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ASSIST-Y:

Validity, Reliability and Clinical Utility

in Spanish youth detainees

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We acknowledge and pay our respects to the Kaurna people,
the traditional custodians whose ancestral lands we gather on.

We acknowledge the deep feelings of attachment and relationship of the Kaurna people to country and we respect and value their past, present and ongoing connection to the land and cultural beliefs.

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Background

Adolescence is a critical period for substance use initiation

- Early onset increases risk of dependence.

Poly-substance experimentation (alcohol, tobacco, cannabis) is common,

- increases risks for future harm.

Current tools may miss risky, non-dependent use

Study aims:

- Validate ASSIST-Y's reliability and accuracy.
- Compare with other tools.
- Assess its utility for early detection of risky use.

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Methods

Participants and Sampling

Adolescent males aged 15-17 from a juvenile justice centre, meeting drug-related criteria (n=187); exclusions based on age, detention period, psychiatric symptoms, cognitive issues, or lack of parental consent, resulting in 101 participants.

Recruitment:

Conducted at Can Llupià Educational Center (Barcelona) from Dec 2021 to Sept 2022; participants provided informed consent and could decline without penalty.

Procedure:

Participants completed validated questionnaires on demographics, psychological symptoms, and substance use, administered by a clinical psychologist; an independent addiction specialist conducted diagnostic interviews for additional validity assessment.

Instruments and Comparators

Screening tools administered (by Clinical Psychologist):

- ASSIST-Y
- Cannabis Abuse Screening Test (CAST)
- CRAFFT
- Severity of Dependence Scale (SDS)
- Fagestrom Test of Nicotine Dependence (FTND)

Diagnostic Interview (by Addiction Medicine Specialist)

- MINI-Plus Neuropsychiatric Interview
- Assessing current and lifetime
  - DSM-IV-TR substance abuse, DSM-IV-TR dependence

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Statistical approach

Step 1:

Use ASSIST-Y to determine cut-off scores for low, moderate and high risk using ROC curves

Step 2: evaluate psychometric performance of ASSIST-Y

Reliability – Cross-method agreement; Internal Consistency

Validity – Concurrent and Convergent

Diagnostic Accuracy – Sensitivity, Specificity, PPV, NPV, Clinical utility (+/-)

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Sample characteristics

Age (Mean, SD)	16.26 (.78)
Place of birth	
Spain	38 (37.6)
North Africa	42 (41.6)
South America	15 (14.9)
Eastern Europe	2 (2.0)
Sub-Saharan Africa	1 (1.0)
Other	3 (3.0)
Intoxicated at moment of arrest	44 (44.0)
Offending under influence	62 (60.8)
Parent with SUD	35 (35.0)
Diagnosed with addictive disorder	77 (76.3)
Mean (SD) substances used in lifetime	5.52 (.24)
Mean (SD) substances used in past 3-months	4.4 (2.3)

Immigrated to Spain	62 (62.7)
age at immigration	11.5 years
Immigrated alone	45 (45.3)
Began use during immigration	21 (45.3)
Began after immigrating	24 (54.7)

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Substance use characteristics

	Used in lifetime	Frequency of past 3-month use				
	N (%)	Daily or almost daily	Weekly	Monthly	Once or twice	No use
Tobacco	96 (95.0)	86 (89.6)	5 (5.2)	1 (1.0)	1 (1.0)	3 (3.1)
Alcohol	93 (92.1)	12 (12.9)	31 (33.3)	18 (19.4)	17 (18.3)	15 (16.1)
Cannabis	95 (94.1)	74 (77.9)	7 (7.4)	1 (1.1)	6 (6.3)	7 (7.4)
Cocaine	50 (49.5)	9 (18.0)	17 (34.0)	3 (6.0)	11 (22.0)	10 (20.0)
Stimulants	51 (50.5)	11 (21.6)	12 (23.5)	7 (13.7)	8 (15.7)	13 (25.5)
Inhalants	37 (36.6)	1 (2.7)	3 (8.1)	2 (5.4)	6 (16.2)	25 (67.6)
Sedatives	57 (56.4)	19 (33.3)	13 (22.8)	6 (10.5)	10 (17.5)	9 (15.8)
Hallucinogens	31 (30.7)	2 (6.5)	2 (6.5)	2 (6.5)	8 (6.5)	17 (54.8)
Opioids	17 (16.8)	1 (5.9)	2 (11.8)	1 (5.9)	5 (29.4)	8 (47.1)
Other substances	31 (30.7)	10 (32.3)	8 (25.8)	3 (9.7)	6 (19.4)	4 (12.9)

