

INTRODUCTION

The improved survival of preterm neonates doesn't correspond with better developmental outcomes (Zwicker & Harris, 2008). Preterm infants born with CNS that is not already fully developed. This immaturity persists throughout the developmental age of the child, to adulthood. This is particularly clear in preschool and during the transition to school, when request from environment increased.

Although the population of preterm children usually has an IQ average, they may experience deficits in specific areas, such as verbal fluency, working memory, cognitive flexibility, which impact negatively on behavioural functioning and on school performances (Aarnoudse-Moens et al., 2009).

OBJECTIVE

To investigate the presence of possible difficulties linked to:

1. cognitive development
2. motor development
3. reading and writing
4. adaptive behavior

at 4 and 5 years comparing preterm and full term children.

METHODS

Participants

	Preterm (N=40)	Full-term (N=30)
4-years-old	n=17	n=17
5-years-old	n=15	n=15
GA	28.91±2.49	38.82±1.73
Birth Weight	1078.16±409.14	3163.00±497.91

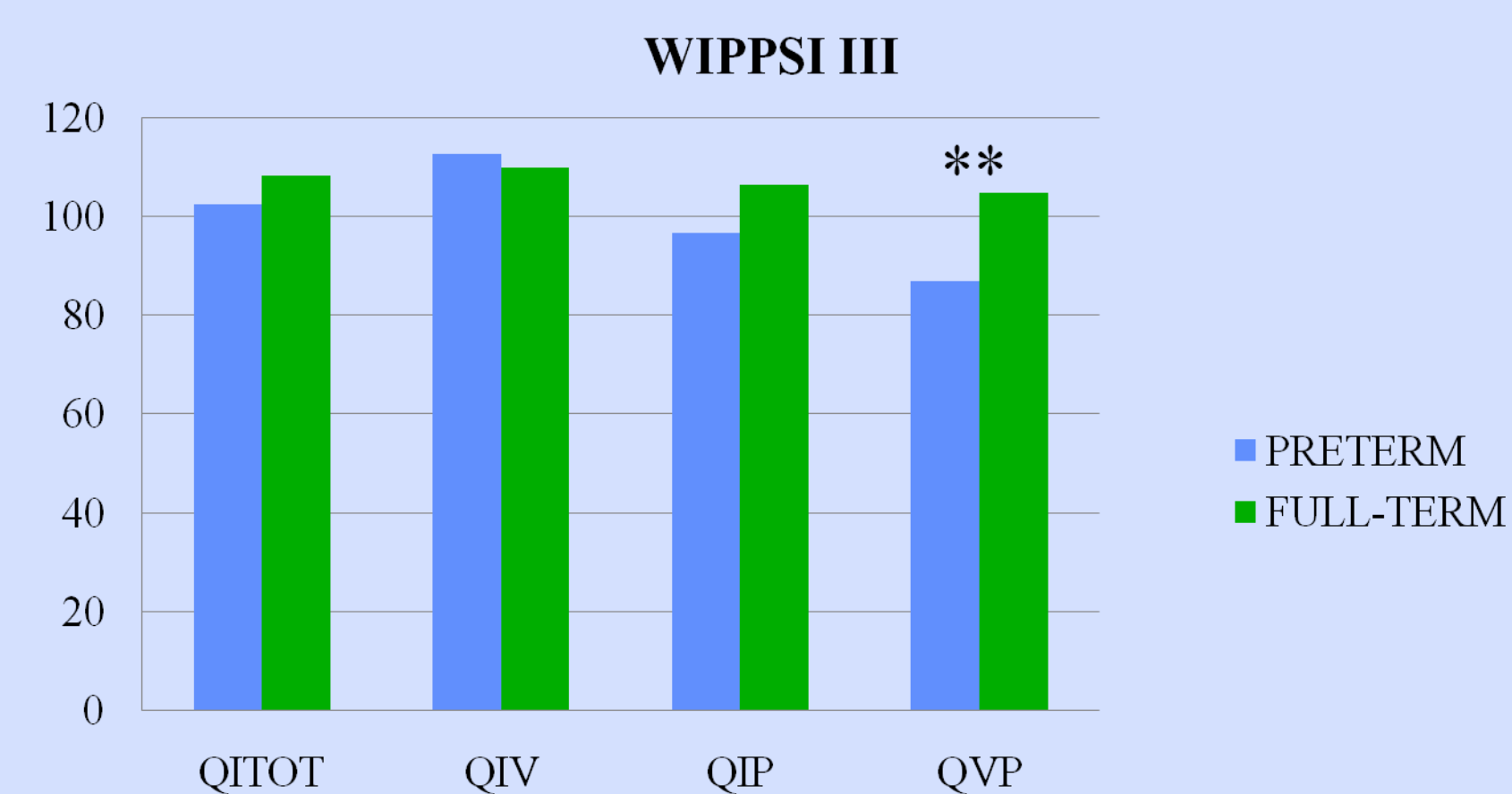
6 preterm children had a pathological NMRI (2 small punctiform injury, 1 hydrocephalus, 1 cerebellar damage and 2 leukomalacia). No one had significant neurological alterations. Preterm children with visual or auditory deficit were excluded.

