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Measuring Lawyer Well-Being Systematically: Evidence from the National Health Interview Survey

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Conventional wisdom says that lawyers are uniquely unhappy. Unfortunately, this conventional wisdom rests on a weak empirical foundation. The "unhappy lawyers" narrative relies on non-random survey data collected from volunteer respondents. Instead of depending on such data, researchers should study lawyer mental health by relying on large microdatasets of public health data, such as the National Health Interview Survey (NHIS) administered by the U.S. Centers for Disease Control. The NHIS includes data from 100–200 lawyers per year. By aggregating years, an adequate sample size of lawyers can readily be obtained, with much greater confidence that the lawyers in the sample resemble the true population of U.S. lawyers. When we examine the NHIS data, we find that, contrary to the conventional wisdom, lawyers are not particularly unhappy. Indeed, they suffer rates of mental illness much lower than the general population. Lawyer mental health is not significantly different than the mental health of similarly educated professionals, such as doctors and dentists. Rates of problematic alcohol use among lawyers, however, are high, even when compared to the general population. Moreover, problematic use of alcohol among lawyers has grown increasingly common over the last 15 years. These sometimes surprising and nuanced findings demonstrate the value of relying on more reliable data such as the NHIS.

I. Introduction

Conventional wisdom says that lawyers are uniquely unhappy. Headlines state or ask: "Why Lawyers Are Miserable,"[1] "Why Are Lawyers So Unhappy?,"[2] and "Why Are So Many Lawyers So Unhappy?"[3] The American Bar Association's (ABA) website agrees that "research suggests that

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[1]Stephen Carter, Why Lawyers Are Miserable, Chi. Trib. (Sept. 7, 2015). Available at https://www.chicagotribune.com/news/opinion/commentary/ct-why-lawyers-are-miserable-20150907-story.html.

[2]Jeena Cho, Why Are Lawyers So Unhappy? Above the Law (Aug. 1, 2016). Available at https://abovethelaw.com/2016/08/why-are-lawyers-so-unhappy/.

[3]Tyger Latham, The Depressed Lawyer, Psychol. Today (May 2, 2011). Available at https://www.psychologytoday.com/us/blog/therapy-matters/201105/the-depressed-lawyer.

lawyers experience depression and substance abuse at higher rates than the general population,"[4] and the ABA 2017 National Task Force on Lawyer Well Being finds "an elevated risk in the legal community for mental health and substance use disorders,"[5] citing rates of depression, anxiety, and excessive alcohol use that greatly exceed those in the general population.

Unfortunately, this conventional wisdom rests on a weak empirical foundation. The ABA's 2017 Task Force, for example, relies on an ABA-sponsored survey completed by over 13,000 lawyers.[6] The survey's design is representative of the survey methodology used by most studies. The survey data were not collected from a random sample of lawyers. Instead, they were collected from volunteer respondents. Because the volunteer survey respondents may not be representative of the general population of lawyers, it is inappropriate to rely on these data for estimating the prevalence of mental illness or excessive alcohol use for lawyers or comparing rates for lawyers with other populations who went un-surveyed.[7] If lawyers struggling with mental illness are more likely to fill out the survey, for example, then the survey data will indicate higher rate of mental illness than we would find in a random survey of lawyers.

Several articles have observed that the "unhappy lawyers" narrative has been driven by a reliance on nonrandom survey data.[8] However, they have failed to change the state of the art for studying lawyer mental illness. Surveys of groups of randomly selected lawyers are much more difficult to conduct than volunteer surveys. As a result, they have remained relatively rare and ad hoc, often focusing on unrepresentative groups of lawyers, such as lawyers in a single city or law school in a single year.[9] Moreover, the data

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[4]American Bar Association, Suicide, A.B.A. (Nov. 21, 2017). Available at https://www.americanbar.org/groups/lawyer_assistance/resources/suicide/.

[5]American Bar Association, National Task Force on Lawyer Well Being, The Path to Lawyer Well-Being 7, A.B.A. (2017). Available at https://www.americanbar.org/content/dam/aba/images/abanews/ThePathToLawyerWellBeingReportRevFINAL.pdf [hereinafter ABA Report].

[6]See P.R. Krill et al., The Prevalence of Substance Use and Other Mental Health Concerns Among American Attorneys, 10 J. Addiction Med. 46 (2016).

[7]See footnote 25 explaining why the ABA study likely had a low response rate, exacerbating potential response bias issues.

[8]See, e.g., Kathleen E. Hull, Cross-Examining the Myth of Lawyers' Misery, 52 Vand. L. Rev. 971 (1999); John Monahan & Jeffrey Swanson, Lawyers at the Peak of Their Careers: A 30-Year Longitudinal Study of Job and Life Satisfaction, 16 J. Empirical Legal Stud. 4 (2019). For a different critique of studies of lawyer mental health based partially on non-response bias, see David L. Chambers, Overstating the Satisfaction of Lawyers, 39 L. & Soc. Inquiry 313 (2014).

[9]These studies are worthwhile contributions to the literature to the extent that they help inform understandings of lawyers' mental health among particular subpopulations or geographies. However, one cannot use these studies to draw conclusions about the entire population of lawyers. Hull, for example, seems to claim that all "large-firm lawyers do not appear to be more unhappy in their work than other lawyers," but draws this conclusion from data only on Chicago lawyers. See Hull, supra note 8, at 978, 983. It is possible that Chicago law firms have different cultures than those in other cities, or that firms in Chicago practice different kinds of law than those in other cities, yet Hull does not seem to account for this possibility. Although drawing conclusions about American lawyers as a whole may be troubled given the great diversity in lawyers' work and geographic location, to the extent that commentators continue to characterize the nation's lawyers, they should do so based on representative data.

from surveys sent to random groups of lawyers cannot be compared to data about other occupations unless the populations are surveyed using the same methodology.

Instead of this muddle, mental health and substance abuse among lawyers should be estimated by relying on the "Trusted Gold Standard" of public health data, the Center for Disease Control's National Health Interview Survey (NHIS).[10] Other large public datasets collected by the U.S. government also offer promising sources of data.[11] The NHIS avoids the problems plaguing current data on lawyer mental health and substance abuse for five reasons. First, instead of relying on volunteer respondents, the NHIS surveys a random sample of the U.S. population. Second, high response rates to the NHIS (over 70 percent) mean that nonresponse bias poses less of a problem for the NHIS than for most other survey instruments. Third, because the NHIS is an annual survey, it can be used for up-to-date analyses. Fourth, because the NHIS uses consistent questions, it allows the researcher to identify trends over time. Fifth, because the NHIS surveys the entire (non-institutionalized) U.S. population, it can be used to compare data for lawyers with the general population or other relevant subgroups.

Examining the NHIS data, we find that the incidence of mental illness is much lower for lawyers than for the general population. Even compared with similarly educated professionals, lawyers do not experience significantly higher rates of mental illness. However, compared to their educational peers, lawyers consume alcohol at extraordinary rates. Lawyers exhibit excess alcohol consumption twice as frequently as others with advanced professional degrees. Moreover, alcohol abuse in the legal profession has been getting worse—increasing dramatically over the last 15 years. This trend seems especially prevalent among lawyers under 40.

Our analysis of the NHIS data does not identify the causal effect of becoming a lawyer on mental health or excessive alcohol usage. Nor does our finding that lawyers are not suffering from extraordinary levels of mental illness compared to the general population mean that mental illness is not a problem in the legal profession. Nevertheless, the analysis has potentially important policy implications. Lawyer well-being is an increasingly high priority issue for the American Bar Association, which issued a comprehensive taskforce report with more than 50 recommendations on the subject in 2017. Improving lawyer well-being, however, demands a nuanced understanding of mental health and substance abuse among lawyers. If mental health or substance abuse are particularly bad within the legal profession, then solutions need to target the aspects of the profession that may be causing the most harm. If problems in the legal profession track those in the country at large, then the profession should focus on adapting general recommendations to the unique circumstances of the legal profession rather than considering more fundamental changes. If these challenges face only particular subpopulations of lawyers, then policymakers should tailor their solutions to those groups most affected.

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[10]See Ctr. Disease Control, National Health Interview Survey. Available at https://www.cdc.gov/nchs/data/nhis/brochure2016april.pdf.

[11]Other promising sources of data include the National Survey on Drug Use and Health (NSDUH). Available at https://nsduhweb.rti.org/respweb/homepage.cfm; and the National Health and Nutrition Examination Survey (NHANES). Available at https://wwwn.cdc.gov/nchs/nhanes/Default.aspx.

II. Previous Studies on Lawyer Mental Health and Excessive Alcohol Use and Conclusions Based on These Studies

Many empirical studies examine lawyer well-being.[12] According to the "conventional wisdom," the "unhappiness and discontent of lawyers is well-documented."[13]

Most of this conventional wisdom is derived from studies with the following empirical design. First, the researcher identifies a population of lawyers to study, such as the entire national Bar,[14] members of the Bar of a particular state,[15] city,[16] or other subset of the Bar such as young lawyers[17] or the alumni of a particular law school.[18] Second, the researcher then offers the survey, which includes questions about lawyer well-being, to all the lawyers in the population or to a random subsample of them. In most designs, the survey is made available to the target population more than once, to raise response rates.[19] (Offering the survey to only a random subsample of the target population enables the researcher to devote more energy to raising response rates.)

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[12]For articles surveying empirical research in the subject, see Susan Daicoff, Lawyer, Know Thyself: A Review of Empirical Research on Attorney Attributes Bearing on Professionalism, 46 Am. U. L. Rev. 1337 (1997); Patrick J. Schiltz, (1999) On Being a Happy, Healthy, and Ethical Member of an Unhappy, Unhealthy, and Unethical Profession, 52 Vand. L. Rev. 871, 881 (1999); Hull, supra note 8; Richard Delgado & Jean Stefancic, Can Lawyers Find Happiness? 58 Syracuse L. Rev. 241, 247 (2007); Jerome M. Organ, What Do We Know About the Satisfaction/Dissatisfaction of Lawyers? A Meta-Analysis of Research On Lawyer Satisfaction and Well-Being, 8 U. St. Thomas L.J. 225 (2011).

[13]Martin E.P. Seligman et al., Why Lawyers Are Unhappy, 23 Cardozo L. Rev. 33 (2001).

[14]See, e.g., P.R. Krill et al., supra note 6.

[15]See, e.g., Mary Ellen W. Harrison, Report of the Alabama State Bar Quality of Life Survey, 67 Ala. Law. 369 (2006); G. Andrew H. Benjamin et al., The Prevalence of Depression, Alcohol Abuse, and Cocaine Abuse Among United States Lawyers, 13 Int'l J.L. & Psychiatry 233, 234 (1990) (analyzing Washington Bar).

[16]John P. Heinz et al., Lawyers and Their Discontents: Findings from a Survey of the Chicago Bar, 74 Ind. L.J. 735, 736, 742, 749 (1999).

[17]Ronit Dinovitzer et al., After the JD: First Results of a National Study of Legal Careers (2004). Available at http://www.americanbarfoundation.org/uploads/cms/documents/ajd1_final_report_for_distribution.pdf.

[18]See, e.g., John Monahan & Jeffrey Swanson, Lawyers at Mid-Career: A 20-Year Longitudinal Study of Job and Life Satisfaction, 6 J. Empirical Legal Stud. 451, 452 (2009) (UVA); J. Monahan & J. Swanson, "Lawyers at the Peak of Their Careers: A 30-Year Longitudinal Study of Job and Life Satisfaction," 16 J. Empirical Legal Stud. 4 (2019); Deborah J. Cantrell et al., Walking the Path of the Law: How Law Graduates Navigate Career Choices and Tolerate Jobs that Fail to Meet Expectations, 14 Cardozo J.L. & Gender 267, 268 (2008) (Yale); Kenneth G. Dau-Schmidt et al., "The Pride of Indiana": An Empirical Study of the Law School Experience and Careers of Indiana University School of Law-Bloomington Alumni, 81 Ind. L.J. 1427 (2006).

[19]See, e.g., John Hagan & Fiona Kay, Gender in Practice: A Study of Lawyers' Lives 19 (Oxford UP, 1995) (noting two reminders sent to potential respondents); Monahan & Swanson, supra note 18, at 459 n.40 (describing advance letter sent to survey population, as well as second packet mailed to non-respondents).

