

Quality of Life in Epilepsy is Determined by Psychological Wellbeing and Seizure Frequency than Epilepsy Syndrome

Raju Yerra

Psychosocial Outcomes in Patients with Epileptic Seizures and Psychogenic Non-Epileptic Seizures

Raju Yerra

Psychosocial Outcomes and Their Determinants in Patients with Epileptic Seizures and Psychogenic Non-Epileptic Seizures

Raju Yerra



Introduction:

- Epilepsy is a common neurological disorder characterised by recurrent seizures due to abnormal neuronal discharges in the brain
- Epilepsy Syndromic diagnosis is important in
 - Determining prognosis
 - Choice of treatment : both medical and surgical
- Up to 30% have “medically refractory” epilepsy which cannot be controlled with anti-epileptic drugs (AEDs)
- Uncontrolled seizures are associated with poorer quality of life (QOL) and higher rates of psychiatric disorder



Non-Epileptic Seizures (NES)

- Many medical problems have episodes which resemble epileptic seizures and may be misdiagnosed as epilepsy
- Episodes may have a physiological basis (e.g. syncope, migraine) or a psychiatric basis (e.g. panic attacks)
- Psychogenic non-epileptic seizures (PNES) refer to episodes without a physiological explanation and are likely to have a psychological origin



Quality of Life (QOL)

- Epilepsy can have significant psychosocial impacts
 - Chronic nature of illness
 - Low socioeconomic status
 - Social stigma
 - Fear of seizures
 - Unpredictability of seizures
- QOL is lower in patients with epilepsy compared to healthy controls and patients with other chronic conditions (e.g. asthma, diabetes and MS)
- Little is known about QOL in different epilepsy syndromes or NES
 - Patients with PNES report a substantially lower QOL compared to patients with intractable epilepsy



Psychiatric Disorder

- Individuals with epilepsy are twice as likely to have been diagnosed with a psychiatric disorder compared to people in the general population
- Mood disorder is the most common psychiatric disorder in epilepsy (24-72%), followed by anxiety disorders (10-25%) and psychosis (2-7%)
- Few studies have directly compared the level of psychopathology in different epilepsy syndromes and NES
 - Higher prevalence of psychiatric disorder in PNES compared to epilepsy
 - Patients with temporal lobe epilepsy (TLE) have an increased risk of psychiatric disorder



Personality

- In 1975, Waxman and Geshwind documented a number of personality traits which appeared more common in TLE (e.g. deepened emotions, circumstantial thought, increased religiosity, hypergraphia and hyposexuality)
- Studies have generally failed to find evidence supporting the existence of a TLE specific personality syndrome
- Little is known about personality in other epilepsy syndromes and in NES



Cognition

- People with epilepsy are at increased risk of cognitive deficits, especially memory problems
- Due to underlying pathology: Patients with TLE may experience memory impairment secondary to pathology in the mesial temporal structures of the brain
- Due to anti epileptic medications
- Due to uncontrolled seizures
- Little is known about how level of cognitive impairment compares in other epilepsy syndromes and in NES



Introduction

- Little is known about the differences in QOL between patients with different epilepsy syndromes or non-epileptic seizures.
- The vast majority of studies examined patients with epilepsy as a single group and rarely divided patients into the different epilepsy syndromes.
- Effect of one variable on the other is poorly studied



Aims

- To study the psychosocial outcomes and their determinants in a cohort of patients with epilepsy and non epileptic seizures.



METHODS



Study Design

- This is a prospective cross-sectional and longitudinal observational study of patients attending Video EEG monitoring unit of the Comprehensive Epilepsy Program at the Royal Melbourne Hospital, a tertiary referral centre.
- Data collection included
 - Comprehensive clinical profiling – Epilepsy syndrome – based on clinical features - imaging and video EEG
 - Comprehensive psychosocial profiling with questionnaires
 - Neuropsychiatric &
 - Neuropsychological evaluations where required.



Patient Recruitment

- 177 consecutive patients were recruited from the between August 2005 and February 2008
- Participants were given a set of questionnaires, in addition to a short cognitive assessment
- **Exclusion criteria:** Patients cognitively incapable of giving informed consent or unable to independently complete a majority of the questionnaires



