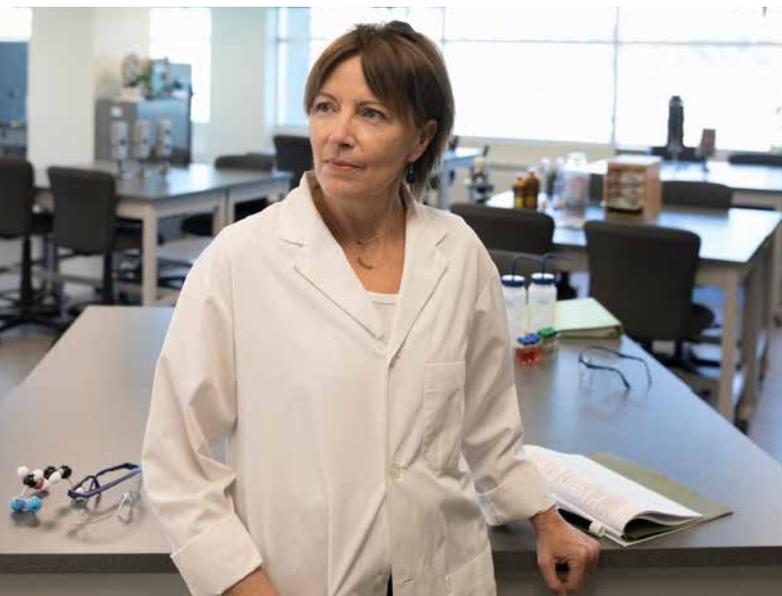




# Sexual Harassment Experiences and Consequences for Women Faculty in Science, Engineering, and Medicine

Christine Lindquist and Tasseli McKay



The Committee on the Impacts of Sexual Harassment in Academia of the National Academies of Sciences, Engineering, and Medicine (NASEM) commissioned this study to understand the influence of sexual harassment on the career advancement of women faculty in sciences, engineering, and medicine. This study was part of a larger effort to understand the prevalence and influence of sexual harassment in academia and to determine how to prevent and address it in academic sciences, engineering, and medicine. (The full report by the National Academies, *Sexual Harassment of Women: Climate, Culture, and Consequences in Academic Sciences, Engineering, and Medicine*, is available at <http://www.nationalacademies.org/SexualHarassment>.) To understand these complex and sensitive experiences and their impacts, RTI conducted semi-structured, qualitative interviews with 40 women faculty in sciences, engineering, and medicine who had experienced

## Key Findings

- In a qualitative study of 40 women faculty in sciences, engineering, and medicine, respondents at all career levels and fields reported a range of sexual harassment experiences, including gender-based harassment (e.g., gendered insults, lewd comments), unwanted sexual advances, stalking, and sexual assault by a colleague.
- Sexual harassment experiences often diminished study participants' scientific productivity as energy was diverted into efforts to process emotional responses, manage the perpetrator, report the harassment, or work to prevent recurrences.
- Many women who experienced sexual harassment adjusted their work habits and withdrew physically or interpersonally from their departments, colleagues, and fields. Some women reported that they ceased contact with collaborators and mentors, avoided nonrequired interactions with peers, and stopped attending scientific and professional gatherings.
- Faculty often feared they would encounter negative consequences if they reported sexual harassment through department or university channels.
- Those who chose to report harassment to a supervisor or department leader often reported that the reactions they received made them feel dismissed and minimized. Sympathetic responses and active or formal support were rarely provided, and women were typically discouraged from pursuing further action.
- Women who disclosed their experiences often faced long-term, negative impacts on their careers and damaged relationships with colleagues.
- Study participants identified opportunities to address sexual harassment by (1) harnessing the power of university leaders, department leaders, and peer bystanders to improve the academic climate; (2) instituting stronger and better-enforced institutional policies on sexual harassment with clear and appropriate consequences for perpetrators; and (3) advancing the cross-institutional work of scientific and professional societies to change the culture in their fields.

one or more events that conformed to the research definition of sexual harassment in the last 5 years.\*

Faculty were recruited through professional organization networks and selected for diversity of characteristics, experiences, and contexts. Of the 340 women who completed the screening tool, 65 were determined to be eligible, 48 were contacted for interviews, and 40 completed interviews. Respondents held positions at a range of public and private doctoral-granting universities, including “R1,” “R2,” and “R3” institutions.<sup>1</sup> Just over half (55%) were junior faculty or professionals and 43% were senior faculty or professionals. Respondents worked across the sciences (50% of respondents), engineering (28%), and medicine (23%). Each completed a 1-hour, confidential interview about her sexual harassment experiences in the past 5 years, responses to those experiences, how sexual harassment had impacted her work and career path, and her ideas for prevention and response. Respondents focused on the harassment experience that had been most impactful to them; these included unwanted sexual advances, lewd jokes or comments, insults related to their competency, stalking, unwanted sexual touching, and sexual assault by a colleague.