The 2016 study sponsored by the ABA Commission on Lawyer Assistance Programs and the Hazelden/Betty Ford Foundation of nearly 13,000 currently practicing lawyers is illustrative.[20] The survey's methodology was described as follows:

15 state bar associations and the 2 largest counties of 1 additional state e-mailed the survey to their members. Those bar associations were instructed to send 3 recruitment e-mails over a 1-month period to all members who were currently licensed attorneys … Participants completed measures assessing alcohol use, drug use, and mental health symptoms.[21]

Approximately 13,000 eligible lawyers responded to the emails and completed the surveys. The study "found that between 21 and 36% [of lawyers] qualify as problem drinkers, and that approximately 28%, 19%, and 23% are struggling with some level of depression, anxiety, and stress, respectively."[22] Because these numbers significantly exceed the prevalence of these conditions in the general population, the study urged the establishment of "tailored, profession-informed services."[23] This study was enormously influential, forming the primary empirical basis for an ABA taskforce report.[24] The ABA/Hazelden study, and many others like it, form the empirical foundation for the claim that law is an "unhappy" and "unhealthy" profession (see Table 1).

While the ABA/Hazelden study provides an invaluable resource for the study of lawyer well-being, it is ill-suited for estimating the true prevalence of excessive alcohol use or mental illness within the legal profession. As described above, response bias plagues this study and others like it. Although more than 15 state and county bar associations emailed the survey to their members, only 13,000 people replied, implying a very low response rate.[25] If the lawyers responding to the survey are a random sample of the population of lawyers as a whole, then the low response rate is not a problem. If, however, lawyers suffering from mental illness or excessive alcohol use are more likely (or less likely) to respond to the

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[20]Krill et al., supra note 6.

[21]Id. at 47.

[22]ABA Report, supra note 5, at 7.

[23]Krill et al., supra note 6, at 51.

[24]For example, the 2017 ABA taskforce report refers to this work as "the study." ABA Report, supra note 5, at 7.

[25]As the authors of the ABA study point out, "[d]ue to the nature of recruitment (eg, e-mail blasts, web postings), and that recruitment mailing lists were controlled by the participating bar associations, it is not possible to calculate a participation rate among the entire population." Krill et al., supra note 6. Given that the authors do not disclose which state bar associations participated in the study, it is impossible to estimate a total number of lawyers who could have participated in the study. However, if the study were conducted in the 15 states with the smallest populations of lawyers, it would have a participation rate of 24.9 percent. See ABA National Lawyer Population Survey 10-Year Trend. Available at https://www.americanbar.org/content/dam/aba/administrative/market_research/national-lawyer-population-by-state-2009-2019.pdf. Krill's final sample was 12,825 (page 47), and the 15 states with the smallest population of lawyers in 2015 had a total population of 51,601. The bar associations in Krill's study surveyed "all members who were currently licensed attorneys" (see Krill p. 47), which seems to be the same as the ABA's count of "resident active attorney" used in this calculation.

survey than the typical member of the Bar, then the survey offers a poor gauge of the prevalence of mental illness or excessive alcohol use within the profession.

This critique is not a new one. Hull, echoed by Organ and, more recently, Monahan and Swanson, contended that many of the studies showing rampant unhappiness among lawyers suffer from response bias.[26] Instead of relying on volunteers to complete surveys offered to large groups of lawyers, both Hull and Organ approved of smaller surveys sent to random subsamples of lawyers.[27] With considerable effort devoted to raising response rates within this subsample, researchers can raise response rates and thus mitigate the response bias problem.[28] Focusing on studies with "high response rates" of approximately 50–80 percent, Hull and Organ found relatively little evidence for rampant mental illness among lawyers.[29] They therefore argued that more emphasis should be placed on better conducted studies that produced more reliable estimates, even if these studies garner fewer respondents.

Hull, Organ, and Monahan and Swanson's acute critiques fell on deaf ears. The conventional wisdom continues to rely on national surveys completed by volunteers, such as the ABA/Hazelden survey. One reason for the continued emphasis on such flawed studies may be that the flawed studies are simpler to conduct. Raising response rates is very expensive and outside the scope of most surveys. As a result, Hull and Organ base their conclusions on an invaluable but ad hoc group of studies with high response rates. Hull, for example, emphasizes studies of lawyers in Minnesota, Chicago, and Toronto, with each of the three studies collecting data from a single year.[30] Similarly, Organ studies trends in lawyer happiness by comparing Michigan lawyers in the 1990s with South Carolina lawyers from 2008–2010.[31] Monahan and Swanson focus on alumni of the University of Virginia Law School, who are potentially unrepresentative of the broader population of lawyers. Instead of relying on ad hoc collections of studies such as these, we understand why the ABA might use a flawed but up-to-date national survey of lawyer mental health and excessive alcohol use, even though the data relied on by Hull, Organ, and Monahan and Swenson featured higher response rates and lower risk of bias.[32]

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[26]See Hull, supra note 8; Delgado & Stefancic, supra note 12, at 247; Organ, supra note 12; Monahan & Swanson (2009), supra note 18, at 453.

[27]Hull, supra note 8, at 973 (praising such studies as having "sounder survey techniques"); Organ, supra note 12, at 236 (citing studies with "random samples and good response rates").

[28]Randomness per se is not essential. With 100 percent response rates, we know that the results are not due to response bias.

[29]Hull, supra note 8, at 974; Organ, supra note 12, at 242.

[30]Hull, supra note 8, at 974.

[31]Organ, supra note 12, at 267.

[32]The Hull, Organ, and Monahan and Swanson studies capture many variables of interest not collected by the NHIS. As a result, there will still be a need for well-done ad hoc studies.

Moreover, even these preferred datasets are flawed for the purpose of comparing lawyers with non-lawyers. By focusing on lawyers exclusively, they cannot compare between lawyers and other populations without comparing data from different surveys using very different methodologies. As a result, it is impossible to know if differences in reported well-being between lawyers and the general population should be attributed to systematic professional differences in well-being or to differences in methodology. Yet is imperative to know if patterns of mental health and excessive alcohol use within the legal profession reflect those in the population at large or something unique to lawyers. Moreover, the studies (with the exception of Monahan and Swanson's focus on a single cohort of lawyers) make capturing trends in lawyer mental health difficult. The literature desperately needs a consistent survey of lawyer mental health and excessive alcohol use that can be relied on at low cost and allows for comparison between lawyers and non-lawyers. The NHIS data meets this need.

Another advantage of the NHIS data is adjustment for non-responses through the use of sampling weights. If a household does not respond to the NHIS survey, similar households (as defined by geographic location, age, race, ethnicity, and gender) that do respond receive higher sampling weights.[33] This reduces the bias associated with differences in response rates that are correlated with the demographic variables and with differences in the outcome measures of interest. The lawyer well-being surveys described above, by contrast, assign equal sampling weights to all respondents, with the exception of the Toronto study cited by Hull.[34]

Overall, then, the NHIS has several advantages over previously examined surveys: it is up to date and consistent, allowing valid comparisons over time; it has a relatively high response rate, and weights responses to account for potential bias; and it uses the same methodology to survey lawyers and non-lawyers, allowing comparisons with other occupations.

III. Data and Summary Statistics

A. NHIS *Data Measuring Mental Health and Excessive Alcohol Use*

To estimate the prevalence of mental illness and excessive alcohol use from a random sample of lawyers and compare the results to similarly randomly sampled groups of non-lawyers, we downloaded data from the National Health Interview Survey (NHIS). The Centers for Disease Control (CDC) describes the NHIS as "the principal source of information on the health of the U.S. population."[35] Trained interviewers from the

[33]For a description of the NHIS sampling weights and adjustments in weighting for non-responses, see IPUMS, User Note—Sampling Weights, available at https://nhis.ipums.org/nhis/userNotes_weights.shtml, and IPUMS, User Note—Sample Design, available at https://nhis.ipums.org/nhis/userNotes_sampledesign.shtml.

[34]Hagan & Kay, supra note 19, at 205.

[35]Ctr. for Disease Control, National Health Interview Survey. Available at https://web.archive.org/web/20171113023306/https://www.cdc.gov/nchs/data/nhis/brochure2010January.pdf.

Table 1: Previous Studies on Attorney Mental Health

Study	*Year Published*	*Citations (Google Scholar)*	*Sampling Method*	*Response Rate*	*Issue*
Milan Markovic & Gabriele Plickert, Attorneys' Career Dissatisfaction in the New Normal, 25 Int'l J. Legal Prof. 147 (2018)	2018	6	Emailed survey to all active Texas State Bar members who have not opted out of receiving surveys.	12.5%	Low response rate. Difficult to compare lawyer outcomes with general population. Analyzes only Texas Bar.
P.R. Krill et al., The Prevalence of Substance Use and Other Mental Health Concerns Among American Attorneys, 10 J. Addiction Med. 46 (2016)	2016	105	15 state bars and 2 largest counties of an additional state emailed 3 recruitment emails over a 1-month period to currently licensed attorney members.	Not possible to calculate across the entire population because mailing lists controlled by participating Bar associations.	Likely had low response rate (see note 25). Difficult to compare lawyer outcomes with general population.
Jerome M. Organ, What Do We Know About the Satisfaction/ Dissatisfaction of Lawyers? A Meta-Analysis of Research on Lawyer Satisfaction and Well-Being, 8 U. St. Thomas L.J. 225 (2011)	2011	69	Averages results of 28 surveys from the 1980s to 2000s.	Varies depending on survey.	Draws trends on overall lawyer well-being from studies disparate in time and place (e.g., Michigan in the 1980s to South Carolina in 2008). Difficult to compare lawyer outcomes with general population.
John Monahan & Jeffrey Swanson, Lawyers at Mid-Career: A 20-Year Longitudinal Study of Job and Life Satisfaction, 6 J. Empirical Legal Stud. 451 (2009)	2009	44	Mail, web, and telephone survey of UVA law class of 1987.	72.2%	Analyzes only UVA graduates. Difficult to compare lawyer outcomes with general population.
Kathleen E. Hull, Cross-Examining the Myth of Lawyers' Misery, 52 Vand. L. Rev. 971 (1999)	1999	67	Survey of several studies described below. *Chicago study*: see Heinz, Hull, & Harter below. *Toronto study*: mailed surveys to randomly selected lawyers in Toronto area from	Cites studies with response rates of 65% (Toronto) to 90% (Minnesota).	Emphasizes studies focusing on lawyers in a particular city (Chicago or Toronto) or graduates from particular law schools (University of Michigan and three Minnesota law schools).

Table 1: *Continued*

Study	*Year Published*	*Citations (Google Scholar)*	*Sampling Method*	*Response Rate*	*Issue*
			membership of Law Society of Upper Canada, with disproportionate stratified sampling. *Minnesota study*: telephone survey of randomly selected Minnesota law school graduates *Michigan study*: mail survey of UMich Law graduates who had responded to a previous alumni survey.		
Patrick J. Schiltz, On Being a Happy, Healthy, and Ethical Member of an Unhappy, Unhealthy, and Unethical Profession, 52 Vand. L. Rev. 871, 881 (1999)	1999	691	Survey of other studies.	Cites studies with response rates of 11%.	Emphasizes studies with low response rates or other methodological flaws (see Hull, *Cross-Examining the Myth of Lawyers' Misery*, at 972). Difficult to compare lawyer outcomes with general population. Results over 20 years old.
John P. Heinz, Kathleen E. Hull, & Ava A. Harter, Lawyers and Their Discontents: Findings from a Survey of the Chicago Bar, 74 Ind. L.J. 735 (1999).	1998	136	Face-to-face interviews with random sample of lawyers with offices in Chicago.	82%	Analyzes only Chicago Bar. Difficult to compare lawyer outcomes with general population. Results over 20 years old.
G. Andrew H. Benjamin et al., The Prevalence of Depression, Alcohol Abuse, and Cocaine Abuse Among United States Lawyers, 13 Int'l J.L. & Psychiatry 233 (1990)	1990	272	Mail survey of random sample of 10% of Washington State lawyers.	68%	Analyzes only Washington Bar. Difficult to compare lawyer outcomes with general population. Results over 20 years old.

