



A career in sport and exercise science

Prof. Nanette Mutrie reflects on her career in sport and exercise science.

How did you get into your career?

I was passionate about sport and PE at school, and I had several hockey team mates who were a year older than me who went to PE College. I visited them at the Cramond Campus of Dunfermline College of PE (no such thing as open days then!), saw the facilities and the location on the edge of the Firth of Forth near Edinburgh, and immediately decided PE College was for me! I then taught in schools for a couple of years before taking a job in the PE Department of Glasgow University in 1975. At the same time a new Director was appointed to the University's PE Department. His name was Peter Radford and he was an elite sprinter who held world records and Olympic medals in the 1960's. Peter had studied in Canada where the field of 'kinesiology' (an often-used North American term for sport and exercise science or movement science) was well established and he began a process of encouraging the PE staff to gain further qualifications with a view to developing undergraduate and postgraduate degrees. Peter encouraged me to take 'study leave' and with the help of a Fulbright Scholarship I attended Penn State University and gained my PhD in 1986. I specialised in psychology and that became my discipline.

Was it always your ambition to work in S&E science?

No....because sport and exercise science did not exist in the UK when I went to PE College! If you cannot see it, you cannot be it! After gaining my PhD at Penn State I helped the Glasgow University team to develop and deliver one of the first sports science degrees at undergraduate level in the UK. The Physiology and Sports Science degree of the University of Glasgow is still a very popular option. We also developed Master's degrees and we managed to get the three Universities in Glasgow to work together to offer the M.Sc in Medicine and Science in Sport and Exercise. On that course I worked with lots of physiotherapists and doctors who have gone on to lead the field of Sports Medicine.

What have you learnt over your career - has your thinking changed over what is important?

Initially sport was the draw into this area - I loved sport and still do. I played squash for Scotland back in the day and was intrigued by how science could help performance. However, I realised that sport did not work for all the girls (and maybe some of the boys) I taught in school and tried to find activities that might motivate them - early dance type exercise comes to mind. The same was true for students and staff of the university and it was a challenge to change timetables from endless 5-aside football games to allow access for exercises classes such as 'popmobility' or tune-up as we called them - 30 minute classes that could be done in the lunch break. These were hugely popular additions to what could be done 'at the gym'. I love what has been provided by the 'this girl can' resources but it shows that the problem of finding the right activities that inspire women and girls is an ongoing problem.

My thinking changed from performance science to the challenge of how science could help people become more active ...how to find motivation, what activities to try, what mental health benefits could be expected, how to apply this knowledge to clinical populations and how to help adherence in the long term - indeed how to find joy in movement. This is the world of physical activity psychology, and I am very proud to have recently produced with my co-authors the 4th edition of *The Psychology of Physical Activity* (Biddle *et al.*, 2021).

I would love more sport and exercise scientists to get into the public health area of helping to increase the percentage of the population who can achieve the Chief Medical Officers' minimum guidelines for physical activity for health (https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/832868/uk-chief-medical-officers-physical-activity-guidelines.pdf)

Most sport and exercise scientists start with performance and their own love of activity so gaining insight into those who do not have that motivation is critical to begin to understand why some people remain inactive while others can embrace activity through their whole life.

Who has influenced you over your career?

I would highlight four very important mentors in chronological order. The first, already mentioned is Peter Radford, who retired from Brunel University a few years ago as Professor of Sport and Exercise Science. He was a real polymath, gaining his PhD in Physiology but writing most of his academic papers about historical aspects of sport. He strongly supported and encouraged me to gain my academic qualifications. The next would be Professor Dorothy Harris who was my supervisor at Penn State. She steered me towards psychology, and I had the privilege of studying with



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some amazing psychology Professors as a result. Next would be Professor Stuart Biddle, a BASES member who is now working in Australia after a long career at Loughborough. He led the writing of four editions of the textbooks which we have co-authored. He knows what is important in physical activity research and how to get writing done! We have enjoyed several writing retreats, interspersed with golf, on the journey to completion of these books. Finally, a strong influence on my career is Dame Sally Macintyre who was the Director of the MRC Social and Public Health Sciences Unit at the University of Glasgow. I went on sabbatical there for a year and stayed for four! She knew how to run a research group and she immediately understood the public health importance of physical activity. I learned a lot about public health research from Sally and she was an excellent career mentor for me. However, beyond individual people, I have been strongly influenced by great peer groups and project teams that I have worked with and by professional organisations such as BASES.

