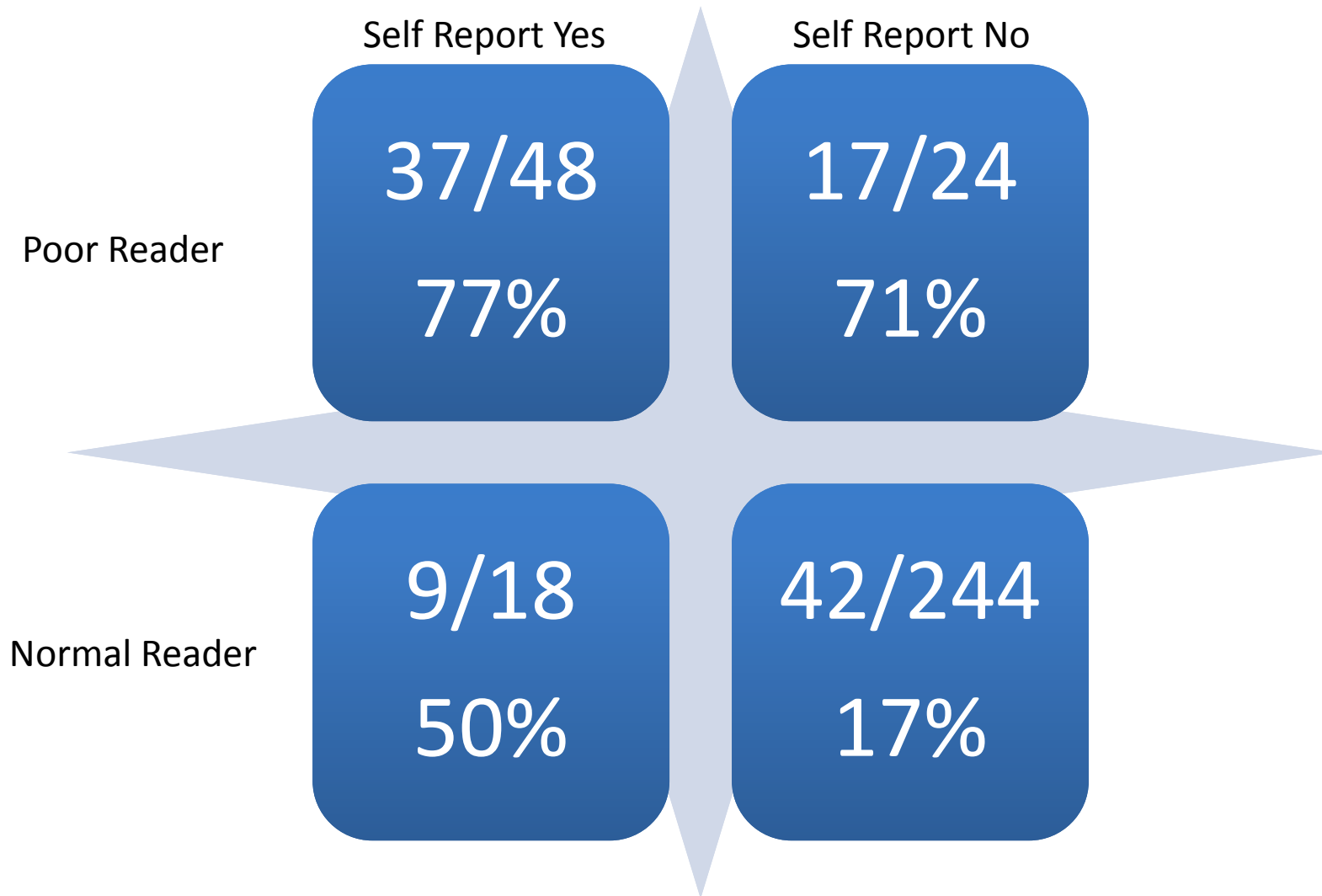
Word Reading

| | | Self Report Yes | | Self Report No | | |
|---------------|-------------------|-----------------|-------|----------------|-------|---|
| | | Mean | SD | Mean | SD | |
| Poor Reader | Word Reading | 77.60 | 8.28 | 82.58 | 6.83 | F = 52.06 p = sig Post-hoc: CR>FA, Miss, Hit FA>Hit |
