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EUROPEAN DEPRIVATION INDEX AND CHILDREN WITH CEREBRAL PALSY

DATA FROM THE PORTUGUESE CEREBRAL PALSY SURVEILLANCE PROGRAM

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Background and Objectives

- *The Portuguese National Surveillance of Cerebral Palsy (PVNPC) registers **clinical, epidemiological, and functioning data** of children with cerebral palsy (CP) at 5-8 year old, born in the 21st century.*
- ***Social inequality**, have been associated with CP outcomes, probably due to their **relationship with several risk factors**, and appears to have a **negative impact on CP severity**.*

Materials/Methods

*PVNPC actively registers CP **children at 5-8 years-old,** born since 2001, following the **common Surveillance of Cerebral Palsy in Europe (SCPE) protocol**,*

*The PVNPC additionally use the **Complexity Clinical Score** and the **Educational Inclusion** Classification scale;*

*Social inequality was characterized according to the **European Deprivation Index** - Portuguese version (EDI-PT), and classified into tertiles*

*Children with CP **born between 2001-2015 and reported to the PVNPC between 2006-2024** were analyzed and compared with 2001-2015 total Portuguese live births (PLB).*

Associations between the clinical forms of CP, complexity indicators and the EDI-PT classification were explored.

Proportions were described with 95% confidence interval, Univariate Chi-square test was used to estimate associations by the odds ratio (OR) (95%-CI).

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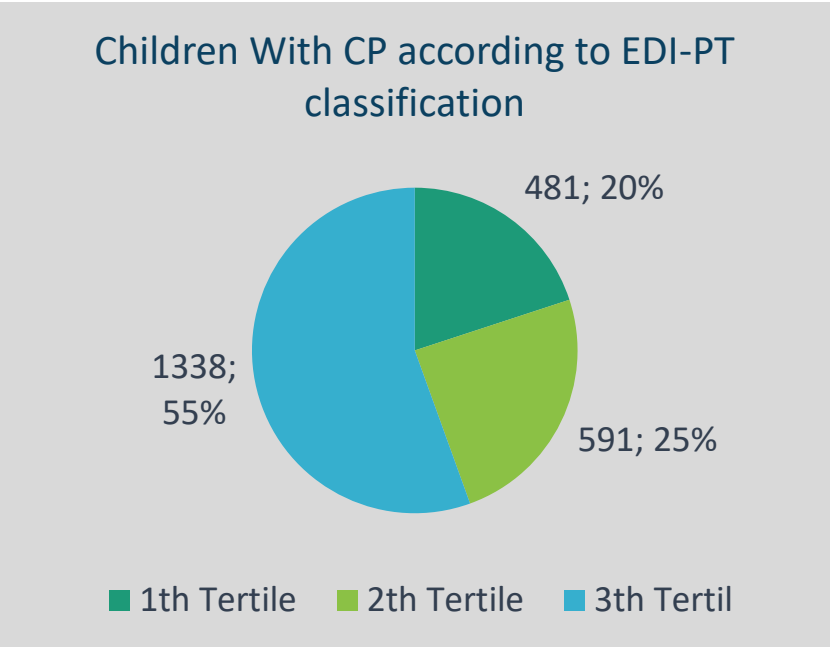
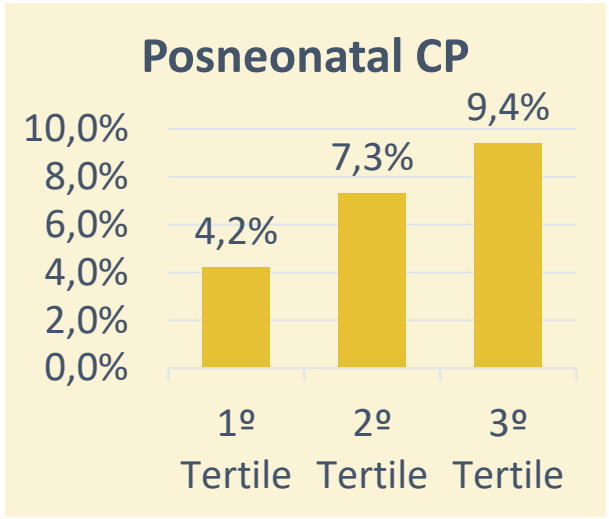
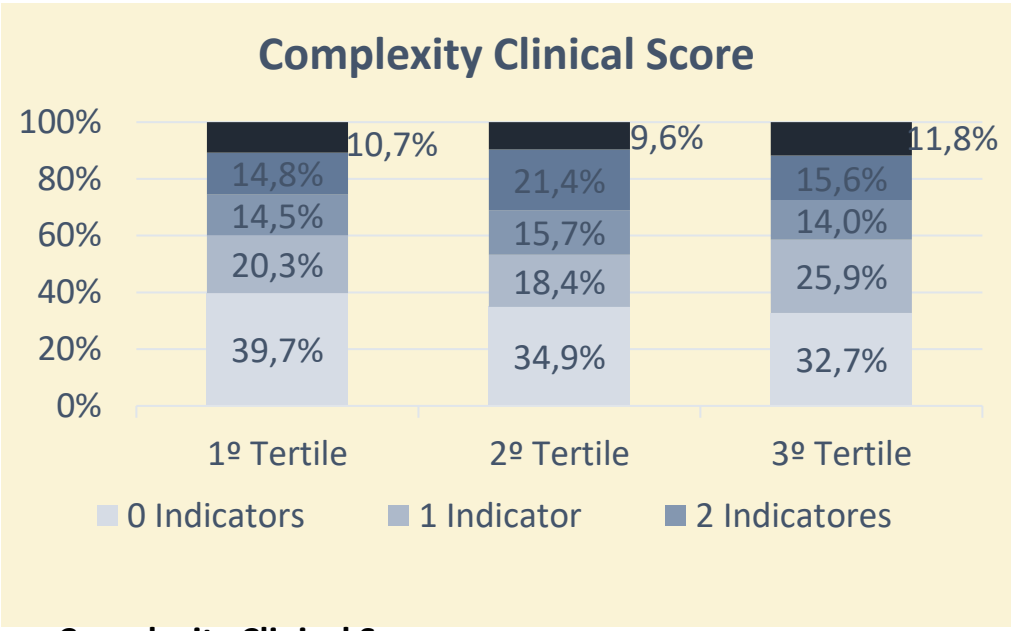
RESULTS







