War Stories from the Drug Survey

The primary data driver behind US drug policy is the National Survey on Drug Use and Health. This insider history traces the evolution of the survey and how the survey has interacted with the political and social climate of the country, from its origins during the Vietnam War to its role in the war on drugs. The book includes firsthand accounts that explain how the data were used and misused by political leaders, why changes were made in the survey design, and what challenges researchers faced in communicating statistical principles to policymakers and leaders. It also makes recommendations for managing survey data collection and reporting in the context of political pressures and technological advances.

Survey research students and practitioners will learn practical lessons about questionnaire design, mode effects, sampling, nonresponse, weighting, editing, imputation, statistical significance, and confidentiality. The book also includes common-language explanations of key terms and processes to help data users understand the point of view of survey statisticians.

J O S E P H G F R O E R E R was responsible for analysis and supervision of the National Survey on Drug Use and Health for more than three decades as a statistician at the National Institute on Drug Abuse (NIDA) and the Substance Abuse and Mental Health Services Administration (SAMHSA). A widely recognized expert in methods for substance use surveys, he authored dozens of peer-reviewed journal articles and book chapters and hundreds of government reports on survey methodology and substance use epidemiology. A member of the American Statistical Association for more than thirty-five years, he has received numerous awards from NIDA, SAMHSA, the White House, and the American Public Health Association for his work on the survey.
War Stories from the
Drug Survey

*How Culture, Politics, and Statistics Shaped the National Survey on Drug Use and Health*

Joseph Gfroerer
US Department of Health and Human Services (retired)
For Sue and Rachel
Contents

List of Figures .......................... xi
List of Tables .......................... xii
Preface ................................. xiii
Acknowledgments ...................... xv
List of Acronyms ........................ xvii

Introduction .............................. 1
  Other Histories of Government Surveys .......................... 6
  Who Should Read this Book ........................................ 6

1 President Nixon Launches the War on Drugs ........ 8
  Drug Use Prior to the 1960s ........................................ 9
  Links between the Vietnam War and the War on Drugs ........ 10
  The Drug War Begins ............................................. 13
  Design of the First National Drug Survey .................. 15
  First Commission Report ....................................... 19
  Second National Survey ......................................... 21

2 The Survey Continues, As Illicit Drug Use Peaks .......... 26
  1974 Survey: Public Experience with Psychoactive Substances 27
  1976 Survey: Nonmedical Use of Psychoactive Substances .... 32
  1977 and 1979 National Surveys on Drug Abuse (NSDA) .... 34
  Estimating the Prevalence of Heroin Use ...................... 36
  The Drug War’s Impact on Drug Abuse .......................... 38

Wrap-Up for Chapters 1 and 2 ................ 45

3 Cocaine and New Directions for the Survey .......... 49
  President Reagan’s Drug War ...................................... 49
  1982 National Survey on Drug Abuse ............................ 51
  Consolidation of National Drug Abuse Data Systems ......... 54
  1985 National Household Survey on Drug Abuse (NHSDA) .... 55
  1988 National Household Survey on Drug Abuse ............ 61
  Cocaine, Crack, and the Drug Czar ............................ 65
  Release of the 1988 NHSDA Results ........................... 67

vii
Contents

4 The White House Needs Data and a Bigger Survey 71
   A National Drug Index 72
   HHS Responds to the New Requirements 73
   ONDCP Gets Involved 75
   The First National Drug Control Strategy 77
   ONDCP Tells NIDA to Increase the Sample Size 79
   NIDA Responds to ONDCP’s Demands 81
   Addressing Survey Methodology Concerns 84
   ONDCP Pushes for State-Level Estimates 86

5 Criticism, Correction, and Communication 91
   Other Studies Challenge NHSDA Estimates 91
   Final Design for the 1990 Survey 94
   Release of 1990 Results by President Bush 94
   The 1991 NHSDA 97
   Competing Drug Control Strategies 99
   Controversy over Revision of a Key Cocaine Indicator 100
   Pre-Election Data Correction 102
   NHSDA Methodological Research 106
   NIDA and Its Grantees Continue to Oppose the Large Sample 110