| | Nonword Reading | 73.94 | 8.77 | 81.17 | 6.81 | |
| | Spelling | 84.25 | 8.60 | 87.88 | 5.10 | |
| | Nonverbal Ability | 110.85 | 15.20 | 106.63 | 13.24 | |
| | Vocabulary | 96.47 | 15.99 | 85.83 | 13.98 | |
| Normal Reader | Word Reading | 86.44 | 8.89 | 96.78 | 11.63 | |
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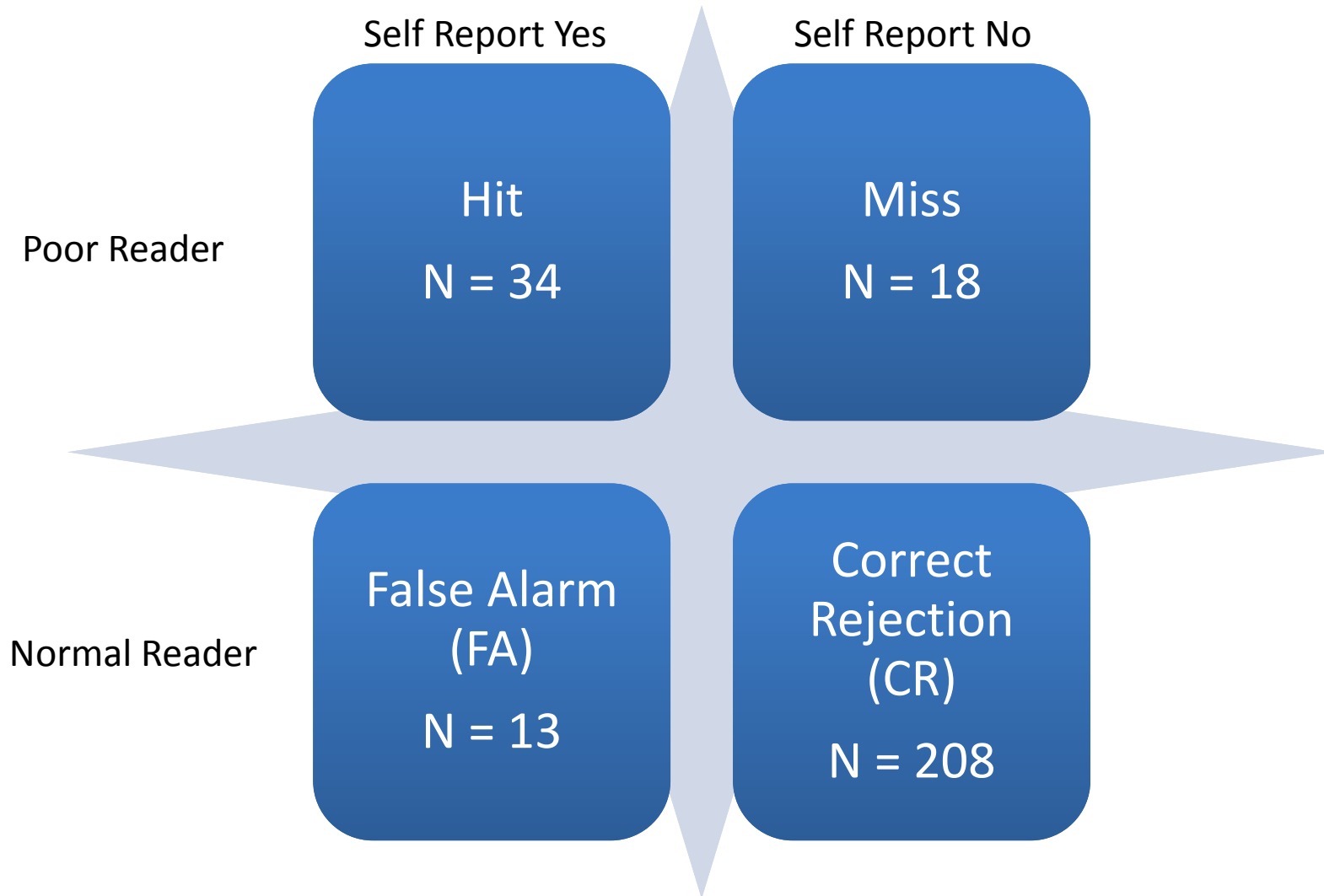
Nonverbal Ability