Measure

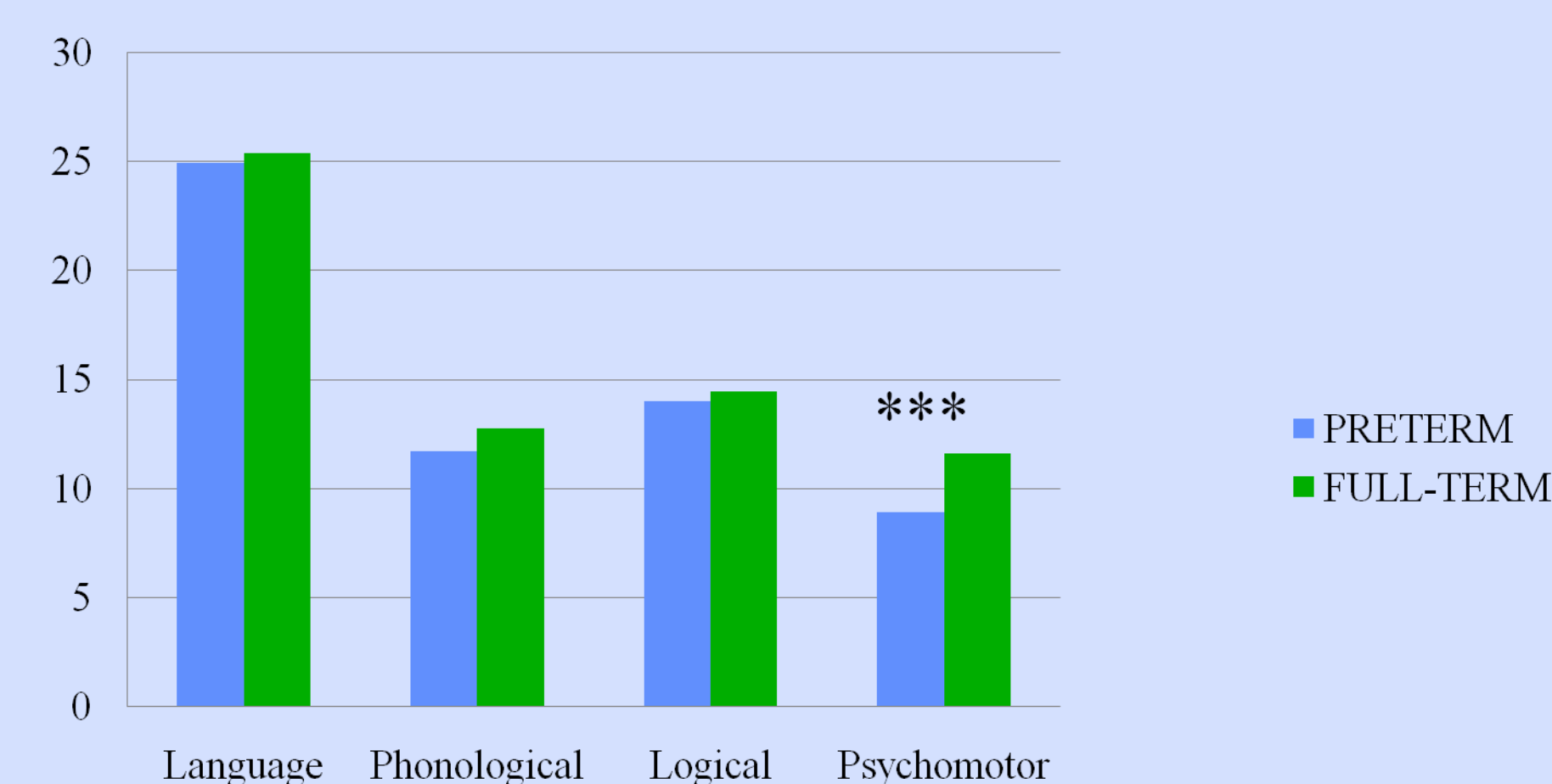
- ❖ **Wechsler Preschool and Primary Scale of Intelligence III** (WPPSI-III; Wechsler, Fancello & Cianchetti, 2008) at 4 and 5 years
- ❖ **School Readiness 4-5** (SR 4-5; Zanetti, Miazza, 2003) at 4 and 5 years
- ❖ **Child Behaviour Checklist 4-18** (CBCL/4-18; Achenbach, 1991) at 4 and 5 years

