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Opening Up About Stress In Graduate School

Graduate students and professors talk about how the pressures of graduate school affect mental health

By *Linda Wang*

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Credit: Will Ludwig/C&EN

Like many graduate students, Karen Chiang entered her Ph.D. program full of enthusiasm, and she looked forward to earning her scientific wings.

But instead, graduate school became associated with some of the lowest points in her life, because of the overwhelming stress and self-doubt she experienced. “I had a very difficult time seeing myself in a positive light,” says Chiang, who earned a Ph.D. in chemistry recently and is now teaching at a liberal arts college and working as an adjunct for a community college in San Diego.

Although Chiang was never diagnosed as being depressed, she acknowledges that she likely was.

Chiang is not alone. **According to a 2011 survey** <[\[content/themes/twentyeleven/docs/woodberry2010.pdf\]\(http://gradresources.org/wp-content/themes/twentyeleven/docs/woodberry2010.pdf\)> by the nonprofit group **Grad Resources** <<http://www.gradresources.org>>, 43% of U.S. graduate students who participated reported experiencing more stress than they could handle. And a 2014 study conducted by the Graduate Assembly of the University of California, Berkeley, found that 47% UC Berkeley Ph.D. students who responded to the survey reached the threshold considered to be depressed.](http://gradresources.org/wp-</p></div><div data-bbox=)

Live CHAT: Grad School Stress

Join chemistry blogger

Chemjobber and Gregory Eells, director of counseling and psychological services at Cornell University, on Tues., Sept. 29, at 10 AM ET for a frank discussion about graduate school and mental health, hosted by Reddit Science's American Chemical Society Ask Me Anything series:

www.reddit.com/r/science
<[https://www.reddit.com/r/sc](https://www.reddit.com/r/science)

• **Learn tips for stress relief from grad students**
<<http://cen.acs.org/articles/9Relief.html>>

Stress continues to be one of the biggest mental health issues that graduate students face, and although attempts have been made to mitigate the problem, the issue of stress largely flies under the radar, quieted by the unrelenting pressure to publish.

Gregory T. Eells, associate director of **Gannett Health Services**

<<https://www.gannett.cornell.edu>> and director of counseling and psychological services Cornell University, says few studies have looked at the issue of graduate school and mental health. “This is an area where there are not a lot of hard data,” he says. “It’s partly because graduate students are in that in-between zone: They’re not the undergrads who get a lot of the attention, and they’re not faculty members.”

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RELATABLE

Graduate student stress is a topic that comes up regularly in the popular comic strip “PHD Comics” (www.phdcomics.com) by Jorge Cham. A second movie based on the comic strip is coming out this month.

Credit: PhD Comics

The collective voices of graduate students on this issue are getting louder, however. **In a five part series in 2013** <<http://chemjobber.blogspot.com/2013/01/is-graduate-school-in-chemistry-bad-for.html>> , chemistry bloggers **Chemjobber** <<http://www.chemjobber.blogspot.com>> and **Vinylogous** <<http://www.notthelab.blogspot.com>> facilitated an online discussion about the effect of

graduate school on students' mental health, which seemed to touch a nerve within the chemical community.

"The impact of grad school stress on mental health is something that nearly everyone experiences," Vinylogous says, "but it's never really talked about openly, for fear of perceived weakness."

"Even the most confident among us are prone to anxiety and worry in graduate school," Chemjobber adds.

"Having the dialogue out in the open revealed common issues and challenges and ways of dealing with them," Vinylogous says. "And it's become okay to talk about mental health; it's now a national conversation, although still, unfortunately, stigmatized."

There's no sugarcoating just how stressful graduate school can be. Patrick Gorman, a fifth-year Ph.D. candidate in chemistry at UC Berkeley tells C&EN that he was juggling so much by his third year of graduate school that he began having frequent panic attacks. "It's subconscious," he says. "You'll just be sitting in a room not really thinking about anything, and all of a sudden your heart will start pounding and you're not entirely sure why. There was just this sense of feeling uncomfortable wherever I was."

For Casey Schwarz, who is now a postdoc at the University of Central Florida (UCF), stress interfered with her ability to sleep. "I was just trying to be everything to everybody, and what started happening was that I couldn't sleep anymore. I was just worrying all night long," she says. "That was the most aggravating thing in the world, and I didn't know how to deal with it."

The stress can cause some graduate students to contemplate leaving their Ph.D. programs. "There were at least two times when I seriously considered dropping out of graduate school," says Cheri Ackerman, a chemistry graduate student at UC Berkeley.