| | | Self Report Yes | | Self Report No | | |
|---------------|-------------------|-----------------|-------|----------------|-------|-----------------------------------|
| | | Mean | SD | Mean | SD | |
| Poor Reader | Word Reading | 77.60 | 8.28 | 82.58 | 6.83 | |
| | Nonword Reading | 73.94 | 8.77 | 81.17 | 6.81 | |
| | Spelling | 84.25 | 8.60 | 87.88 | 5.10 | |
| | Nonverbal Ability | 110.85 | 15.20 | 106.63 | 13.24 | F = 3.61 |
| | Vocabulary | 96.47 | 15.99 | 85.83 | 13.98 | p = sig Post-hoc: CR > Miss |
| Normal Reader | Word Reading | 86.44 | 8.89 | 96.78 | 11.63 | |
| | Nonword Reading | 90.89 | 5.61 | 106.00 | 11.26 | |
| | Spelling | 101.61 | 6.49 | 109.13 | 10.49 | |
| | Nonverbal Ability | 116.17 | 11.01 | 115.39 | 10.61 | |
| | Vocabulary | 106.00 | 14.07 | 108.32 | 14.93 | |

Discrepancy Definition of Dyslexia



Vocabulary



Vocabulary

Self Report Yes

Self Report No

Poor Reader

Normal Reader

| | Mean | SD | Mean | SD |
|-------------------|--------|-------|--------|-------|
| Word Reading | 77.60 | 8.28 | 82.58 | 6.83 |
| Nonword Reading | 73.94 | 8.77 | 81.17 | 6.81 |
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| Nonverbal Ability | 110.85 | 15.20 | 106.63 | 13.24 |
| Vocabulary | 96.47 | 15.99 | 85.83 | 13.98 |
| Word Reading | 86.44 | 8.89 | 96.78 | 11.63 |
| Nonword Reading | 90.89 | 5.61 | 106.00 | 11.26 |
| Spelling | 101.61 | 6.49 | 109.13 | 10.49 |
| Nonverbal Ability | 116.17 | 11.01 | 115.39 | 10.61 |
| Vocabulary | 106.00 | 14.07 | 108.32 | 14.93 |

