



**EMERGENCE OF DEVELOPMENTAL
DISABILITIES AND DISORDERS IN
CHILDREN**

Neurodevelopmental Disorders

- Group of conditions with onset in the developmental period
- Manifest early in development, typically before primary level schooling.
- Developmental deficits result in impairment in personal, social, academic or occupational functioning
- Frequently co-exist (co-morbidity)

Overall Prevalence

for Noninstitutionalized US Children 3-17 Years

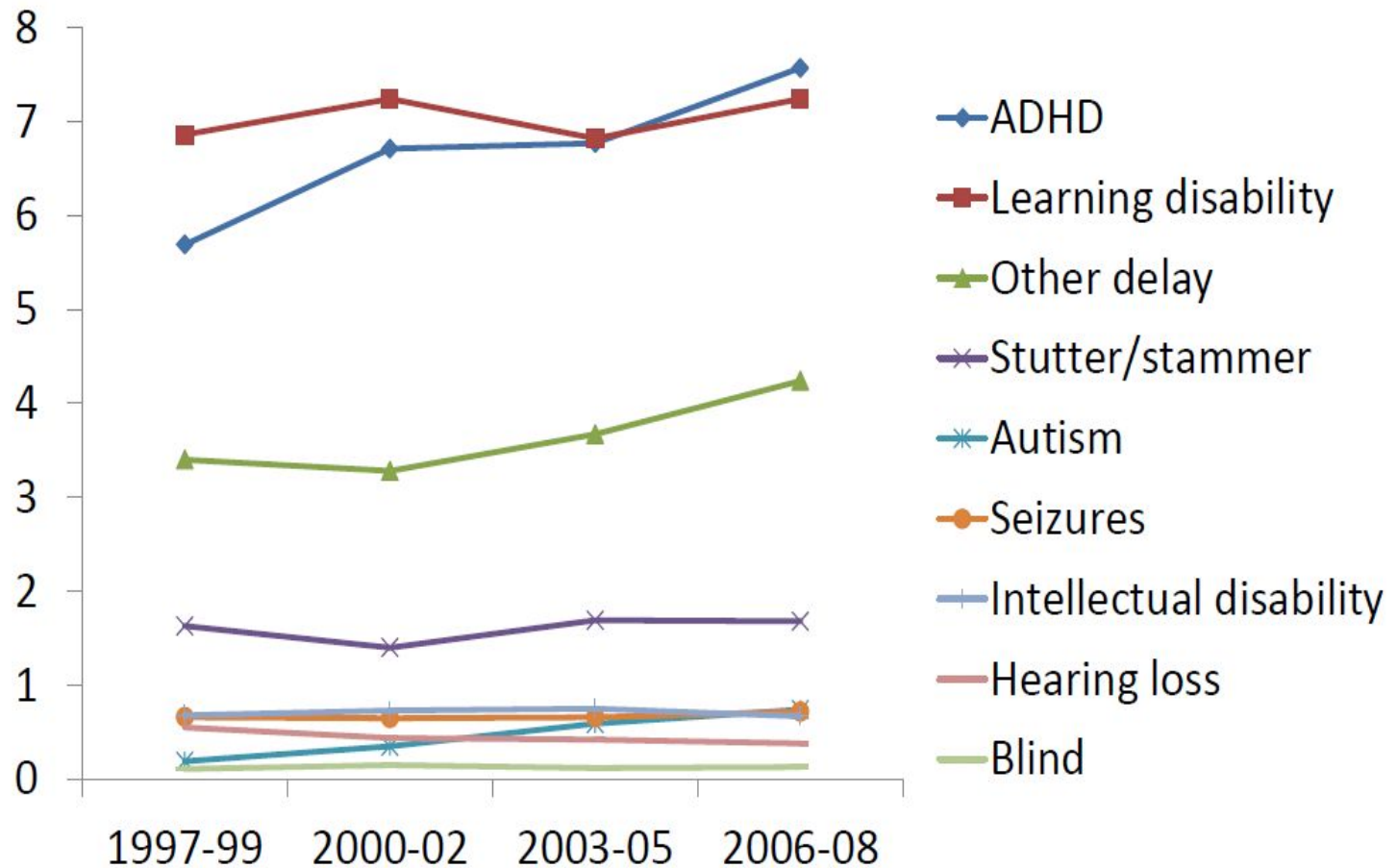
<i>Disability</i>	<i>Prevalence</i>
Any developmental disability	13.9
ADHD	6.7
Autism	0.5
Blind, unable to see	0.1
Cerebral palsy	0.4
Intellectual disability	0.7
Learning disability	7.0
Moderate to profound hearing loss	0.5
Seizures	0.7
Stammering/stuttering	1.6
Other developmental delay	3.7



