Performance on the Structured Inventory of Malingered Symptoms in Known Epilepsy and Psychogenic Non-Epileptic Event Groups

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Introduction

Psychogenic non-epileptic events are episodes that resemble seizures but do not have electrophysiological or other clinical correlates and that have presumed psychogenic causes (1). 25-30% of referrals to tertiary epilepsy centers identify PNEE as a likely etiology (2).

Identification of PNEE can help to guide appropriate treatment, reduce potential iatrogenic effects of medication or other treatment medications, and result in better resource allocation.

Definitive diagnosis of PNEE requires long term Video EEG monitoring in addition to clinical evaluation, including psychological evaluation (1). While clinical features of the PNEE events themselves are useful raising diagnostic suspicion, relatively little work has evaluated potential screening instruments to identify individuals at risk for PNEE diagnoses.

In the current study, we evaluated the potential for the Structured Interview of Malingered Symptoms (SIMS; 3) to discriminate between long term video EEG confirmed PNEE and confirmed epileptic seizure. On its face, the SIMS is an attractive option for picking up atypical symptoms across a variety of domains, including neurological symptoms, in a self-report format. However, no studies to date have evaluated the ability of this instrument to identify PNES groups, and commonly used cut-off scores were established in clinical groups that were non-epileptic nature

Methods

Patients admitted for long-term video EEG were administered the SIMS upon admission along with other instruments. For the current study, 14 patients were identified with confirmed epileptic seizures documented during VEEG and are labeled the epileptic group. The PNEE group was defined by lack of epileptic features on VEEG, and successful placebo induction in the presence of psychological factors as determined by clinical interview and chart review.

Results

In general, the PNEE group identified a significantly greater number of atypical neurological and affective symptoms than the confirmed epilepsy group. AUC results suggested that neurological and affective symptoms do discriminate between the groups to a statistically significant degree.

In terms of cutoff scores, 71% of the PNEE group and 57% of the epilepsy group exceeded the typical cut off scores. A score of 6 on neurological scores was fairly specific (.8) but limited in terms of sensitivity (.38). A score of 6 on affective scale was of limited sensitivity (.49) but fairly specific (.8)

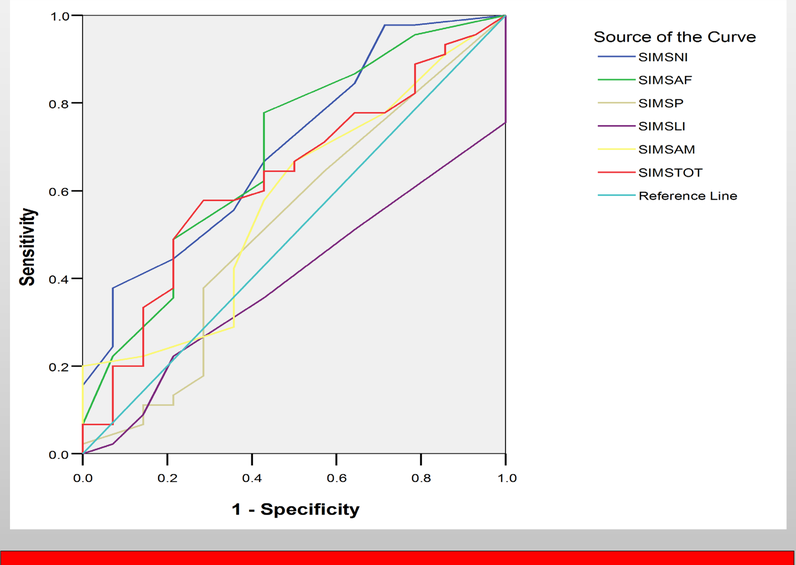
Table 1: Mean Performances Across SIMS Subscales

SIMS Subscale	PNEE Group M(SD)	Epilepsy Group M(SD)	T-Test
Neurological	5.7(3.2)	3.3(2.7)	p<.05
Affective	6.4(4.8)	4.8(2.4)	p<.05
Psychosis	1.9(2.7)	2.1(3.0)	ns
Low Intelligence	2.0(1.7)	2.5(1.6)	ns
Amnestic Memory	4.7(3.7)	3.7(3.0)	ns
Total Score	20.6(9.9)	16.5(8.4)	ns

Table 2: Area Under the Curve (AUC) analyses

SIMS Subscale	Area	SE	Asymptotic Sig.
Neurological	.70	.08	p<.05
Affective	.69	.08	p.<.05
Psychosis	.52	.09	ns
Low Intelligence	.40	.08	ns
Amnestic Memory	.58	.09	ns
Total Score	.63	.08	ns

Figure 1: Receiver Operator Characteristic Curves for SIMS Scales



Conclusion

- "Atypical" self-reported symptoms are actually quite common, even in confirmed epilepsy patients
- The total score on the SIMS is not as clinically useful as neurological and affective subscales at differentiating between PNEE and epilepsy.
- A cut off score of 6 on neurological and affective scores respectively shows preliminary evidence of adequate specificity but limited sensitivity to PNEE.
- Future studies could employee multiple level likelihood ratios to better improve the diagnostic utility of the SIMS in this population across various base rates (4).

References

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