Wrap-Up for Chapters 3, 4, and 5 113

6 The Survey Moves to SAMHSA 116
   The Creation of SAMHSA and the Office of Applied Studies 116
   Building OAS 118
   New Leaders and Shifting Policies in the Drug War 120
   1992 NHSDA: Building a Consistent Timetable and Statistical Integrity 121

7 Rising Youth Drug Use in the 1990s 126
   1993 NHSDA 126
   1994 NHSDA: Tracking Trends during a Survey Redesign 128
   Attacks on Clinton’s Drug Policy 130
   Administration Responses to the Increases in Youth Drug Use 132
   1995 NHSDA: Creating a Bridge to the Past 132
   Pre-Release Controls and a Leak of the 1995 Survey Findings 134
   States Legalize Medical Use of Marijuana 138
   1996 NHSDA 139
   1997 NHSDA: Expanded Samples in California and Arizona 140
   1998 NHSDA 141

8 Better Sample, Better Analysis, but Not Always 144
   State and Metropolitan Area Estimates 144
   Miami Success, Thanks to Andrew 145
   New Data for HIV-AIDS Research 147
   How Many People Need Treatment for a Substance Abuse Problem 149
   To Predict the Future, You Must Understand the Past 151

Wrap-Up for Chapters 6, 7, and 8 155
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>A Perfect Redesign Storm</td>
<td>159</td>
</tr>
<tr>
<td></td>
<td>Computer-Assisted Interviewing</td>
<td>159</td>
</tr>
<tr>
<td></td>
<td>Estimates for Every State</td>
<td>162</td>
</tr>
<tr>
<td></td>
<td>Tobacco Module</td>
<td>164</td>
</tr>
<tr>
<td></td>
<td>The Final Implementation Plan</td>
<td>166</td>
</tr>
<tr>
<td></td>
<td>How Many Federal Statisticians Does It Take?</td>
<td>167</td>
</tr>
<tr>
<td></td>
<td>The New Sample Design</td>
<td>169</td>
</tr>
<tr>
<td></td>
<td>The New Instrumentation</td>
<td>172</td>
</tr>
<tr>
<td></td>
<td>Respondents Report More Drug Use with Inexperienced Interviewers</td>
<td>175</td>
</tr>
<tr>
<td></td>
<td>The Mode Effect on Reporting of Drug Use: Paper versus Computer</td>
<td>176</td>
</tr>
<tr>
<td></td>
<td>Release of the 1999 State and National Results</td>
<td>177</td>
</tr>
<tr>
<td>10</td>
<td>Continuing Survey Design Improvements</td>
<td>180</td>
</tr>
<tr>
<td></td>
<td>Incentive Payments</td>
<td>180</td>
</tr>
<tr>
<td></td>
<td>Improvements in Data Collection Quality Control</td>
<td>181</td>
</tr>
<tr>
<td></td>
<td>Changing the Name of the Survey</td>
<td>182</td>
</tr>
<tr>
<td></td>
<td>Concern about Trend Measurement</td>
<td>183</td>
</tr>
<tr>
<td></td>
<td>Questionnaire Changes</td>
<td>184</td>
</tr>
<tr>
<td></td>
<td>Collecting Urine and Hair from NHSDA Respondents</td>
<td>186</td>
</tr>
<tr>
<td></td>
<td>Results from 2000 through 2002</td>
<td>187</td>
</tr>
<tr>
<td></td>
<td>Impact of the Changes in 2002</td>
<td>191</td>
</tr>
<tr>
<td></td>
<td>Four Years of Redesign</td>
<td>192</td>
</tr>
<tr>
<td></td>
<td>Wrap-Up for Chapters 9 and 10</td>
<td>194</td>
</tr>
<tr>
<td>11</td>
<td>Analytic Bankruptcy, Reorganization, Recovery, and Resilience</td>
<td>196</td>
</tr>
<tr>
<td></td>
<td>SAMHSA’s Data Strategy and National Outcome Measures</td>
<td>196</td>
</tr>
<tr>
<td></td>
<td>OAS Recovers and Rebuilds</td>
<td>199</td>
</tr>
<tr>
<td></td>
<td>Sharing Data While Protecting Respondent Confidentiality</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td>OAS Becomes a Center</td>
<td>203</td>
</tr>
<tr>
<td></td>
<td>Annual Releases of 2003–2014 NSDUH Results</td>
<td>204</td>
</tr>
<tr>
<td></td>
<td>Estimating First-Time Drug Use (Initiation)</td>
<td>206</td>
</tr>
<tr>
<td></td>
<td>A Powerful Analytic Tool</td>
<td>207</td>
</tr>
<tr>
<td>12</td>
<td>How to Redesign an Ongoing Survey, or Not</td>
<td>212</td>
</tr>
<tr>
<td></td>
<td>Conceptual Approval for a Redesign</td>
<td>212</td>
</tr>
<tr>
<td></td>
<td>Areas for Improvement</td>
<td>214</td>
</tr>
<tr>
<td></td>
<td>Methodological Research to Guide Design Decisions</td>
<td>215</td>
</tr>
<tr>
<td></td>
<td>Assessing Data Users’ Needs</td>
<td>215</td>
</tr>
<tr>
<td></td>
<td>Advice from Outside Experts</td>
<td>216</td>
</tr>
<tr>
<td></td>
<td>Managing the Redesign Work While Continuing the Survey</td>
<td>216</td>
</tr>
<tr>
<td></td>
<td>Final Design Decisions</td>
<td>217</td>
</tr>
<tr>
<td></td>
<td>Redesign Effects on Estimates</td>
<td>220</td>
</tr>
<tr>
<td></td>
<td>Other Changes Considered for the Survey</td>
<td>222</td>
</tr>
<tr>
<td></td>
<td>Mental Health Surveillance</td>
<td>225</td>
</tr>
<tr>
<td></td>
<td>Wrap-Up for Chapters 11 and 12</td>
<td>229</td>
</tr>
</tbody>
</table>
Contents

