

Science AMA Series: I'm Allard Dembe, a professor of health services management and policy in Ohio State University's College of Public Health. I research the health implications of long work hours. AMA!

Allard_{Dembe}¹*andr/ScienceAMAs*¹

¹Affiliation not available

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Abstract

Hi Reddit! My most recent study (<https://news.osu.edu/news/2016/06/16/overtime-women/>) found that women, in particular, have higher rates of cancer, diabetes, heart disease and arthritis when they work long hours for many years. I think that life demands outside of work could contribute and help explain why we found these life-threatening problems for women but not for men. (More information about my work is available at: <https://cph.osu.edu/people/adembe>) I will be back at 1 pm ET (10 am PT) to answer your questions, ask me anything! UPDATE: I'd just like to say I'm really appreciative of having had the opportunity to talk with so many of you today. We had a huge turnout of more than 350 people asking questions and I'm sorry I was not able to provide information back to all of you. If you have additional questions, please contact me on my website, listed above. I know that many of you are struggling with trying to find work scheduling arrangements that will be most effective and appropriate for each of your situations and I'd very much like to have future opportunities to interact with you on these issues.

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ALLARD_DEMBE [R/SCIENCE](#)

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Does working less days per week make up for working more hours per day? Would working four shifts of ten hours be any better or worse than five shifts of eight hours for example.

[CarrotSkull](#)

There might be some additional risks involved in working longer shifts because of fatigue that builds up at the end of the day. I wrote about this in a recent piece you might be interested in reading:

<https://theconversation.com/why-a-four-day-workweek-is-not-good-for-your-health-64516>

Why do think the norm across most industries is the expectation of employees to work very long hours even though there is sound research to discourage this?

[marcus1275](#)

Good question. You should look at an article from the Dec. 2006 Harvard Business Review that talks about why some people choose to work extremely long hours and this article talks about why there's a rise in this. Some of the reasons cited include competitive pressures, an ethos of doing extreme work as a way of expanding your prestige and your value to the organization and the rise of global 24-hour operations as well as the increase of more knowledge-based work. The article talks about how people will work ridiculously long hours in hopes of gaining rewards from the employer for doing that, which is

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a bad way of thinking in my estimation. <https://hbr.org/2006/12/extreme-jobs-the-dangerous-allure-of-the-70-hour-workweek>

At what number of hours per month or per shift do the negative effects become significant? Does the type of work make a difference?

[Monolithic_Zebra](#)

Research has shown that a person who works many hours per week, more than 50 or 60 hours a week or a person who works many long hours in a day, more than 9 or 10, may be at risk for some health problems but in terms of hours per month or hours per shift there is less information available about what the effects of long-term outcomes might be with respect to monthly schedules.

What do you make of [Sweden's move to the 6 hour work day](#)?

[prodigies2016](#)

I wasn't aware of Sweden's move and I don't know the reasons behind that but in parts of Europe and Scandinavia, there's some tendency to want to lower average work days per week as a mechanism for more broadly distributing available hours amongst the working population as a way of mitigating unemployment.

If research shows and peer studies confirms these findings what do you and your colleagues believe is the chance that American cultural ideas could be changed. Will Americans ever get shorter work days.

[ctel](#)

Unfortunately, American cultural values encourage some employees to overwork in hopes of deriving certain benefits, but if they work too hard they may suffer consequences such as health effects and poor performance. Additionally, employers often ask too much of their employees.

I'd like to know more about the type of work your participants were involved in. How mixed were the jobs in your study based on quality of work movements (standing/walking verse sitting)? Did sedentary workers have more risk of disease or illness?

[bag-o-farts](#)

Dear bag-o-farts, in our studies we used a nationally representative sample crossing all types of occupations. Our methods did not allow for analyzing the effect of particular postures or sedentary work.

Does the effect of light pollution factor into your research in any way? For example, there was a study suggesting that people who work night shifts have higher rates of cancer than people who work the same jobs during regular hours. The theory being that melatonin production and other circadian processes are altered by regular exposure to artificial light during hours of darkness.

This idea really interests me, especially considering humans have evolved with regular sleep-wake periods, and artificial light has only been ubiquitous for the past hundred+ years.

[SoloDolo](#)

There has been considerable research suggesting that people's biorhythms affect their health. I've seen some evidence suggesting that night shifts may be associated with a risk of cancer, but there's still a lot of uncertainty regarding those associations.

Is this not a case of correlation rather than causation? How does your study deal with confounding? It strikes me that there are things correlated with having to work long hours that would influence disease incidence... Poor diet, inactivity/less time for exercise, no health insurance (no preventative care).

Edit: Also the kinds of work/occupation people who work long hours are engaged in, could influence disease incidence. It strikes me there is much more going on and only so much that could be controlled for in a regression.

