**NOX ISRAEL PROCEDURES**

**Abril 17, 2023**

**1. Database in Excel: preparation/depuration:**

1. First row as column headers. Columns represent variables.
2. First column as subject names/observation number. Rows represent observations/ subjects.
3. Row names unique: 1 row = 1 observation/ subject.
4. Column names unique: 1 column = 1 variable.
5. Variable names: without blank spaces, special symbols (?, $, \*, +, #, (, ), -, /, }, {, |, >, < etc) [possible Long\_jump or Long.jump] and without number as a first character.
6. R is case sensitive: Name ≠ Name ≠ NAME.
7. Missing values replaced by Blanks.
8. If date value, four-digit format is used.
9. BIN variables (grouping) recoded as 0/1…

**2. New variables:**

- N.Symptoms

- N.DaySymptoms

- N.NightSymptoms

**3. New groups:**

- NeuroDiverse:

0: Neurotypical

1: Learning Disabilities

2. A(H)DD

3: Both

- Learning disability:

- Dyslexia

- Dysphasia

- Dyspraxia

- Language problems

- Learning problems

- Interventions:

- Adenoidectomy

- Tonsillectomy

- Orthodontics

- Palate disjunction

- AgeG1:

1: < 6yo

2: 6 &11yo

3: > 12yo

- AgeG2:

1: < 4yo

2: 4 & 10yo

3: > 10yo

- PLMS:

0: PLM ≤ 5/h

1: PLM > 5/h

- SAHS:

0: IAH < 1/h

1: IAH 1 & <5/h

2: IAH 5 & <10/h

3: IAH ≥ 10/h

4. **Export database to R** (by xlsx package)

*Library(xlsx)*

*NoxAfrica <- read.xlsx(file.chose(),1)*

5. **Analysis:**

1. Conversions and review

- Vars type

- Factors

- Data frame

2. Health Status of data

*df\_status(NoxAfrica)*

3. Exploratory analysis (outliers)

3. Demographics

- Height

- Weight

- Gender (Sex Ratio)

- Symptoms

- Main Symptoms

- Main Night Symptoms

- Main Day Symptoms

- Disabilities

- ADD [24 (26)] / AHDD [39 (47) – combined [72]

- Learning Disabilities [50]

- Epilepsy [21]

4. Sleep Architecture

- TST, SE

- SleepLat, REMLat

- %Stages

- ArousalIndex

- Awakening…

*[consider comparing sleep values with the reference values <10yo vs >10yo]*

5. Diagnosis

- SAHS

- PLMS

6. Quality of signal

- GlobalQ

- SpO2Q

- CannulaQ

- RIPQ

7. Feasibility

- %Failed studies

- %Epilepsy detection

8. Satisfaction

- Child

- Parents

- Ambulatory preference

7. **List of Conclusions:**

- Descriptive

- Inferential

**8. Tables**

**9. Figures**

**10. LIMITATIONS/ COMMENTS**

1. Missing variables:

- Treatment

- Referred physician

2. Sample selection Bias

- neurodiverse vs neurotypical: sample vs population 15:85

- Gender: sample vs population (3:1)

2. Quality for PLM signal

3. Reference PSG parameters by age (<10yo or > 10yo)