U.S. Census Bureau visit a randomly selected group of 35,000 households, collecting data on nearly 90,000 individuals of all ages each year.[36] The NHIS collects data on both mental health and physical health, as well as behaviors correlated with health such as sleep, exercise, and alcohol usage. In addition, the NHIS collects detailed demographic data for each person in the sample. NHIS response rates for the sample years used in this article ranged from 67 percent to 82 percent—at the high end of the surveys described as having "good response rates" by Hull and Organ.[37]

NHIS includes data on occupation, enabling us to identify the lawyers in the sample. Lawyers constitute well under 1 percent of the U.S. population. To build a reasonably sized sample of lawyers from the NHIS therefore requires the use of several years of NHIS data. In what follows, we use NHIS data from 2010–2017. These years include data on approximately 1,000 lawyers. (We define a lawyer as someone whose detailed occupational classification is "lawyers, judges, and related workers" and who has a doctoral/professional doctoral degree.[38]) The total sample of adults between 25 and 64 or over 64 and currently employed contains data on approximately 180,000 people. The fraction of lawyers in the sample therefore roughly corresponds to the prevalence of lawyers in the general adult population of the United States.[39]

In the NHIS, mental health is measured by the Kessler 6 screening scale (K6) of mental illness and distress. Participants are asked a series of six questions about their mental health and their responses to each question are given a value and then

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[36]Nat'l Ctr. for Health Statistics, About NHIS (Jan. 16, 2019). Available at https://www.cdc.gov/nchs/nhis/about_nhis.htm.

[37]See note 27. The cooperation rates for NHIS range from 73.7 percent to 87.3 percent. See Appendix C for calculations and discussion of response rate versus cooperation rates. Since the other studies we discuss in this article report response rates, we will compare studies by response rates.

[38]In robustness checks, we use alternative definitions for a lawyer. Some are less restrictive, including respondents employed in the legal profession who report master's-level educations (perhaps by mistake), adding nearly 100 lawyers to the sample. Others are more restrictive, including only those who report obtaining a professional doctoral degree. This further restriction eliminates approximately 160 potential lawyers from the sample. Neither alternative definition of a lawyer changes the results materially. A disadvantage of our definition of a lawyer is that it excludes lawyers, primarily older, who have an LL.B. but not a J.D.

[39]The sample contains 179,657 adults who are either between the ages of 25 and 64 or are older than 64 but continue to work. Of these, 979 (0.54 percent) are of lawyers. In the general population, there were approximately 1.3 million lawyers. See American Bar Association, Historical Trend in Total National Lawyer Population (2018). Available at https://www.americanbar.org/content/dam/aba/administrative/market_research/Total_National_Lawyer_Population_1878-2018.authcheckdam.pdf. There were 167 million adults between the ages 25 and 64 in 2013. U.S. Census Bureau, Annual Estimates of the Resident Population for Selected Age Groups by Sex, June American Factfinder (2018), available at https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=PEP_2017_PEPAGESEX&prodType=table, and an additional 8 million adults over 65 in the labor force (using an 18 percent labor force participation rate for this subgroup), see Bureau of Labor Statistics, Civilian Labor Force Participation Rate by Age, Sex, Race, and Ethnicity (Sept. 2019), available at https://www.bls.gov/emp/tables/civilian-labor-force-participation-rate.htm, and a subgroup population of approximately 45 million, U.S. Census Bureau, supra. Lawyers therefore comprised about 0.7 percent of the relevant U.S. population. Because we use a relatively restrictive definition for lawyers, we would expect the fraction of lawyers in the sample to be slightly below their prevalence in the general population.

summed.[40] Low scores reflect good mental health, with zero reflecting no indication of mental health impairment, while high scores reflect mental illness, with 24 being the maximum score. The K6 score has been extensively validated as a reliable indicator of mental illness.[41] One widely used measure defines any respondent with a K6 score equal to or above 5 as suffering from some type of mental illness (moderate or severe).[42] A K6 score equal to or above 13 indicates severe mental illness.[43] Although we also report average K6 scores by occupation, the value of K6 scores as general measures of well-being for people below the moderate mental illness threshold has not been validated.

The key question for measuring excess alcohol consumption in the NHIS asks how many days respondents had five or more drinks in the past year.[44] The CDC considers all respondents with 12 or more such days to exhibit "excessive alcohol consumption."[45]

B. Summary Statistics for Demographic and Socioeconomic Status Variables

Table 2 presents summary statistics for the mental health and alcohol abuse variables of interest, as well as key demographic and socioeconomic data. All results are weighted averages to account for different sampling probabilities. Column 1 reports results for all adults with K6 score data between the ages of 25–64 or still employed above age 64. Column 2 presents summary statistics for the subsample of these adults without a bachelor's degree. Column 3 restricts the sample to those with a bachelor's degree, while Column 4 presents results for the subsample with a master's (including MBAs) or Ph.D. Column 5 is limited to those with a professional doctoral degree other than a J.D., such as an M.D., D.D.S., or D.V.M. Column 6 is limited to lawyers, where lawyers are defined as individuals working in the legal profession who have obtained doctoral education.[46]

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[40]For example, one question asks: "How often [respondent] felt hopeless?" Response choices are "none of the time, a little of the time, some of the time, most of the time, all of the time." A response of "none of the time" is given a score of 0, while a response of "all the time" is given a score of 4.

[41]See Ronald C. Kessler et al., Screening for Serious Mental Illness in the General Population, 60 Archives Gen. Psychiatry 184 (2003); Ronald C. Kessler et al., Short Screening Scales to Monitor Population Prevalences and Trends in Non-Specific Psychological Distress, 32 Psychol. Med. 959 (2002).

[42]Judith J. Prochaska et al., Validity Study of the K6 Scale as a Measure of Moderate Mental Distress Based on Mental Health Treatment Need and Utilization, 21 Int'l J. of Methods in Psychiatric Res. 88 (2012).

[43]See Ronald C. Kessler et al., Screening for Serious Mental Illness, supra note 41.

[44]Description of ALC5UPYR variable, IPUMS. Available at https://nhis.ipums.org/nhis-action/variables/ALC5UPYR#description_section.

[45]Ctr. for Disease Control, Percentage of Adults Aged 18 Years and Older with Excessive Alcohol Consumption: United States, 1997–2001. Available at https://www.cdc.gov/nchs/data/nhis/measure09.pdf.

[46]We identify the 164 observations in the sample who work in the legal profession but report Ph.D. levels of education as lawyers, assuming that they either have J.S.D. degrees or have otherwise been mischaracterized. As noted above, the inclusion or exclusion of this group has no material effect on the results.

Table 2: NHIS Summary Statistics (Aggregate 2010–2017)

	(1)	(2)	(3)	(4)	(5)	(6)
	Entire Sample	*No B.A.*	*B.A.*	*M.A. or Ph.D.*	*M.D., Vet, Dentist*	*Lawyer*
Serious MI	0.037 (0.000)	0.049 (0.001)	0.013 (0.001)	0.011 (0.001)	0.009 (0.001)	0.007 (0.002)
MI	0.128 (0.001)	0.158 (0.002)	0.077 (0.002)	0.066 (0.002)	0.051 (0.004)	0.064 (0.006)
No distress	0.459 (0.004)	0.452 (0.003)	0.474 (0.007)	0.469 (0.006)	0.517 (0.012)	0.412 (0.016)
K6 score	2.597 (0.019)	2.945 (0.022)	1.980 (0.036)	1.886 (0.032)	1.626 (0.071)	1.983 (0.073)
Excess drinking	0.101 (0.001)	0.107 (0.001)	0.100 (0.002)	0.067 (0.002)	0.054 (0.005)	0.111 (0.015)
Age	45.366 (0.051)	45.591 (0.070)	44.094 (0.095)	46.217 (0.149)	47.552 (0.299)	47.435 (0.496)
White	0.798 (0.003)	0.795 (0.003)	0.809 (0.003)	0.787 (0.005)	0.776 (0.009)	0.901 (0.010)
Female	0.509 (0.001)	0.504 (0.002)	0.517 (0.003)	0.534 (0.002)	0.434 (0.014)	0.397 (0.019)
Married	0.606 (0.002)	0.570 (0.002)	0.655 (0.003)	0.708 (0.007)	0.749 (0.007)	0.725 (0.013)
Income > $100 k	0.267 (0.008)	0.157 (0.005)	0.423 (0.008)	0.541 (0.011)	0.665 (0.018)	0.753 (0.008)
N (observations)	179,236	120,266	37,047	19,121	1,824	978
N (population)	167,181,303	109,290,041	36,492,169	18,584,692	1,831,422	982,980

NOTES: Means followed by standard deviations in parentheses. Definitions for all terms in Appendix A.

Socioeconomic and demographic variables mostly appear as expected. Lawyers (Column 6 of Table 2) and medical professionals (Column 5) are slightly older and more likely to be white, male,[47] and married than the population at large. Lawyers also earn much higher incomes than the typical NHIS respondent. Three-quarters of lawyers in the sample live in households with total income greater than $100,000. These differences are statistically significant (see Tables B1 and B2 in the Appendix).

C. Summary Statistics for Mental Health and Excessive Alcohol Use Indicators

Mental Health and Illness

Comparing mean K6 scores for different populations is not the best way to compare mental health across groups. A K6 score of 0 (reported by over 45 percent of the population), for example, implies that the respondent reported feeling sad or restless "none of the time" over the past 30 days. Respondents who report some sadness or restlessness may simply be more accurate respondents rather than respondents suffering from greater mental health distress. As a result, we focus on the number of K6 scores of 13 or above, a reliable indicator of serious mental illness.[48] As noted above, the K6 scores were developed to identify mental illness, rather than as a general indicator of wellness.[49] On this measure, lawyers fare significantly better than respondents with no college degree or only a B.A. Only 0.7 percent of the lawyers in the sample suffer from serious mental illness, compared to 4.9 percent of those without a college degree and 1.3 percent of those with only a B.A. (see Figure 1). Further, lawyers fare no worse than those with a master's, Ph.D., or medical degree—differences in rates of serious mental illness between lawyers and these populations are not significant at a 5 percent level (see Table B4). The picture is similar when examining incidence of moderate or severe mental illness: lawyers, with an incidence of 6 percent, fare significantly better than respondents with no college degree (16 percent) or only a B.A. (8 percent) and not significantly different than respondents with a master's, Ph.D., or medical degree (see Figure 2 and Table B5).

Mental illness rates for lawyers derived from the NHIS fall well short of the rates calculated in the ABA/Hazelden survey and reported in the ABA's taskforce report. In the NHIS data reported here, approximately 6 percent of lawyers report K6 scores that indicate moderate or serious mental illness of any kind. (See Table 2, row labeled "MI", Column 6.) The ABA taskforce report, by contrast, reports that "approximately 28%, 19%, and 23% [of lawyers] are struggling with some level of depression, anxiety, and

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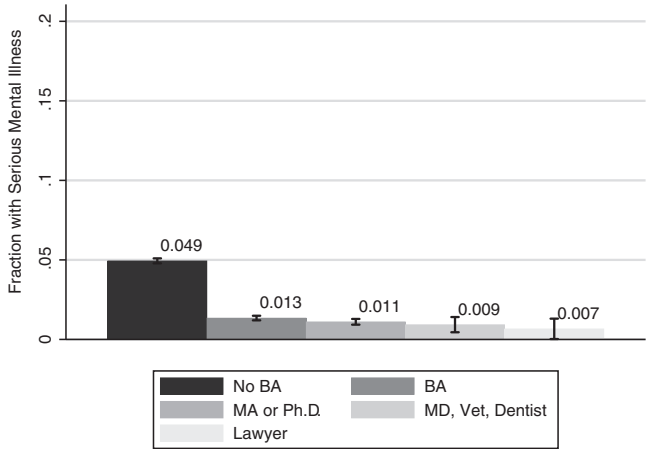
[47]The percentage of female lawyers in the sample, 39 percent, exceeds the share of female lawyers reported by the American Bar Association, 35 percent. See American Bar Association, National Lawyer Population Survey (2017). Available at https://www.americanbar.org/content/dam/aba/administrative/market_research/national-lawyer-population-10-year-demographics-revised.authcheckdam.pdf.

[48]See Ronald C. Kessler et al., Screening for Serious Mental Illness, supra note 41.

[49]Id.

Figure 1: Fraction of sample with serious mental illness.



NOTE: With 95 percent confidence intervals.

stress, respectively."[50] This demonstrates how relying on a survey taking randomly sampled data with relatively high response rates (the NHIS) yields very different results than a survey relying on volunteer respondents and thus particularly vulnerable to response bias.

Lawyers' average K6 score (1.98) is significantly lower than that of the overall population (2.60) and those without B.A.s (2.95), but significantly higher than the K6 score of medical professionals. It is not significantly different than the K6 scores of those with bachelor's, master's, or Ph.D. degrees (see Table B3 and Figure 3a). Figures 3b and 3c show the distributions of K6 scores and alcohol consumption responses for lawyers and medical professionals.