Measures

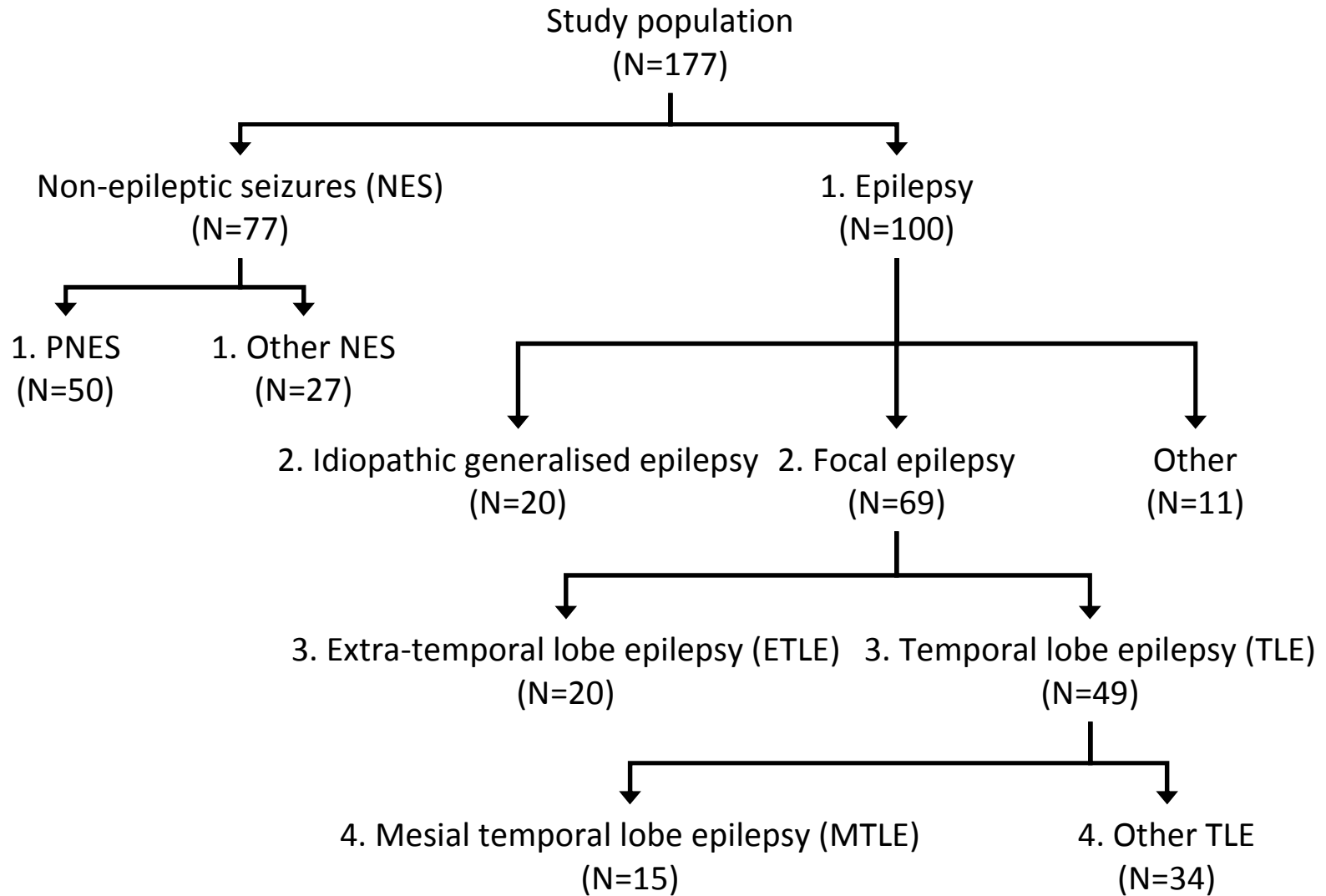
- **For psychiatric disorder and level of psychopathology:**
 - Hospital Anxiety and Depression Scale (HADS)
 - Symptom Checklist-90-Revised (SCL-90-R)
- **For quality of life:**
 - Quality of Life in Epilepsy Inventory-89 (QOLIE-89)
- **For personality:**
 - NEO Five-Factor Inventory (NEO-FFI)
- **For cognitive function:**
 - Neuropsychiatric Unit Cognitive Assessment Tool (NUCOG)



Diagnosis

- Patients were classified into diagnostic categories based on the final diagnosis after five days of video-EEG monitoring
- Seizure diagnosis was determined by the consensus of three epileptologists and other clinicians
- Diagnosis was based on information from the clinical history, the prolonged video-EEG recording, neuroimaging and a neuropsychiatric assessment