### Short-Term Responses to Sexual Harassment

Several previous studies have identified psychological distress as a consequence of sexual harassment in the workplace.<sup>2–4</sup> Women who experience sexual harassment are more likely to report symptoms of depression, general stress, anxiety, posttraumatic stress disorder, negative mood, disordered eating, self-blame, reduced self-esteem, and several other emotional responses.<sup>5,6</sup> Among our sample, women’s psychological and emotional responses to the harassment they experienced ranged from “uncomfortable” to “devastated.” The most common responses were anger, frustration, fear, stress, and anxiety. Many respondents experienced some form of long-term emotional response, such as self-blame, decreased confidence, or heightened emotional reactivity.

“I try to think of myself as being a strong person, you know? But it definitely had an impact on me, and I was embarrassed that it had such an impact on me, too. I was mortified that I[had] broken down in tears, ‘cause it was kind of difficult for me. . . . I was mortified and embarrassed that I let that have such a big impact on me.”

—Associate professor of engineering

Prior work has documented a variety of other responses in the immediate aftermath of sexual harassment, including avoiding the perpetrator, attempting to minimize the incident, seeking social support, and far less commonly, initiating formal and informal reporting (reviewed by the US Equal Employment Opportunity Commission [EEOC]<sup>7</sup>). In our study, respondents often made several changes to their work habits in the wake of the incident(s). Some immediately considered quitting their employment or training, and several could not get any work done in the aftermath of the incident. Changes to work habits included no longer meeting with others in closed offices, avoiding being alone with anyone, changing office hours, and changing professional dress to avoid harassment. Women’s other coping responses included minimizing the incident, strategizing about how to respond to similar incidents in the future, and becoming more active in addressing gender inequality.

“This is my way of coping with it: trying to not let it happen to others.”

—Associate professor of chemistry

Women took several distinct approaches to addressing or reporting their experiences. A few confronted their perpetrators directly, communicating that the harassing behavior was unacceptable. Many women reported sexual harassment incidents to their supervisors instead of or before pursuing formal reporting at the university level. Such reports met with sympathy or dismissiveness, but rarely action; as a result, many complaints stopped there.

“People like my chair were saying that this is really bad, they’re on my side, they have my back, it sucks. But [they] never did anything or said anything to the guy in question. So, the people around me find this behavior normal.”

—Professor in geosciences

Still, some women initiated formal, institutional reporting. Those who did were motivated to try to mitigate the consequences of perpetrators’ behavior for their own careers, ensure their personal safety, and protect other women from experiencing such behavior from the same perpetrator. Women who chose to formally report sometimes stated that it damaged relationships with their immediate management.

Some women perceived that they had no viable option for reporting. Stark power differentials between sexual harassment targets and perpetrators exacerbated the sense of limited options and the general fear of disclosure. Respondents who felt the least empowered in disclosing or addressing the sexually harassing behavior were often newer faculty, residents, and postdocs, whereas their perpetrators were often higher-ranking faculty, professional mentors, or widely recognized experts. In addition, women noted that higher-ranking faculty

\* Due to the study’s focus on women currently in academic positions, the experiences of those who had exited academia due to sexual harassment (and indeed may have experienced more egregious harassment) were not captured. Although all of our respondents still held academic positions, 38% did not remain in their department after the sexual harassment experience, which allowed us to learn about significant career changes from our sample.

were influential in making promotion, retention, and tenure decisions within their departments, making the women more hesitant to disclose their experiences.

“Say it was just a friend or something like that, there’s more of an equal relationship with the person . . . you could just say, ‘Can you just stop hugging me?’ or ‘I’m just not comfortable with that.’ But the issue with this situation is that he’s got power over me that could destroy my career.”

—Assistant professor of mathematics

In addition to (or instead of) reporting to supervisors or university officials, many women talked with family and friends or female colleagues about their sexual harassment experiences.