The pressures of graduate school are often magnified for international students. Not only are they acclimating

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to a new culture, but taking time off to return home for a visit is nearly impossible. “I can take vacation for two or three days here and there, but going back to India is not possible in two or three days,” says Rashi Sharma, who came to the U.S. four years ago and is now a graduate student at UCF.

What’s more, foreign graduate students who are on a visa need to find a job shortly after graduating, otherwise they need to return home. “Because of student visa restrictions, we only get three months after we graduate to find a job, and if in three months you don’t get a job, you have to leave the country,” she says. In addition, she cannot work on U.S. government research projects, which require either U.S. citizenship or a green card.

Although many factors contribute to the stress that graduate students feel, Chiang thinks that some of her stress was self-imposed. “I would constantly be telling myself that I didn’t work hard enough, or that I wasn’t smart enough. That thought had come across my mind a lot,” she says. “I might take something my adviser said and just blow it out of proportion.”

Advisers are not always free from blame. Some advisers admit that when times are tough, they are more likely to pass that stress on to their graduate students. “This is a very tough time for funding nationwide and worldwide,” says Stephen Buchwald, a chemistry professor at Massachusetts Institute of Technology. “When economic times get tight, that puts pressure on the faculty because they have to raise the money or they feel like a failure. When they’re stressed that’s going to filter down.”

Buchwald says he’s learned over the years how to communicate more effectively with his



UKNIGHTED

Officers of the Uknighthed Chemistry Graduate Student Association at the University of Central Florida, Rashi Sharma (from left), Domenic Val, Julie Donnelly, and Yuly Vesga-Prada.

Credit: Casey Sch

graduate students. “I certainly would shudder to watch films of myself as an adviser 25 years ago,” he says. “Hopefully, every year, I’ve gotten a little better, but I try to tell people up front what I expect and what I think are the priorities.”

In addition to encouraging his students to take one month off per year, he also gives them frequent praise. “I think one of the biggest differences between me now and me 25 years ago is that I give people a lot more compliments,” he says. “In the early days, I assumed they knew I thought they were great. But now, I say it.

“It’s taken me a long time to get to this point, and I’m still making mistakes over and over again, but you just try to learn from your mistakes,” he says.

Christopher Cramer, a chemistry professor at the University of Minnesota, Twin Cities, says his personal experience dealing with stress in graduate school—including his attempts at “self-medicating with ethanol”—made him more aware of his role as an adviser. “My experience has certainly made me sensitive to members of my own research group, and I have had a few students who have suffered from mental health issues and have been willing to share that with me, and we sought ways to make things work out well for them.”

He acknowledges that “there still has not been a lot of movement in the culture of a lot of academic departments” when it comes to dealing with mental health. He also says some advisers perpetuate the problem.

“The system selects for those who are like those already in the system,” Cramer notes. “If the faculty who are doing the hiring are those who prevailed against overwhelming odds and gutted through, and they hire the same people, there’s this expectation that that’s what it takes, and there’s maybe less of an interest in accommodating a full range of students.”

It’s often left up to the graduate students to protect themselves, Cramer says. “If you’re a graduate student and you’re thinking about research groups, it’s really critical to try to talk to a bunch of people and learn what an adviser is really like.”

Another way to minimize stress is to maintain a healthy perspective and stay connected to

others, says Cornell's Eells. "Your work is not in totality of who you are," he says. "You have to have other relationships, you have to stay connected, and you have to be willing to step away from the lab."

If the amount of stress does become overwhelming, he encourages students to seek counseling which many universities offer to their students at either no or low cost. Eells points out that 20% of the graduate student body at Cornell has sought counseling at one point or another during graduate school.

And to those who say they are too busy for therapy? Eells has this to say: "Maybe you're spending an hour not doing your research, but you may be able to do that lab work more efficiently and effectively and in less time if you take that time for yourself."

Chiang says group therapy "changed my life." She began to realize that she wasn't alone. "There are so many people who feel this way, and it's not just in chemistry; it's graduate school in general," she says.

Schwarz also found healing through therapy, although she admits that she felt self-conscious being seen entering and leaving the counseling building. "It was embarrassing," she says.

Therapy often comes with a stigma. "My experience here has been that when I gently encourage a friend to go to therapy, it will be months or years before they will do it," says Ackerman, who has gone to therapy herself. "It doesn't mean that you're screwed up; it just means that you need a little help, and that's okay."

At UC Berkeley, Gorman joined a campus support group called Thriving in Science, which brings graduate students together to discuss issues that they face. "It was really great to just sit down with 10 people and talk about your problems," he says. And because they were all graduate students and postdocs, they could relate to how he was feeling.