RESULTS

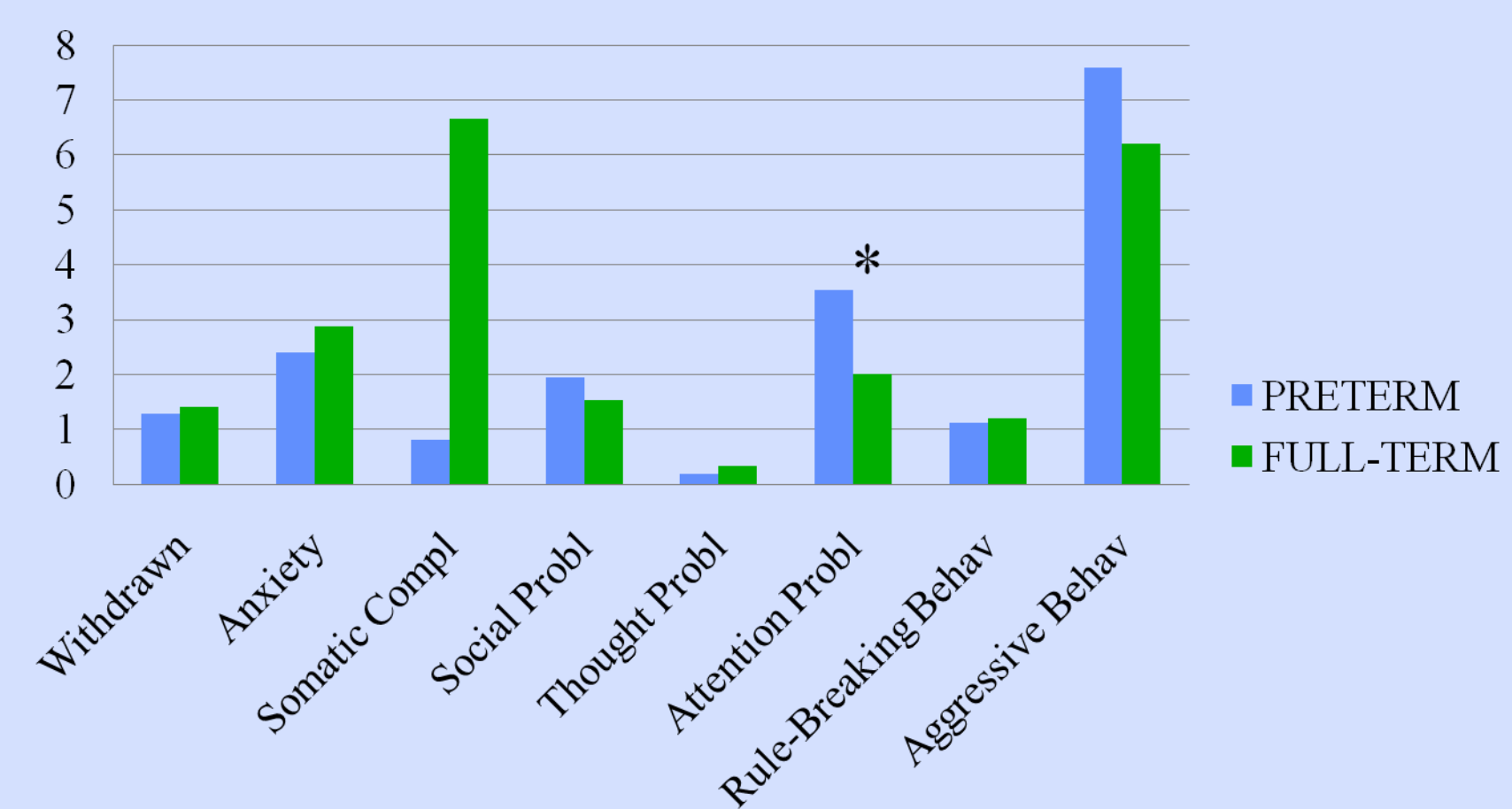
4-years-old



SR 4-5



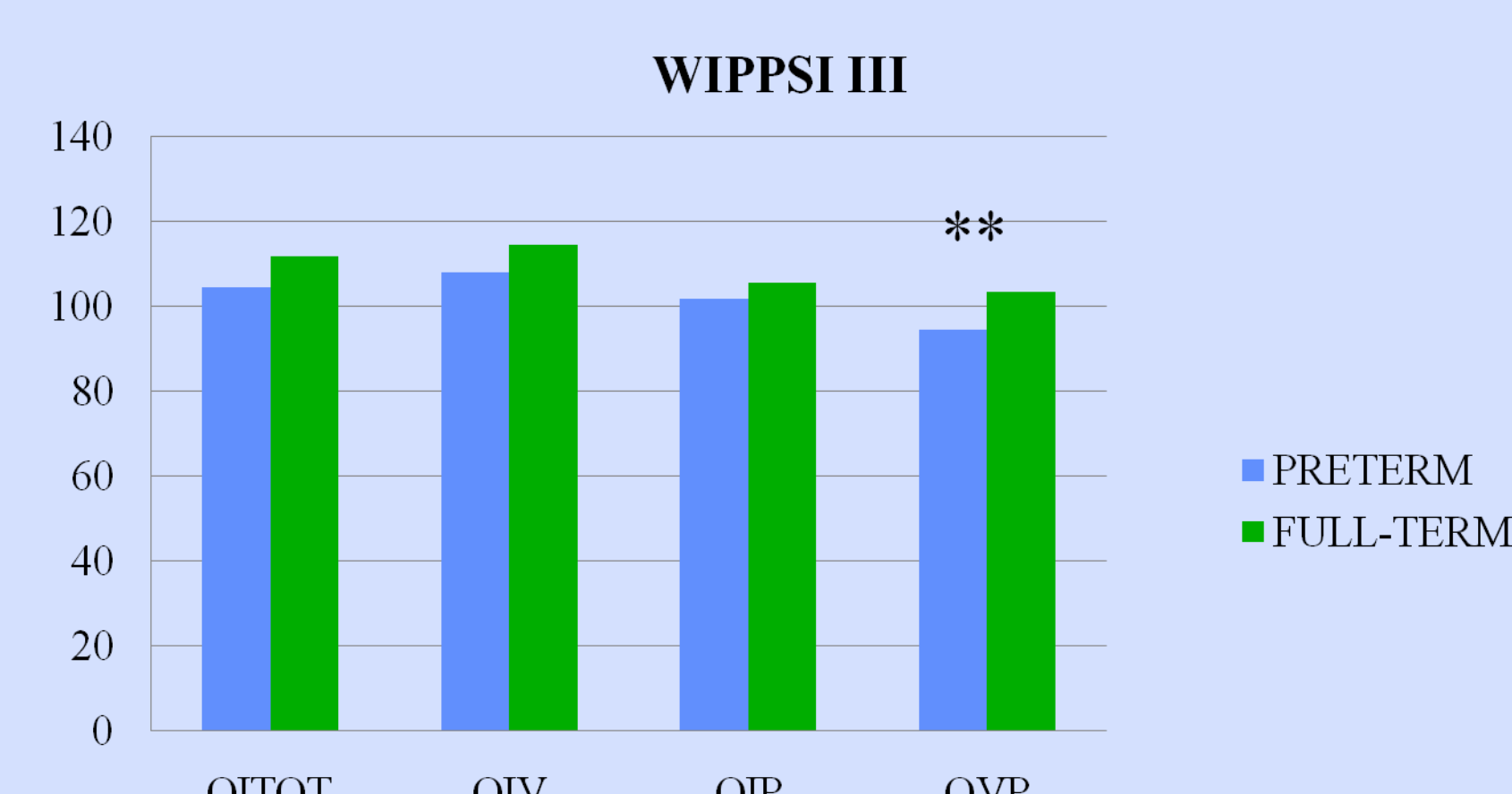