In sum, the NHIS data do not indicate a uniquely high incidence of mental illness among lawyers. Instead, they indicate that lawyers have better mental health than respondents without college degrees or with only a B.A. and comparable mental health to those with postsecondary degrees.

Excessive Alcohol Use

As with mental health, problematic drinking rates (defined by the CDC as having five or more drinks on 12 or more days in a year[51]) are correlated with education (Table 2 and Figure 4). Ten percent of respondents in the entire sample (Column 1) report problematic drinking, compared to 6.7 percent of respondents with master's or Ph.Ds and 5.4 percent of respondents with a medical degree.

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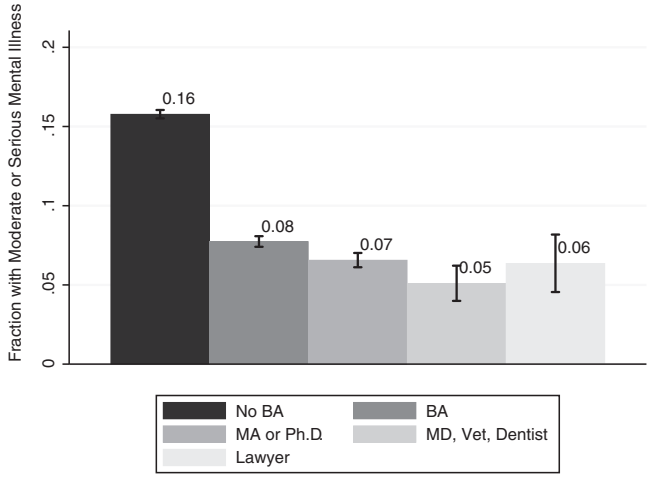
[50]ABA Report, supra note 5, at 7.

[51]See note 45.

Figure 2: Fraction of sample with moderate or serious mental illness.



NOTE: With 95 percent confidence intervals.

Lawyers provide an exception to this rule. Although highly educated, 11 percent of lawyers report excess alcohol consumption. (Note that this estimate is subject to high standard errors, with a 95 percent confidence interval between 8 percent and 14 percent.) Although in line with the overall NHIS population, this figure is more than twice as much as the excess alcohol fraction reported by other similarly educated professionals such as doctors and dentists. This difference is statistically significant at the 99 percent level (see Table B6).

Although lawyers consume excess amounts of alcohol at much greater rates than similarly educated non-lawyers, the rate reported in the NHIS (11 percent) falls far short of the rates derived from the ABA/Hazelden survey, which "found that between 21 and 36% [of lawyers] qualify as problem drinkers."[52] That said, this may reflect the different instruments used to observe problematic drinking. The ABA/Hazelden survey used the Alcohol Use Disorders Identification Test, "a 10-item self-report instrument developed by the World Health Organization to screen for hazardous use, harmful use, and the potential for alcohol dependence."[53]

In sum, lawyers drink problematic amounts of alcohol at rates well in excess of their similarly educated peers.

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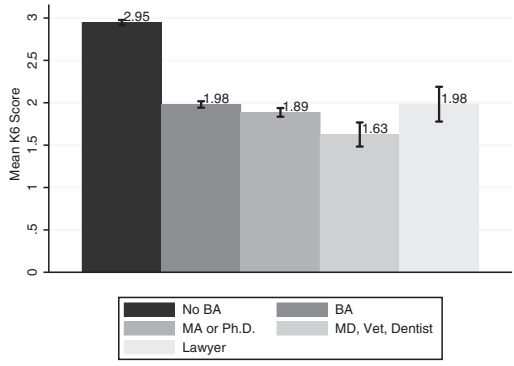
[52]ABA Report, supra note 5, at 7.

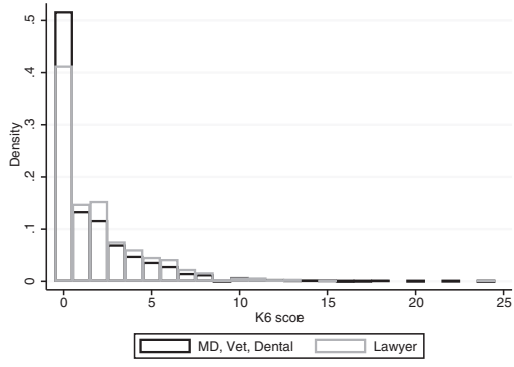
[53]Krill, supra note 6, at 47.

Figure 3a: Average K6 scores by education or profession.



NOTE: With 95 percent confidence intervals.

Figure 3b: Distribution of K6 scores.



IV. FACTORS AND TRENDS IN LAWYER WELL-BEING

This section examines factors correlated with mental illness and excessive alcohol use rates among lawyers, as well as trends in these variables over time. As with the previous section, the data demonstrate correlation, not causation.[54] Moreover, the relatively small sample size of lawyers (approximately 1,000) makes it difficult to find statistically

[54]Because this section reports associations rather than causal effects, we do not combine the results into a single regression. Regression formats too easily lend themselves to causal readings and interpretations.

Figure 3c: Distribution of alcohol consumption responses.

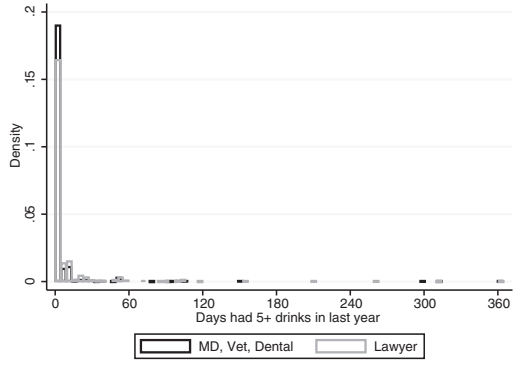
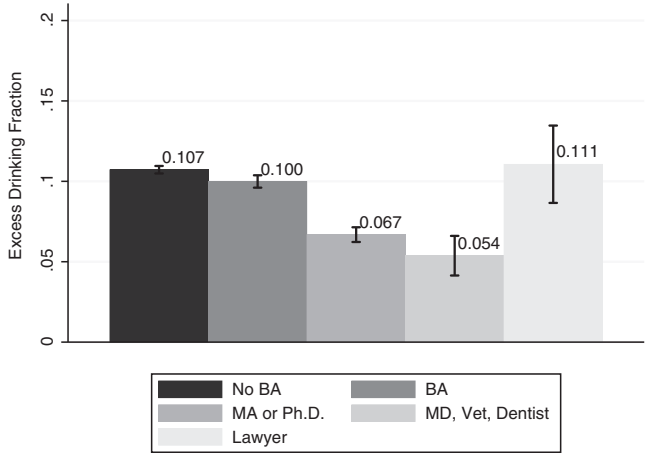


Figure 4: Fraction of population with excessive drinking.



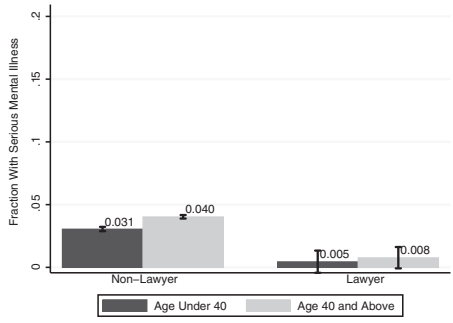
NOTE: With 95 percent confidence intervals.

significant differences between groups of lawyers. Nevertheless, this section reexamines some of the most important correlates of mental illness and excessive alcohol use among lawyers identified in the prior literature.

A. Correlates of Lawyer Mental Illness and Excessive Alcohol Use

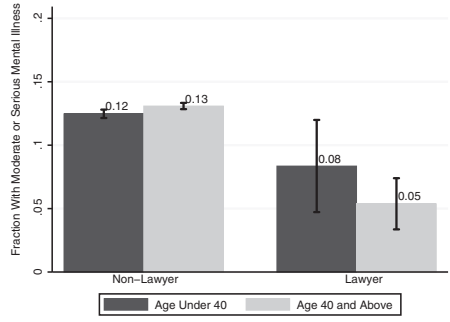
Earlier empirical studies, including the study relied on by the ABA taskforce, "found that younger lawyers in the first ten years of practice and those working in private firms

Figure 5a: Fraction with serious mental illness by age.



NOTE: With 95 percent confidence intervals.

Figure 5b: Fraction with moderate or serious mental illness by age.

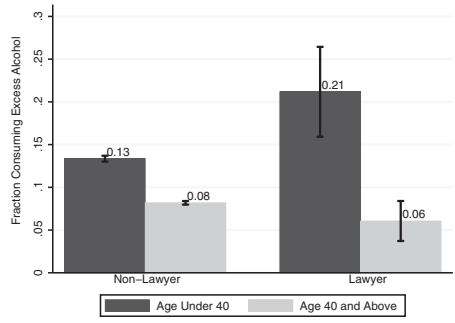


NOTE: With 95 percent confidence intervals.

experience the highest rates of problem drinking and depression."[55] Figures 5a–5d examine mental health and excessive alcohol use for young lawyers (under 40) compared with older lawyers. The difference in rates of mental illness between young and older lawyers is not significant (Figures 5a and 5b and Table B8a). However, more than three times as many young lawyers drink alcohol at problematic rates compared to their older peers, a difference significant at the 99 percent level (Figure 5c and Table B8b). Young lawyers also have an average K6 score 0.9 higher than their older peers, significant at the 99 percent level (Figure 5d and Table B8b). Thus, the NHIS data provide no basis for believing

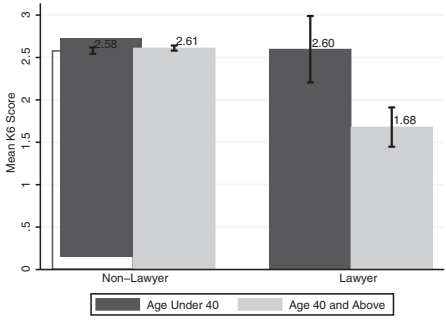
[55]ABA Report, supra note 5, at 7.

Figure 5c: Fraction consuming excess alcohol by age.



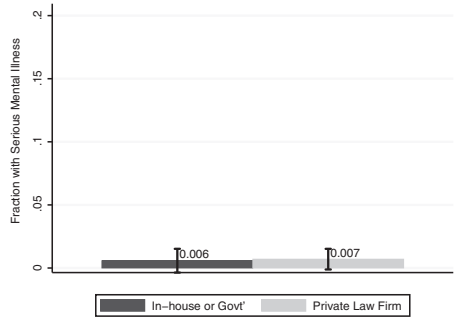
NOTE: With 95 percent confidence intervals.

Figure 5d: Average K6 score by age.



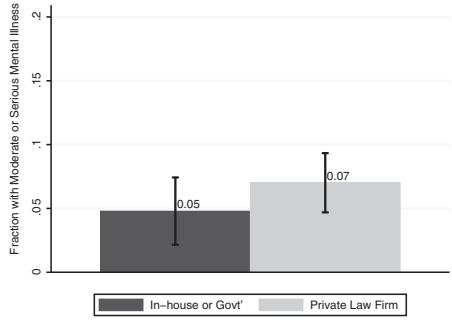
NOTE: With 95 percent confidence intervals.

Figure 6a: Fraction of lawyers with serious mental illness by legal employer.



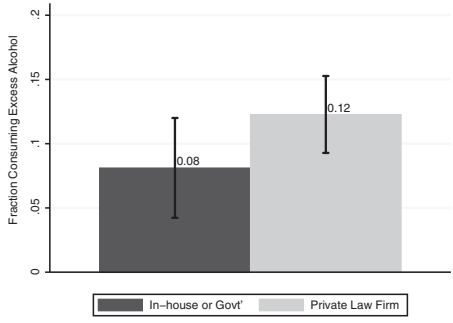
NOTE: With 95 percent confidence intervals.

Figure 6b: Fraction of lawyers with moderate or serious mental illness by legal employer.



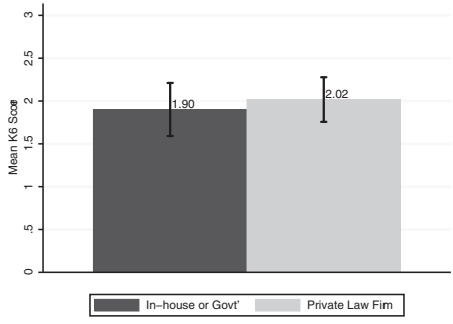
Note: With 95 percent confidence intervals.

Figure 6c: Fraction of lawyers consuming excess alcohol by legal employer.