“I happen to be in a department that is well above the national average for women faculty in [a predominantly male field]. Because of that, we have a really strong network of women who—I mean, we go out to coffee once a month just to talk about being female faculty from the full professor level all the way down to first-year assistant professors or instructors. Because of that, it’s easier to face some of these issues when you kind of have a team behind you. I know I’m lucky in having that kind of network here; most women faculty don’t.”

—Assistant professor of engineering

A few, however, told no one at all. Some women sought some form of professional support, such as legal advice or counseling. Those who did often found that outside professionals’ validation and helpfulness contrasted starkly with the responses they received inside their departments or programs. A few women sought support from scientific societies, accreditation bodies, police, or healing providers.

### The Influence of Sexual Harassment on Career Trajectories

Research with the general population has identified several job-related outcomes of experiencing sexual harassment in the workplace, including decreased job satisfaction (particularly feelings about coworkers and supervisors), decreased organizational commitment, decreased productivity, and increased work withdrawal.<sup>2–4</sup> Many of these consequences were identified by our sample members as well. One key finding from their interviews was that women’s collaborative or mentoring relationships often suffered in the wake of sexual harassment experiences. Over the longer term, it was common for women to become less trusting and more cautious in developing professional relationships and dealing with potential academic collaborators. Some women came to avoid male mentors. Some altered their interpersonal interactions with colleagues in other permanent or long-term ways that often harmed their professional relationships. Examples include avoiding professional association conferences or social

events, limiting personal topics (or jokes) in conversation, being more direct, and being more vocal in calling out inappropriate comments.

“Well yeah, I think now I’m—I’ll call it out instantly when I see it rather than be quiet. I’ve become much more vocal, and I’ve never been exactly shy. I’ve always been pretty outspoken, which is another reason why looking back on this all, I just cringe because I don’t think of myself as the kind of person who puts up with this. Now, I’ve made a real conscious effort that when I see—and some of this also has to do with our current national environment. I think that in the Trump era, it’s really important to speak up when you’re facing sexism, even when it’s not directed toward you, even if it’s not textbook ‘sleep with me or I’m going to fire you’ kind [of] sexual harassment. I think it’s really important to put a stop to these things that are like, ‘oh yeah, it’s normal,’ ‘well, you know, he’s old school,’ just all of these things to excuse this sort of behavior. It’s not excusable and it shouldn’t be. I am happy to make up for lost time now.”

—Non-tenure track faculty member in biology

It was fairly uncommon for women to shift the overall focus of their scholarly work because of their harassment, although a few switched fields or avoided certain research areas of interest to avoid their perpetrators. However, one near-universal theme that arose was women’s increased attention and service focused on gender-equity issues in the context of their fields and academic institutions.<sup>†</sup> Several women began doing more research on gender or diversity and inclusion issues within their fields, whereas others became heavily involved in awareness-raising activities or efforts to change policies at their institutions or within their professional associations. Most experienced such involvement as very gratifying but noted that it took significant energy away from their scholarly work.

“That means I spend a whole lot of time doing those things, which is probably like, if that’s, if that’s what science means for me. . . . if that’s what I need to do so that my students have a better field, then that is what it is, and I know that I’ll have a bigger impact on science doing those things than one more paper.”

—Assistant professor in geosciences

Women who had chosen to formally report or otherwise speak out about their experiences often recounted negative, long-term impacts on their careers. Several respondents made negative career transitions that they attributed to their sexual harassment experiences, such as stepping down from an assistant dean position, taking a position at a lower-ranked

<sup>†</sup> It should be noted that the involvement of respondents in gender-equity issues could be a byproduct of the study’s recruitment procedures, such that only women who were invested in this topic took the initiative to respond. We cannot rule out this possibility, and no other research studies of which we are aware have explored whether experiencing sexual harassment leads individuals to become more active in gender-equity issues.

university, being fired in retaliation for disclosing harassment, or dropping out of a major research project. Others stayed in their positions but suffered from lack of advancement, such as not receiving tenure or not becoming a full professor. A few passed up job opportunities to avoid their perpetrators or to avoid situations that they feared could expose them to future sexual harassment. Some respondents felt that they had accomplished less in their professions or that their work quality had suffered because of their sexual harassment experiences (due to disrupted concentration, decreased confidence, avoidance of networking opportunities, and increased negativity toward their field). Further, respondents who reported the incident noted how much time, energy, and emotion they had had to expend to deal with it, which took time away from professional achievements.