Diagnostic Categories



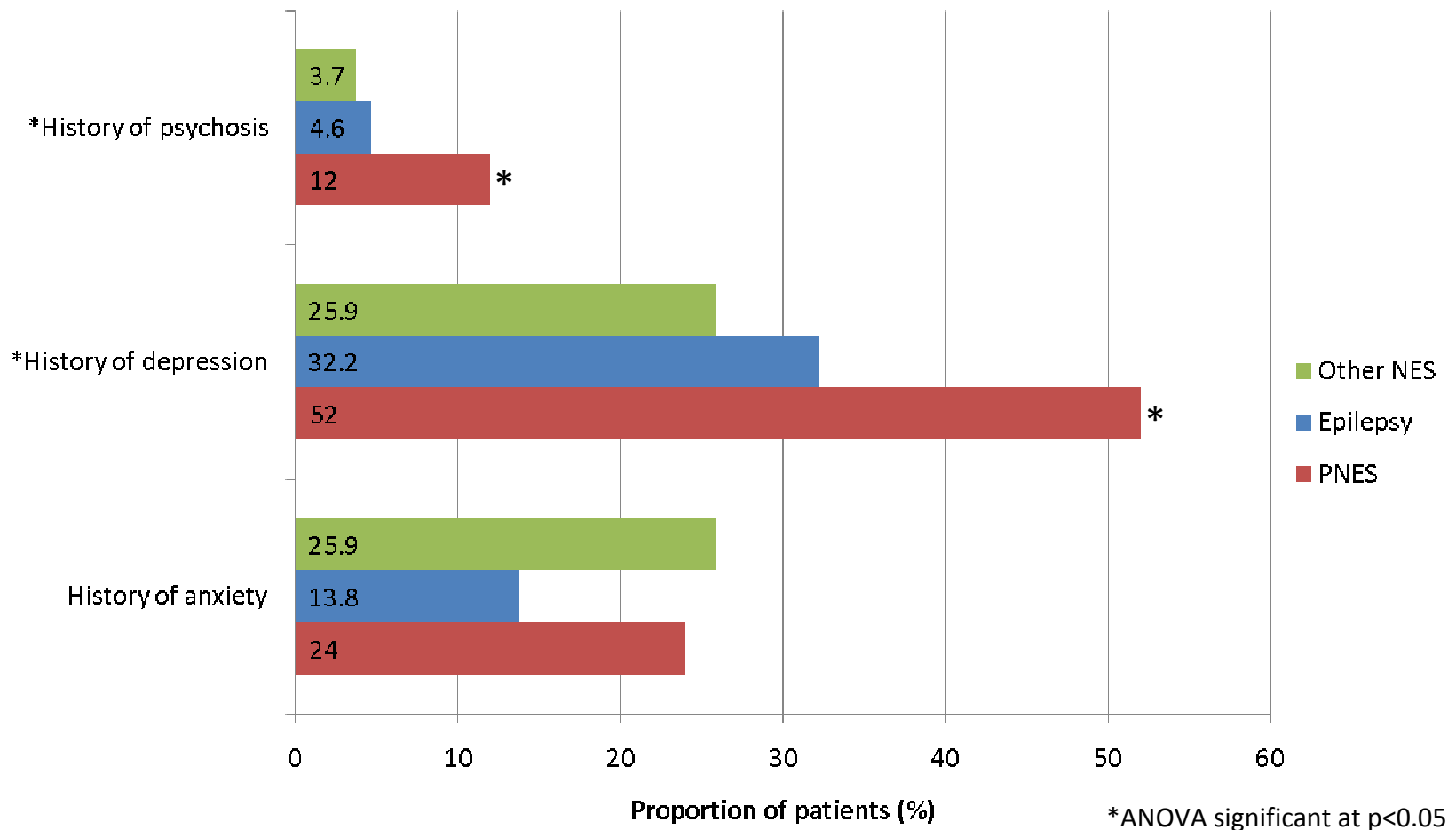


RESULTS

Psychopathology

- Significantly higher rates of previous psychosis and depression in PNES

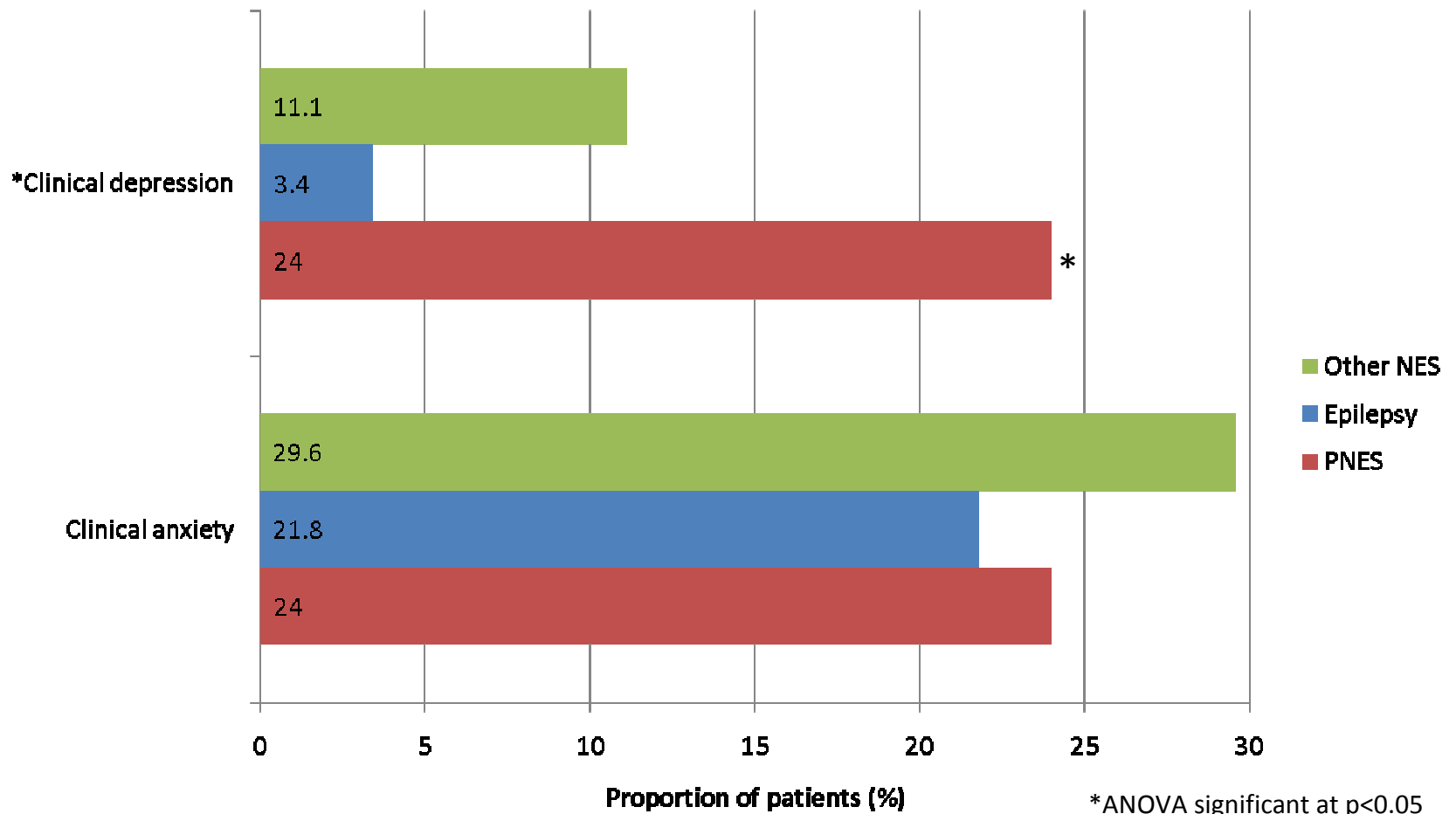
Chart: Self-Reported Psychiatric History