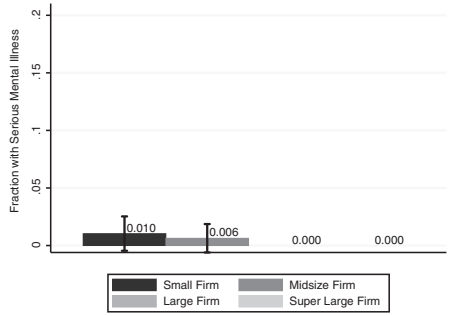
Note: With 95 percent confidence intervals.

Figure 6d: Average K6 score of lawyers by legal employer.



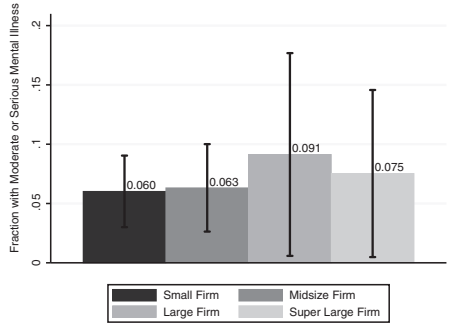
Note: With 95 percent confidence intervals.

Figure 7a: Lawyers with serious mental illness by firm size.



NOTE: With 95 percent confidence intervals.

Figure 7b: Lawyers with moderate or serious mental illness by firm size.



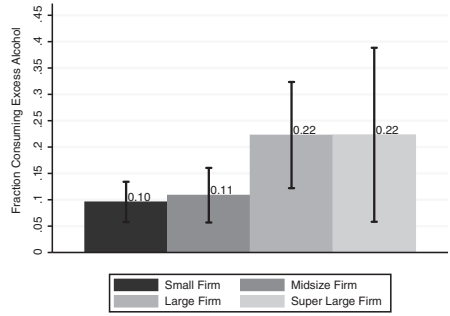
NOTE: With 95 percent confidence intervals.

that younger lawyers have higher rates of depression or other mental illness but strongly support the conclusion that they experience the highest rates of problem drinking.[56]

This difference in problematic drinking probably cannot be explained by age alone. Differences in excess alcohol consumption by age among non-lawyers, while significant, are about a third as large as between young and old lawyers (Figure 5c and Table 8b).

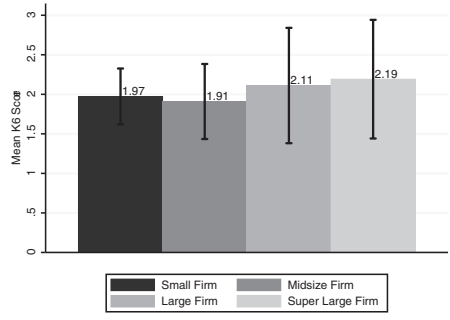
[56]Although young workers in professions comparable to law, such as young doctors and dentists, also report higher rates of excessive alcohol use than their older peers, the relationship between age and excessive alcohol use is not as strong as it is in law. Moreover, young doctors and dentists have a lower incidence of serious mental illness compared to those over 40, although the absolute incidences are still much lower than the non-medical-professional population. Young doctors' and dentists' incidence of moderate or serious mental illness is not statistically different than that of older ones. See Tables B8c and B8d.

Figure 7c: Fraction of lawyers consuming excess alcohol by firm size.



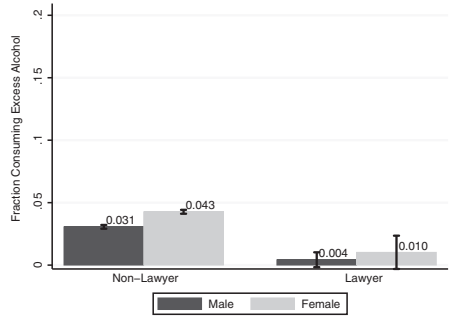
NOTE: With 95 percent confidence intervals.

Figure 7d: Average K6 score by firm size.



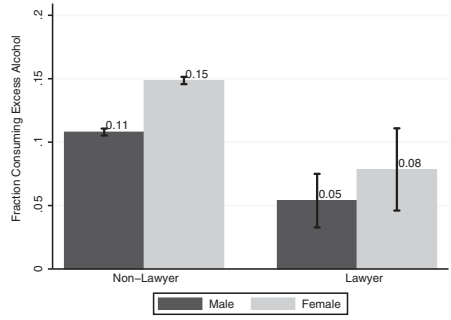
NOTE: With 95 percent confidence intervals.

Figure 8a: Population with serious mental illness by gender.



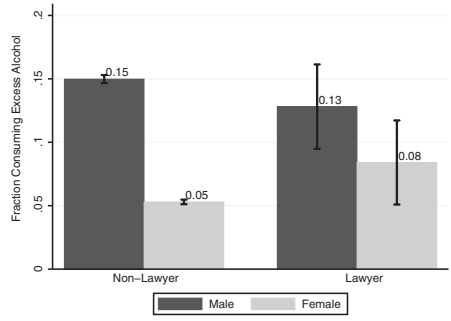
NOTE: With 95 percent confidence intervals.

Figure 8b: Population with moderate or serious mental illness by gender.



NOTE: With 95 percent confidence intervals.

Figure 8c: Population consuming excess alcohol by gender.

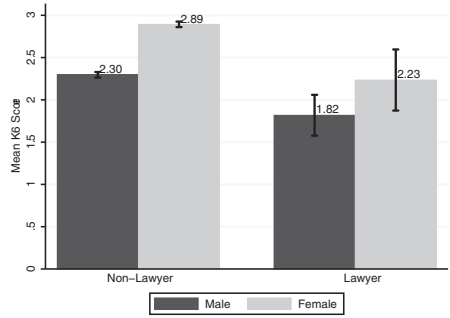


NOTE: With 95 percent confidence intervals.

Figures 6a–6d examine mental health and excessive alcohol use for lawyers working at law firms compared with lawyers working for the government or as in-house lawyers. Differences in rates of mental illness between such lawyers are not significant; neither are average K6 scores (see Figures 6a, 6b, 6d, and Table B10). However, lawyers at private law firms report problematic drinking rates 50 percent greater than their in-house counterparts or those who work for the government (12.3 percent compared to 8.1 percent). This difference is significant at the 5 percent level. The NHIS therefore provides mixed support for the hypothesis that lawyers "working in private firms experience the highest rates of problem drinking and depression."[57] Problem drinking rates are high in private

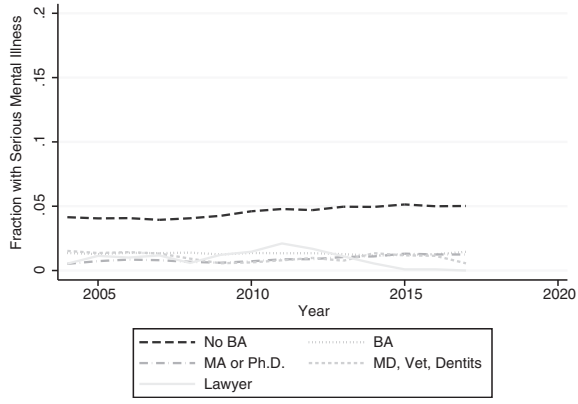
[57]ABA Report, supra note 5, at 7.

Figure 8d: Average K6 score by gender.



NOTE: With 95 percent confidence intervals.

Figure 9a: Fraction with serious mental illness.



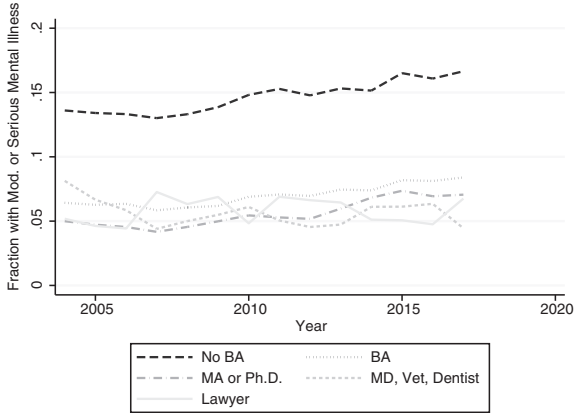
NOTE: Three-year moving averages, 2004–2017.

firms, but rates of mental illness for lawyers in such firms are not statistically different than rates for other lawyers.

Many commentators have argued that lawyers in large law firms are particularly prone to mental illness and excessive alcohol use.[58] Figures 7a–7d probe this hypothesis, showing mental illness and excess alcohol consumption rates by firm size. (Small firms

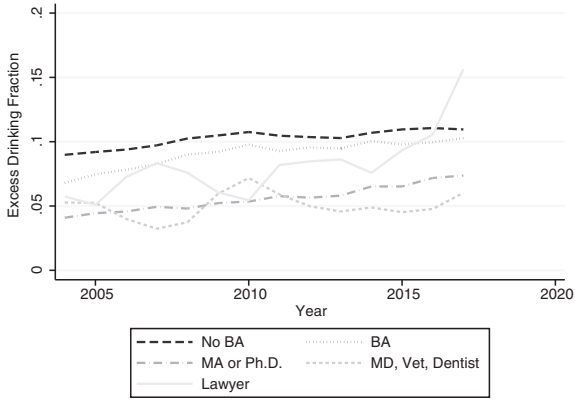
[58]See, e.g., Joanna Litt. (2018) "Big Law Killed My Husband; An Open Letter from a Sidley Partner's Widow," November 12 The American Lawyer. Available at https://www.law.com/americanlawyer/2018/11/12/big-law-killed-my-husband-an-open-letter-from-a-sidley-partners-widow/; Jeanne Sahadi (2019) "He Made his Way to the Top of 'Big Law', Then His Drinking Almost Killed Him," January 24 CNN Business. Available at https://www.law.com/americanlawyer/2018/11/12/big-law-killed-my-husband-an-open-letter-from-a-sidley-partners-widow/.

Figure 9b: Fraction with moderate or serious mental illness.



NOTE: Three-year moving averages, 2004–2017.

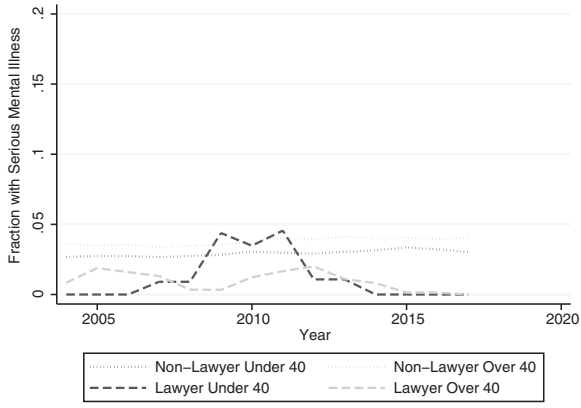
Figure 9c: Fraction of population with excessive drinking.



NOTE: Three-year moving averages, 2004–2017.

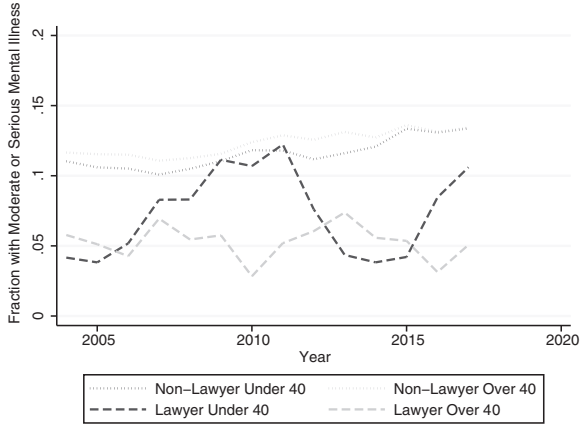
have less than 10 employees, mid-size firms have between 10 and 99 employees, large firms have 100 to 499 employees, and super-large firms have 500 or more employees.) The results provide little support for the conventional wisdom. Large firm and super-large firm lawyers have *lower* incidences of serious mental illness and higher rates of moderate mental illness compared to their counterparts at smaller firms. (Tables B11 and B12). The difference in serious mental illness is significant at the 0.1 percent level, but differences in rates of moderate or serious mental illness are not, as sample sizes become quite small.

Figure 10a: Fraction with serious mental illness by age.



NOTE: Three-year moving averages, 2004–2017.

Figure 10b: Fraction with moderate or serious mental illness by age.