Trends in Prevalence of Any Developmental Disability



Trends in Prevalence of Specific Developmental Disabilities



Identifying Developmental Disabilities

- Obvious Developmental Problems:
 - Easily identifiable condition
(Down Syndrome, seizures, severe delays)
- Less Obvious Identified through:
 - Developmental surveillance
 - Developmental screening, using specific screening tools
(most tools now use parent report)
- Diagnosed by:
 - Developmental Assessment

Reasons for Assessment of Development in JAKIDS

- Obtain culturally relevant information on Jamaican children's development
 - Milestones used to evaluate our children are usually those from other countries, typically HIC
 - Well recognised cultural differences in milestones e.g. Motor skills
- As an outcome measure to evaluate impact of risk factors
- Obtain information on prevalence etc. of developmental disabilities over time

JAKIDS Assessment of Development I

9 mth. and 18 mth. contact

- Included questions from General Screening Tools in all domains:
 - The Ten (Eleven) Question Screen
 - Ages and Stages Questionnaire
 - Other questions

18 mth. contact

- Included questions from specific screening tool
M-CHAT for Autism Spectrum Disorder

18 mth. and 4 year old contact

- Developmental Assessments

JAKIDS Assessment of Development II

- **General Questions**
 - Parental Perception
 - Teacher Perception
 - Health Worker Perception
 - Enquiry of specific conditions (e.g. Seizures)
 - Specialist referrals
 - Hospital admissions
- **Review of administrative data**
 - Clinic Records
 - Hospital Admission Records

