

Wellcome Trust Monitor Summary Report Wave 3

Tracking public views on science and biomedical research

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Wellcome Trust Monitor: Wave 3

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Ipsos MORI

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About the study

This report provides a summary of the key results from the third wave of the Wellcome Trust Monitor, a survey of the UK public aged 18 or over conducted by Ipsos MORI on behalf of the Wellcome Trust. The Wellcome Trust Monitor is designed to measure the public's awareness, interests, knowledge and attitudes in relation to science, and in particular, biomedical research.

The Wellcome Trust Monitor is conducted every three years in order to measure long-term trends in public attitudes and behaviours. The first (baseline) wave was conducted in 2009 by the National Centre for Social Research (NatCen), and the second in 2012 by Ipsos MORI.

The third wave contained a mixture of questions from waves one and two, in order to track trends over time. It also contained new questions, in order to explore previously unexamined topics. New questions were subjected to cognitive testing, a type of in-depth interviewing that pays explicit attention to the mental processes respondents go through when answering a question. Three rounds of ten cognitive interviews each were conducted. A pilot survey of 50 interviews was then conducted to test the questionnaire and associated survey materials.

A two-stage probability sampling methodology was used (as is common in high-quality surveys of the general public). A total of 129 postcode sectors were selected from a stratified list of all postcode sectors, with probability of selection proportionate to size. Twenty five addresses were then randomly selected from each selected sector to obtain a sample of 3,225 addresses to issue to interviewers. At addresses with more than one dwelling unit and/or more than one resident adult, interviewers selected one dwelling unit/adult at random to approach.

Interviews were achieved with 1,524 adults, face-to-face, using computer-assisted personal interviewing (CAPI), between 2 June and 1 November 2015. Interviews took 45 minutes on average. The response rate was 51.4 per cent¹.

Data have been weighted to adjust for differing probabilities of selection, and to adjust the sample to match the UK population by age within gender, and by region.

Further methodological details are provided in Appendix A of the full report, and in the Technical Report, both available at www.wellcome.ac.uk/monitor.

This report has been compiled by Ipsos MORI, who are responsible for its contents.

¹ Response Rate 1, as defined by the American Association for Public Opinion Research Standard Definitions (2011). This is the number of interviews achieved expressed as a proportion of the number of addresses approached less those found to be ineligible during fieldwork (see www.aapor.org/Education-Resources/For-Researchers/Poll-Survey-FAQ/Response-Rates-An-Overview.aspx)

Executive Summary

Knowledge, interest and engagement with science and medical research

Around three-quarters of the public say they are interested in medical research, a high level of interest, consistent with previous waves. Women, older adults, those with higher educational qualifications, and those who know more about science are more likely to be interested in medical research.

The public express a particular interest in the development of new drugs, vaccines and treatments, as well as mental health issues, an area in which interest has increased somewhat since 2012.

Around two in five of the public say they have actively tried to find out information about medical research in the past year, with medical advice most commonly sought. The internet remains by far the most popular method for finding information, with search engines most likely to be the first port of call, as opposed to specific websites run by the NHS or other organisations.

The Wellcome Trust is also interested in how people come across information about medical research, without intentionally having sought for it. Television is the dominant medium by which people happen to come across information about medical research, followed by websites and newspapers.

One in five adults has visited a science museum or science centre in the last 12 months. By contrast, one-third have visited a history museum, and three in ten have visited an art gallery.

The majority of the public say they are interested in hearing directly from scientists about the research they do, but would prefer to hear from them via passive means, such as television, radio, newspapers, and websites, rather than interacting with them directly. Hearing from scientists about the latest findings from scientific research, and about research of personal relevance to them, are of greatest interest.

Of the professions and institutions involved in the production and communication of scientific and medical research, doctors, nurses and other medical practitioners are most trusted by the public, followed by scientists working in universities, medical research charities, and scientists working in private industry. Journalists are the least trusted group by some distance. Reasons for trust and distrust are explored in the report.

Around three-quarters of the public say they would be willing to share their anonymised medical records, or their anonymised genetic information, for the purposes of a medical research study. The primary concern among those who are unwilling relates, perhaps unsurprisingly, to confidentiality and privacy.

The report explores how the public relate to issues of science and medicine in their everyday lives. Two-thirds say their understanding of science is useful in their everyday lives, but a larger proportion, almost nine in ten, say it is useful for others – people in general – to have an understanding of science in their everyday lives. The vast majority of the public feel confident making informed decisions about their health - for example whether to have a flu jab, or whether to make a doctor's appointment when feeling unwell - and around half feel confident in challenging the conclusions of a medical professional.

