Identifying and Mitigating Risk of Violence in the Scientific Workplace

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Forensic psychiatrists can have an important role in helping to improve safety in the scientific workplace by evaluating the potential for violence and developing strategies to mitigate the risk. Forensic psychiatrists engage in violence risk assessment in both criminal and civil settings.[1] In fact, core competencies of forensic psychiatry fellowships include being able to opine about risks of reoffending and making decisions about hospitalization and release. In addition, forensic psychiatrists develop skills in protecting their personal safety as they work with potentially dangerous evaluees and work in correctional settings.

In contrast to psychiatrists' experience and expertise, of psychiatrists within the academic setting, scientists rarely, if ever, have the proper skills to identify or mitigate risk in the workplace. There may be a lack of awareness that warning signs occur and often precede violent acts.[2] Similarly, non–mental health clinicians are typically not trained in assessing and mitigating risk of violence.

The authors of this article work as Deans and Director of Academic Affairs at a large research university. They are often consulted by leaders, faculty, staff, and trainees about problematic behaviors exhibited in the clinical and scientific workplace. One of the authors (R.B.) is also a forensic psychiatrist and has been able to develop training and consultation for the dean's office about recognizing and mitigating risk. As violence in the scientific workplace receives more attention, forensic psychiatrists should expect to be called on for their expertise on this matter.

Violence against scientists is rare in the United States, but occurred at least three times in 2016. Two of the attacks were fatal. Although it is unusual for conflicts in the scientific workplace to culminate in violence, it is important to help clinicians and scientists learn how to recognize potential threats. In the competitive scientific environment in which it is important to be meticulous and productive, scientists may not tolerate mistakes and their supervisory role may affect the careers of other investigators and research staff.[3] Although abrasive personalities and brusque conduct are sometimes tolerated and may not be deterrents to academic success in the scientific community, the resulting negative communication may lead to misunderstandings and interpersonal conflicts.[4]

In this article, we present several recent examples of violence against scientists and offer strategies to mitigate the risk. We wish to underscore the unique role that forensic psychiatrists can offer in these situations. Most workplace training programs deal with how to implement appropriate responses to potentially violent situations, such as de-escalation.[5] We focus on early identification of risk and consulting appropriate experts and leaders when concerns are developing, long before action must be taken. To our

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knowledge this is the first paper to focus specifically on violence in the scientific workplace. The following case examples have been taken from news reports.

Case Examples

On February 12, 2010, at the University of Alabama in Huntsville, Professor Amy Bishop, a 45-year-old neuroscientist, killed three fellow biology professors, including the department's chair, at a faculty meeting. Dr. Bishop was denied tenure in March 2009 and the university rejected her appeal in November 2009. According to the Dean of Graduate Studies, after the tenure was denied, Dr. Bishop "started to get a lot more agitated about things."[6]

On June 1, 2016, Mainak Sarkar, PhD, confronted Professor William Klug in UCLA's engineering complex and shot him dead with a 9-mm handgun before taking his own life. According to a contemporaneous article in the *Los Angeles Times*, Dr. Klug had been Sarkar's doctoral advisor in mechanical engineering. Sarkar called Klug an "enemy" and "a sick person" in a blog post of March 10, 2016. He advised students to "stay away from this guy" because Klug "cleverly stole all my code and gave it to another student. He made me really sick."[7]

On August 29, 2016, Hengjun Chao, a 49-year-old scientist who worked at Mt. Sinai's Icahn School of Medicine, shot Dr. Dennis Charney, a neurobiologist and the Dean of Mt. Sinai Medical School. According to a report in *Inside Higher Education*, Chao had been dismissed from the faculty by Dr. Charney for alleged "research misconduct." Chao unsuccessfully brought legal action against the medical school to reverse the dismissal. Investigators believed he had been spying on Dr. Charney before the shooting. The reported motive for the shooting was revenge.[8]

On December 2, 2016, David Jonathan Brown, a graduate student at the University of Southern California stabbed to death his mentor, Professor Bosco Tjan, a cognitive neuroscientist. According to reports in the USC school paper, Mr. Brown had worked in Dr. Tjan's laboratory since 2013, but recently had taken a "leave of absence for personal reasons." The attack was not random but was a result of a "personal dispute."[9]

Risk Factors for Violence

Warning signs may be evident before an episode of violence in the scientific workplace. A 2010 publication on campus violence reported that in 29 percent of incidents of violence that occurred on university campuses, perpetrators had engaged in verbal or written threats, stalking, or harassing behaviors, or physically aggressive acts.[10] In the case at UCLA described above, the perpetrator posted his writings on a blog several months before the shooting. As described in the case examples, sometimes perpetrators seemed to be upset about actions taken by others that have negative consequences for them, leading to feelings that punishment is deserved. When perpetrators see themselves as victims who have been unfairly attacked, have lost their reputation or their profession, and have nothing more to lose, they may choose to direct their anger and frustration toward others, including those whose actions culminated in the unfavorable action or decision. The spectrum of ideas held by perpetrators may also include persecutory delusions.