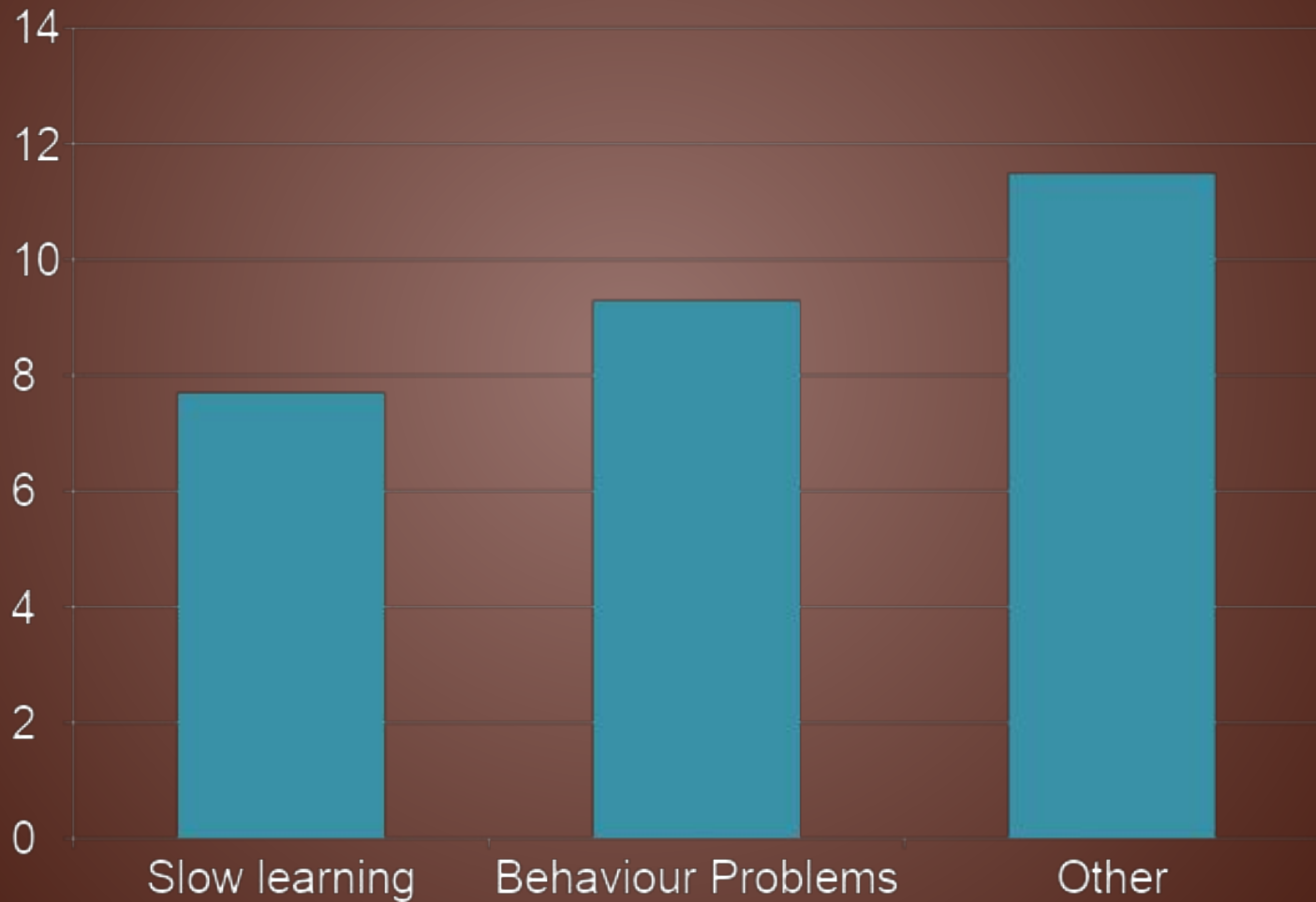
General Questions

- Seizures 1.0% (9 mths) 1.9% (18 mths.)