One resource for graduate students in distress is the **National Grad Crisis Line** <<http://www.gradresources.org/crisisline>> [(877) GRAD-HLP], operated by Grad Resource Counselors are on hand 24 hours per day to answer calls. Nick Repak, who founded the nonp

group after hearing about the 1998 suicide of Harvard University chemistry graduate student Jason Altom, says that at one point, as many as 25% of callers to the hotline were at a suicidal stage.

“As a graduate student, when you don’t feel like you can talk to someone, and you don’t feel comfortable going to the mental health services, then you are very limited,” Repak says. “At the moment of despair when you say there is nothing else worth living for, you need to have somebody talk you off the ledge.”

Repak urges graduate students and faculty to watch for warning signs that someone is experiencing a mental health issue. The person may behave differently than they normally would and become withdrawn. There might also be a change in their hygiene or appearance, or a decline in their academic performance.

Many graduate students who have experienced debilitating stress look for ways to help others in similar situations. Gorman got involved in UC Berkeley’s Chemistry Graduate Life Committee, even serving as president for the past year. And Ackerman formed a subgroup within the committee that recently conducted a survey on the mental health and well-being of students in the chemistry department. The committee has helped institute changes, such as more peer mentoring programs and panel discussions on graduate student life.

At UCF, Schwarz and her peers formed the Unknighted Chemistry Graduate Student Association this past January to provide a more supportive community for graduate students. “You go into a black hole that’s your lab, and you stay there,” says Julie Donnelly, a third-year chemistry graduate student and president of the association. “We thought if we formed this association, it would bring people together.”

Concerned chemistry faculty are also initiating changes within their departments. At MIT, chemistry department head Timothy Jamison launched the Quality of Life Committee to look at ways to improve the graduate school experience in regards to stress, mental health, and well-being. The committee is made up of graduate students, postdocs, departmental staff, and faculty.

In the end, many graduate students say that by overcoming their stress and learning how to manage it, they have learned more about their capability to handle adversity. “I know a lot more about myself, even though it was trial by fire,” Gorman says. “The stress was an undue burden but I know far better how I operate as a person and about what my goals and interests are.”

Schwarz says learning how to manage her stress in graduate school has made her much better prepared to deal with stressful situations in the future—and she sleeps much better these days. “The skills I learned from counseling and from being more involved in groups and talking to my people is a life changer for me,” she says. “Right now, I’m pretty proud of the way I can handle most stress.”

>> **Learn tips for stress relief from grad students**

<<http://cen.acs.org/articles/93/i36/Stress-Relief.html>>

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Comments

ncs (September 24, 2015 6:39 PM)

A dissertation can keep you up at night, but sometimes it is better to stop earlier and be able to work the next day. Stay optimistic.

» **Reply**

Jchem (October 2, 2015 5:07 PM)

The committee idea is a great starting point, but MIT has a long way to go, and the efforts have proved too little too late for many students including the one who committed suicide last year. It is nice to receive feedback from the students and to get together to discuss strategies, but until there is a mechanism in place to hold PIs accountable for their treatment of students and more thorough training for students and faculty alike on the subjects of research and mentoring ethics, and proper management techniques, nothing will change. It is ridiculous that the average kindergarten teacher is required to receive more training in education and leadership than an MIT faculty member. If our goal is to produce the most successful scientists, then we must change our priorities and hire only the most competent faculty advisors. Mentorship is an important aspect of scholarship, and a #1 university should have higher

standards for excellence in this category. We can pretend that the majority of these problems are self imposed by the students but anyone who has experienced a top-tier graduate education, if they were brave enough, would admit that exploitation and verbal/emotional abuse are not only tolerated but often accepted as the norm. Therefore, I disagree with the "What doesn't kill you makes you stronger" tone this article takes because in this particular case, it hits too close to home.

» **Reply**

Moceans (January 7, 2016 6:01 PM)

I agree with Jchem 100%. Thank you for articulating this so well. Advisors do need to be held accountable. The term "independent research" should not be taken so literally, specially now that there is a push for interdisciplinary research. Advisors should be there for their students to guide and facilitate the growth of skills because that's part of the job.

» **Reply**

BioPhD (October 11, 2016 5:02 PM)

I also agree with Jchem. Advisers need to be held accountable for providing guidance to the students who they agree to mentor. I have dealt with an adviser who was absent for over half of my PhD tenure. When he was around, it was usually to pass off his personal duties (i.e. completing his journal reviews or teaching his classes) or to dish out verbal abuse. It's sad to think this is a common problem in academia and that nothing is being done to address it.

Completing my Ph.D. has been challenging in ways I never expected, and I have experienced mental health issues for the first time ever as an outcome. I can only hope that surviving my own terrible experience allows me to be hyper-cognizant in the future when I become a student mentor.

» **Reply**