“I mean, I don't think I've been quite as productive as I could have been with these experiences in terms of getting papers out or getting grant proposals out and things like that. I mean, especially this year I have had zero interest or desire in writing up any papers . . . because I don't want to work with the person that I was working with anymore.”

—Non-tenure track faculty member in engineering

### Perceived Barriers to Addressing Sexual Harassment

When asked about barriers affecting academic institutions' responses to sexual harassment incidents, women identified several major barriers to formal reporting. These included lack of acceptable or clear reporting options and the inaction of immediate supervisors. Department-level supervisors who received initial reports of sexual harassment often discouraged women from reporting through university-level mechanisms (either explicitly, or through their inaction or minimization of the experience). However, the most common and significant barrier was the widespread perception that reporting sexual harassment (whether through university-level processes or within departments) would likely be more harmful to the woman reporting it than it would be productive or protective. Respondents noted that they had formed this impression based on the observed outcomes of their own past reporting experiences or those of their colleagues. Their perception is also supported by prior research with nonacademic workforces, which finds that reporting often triggers retaliation and minimization on the part of the organization—particularly in more masculine job-gender contexts and when perpetrators are higher-ranking—and is associated with greater psychological distress among victims.<sup>8</sup>

The faculty who participated in our study noted that any form of sexual harassment complaint or action could weaken (or feminize) them in the eyes of their colleagues, give them

a reputation as a troublemaker, and/or harm their chances of achieving tenure or other career objectives. The fear of retaliation or punishment was a particularly formidable deterrent to reporting. With striking consistency across fields and career stages, respondents said they expected that they would be punished in some way if they reported their harassment experiences to anyone.

“I feel like any institutional attempts to fix this, or to contact him and say, 'Please stop behaving like this' would have been traced back to me, or would have hurt my career more than it would have hurt his. I mean, he's got a big laboratory, he brings in lots of grants, you know. It was going to make me look bad and not him . . . I just felt like there was not going to be any benefit for me in reporting this and making a scene about it. I felt like it would only damage my career. It wouldn't do anything to his.”

—Assistant professor of biology

Cultural barriers at the institutional level were also seen to thwart effective sexual harassment response. These included the under-representation of women in many sciences, engineering, and medical specialties, especially in leadership positions; a lack of clear, ethical guidance from institutions on expectations for behavior related to gender issues; perceived tolerance of sexual harassment from institutions; and the emphasis on protecting the institution rather than supporting individuals who experience sexual harassment. In some cases, women noted that the departmental or university administrators whose leadership was needed for preventing or addressing sexual harassment were instead perpetrating it.

“People who engage in this behavior [are] bullies, and I think their bullying behavior intimidates the good people. So, you get somebody who engages in this behavior and they get themselves into a position of power, like a department chair or even up in the dean's office or something. I honestly do not know how they intimidate other men into accepting this behavior, but they do.”

—Non-tenure track faculty member in geosciences

Finally, respondents observed broader cultural barriers that they believed shaped individual and institutional responses to sexual harassment. They cited a national political environment that was seen as condoning sexual harassment; women's resignation regarding their older, male colleagues' ability to change; the difficulty of differentiating sexual harassment events within workplace cultures that normalized misogyny (with some respondents not initially recognizing their experiences as sexual harassment because they took place within contexts that normalized gender bias and abusive working conditions); and cultures of persistent denial in university communities, including male colleagues' lack of awareness of the pervasiveness of sexual harassment or their contributions to it.

“The leadership, and certainly the senior leadership, is majority male and has never been affected. . . . If you’ve never been discriminated against, you don’t understand discrimination. It takes a lot more work to appreciate that something is happening to other people.”

—Assistant professor of medicine

### Opportunities and Solutions

This study documented considerable room for improvement in sexual harassment prevention and response in the sciences, engineering, and medicine. The faculty who participated in our study also identified an abundance of promising strategies for achieving such improvement.

First, study findings highlight the positive potential of senior faculty and department leadership to shape university and department climate regarding sexual harassment. Their calls to improve department- (or institution-) specific culture through stronger leadership commitment reflect the national dialogue outside of academia. Organizational climate is increasingly seen as a major contributor to workplace sexual harassment, and the EEOC has developed specific recommendations for increasing leadership commitment and engagement to create a culture where harassment is not tolerated.<sup>7</sup> The women we interviewed believed that shifting the climate of harassment also depended on bringing more women into academic leadership in the sciences, engineering, and medicine. Several studies in nonacademic settings<sup>3,9</sup> have found that women in traditionally male-dominated job contexts are more likely to report being sexually harassed. Although it is unclear whether having more women in leadership positions would affect an individual’s risk for sexual harassment based on their job-gender context, it could certainly ameliorate the power imbalance present in many male-dominated fields.

