

# Letters

## RESEARCH LETTER

### Internet Searches for Sexual Harassment and Assault, Reporting, and Training Since the #MeToo Movement

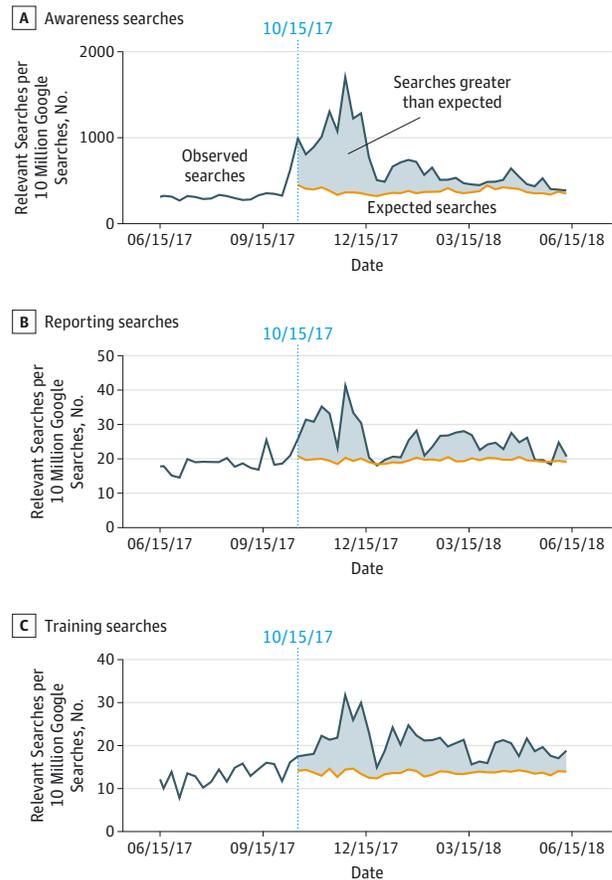
On October 15, 2017, following the public accusations of sexual harassment and assault against film producer Harvey Weinstein, actress Alyssa Milano encouraged victims to bring the taboo topic out of the shadows by sharing their own stories on social media. #MeToo was tweeted 300 000 times the day after Milano's post and generated widespread support with scores of accusations made against media, political, and business leaders, giving voice to previously unheard victims.<sup>1</sup> However, the implications for the victims whose perpetrators are not public figures is unknown. To fill this knowledge gap, we examined how internet searches for sexual harassment and/or assault changed following #MeToo.<sup>2</sup>

**Methods** | We monitored the volume of Google searches originating from the United States that were indicative of sexual harassment and/or assault awareness (all searches including the term "sexual" and the terms "harassment" or "assault") from January 1, 2010, through June 15, 2018. We further monitored the subset of these searches that focused on seeking resources for reporting of sexual harassment and/or assault (searches that also included "report" or "reporting") and preventive training (searches that also included "train" or "training"). The search volumes were provided as a ratio of all Google searches (per 10 million), thereby adjusting for changes in Google usage over time. Raw search count estimates were inferred using Comscore estimates (<http://comscore.com>).

We compared observed search volumes after October 15, 2017, to the counterfactual scenario manufactured from predicted search volumes using the autoregressive integrated moving average (ARIMA) algorithm of Hyndman and Khandakar<sup>3</sup> applied to weekly trends from January 1, 2004, to October 14, 2017 (before #MeToo). The ratio of observed and predicted volumes with bootstrapped confidence intervals (CIs) were computed using R, version 3.5.0 (R Foundation). Because these analyses were based on public aggregate data, institutional review board approval was not required.

**Results** | Sexual harassment and/or assault searches were 86% (95% CI, 60%-117%;  $P < .001$ ) higher than expected from October 15, 2017, to June 15, 2018, reaching record highs (Figure). Moreover, observed searches remained higher than expected each week until 8 months after #MeToo began. In absolute terms, the post-#MeToo period corresponded with the greatest number of sexual harassment and/or assault searches ever recorded in the United States, with 40 to 54 million searches from October 15, 2017, to June 15, 2018.

Figure. US Google Searches for Sexual Harassment and/or Assault Awareness, Reporting, and Training



Weekly Google search volumes are shown. A, All searches that included the terms "sexual" and "assault" or "harassment." B, The subset of searches that also included the terms "report" or "reporting." C, The subset of searches that also included the terms "train" or "training." The dashed vertical line in each graph indicates when #MeToo was first tweeted by Alyssa Milano on October 15, 2017.

Searches related to reporting and preventive training for sexual harassment and/or assault were 30% (95% CI, 23%-39%;  $P < .001$ ) higher and 51% (95% CI, 43%-60%;  $P < .001$ ) higher than predicted from October 15, 2017, to June 15, 2018. Both spiked weeks after #MeToo began and remained greater than expected for all weeks except 1.

**Discussion** | Despite the well-documented evidence that sexual harassment and/or assault has major public health implications,<sup>4</sup> it has received little national attention. The #MeToo movement has prompted substantial interest in not only sexual harassment and/or assault, but also actionable outcomes for reporting and prevention.

Search trends are only proxies for engagement, sentinel surveillance (such as surveys) will clarify these early findings. However, our findings demonstrate the power of grassroots movements to respond to large-scale public health crises. These results suggest that #MeToo may have reduced the stigma of sexual harassment and/or assault as more seek help.<sup>5</sup>

Public health investments in preventing sexual harassment and/or assault is disproportionately small compared with the scale of the problem,<sup>6</sup> in part because the problem is hidden from the public. With millions more persons than ever voicing their needs months after #MeToo began, public health leaders should respond by investing in enhanced prevention training and improving resources for survivors.

**Theodore L. Caputi, BS**  
**Alicia L. Nobles, PhD, MS**  
**John W. Ayers, PhD, MA**

**Author Affiliations:** Health Equity Research Lab, Cambridge Health Alliance, Harvard Medical School, Cambridge, Massachusetts (Caputi); Division of Infectious Diseases and Global Public Health, Department of Medicine, University of California, San Diego, La Jolla (Nobles, Ayers).

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**Corresponding Author:** John W. Ayers, PhD, MA, Department of Medicine, University of California, San Diego, 9500 Gilman Dr, Ste 333 Central Research Services Facility (CRSF), 9500 Gilman Drive, La Jolla, CA 92093-0507 (ayers.john.w@gmail.com).

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