

Clinical utility of the BEARS as a sensitive screener for sleep problems in ADHD



University
of Windsor

Lynette R. Kivisto & Joseph E. Casey
University of Windsor, Department of Psychology



Introduction

- Many children and adolescents do not achieve adequate sleep.
- The prevalence of sleep problems has been estimated at 7% for typically developing children (Corkum, Tannock, & Moldofsky, 1998) and up to 45% for representative samples (Sher-Fen Gau, 2006).
- In children with ADHD, sleep problem prevalence has been estimated at between 25-50% (Corkum, Tannock, & Moldofsky, 1998).
- Given the important role that sleep plays in children with ADHD, a brief and effective screener is needed to aid clinicians in assessing for sleep problems, especially when the referral for a neuropsychological evaluation concerns ADHD or any other neurodevelopmental disorder for which presenting concerns involve symptoms that overlap with ADHD.
- While the developers of the BEARS have demonstrated its utility as a screening tool, there is currently no independent published research replicating this finding.
- The current study aimed to replicate the findings of the BEARS developers by demonstrating its utility as a sensitive screening tool for sleep problems.
- It was predicted that the BEARS would demonstrate high sensitivity in identifying children with sleep problems.

Participants & Methods

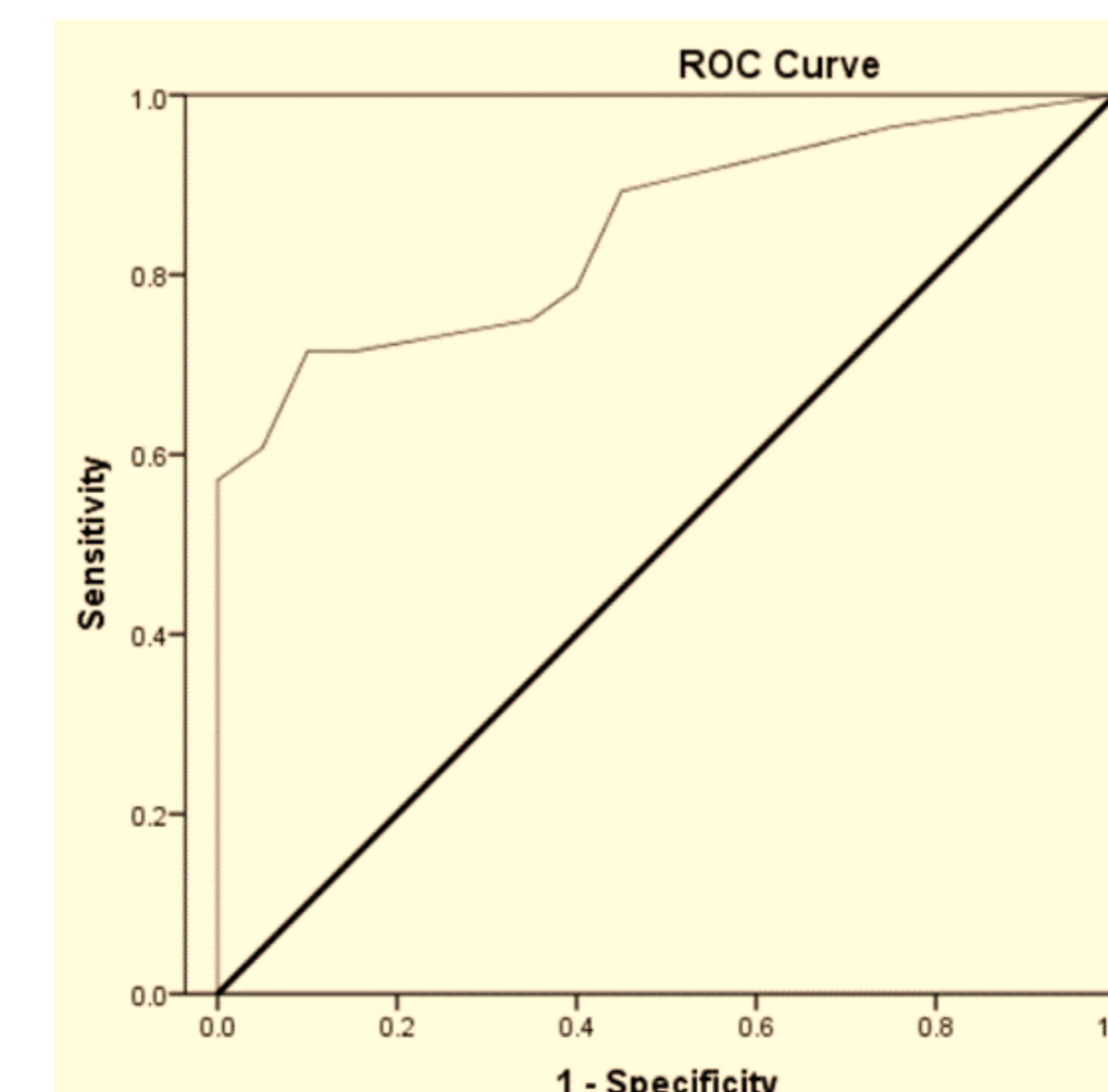
- Data for analysis was obtained from 54 children aged 6 to 14 years ($M_{age} = 9.83$).
- Children were administered the BEARS, and caregivers completed the BEARS and Children's Sleep Habits Questionnaire (CSHQ), as part of a larger study.

Results

- Binomial logistic regression revealed that children with higher BEARS parent report scores were 3.27 times more likely, and those with higher self-report scores were 2.88 times more likely, to exceed the CSHQ cut-off than those with lower scores.
- The model correctly classified 70.8% of cases.
- Sensitivity was 78.6%, specificity was 60.0%, positive predictive value was 73.3%, and negative predictive value was 66.7%.
- Both predictor variables, parent reported BEARS ($p = .001$) and child-reported BEARS ($p = .049$), were significant.
- ROC curve analysis revealed that the BEARS parent and self-report scores had excellent diagnostic utility (Hosmer et al., 2013) for accurately classifying children who exceeded the cut-off on the CSHQ from those who did not (area under the curve [AUC] = 0.849, SE = 0.054, 95% CI = .742 to .956, $p < .001$).

Logistic Regression

β	SE	P
-4.44	1.51	.003
Nagelkerke R^2	$\chi^2(1)$	p
.47	20.51	<.0005



Discussion & Conclusions

- The results of the current study indicate that the BEARS has excellent diagnostic utility for accurately classifying sleep problems.
- Additionally, it is quick to administer making it a practical screening tool for clinicians to include as part of a comprehensive neuropsychological assessment.