F = 12.38

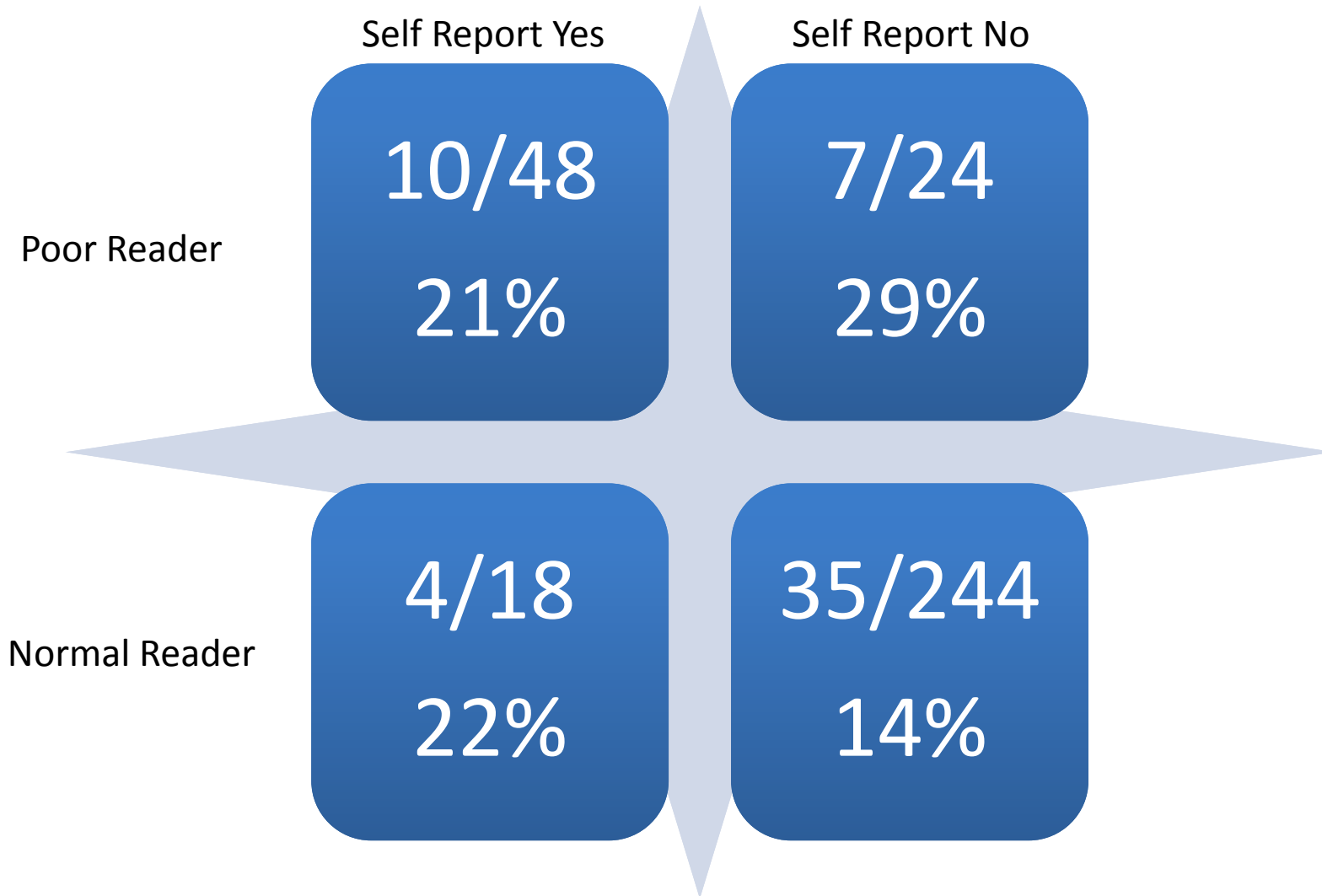
p = sig

Post-hoc:

