BMJ 2020;369:m1374 doi: 10.1136/bmj.m1374 (Published 9 April 2020)

FEATURE

DOCTORS' HEALTH

What I learnt from studying doctors' mental health over 20 years—an essay by Jenny Firth-Cozens

Covid-19 has put mental health in the spotlight more than ever. **Jenny Firth-Cozens** spent two decades following cohorts of doctors through the trials of their career. She looks back on the persisting problems from a failure to acknowledge the reality of a life in medicine—and the organisational changes needed to support it

Jenny Firth-Cozens *emeritus professor of clinical psychology*

Northumbria University

In 1983 I was working as a clinical scientist in Sheffield, at the Medical Research Council (MRC) Social & Applied Psychology Unit. We studied job related issues and ran a small clinic looking at depression in the workplace.

One day, two young doctors arrived saying that two junior house officers (JHOs), one in each of their teams, had died by suicide the week before and that no one had mentioned it in team meetings since then. Look into doctors, they said—no one does. I did so, and response rates were never less than 71%: doctors, it seemed, really wanted to talk about their mental wellbeing.

I was fascinated by the question of whether the job or the person weighs heaviest when it comes to work related stress and depression. Any answer to this must involve a longitudinal design and, because of the medical register, I knew that I could follow UK doctors over years. At the time, just one such study had been done: the US Precursors study from Johns Hopkins, begun in the 1940s and focusing on male doctors and physical disease.[1] My study focused on 304 fourth year medical students at three UK universities, who completed questionnaires and were followed up in their first postgraduate year and again 10 years later. Building on this, I studied various samples of the original participants on and off for 20 years.

A feature of this design is that you hope that you've chosen the right variables early on. I added empathy and self-criticism as variables, because they seemed to me to be difficult characteristics for doctors unless they had excellent support. From my clinical work I was aware of how family issues affected the workplace, so I added in family relationships. I also measured hours worked and slept in the previous two days, organisational measures including the quality of the team (such as how clear its goal is, whether everyone understands their role, and frequency of meetings), and I asked them to describe the things they found most stressful.

First results

The BMJ published the first paper from the study,[2] and several others after that. The subsequent press coverage picked up the high levels of stress in the JHOs—36-50%, depending on the measure used—and their high intake of alcohol. Long working hours raised the question of how doctors could possibly be sober at work, given the amount they admitted to drinking. This cohort worked their longest hours as juniors, and by the time they were seniors a lot of the pressure had been transferred to higher grades, so they felt as though they never escaped it. Some studies, including mine, showed that access to meals and hours of sleep mattered more to young doctors than the number of hours of work.[3]

Over the years of the study, around 28% of the cohort showed symptom levels indicative of psychological distress (compared with 18% of workers generally). Depression levels are more variable, but around the world doctors in their first postgraduate year are most at risk. Alcohol use is higher in doctors than in most other professions, especially in women, and this is related to depression levels.

Sleep still matters, as does being part of a good team. The principal stressors for young doctors involved difficulties with seniors and fear about making mistakes. Individual hospitals differ in the doctors' levels of stress, suggesting that organisational culture also plays a role.[4]

Specialty choice

The design of the study allowed me to get some knowledge of whether people differed between specialties in their measures of personality (self-criticism and empathy), job satisfaction, and stress levels, and also helped me to understand my core interest

jenny.cozens@gmail.com

of whether aspects of the person or the job had more of an influence on depression.

For example, at the 10 year assessment, the specialty reporting the highest levels of depression in the study was psychiatry. These respondents were also the most self-critical and the least satisfied with aspects of their work, but the data showed that they'd felt the same when they were students.[5] Many who were depressed as students went into psychiatry or pathology.