When presented with three options as to how a drug's effectiveness can best be tested, seven in ten of the public choose the controlled experimentation option. Far fewer think that talking to patients to get their opinion, or that scientists using their own knowledge to determine a drug's effectiveness, are the best approaches.

The amount of time taken to develop a medical treatment varies greatly, but research suggests it takes between 15 and 25 years from the pre-discovery phase to availability to patients. Half of the public believe it takes between 10 and 20 years, on average, to develop a medical treatment. Around one in ten believes the process takes less than ten years, and almost one in five say they do not know how long it takes.

Around two-thirds of the public believe (correctly) that pharmaceutical companies spend more than other sectors on developing new medical drugs in the UK. One in five thinks the NHS and other public sector or government organisations spend the most.

Behaviour relating to health and medicine

To provide context to the Wellcome Trust's 'Crunch' campaign, which encourages the public to look at the relationship between food and drink, health, and the environment, the Monitor explored the reasons people give for making different food and drink choices. This shows that the public prioritise considerations affecting their health, namely sugar and salt content. The most important environmental factors relate to sustainability, packaging, and food being produced in the UK rather than in a foreign country. Our analysis segments the public according to the factors they consider important when deciding what to eat and drink.

The Monitor also explored the public's experiences with antibiotics, and their understanding of antibiotic resistance. Nine in ten say they have heard of antibiotic resistance, however this is most commonly thought (mistakenly) to refer to people becoming resistant or immune to antibiotics. Although the great majority of the public believe that antibiotics treat bacterial infections, only two in five (correctly) believe that antibiotics treat bacterial infections alone, and are not an effective treatment for other conditions (such as viral infections, fungal infections, allergic reactions, colds, or flu).

Around one in five of the public say they have, at some point, asked a GP or medical professional to prescribe them antibiotics. The great majority of these requests were granted. Of those who have been prescribed antibiotics before, whether they have asked for them or not, over two in five feel they have, at some point, been prescribed antibiotics inappropriately.

Around two in five adults say they have been prescribed antibiotics in the last year. Most report following their most recent prescription as instructed, taking all the antibiotics they were prescribed, at the right times. However, six per cent say they did not finish the course, typically because they were feeling better before the course was completed.

Use of a range of complementary and alternative medicines, including herbal medicine, acupuncture, and homeopathy, is unchanged since 2009; overall, 47 per cent of the public report having used at least one of the complementary and alternative medicines asked about. Acupuncture is the only one for which use has risen since 2009.

Just under one in five of the public have used homeopathy before. These adults are more than twice as likely to say that homeopathy was effective, rather than ineffective, in treating their condition the last time they used it. Among those who have never used homeopathy, almost

two in five say they would never use it, while almost one-third would consider using it if they thought it would be appropriate for their health problem.

Key Findings

How interested are people in science and medical research?

- The majority of the public (77 per cent) say they are very or fairly interested in medical research.
- Interest in medical research is higher among women, older adults, those with higher educational qualifications, and those who know more about science (as measured by scores on the knowledge quiz), even when the influence of other factors is controlled for.
- Interest in medical science is related to social class. Among those in managerial and professional occupations, 83 per cent say they are interested in medical research. This falls to 73 per cent among those in routine and manual occupations, and to 59 per cent among those who have never worked, or are long-term unemployed.
- Three broad areas of medical research are of most interest to the public: the development of new drugs, vaccines and treatments, mentioned by 61 per cent, how the body works (46 per cent) and how the brain works (45 per cent). There has been no significant change in the broad areas of medical research of interest to the public since 2012.
- There has been little change since 2012 in the specific fields of medical research that are of interest to the public. The proportion interested in mental health has increased significantly from 48 per cent in 2012 to 55 per cent in 2015.
- Two in five (42 per cent) say they have actively tried to find information about medical research in the past year, in line with the proportion recorded in 2009 (39 per cent). Those looking for information about medical research are most likely to be seeking medical advice (69 per cent) or information on other people's experiences of an illness or disease (48 per cent).
- As in 2012, the internet is the most common method for seeking information about medical research, used by 90 per cent of those seeking information.
- Of the professions and institutions involved in the production and dissemination of scientific and medical research, doctors, nurses, and other medical practitioners are most trusted by the public (with 64 per cent having complete trust or a great deal of trust in them to provide accurate and reliable information about medical research). Journalists are the least trusted (three per cent).
- Men are more trusting than women of doctors, nurses and other medical practitioners (71 per cent expressing complete trust, or a great deal of trust, compared with 58 per cent), and of journalists (five per cent, compared with two per cent). Younger adults are more trusting than older adults towards medical research charities (45 per cent of those aged 18 to 34, falling to 28 per cent of those aged 65 or over), and towards scientists working in private industry (36 per cent of those aged 18 to 34, falling to 19 per cent among those aged 65 or over).
- The public are optimistic about the potential of medical research to make life better in the future; 94 per cent believe that medical research will lead to an improvement in the quality of life for people in the UK in the next 20 years.

