Elimination of Familial Sex Offenders Inflates the Estimated Efficiency of the MnSOST-R

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Purpose

- This study is a continuation of an ongoing evaluation of the validity of the Minnesota Sex Offender Screening Tool-Revised (MnSOST-R)
  - MnSOST-R is an actuarial test for the prediction of sexual recidivism (ATSR) of convicted sex offenders
Major Components of Actuarial Tests

- Test items
  - Examples: Age, number of sex offenses
  - Items added to obtain a total test score
- Experience table
  - Consulted to find out what percentage of those with the offender’s test score have re-offended in the past. This is the offender’s estimated recidivism risk.
Development of MnSOST-R

- Funds provided by the Minnesota Department of Corrections (DOC), 1991
- Has never been published in a peer-reviewed journal
Measurement Theory and Research Methodology and the MnSOST-R

• Does not conform to a number of criteria for evaluation of tests, testing practices and effects of test use*
  – *(Revised Standards for Educational and Psychological Testing)*

*American Educational Research Association (AERA); American Psychological Association (APA); National Council on Measurement in Education (NCME)
Effect of Unpublished Status of MnSOST-R

- Limits outlets for the publication of scholarly reviews and research challenging the adequacy of the MnSOST.
The MnSOST is Widely Used in Sexually Violent Predator (SVP) Cases

• Overview of SVP Laws
  – Involve post-prison civil commitment of “high risk” sex offenders
  – SVP laws have been passed by legislatures in 16 states and the District of Columbia
States with SVP Civil Commitment Laws

- Arizona
- California
- Florida
- Illinois
- Iowa
- Kansas
- Massachusetts
- Minnesota
- Missouri
- New Jersey
- North Dakota
- South Carolina
- Texas (outpatient commitment)
- Virginia
- Washington
- Wisconsin
- District of Columbia
Why Continued Scrutiny of MnSOST-R is Important

• Poor test development procedures
• Serious implications of the test for justice and public safety in civil commitment cases
Development of MnSOST-R

- Small original sample (256 incarcerated sex offenders) for a 16-item test
  - Enrichment: included 16 recidivists who did not belong to the sample
  - De-selection: took out 113 familial offenders who belonged in the sample
- Sexual Recidivism Rate = 35% - 41% vs. usual 20% – 25%
- “Cut Score” ≥ 13 used for recommendation for commitment
Validity Indicators

- Sensitivity at cut score of 13 = .15
- 1-Specificity = .02
- Correlation with recidivism = .45
- Area under the ROC Curve = .77
- Comparative test efficiency (calculated by Wollert, 2005, using Bayes’s Theorem)
Efficiency of MnSOST vs. Other ATSRs For High Risk Offenders of Different Ages

Sexual Recidivism Estimates For Sex Offenders Of Different Ages With High Actuarial Scores

- MnSOST-R
- RRASOR
- SORAG
- Static-99
- VRAG
- Commit
Most Thoroughly Documented Shortcoming of the MnSOST

• Serious flaws have been found in all proposed experience tables
  – 1995 SOST (Base Rate = 41%)
  – Replaced by MnSOST-R in 1999
    • Base Rate for MnSOST-R was 35%
    • Same offenders were in both samples
    • No explanation for the drop in base rate
Flaws in 1999 MnSOST-R

- Test Contents
  - Original Experience Table (Base Rate = 35%)
  - Estimated Table for samples with 21% Base Rate
  - Estimated Table for samples with 15% Base Rate
- On cross-validation the recidivism rate for those with scores $\geq$13 decreased from 88% to 44% (Wollert, 2002).
12/03: A Third Version of MnSOST Was Formulated

- Includes almost all of the original sample of offenders and a new sample of 220 offenders
- Classification was much less accurate for the new sample than it was for the original sample
- Who knows when the next MnSOST will appear, or why?
Another Possible Problem That Has Not Been Studied Involves the Elimination of Familial Offenders

- The reliability of this procedure has never been determined
- Raises possibility that some or all of the MnSOST validity estimates are inaccurate (Wollert, 2003)
Method for Studying This Issue

- Obtain data from a representative sample
- Re-calculate validity indicators
Bartosh et al. (2003) Reported Data for a Representative Sample

- N = 186 Sex offenders released from prison
- $r$ with sexual recidivism = .096 (ns)
- ROC = .58 (ns)
  - This means the test does not differentiate recidivists from non-recidivists
Bartosh Shared Her Frequency Data with Waggoner and Wollert

• Results of Waggoner’s and Wollert’s analysis of Bartosh data
  – Sensitivity at cut score of 13 = .14
  – 1- Specificity = .067
  • Much larger than that for the non-representative sample (i.e., .02)
  – Much less efficient than other ATSRs when used to predict recidivism for those with high scores
Sexual Recidivism Estimates for Sex Offenders Who Have High Actuarial Scores But Vary In Age

![Recidivism Estimates Graph]
Discussion

• Validity indicators reported by MnSOST test developers are inaccurate and idiosyncratic as a result of non-representative sampling

• A second study on a large representative sample (N = 468) is currently underway with Barbaree and Langton to explore this problem further
Conclusion

• Rationale for SEPT was to identify procedures that enhance test validity
  – Test developers need to be aware of and follow SEPT procedures
  – Clinicians need to be aware of the extent to which the tests they use are based on SEPT procedures
References