Many studies over the past few decades have sought to determine whether the death penalty has any deterrent effect on homicide rates. Researchers have reached widely varying, even contradictory, conclusions. Some studies have concluded that the threat of capital punishment deters murders, saving large numbers of lives; other studies have concluded that executions actually increase homicides; still others, that executions have no effect on murder rates. Commentary among researchers, advocates, and policymakers on the scientific validity of the findings has sometimes been acrimonious.

Against this backdrop, the National Research Council was asked to assess whether the available evidence provides a scientific basis for answering questions of if and how the death penalty affects homicide rates. The committee examined studies that have been conducted on deterrence and the death penalty since the 1976 Supreme Court decision in Gregg vs. Georgia, which ended a four-year moratorium on executions.

It is important to make clear what the committee’s study did not examine. Deterrence is only one of many considerations relevant to deciding whether the death penalty is good public policy. Not all supporters of capital punishment base their argument on
deterrent effects, and not all opponents would be affected by persuasive evidence of such effects. The case for capital punishment is sometimes based on arguments that the death penalty is the only appropriate response to especially heinous crimes; the case against it is sometimes based on claims that the sanctity of human life precludes state-sanctioned killings. Other considerations include whether capital punishment can be administered in a nondiscriminatory way, whether the risk of mistakenly executing an innocent person is acceptably small, and the cost of administering the death penalty in comparison with other punishments.

The committee was not charged with considering these issues, nor with rendering an overall judgment on whether capital punishment is good public policy. It was tasked only with assessing the scientific quality of the evidence on whether capital punishment deters homicides and recommending ways to improve the quality of future research.

**CONCLUSION AND RECOMMENDATION**

The committee concludes that research to date is not informative about whether capital punishment decreases, increases, or has no effect on homicide rates. Therefore, these studies should not be used to inform deliberations requiring judgments about the effect of the death penalty on homicide. Claims that research demonstrates that capital punishment decreases or increases the homicide rate or has no effect on it should not influence policy judgments about capital punishment.

All of the studies on the possible effects of capital punishment on homicide rates suffer from three fundamental flaws, which make them uninformative as a basis for policy consideration:

The studies do not factor in the effects of noncapital punishments that may also be imposed. The relevant question about deterrence is whether the death penalty is more or less effective as a deterrent than other penalties, such as a life sentence without the possibility of parole. None of the existing studies considers the other potential punishments that states impose or their potential effects on homicide rates. Any effect that these noncapital punishments have on homicide rates may contaminate the estimated effects — in either direction — of capital punishment.

The studies use incomplete or implausible models of potential murderers’ perceptions of and response to the use of capital punishment. Much of the research assumes that potential murderers respond to the objective risk of execution. But determining the objective risk poses great complexities even for a well-informed researcher, let alone a potential murderer. For example, only 15 percent of people who have been sentenced to death since 1976 have actually been executed, and a large fraction of death sentences are reversed. None of the studies used a measure of risk that plausibly corresponds to the objec-

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**USE OF THE DEATH PENALTY**

From 1973 to 2009, 8,115 people were sentenced to death in the United States; 1,188 of them — about 15 percent of those sentenced — had been executed by the end of 2009. Since 2005, the number of executions has remained stable at about 50 per year. As of 2009, 35 states allow the death penalty.
tive risk of execution, and conclusions about any deterrent effect are very sensitive to the measure of risk used. The committee is also skeptical that potential murderers can possibly estimate the objective risk, whatever it is; there is good reason to believe that potential murderers’ perceived risk deviates from the objective risk. Thus, there is no basis for judging which, if any, of the studies’ estimates might be informative about the effect of the death penalty on homicide rates.

Estimates of the effect of capital punishment are based on statistical models that make assumptions that are not credible. For example, a common assumption is that the effect of capital punishment on homicide rates is the same across states and years. As a consequence of such implausible assumptions, the estimated effects themselves lack credibility.

The committee does not construe its conclusion that the existing studies are uninformative as favoring one side or the other in the long-standing debate about deterrence and the death penalty.

NEXT STEPS FOR RESEARCH

The committee offers several recommendations for addressing the shortcomings in the research on capital punishment, including:

• collecting the data required for a more complete consideration of both the capital and noncapital punishments for murder;

• conducting studies on how potential murderers perceive the punishments that are applied in murder cases; and

• use of methods that make more credible assumptions to identify or bound the effect of capital punishment on homicides.

The committee does not expect that advances in data on systems of punishment and in knowledge of risk perceptions will come quickly or easily. However, data collection on the noncapital part of punishment systems need not be entirely complete to be useful; and even if research on perceptions of risk of capital punishment cannot resolve all major issues, making even some progress would provide valuable information for policy makers.

Ultimately, the success of the research may depend on the specific question addressed.

Questions of interest include:

• If or how the legal status of the death penalty affects homicide rates;

• If or how the intensity of use of the death penalty — both in terms of sentencing and actual executions — affects homicide rates; and

• If or how executions affect homicide rates in the short run.

Some of these questions may be informed by research that the committee recommends.

Moreover, the recommended research will likely improve knowledge on the effects of noncapital punishments on crimes not subject to capital punishment. Developing more scientific knowledge about these effects is particularly important. Although capital punishment is a highly contentious public policy issue, policies on prison sanctions and, more broadly, the administration of justice are important components of the nation’s response to crime. Thus, even if the recommended research is not ultimately successful in answering the question of capital punishment’s effects on homicide, advancing knowledge on the crime-prevention effects of other punishments and the criminal justice system can make major contributions to important policy issues.
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