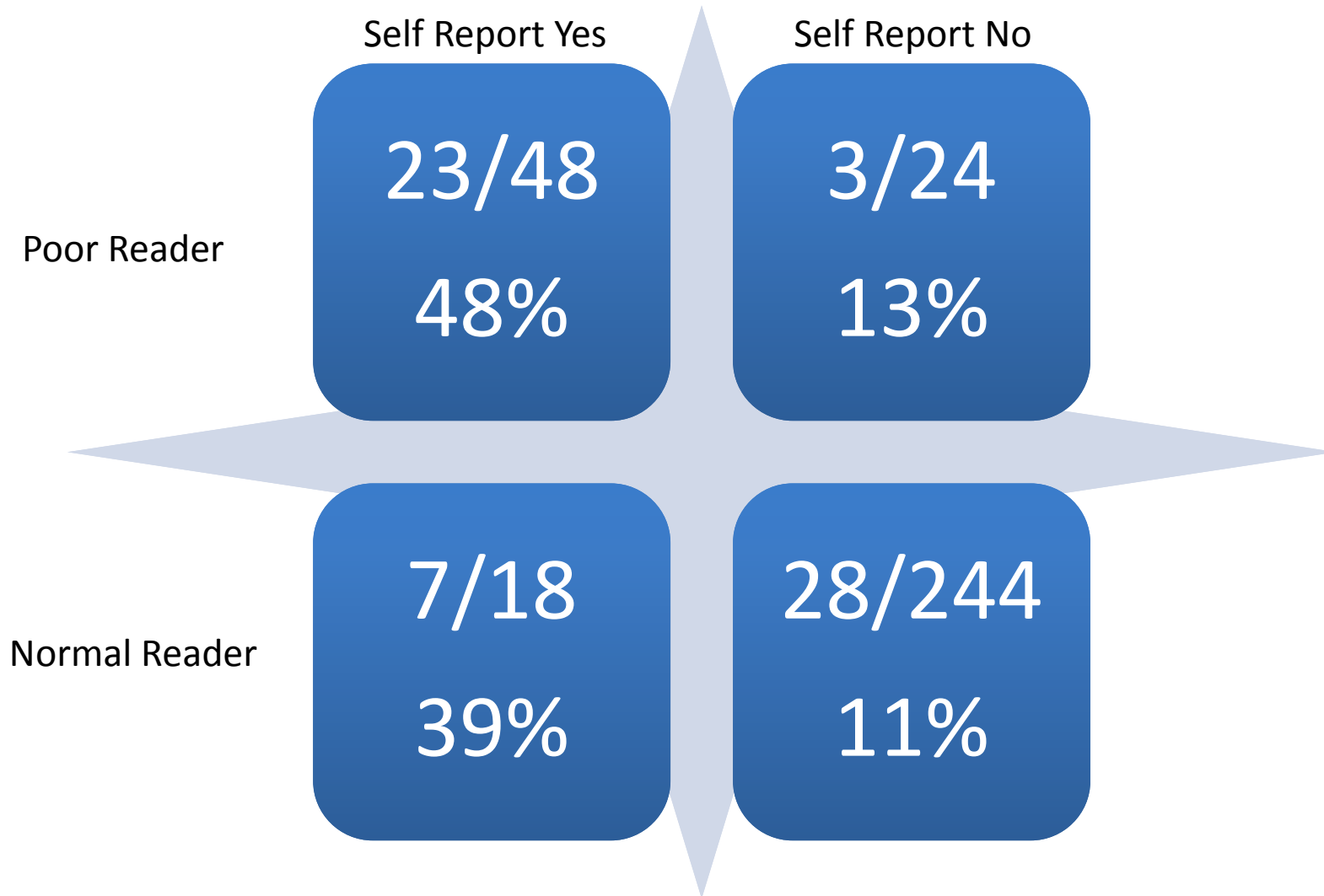
CR>Hit, Miss

FA>Miss