How have you worked with Government and what more should they be doing?

I have been very privileged to be involved with Scottish physical activity policy since the late 1990's. Scotland produced one of the first European or UK policies in physical activity in 2003 - 'let's make Scotland more active'. The essence of that policy remains, and I have been an advisor and latterly the chair of committees that help keep government moving forward with that policy. I have also worked in several guidelines' committees - most recently the revision of the Chief Medical Officers' physical activity guidelines. The question of what more governments should be doing remains quite simple for me. Governments should be spending the same amount of money in preventing inactivity as they do in preventing smoking - these two behaviours have a similar risk (Lee, *et al.*, 2012) and yet much less is spent on inactivity than it is on smoking prevention or cessation. In essence, this means governments must provide resource to implement the excellent policies that now exist.

What has been your relationship with BASES and where do you see them going?

The British Association of Sports Sciences (BASS) was the first organisation I joined and at the first conference I went to in London, Stuart Biddle and I were both disheartened by the lack of psychology and the lack of 'exercise' research - although of course the term physical activity is now the one that we should use. At that meeting we decided that we needed to write a book and thanks to Stuart's leadership the first edition was published in 1991. We also decided to lobby for the name change to include exercise and it took a couple of AGM's to convince the executive to do that!

I saw the lack of women in BASES as a challenge and served as Psychology section chair at a crucial time in relation to accreditation

and relationship with BPS. During my tenure and with the help of Dr Jan Graydon who was the chair of the BPS section (it had not yet become a division) and also a BASES member, we created a pathway from BASES to BPS chartered status.

I see BASES now making excellent progress in the establishment and professionalisation of our field. It is a delight to see we now have the first woman in the position of Chair at BASES - go Zoe! Hopefully Zoe will provide a new role model for the women members of BASES and more women leaders will emerge in all the sections.

What advice would you give to upcoming S&E scientists?

For those beginning their careers in sport and exercise I would encourage multi-disciplinarity. While there might be a need to become accredited in a particular discipline there is also a need to learn as much as possible about the other disciplines that might be involved. For example, exercise prescription is often physiologically based but must consider both social and individual psychology if there is any hope of adherence to the exercise. I would also encourage finding ways to be part of project teams that are led by experienced researchers - learning on the job how to do research well.

What is your greatest achievement/what are you most proud of in your career?

There are three things that I am very proud of - sorry to blow my own trumpet! The first is the four books with Stuart Biddle already mentioned. The second is the award of an MBE from the Queen in 2015 for services to physical activity in Scotland. The third is the creation and development of the Physical Activity for Health Research Centre [PAHRC] at the University of Edinburgh where I spent 10 very happy years before retiring (<https://www.ed.ac.uk/education/rke/our-research/sport-related-research/pahrc>).

What will you do now you are retiring?

The University of Edinburgh has awarded me Professor Emerita status and that will allow me to keep in touch with PAHRC, provide advice and do a little bit of teaching - and of course remain connected to my wonderful colleagues there. I have also become a Director of Paths for All - a charity promoting walking in Scotland - and I am Education and Training Officer for Pickleball Scotland (<https://www.pickleballscotland.org>). Hopefully those connections will keep me busy and active. I will also be travelling in our campervan, walking dogs and playing golf - please join me! ■



Professor Nanette Mutrie FBASES

Professor Nanette Mutrie FBASES has just retired from the University of Edinburgh where she directed the Physical Activity for Health Research Centre [PAHRC] since 2012.

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