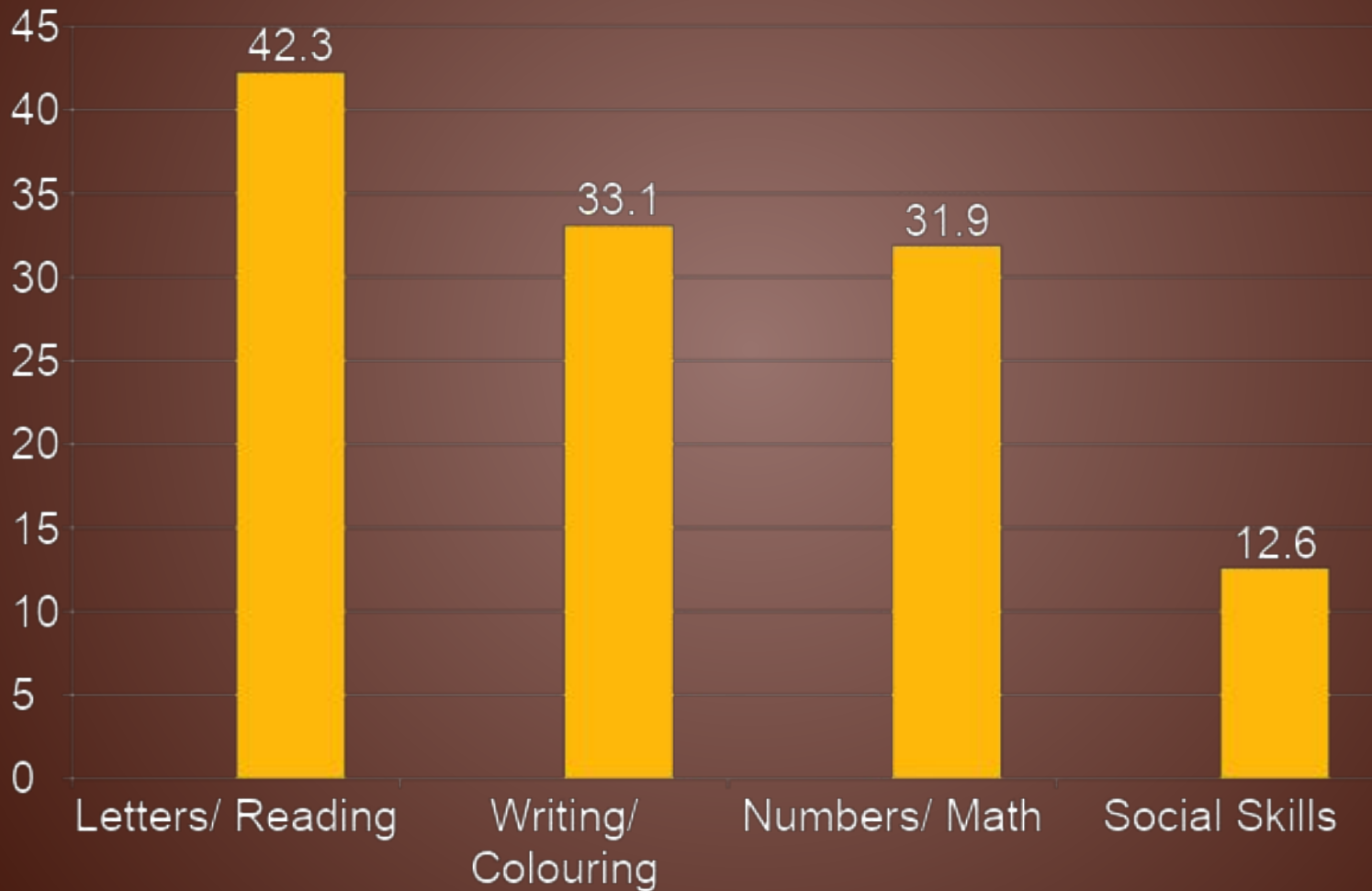
4 years

- Has a health care worker ever told you your child was developing slowly? 1.8%
- Has a health care worker ever told you your child was having behaviour problems? 1.1%

