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## Improving Measurement of Youth and Young Adult Delinquency Risk: Evidence from the Eastern and Southern Caribbean

### Background

Programs designed to prevent youth violence can only be effective if accurately targeted to at-risk youth. To address this challenge, many violence-prevention programs employ risk screens designed to identify those who are most at risk and screen out those who are not. Yet developing risk screens that can be used effectively in the field is a daunting challenge: not only must they accurately predict future delinquency, they also have to be short, easy to administer, and easy for program administrators to score.

This study aimed to address this challenge in the context of a family counseling program for at-risk youth in the Caribbean. In 2020, Social Impact (SI) concluded an [impact evaluation](#) of the United States Agency for International Development (USAID)'s Community, Family and Youth Resilience (CFYR) Family Matters program in Guyana, St. Lucia and St. Kitts and Nevis. During the evaluation, researchers identified limitations to the existing pre-program risk screen as a source of poor program targeting and a key barrier to greater program impact. In particular, the existing risk screen did not appear to accurately distinguish between youth at high vs. low risk of delinquency; it also took nearly an hour to administer and required special expertise to compile the results into a risk score.



### Developing the Youth Risk Screen (Y-RISC)

To help improve targeting for programs like *Family Matters* that focus on at-risk youth, USAID commissioned a follow-up study with a mandate to develop a streamlined and potentially more accurate risk assessment tool. Drawing on longitudinal survey data from a sample of 2,393 potentially at-risk youth collected as part of prior USAID-funded impact evaluations in the Caribbean and Central America, the study used machine learning algorithms to analyze the predictive

power of a wide range of potential risk factors, including anti-social tendencies, weak parental supervision, impulsive behavior, negative peer influence, and past delinquency, among others. In particular, machine learning prediction algorithms were used to identify which risk factors measured at baseline were the strongest predictors of delinquency at endline.

Informed by these results and a review of recent literature on risk factors and risk screens, the study used the subset of the strongest, most-accurate risk factors as the basis for the streamlined risk assessment tool. The resulting tool, the Youth Risk Screen (Y-RISC), is easy to administer, easy to score, and potentially highly predictive of future delinquency. Designed for both youth (ages 11 to 17) and young adults (ages 18 to 29), the Y-RISC includes just 39 questions and takes about 15 minutes to administer.

### Pre-testing the Y-RISC

The Y-RISC was pre-tested on a sample of 90 young adults from five Caribbean countries in May 2021. Overall, the results confirmed high levels of respondent attention and comprehension throughout the survey, and supplemental analysis provided evidence that potentially sensitive questions about self and peer delinquency elicited truthful responses.

### Next steps

Additional data collection is required to fully validate the Y-RISC's accuracy and to identify any adaptations that might be required for use outside the Caribbean. Nevertheless, the current Y-RISC is publicly available for researchers, implementers, and policymakers to use. For full details on the Y-RISC, the methodology used to develop it, guidelines for how it should be used, and its limitations, see the [full report](#).



Alberto Díaz-Cayeros, Stephanie Gimenez Stahlberg, Nancy Guerra, Rashmi Bhat, Ben Morse, and Alexa Aziz (2021) [Improving Measurement of Youth and Young Adult Delinquency Risk: Final Report](#)

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