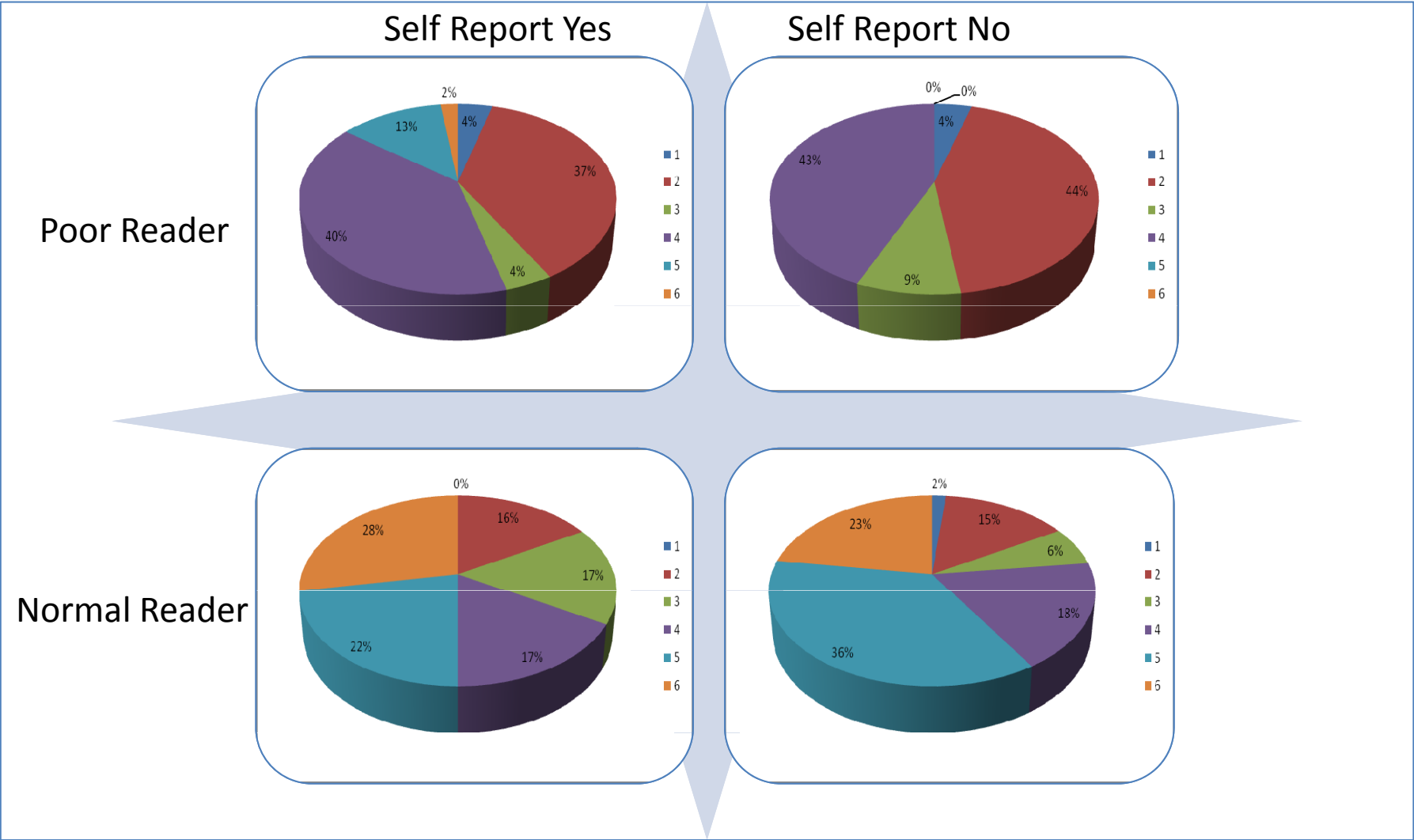
Language (CC-SR)