Surgeons, on the other hand, were consistently the most cheerful, the most satisfied with their jobs, and the least self-critical, both as students and throughout their careers. The main stressors they described concerned relationships with their colleagues and their patients.[6]

Personality and family

It was clear that the person does bring important individual factors to the job. Participants whose empathy stayed high both as students and as JHOs were more likely to score highly for depression, but studies have shown that empathy reduces during training among most doctors. And self-criticism while students continued to be a strong predictor of depression over many years. More needs to be done during training to emphasise that things will go wrong: one can't always avoid making mistakes, and doctors need support when this happens.

But family variables mattered too.[7 8] For example, in the Precursors study[1] and others since, having an older father was consistently associated with depression. An example of what psychotherapists call "transference" was that the level of stress perceived by JHOs as being caused by senior doctors was predicted most strongly by a poor relationship with their father. Similarly, among GPs,[8] while their main stressor was their workplace partners, the main predictor of their stress and depression levels was envious sibling relationships when they were young. And almost all of them (n=102) had siblings, which surprised me, as high achievers are more often only children.

Gender

Among male doctors, my study found significant relations between levels of depression as students and 10 years later. Women were consistently more depressed than their male counterparts but only once they graduated, suggesting that aspects of the workplace were affecting them.[9]

Later, working with data from the National Clinical Assessment Service, I began to look at which groups were referred for problems in the care they gave. The largest specialty group referred was psychiatrists,[5] but the clearest finding was that far more men than women had been referred. Since men and women have been found to be equally good clinically, one reason for this discrepancy must be that other attributes, beyond clinical expertise, underpin a good doctor-patient relationship, making a difference in how problems are handled. In addition, far fewer women are disciplined for addiction. Any analysis of the economic costs of employing a greater proportion of female doctors should take into account the higher costs to health services from men's involvement in litigation, discipline, and retraining.[10]

Safety, tiredness, and stress

Several studies have shown that stressed staff produce more errors and are less compassionate.[11] Tiredness is a factor in this, particularly from a lack of sleep. When most of my cohort were registrars I asked them to write, anonymously, about something they'd done that had caused distress, error, the death of a patient. The incidents they reported—often serious—were seen as caused primarily by their tiredness. None had been acknowledged before, and there seemed to be a need to confess.

Exhaustion is also a factor in post-traumatic stress disorder (PTSD). From research I conducted for a separate study, by following health workers involved in the 1998 Omagh bombing, the worst PTSD outcomes were among those who worked more than 12 hours, had experienced a similar life event, or used alcohol to cope. Talking about what had happened was beneficial to their symptoms. In that study, junior doctors showed increased symptoms over the next two years, whereas they reduced in more senior doctors. Of all the 41 doctors in the study, on follow-up only two had used professional help.[12]

Positive change, but not enough

Sometimes, when I see the stressful conditions that health service staff still have to work under, I wonder whether anything has changed. But the problem has at least been recognised, and interventions have definitely increased as a result. It's true that doctors, young and old, are sadly still taking their own lives, but services do exist today to prevent some of this loss, and a group has been set up to support the friends, relatives, and staff in dealing with it.[13] That's a change that might have pleased those young doctors who came to me back in 1983.

The United States has always used private services, developed just for the doctor in difficulty and paid for by him or her. At one time, a few UK cities such as London and Newcastle provided special services for NHS doctors, often psychoanalytically based.

In the 1990s I worked with doctors in Barcelona and Oslo, setting up other models of intervention, and with the National Clinical Assessment Service to initiate the first Physician Health Programme (PHP), in London under Clare Gerada. This has proved very successful, both in terms of the immediate and obvious need for it and the beneficial change it has provided.[14] As a result, the PHP model has spread throughout England as a service for doctors and dentists.

However, the organisational practices that have helped create the need for these services have not changed—or they have worsened. For example, we know that good teamwork significantly mitigates healthcare stress, but it isn't easy to create with staff shortages and organisational change.

I hope that future research will stop reinventing the wheel. Being a doctor is a career most of them enjoy, but it's still often very stressful—so, let's start now to study organisational interventions to reduce stress in the first place. The cost effectiveness of this work would be enormous, both in reducing the numbers who leave the profession and in the human and litigation costs of failing to do anything.

