

Psychometric properties of the Danish Inventory of Callous-Unemotional Traits*

M. Kongerslev^{a, b}, S. Bo^a, A. E. Forth^c, & E. Simonsen^a

*Following submission of this poster the results have been published in an open-access article (1)

BACKGROUND

- Research suggest that callous-unemotional traits (e.g. lack of remorse/guilt/empathy; lack of concern about performance; and shallow and deficient affect) is a valuable personality construct for designating a distinct subgroup of conduct disordered youth, who displays the most severe, aggressive, and stable pattern of antisocial behaviors. Based on this evidence base, callous-unemotional traits have also been included as a specifier in the diagnostic criteria for conduct disorder in the Diagnostic and Statistical Manual on Mental Disorders, fifth edition (DSM-5).
- The construct of callous-unemotional traits emerged from research into the latent factor structure of psychopathy. Despite ongoing debate about the content and number of latent dimensions underlying the concept of psychopathy, callous-unemotional traits has consistently emerged as a significant and relatively distinct underlying factor of psychopathy across measures, age-groups, samples, and studies.
- Taken together this has created a need for efficient, comprehensive, and psychometrically sound measures of callous-unemotional traits. To this end, P. Frick developed the 24-item self-report Inventory of Callous-Unemotional Traits (ICU; 2).

AIMS

The goal of the current study was to investigate the psychometric properties of the ICU in a Danish sample of incarcerated boys. Specifically we aimed to evaluate:

- Internal consistency and retest reliability
- Criterion validity against an established rating-scale of psychopathic traits, both dimensionally and categorically
- Construct validity with measures of psychosocial impairment, aggression, and empathy

RESULTS

Reliability of the ICU: Internal consistency (N = 80) and 9-days test-retest reliability (n = 40)

ICU scales	Internal consistency (Coefficient α)	Retest reliability (ICC)
Total	.89	.88
Uncaring	.78	.82
Callousness	.78	.86
Unemotional	.78	.82

Note. For all ICC calculations $p < .01$ (two-tailed).

CONCLUSIONS

The ICU demonstrated adequate internal consistency and excellent test-retest reliability. The ICU was moderately to strongly correlated with dimensional ratings of psychopathic traits on the PCL:YV. ROC analysis revealed an AUC of .90, indicating moderate to high discriminatory accuracy. Together these findings indicate excellent criterion validity of the ICU against the PCL:YV. As expected, the ICU was positively correlated with psychosocial impairments, and reactive and proactive aggression, and negatively with cognitive and affective empathy, suggesting good construct validity. All together, the results from this study add to the growing research-base supporting the cross-cultural validity and clinical utility of the ICU as a brief self-report measure for assessment of callous-unemotional traits among conduct disordered boys.

METHOD

Participants and procedure

Eighty adolescent boys between the ages of 15 to 18 years, remanded or sentenced to juvenile offender institutions were included in the study. The participants were concurrently assessed with the ICU and measures of psychopathy, psychosocial impairments, aggression, and empathy. After 9 days, the ICU was re-administered to a randomly selected subset of the sample (n = 40) to compute retest reliability.