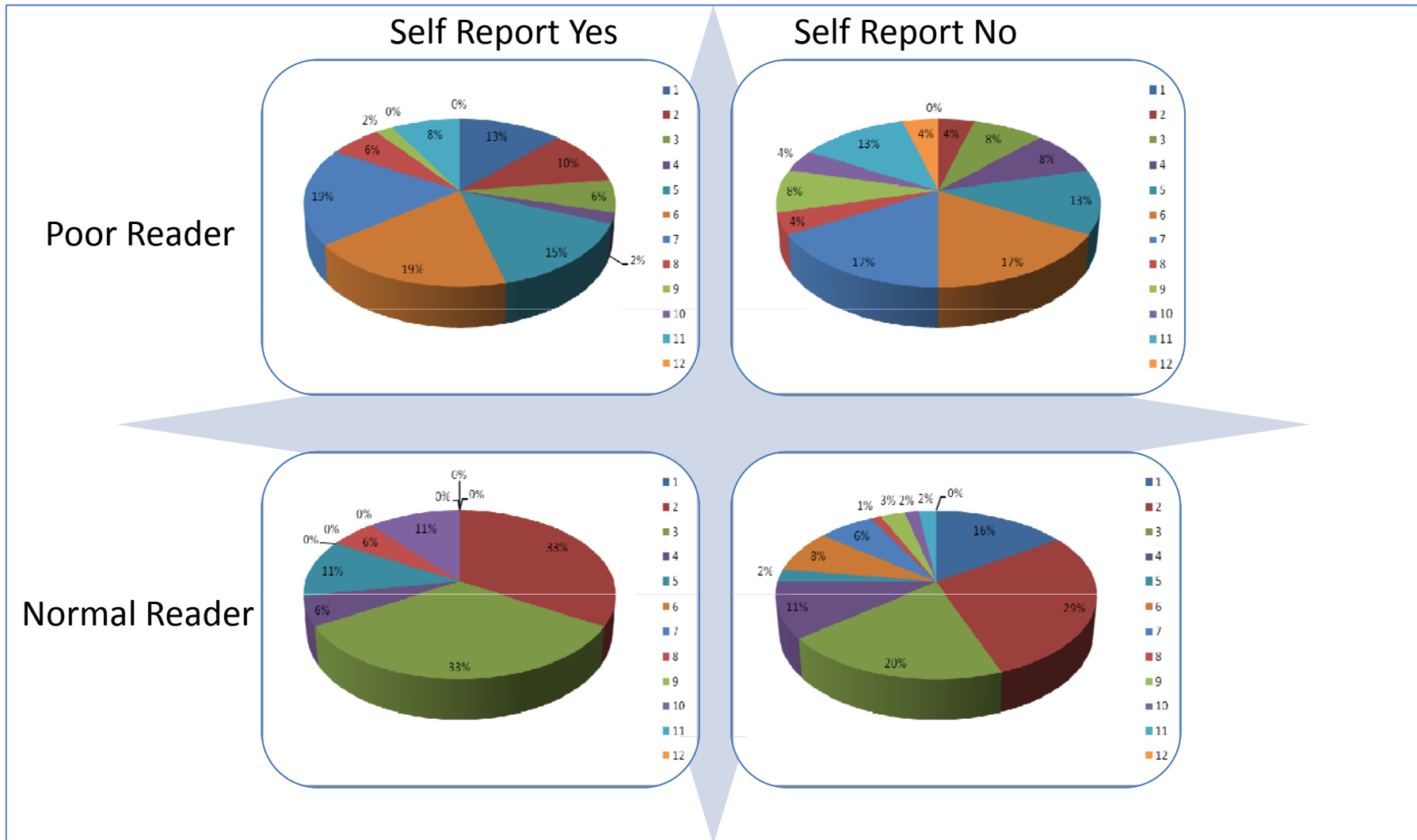
Attention (ASRS)



Education Level



Occupation Level



Summary

Misses

Why don't they self report?

- It's not just that they have less severe literacy difficulties
- Younger than people who do self report
- Mothers appear to be less aware of their difficulties
- Lower ability (nonverbal, vocabulary) – not specific problems?
- They are lower SES and in lower level occupations

False alarms

Why do they self report?

- They do show evidence of mild literacy difficulties
- Older than people who don't self report
- Fathers appear to be more aware of their difficulties
- Higher ability (nonverbal, vocabulary) – specific problems?
- They are higher SES and in higher level occupations

Thank you...

To the families in the project

And to the other members of the research team:

Maggie Snowling, Charles Hulme, Emma Hayiou-Thomas

Hannah Nash, Debbie Gooch, Fiona Duff

Lorna Hamilton and Katy Grainger