**50 Years of Life in Britain – Transcript**

**Episode 5 – Midlife, the 2010s and health and wellbeing**

Lee Elliot Major 00:06

In one week in April 1970 17,000 mothers and their newborn babies were asked to take part in a survey to find out more about the first week of life. This became known as the 1970 British Cohort Study, BCS70. The study followed these babies as they grew, and continues to do so today. This year, the study turns 50. And so welcome to 50 Years of Life in Britain, a podcast celebrating half a century of the 1970 British Cohort Study. I'm Lee Elliot Major, Professor of Social Mobility at the University of Exeter and I'll be your host as we trace the story of BCS70 across five decades and consider the future of this amazing study. In the previous podcast, we learned about the golden years of the new millennium when Prime Ministers Tony Blair and Gordon Brown championed social science and the birth cohorts.

Jo Blanden 00:59

We made loads of presentations in government about it, including at one point a meeting in the Number 10 Cabinet Room when Brown was Prime Minister.

Lee Elliot Major 01:08

The government funded the 1970 study to survey participants on three occasions and even started the first new birth cohort study in 30 years with the Millennium Cohort Study.

Heather Joshi 01:20

Peter Mandelson, who was in the cabinet still at that point, thought that having a cohort to celebrate the millennium would be a good way to add to the portfolio of bridges and domes and things.

Lee Elliot Major 01:32

Now onto the 2000 and 10s. Although the decade would be marked by austerity, Brexit and growing concerns about climate change, Britain enjoyed sporting success with a record medal haul at both the 2012 and 2016 Olympic Games. But as our study members reached middle age, how were they getting on?

Study member 02:00

I turned 40 in 2010 and also got married a few months after that. We had a wonderful red wedding with lots of our nearest and dearest lots of good friends and family. And, you know, it was the happiest day of my life – I know it's cliched, but it absolutely was.

Study member 02:22

At the start of the 2010s, I was working in a university, and then the Conservative government won the election and their key activity was austerity, which meant a huge contraction in public sector employment, and I was made redundant along with thousands of other people.

Study member 02:39

We've become much more aware of global warming and climate change and the role of humans in making that happen. And the terminologies changed from "climate change" to now we're talking of "climate emergency".

Study member 02:57

Having been made redundant in 2010, I was facing the choice – do I find another job, even though there's a big recession on, or do I become self employed. So I'd had a small redundancy payment, I was aged 40 I thought, well, if I don't try becoming self employed now then it's probably never going to happen. And so gradually, but quite quickly, I became a wedding photographer and videographer, and that's continued for last 10 years and grown, and I've branched out into doing websites and other creative self employed tasks.

Study member 03:27

My own children have grown up and in the 2010s, they've all gone off to university. And by the end of this decade – or end of that decade, 2010s – we were left "empty nesters", as they call it, with no children.

Study member 03:45

The whole Brexit debate and vote and all the debates that happened after that. 2016, whichever view you take on it were obviously, you know momentous. And then also that same year, the election of Donald Trump in America, both those things are things that still kind of reverberate now.

Lee Elliot Major 04:11

After the global financial crisis and a new government ushering in a decade of public sector cuts, social science and the cohort studies might have faded into obscurity. But with government funding two surveys and citing findings in various national policies, and international academics demanding the data more than ever before, it appeared that the value of the studies had been cemented. In this episode, we'll be finding out why study members were asked to stand on one leg with their eyes closed. All will be explained by epidemiologist Professor Mark Hamer. And we discuss the Age 46 Biomedical Sweep. We'll find out what it's like to have a hotline to the study participants when we speak to Mary Ukah, BCS70 Cohort Maintenance Officer. We'll also hear from study members about the physical assessments and tests they were asked to undertake as part of their midlife health M.O.T. But first Professor George Ploubidis, the Centre for Longitudinal Studies' Director of Research. We discussed his work looking at the rising levels of depression among Generation X in middle age. Can you tell us when you first encountered the cohort studies?

George Ploubidis 05:24

Well it was 16 years ago, 2004. I had my first job after my PhD as a post doc at the University of Cambridge at the Department of Psychiatry. In the interview they were asking, they were mentioning this magical thing, the 1946 British Birth Cohort – I had no idea what this was right. Obviously, I checked a little bit – as much as you could have checked back then online – about you know what this was and so on. Luckily, you know, I got appointed to the job and I started working on mental health over the life course in the 1946 cohort first. You can imagine my surprise that this thing was available. So data from birth, detailed data across the life course on various things that we could link with mental health, and so on. And you can imagine my delight and surprise when I realised that oh, you know what? In the UK, there are three more of those. NCDS, BCS70 and of course, back then the latest one, the newest one Millennium Cohort, they were four years old back then right. So I was, you know, it was love at first sight for each of the cohorts we have even if we had a single birth cohort in the UK, that would have been amazing in itself right. They are a very important thing for science. The fact that you have a series of those, this is, you know, the UK leads on that on that area.