[yeah okay whatever](#)

In an observational analysis, it will only be possible to establish an association between long hours worked and health effects. Most all studies will not be able to determine causation. In the studies we've performed, we've tried to account for relevant confounders, such as demographic and behavioral characteristics.

I know your study shows that health risks begin to climb above 40 hour work weeks, but how does a 40 hour week compare to 10, 20, or 30 hour weeks? Do we know which work schedule leads to optimal health?

[fendoria](#)

As a general principal, being employed is healthier than not being employed, but there is little evidence to really measure the health effects of schedules in the range of 20 or 30 hours per week.

Hi and thanks for doing this! I work 12 hour days 4 day on 4 off. It is a rotating shift so it alternates night and days every other shift. Is there any evidence of health impacts on employees who work shifts like this? Thanks!

[Locodekanko](#)

I'm aware that shifts like that are common amongst health-care workers and some of them may do very well with schedules like that. But, I'm still concerned with the fatigue that may occur over a 12-hour shift and the dangers that might exist because of those long hours.

Professor Dembe, thanks for doing the AMA. I rarely ever participate in AMAs, but this caught my attention.

Do you feel satisfaction at work also plays a part in addition to hours worked; i.e. if someone enjoys their work do long hours have the same effect as someone who doesn't work long hours?

Also, does the college of public health hire math postdocs? Just kidding. I will go to the website to check out if positions are available though.

[TheHomoclinicOrbit](#)

I'd say in general people who are satisfied with their employment are less likely to suffer an injury or illness at work. A greater danger may occur when employers mandate that employees work long hours.

Are the observed health implications affected by the type of work being done? Say, blue collar vs white collar? Thank you.

[TeeJay3](#)

Yes, if you are both working long hours and have especially demanding job requirements your risks are even higher.

How does one most efficiently recover from being burned-out/overworked?

[pope4president](#)

Scale down over a period of time. If you simply take a break from working 70-hour work weeks and return to that schedule, you'll be right back where you started.

Is it better to wake up early and go to work at 8am or going at almost PM times? Im referring to the study of students being more efficient when starting school later rather than early in the mornings.

[Perunamies](#)

I'm not familiar with scheduling issues relative to the starting time of students, so I can't really comment on that.

Fellow buckeye graduate here. OH! My question is in regards to change of corporate policy. Are there current discussions on how to best utilize technology, and furthering the ability to work remotely, as opposed to going into the office everyday?

[Cooo Stan Za](#)

IO! The whole issue of working long hours remotely is complicated and difficult to assess. More and more, working hours and hours at home are difficult to differentiate. Establishing appropriate safeguards and working schedules in that context is challenging. This is an issue that we'll need to tackle on a societal basis and through appropriate regulation. A related issue is the trend towards reclassifying employees as independent contractors.

Is there a type of work that long hours don't seem to have as much effect as other types of work?

For example, physical labor vs. watching security cameras vs. analyzing complicated spreadsheets.

One taxes your brain, one can bore you to sleep, and the other physically exhausts you.

[subdep](#)

The effect of long working hours probably varies depending on the type of work demands and occupations, but few studies have been conducted analyzing those differences.

In the railroad industry crews are often found in situations that require them to work 12 hour shifts. Many of these crews also work at an on call basis and the two situations combined often make for unstable sleep and work cycles. This leads to crew members being awake for many hours and is very stressful.

Some though has been given to reducing the federally mandated maximum shift length of 12 on duty hours.

In your opinion, would it be more beneficial to reduce the maximum shift length or designate dedicated off times periodically(if so how often) throughout the work week?

[alpha4005](#)

These are all good questions. It's important that people in these occupations get sufficient breaks. But, it is also true that 12-hour shifts are not uncommon in the transportation sector. We have to safeguard the employees to not put them in situations that might be particularly hazardous.

Hey! How much does living an active lifestyle, for example lifting 2 hrs 5-6 days a week mitigate the disadvantages of working 60-70 hrs a week at a desk and travel job? This reduces the amount of time available to relax/sleep. In your opinion is this Tradeoff worth it? Would love others to chime in on this as well!

[MechShep](#)

This is a good question. Years ago, we used to think that avoiding strenuous activities was desirable. Now, the trend is to think that regular exercise and job activities might be beneficial. I'd say the best approach is to avoid the extremes. That is, not to perform activities to excess and to make sure you get sufficient rest.

Have any of your studies monitored mental health? If so, what do the data tell us about long work hours and severity of depressive symptoms or other mental health issues (e.g., anxiety)?