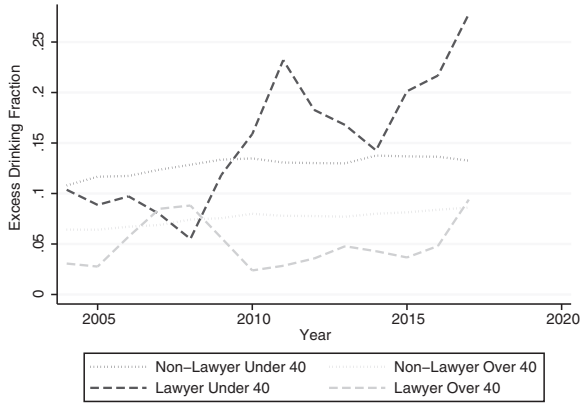


NOTE: Three-year moving averages, 2004–2017.

Average K6 scores for lawyers at larger firms are higher than those for lawyers at smaller firms, but again the difference is not statistically significant (Tables B11 and B12).

Rates of problem drinking are higher for lawyers at large firms and super-large firms (Tables B11 and B12). The differences are not statistically significant at the 5 percent level (though the difference for lawyers at large firms is significant at the 10 percent level). In total, the NHIS data suggest that rates of mental illness at large firms are

Figure 10c: Fraction of population with excessive drinking by age.



NOTE: Three-year moving averages, 2004–2017.

comparable with those at other legal workplaces, but problem drinking is more prevalent. That said, at this level of disaggregation, results should be taken with a grain of salt. For example, Figure 7a shows that *no* lawyers at large or super-large firms reported serious mental illness. It is exceedingly unlikely that these firms actually have no lawyers with such illnesses.

In the general population, women report higher rates of anxiety and depression than men.[59] Men abuse alcohol at higher rates.[60] Figures 8a–8d and Table B13 demonstrate that these findings apply unevenly to the lawyers in the NHIS. Although female lawyers report K6 scores approximately 0.4 points higher than those of their male counterparts (Figure 8d), they do not report significantly different incidences of serious or moderate mental illness (Figures 8a and 8b and Table B13). However, male lawyers do report problematic drinking at 1.5 times the rate of their female counterparts, a difference significant at the 5 percent level (Figure 8c and Table B13).

It is unlikely that lawyers' relatively modest mental health problems and high drinking problems result from the profession having more males. Although differences between male lawyers' and male non-lawyers' excess alcohol consumption are not statistically significant (Figure 8c and Table B14a), male lawyers consume excess alcohol much more frequently than male non-lawyers with similar educational levels (Table B15). Female lawyers report greater rates of excess alcohol consumption than do female non-

[59]See World Health Organization, Gender and Women's Mental Health. Available at https://www.who.int/mental_health/prevention/genderwomen/en/.

[60]See Center for Disease Control, Excessive Alcohol Use and Risks to Men's Health (Mar. 7, 2016). Available at https://www.cdc.gov/alcohol/fact-sheets/mens-health.htm.

lawyers, with the difference particularly large (and statistically significant) when comparing female lawyers to other females with comparable educational backgrounds. (Figure 8c and Tables B14a and B16). Female lawyers' incidence of moderate or serious mental illness is about half that of female non-lawyers, with the difference significant at the 99 percent level. The same pattern holds true for male lawyers and non-lawyers (Figure 8b and Table B14b). Both male and female lawyers report lower average K6 scores than their non-lawyer counterparts, significant at the 99 percent level (Figure 7d and Table B14a). The evidence therefore suggests that our conclusions about mental illness and excess alcohol consumption in the legal profession are not an artifact of the disproportionate number of males in the profession.

B. Time Trends in Lawyer Well-Being

Relying on massive surveys of volunteer respondents with low response rates renders any longitudinal analysis of lawyer well-being tenuous. Observed time trends may be attributed to genuine trends or to differences in survey methodology or response rates. It is therefore not surprising that longitudinal analysis of lawyer well-being is exceedingly rare. Relying on the NHIS data to study lawyer well-being, by contrast, allows us to study trends over time because the NHIS uses a common survey methodology over many years.

Figures 9a and 9b present moving averages of serious mental illness and moderate or serious mental illness among lawyers from 2004–2017.[61] Figure 9a suggests that incidence of serious mental illness among lawyers declined slightly from 2004 to 2017. Negative and statistically significant time trend dummies in regressions of serious mental illness over time (Table B17) support this conclusion with an average decrease by 0.1 percent. Time trends in the incidence of moderate or serious mental illness were not significant (Table B17).

Figure 9c presents the fraction of each subpopulation reporting problematic drinking behavior (five or more drinks in a session on more than 12 days a year). Problematic drinking rates among lawyers increased considerably (and with a statistically significant time trend; see Table B17) from 2004 to 2017. By contrast, problematic drinking rates for other educational and professional categories show milder increases. Doctors, dentists, and veterinarians, for example, report a relatively steady problematic drinking rate throughout the period. The dramatic increase in problematic drinking rates for lawyers during this period thus represents a potentially troubling development that is particular to law, although standard errors remain high. Identifying this previously unstudied trend is an excellent example of the possibilities unlocked by using annually repeated surveys such as the NHIS to study lawyer well-being in place of more ad hoc studies, even if those studies have larger sample sizes.

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[61]Before 2004, the NHIS used a rather coarse occupational variable that makes identifying lawyers very difficult. Figures 10a through 10c show moving averages of lawyer mental illness and excessive drinking by age.

V. Conclusion

To study lawyer well-being, we should rely on the comprehensive annual surveys produced by the U.S. government rather than the ad hoc surveys currently used to study the problem. Using data from the NHIS, one such government study, to study lawyer well-being, we find that lawyer mental health (measured by moderate and serious mental illness rates) is much better than mental health for the general population. Lawyer mental health resembles mental health in professions with similarly educated workers. Lawyer mental health has worsened slightly over the last 15 years, at a rate that is comparable to the general decline in mental health throughout the population.

These findings cast doubt on widely held assumptions (and assertions) that mental health among lawyers is uniquely poor. Lawyer mental health is about where we would expect it to be. Mental illness among lawyers poses a significant problem (as it does in all occupations), but proposed reforms should not take as their starting point that the problem is the profession itself. Some subgroups of the profession, however, suffer poor mental health at higher rates. In particular, women and young lawyers report more struggles with mental illness than their peers.

Lawyers drink excessively at higher rates than the general population. In particular, lawyers drink excessively at much higher rates than other groups of highly educated professionals. Moreover, problematic drinking among lawyers has grown considerably worse over the last decade, with today's rates of problematic drinking more than 50 percent above the rates reported in the mid-2000s. Problematic drinking rates among lawyers are highest among young lawyers and those working at large law firms.

Alcohol abuse appears to be a particular problem for lawyers, and one that has recently grown much worse. Reformers should evaluate the role of drinking within legal culture and consider ideas for reducing alcohol's role.

APPENDIX A: Variable Definitions

Variable	*Definition*
Age	Age of observation. AGE in NHIS IPUMS. See https://nhis.ipums.org/nhis-action/variables/AGE#codes_section.
BA	Dichotomous variable. BA == 1 if observation's highest level of schooling completed is a bachelor's degree, such as a B.A., B.S., or B.B.A. EDUC == 500 in the NHIS IPUMS data. See https://nhis.ipums.org/nhis-action/variables/EDUC#description_section.
Constant	The constant term in the regression.
Excess Drinking	Dichotomous variable indicating excess alcohol consumption as defined by the CDC. 1 if there were 12 or more days in the last year that observation had 5 or more drinks, 0 otherwise. ALC5UPYR in NHIS IPUMS. See https://nhis.ipums.org/nhis-action/variables/ALC5UPYR#description_section.

Variable	*Definition*
Female	Dichotomous variable indicating whether observation's sex was female. 1 if female, 0 otherwise. SEX == 2 from NHIS IPUMS. See https://nhis.ipums.org/nhis-action/variables/SEX#codes_section.
Income > $100 k	Dichotomous variable indicating whether observation's total family income was greater than $100,000. 1 if so, 0 if not. INCFAM97ON2==32 from NHIS IPUMS. https://nhis.ipums.org/nhis-action/variables/INCFAM97ON2#codes_section.
In-house or Government	For lawyers only: dichotomous variable indicating whether the lawyer works for an entity other than a private law firm. INDSTRN204! = 12 from NHIS IPUMS. See https://nhis.ipums.org/nhis-action/variables/INDSTRN204#codes_section.
K6 Score	Kessler 6 score of mental health. The sum of respondent's AEFFORT, AHOPELESS, ANERVOUS, ARESTLESS, AWORTHLESS, and ASAD scores. Anyone with missing values for any of these variables was excluded from the data.
Large Firm	For lawyers working at a private law firm only: employer has 100 to 499 employees.
Lawyer	Dichotomous variable. Lawyer == 1 if observation's highest level of schooling is a professional or doctorate degree and observation works in the legal services or legal support services occupation. (OCCUPN104==18) & EDUC > = 602 & EDUC <700. See https://nhis.ipums.org/nhis-action/variables/OCCUPN104#codes_section.
MA or Ph.D.	Dichotomous variable. MA == 1 if observation's highest level of schooling completed is a master's or doctorate degree, such as an M.A., M.S., M.Eng., M. Ed., M.B.A., Ph.D., or Ed.D., and is 0 otherwise. EDUC = 601 or EDUC = 603 in the NHIS IPUMS data.
Married	Dichotomous variable indicating whether observation was married. 1 if married, 0 otherwise. MARSTAT == 10 from NHIS IPUMS. See https://nhis.ipums.org/nhis-action/variables/MARSTAT#codes_section.
MD, Vet, Dental	Dichotomous variable. MD, Vet, Dental == 1 if observation's highest level of schooling completed is a professional degree, such as an M.D., D.D.S., or D.V.M., but is not a lawyer. Is 0 otherwise. EDUC = 602 & lawyer = 0.
Medium/Midsize Firm	For lawyers working at a private law firm only: employer has 10 to 99 employees.
MI	Dichotomous variable indicating whether observation has moderate or serious mental illness. 1 if K6 > = 7, 0 otherwise.
N (observations)	The number of NHIS observations for the subpopulation examined.
N (population)	The number of people that the NHIS observations represent, using the NHIS sampling weights.
No BA	Dichotomous variable. No BA == 1 if observation does not fit into the BA, MA, MD or Vet, or Lawyer categories and is 0 otherwise.
No Distress	Dichotomous variable indicating whether observation has no mental health distress. 1 if K6 == 0, 0 otherwise.
Private Law Firm	For lawyers only: dichotomous variable indicating whether the lawyer works for a private law firm. INDSTRN204==12 from NHIS IPUMS. See https://nhis.ipums.org/nhis-action/variables/INDSTRN204#codes_section.
Serious MI	Dichotomous variable indicating whether observation has serious mental illness. 1 if K6 > = 13, 0 otherwise.
Small Firm	For lawyers working at a private law firm only: employer has fewer than 10 employees.

Variable	*Definition*
Super-Large Firm	For lawyers working at a private law firm only: employer has 500 or more employees.
White	Dichotomous variable indicating whether observation's race was white. 1 if white, 0 otherwise. RACEA == 100 from NHIS IPUMS. See https://nhis.ipums.org/nhis-action/variables/RACEA#codes_section.

APPENDIX B: Statistical Tests

Table B1: Lawyer Demographics Compared to Non-Lawyers

	(1)	*(2)*	*(3)*	*(4)*	*(5)*
	Age	*White*	*Female*	*Married*	*Income > $100 k*
Lawyer	2.081***	0.104***	−0.112***	0.119***	0.489***
	(0.476)	(0.011)	(0.018)	(0.012)	(0.012)
Constant	45.354***	0.797***	0.509***	0.606***	0.264***
	(0.049)	(0.003)	(0.001)	(0.002)	(0.008)
N (observations)	179,236	179,236	179,236	179,236	179,236
N (population)	167,181,303	167,181,303	167,181,303	167,181,303	167,181,303

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Table B2: Medical Professional Demographics Compared to Non-Medical Professionals

	(1)	*(2)*	*(3)*	*(4)*	*(5)*
	Age	*White*	*Female*	*Married*	*Income > $100 k*
MD, vet, dental	2.210***	−0.022*	−0.075***	0.144***	0.403***
	(0.290)	(0.009)	(0.013)	(0.008)	(0.016)
Constant	45.342***	0.798***	0.509***	0.605***	0.262***
	(0.049)	(0.003)	(0.001)	(0.002)	(0.007)
N (observations)	179,236	179,236	179,236	179,236	179,236
N (population)	167,181,303	167,181,303	167,181,303	167,181,303	167,181,303

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Table B3: Average K6 Score Compared to Lawyers

	(1)	*(2)*	*(3)*	*(4)*	*(5)*
	Entire Population	*No B.A.*	*B.A.*	*M.A. or Ph.D.*	*M.D., Vet, Dentist*
Lawyer	−0.617***	−0.962***	0.004	0.097	0.358***
	(0.069)	(0.069)	(0.071)	(0.061)	(0.084)
Constant	2.600***	2.945***	1.980***	1.886***	1.626***
	(0.019)	(0.022)	(0.036)	(0.032)	(0.071)
N (observations)	179,236	121,244	38,025	20,099	2,802
N (population)	167,181,303	110,273,021	37,475,149	19,567,672	2,814,401

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.* p < .05,
NOTE: Lawyer coefficient represents lawyers' average K6 score compared to the population in the column.