13 Lessons Learned and Future Challenges 232
   Improving Communication While Maintaining Statistical Integrity 232
   The Value of Methodological Research 233
   Managing Survey Redesigns 234
   Effective Use of Consultants 235
   Making Connections across the Survey Research Community 236
   The Real Value of Surveys: Findings 237
   Next for NSDUH 238
   Challenges for Surveys, Statisticians, and Users of Survey Data 240

Appendix 243
Bibliography 246
Index 256
Figures

1.1 Number of heroin initiates, by year. \hspace{1cm} page 11
1.2 Number of marihuana initiates, by year. \hspace{1cm} 12
1.3 Multistage sample for 1971 survey. \hspace{1cm} 16
1.4 Marihuana use, by age, 1971. \hspace{1cm} 20
2.1 Creation of ADAMHA, 1973. \hspace{1cm} 27
2.2 Lifetime use of marijuana, by age and year. \hspace{1cm} 41
2.3 Lifetime use of selected drugs among persons age 18–25 years, 1972 and 1979. \hspace{1cm} 42
3.1 Multistage sample for 1985 survey. \hspace{1cm} 57
3.2 Multistage sample for 1988 survey. \hspace{1cm} 63
3.3 Cocaine use and perceived risk by age, 1985 and 1988. \hspace{1cm} 68
5.1 Weekly cocaine use by age: 1990 and 1991, before and after the imputation revision. \hspace{1cm} 101
5.2 Page 2 of Drinking Experiences answer sheet, 1991 NHSDA. \hspace{1cm} 104
6.1 Location of drug data sets before and after creation of SAMHSA, 1992. \hspace{1cm} 118
7.1 Number of marijuana initiates, by year. \hspace{1cm} 131
7.2 Any illicit drug use in the past thirty days, by age group and year. \hspace{1cm} 137
9.1 Multistage sample for 1999–2013 surveys. \hspace{1cm} 171
11.1 Estimated number substance use initiates during 2003, by length of recall. \hspace{1cm} 207
11.2 Heroin initiation, use, and disorder (abuse or dependence) in the past twelve months, by year. \hspace{1cm} 208
12.1 Perceived great risk in using marijuana once or twice a week and in using cocaine once a month, by year: ages 12 and older. \hspace{1cm} 222
13.1 NSDUH response rates, by year. \hspace{1cm} 239
# Tables

   - Page 243
2. Drug surveys with national and state samples, using computer-assisted interviewing, 1999–2016  
   - Page 245
Preface