- *Of 2410 children with CP classified according to EDI-PT,*
  - *481 were in the 1st tertile (20% vs PLB-23%);*
  - *591 in the 2nd tertile (25% vs PLB-33%);*
  - *1.338 in the 3th tertile (55% vs PLB-44%).*

- *The differences between tertiles were significant (p ,004) for post-neonatal causes with a recorded risk of*
  - *1.803 (CI 0.9935, 3.38) in the 2nd tertile*
  - *2.365 (CI 1.408, 4.175) for the 3rd tertile.*

- **Complexity Clinical Score**
  - More complex CP (p,019)
  - 0 indicators:
    - 1th Tertile 39,7%;
    - 2th Tertile 34,9%,
    - 3th Tertile 32,7%;

Complexity CP scale (Quantifies the number of severity indicators):

- *not walking (GMFCS levels III, IV, V);*
- *moderate to severe cognitive impairment (IQ <50);*
- *active epilepsy;*
- *severe visual and/or hearing impairment.*

TAKE HOME MESSAGES

- This socioeconomic disadvantage at birth appears to have a negative impact in
  - the proportion of new cases, and
  - could contribute to a higher risk of more severe/complex functional outcomes of CP.
- However given the CP variability, both in etiological processes and functional outcomes, these data can only be considered as preliminary and require further investigation.

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- *591 in the 2nd tertile (25% vs PLB-33%);*
- *1.338 in the 3th tertile (55% vs PLB-44%)*

Risk for the 3rd tertile

OD :1.453

confidence interval 1.309, 1.612[1]

p<0.0000001