Lee Elliot Major 06:46

Absolutely. Could you tell us a little bit about your research on mental health and wellbeing?

George Ploubidis 06:52

I got interested into looking at, into comparing the mental health status of various generations. The idea of course that younger cohorts are expected to live longer, or at least were expected to live longer. The rise of life expectancy in the last hundred years and so on. And the question was, okay, we're living longer, but are we healthier, are we happier, right? And I think this will be interesting, important question. Of course having the birth cohorts available, and having identical measures of mental health available in various generations allows us to do these comparisons. There are various methodological, intriguing methodological issues about how people can actually – whether different generations interpret an identical question about a symptom of anxiety or depression the same way. So there's a lot of methodological work we have done at CLS on this. And what we found, for example, that BCS70 compared to NCDS, in midlife, BCS70 has worse, higher, more symptoms of psychological distress. This is depression and anxiety. And this difference was a bit more pronounced in men as well. Which if you think about it is a little bit of a surprising finding because BCS70, of course are expected to live longer, and so on. It was the basis for a bit more work that we do as we speak, on trying to understand this difference. Why younger cohorts report more symptoms. And, you know understand the mechanism that underlies this and so on.

Theresa May 08:18

For too long mental illness has been something of a hidden injustice in our country, shrouded in a completely unacceptable stigma, and dangerously disregarded as a secondary issue to physical health.

Lee Elliot Major 08:32

What you found was that later generations suffered more mental health issues than previous generations, which I guess is surprising to many people because you know, generally, I guess people think society has got better off and we're not as hard up I guess as before, although others would argue that inequality has increased but that was quite a surprising finding wasn't it?

George Ploubidis 09:00

Yes, I mean, in a sense, you know, from various perspectives, just, you know, all this economic growth right and everything and of course, you know, life expectancy, if you look at life expectancy you're expecting generally health, health outcomes, including mental health outcomes to follow more or less a similar pattern. However, if you think of those born around 1970, as the Generation X, you will, especially in the UK, you will see that inequality has gone up, for example. When this generation entered the labour market, if you look at unemployment as well, again it was fluctuating a lot. It was higher, compared to, let's say, the Baby Boomers, and so on. So there are explanations for this, for this, but it initially looks like oh, that's a surprising finding. There are explanations for this, but I think there is more work that needs to be done to actually explain because this difference that we found, which is a very strong, unexpected difference, but there are there are explanations around inequality and labour market conditions, and so on. And we're working on that as we speak.

Lee Elliot Major 10:06

So is your area now becoming even more interesting, I guess, given what's happening in in terms of COVID?

George Ploubidis 10:13

Well, there is certainly a lot of interest in mental health. For example, what is the impact of the COVID-19 crisis? Social distancing measures, lockdown on mental health – or inequalities on mental health, right, and so on. So there's a lot of interest in that absolutely. There's a lot of interest on how this will influence the long term trends we have established on mental health. The ones we've been discussing about younger cohorts, you know, generally reporting more risk, more mental health problems, anxiety, depression, and so on. The cohorts are particularly important in this kind of work, because of course, we have all these trajectories of mental health and all this other information that we can include in our investigations of mental health. We have this new web survey that we are doing now at the Centre for Longitudinal Studies, which includes all the CLS cohorts, but also the 1946 birth cohort, which I think is the very first time that this happens, there is a data collection in all national birth cohorts happening at once. And this of course, it's not only about the impact of, let's say, the COVID-19 crisis now, as we speak on mental health, which is an important question. But it's also about short term and long term impacts. For example, what are the factors that confer resilience in the long term with respect to mental health? And I think the cohorts probably are the only studies, the only data set available on the planet that will allow this detailed work in the long term, in 5 or 10 years from now to understand exactly what are the impacts of the COVID-19 crisis.

Lee Elliot Major 11:53

What did the study tell us about life for Generation X as they settled into middle age? Here are some results from the 2012 survey.

Narrator 12:02

At Age 42, 4 in 5 study participants had become parents. 3 in 5 women believed in life after death, and a third of men believed in the afterlife. 3 in 10 voted for the Conservatives in the 2010 general election. 1 in 5 knew the meaning of the word "pusillanimous". Half ate breakfast every day, but 1 in 10 never ate breakfast. Half of women and a third of men were trying to lose weight.