CBCL/4-18



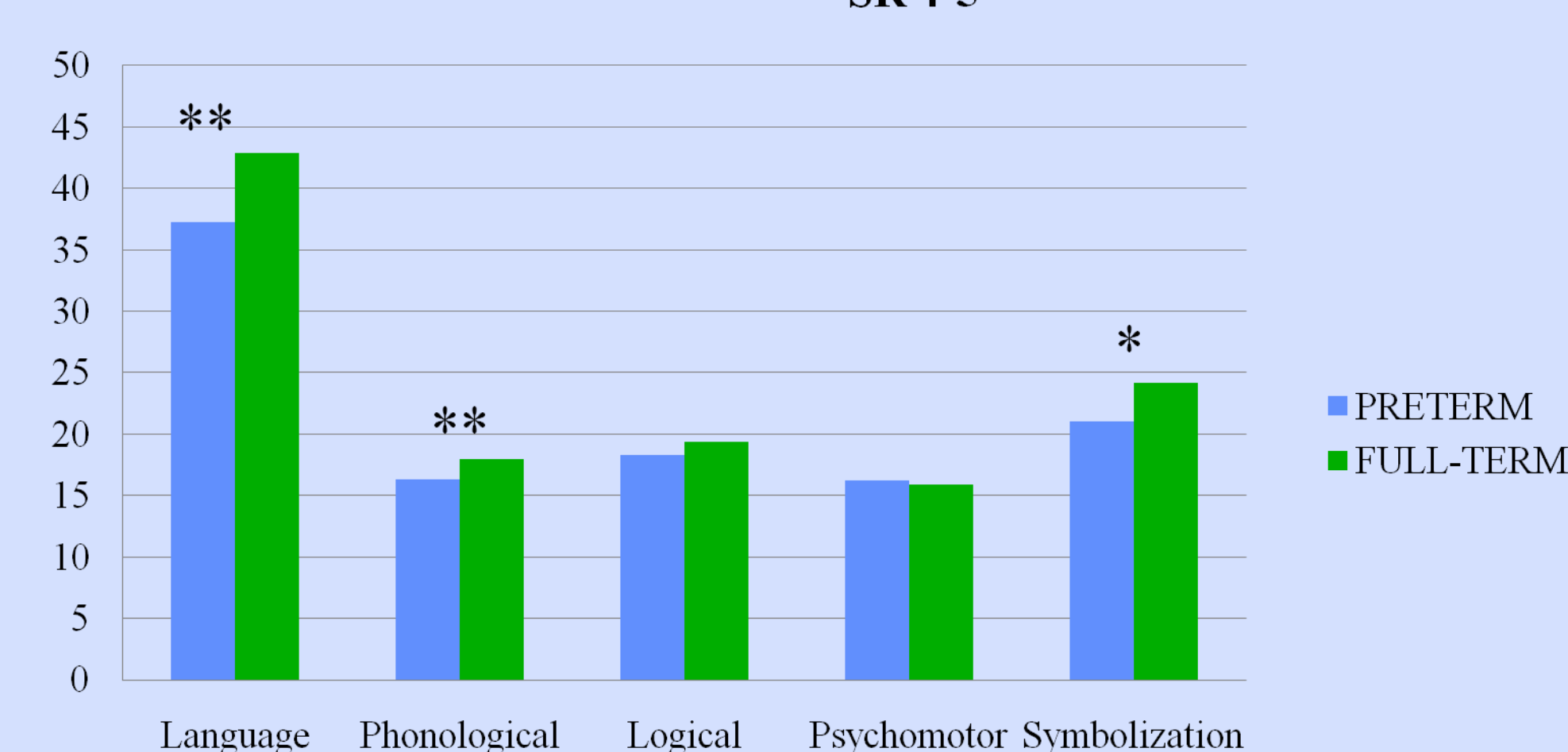
*** $p < .000$; ** $p < .010$; * $p < .050$

No difference were found between IQ scores (WPPSI III) of preterm with pathological and non pathological NMRI both at 4 and at 5 years old