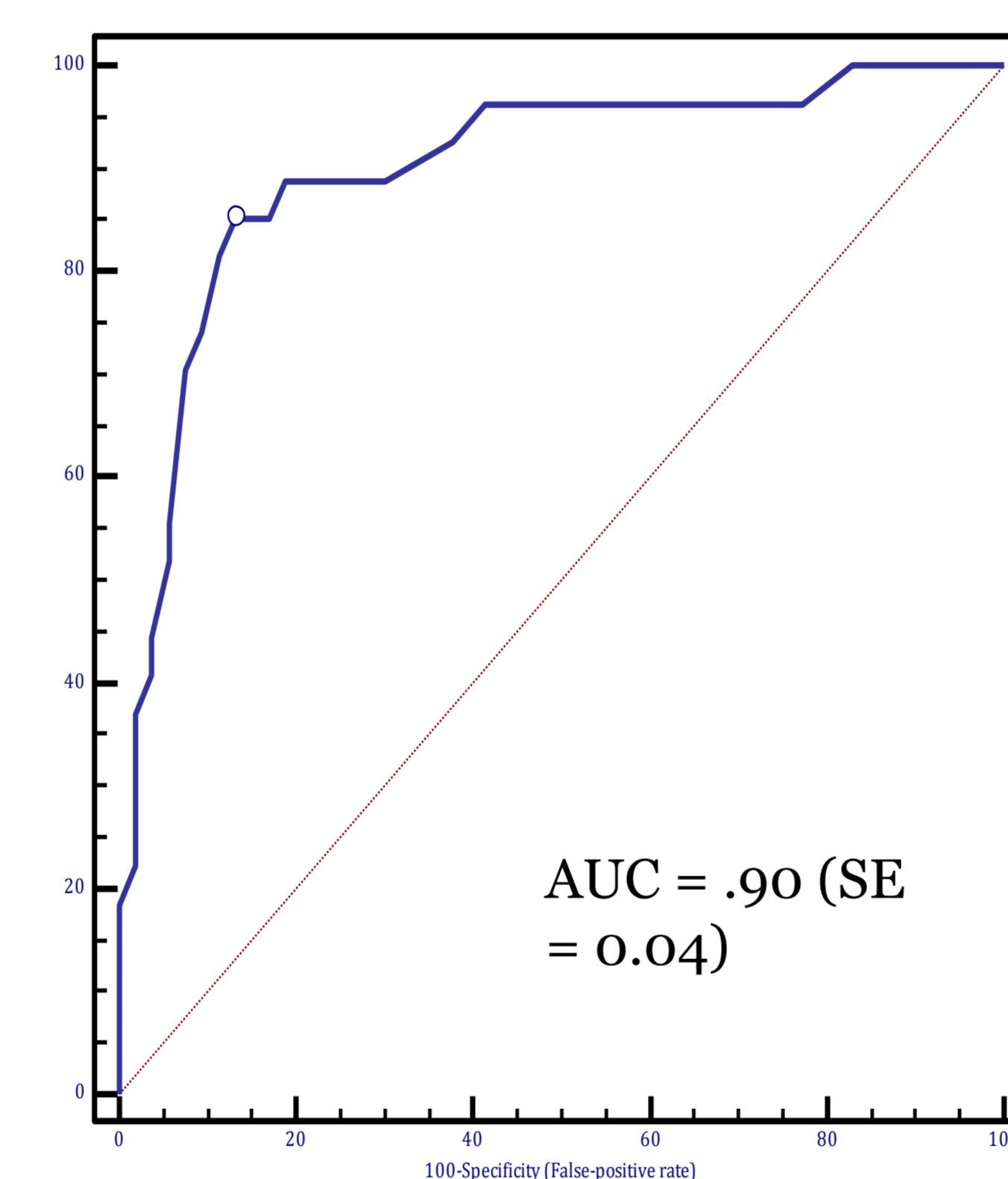
Measures

- Inventory of callous-unemotional traits (ICU)
- Psychopathy Checklist: Youth Version (PCL:YV)
- Health of the Nation Outcome Scales (HoNOSCA)
- Reactive-Proactive Aggression Questionnaire (RPQ)
- Interpersonal reactivity index (IRI)

Statistical analysis

Data analyses were conducted using IBM SPSS statistics for MAC, version 22.0. We used Cronbach's coefficient α to examine the internal consistency of the ICU scales. To assess test-retest reliability we computed Intra-class correlation coefficients (ICCs), and bivariate Pearson correlations were used to gauge criterion and construct validity between the ICU and other measures. Receiver operating characteristic (ROC) analysis was used to examine the discriminatory performance of the ICU against a criterion diagnosis of psychopathy on the PCL:YV (PCL:YV ≥ 25). The ROC curve plots the true positive rate against the false-positive rate, and the area under the curve (AUC) can be used as an index of overall discriminatory accuracy.

ROC curve for the ICU against a criterion diagnosis of psychopathy (PCL:YV ≥ 25 ; N = 80)



Measures	ICU total (r)
Criterion validity with the PCL:YV	
Total	.76
Facet 1: Interpersonal	.41
Facet 2: Affective	.77
Facet 3: Behavioral	.61
Facet 4: Antisocial	.52
Construct validity	
HoNOSCA	.46
RPQ: Reactive	.53
RPQ: Proactive	.59
IRI: Cognitive empathy	-.56
IRI: Affective empathy	-.76

Note. All bivariate correlations were significant at the level of $p < .01$ (two-tailed).

LITERATURE

- (1) Kongerslev, M. T., Bo, S., Forth, A. E., & Simonsen, E. (2015). Assessment of the affective dimensions of psychopathy with the Danish version of the inventory of callous-unemotional traits among incarcerated adolescent boys: A study of reliability, criterion validity, and construct validity. *Scandinavian Journal of Child and Adolescent Psychiatry and Psychology*, 3(1), 80-96.
- (2) Frick, P. J. (2004). *The inventory of callous-unemotional traits (ICU)*. Unpublished rating scale.

^a Psychiatric Research Unit
Region Zealand
Denmark

^b Psychiatric Clinic Roskilde
Region Zealand
Denmark

^c Carleton University
Ottawa, ON
Canada

REGION
SJÆLLAND

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