**INTRODUCTION:**

- Obstructive sleep apnoea (OSA) is a chronic condition in which the upper airways collapse repeatedly during sleep, completely or partially obstructing breathing.
- This obstruction leads to chronic intermittent hypoxia and severe sleep fragmentation, disrupting the restorative functions of sleep.
- Beebe and Gozal (2002) developed a theory which hypothesises that disruption of the restorative functions of sleep lead to a chronic low level brain damage most evident in executive functions (EF).
- Neuropsychological testing of EF, volumetric MRI, magnetic resonance spectroscopy, event related potentials and CSF biomarkers all provide support for this theory.
- Little research has been done to explore the nature of the subjective complaint and its impact on the activities of daily living.

**AIM:** To characterise the nature of the subjective EF complaint associated with OSA, and its impact on daily living.

**METHOD:**

**Sample**

- 127 patients undergoing polysomnography (clinical sleep study; EEG, EMG, EOG, ECG, oximetry and respiratory effort) which confirmed the presence of OSA.
- Respiratory disturbance index (RDI) = 25.3±22.4.
- Age = 52.4 ± 13.9.
- Body Mass Index (BMI) = 33.8 ± 8.6.

**Procedure**

- Participants completed the Dysexecutive Questionnaire (DEX; a subtest of the Behavioural Assessment of Dysexecutive Syndrome) and Cognitive Failures Questionnaire (CFQ) + questions on age, education, obesity, occupational attainment, head injuries, exposure to toxins, illicit drug use, alcohol intake and medication intake.

**Analyses**

- Exploratory factor analyses were conducted on DEX and CFQ. Oblique rotation was utilised for greater accuracy to allow for the correlation of the EF factors.

**RESULTS:**

- On the basis of scree plots, overall Eigen and item loading values factor structures of four (DEX) and five factors (CFQ) were found to be the most parsimonious.

- **DEX:** A four factor solution gave an Eigen value of 0.955 and was supported by a scree plot (3 factor Eigen = 1.305 was not supported by scree plot). Structure loadings were in the range of .482-.850 and pattern loadings of .301-.873.

- **DEX factors** were interpreted as: Planning (α = .91), Inhibition (α = .80), Social rules (α = .68), Higher order thought (α = .55)

- **CFQ:** A five factor solution gave an Eigen value of 1.059. Structure loadings were in the range of .513-.800 and pattern loadings of .370-.846

- **CFQ factors** were interpreted as: Working Memory (α = .88), Absent-mindedness (α = .86), Social Behaviour (α = .80), Performance monitoring (α = .71) and Inattention (α = .75).

**CONCLUSIONS:**

- Factor analyses have been conducted with DEX and CFQ in different populations, but never before with the OSA population. In these previous studies there has been some support for four factor solutions for the DEX and five factor solutions for the CFQ.

- The presence of logical factor groupings for the DEX and CFQ adds further support to the Beebe and Gozal model of OSA induced EF deficits resulting from chronic low-level brain damage.

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