Lee Elliot Major 12:34

After the successes of the London 2012 Olympics, it was widely reported that the Great British public was spending more time getting fit. And as participants reached middle age, they were asked to complete a series of physical tests and assessments for the first time since they were teenagers. Here's what they remember about the Age 46 Biomedical Survey.

Study member 13:01

I did a blood test, I did the – I had the activity monitor. It happened to be a week where I was skiing for a week so I kind of thought, this is a bit crazy that you know, they're not going to see my normal activity because I'm actually skiing all week and then I think by the end of the seven days, I think it was supposed to be on for seven days, it lasted like five days I think. But I thought that was pretty good going. But it did look like I was ultra fit and active, but they said, that's the way you've got to do it. And I was like, well, that's the week I was skiing. So that's what it's got to be.

Study member 13:36

I think I was a bit freaked out by the last ones which were a bit more physical tests, that's really stuck in my memory, of having to balance on one leg in my lounge and falling over literally within seconds and thinking, oh my Lord, but you know then I think well, there might be lots of other people who are undertaking this, who have got lots of difficult you know, difficult physical issues and difficulties with mobility and you know how that impacts and you know how that might make them feel. So, you know, you need to think a bit wider about that.

Study member 14:08

So there were lots of medical tests, you did a blood test that was all about your health and family medical history and that sort of thing. Yeah, I remember she had me balancing on one leg with my eyes closed and stuff like that. And then previous to that, a lady had come out and talked. That was just more of a chat about general things.

Study member 14:27

Oh, yeah. And there was a load of tests that we had to do like timed tests on the laptop as well.

Study member 14:33

With the last one. So all about, I think verbal reasoning and all those sorts of tests, I'd forgotten about that.

Study member 14:41

That was quite a lengthy interview, I think she was here for a good couple of hours.

David Cameron 14:47

I think you only need two words to sum up these games. Britain delivered. We showed the world what we're made of. We reminded ourselves what we can do. These small islands of 60 million people taking third place behind countries more than 5 or 10 times our size.

Lee Elliot Major 15:07

So, during this decade of British Olympic glory, was the country getting healthier? Mark Hamer is Professor of Sport and Exercise Medicine at University College London. He played a central role in designing the Age 46 Biomedical Survey. We spoke to him to find out more about the health of Generation X in middle age, and how his findings might be used to help the population as a whole to get healthier.

Mark Hamer 15:32

I first got involved about 10 years ago, and it was just before Alice Sullivan was starting to think about putting together the biomedical for the 1970 cohort. And I was largely brought in for my expertise on biomedical aspects. It was a lot of work. We had a lot of consultations with experts in the field.

Lee Elliot Major 16:01

Mark told us about the assessments and tools used to measure people's health.

Mark Hamer 16:05

One of the most important things was that the 1970 cohort have never had any blood taken from them. And blood's important because we can measure a lot of things from the blood. Firstly, we can get their DNA – and DNA can increasingly be used to predict disease. We can also get clinical risk factors including things like cholesterol, blood glucose, and those things can be used to predict risk of future disease, such as elevated glucose which could go on to predict diabetes in a few years' time. We also measure blood pressure. Another really interesting novel measure that we introduced was a thigh worn activity monitor. And in in my field, which is physical activity, we are increasingly preferring to use devices to measure physical activity. Because we know that when we give out questionnaires, people tend to find it quite difficult to accurately recall how much physical activity and exercise they actually do. So if we can capture it objectively with a small device, it's much better scientifically. We asked study members to take part in a series of physical tests. In one we asked them to stand on one leg for a minute, and then repeat this test with their eyes closed. And in essence, this is a test to measure people's coordination, balance and to some extent, their lower body leg strength. And it's really interesting because this test is a very powerful way to predict someone's future health risk.

Lee Elliot Major 17:57

The data only became available to researchers late last year, but Mark was able to tell us a little bit more about the early findings.

Mark Hamer 18:05

One of the interesting things we've looked at is how blood pressure tracks from childhood to adulthood. When the cohort members were aged 10, they actually had an objective assessment of blood pressure that the nurse took. And when we undertook the midlife biomedical assessment, we repeated the blood pressure measures. And what's really interesting is that the children that recorded the higher levels of blood pressure are the ones that do go on to develop, what we would term as "clinically elevated blood pressure", or hypertension, when they're in their middle age, and some of those adults are already taking medications to control their blood pressure.

Lee Elliot Major 18:53

So what are the main health issues for this generation?