Table B4: Significant Mental Illness Compared to Lawyers

	(1)	*(2)*	*(3)*	*(4)*	*(5)*
	Entire Population	*No B.A.*	*B.A.*	*M.A. or Ph.D.*	*M.D., Vet, Dentist*
Lawyer	−0.030***	−0.043***	−0.007***	−0.004	−0.003
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Constant	0.037***	0.049***	0.013***	0.011***	0.009***
	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)
N (observations)	179,236	121,244	38,025	20,099	2,802
N (population)	167,181,303	110,273,021	37,475,149	19,567,672	2,814,401

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.
NOTE: Lawyer coefficient represents lawyers' incidence of significant mental illness compared to the population in the column.

Table B5: Moderate or Serious Mental Illness Compared to Lawyers

	(1)	*(2)*	*(3)*	*(4)*	*(5)*
	Entire Population	*No B.A.*	*B.A.*	*M.A. or Ph.D.*	*M.D., Vet, Dentist*
Lawyer	−0.065***	−0.094***	−0.014*	−0.002	0.013
	(0.006)	(0.007)	(0.006)	(0.007)	(0.009)
Constant	0.129***	0.158***	0.077***	0.066***	0.051***
	(0.001)	(0.002)	(0.002)	(0.002)	(0.004)
N (observations)	179,236	121,244	38,025	20,099	2,802
N (population)	167,181,303	110,273,021	37,475,149	19,567,672	2,814,401

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.
NOTE: Lawyer coefficient represents lawyers' incidence of moderate or significant mental illness compared to the population in the column.

Table B6: Excess Alcohol Consumption Compared to Lawyers

	(1)	*(2)*	*(3)*	*(4)*	*(5)*
	Entire Population	*No B.A.*	*B.A.*	*M.A. or Ph.D.*	*M.D., Vet, Dentist*
Lawyer	0.010	0.003	0.011	0.044**	0.057***
	(0.015)	(0.016)	(0.013)	(0.014)	(0.013)
Constant	0.101***	0.107***	0.100***	0.067***	0.054***
	(0.001)	(0.001)	(0.002)	(0.002)	(0.005)
N (observations)	179,236	121,244	38,025	20,099	2,802
N (population)	167,181,303	110,273,021	37,475,149	19,567,672	2,814,401

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.
NOTE: Lawyer coefficient represents lawyers' incidence of excess alcohol consumption compared to the population in the column.

Table B7: Difference in Excess Alcohol Consumption Between Those with an M.A. or Ph.D. and Overall Population

	(1)
	Excess Alcohol Consumption
M.A. or Ph.D.	−0.038***
	(0.002)
Constant	0.105***
	(0.001)
N (observations)	179,236
N (population)	167,181,303

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Table B8a: Difference in Fraction with Mental Illness Between Young and Old by Lawyer

	(1)	*(2)*	*(3)*	*(4)*
	Serious Mental Illness (Non-Lawyer)	*Serious Mental Illness (Lawyer)*	*Moderate or Serious Mental Illness (Non-Lawyer)*	*Moderate or Serious Mental Illness (Lawyer)*
Over 40 years old	0.010***	0.003	0.006	−0.030
	(0.002)	(0.003)	(0.003)	(0.019)
Constant	0.031***	0.005	0.125***	0.084***
	(0.001)	(0.003)	(0.003)	(0.016)
N (observations)	178,258	978	178,258	978
N (population)	166,198,324	982,980	166,198,324	982,980

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Table B8b: Difference in Average K6 Score and Excess Alcohol Consumption Between Young and Old by Lawyer

	(1)	(2)	(3)	(4)
	Average K6 Score (Non-Lawyer)	*Average K6 Score (Lawyer)*	*Excess Alcohol Consumption (Non-Lawyer)*	*Excess Alcohol Consumption (Lawyer)*
Over 40 years old	0.029	−0.918***	−0.052***	−0.151***
	(0.048)	(0.195)	(0.003)	(0.021)
Constant	2.581***	2.597***	0.134***	0.212***
	(0.038)	(0.174)	(0.002)	(0.018)
N (observations)	178,258	978	178,258	978
N (population)	166,198,324	982,980	166,198,324	982,980

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Table B8c: Difference in Fraction with Mental Illness Between Young and Old by Medical Professional (M.D., Dentist, Vet)

	(1)	(2)	(3)	(4)
	Serious Mental Illness (Non-Med. Professional)	*Serious Mental Illness (Med. Professional)*	*Moderate or Serious Mental Illness (Non-Med. Professional)*	*Moderate or Serious Mental Illness (Med. Professional)*
Over 40 years old	0.010***	0.008**	0.006	0.012
	(0.002)	(0.002)	(0.003)	(0.007)
Constant	0.031***	0.004*	0.125***	0.043***
	(0.001)	(0.002)	(0.003)	(0.006)
N (observations)	177,412	1,824	177,412	1,824
N (population)	165,349,882	1,831,422	165,349,882	1,831,422

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Table B8d: Difference in Average K6 Score and Excess Alcohol Consumption Between Young and Old by Medical Professional (M.D., Dentist, Vet)

	(1)	(2)	(3)	(4)
	Average K6 Score (Non-Med. Professional)	*Average K6 Score (Med. Professional)*	*Excess Alcohol Consumption (Non-Med. Professional)*	*Excess Alcohol Consumption (Med. Professional)*
Over 40 years old	0.026	−0.044	−0.052***	−0.036***
	(0.047)	(0.125)	(0.003)	(0.009)
Constant	2.591***	1.655***	0.135***	0.078***
	(0.038)	(0.134)	(0.002)	(0.007)
N (observations)	177,412	1,824	177,412	1,824
N (population)	165,349,882	1,831,422	165,349,882	1,831,422

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Table B9a: Difference in Average K6 Score and Excess Alcohol Consumption Compared to Lawyers by Age

	(1)	*(2)*	*(3)*	*(4)*
	Average K6 Score (Under 40)	*Average K6 Score (Over 40)*	*Excess Alcohol Consumption (Under 40)*	*Excess Alcohol Consumption (Over 40)*
Lawyer	0.016	−0.931***	0.078***	−0.021
	(0.173)	(0.090)	(0.019)	(0.016)
Constant	2.581***	2.611***	0.134***	0.082***
	(0.038)	(0.024)	(0.002)	(0.002)
N (observations)	64,682	114,554	64,682	114,554
N (population)	60,341,122	106,840,181	60,341,122	106,840,181

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Table B9b: Difference in Fraction with Mental Illness Between Lawyers and Non-Lawyers by Age

	(1)	*(2)*	*(3)*	*(4)*
	Serious Mental Illness (Under 40)	*Serious Mental Illness (Over 40)*	*Moderate or Serious Mental Illness (Under 40)*	*Moderate or Serious Mental Illness (Over 40)*
Lawyer	−0.026***	−0.033***	−0.041**	−0.077***
	(0.004)	(0.002)	(0.015)	(0.006)
Constant	0.031***	0.040***	0.125***	0.131***
	(0.001)	(0.001)	(0.003)	(0.001)
N (observations)	64,682	114,554	64,682	114,554
N (population)	60,341,122	106,840,181	60,341,122	106,840,181

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Table B10: Lawyers at Private Law Firms Compared to In-House and Government Lawyers

	(1)	*(2)*	*(3)*	*(4)*
	Serious Mental Illness	*Moderate or Serious Mental Illness*	*Excess Alcohol Consumption*	*Average K6 Score*
Private law firm	0.001	0.022	0.042*	0.116
	(0.002)	(0.012)	(0.020)	(0.101)
Constant	0.006*	0.048***	0.081***	1.901***
	(0.003)	(0.006)	(0.018)	(0.084)
N (observations)	978	978	978	978
N (population)	982,980	982,980	982,980	982,980

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Table B11: Lawyers at Large Firms Compared to Those at Non-Large Firms

	(1)	(2)	(3)	(4)
	Serious Mental Illness	*Moderate or Serious Mental Illness*	*Excess Alcohol Consumption*	*Average K6 Score*
Large firm	−0.008***	0.024	0.114	0.107
	(0.002)	(0.037)	(0.063)	(0.288)
Constant	0.008***	0.067***	0.108***	2.004***
	(0.002)	(0.009)	(0.017)	(0.091)
N (observations)	667	667	667	667
N (population)	696,439	696,439	696,439	696,439

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Table B12: Lawyers at Super-Large Firms Compared to Those at Non-Super-Large Firms

	(1)	(2)	(3)	(4)
	Serious Mental Illness	*Moderate or Serious Mental Illness*	*Excess Alcohol Consumption*	*Average K6 Score*
Super-large firm	−0.007***	0.005	0.107	0.185
	(0.001)	(0.032)	(0.132)	(0.222)
Constant	0.007***	0.070***	0.116***	2.006***
	(0.001)	(0.008)	(0.015)	(0.088)
N (observations)	667	667	667	667
N (population)	696,439	696,439	696,439	696,439

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Table B13: Difference in Average K6 Score, Excess Alcohol Consumption, and Rates of Mental Illness Between Male and Female Lawyers

	(1)	(2)	(3)	(4)
	Average K6 Score	*Excess Alcohol Consumption*	*Serious Mental Illness*	*Moderate or Serious Mental Illness*
Female	0.417*	−0.044*	0.006	0.025
	(0.183)	(0.020)	(0.005)	(0.023)
Constant	1.818***	0.128***	0.004	0.054***
	(0.076)	(0.022)	(0.003)	(0.008)
N (observations)	978	978	978	978
N (population)	982,980	982,980	982,980	982,980

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Table B14a: Difference in Average K6 Score and Excess Alcohol Consumption Between Genders by Lawyer Occupation

	(1)	(2)	(3)	(4)
	Average K6 Score (Male)	*Average K6 Score (Female)*	*Excess Alcohol Consumption (Male)*	*Excess Alcohol Consumption (Female)*
Lawyer	−0.479***	−0.658***	−0.022	0.031**
	(0.068)	(0.141)	(0.022)	(0.009)
Constant	2.296***	2.893***	0.150***	0.053***
	(0.025)	(0.027)	(0.001)	(0.002)
N (observations)	82,298	96,938	82,298	96,938
N (population)	82,152,140	85,029,163	82,152,140	85,029,163

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Table B14b: Difference in Rates of Mental Illness Between Genders by Lawyer Occupation

	(1)	(2)	(3)	(4)
	Serious Mental Illness (Male)	*Serious Mental Illness (Female)*	*Moderate or Serious Mental Illness (Male)*	*Moderate or Serious Mental Illness (Female)*
Lawyer	−0.026***	−0.032***	−0.054***	−0.070***
	(0.004)	(0.003)	(0.009)	(0.018)
Constant	0.031***	0.043***	0.108***	0.149***
	(0.001)	(0.001)	(0.001)	(0.001)
N (observations)	82,298	96,938	82,298	96,938
N (population)	82,152,140	85,029,163	82,152,140	85,029,163

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Table B14c: Difference in Average K6 Score and Excess Alcohol Consumption Between Genders by Medical Occupation

	(1)	(2)	(3)	(4)
	Average K6 Score (Male)	*Average K6 Score (Female)*	*Excess Alcohol Consumption (Male)*	*Excess Alcohol Consumption (Female)*
M.D., vet, dentist	−1.026***	−0.822***	−0.082***	−0.019**
	(0.052)	(0.113)	(0.010)	(0.006)
Constant	2.306***	2.898***	0.151***	0.053***
	(0.025)	(0.028)	(0.001)	(0.002)
N (observations)	82,298	96,938	82,298	96,938
N (population)	82,152,140	85,029,163	82,152,140	85,029,163

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Table B14d: Difference in Rates of Mental Illness Between Genders by Medical Occupation

	(1)	(2)	(3)	(4)
	Serious Mental Illness (Male)	*Serious Mental Illness (Female)*	*Moderate or Serious Mental Illness (Male)*	*Moderate or Serious Mental Illness (Female)*
M.D., vet, dentist	−0.027***	−0.026***	−0.077***	−0.072***
	(0.003)	(0.004)	(0.003)	(0.008)
Constant	0.031***	0.043***	0.109***	0.149***
	(0.001)	(0.001)	(0.001)	(0.001)
N (observations)	82,298	96,938	82,298	96,938
N (population)	82,152,140	85,029,163	82,152,140	85,029,163

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Table B15: Difference Between Lawyers and Medical Professionals (Male)

	(1)	(2)	(3)	(4)
	Serious Mental Illness	*Moderate or Serious Mental Illness*	*Excess Alcohol Consumption*	*Average K6 Score*
Lawyer	0.001	0.023**	0.059***	0.538***
	(0.002)	(0.008)	(0.017)	(0.090)
Constant	0.004	0.031***	0.069***	1.280***
	(0.002)	(0.003)	(0.009)	(0.064)
N (observations)	1,571	1,571	1,571	1,571
N (population)	1,628,691	1,628,691	1,628,691	1,628,691

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.
NOTE: Data restricted to male lawyers and medical professionals (M.D., vet, dentist).

