Stable-2007 Predictive Validity

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Key Findings

- The Stable-2007 accurately sorted individuals into risk categories 65% of the time for any recidivism, 63% for criminal recidivism, and 64% of the time for any sexual recidivism.
- Base rates for any recidivism 24.9% (n=124), any criminal recidivism 19.7% (n=98), and any sexual recidivism 9.0% (n=45) were consistent with those observed in Hanson et al. (2007).
- The STABLE-2007 is an effective tool to assess the risk for sexual re-offense in the State of Washington.

Background

Sex offenders presently consist of approximately 20% of the population under confinement and 18% of those supervised in the community by the Washington State Department of Corrections (WADOC, 2020). The WADOC Sex Offender Treatment and Assessment Program (SOTAP) assesses, screens, and provides treatment for sexual offenders with a goal of fulfilling DOC’s mission to improve public safety. In order to participate in the program, incarcerated individuals must acknowledge or recall having committed a sex offense, agree to attend and follow treatment rules and expectations, and be eligible to release from prison at some point in the future (Washington State Department of Corrections, 2016). The program typically occurs in the final 12-18 months of the participants’ incarceration with one year of programming in prison and one year out in the community.

The SOTAP uses evidence-based treatment and assessment practices. Upon WADOC intake, individuals are screened for amenability and prioritized for treatment with the Static-99R (Hanson & Thornton, 2000), and those who score a 3 or higher and are amenable are considered further for participation in SOTAP. Priority is given to those with the higher risk scores. At the beginning of treatment, incarcerated individuals are assessed using the STABLE-2007 (Hanson, Harris, Scott, & Helmus, 2007) to identify treatment needs. The STABLE-2007 is a 13-item dynamic risk assessment that predicts risk in adult male sex offenders in five recidivism categories: overall, sexual, sexually violent, violent, and breaches (violation behaviors). This study will replicate conditions for overall recidivism, criminal recidivism, and sexual recidivism with inclusion of breaches.

The purpose of the present analysis was to assess the psychometric characteristics of the STABLE-2007 with a sample of incarcerated individuals in Washington. Specifically, we tested the predictive validity of the STABLE-2007 in regard to the tool’s performance in predicting overall (any recidivism, including breaches), criminal (criminal recidivism, excluding breaches) and sexual recidivism (any sexual recidivism, including breaches). This project was reviewed and approved by the Washington State Institutional Review Board (WSIRB).

Methods

Of five offense categories referenced by Hanson et al., the current analysis includes any recidivism, defined as any new incarceration as an inmate (non-violator) in Washington State within three years of release, any new identified offense (regardless of whether or not it carried a term of confinement) within three years of release, and any violation while being supervised in the community that resulted in revocation/termination of supervision (and returning to incarceration, including Failure to Register). Any criminal recidivism is included and defined as any new incarceration as an inmate (non-violator) in Washington State within three years of release or any new identified offense (whether or not it carried a term of confinement) within three years of release (excluding Failure to Register). Current analysis included “any sexual recidivism”, which includes any new sex offense as defined by RCW (excluding Failure to Register), any offense with “Sexual Motivation” enhancement,
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or any offense with “Sexual Motivation” finding type within three years of release. Additionally, any individual who was revoked or terminated from supervision as the result of a violation hearing, where contact with a prohibited class/minor, possessing or perusing pornography, entering playground/school, or entering sex related business were found (excluding Failure to Register).

Logistic regression was used to model recidivism as dependent on risk level. In addition to measuring the strength of the relationship between risk scores and the probability to reoffend, models provided a comparison between the predictive ability of the Stable 2007 risk category and prediction based on population base rates. Predictive validity was assessed using receiver operating characteristic (ROC) curve analysis to evaluate discrimination, or how well individuals were sorted along a continuum of risk.

Sample. The sample consisted of 498 individuals who were incarcerated with at least one sex offense (or sexually motivated offense), had a completed STABLE-2007 during incarceration, and were released prior to November 30, 2017. November 30th, 2020 was used as the cut-off date to assure a three-year follow-up recidivism cohort. Individuals included in this sample are at various stages of participation in the SOTAP program, ranging from beginning the program in prison to successful discharge from community SOTAP.

