



# Efficient Screening for Depression in Epilepsy - Preliminary Comparison of Four Simple Methods

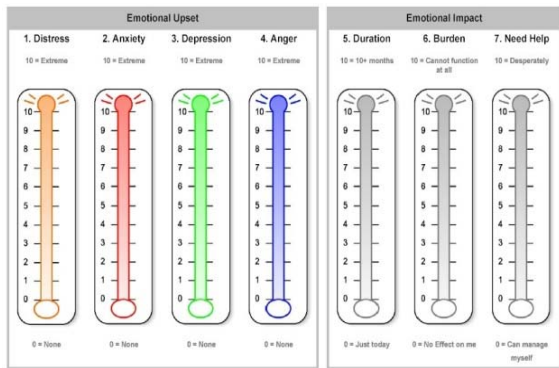
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## Introduction

Depression and anxiety in epilepsy are common, underdiagnosed and associated with increased morbidity and mortality(1). Co-morbid depression increases seizure frequency(2) and treating depression in epilepsy improves quality of life(3). Commonly used tools such as the BDI-II, HADS and MDI, are not validated for use in patients with epilepsy and are time consuming. NDDI-E is a brief screening tool which is validated for use in epilepsy in the USA but requires scoring and is not validated in the UK.



ET7 (above) is a brief, non verbal instrument that has been validated for use in oncology. We are interested in its potential for people with epilepsy.

## Aim

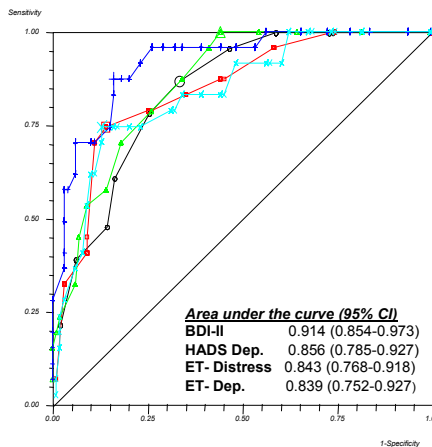
To identify and validate a brief screening tool for depression and anxiety spectrum disorders that can be applied in busy neurology out-patient clinics and primary care.

## Method

Unselected consecutive patients attending the epilepsy clinic at Atkinson Morley Neurosciences Centre were asked to complete the 5 questionnaires mentioned above. MDI was used as Gold Standard for ICD10 diagnosis of depressive disorder.

## Results

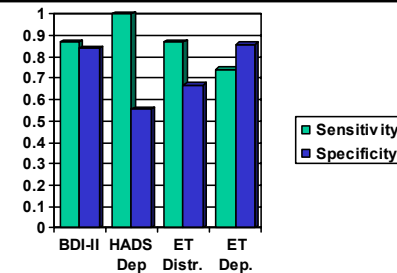
122 patients, 53% female, 66% White British, age range 16-89, mean 39.6



ROC curve analysis of the various tools against the ICD-10 diagnosis of depression

Sensitivity (95% CI)    Specificity (95% CI)

BDI-II	0.869 (0.664-0.972)	0.838 (0.750-0.904)
HADS Dep	1.00 (0.851-1.00)	0.555 (0.452-0.655)
ET Dist.	0.869 (0.664-0.972)	0.666 (0.564-0.758)
ET Dep.	0.739 (0.515-0.897)	0.858 (0.774-0.920)



## Discussion

The data suggests that performance ET7 is comparable to BDI-II. Practical advantages of ET7 may outweigh lower sensitivity/ specificity seen so far. Our preliminary data supports the idea that ET7 may be suitable for screening for depression in epilepsy.

Further work with larger sample size is ongoing. Combining individual components of ET7 may improve its performance.

### Declaration of interests

Dr Mitchell holds the copyright on the revised Emotional Thermometers tool but has made it freely available (royalty-free) for non-commercial and clinical use(4)

### References

- Christensen, J (2007) Epilepsy and risk of suicide: a population-based case-control study. The Lancet Neurology 6 p693-698
- Thapar, A; Kerr, M; Harold G. (2009) Stress, anxiety, depression and epilepsy: Investigating the relationship between psychological factors and seizures. Epileps & Behaviour 14 p134-140
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- Psycho-oncology resources and tools. <http://www.psycho-oncology.info/ET.htm>