Psychopathology

- Significantly more patients with PNES were currently depressed

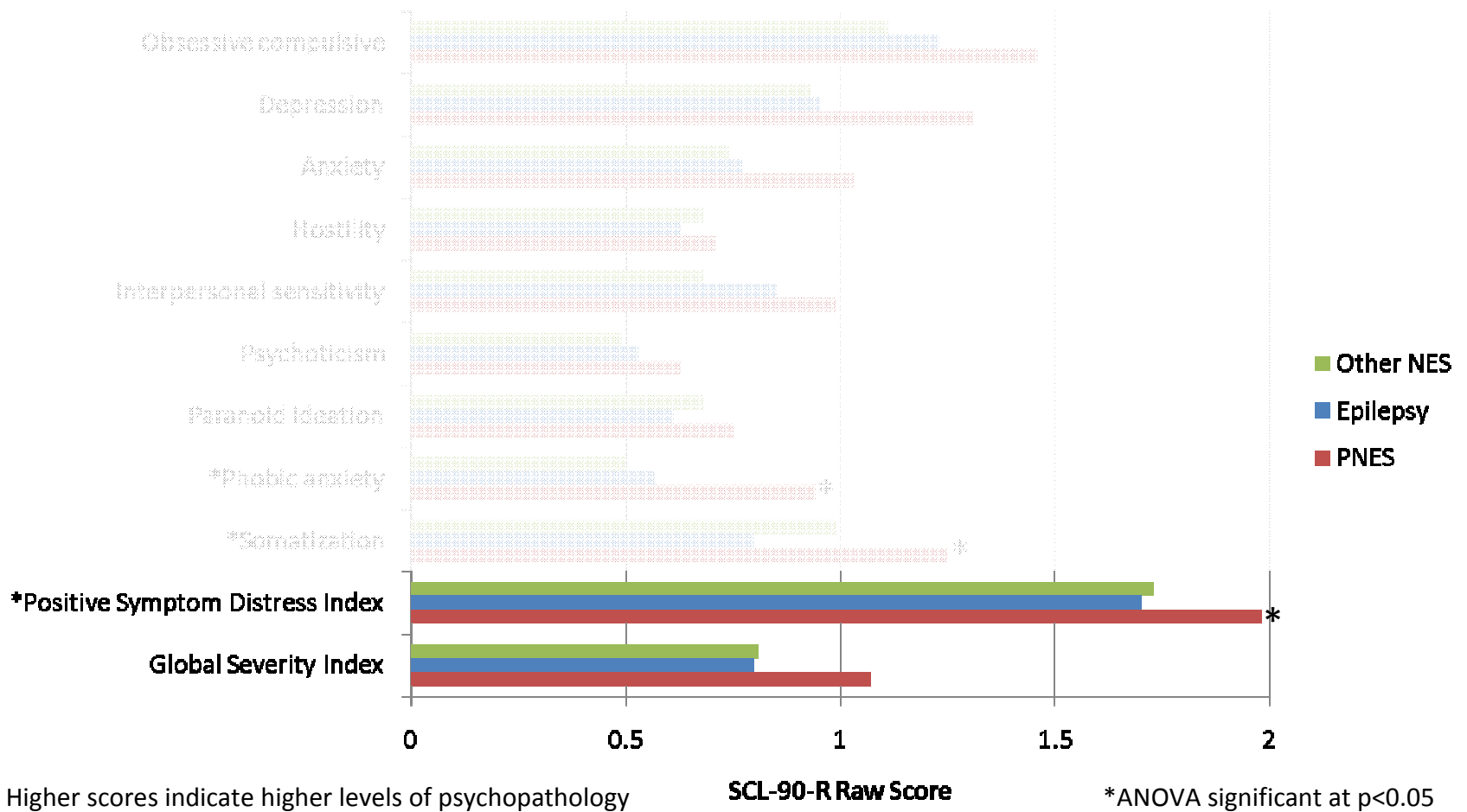
Chart: Current Depression and Anxiety (HADS)



Psychopathology

- The level of psychopathology was higher in PNES

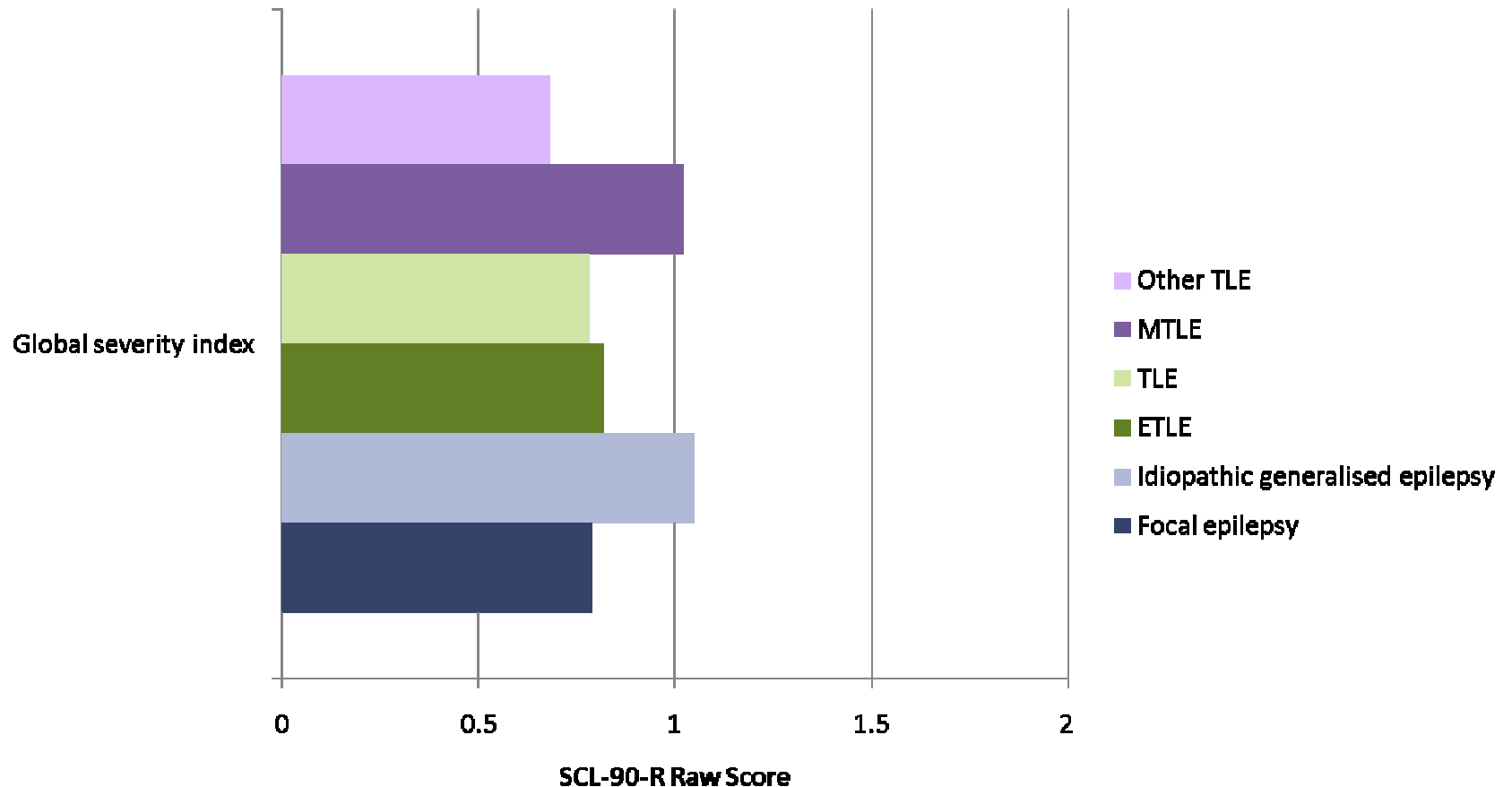
Chart: Level of Psychopathology (SCL-90-R)