Typical risk factors for violence have been described and include a history of violence, acute psychosis, substance use, criminal history, and access to weapons.[11,12] However, it is not known whether these are the most important risk factors for violence in the scientific workplace. Such violence is rare and may involve a different cluster of factors and warning signs. Moreover, it is very difficult for colleagues, supervisors, or others to be aware of historical risk factors that may have been manifest before the date of hire or not within the scope of review at the time of hire. According to a review of the Bishop case in *Nature*, Professor Bishop at the University of Alabama had a history of violence and had shot her brother in 1986, when she was 21 years old. In 1993, she was suspected to have sent a mail bomb to a neurologist for whom she had previously worked as a postdoctoral student and who was reluctant to write a strong reference letter for her. Dr. Bishop was charged with assault in 2002 when she punched a woman in the head at a restaurant after the woman took the last available child's booster seat.[6] It is not clear if the university was aware of Dr. Bishop's history of violent behavior or whether any mitigating strategies were used.

Whenever there is a concern about violence because of warning signs, such as anger, threatening behavior, stalking, or a marked change in appearance or behavior of someone in the scientific workplace, it is important to obtain prompt professional consultation to determine whether risk factors are present and

make a formal assessment of the risk of violence. Although many universities have multidisciplinary Threat Management Teams, in other settings, forensic psychiatrists may be asked to participate in the evaluation and management process.

Prevention Strategies

In the cases described herein, the perpetrators apparently targeted the scientists in response to some type of dispute. Based on the news reports, the degree of risk had not been recognized or was underappreciated by the scientists. When managing professional or scientific disputes, the potential for violence may be low, but should be considered. If asked to participate in an evaluation process, forensic psychiatrists should emphasize the four universal prevention strategies given below. Although these principles may not always prevent violence, they are likely to decrease its risk.

Ensure Fair Process and Respectful Communication

Ensuring a fair, transparent, and impartial process for performance assessment is essential.[3,4] It is important that each individual be treated with respect and courtesy, regardless of performance. When there is a negative outcome to an evaluation, individuals should be informed of their right to appeal (if applicable) and to the option of legal action outside the university. Although the right to an appeal may not apply to everyone, legal action through the civil courts is usually an option. We believe that offering additional options may serve to empower the individual and provide a constructive alternative to the type of desperation that may lead to violence. When all avenues of appeal have been exhausted and an individual still feels that he has been mistreated, the situation becomes risky, and additional strategies may be indicated.

Maintain Awareness and Refer to Experts in Risk Assessment

It is important to anticipate a wide range of reactions from an individual who receives an unfavorable review or who seems to be angry and upset in the workplace. When an individual reacts in a way that raises a concern about violence, it may be appropriate to refer the matter to a specially trained mental health professional, such as a forensic psychiatrist, or to a group of trained professionals such as a multidisciplinary threat management team. Many organizations and universities have assembled such teams, which typically consist of representatives from mental health, law enforcement, and the legal affairs office and can be accessed on an as needed basis. Such teams are trained to assess the likelihood of violence based on reported information about the potential perpetrator[11,12] and may assist in mitigating or preventing violent acts.

Take Action When Warning Signs Are Present

Everyone who is involved in evaluation processes, oversees a laboratory, or supervises scientists should be trained to recognize occurrences of threatening phone calls or e-mails, as well as stalking behaviors, and should refer such occurrences promptly to a multidisciplinary threat assessment team for assessment and action or to mental health professionals who are skilled in violence risk assessment. It is common for individuals to ignore worrisome or dangerous situations as a form of denial or minimization, and many people overestimate their ability to evaluate and manage threats.[11,12]

Mitigate the Risk

Depending on the situation and with active involvement from law enforcement and legal affairs, protective measures such as individual or institutional restraining orders may be appropriate.

In our role of trying to prevent violence, we have also learned to be especially meticulous in maintaining confidentiality when assessing the risk of violence. We must balance the necessity of maintaining a safe workplace with the risk of inappropriately labeling a scientist as potentially violent. We have to be careful not to injure a faculty member's career by overreacting to anger or other negative behaviors, especially in the context of managers who may lack experience in distinguishing between a person who is threatening and potentially violent and a person who is angry and disruptive but is unlikely to become violent.

In our experience as Deans in the Office of Academic Affairs at a large research university, we have found that scientists understandably prefer to focus on their research, and the result is an avoidance of interpersonal strife, coupled with the hope that adversarial situations will self-resolve. Although this strategy may sometimes be effective, forensic psychiatrists have an important role in stressing the need for

attention to warning signs and to obtain consultation in a timely fashion. As in most potentially risky situations, the best prevention is awareness, early consultation, and risk mitigation.

This article is limited to one aspect of violence in the scientific community: violence in retaliation toward others in charge. We did not address the risk of suicide and other self-harm behaviors that are significantly more prevalent but that may indeed share some of the same warning signs. The preventive strategies can apply in those cases as well. Finally, we identified another role for forensic psychiatrists: case analyses and research to investigate the characteristics and psychiatric mechanisms that fuel and culminate in academic violence. What we discover will refine and extend strategies for prevention and treatment.

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