Demographics. The race and ethnic group breakdown of the study sample was as follows: Non-Hispanic White (n=354), Non-Hispanic Black (n=51), Hispanic White (n=48), Non-Hispanic American Indian or Alaskan Native (n=20), and Non-Hispanic Asian/Pacific Islander (n=13). The race and ethnicity of 11 individuals were listed as unknown or not reported. Race and ethnicity categories with less than 10 were not included for privacy purposes. Mean age was 39.8 (median 38, range 21 to 78 years of age).

Results

Three-year recidivism rates of individuals assessed with the STABLE-2007 (n=498) included 24.9% (n=124) for any recidivism, 19.7% (n=98) for criminal recidivism, and 9.0% (n=45) for any sexual recidivism. Figure 1 shows probability to reoffend by recidivism type and assessed risk level.

Figure 1. Recidivism by Stable Risk Category (Low, Moderate, and High)

NOTE: Percentages above are of the total population (n=498) and not of the recidivating population (n=124). For example, in any sexual recidivism 15.2% of the total population given the Stable-2007 and scored as high risk sexually recidivated.
For each recidivism type, the probability of reoffending increased with each step increase in assessed risk. Likelihood ratio tests indicated that assessed risk level significantly improved prediction of all recidivism types. For any recidivism, an increase in risk was associated with 2.6 times increase in the likelihood of a new offense or violation. For any criminal recidivism, an increase in risk was associated with 2.4 times increase in the likelihood of a new offense or revocation. For any sexual recidivism, an increase in risk was associated with 2.5 times increase in the likelihood of a new sex offense or sexually motivated violation. In other words, an individual in the moderate risk level for sexual recidivism is approximately two and a half times more likely to commit a new sex offense than someone assessed as low. Further, an individual assessed as high level is approximately two and a half times more likely to commit a new sex offense than someone assessed as moderate risk, and approximately five times more likely to commit a new sex offense than someone assessed as low.

*Figure 2. ROC curves by recidivism type*

ROC curves with area under the curve (AUC) shown in Figure 2 indicate that with any randomly drawn pair of individuals, one reoffending and the other not reoffending within three years of release, the reoffending individual would have a higher risk score 65% of the time for any recidivism (includes breaches), 63% for any criminal recidivism (excludes breaches), and 64% of the time for any sexual recidivism. Median AUC estimates were consistent with previous analyses characterizing the STABLE-2007 as having significant but weak to moderate discriminative ability (Hanson et al., 2007). Population base rates were also similar with those reported by Hanson; 28.0% for any recidivism, 18.7% for any criminal recidivism, and 9.1% for any sexual recidivism.

**Summary**

This report examines the performance of the STABLE-2007 assessment in predicting the likelihood of reoffending, including any, criminal and sexual recidivism. The findings show that STABLE-2007 is effective at predicting the likelihood of reoffending with respect for any recidivism, any criminal recidivism, and any sexual recidivism. A step-wise increase in risk category from low to moderate (or moderate to high) increases the likelihood for all three recidivism types consistent with STABLE-2007 findings in outside populations. The use of the Receiver Operator Characteristic (ROC) with area under the curve (AOC) indicate the Stable-2007 accurately sorts individuals into risk categories 65% of the time for any recidivism, 63% for criminal recidivism, and 64% of the time for any sexual recidivism. Base rates for any recidivism 24.9% (n=124), any criminal recidivism 19.7% (n=98), and any sexual recidivism 9.0% (n=45) were consistent with those observed in Hanson et al., (2007). While for this study violations resulting in return to confinement were included in the any recidivism count, future analyses could include all five recidivism types defined by Hanson et al (2007). Additionally, future research could expand upon this study by evaluating the predictive validity of STABLE-2007 when combined with
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the Static-99R or other assessments. Overall, the current analyses indicate that the STABLE-2007 is an effective tool to assess the risk for sexual re-offense in the State of Washington.

References


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