



How to Use the STABLE-2007 and Static-99R Calculator

This calculator enables the user to enter Static-99R and STABLE-2007 total scores and obtain five-year sexual recidivism estimates based on the logistic regression equation described by Hanson and Thornton (2024). The calculator also provides a margin of error for the estimate. This margin of error is based solely on the accuracy with which the incremental b coefficient for STABLE-2007 is estimated. It does not take into account other potential sources of error. A more detailed explanation is contained in Hanson and Thornton (2024).

To use the Calculator follow these steps:

1. **Click Clear Prior Values** to clear the results of previous calculations. This action is complete when the Static-99R, STABLE-2007, 5-Year Predicted Sexual Recidivism, and Margin of Error fields are blank. Depending on your computer it may take a moment for this to complete.
2. **Enter the appropriate total scores in the Static-99R and STABLE-2007 fields** of the spreadsheet. After a moment all the output fields will fill with values.
3. **Manually copy the sexual recidivism rate (and margin of error, if desired) into your report.** You could also take a screenshot of the results and save it as a PDF if you prefer.

The calculator provides both a point estimate of the five-year sexual recidivism rate (referred to as Predicted Sexual Recidivism) associated the individual's Static-99R and STABLE-2007 scores, and margins of error that define a zone around that point estimate. Although it is not always necessary to cite the margins of error of a risk estimate in a report, it is important for an evaluator to keep them in mind. Furthermore, even when an evaluator chooses not to describe the margins of error of a risk estimate in their report, they should be prepared to answer questions about them.

The most commonly reported kind of margin of error for the recidivism estimates produced by a logistic regression equation is a confidence interval that takes into account how accurately each of the coefficients in the equation are estimated. As Hanson &

Thornton (2024) explain, for technical reasons it is not possible to provide traditional confidence intervals in the present case. Instead, the margin of error provided reflects only the accuracy with which the incremental *b* coefficient for STABLE-2007 is estimated. Other potential sources of error are described in Hanson and Thornton (2024).

Depending on the context, more or less elaborate explanations of your assessment will be reasonable. Below we give one example of how results might be described.

*Mr. Jones scored 5 on Static-99R and 11 on STABLE-2007. Considering Mr. Jones's Static-99R score alone, the five-year sexual recidivism rate associated with this score is 12.8% in Routine samples and 21.2% in High Risk / High Need samples according to the 2021 version of the Evaluators' Workbook. The STABLE-2007 and Static-99R Calculator was used to refine these recidivism estimates based on considering Mr. Jones' STABLE-2007 score in addition to his Static-99R score. This Calculator provides a recidivism estimate based on the logistic regression equation described by Hanson & Thornton (2024). This equation uses a sexual recidivism base rate from the Dynamic Supervision Project (N = 611; described by Hanson et al., 2015) and estimates of incremental *b* coefficients for Static-99R and STABLE-2007 based on the incremental hazard ratios from Brankley et al. (2021)'s meta-analysis (N = 6,955).*

The Calculator produced an expected five-year sexual recidivism rate for individuals with Mr. Jones' scores of 16.9%. The Calculator gives a margin of error for this estimate from 15.3% to 18.5%. This margin of error reflects the lower and upper bounds (95% confidence interval) of the incremental effect of STABLE-2007 over Static-99R. It does not consider the error associated with estimating the recidivism base rate, nor the error associated with the incremental effect of Static-99R over STABLE-2007.

The base rate from the Dynamic Supervision Project (Hanson et al., 2015) is used in the Calculator because of the particularly careful and comprehensive way recidivism data was gathered for that study.

References

- Hanson, R. K., Helmus, L., & Harris, A. J. R. (2015). Assessing the risk and needs of supervised sexual offenders: A prospective study using STABLE-2007, Static-99R and Static-2002R. *Criminal Justice and Behavior*, 42(12), 1205-1224.
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- Hanson, R.K. & Thornton, D. (2004). Obtaining More Precise Risk Estimates from Static-99R / STABLE-2007 Combinations. ATSA Catalyst.
- Helmus, L.M., Lee, S.C. Phenix, A., Hanson, R.K. & Thornton, D. (2021). *Static-99R & Static-2002R Evaluators' Workbook*. SAARNA: The Society for the Advancement of Actuarial Risk Needs Assessment. SAARNA.org

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