Psychopathology

- No significant differences in psychopathology by epilepsy syndrome

Chart: Level of Psychopathology (SCL-90-R)

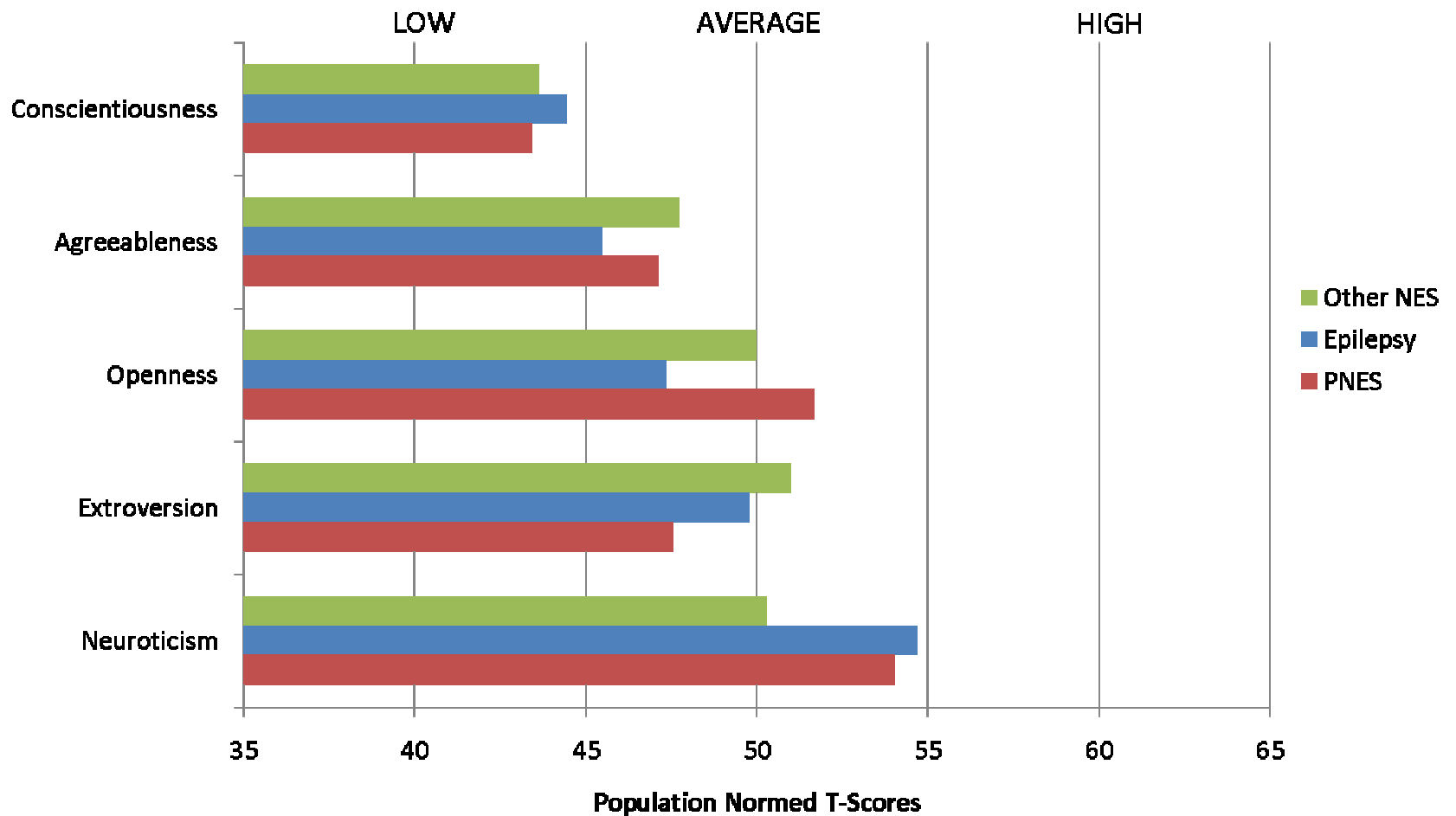


NOTE: Higher scores indicate