In the fall of 2013, I decided to end my federal career after thirty-seven years as a statistician in the US Department of Health and Human Services. During my final months before retiring in January 2014, it occurred to me that the project I had worked on for the past thirty years, the National Survey on Drug Use and Health (NSDUH), had an interesting history, including amusing stories and valuable lessons for statisticians and government leaders. But the stories were not only about statistics and survey research; they were also about management, how government operates, politics, personalities, and the nation’s drug abuse policies. I felt that this history would be of interest to a broad audience, not just survey researchers. I also knew that these stories from years ago were still relevant because they were often used as examples and justification to guide current decision-making, or simply to explain why the survey was the way it was. I realized that the only way this history would be appreciated and preserved was for me to write the story. My direct involvement in the survey since the early 1980s, including serving as the lead federal official responsible for managing the project from 1988 through 2013, gives me a unique perspective on the survey’s history. I had saved much of the survey’s documentation in my paper and electronic files, and also in my head. With the aid of the collection of published and unpublished reports, internal memos, notes from meetings, and interviews with other people involved in the survey, I was able to construct a complete chronicle of the survey. Most of it is based on my firsthand knowledge of the events described. Keeping in mind the wide range of people who may be interested in learning about how surveys are conducted, drug policy, and government, I have kept complex statistical discussions to a minimum. There are no formulas in the book, just simple explanations of some key statistical concepts.

My initial work on the survey was at the National Institute on Drug Abuse, conducting analysis with the data files from the 1974–79 surveys. I participated in planning for the design of the 1985 survey. I became alternate project officer in 1983, and project officer in 1988. With full
responsibility for managing the survey contract, and little staff support, it was necessary to become familiar with every aspect of the project. As the survey grew in size and importance, and moved to the Substance Abuse and Mental Health Services Administration, I was able to gradually recruit and hire staff with a wide range of survey-related expertise to build a strong, diverse team to manage the project. The survey team has faced many difficult management, design, and analysis problems. The solutions we implemented often worked but sometimes failed. These experiences serve as lessons that can guide statisticians and survey managers in their work, and suggest factors that are associated with survey success. I am pleased to share these experiences with other statisticians and managers of surveys, to help them make sound decisions when they face similar challenges.

Joseph Gfroerer
Frederick, Maryland
August 2018
Acknowledgments

Special thanks go to Joe Gustin, who helped manage the survey contract from 1989 until 2006. He brought his passion for history to work with him, which triggered his idea to draft a report on the early history of the survey, focusing on contracting and contractors. The information he gathered, including documentation and interviews with early NSDUH leaders Herb Abelson, Louise Richards, Joan Rittenhouse, and others, was invaluable in writing the first few chapters of this book.

I thank Tim Johnson for his encouragement and advice to me as I developed the concept of the book and the proposal I submitted to the publisher. He also reviewed my initial drafts of early chapters.

I am hugely indebted to Jonaki Bose for the time she devoted to reviewing drafts of this book. She reviewed every chapter (sometimes second and third drafts), providing valuable technical comments and suggestions that without a doubt improved the book.

Others who helped by reviewing drafts of portions of the book, locating and sending me reference documents, and talking to me about their experiences with the survey include Edgar Adams, Peggy Barker, Ann Blanken, John Carnevale, Judy Droitcour, John Gfroerer, Sarra Hedden, Art Hughes, Joel Kennet, Anna Marsh, Grace Medley, Dicy Painter, Coleen Sanderson, Len Saxe, Peter Tice, Tom Virag, Mark Weber, and Terry Zobeck.

I would also like to thank all of the great staff that worked under me on the survey from 1988 to 2014, when I retired. All were dedicated and productive, and the survey’s successes are due to their work. The project benefited greatly from staff who stayed with the survey for a long time, building their in-depth knowledge of the survey and institutional memory. I list them all here, grouped by the length of time they worked on the NSDUH team, as of 2017. Peggy Barker, Joe Gustin, Art Hughes, Joel Kennet, Dicy Painter, and Doug Wright all devoted fifteen or more years to the NSDUH. Jonaki Bose, Joan Epstein, and Pradip Muhuri contributed more than ten years. Those with fewer than ten years on the team were Marc Brodsky, Jim Colliver, Lisa Colpe, Janet Greenblatt,
xvi  Acknowledgments

Beth Han, Lana Harrison, Sarra Hedden, Mike Jones, Andrea Kopstein, Sharon Larson, Rachel Lipari, Grace Medley, Jeanne Moorman, Ken Petronis, Kathy Piscopo, Maria Rivero, Lucilla Tan, and Pete Tice. In addition, the success of the survey would not have been possible without the great work of RTI's contract managers, task leaders, statisticians, survey methodologists, programmers, field supervisors, field interviewers, and others. There are too many to name, but special thanks go to Tom Virag, who served as RTI's project manager on the main survey contract from 1988 until he retired in 2014. I also appreciated the excellent work of the NORC staff on the NSDUH analysis contract.