Table B16: Difference Between Lawyers and Medical Professionals (Female)

	(1)	(2)	(3)	(4)
	Serious Mental Illness	*Moderate or Serious Mental Illness*	*Excess Alcohol Consumption*	*Average K6 Score*
Lawyer	−0.006***	0.002	0.050***	0.159
	(0.002)	(0.021)	(0.013)	(0.205)
Constant	0.017***	0.077***	0.034***	2.076***
	(0.003)	(0.008)	(0.007)	(0.100)
N (observations)	1,231	1,231	1,231	1,231
N (population)	1,185,710	1,185,710	1,185,710	1,185,710

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.
NOTE: Data restricted to female lawyers and medical professionals (M.D., vet, dentist).

Table B17: Difference in Incidence of Serious Mental Illness, Moderate or Serious Mental Illness, and Excess Alcohol Consumption Among Lawyers by Year

	(1)	*(2)*	*(3)*
	Serious Mental Illness	*Moderate or Serious Mental Illness*	*Excess Alcohol Consumption*
Year	−0.001**	0.001	0.008**
	(0.000)	(0.001)	(0.003)
Constant	0.016**	0.052***	0.034*
	(0.005)	(0.009)	(0.016)
N (observations)	1,548	1,548	1,548
N (population)	2,371,669	2,371,669	2,371,669

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.
NOTE: Year is a time dummy equal to 1 for observations from 2004, 2 for observations from 2005, and so on.

Table B18: Difference in Incidence of Serious Mental Illness, Moderate or Serious Mental Illness, and Excess Alcohol Consumption Among Lawyers by Age

	(1)	*(2)*	*(3)*
	Serious Mental Illness	Moderate or Serious Mental Illness	Excess Alcohol Consumption
Over 40 years old	0.0041*	−0.0013	−0.0098
	(0.0019)	(0.0167)	(0.0311)
Year	−0.0007***	0.0034	0.0160***
	(0.0002)	(0.0030)	(0.0045)
Over 40 years old * Year	−0.0004	−0.0035	−0.0125*
	(0.0005)	(0.0034)	(0.0055)
Constant	0.0132***	0.0527***	0.0413
	(0.0036)	(0.0140)	(0.0273)
N (observations)	1,548	1,548	1,548
N (population)	2,371,669	2,371,669	2,371,669

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.
NOTE: Year is a time dummy equal to 1 for observations from 2004, 2 for observations from 2005, and so on.

Table B19: Difference in Incidence of Serious Mental Illness, Moderate or Serious Mental Illness, and Excess Alcohol Consumption Among Lawyers by Type of Employer

	(1)	*(2)*	*(3)*
	Serious Mental Illness	*Moderate or Serious Mental Illness*	*Excess Alcohol Consumption*
Private law firm	−0.0113	−0.0510**	0.0105
	(0.0095)	(0.0187)	(0.0316)
Year	−0.0015	−0.0033*	0.0047*
	(0.0008)	(0.0016)	(0.0021)
Private law firm * year	0.0007	0.0064**	0.0040
	(0.0006)	(0.0022)	(0.0045)
Constant	0.0234*	0.0856***	0.0276*
	(0.0114)	(0.0170)	(0.0108)
N (observations)	1,548	1,548	1,548
N (population)	2,371,669	2,371,669	2,371,669

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.
NOTE: Year is a time dummy equal to 1 for observations from 2004, 2 for observations from 2005, and so on.

Table B20: Difference in Incidence of Serious Mental Illness, Moderate or Serious Mental Illness, and Excess Alcohol Consumption Among Lawyers by Firm Size

	(1)	*(2)*	*(3)*
	Serious Mental Illness	*Moderate or Serious Mental Illness*	*Excess Alcohol Consumption*
Midsize firm	−0.0107***	−0.0436***	0.0055
	(0.0001)	(0.0119)	(0.0270)
Large firm	−0.0002	0.0746**	−0.0467
	(0.0022)	(0.0230)	(0.0559)
Super-large firm	0.0032	0.0580	−0.1089*
	(0.0038)	(0.0319)	(0.0498)
Year	−0.0014*	0.0011	0.0044
	(0.0005)	(0.0015)	(0.0038)
Midsize firm * Year	0.0008***	0.0034	−0.0008
	(0.0002)	(0.0023)	(0.0042)
Large firm * Year	0.0007	−0.0052	0.0119
	(0.0005)	(0.0036)	(0.0078)
Super-large firm * Year	−0.0003	−0.0055	0.0120
	(0.0002)	(0.0046)	(0.0077)
Constant	0.0194***	0.0476***	0.0551
	(0.0053)	(0.0072)	(0.0337)
N (observations)	1,528	1,528	1,528
N (population)	2,345,018	2,345,018	2,345,018

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.
NOTES: Firm size base case is small firm. Year is a time dummy equal to 1 for observations from 2004, 2 for observations from 2005, and so on.

Table B21: Difference in Incidence of Serious Mental Illness, Moderate or Serious Mental Illness, and Excess Alcohol Consumption Among Lawyers by Gender

	(1)	*(2)*	*(3)*
	Serious Mental Illness	*Moderate or Serious Mental Illness*	*Excess Alcohol Consumption*
Female	0.0201***	0.0027	−0.0184
	(0.0042)	(0.0219)	(0.0285)
Year	−0.0005*	−0.0005	0.0094**
	(0.0002)	(0.0013)	(0.0035)
Female * Year	−0.0014**	0.0035	−0.0041
	(0.0004)	(0.0043)	(0.0045)
Constant	0.0089*	0.0515***	0.0396*
	(0.0037)	(0.0087)	(0.0170)
N (observations)	1,548	1,548	1,548
N (population)	2,371,669	2,371,669	2,371,669

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.
NOTE: Year is a time dummy equal to 1 for observations from 2004, 2 for observations from 2005, and so on.

APPENDIX C: COOPERATION RATE FOR NHIS

The American Association for Public Opinion Research (AAOPR) defines a cooperation rate as "the proportion of all cases interviewed of all eligible units ever contacted."[62] The minimum cooperation rate is the "number of complete interviews divided by the number of interviews (complete plus partial) plus the number of non-interviews that involve the identification of and contact with an eligible respondent (refusal and break-off plus other)."[63] In contrast, AAOPR defines the minimum response rate as "the number of complete interviews divided by the number of interviews (complete plus partial) plus the number of non-interviews (refusal and break-off plus non-contacts plus others) plus all cases of unknown eligibility (unknown if housing unit, plus unknown, other)."[64] In mathematical terms, these two quantities are defined as follows:

$$RR = \frac{I}{(I+P)+(R+NC+O)+(UH+UO)}$$

$$COOP = \frac{I}{(I+P)+R+O},$$

[62]American Association for Public Opinion Research, Standard Definitions: Final Dispositions of Case Codes and Outcome Rates for Surveys 63 (2016). Available at https://www.aapor.org/AAPOR_Main/media/publications/Standard-Definitions20169theditionfinal.pdf.

[63]Id.

[64]Id. at 61.

Variable name	*Definition*
RR	Minimum response rate
COOP	Cooperation rate
I	Complete interview
P	Partial interview
R	Refusal or break-off
NC	Non-contact
O	Other
UH	Unknown if household/occupied
UO	Unknown, other

where the variables are defined as follows:[65]

NHIS does not report cooperation rates, nor does it explicitly link its reported values to the AAOPR values. Rather, it reports several response rates, including the "Household Response Rate."[66] In the interest of reporting standardized values for comparison, we attempt to convert NHIS's reported rates to AAOPR rates below.

NHIS's Household Response Rate "is calculated by dividing the number of interviewed households by the sum of the number of responding households and the number of Type A nonresponse households."[67] NHIS defines Type A nonresponse households as those "that were not interviewed for a variety of reasons: language problems, no one home after repeated contact attempts, family temporarily absent, refusal, household records rejected for insufficient data, and household records rejected for other CAPI-related [computer-assisted personal interviewing-related] problems, or other reasons for no interview."[68]

NHIS also reports the number of "eligible" and "interviewed" households used in calculating its Household Response Rate.[69] The Household Response Rate is calculated by dividing the number of "interviewed" households by the number of "eligible" households.

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[65]AAOPR's definition of a "complete" interview does not necessarily mean that the respondent completed every question. For example, it notes that a surveyor may define a complete response as one with more than 80 percent of applicable questions answered. Id. at 15. NHIS includes those with "acceptable 'sufficient' partial interviews" in its numerator, suggesting that its definition of a complete interview comports with the AAOPR's. See National Health Interview Survey, 2017 National Health Interview Survey Description 84 (2017). Available at ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Dataset_Documentation/NHIS/2017/srvydesc.pdf.

[66]National Health Interview Survey, 2017 National Health Interview Survey Description 84 (2017). Available at ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Dataset_Documentation/NHIS/2017/srvydesc.pdf.

[67]Id.

[68]Id.

[69]Id. at 87.

Table C1: Cooperation Rates of NHIS Surveys[a]

NHIS Year	*Eligible Households*	*Interviewed Households*	*Household Response Rate*	*Noncontact Rate*	*Cooperation Rate*
2017	49,067	32,617	66.5%	9.8%	73.7%
2016	59,230	40,220	67.9%	10.3%	75.7%
2015	59,170	41,493	70.1%	9.5%	77.5%
2014	60,347	44,552	73.8%	8.6%	80.8%
2013	54,612	41,335	75.7%	8.0%	82.3%
2012	54,603	42,366	77.6%	7.8%	84.2%
2011	48,200	39,509	82.0%	6.1%	87.3%
2010	43,208	34,329	79.5%	7.6%	86.0%

[a]Calculated by subtracting the number of non-contacted households from eligible households. That is, for each year t, Cooperation Rate_t = (Interviewed Households_t)/(Eligible Households_t * (1 – non-contact rate_t)). Includes only completed or sufficient partial interviews. The 2011 Survey Description Document said that the non-contact rate was 7.6 percent. National Health Interview Survey, 2011 National Health Interview Survey Description 12 (2011). Available at ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Dataset_Documentation/NHIS/2011/srvydesc.pdf. However, a non-contact rate of 7.6 percent would make the overall response rate over 100 percent because the rate of refusal or insufficient partial interviews for 2011 was 11.9 percent, and 82.0 + 7.6 + 11.9 > 100. Because the document says "the remaining 7.6%" and the previous year's non-contact rate was 7.6 percent, we believe the 7.6 percent in the 2011 document to be a typo. We instead calculate the non-contact rate for 2011 by subtracting the 82 percent of interviewed households and 11.9 percent of refused or insufficient partial interviews from 100 percent, in line with the manual's language about the "remaining" share being noncontact households.
NOTE: Data from NHIS Survey Description Documents.

However, NHIS's term "eligible" is not "eligible" in AAOPR's understanding of the term for calculating the minimum cooperation rate. This is because NHIS's definition of "eligible" includes not just those who refused or provided insufficient partial interviews, but also those who NHIS could not contact. In contrast, under AAOPR's definitions, non-contacted households are excluded from the denominator of "eligible" respondents when calculating the minimum cooperation rate. Thus, to calculate the AAOPR minimum cooperation rate from NHIS's data, one must subtract the non-contacted households from the number of NHIS-"eligible" respondents.