higher levels of psychopathology

Personality

- No significant differences between epilepsy, PNES and Other NES

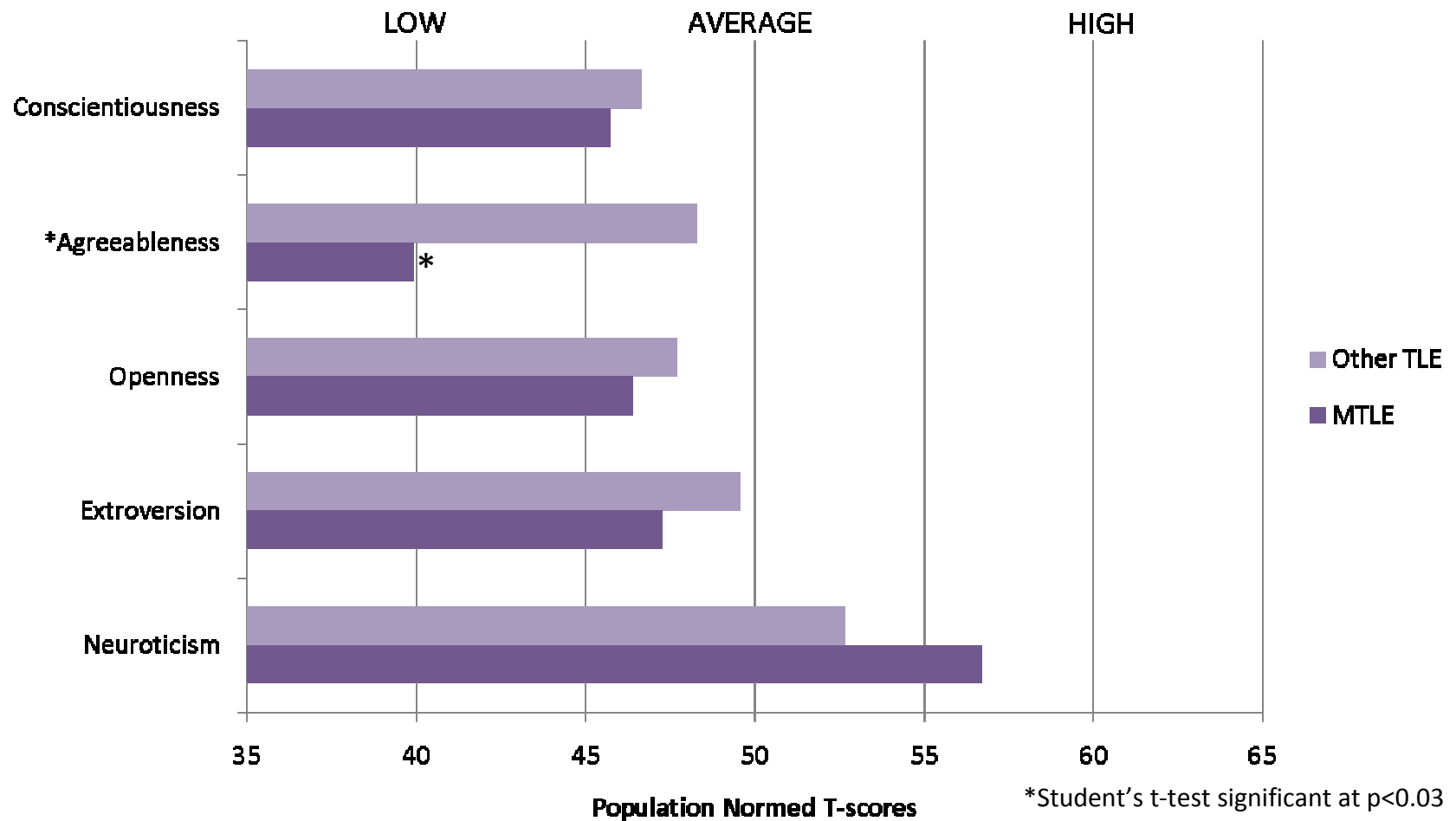
Chart: Five-Factor Model of Personality (NEO-FFI)