Mark Hamer 18:57

One of the striking features of the data is that two thirds of the cohort are either overweight or obese. So in other words, their body mass index is over 25. And in some participants it's over 30, which would be categorised as obese. I think that's quite striking. I was also born in the 70s and I think this particular generation have, unlike our parents, enjoyed plentiful food supplies. You know, we've not been influenced by any rations, postwar rationing. And we've also seen quite an interesting kind of automation in our workplace. So I think during my working life, we've sort of seen the introduction of computers, emails, etc. And that's probably led to an overall reduction in physical activity levels. So those two things combined; plentiful food supplies and probable reduction of physical activity is probably partly accounting for this obesity epidemic that we're currently seeing. And of course, we know that obesity is very closely linked to diabetes. And I suspect that in a few years' time when we come to reassess this cohort, levels of diabetes will have gone up.

Lee Elliot Major 20:21

Mark explained why it's important to have biomedical surveys in the cohort.

Mark Hamer 20:25

Cohort members themselves get a really good biomedical checkup, and it's really probably as good as going to your GP because the tests that we do are the ones that your GP would do. Also particularly for this 1970 cohort, midlife is a period when you're probably not demonstrating clinical disease. You wouldn't think that you need to be seeing the GP, but actually, many participants are actually starting to develop risk factors which could be going on in the background without you really knowing. So for example, blood pressure, cholesterol, blood glucose – those risk factors could all be very gradually rising before you know that you are actually diabetic.

Lee Elliot Major 21:14

So how can the findings from the study be used by policymakers and health practitioners and also by the study participants themselves?

Mark Hamer 21:22

It's certainly really good to be able to feed back data to the cohort members so that they can understand what's happening with their health. In terms of the policymakers, my interest is particularly in how we can use evidence to influence the physical activity guidelines, because at the moment, we have guidelines that rely on self reported evidence. Studies that we have done with the objective assessments are hugely beneficial because we can help to really start to improve our physical activity guidelines. And we can really start to give people more accurate advice about how much physical activity they should be doing for improving their health. What we tend to see on NHS websites, government websites, are a basic set of guidelines. Currently, what you'd be familiar with is the 30 minutes a day, or 150 minutes a week of moderate to vigorous physical activity. We know that it's not a "one size fits all" – for example, we know that different people will probably benefit from doing different types and levels of exercise. We know that physical activity interventions are challenging because when you have a family, full time job, life can be very busy. And it's hard to make these changes. So we tend to suggest that you look at trying to make small changes that you can actually integrate into your life. So that might not involve going to get a gym membership, it might be sort of thinking about how you could leave the car in the garage and try to, for example, walk to the station or walk into work, those sorts of ideas. And, and obviously, trying to be a bit more active in your life should help with weight loss.

Lee Elliot Major 23:19

As we're in the middle of this COVID-19 pandemic, I asked Mark about the survey that's been sent to the 50,000 study members across all the cohort studies. What will this survey show us in terms of exercise, diet and health?

Mark Hamer 23:32

The lockdown has been really interesting. Obviously, you hear lots of different stories about how some people have changed their kind of health behaviours dramatically. I think paradoxically, some people would have been able to actually go out and exercise a bit more. You know, when I've been out on my bike, I've certainly seen lots of people out that I've never seen before. But you hear all the stories about people possibly drinking more alcohol, possibly consuming more calories. So I think the, the survey that we're doing at the minute could help to really unpick all of those issues and actually provide some solid data on what is going on. Because obviously, we have lots of data on people's behaviours before the lockdown started. So we're probably in a really good position to to actually get a good handle on some accurate data as opposed to other surveys that have only been able to collect that one snapshot of data.

Lee Elliot Major 24:35

So what did the early results from the 2016 survey tell us about the health and cognition of Generation X at middle age? Here are some findings.

Narrator 24:45

At Age 46, 8 in 10 study participants had normal blood pressure, but men were more likely than women to have raised blood pressure. Nearly 7 in 8 could stand on one leg for 30 seconds with their eyes open. But only 1 in 8 could do it with their eyes closed. In another assessment study members were asked to name as many animals as they could in one minute. On average, they could name 24 animals, but one person managed to name 70 animals in one minute.

Lee Elliot Major 25:22

At the home of BCS70, the Centre for Longitudinal Studies, there's a team of in-house detectives who trace study members if they're missed in recent surveys. We caught up with Mary Ukah, who has been a Cohort Maintenance Officer for the past decade. Mary told us what it's like to have a hotline to our precious participants.

