

Exercise to the people

Research into physical activity helps drive government policy in Brazil.

Colin Macilwain

When the London-based Wellcome Trust announced the first 27 winners of its Investigator Awards last month, Pedro Hallal was the only non-UK researcher on the list.

Hallal, a 31-year-old investigator of the links between physical exercise in mothers and children and life-long health, is based at the Federal University of Pelotas in Brazil. A consultant to the Ministry of Health in Brazilia, his influence has already helped spawn programmes to encourage physical exercise in 1,400 Brazilian cities.



Pedro Hallal. *courtesy of Pedro Hallal*

Nature caught up with him at the Institute of Child Health (ICH) at University College London, where he is just finishing a Royal Society visiting fellowship, to find out about his work in Brazil and his plans for the £2.5 million (US\$4 million), 7-year award.

How did you first get interested in physical exercise?

Like all Brazilians I thought I'd be a football player. I had a trial with Flamengo, where Ronaldinho played — I played against him once. But I was not successful, and I started an undergraduate degree in physical education. At first I wanted to be a football coach — but then I decided the research work was really cool.

What kind of research?

I started doing measurements with sports players of their fitness levels — basic stuff. Later I started on a PhD, to see if there is something going on *in utero* or just after birth that will predict our activity levels forever, or at least make us more or less active. My PhD paper¹ was published in the *British Medical Journal*.

How did you get involved in advising the federal government?

When I was doing my thesis, physical activity was getting wide attention, under President Lula [Luiz Inácio Lula da Silva]. They invited me to a meeting in Brazilia. So I sat at a table with them, and was kind of shy. Then someone said, we want you to help us prepare a TV advertisement to say that physical activity is good for health. And I said, you will not change people's behaviour by doing that — and then it all started. I said, we need to fund cities to have their own interventions. I had no idea that we'd have what we have now — a law that

every city needs to have them, signed by President Dilma Vana Rousseff in April.

What are the main strands of these programmes?

The most promising ones offer classes for free, to everyone. The people using them are mainly low-income women, and this is the least active group of the population. So they get to exactly those who need them.

Do the programmes advertise too?

When we ask people if they think there are health benefits to physical education, over 99% say yes — so they already know! We need to understand why they don't do it. One of the reasons is safety: if you work, you have free time at night. Will you exercise in the evening, in most Brazilian cities? No. The transport system is another crucial thing that we need to work on.

Why did you apply for the Wellcome special investigator award?

When I saw the call, I thought, this is exactly what I need: long-term funding. I have a field — physical activity and health — but I'm not connected to a single project, I need something that'll not be a project grant, but an investigator grant. And Jonathan Wells [Hallal's mentor and long-time collaborator at the ICH] thought it fitted me perfectly.

What will you do with the award?

There are two main things: one is a birth cohort study of babies born in 2015 [the fourth in a series conducted every 11 years since 1982 in Pelotas]. That will be the first birth cohort study ever to focus on physical activity, right from the beginning.

The other big thing is a series of articles for *The Lancet*. Next year, at the time of the Olympics, we will publish five landmark papers on physical activity. This whole area started with Jerry Morris [a social epidemiologist] here in the United Kingdom, when he showed that bus drivers were at high risk of heart disease, as opposed to bus conductors². That was in *The Lancet* over 50 years ago, and the field has developed a lot since then.

But we'll be saying that this is not enough. How can we encourage people to be more physically active? We need to avoid this nanny approach, where people say "exercise, exercise" because it is good for you. We want people to choose an active lifestyle: the problem is that in most low- and middle-income countries people do not have the choice, because the environment is completely negative. We need to change that environment, and provide information, so that people have the choice.

How did you become a fellow of Brazilian

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Academy of Sciences at the tender age 28?

I think it is a combination of publications, and these contacts with the Ministry of Health. That's real-life experience, it is completely different, to sit in a room with someone like the minister of health. The topic is the same, but you don't convince someone with the same arguments.

What is your sense of how Brazilian science is developing?

I still think we have a long road in terms of quality, to be competitive internationally. We are getting better, but evaluation of research productivity in Brazil is biased: quantity is much more important than quality, and this is wrong. If you have good researchers starting out, they soon realize that ten papers a year in journals with a low impact factor count more than two papers in *The Lancet* or *JAMA*, and they will aim for that.

References

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