

The N-SAT

The Nebraska Screening and Assessment Tool

The N-SAT is intended to standardize assessment of youth referred to diversion in Nebraska. It determines risk level of further involvement (1-year) in the justice system (i.e., delinquency/criminality). It was not purchased “off the shelf”, rather was developed by the Nebraska Crime Commission (NCC). It is free for Nebraska agencies to use, provides domain scores for referral and treatment purposes, and is more accurate than other tools used in Nebraska.

Comparing features of different tools

	Normed to Nebraska's population	Gender specific	Uses criminal history	Founded on Risk, Needs, Responsivity model	Includes scores for needs domains	Free to use	Free, ongoing training
N-SAT	✓	✓		✓	✓	✓	✓
ARNA			✓	✓		✓	
YLS			✓	✓	✓		
NYS			✓	✓	✓	✓	
MAYSI full					✓		

Comparing model diagnostics (1 year reinvolvement)

Model	AUC	# of Questions	Domains with scores
N-SAT Screener	0.62	27	none
N-SAT Full Male	0.65	84	School, Associations, Family, Alcohol & Drugs, Mental Health, Attitude/Behavior, Aggression, Cognitive Skills
N-SAT Full Female	0.64	84	School, Associations, Family, Alcohol & Drugs, Mental Health, Attitude/Behavior, Aggression, Cognitive Skills
ARNA	0.69	5, 4, or 10	none
YLS	0.57	42	Offense History, Family Circumstances, Education/Employment, Peer Relationships, Substance Use/Abuse, Leisure/Recreation, Personality/Behavior, Attitude/Orientation
NYS	0.55	9	Offense History, Family Circumstances, Education/Employment, Peer Relationships, Substance Use/Abuse, Leisure/Recreation, Personality/Behavior, Attitude/Orientation

Future plans

NCC has three primary steps moving forward with the N-SAT:

- 1) Develop implementation procedures with considerable input from stakeholders (users).
- 2) Provide cost-free in-person and virtual trainings. These will be recorded for future use.
- 3) Developers Hamilton and colleagues (UNO) will examine the records of individuals assessed by the N-SAT after two years of use, in order to recalibrate the assessment.

Some more details

Why use a risk assessment?

Research has shown for decades that actuarial tools (i.e., set of questions intended to predict an outcome) are better at predicting recidivism than practitioner “gut instincts” (Clear & Gallagher, 1985; Dawes, Faust, & Meehl, 1989). Further, risk assessments can be organized to provide practitioners with broad needs categories to structure referrals to services. Finally, Nebraska statute requires diversion programs to use a screening or risk assessment tool when creating a diversion plan (43-260.04; Nebraska Juvenile Diversion Guidelines, 2015, p.14).

What does “validated” really mean?

“Validate” in justice applications means to empirically determine the extent to which the tool is predicting recidivism. However, many individuals claim a tool is validated, but miss the fact that it is not tested in the jurisdiction where it is used.

Are we using risk assessment in juvenile justice?

Multiple tools are currently used by various diversionary programs/agencies in Nebraska, and the accuracies and reliabilities of these tools were examined by Nebraska’s Juvenile Justice Institute (JJI) (Rufino et al., 2019). Rufino and colleagues’ report recommended that a single, standardized tool be developed for diversionary programs across the state in order to increase efficiency.

What is norming?

Norming is the practice of adjusting 1) which questions to include in the statistical algorithm and 2) how much each question counts towards the risk or needs score. To our knowledge, no other tool used in Nebraska diversion has been normed, thus the tools all rely on the characteristics of juveniles in the jurisdictions where they were created (e.g., Canada, Arizona).

What is the AUC?

The AUC score in justice applications represents the probability that individuals ranked in a higher category (e.g., high risk) will recidivate at a higher rate than individuals ranked in a lower category (e.g., moderate risk). Higher AUC scores mean the tool is better at predicting recidivism. AUC’s range from 0 to 1, where a 0.5 is equivalent to “chance” or flipping a coin (i.e., 50/50). Many tools range 0.63 to 0.75.

Do all questions contribute equally towards the score (and what does “gender specific” mean)?

No. Each question has the potential to count differently towards an overall score, as determined by a “Nebraska-looking” sample. This means the tool is customized to predict on Nebraskans. The tool also has separate algorithms for males and females, meaning the same question can count differently towards the overall scores (e.g., if yes, the algorithm adds 1 for males or adds 0.5 for females).

Who are these developers?

These Nebraskan developers have created such tools for agencies at local, state, and federal levels (Hamilton et al.). They created, among other tools, the Prisoner Assessment Tool Targeting Estimated Risk and Needs (PATTERN) tool, which began use in the Federal Bureau of Prisons in 2019.

Where else is this tool used?

The original non-proprietary assessment was created by the Washington State Juvenile Court Administration in 1997. It has been modified (a key element of this tool) to be used on different populations (i.e., weighted, changed questions, changed wording), to account for cultural and legal differences across regions, jurisdictions, and populations. It is used at local and state levels, including Colorado, Iowa, Oregon, Florida, New York, North Dakota, Illinois, and Delaware.