Concurrent validity of ASSIST-Y

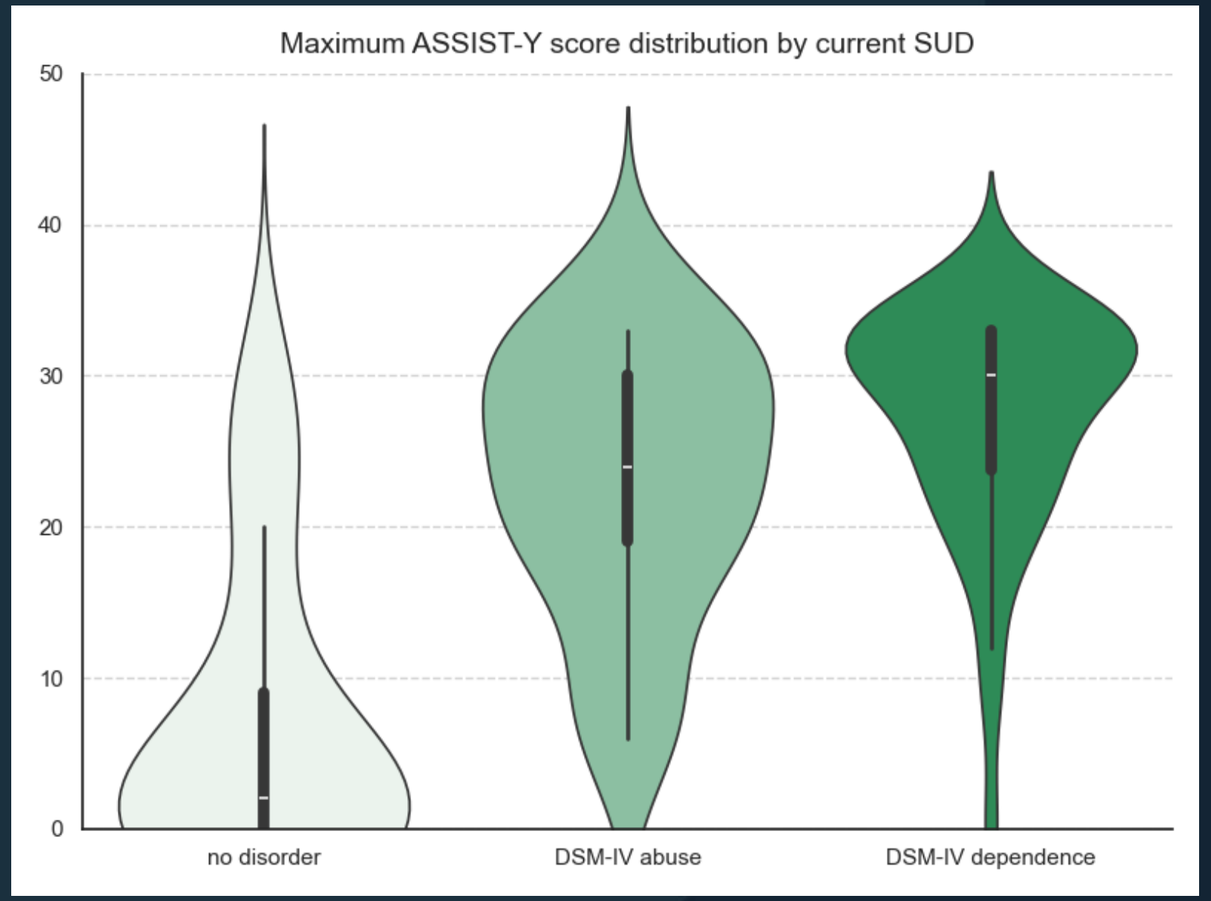
With MINI Diagnostic Interview:

DSM-IV-TR abuse:

- mean scores significantly higher lifetime or current abuse ($p<.05$) vs those without (all substances, ex. current cannabis abuse [$p = .871$]).