My greatest thanks go to my wife Sue, who was supportive of my frequent weeknight and weekend work and the on-call nature of my responsibility for overseeing NSDUH during my HHS career and in the early years of my “retirement.” She reviewed drafts of every chapter, and the book was made more readable because of her editing skills and her non-statistician perspective.
Acronyms

ACASI audio computer-assisted self-interviewing
ADAMHA Alcohol, Drug Abuse, and Mental Health Administration
ASPE Office of the Assistant Secretary for Planning and Evaluation, HHS
CAI computer-assisted interviewing
CAPI computer-assisted personal interviewing
CBHSQ Center for Behavioral Health Statistics and Quality
CDC Centers for Disease Control and Prevention
CIPSEA Confidential Information Protection and Statistical Efficiency Act
CMHS Center for Mental Health Services, SAMHSA
CODAP Client Oriented Data Acquisition Process
CSAP Center for Substance Abuse Prevention, SAMHSA
CSAT Center for Substance Abuse Treatment, SAMHSA
DAWN Drug Abuse Warning Network
DC-MADS DC Metropolitan Area Drug Study
DDID Division of Data and Information Development, NIDA
DEA Drug Enforcement Administration, Department of Justice
DEPR Division of Epidemiology and Prevention Research, NIDA
DESA Division of Epidemiology and Statistical Analysis, NIDA
DMPA Division of Medical and Professional Affairs, NIDA
DPS Division of Population Surveys, OAS
DUF Drug Use Forecasting
FI field interviewer
FTE full time equivalent
GAO General Accounting Office
GWU George Washington University
HEW Department of Health, Education and Welfare
xviii List of Acronyms

HHS Department of Health and Human Services
ISR Institute for Survey Research, Temple University
LA listing area
MHSS Mental Health Surveillance Study
MTF Monitoring the Future study
NCHS National Center for Health Statistics
NDATUS National Drug and Alcoholism Treatment Unit Survey
NFIA National Families in Action
NHIS National Health Interview Survey
NHSDA National Household Survey on Drug Abuse
NIAAA National Institute on Alcohol Abuse and Alcoholism
NIDA National Institute on Drug Abuse
NIH National Institutes of Health
NIJ National Institute of Justice
NIMH National Institute of Mental Health
NOMS National Outcome Measures
NORML National Organization for the Reform of Marijuana Laws
NSDA National Survey on Drug Abuse
NSDUH National Survey on Drug Use and Health
OAS Office of Applied Studies
ODAP Office of Drug Abuse Policy
OMB Office of Management and Budget
ONDCP Office of National Drug Control Policy
PAPI paper-and-pencil interviewing
PART Program Assessment Rating Tool
PDFA Partnership for a Drug Free America
PRIDE Parents’ Resource Institute on Drug Education
PSU primary sampling unit
RAC Response Analysis Corporation
R-DAS Restricted Use Data Analysis System
RFP Request for Proposal
RTI Research Triangle Institute (RTI International)
SAE small area estimation
SAMHSA Substance Abuse and Mental Health Services Administration
SAODAP Special Action Office for Drug Abuse Prevention
SAPT Substance Abuse Prevention and Treatment
SBIRT Screening, Brief Intervention, and Referral to Treatment
SED serious emotional disturbance
List of Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMI</td>
<td>serious mental illness</td>
</tr>
<tr>
<td>SPG</td>
<td>Special Projects Group</td>
</tr>
<tr>
<td>SSDP</td>
<td>State Systems Development Program</td>
</tr>
<tr>
<td>SSR</td>
<td>state sampling region</td>
</tr>
<tr>
<td>TEDS</td>
<td>Treatment Episode Data Set</td>
</tr>
<tr>
<td>YARM</td>
<td>yet another redesign meeting</td>
</tr>
</tbody>
</table>