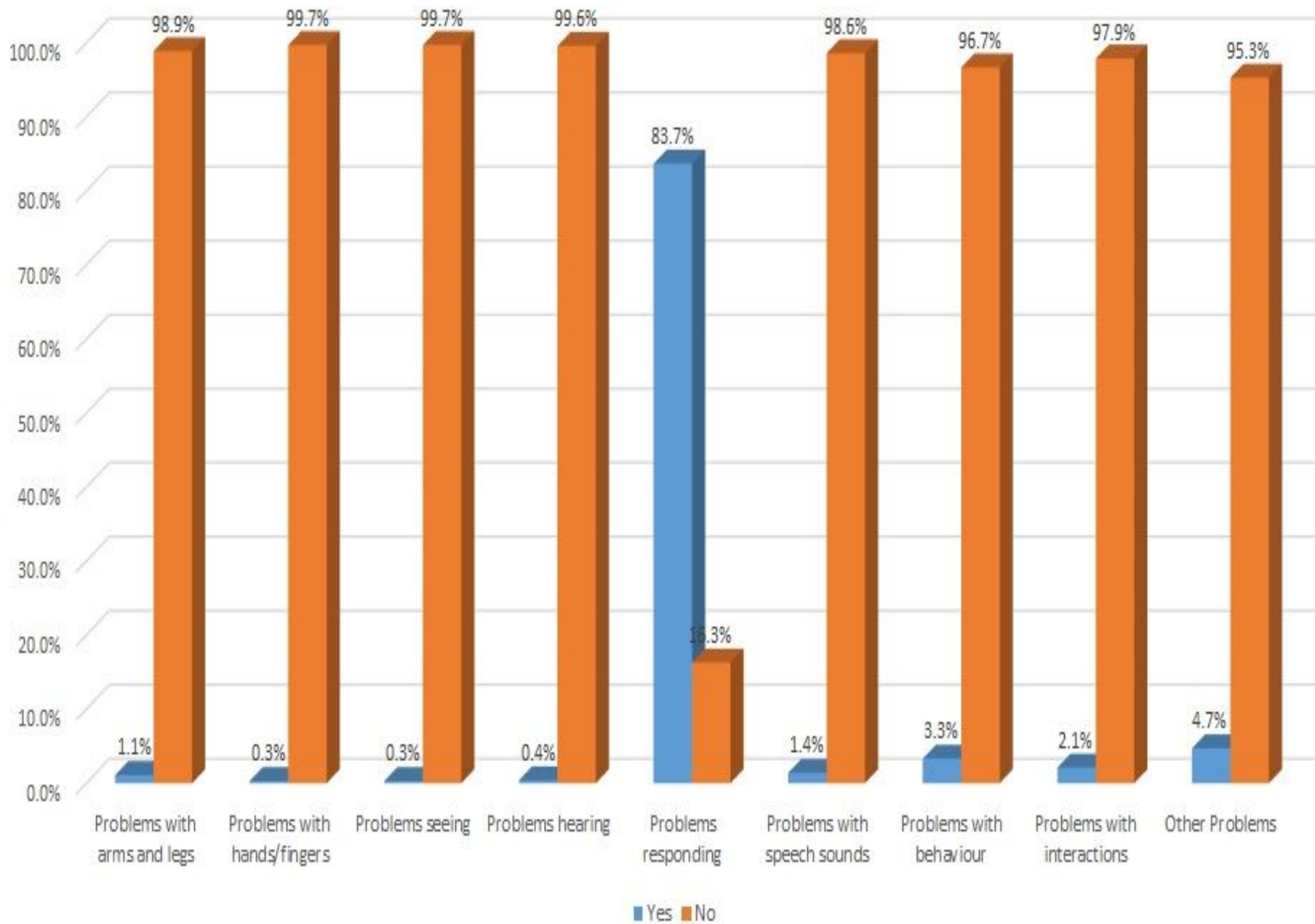
Child Performance Concerns (Teacher)