In addition to the important role of departmental leaders, the findings also suggest an influential role for bystanders, as many targets of sexual harassment recounted that their experiences had been witnessed by silent colleagues whom they wished had intervened. To transform climate and better engage bystanders, study participants suggested improving the delivery and uptake of faculty and staff training, including content relevant to those at different career stages and reflecting the full continuum of sexual harassment behaviors (not just “quid pro quo” harassment).

Although prior research has not shown that trainings are effective at changing attitudes or behaviors,<sup>10-12</sup> they play an important role in conveying what behaviors are unacceptable in the workplace. Interactive trainings delivered in person and that involve men as facilitators may be more effective<sup>13,14</sup> and should be encouraged. Bystander interventions, such as Green Dot, have also shown promise in university student

populations<sup>15</sup> and are increasingly being considered for applications to the workplace.

Second, our results indicate a need for stronger and better-enforced sexual harassment policies and clear and appropriate consequences for perpetrators (including those with tenure and in positions of academic leadership). Study participants suggested that university and departmental leadership should inform all staff of harassment policies, make their enforcement known, and disseminate resources for victims. One institution working toward the goal of better transparency for complaint outcomes, Yale University, produces semi-annual reports to faculty and students on sexual harassment reporting that detail the outcomes of each (deidentified) complaint and the positions of the complainant and respondent.<sup>16</sup>

Study participants also emphasized a need for improved reporting environments. Consistent with federal recommendations that organizations offer multiple options for reporting harassment (including informal options) and protecting victim privacy,<sup>7</sup> our respondents recommended offering confidential reporting options, role-specific resources (e.g., for post-doctoral fellows), and safeguards for those who report. To better inform universities’ sexual harassment-related efforts, faculty also recommended using climate surveys and other data to monitor the prevalence of harassment and evaluate institutions’ prevention and response strategies. This is consistent with the EEOC’s recommendation for “[regular] anonymous employee surveys . . . to assess whether harassment is occurring, or is perceived to be tolerated.”<sup>7</sup>

Finally, these findings suggest that professional and scientific societies have a leading role to play in preventing and addressing sexual harassment. Faculty who participated in our study felt that their membership organizations could help to change norms in the profession by disseminating information about sexual harassment and establishing clear policies regarding it. Specific ideas included instituting organizational consequences for perpetrators (such as withholding professional awards or barring them from serving in certain roles), commissioning white papers on harassment in the field, providing resources to members, and creating safe spaces for women to share their experiences (such as at national meetings). Toward that end, the American Geophysical Union has revised its professional ethical guidelines to address sexual harassment; created a task force on sexual harassment in the geosciences; shared information on sexual harassment definitions, responses, and victim rights with its members; and developed an extensive suite of member resources on the topic.<sup>‡</sup> Peer-organized efforts within scientific societies, such

‡ The American Geophysical Union’s sexual harassment resources are available at <https://harassment.agu.org/>.

as Astronomy Allies within the American Astronomical Society, are also working to create environments that support women targeted by sexual harassment and prevent its occurrence at scientific gatherings.

## Conclusions

As respondents to this study consistently emphasized, better sexual harassment prevention and responses are urgently needed in science, engineering, and medical fields. Without them, they argued, “pipeline” investments will be wasted.

“We have all these K-12 STEM efforts: ‘Let’s get the girls excited about science.’ And at this point, a lot of us feel like, Why? Why would you do that to them?”

—Assistant professor in geosciences

Further, the faculty we interviewed sounded an alarm regarding immense and ongoing scientific losses to their fields as the energies of so many scholars, physicians, and engineers were sapped by sexual harassment. Another geosciences professor explained, “Even the women who are staying in the field, I feel like aren’t able to do science to the best of their ability, because they have this processor that isn’t being used, ‘cause it’s doing other stuff.” An engineer observed that sexual harassment “is stunting everything about the discipline—creativity-wise, progress-wise, technology.”

Women faculty are the first to acknowledge that ending sexual harassment in academic medicine, engineering, and the sciences represents an enormous challenge. Yet it is equally clear that opportunities abound to better prevent and address sexual harassment and that the realization of women’s full scientific contributions to these fields will depend on seizing them.

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