

## **Does Research Design Affect Study Outcomes in Criminal Justice?**

Weisburd, D., Lum, C., & Petrosino, A. (2001). Does research design affect study outcomes in criminal justice? *Annals of the American Academy of Political and Social Science*, 578, 50-70.

### **BACKGROUND**

The move toward evidence-based practices in criminal justice policies has grown in recent years, with emphasis placed on programs that are effective in their intended purpose. One aspect of this movement has been improving the rigor of evaluation research in determining “what works” with regard to crime prevention programs. This study examines whether the type of research design used in a crime and justice study influence its conclusions. Scholars agree in theory that randomized experimental studies have higher internal validity than do nonrandomized studies. But there is no consensus regarding the costs of using nonrandomized studies in coming to conclusions regarding criminal justice interventions. To examine these issues, the authors look at the relationship between research design and study outcomes in a broad review of research evidence on crime and justice commissioned by the National Institute of Justice.

### **DATA AND METHODS**

The authors use the Maryland Report Scientific Methods Scale (SMS) developed by Sherman et al. (1997)<sup>1</sup> to examine criminal justice studies. The SMS ranges from 1-5: a 5 is an experimental study design, a 3 or 4 is a quasi-experimental study design, and a 1 or 2 is a nonexperimental study design. The authors develop a measure of study outcomes, which they call the investigator reported result (IRR). The IRR contains three values: a score of 1 indicates the study had a positive and intended treatment effect (such as crime reduction), a score of 0 indicates no statistically significant effect, and a score of -1 signifies an unintended or backfire effect of the treatment (such as increases in crime). After excluding studies from the Maryland Report for various reasons outlined in the article, the final sample used in this study was 308 studies.

### **FINDINGS AND CONCLUSIONS**

Criminal justice evaluations studies with a lower SMS score had higher IRR scores. This indicates that evaluations conducted with more rigorous methods and internal validity were less likely to find an intervention “worked” and more likely to detect “backfire” or “harmful” effects of interventions (see related work by McCord, 2003),<sup>2</sup> and those using weaker methods were more likely to see a positive effect in the evaluation. Their findings suggest that evaluation design in criminal justice studies may be systematically associated with a study’s findings. The authors speculate this could reflect a number of possibilities, including publication bias or attrition rates, and possibly norms and design difficulties in nonexperimental criminal justice research that may result in positive findings biases.

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<sup>1</sup> Sherman, L. W., Gottfredson, D. C., MacKenzie, D. L., Eck, J. E., Reuter, P., & Bushway, S. D. (1997). *Preventing crime: What works, what doesn't, what's promising*. Washington, DC: U.S. Department of Justice, National Institute of Justice.

<sup>2</sup> McCord, J. (2003). Cures that harm: Unanticipated outcomes of crime prevention programs. *The Annals of the American Academy of Political and Social Science*, 587(1), 16-30.