Graduate school can be extremely tough on students.

Grad students in the sciences are often expected to put in 50- or 60-hour weeks in the laboratory. (One professor boasted to me that he worked 80-hour weeks when he was in grad school.) Some professors are notoriously demanding and mercurial, expecting students to be in the lab on weekends and on holidays. Writing dissertations and other papers is an endless back-and-forth of often nit-picky edits.

It goes without saying that grad students are also poor. But, they are told that if they grind it out for six (or more) years, they will land a sweet gig somewhere in academia. Of course, that's not true. Universities produce far more PhD's than there are available positions [2], so PhD's have become a reliable source of cheap labor for schools. Frustrated by the false hope of a bright future, PhD's are increasingly choosing to leave academia.

That's not as easy as it sounds. Science [3] explains that PhD's are paradoxically overqualified and underqualified at the same time. They are overqualified because they are "overeducated" for most jobs; they are underqualified because the skill set they do have isn't of any interest to employers. It is a fantasy [4] to believe that a PhD will easily find work outside academia.
Those freshly minted PhD's who do decide to try their luck in academia can expect to work in one or more "post-doctoral" positions. These jobs are sort of analogous to apprenticeships, in which a post-doc is expected to learn how to become, as my mentor liked to say, a big-time professor at a major university. The trouble is that there aren't many openings for big-time jobs and even fewer at major universities. Landing at a low-paying community college is not an unlikely outcome.

Making all of this worse is the fact that most grad students are in their mid-to-late-20's, which is the time that many people are looking to start a family. Grad students in the sciences often leave debt-free, but grad students in other fields usually leave school with a hefty burden [4].

Society told PhD students that the world would be theirs one day. In truth, after six (or more) years of grueling work, PhD's find themselves exhausted, indebted, and unemployable. Facing this reality, is it really any wonder that there's evidence of a serious mental health crisis among graduate students?

Grad Student Depression

A new study [5] in Nature Biotechnology shines a light into the darkness of graduate school. The survey was based on a convenience sample, which means that the results are based on people who chose to respond. (It's sort of like grabbing people on the street and asking them what they think about some issue.) Because this sampling method is not statistically sound, the results should be thought of as "hypothesis generating" rather than definitive.

Still, the responses are deeply concerning. Of those grad students who responded, 39% reported suffering moderate to severe depression. That compares to only 6% among the general population. Even if the number were cut in half, that would still mean that grad students are three times likelier to be depressed than the average person.

Given the design of the study, it is not possible to determine causation. It is possible that people who are depressed are more likely to be in school. Though that sounds absurd on its face, it's actually quite plausible. People who are highly intelligent (the sort of people you find in grad school) also may be more likely to suffer mental illness [6].

Whatever the ultimate cause of their problems, preliminary indications are that grad students need help. That should come in multiple forms, starting with better (non-academic) job training as well as special attention to their mental health. Furthermore, the authors call for a cultural change.

They are absolutely right. The era of 80-hour workweeks for an empty promise should come to an end.
[5] https://www.nature.com/articles/nbt.4089