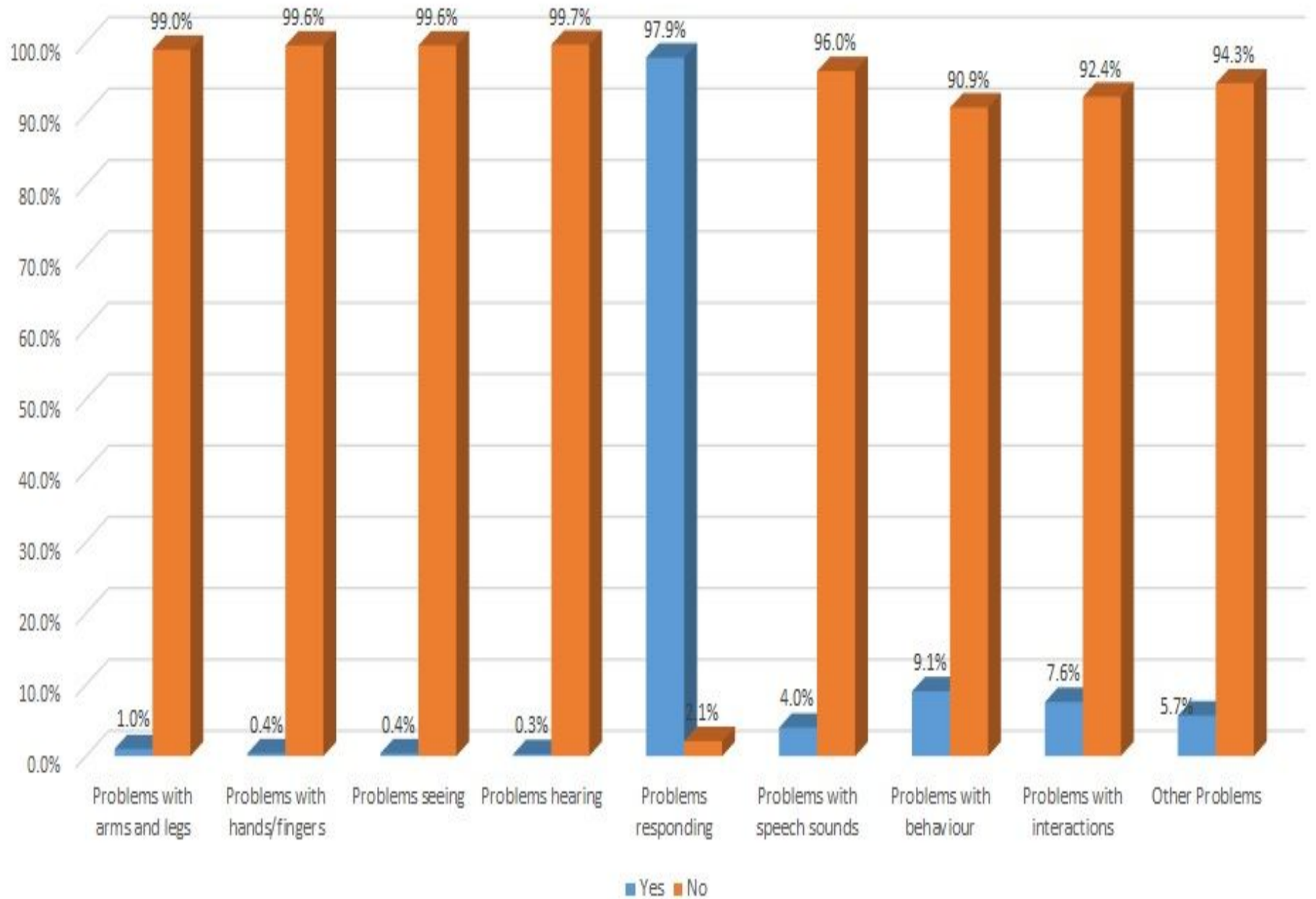
Child Performance Concerns (Mother)



Ten Screen Questions: 9 Month



Ten Screen Questions: 18 Month



Comparison of TQS 9 & 18 mths.

• Arms and legs (G Motor)	1.1%	1.1%
• Hands and Fingers (F Motor)	0.3%	0.4%
• Vision	0.3%	0.4%
• Hearing	0.4%	0.3%
• Responding	16.3%	2.1%
• Speech	1.4%	4.0%
• Behaviour	3.3%	9.0%
• Interactions	2.1%	7.6%

Autism Spectrum Disorder

- 21 JAKIDS diagnosed with ASD so far = 0.2%
- Administrative data from specialist main public & private clinics for ASD at UHWI
- USA rate for 8 year old children = 1.7% (1 in 59)
- Others diagnosed that we are not aware of
- Others undiagnosed

Age of Diagnosis

	Under one year	2 years	3 years	4 years	5 years	6 years
Parental Concern	6	6	5	2	-	
Specialist Consult	1	2	2	5	8	1

Developmental Scores

	Personal-Social	Hearing & Speech	Co-ordination	Non-Verbal Reasoning
Mean	57.3	44.9	57.3	57.8
SD	24.3	24.1	24.0	24.9
Proportion below Normal (80)	78.6%	92.9%	85.7%	85.7%

Conclusions

- The JAKIDS study has the potential to:
 - Track the emergence of developmental disabilities
 - Determine the true prevalence of developmental disabilities
 - Identify risk factors from data collected from before birth and in the earlier years