The value of science in everyday life

- Most members of the public (66 per cent) say that their understanding of science is useful in their everyday lives. A higher proportion, however, (87 per cent) say it is useful for others – people in general – to have an understanding of science in their everyday lives.
- Around two in five (39 per cent) of the public say they usually understand stories about science they come across in the news, and a further half (50 per cent) say they only understand them sometimes. Just 13 per cent of those who say they usually, or sometimes understand science stories say they feel very confident discussing them with others.
- Nine in ten (90 per cent) of the public feel confident in making informed decisions about their health, and half (48 per cent) feel confident challenging the conclusions of a medical professional.
- One in five (22 per cent) of the public lives in a household where they, or another household member, works or has previously worked in a scientific or medical field.
- Around three in five (61 per cent) of those who have worked in a scientific or medical field say they pursued the job because they were interested in the field, or enjoyed the role.
- Most people (62 per cent) say that when they were growing up, their parents were not interested in science. Those whose parents were interested in science are twice as likely to have worked in science or medicine themselves, and are more than twice as likely to have gained a science-related qualification from university or college, as those whose parents were not interested in science.
- Twelve per cent of adults say that one or both of their parents have worked in a scientific or medical field. Those with a parent who has worked in a scientific or medical field are twice as likely to have themselves worked in a scientific or medical field as those whose parents have not worked in these areas.

Cultural and informal science experiences

- One in five of the public has visited a science museum or science centre in the last 12 months, and seven in ten say that they have visited a science museum or science centre at some point in their life.
- Younger adults are more likely than older adults to have visited a science museum or science centre in the past 12 months (a quarter of those aged 18 to 49, falling to under one in ten of those aged 65 or over).
- Visiting science-related locations is related to social class; those in managerial and professional occupations are most likely to have visited a science museum or science centre in the past 12 months (29 per cent, compared with 10 per cent among those in routine and manual occupations, and 10 per cent also among those who have never worked or are long-term unemployed).
- By contrast, one-third (33 per cent) of adults have visited a history museum in the last 12 months, and 30 per cent have visited an art gallery.

- Almost all (96 per cent) those visiting a science museum or science centre in the last 12 months found the experience very or fairly interesting.
- The majority of the public (57 per cent) have watched a film or television programme involving science or medical research in the last 12 months, and around one in five (19 per cent) have listened to a radio programme involving science or medical research.
- Overall, 51 per cent of the public have made a visit to a science-related attraction or event in the past twelve months.

Public interest in hearing from scientists

- The majority (63 per cent) of the public say they are interested in hearing directly from scientists about the research they are conducting.
- Almost three-quarters (73 per cent) of those interested in hearing directly from scientists want to hear about the current or latest findings from scientific research, and almost three in five (57 per cent) want to hear about scientific research that is relevant to their lives.
- Those interested in hearing directly from scientists would prefer to do so via the television, the radio or from a podcast (73 per cent), or from a newspaper, magazine, book, blog or website (65 per cent). These preferences coincide with the channels through which the public tend to come across information about medical research, the most common of which are television, websites, and newspapers.
- Other preferred channels for hearing directly from scientists include listening to a lecture, talk or debate (31 per cent), and hearing from scientists at a museum or exhibition (23 per cent).
- Older adults are more likely to want to hear directly from scientists from television, radio or from a podcast (78 per cent of those aged 65 or over, compared with 65 per cent of those aged 18 to 34). Younger adults are more likely to express a preference for those channels which involve making a visit outside the home. For instance, one-quarter of those aged 18 to 34 express a preference for asking questions at a lecture, talk or debate, compared to 11 per cent of those aged 65 or over.
- Younger adults are more likely to express a preference for online channels of communications. For instance, among those aged 18 to 34, one-third want to hear directly from scientists through social media, compared with just five per cent among those aged 65 or over.

Participation in medical research

- Over one in ten (12 per cent) of the public report that they have, at some point, taken part in a medical research project. This level of participation has remained stable over the last six years.
- Of those living in a household where someone has taken part in medical research, 41 per cent say participation involved testing a new drug, 39 per cent say a blood or tissue sample was provided, 37 per cent say a survey was completed, 26 per cent say participation involved health or behaviour monitoring, and 24 per cent say participation involved allowing access to medical records.