Mary Ukah 25:43

I work on the tracing of subjects. My team we prepare mail letters, we make telephone calls, we liaise with statutory and other agencies and field work agencies that are involved from time to time. We have regular correspondence with cohort members in that way. For example, annually we send out birthday cards to BCS70 members. So I'm involved with preparing that and sometimes involved in selecting the cards – just being available to correspond with cohort members either via telephone or email and letters, obviously. And we still use the old fashioned letters. And one of my key tasks is to maintain the records on the cohort studies database information, contact information as it were – the front end, their addresses and telephone numbers and email addresses etc. So that we can keep in touch with them. So I'm involved in trying to find cohort members with whom we've lost contact.

Lee Elliot Major 26:54

How do you go about tracing people? How does that work?

Mary Ukah 26:58

We start from where we last found them where we last had contact; if we have telephone numbers we ring them, if we're lucky we get through to them or to family members who they have previously submitted to us as stable contacts. So, well you know sometimes we email them, sometimes we do all these things and still no joy – no success. We reach out to some other agencies and they're able to assist us with looking at their records to see if they – some of our cohort members are on it.

Lee Elliot Major 27:38

How do you feel when you actually find...

Mary Ukah 27:40

When we successfully trace somebody?

Lee Elliot Major 27:42

Yeah.

Mary Ukah 27:43

That is – joy! If you find a particularly tricky one to find, you can jump up and dance around the room or something! It feels good because sometimes it's taken hours of almost detective work, you know.

Lee Elliot Major 28:03

You're like the cohort detective, aren't you?

Mary Ukah 28:06

Something like that – yes.

Lee Elliot Major 28:08

But you're still enjoying the job? What are the best bits.

Mary Ukah 28:11

Learning about humanity. That's what I get out of it. I enjoy, you know, the encounter with various kinds of people out there. It's a rich diversity of different characters for want of a better word. You'll find some people are really, really into this study, they are so happy to be contributing meaningfully to society. Some people are very kind and gentle and cooperative. So the usual diversity that you'll find across different persons that you encounter. I connect with people. I like people, so I like cohort members. And some of them are just, you know, trying to navigate life just like all of us, the rest of us. So I do make a connection when I'm interacting with cohort members directly on a one-to-one.

Lee Elliot Major 29:09

Here, study members reflect on whether taking part in the Biomedical Survey at Age 46 has made them think more about their health.

Study member 29:17

The lady came to the house, I suppose she's a nurse or researcher or something. She came to my house and there were all sorts of tests that I had to do. At one point, she said, okay, can you stand on one leg for a minute? And I thought, well, that's not going to be very difficult so I managed to do that. And then she said, can you stand on one leg for a minute, but this time with your eyes closed? And I thought, well, that's also going to be very easy. And I was amazed at how difficult it was – but I still did it, I managed it. Also, there was an activity monitor that I had to wear then for a whole week. Well, I think that these sorts of things kind of concentrate your own mind, really. So that week made me – I didn't do anything different to what I usually do. But I must admit it did make me think, hmm, I'm not really perhaps quite as active as I should be. I think that being in study makes you, makes you reflect on your own life. And also, you know, when you're asked questions about your opinions, and it's, it kind of makes you think of your place in history and kind of step back from your life that you normally living. That's been quite good for me, whether that's good for the study, I don't know.

Study member 30:37

The one in our forties looked at our health and our health and wellbeing. And I think that particular survey's perhaps of most interest to me personally as a researcher too, because they were collecting data that I can see is enormously valuable to biomedical research, so they've taken blood samples, they've asked us to complete diet diaries. So the focus has really been on our health – we had to wear a fitness tracker, I think for seven days. And that was quite interesting to get the report back and to see how much of the time I actually spent sitting and how much of the time I was walking. And so that was quite interesting to receive a little bit of feedback from that. And in terms of reporting on various health parameters, the survey in our forties has had a very different feel to the previous surveys. One aspect was that they also made us to stand on one leg again, which is something that we had to do at the very beginning. So it's come full circle that at five years old I can remember being asked to stand on one leg. And then in my late 40s, I was asked to stand on one leg again. This time, they asked me to close my eyes and that's where I wobbled and yeah, couldn't do that.

Lee Elliot Major 32:11

Next time in our sixth and final episode, we'll look to the future. We'll find out more about the progress of the COVID-19 survey that has been sent to 50,000 study members taking part in Britain's cohort studies, including the 1970 cohort. We'll discover more about how surveys might be run during potential future lockdowns. And we'll also find out more about the benefits of a new cohort study being launched in the coming years. See you next week.

Narrator 32:43

50 Years of Life in Britain, powered by UCL Minds. I hope you subscribe to join the celebration.