DSM-IV-TR dependence:

- mean scores were significantly higher ($p \leq .002$) among those with a lifetime or current diagnosis of dependence, vs. those without (alcohol, cannabis and sedatives).
- For the remaining substances, higher (but not statistically significant) mean SSIs



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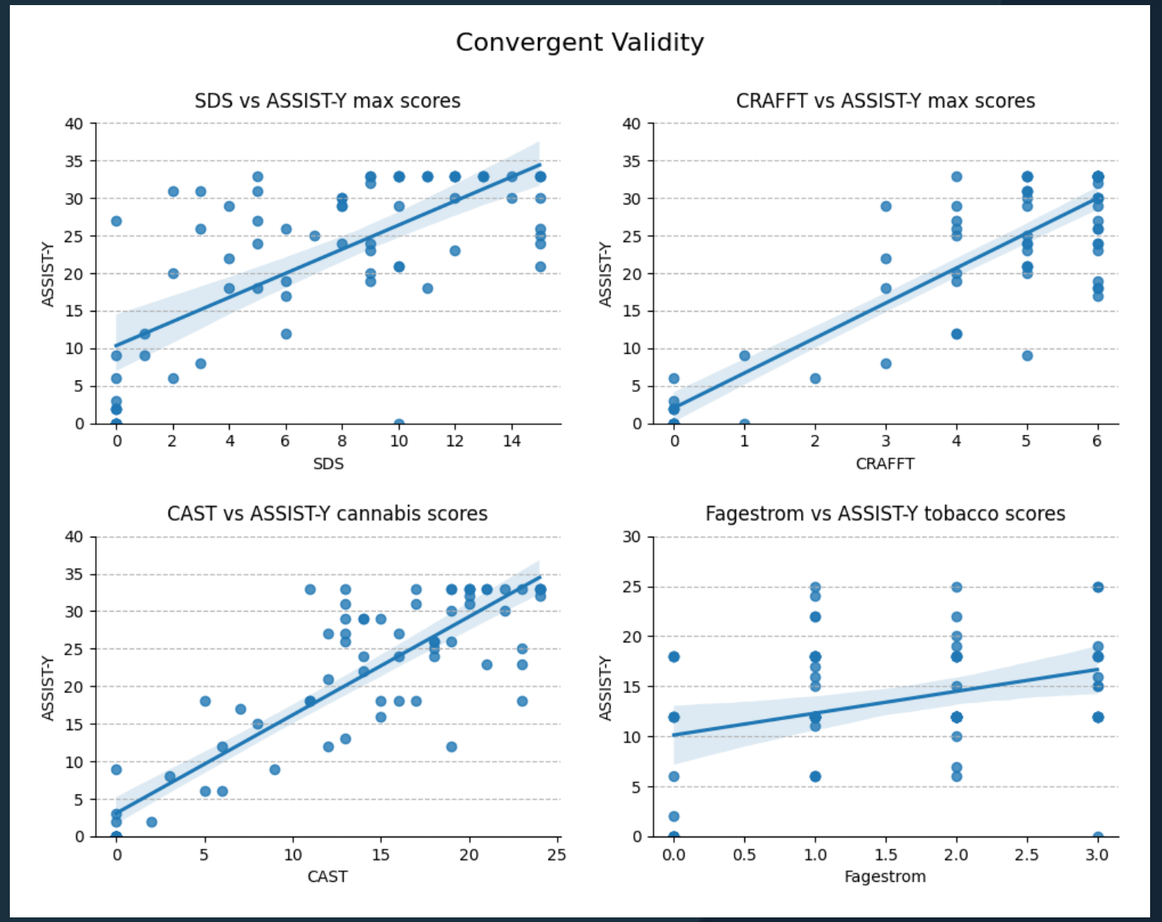
Convergent validity of ASSIST-Y

With other valid, standardised measures

- CRAFFT (all substances)
- SDS (all substances)
- Fagestrom (tobacco)
- CAST (Cannabis)



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Reliability

Internal Consistency

- excellent reliability for cocaine and inhalants ($\alpha > .90$),
- good for alcohol, cannabis, and stimulants ($\alpha > .80$),
- acceptable for opioids and sedatives ($\alpha = .72$ and $.68$)

Cross-method agreement

Acceptable agreement ($\kappa \geq .40$) between for alcohol, cocaine, stimulants, and sedatives in cases of substance abuse

Good agreement for cannabis, acceptable for sedatives and alcohol in cases of dependence

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Diagnostic Performance

Compared with other standardised measures:

- ASSIST-Y outperformed other tools (SDS, CRAFFT, CAST) in AUC values for alcohol, cocaine, stimulants, and sedatives, with the highest case-finding (CUI+) and screening utility (CUI-) for these and other substances
- however, CAST had higher clinical utility for cannabis, and screening utility was adequate across all substances.

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Takeaways

ASSIST-Y can help identify adolescents at risk from substance use

Not a diagnostic instrument, but can effectively differentiate between regular use and dependence for most substances.

It offers a quick, broad assessment across substances, supporting risk-reduction interventions, particularly for non-specialist clinicians.

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make history.

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