The apparently new initiatives to tackle stress that arrive most decades from the Department of Health are unlikely to work because healthcare is a career full of responsibility, which is naturally stressful. These problems will never go away. We need systems that recognise that fact and work constantly to tackle them—for the sake of doctors and their patients.

Biography

Jenny Firth-Cozens is a retired clinical and organisational psychologist and emeritus professor of clinical psychology. She worked clinically in the NHS and academically at Sheffield, Leeds, and Northumbria universities and at Imperial College London. She was special adviser in education to the London Postgraduate Deanery and consultant to the National Clinical Advisory Service, and she has advised on doctors' health in other European countries. She is co-editor of *Stress in Health Professionals: Psychological and Organisational Causes and Interventions* (Wiley) and author of *How to Survive a Career in Medicine* (BMJ Books).

Competing interests: I have read and understood BMJ policy on declaration of interests and have no relevant interests to declare.

Provenance and peer review: Commissioned; not externally peer reviewed.

1 Thomas CB, Duszynski KR. Closeness to parents and the family constellation in a prospective study of five disease states: suicide, mental illness, malignant tumor, hypertension and coronary heart disease. *Johns Hopkins Med J* 1974;134:251-70.4826123
2 Firth-Cozens J. Emotional distress in junior house officers. *Br Med J (Clin Res Ed)* 1987;295:533-6. 10.1136/bmj.295.6597.533 3117213
3 Firth-Cozens J, Cording H. What matters more in patient care? Giving doctors shorter hours of work or a good night's sleep?*Qual Saf Health Care* 2004;13:165-6. 10.1136/qshc.2002.002725 15175481
4 Firth-Cozens J. The psychological problems of doctors. In: Firth-Cozens J, Payne RL, eds. *Stress in Health Professionals*. John Wiley & Sons, 1999.
5 Firth-Cozens J. Improving the health of psychiatrists. *Adv Psychiatr Treat* 2007;13:161-810.1192/apt.bp.106.003277.
6 Firth-Cozens J, Lema VC, Firth RA. Specialty choice, stress and personality: their relationships over time. *Hosp Med* 1999;60:751-5. 10.12968/hosp.1999.60.10.1222 10656071
7 Firth-Cozens J. The role of early family experiences in the perception of organizational stress. *J Occup Organ Psychol* 1992;65:61-7510.1111/j.2044-8325.1992.tb00484.x.
8 Firth-Cozens J. Individual and organizational predictors of depression in general practitioners. *Br J Gen Pract* 1998;48:1647-51.10071396
9 Firth-Cozens J. Source of stress in women junior house officers. *BMJ* 1990;301:89-91. 10.1136/bmj.301.6743.89 2390589
10 Firth-Cozens J. Doctors with difficulties: why so few women?*Postgrad Med J* 2008;84:318-20. 10.1136/pgmj.2008.068478 18644923
11 Firth-Cozens J, Cornwell J. Enabling compassionate care in acute hospital settings. King's Fund. 2009. https://www.kingsfund.org.uk/sites/files/kf/field/field_publication_file/poc-enabling-compassionate-care-hospital-settings-apr09.pdf.
12 Firth-Cozens J, Greenhalgh J. Doctors' perceptions of the links between stress and lowered clinical care. *Soc Sci Med* 1997;44:1017-22. 10.1016/S0277-9536(96)00227-4 9089922
13 Gerada C. Clare Gerada: In memoriam—doctors who have died by suicide or accidental death. *BMJ Opinion* 2018 Aug 9. https://blogs.bmj.com/bmj/2018/08/09/clare-gerada-memoriam-doctors-died-suicide-accidental-death/.
14 Gerada C, Ashworth M, Warner L, Willis J, Keen J. Mental health outcomes for doctors treated at UK Practitioner Health Service: a pilot study. *Res Adv Psychiatry* 2019;6:7-14.