[joyandcuriosity](#)

Mental health is an extremely important topic and I've recently begun to perform some significant studies in this area. In Asia, especially, there are a number of studies that link long working hours to adverse mental-health outcomes. I'm starting to perform some studies using data from the United States to examine this issue. Currently, though, there's an absence of information from U.S. sources.

Is there any evidence that working from home helps to alleviate the negative affects of working longer hours?

[manyx16](#)

Whether you're working at home or at a place of business, you're still working and if you put in long hours it might affect your level of health.

Say I'm forced/choose to work long hours, 5 to 6 days a week.

What's the best way to mitigate the downsides of a difficult work schedule?

[Weenie-Hut-General](#)

The obvious way is to work less hours and fewer days per week but if you do have to work fewer days a week with long hours, then cut off your work day at no more than about nine hours.

I'm a woman in my mid-20's. I have some medical issues already that are putting me on the path of arthritis. I also work in a factory and average out to 50 hours a week. Will those hours cause a rapid development of arthritis? Is there anything I can do to try and slow that development down?

[wiseoldbaker](#)

Our studies have shown that performing demanding work activities when you're young can have long-term effects later in life. In fact, some of our recent studies have documented that women working more than 50 or 60 hours a week on average for many decades face a much larger risk of chronic disease later in life. So, you need to start early recognizing the importance of not exposing yourself to working conditions that might be excessive.

Have you done much research on the effect of seasonal work? People in the tomato industry, for example, will work regular or shorter hours for nine months of the year, and then 100 hour weeks for three months.

[KakarotMaag](#)

Those are very tough work schedules and people working in those conditions often face great barriers in trying to maintain a decent work life. In some cases, assistance from organized labor can help mitigate the burdens.

is nightshift (11-7am) literally killing me? Especially since recently I have not been going to bed right when I get home. Also, I'd like to add that I am on rotation so I switch to day shift every 2 weeks.

[CasualSmoker](#)

Again, night shifts and other kinds of non-conventional work shifts have been shown to increase the likelihood of work injuries and other health conditions.

How many hours a week do you work?

[RasFranks](#)

Too many.

What is your thoughts on going the european route with a long nap in the middle of the day? I would love it personally but has it been proven to be a better way to live healthwise?

[RobotJiz](#)

I would say if you're the kind of person who works habitually long hours without a break then a nap might be useful. Maybe a better approach would be to not work long hours in the first place.

How about students? Everyone know some of them are at "work" for at least 8 hours a day then have multiple hours of studying and homework to do at home. How does their work affect their health?

[ScaryPillow](#)

It's like performing two jobs. You have your regular job and your schoolwork. It's difficult to balance all those responsibilities. For that reason, you really have to take care of yourself.

Was there any difference between women who had long term partners or in cohabiting situations or not? Thank you for the AMA.

[foraday](#)

In our studies of chronic disease we were not able to assess the effects of household composition.

Hi, Allard! Any plans on studying the health outcome implications for the dependents of individuals who work long hours? I'd wager that extreme work schedules on the part of one or more earners may be linked to worse outcomes in the physical and mental health of children and dependent seniors.

[nochvedmy](#)

It's very important to study the effect of parents' long working hours on the health and welfare of children and unfortunately not enough research has been performed in that area. My colleague, Xiaoxi Yao at the Mayo Clinic, has performed some interesting studies in that area.

When medical residents work long shifts, how does this actually affect the hospital? Is the effect positive or negative? Would it be beneficial for hospitals to engage in practices that cut down on the long shifts of medical residents?

[itsbrownbear](#)

There are several studies in this area, especially some studies that measure the effect of long working hours among nurses on patient outcomes. It's a big issue in hospitals, especially with respect to expected work hours and the ratio of nurses to patients. With respect to medical residents, the issues are more complex.

Hi there.

I would like to know if you think that the ability to resist falling ill due to long work can be attributed more so due to the psychological make-up of a person (i.e. a very disciplined person, with principle, or simply someone with boundless motivation) versus something like a genetic predisposition in their health that favors them to work longer, harder, and with less complications.

This being said, I have to admit that I have no actual background in medicine nor psychology.

Thanks.

[erdmanatee](#)

A positive psychological approach can go a long way in determining a person's health. Genetic factors

are also influential. But in either case you want to avoid working conditions that might place you at risk.

I work 7 days/week, at least 12 hours/day, in a combat environment. Is my job as bad for my health as it is good for my bank account?

[Green_Badger81](#)

Even if you earn twice as much, is it really worth it? What is really important? I'd rather have my health.

Do the often excessive working hours of graduate students have any discernable long-term effects? Or will other factors like poor diet, lack of exercise, and too much alcohol outweigh the influence of overworking?