Personality

- Significantly lower agreeableness in patients with MTLE

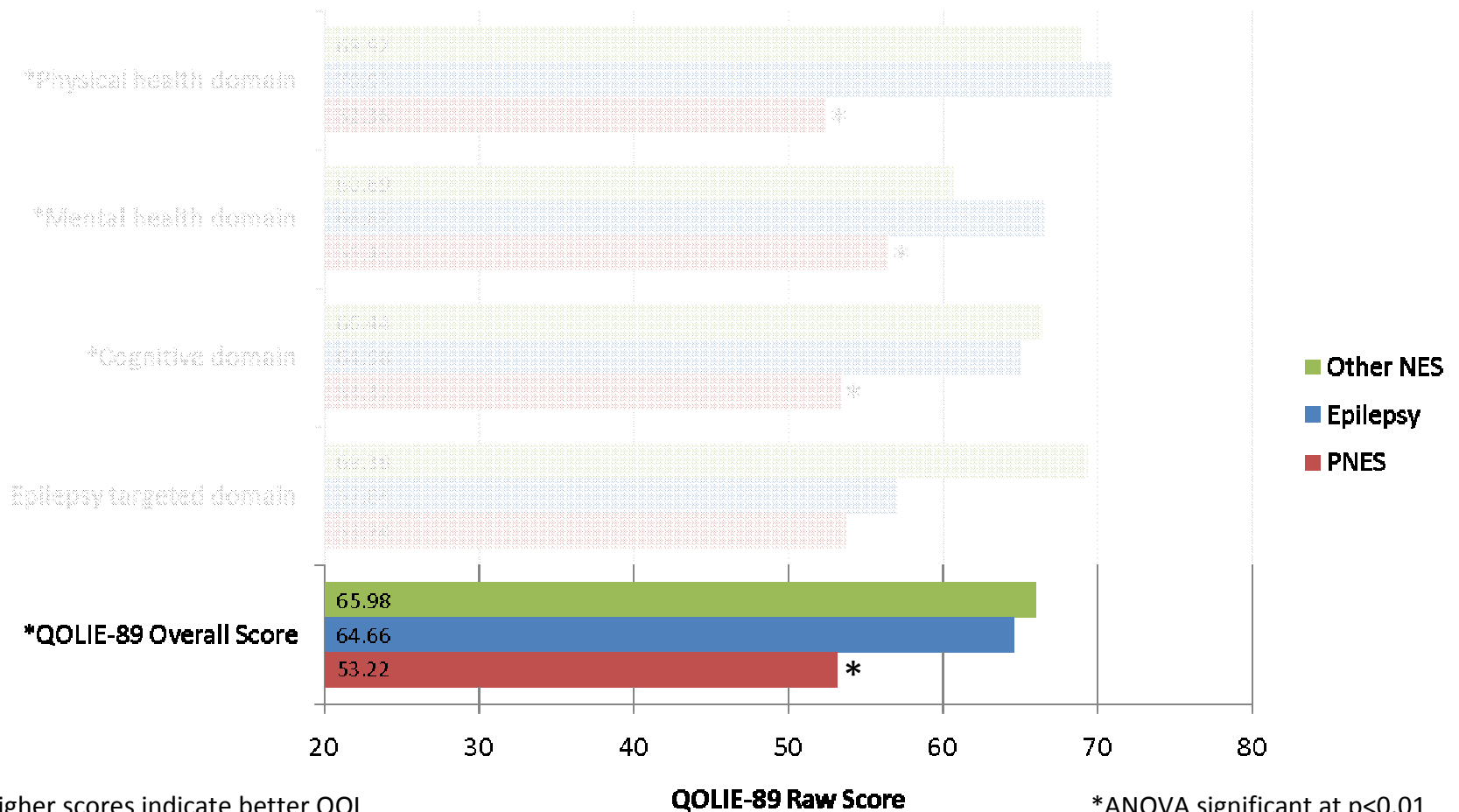
Chart: Five-Factor Model of Personality (NEO-FFI)



Quality of Life

- Significantly lower QOL in PNES

Chart: Quality of Life (QOLIE-89)



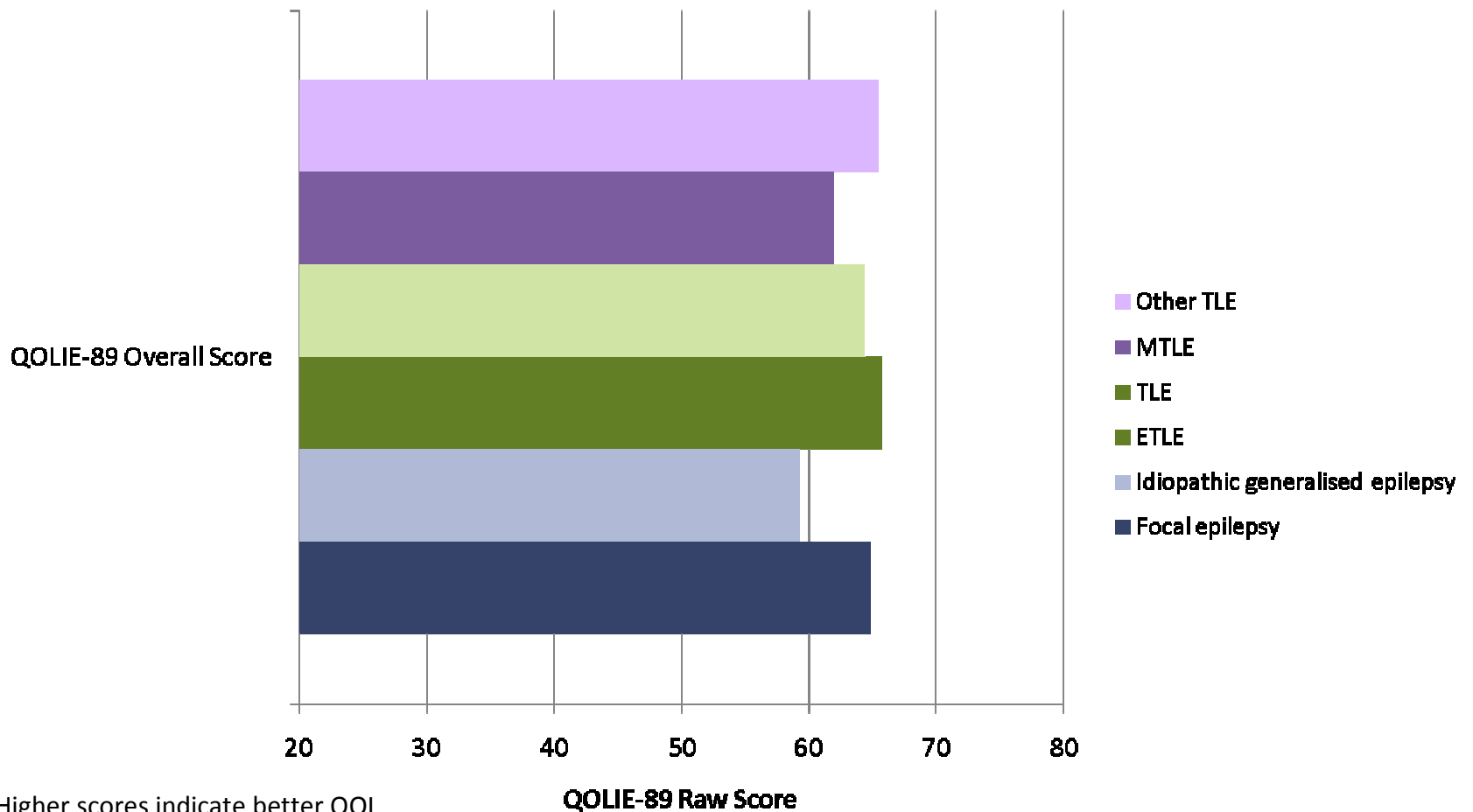
NOTE: Higher scores indicate better QOL

*ANOVA significant at p<0.01

Quality of Life

- No significant differences in QOL by epilepsy syndrome

Chart: Quality of Life (QOLIE-89)