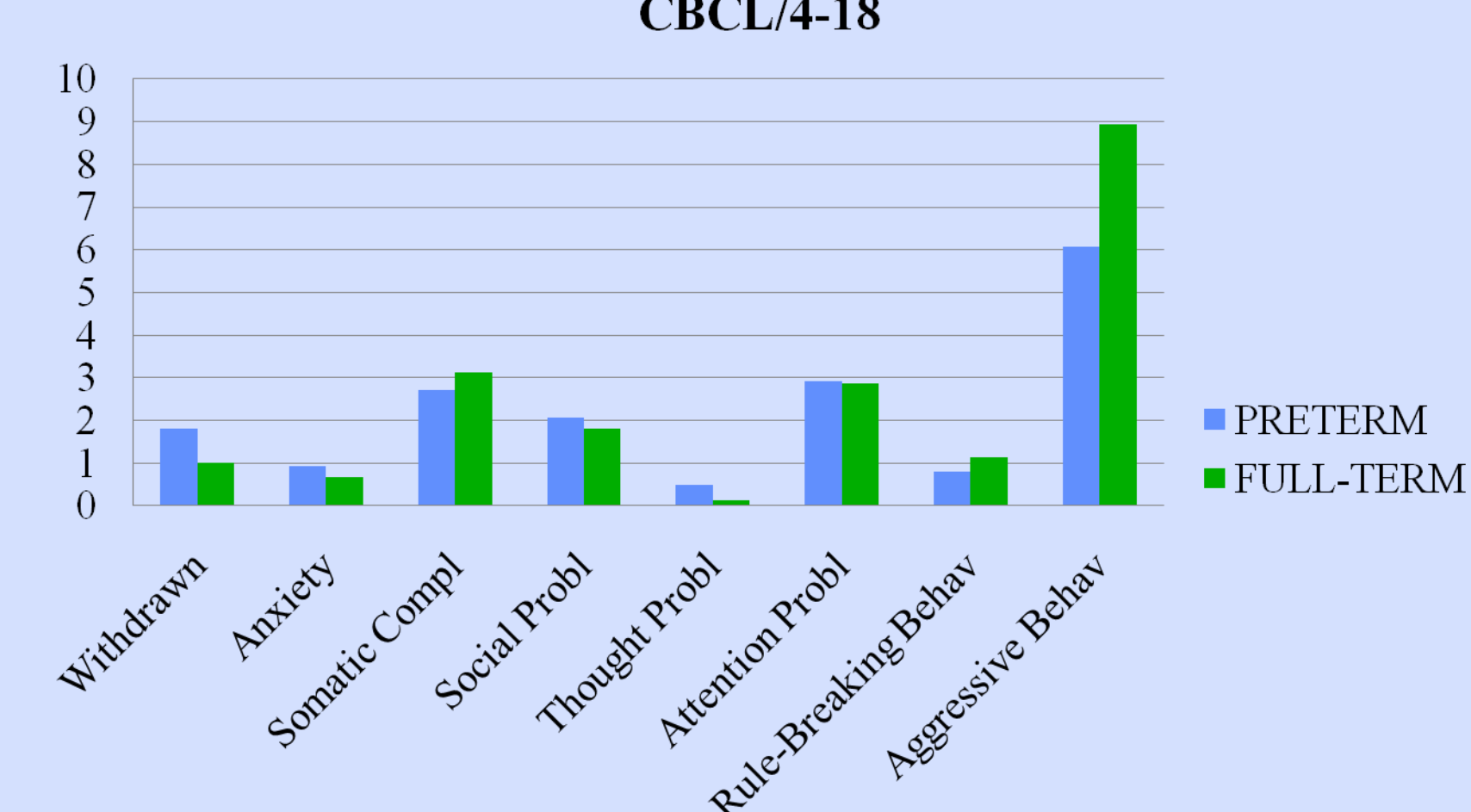
5-years-old



SR 4-5



CBCL/4-18



DISCUSSION

- ❖ At 4 years preterm children obtain average scores as regards their cognitive level, but lower than their term peers;
- ❖ The processing speed (QVP) is significantly different both at 4 and at 5 years of age: preterm children are more slowly in perceptive and cognitive tasks, in learning, in searching and recognizing stimuli than their term peers;
- ❖ Psychomotor development at 4 years is significantly worst in preterm children, however this gap between preterm and full term children disappear at 5-years-old;
- ❖ At 5 years of age preterm children show worse language, phonological and symbolization skills than their term peers;
- ❖ At 4 years of age preterm children show more attention problems than their term peers.

CONCLUSION

Preterm birth could be a risk factor for neuropsychological development in early years of life and during preschool period. A follow-up from birth to preschool age is crucial to reduce any negative impact on school performance.

REFERENCES

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