[shiruken](#)

Whether you're working excessive hours on a job or because of schoolwork, your health may be affected if you try to accomplish too much. Periodic breaks can help.

Now I never would have expected OSU faculty, and I'm a student in CPH as well so count me doubly excited! So my question pertains to a preferable work schedule. So one type of "schedule" that has been gaining traction is one where more breaks are factored into the work week. Different arrangements exist however it may be like 2 days off, 2 days on, day off, 2 days on (basically like taking Wednesday off every week). The articles that present these types of schedules usually say something like increased productivity and increased worker health and motivation. So would something like this work? Or do we simply need to cut down the hours worked by individual, as I noticed some of your measures/thresholds group individuals by hours worked per week. My next question is what is your hypothesis for health disparities amongst women? I know in the article the second shift hypothesis is mentioned, however there's got to be many different explanations for why women working the same amount of overtime often have worse outcomes compared to men pulling the same overtime.

Thanks again for doing this!

[SK0SH](#)

Nice to hear from another Buckeye! Some people feel that the issue is not long work hours, but rather how often and what kind of breaks are provided. I remember one researcher years ago claiming that the number and amount of breaks are really more important than the length of hours worked because of the need for sufficient recovery periods, so perhaps that is the real issue. Why women are more affected is still a bit of a mystery to me.

Any increases in risk or health problems for people who may be on rotating swing shifts with varying pre scheduled hours?

[sdvor104](#)

The possible dangers of rotating shifts are probably not as prominent as are regular night and evening shifts.

What can we do to mitigate the effects of working longer shifts; and, how much sleep is medically adequate during those times we are working extended hours?

[Dking2204](#)

The obvious answer is to work shorter shifts and get more sleep. At some workplaces, you can enter into a discussion with an employer as to how to create a schedule that works for you. Maintaining a good diet and sleep schedule might be useful if you must work long shifts.

Thanks for the AMA and for doing this work.

i know these questions are out of your areas of expertise, but I am curious about the following, given all that you've observed and thought about:

First, what in your research do you think would be most compelling to persuade women and men to more equitably divvy up the responsibilities of home and families (since, on average, women still do considerably more of that work than men)?

Second, what in your research do you think would be most compelling to persuade business owners that many do need to hire more employees so that their workers can work more humane hours?

[kneekneeknee](#)

These are good questions. It's important to establish a meaningful balance between your work obligations and your life in general. Employers need to realize that a good work-life balance will promote better results for the company as well as more satisfied and productive workers.

I would like to ask about your experience in public health. How difficult is it to get funding in this field vs some of the hard science fields? Is there a difference in getting funding as a PhD, MPH, MD/PhD, MD/MPH?

Thank you for the work you do! I am currently working on work conditions and physician empathy! (We should team up!)

[Emlym](#)

Getting sufficient funding to do research is very difficult. You have to be dedicated and persistent. I don't think that the type of training and academic degree you have would make much difference. It's more about identifying an important topic and conveying your ideas to the funders. Good luck!

Thanks for taking the time to answer.

Is there any difference between workers on the public sector and workers on the private sector? I guess private sector means more long hours but is there any difference between them?

[DharmaLeader](#)

I doubt that there's much difference.

Most people seem to agree that a five day eight to five is not ideal.

How, and to whom, would you present your research to best change this routine in a widespread way?

It's all up to the employer and job type, fo sho; I'm curious if you have a grand scheme

[Saucy Apples](#)

I'm not sure that a 5-day, 8-to-5 schedule is that bad. It could be a lot worse.

My partner has worked 12 hours a day for the last 32 days. By the time he gets home it will be 36 days straight if 12+ hour days. Is there anything you can recommend in the way of supplements/diet to reduce the risk of health issues in the future?

[ladyinred](#)

Yikes! Oh my gosh, that sounds like a really demanding schedule. Is there any way he can decrease his obligations? Taking supplements is fine, but unless he significantly changes his working habits, he might be facing some real illness risks.

Current OSU student here! Was curious to know what kind of effects you believe working long hours can have on ones mental health, meaning whether or not you believe they may be more susceptible to increased anxiety or possibly depression?

[somejewishguyyouknow](#)

It's an important issue. I'm doing more research in this area. Please see above. Go Bucks!

It seems that sex modifies the relationship between working long hours and health outcomes. Is there a sociological/biological explanation for this?

[qyl](#)

In recent studies that we've performed it has been shown that women working long hours often have greater health risks than men do. In fact, the risks can be two or three times as great for women. The studies we performed were not able to explain why the risk for women was so great. It's possible that the greater risk for women might have something to do with the additional roles that women are asked to perform in everyday life, for instance involving childcare and pregnancy and taking on the bulk of household responsibilities. Further research is needed to really determine whether those are the relevant factors.