Determinants of Quality of Life

	Stepwise linear regression				Overall Model		
	β	SE	p value	R ²	Adjusted R ²	F value	p value
QOLIE-89 Overall Score							
1. SCL-90-R Global Severity Index	-0.51	1.92	<0.0001	0.59			
2. HADS Depression subscale	-0.33	0.31	<0.0001	0.65			
3. Seizure frequency	-0.12	0.74	<0.03	0.66	0.65	83.9	<0.0001
QOLIE-89 Epilepsy-targeted Domain							
1. SCL-90-R Global Severity Index	-0.59	2.36	<0.0001	0.38			
2. Number of AEDs	-0.25	1.45	<0.001	0.45			
3. Seizure frequency	-0.13	1.26	<0.05	0.46	0.45	36.7	<0.0001
QOLIE-89 Cognitive Domain							
1. SCL-90-R Global Severity Index	-0.47	2.69	<0.0001	0.46			
2. HADS Depression subscale	-0.27	0.43	<0.01	0.50			
3. NUCOG Memory	0.16	0.46	<0.02	0.52	0.51	47.2	<0.0001
QOLIE-89 Mental Health Domain							
1. SCL-90-R Global Severity Index	-0.47	1.94	<0.0001	0.59			
2. HADS Depression subscale	-0.39	0.34	<0.0001	0.69			
3. NEO-FFI Conscientiousness	0.13	0.10	<0.01	0.70	0.69	108.8	<0.0001
QOLIE-89 Physical Health Domain							
1. HADS Depression subscale	-0.35	0.52	<0.001	0.24			
2. SCL-90-R Global Severity Index	-0.41	3.47	<0.001	0.28			
3. NEO-FFI Neuroticism	0.32	0.18	<0.001	0.33			
4. NUCOG Visuoconstructional	0.15	1.04	<0.05	0.36	0.34	17.8	<0.0001



Summary and Conclusion

- There were considerably higher levels of psychopathology and poorer QOL in PNES compared to epilepsy
 - Little difference between specific epilepsy syndromes
- The level of psychopathology and seizure frequency were the most important determinant of QOL while clinical factors such as epilepsy syndrome had limited influence
- Personality was generally similar across the whole study population but there was low agreeableness in MTLE



Clinical Implications

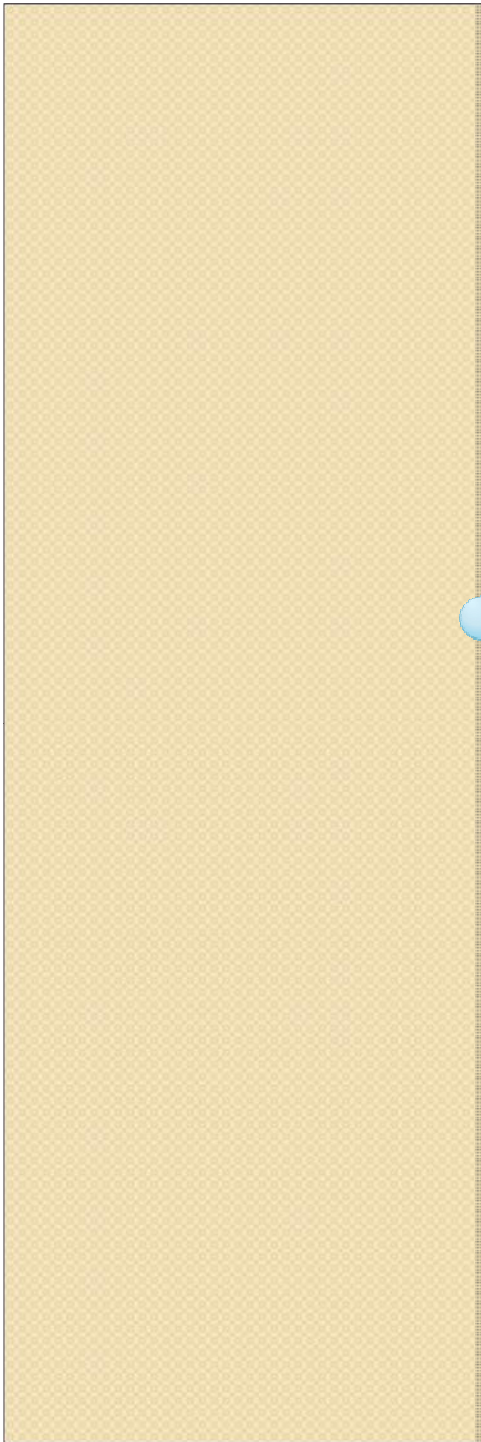
The importance of psychopathology

- Holistic approach to treating patients with epilepsy and patients with NES
 - Patients with PNES had high levels of psychopathology and poor overall QOL
- Prompt detection and treatment of psychiatric illness may improve psychosocial outcomes
 - Important in patients who have little chance of achieving seizure freedom



Acknowledgements

- Yves Choi, AMS student
- Dr. Dennis Velakoulis
- Prof. Terence O'Brien
- Dr. Nerissa Cordy
- Dr. Mark Walterfang
- Slave Petrovski
- Neurology Registrars
- Ms. Sue Belbin



THANK YOU