- Most (77 per cent) say they are willing to share their anonymised medical records for the purposes of medical research. A similar proportion (75 per cent) say they are willing to share information from their genes for medical research purposes, again on an anonymous basis.
- The key concerns among those unwilling to share their anonymised medical records, or anonymised genetic information, for the purposes of medical research relate to confidentiality and privacy. Other reasons are varied, and include issues of trust, concerns about the nature of the research, not being interested or wanting to take part, and (especially for sharing genetic information) not knowing enough about this type of research.

What does the public know about science and medical research?

- The public's knowledge about science, as measured by a knowledge quiz, has been broadly stable over the last six years.
- To gauge the public's appreciation of the scientific method, respondents were asked to choose between three options as to how a drug's effectiveness can best be tested. Seven in ten (70 per cent) choose the controlled experimentation option, with far fewer choosing the other two options: talking to patients to get their opinion (14 per cent), and scientists using their own knowledge to decide (10 per cent). Adults aged between 50 and 64 are most likely to choose the controlled experimentation option (78 per cent), while those aged 18 to 34 are least likely to (65 per cent).
- When those choosing the controlled experimentation option are asked why they chose it, the most common responses relate to comparing groups of patients, providing a true picture or conclusive results, and to the placebo effect.
- Nine in ten (90 per cent) of the public have heard of the term "GM, or genetically modified". Around one-third of those who are familiar with the term say they have a very good or good understanding of what it means.
- Almost nine in ten (86 per cent) of the public say they are aware of genetic tests that predict the likelihood of developing genetically influenced diseases, although one-quarter (27 per cent) say they have not heard much about them.
- Approximately half of the public believe that life evolved as a result of natural selection, without the involvement of God. This proportion rises to 63 per cent among those with a science-related qualification from university or college, and falls to 44 per cent among those with no science-related qualifications. Around one in five (22 per cent) believe life evolved in a process guided by God, and 19 per cent believe all life was created by God, and has always existed in its current form.
- The amount of time taken to develop a medical treatment varies greatly, but research suggests it takes between 15 and 25 years from the pre-discovery phase to availability to patients. Half (50 per cent) of the public believe it takes between 10 and 20 years, on average, to develop a medical treatment. Around one in ten (11 per cent) believes the process takes less than ten years, and 16 per cent say they do not know how long it takes.
- Around two-thirds of the public (65 per cent) correctly believe that pharmaceutical companies spend more than other sectors (including the NHS and other public sector

organisations, and medical charities) on the development of new medical drugs in the UK.

What is important to the public when deciding what to eat and drink?

- When the public hear the term “healthy food” they typically think of vegetables, salads and greens (mentioned by 60 per cent), and fruit (47 per cent).
- When asked about the importance of various factors when deciding what to eat and drink, the public prioritise considerations affecting their own health, namely sugar and salt content. The most important environmental factors affecting food choice are that it comes from sustainable sources, that it does not come in a lot of packaging, and that it is produced in the UK rather than in a foreign country.
- Older adults are more likely to consider it important that their food is produced in the UK, is produced in their part of the country, and does not come in a lot of packaging.

Drug resistant infections and the use of antibiotics

- Awareness of “antibiotic resistance” is high, with 91 per cent of the public saying they have heard of the term.
- Antibiotic resistance is most commonly thought (mistakenly) to refer to a person’s body becoming resistant or immune to antibiotics. Other common conceptions of antibiotic resistance are that antibiotics do not work, or are less effective, and that antibiotics are overused.
- Although most of the public (84 per cent) believe that antibiotics treat bacterial infections, only two in five (correctly) believe that antibiotics treat bacterial infections alone, and are not an effective treatment for other conditions (such as viral infections, fungal infections, allergic reactions, colds, or flu).
- Almost all of the public (91 per cent) have been prescribed antibiotics at some point in their lives, and around two in five (41 per cent) have been prescribed antibiotics in the last year. Over one in five (22 per cent) of those who have been prescribed antibiotics believe there has been an occasion when they have been prescribed antibiotics inappropriately.
- The great majority (86 per cent) of those who have been prescribed antibiotics report following their most recent prescription as instructed, taking all the antibiotics they were prescribed, at the right times. However, six per cent (equating to 2.6 million adults across the UK) say they did not finish the course, and this was typically because they were feeling better before the course was completed.
- One in five (21 per cent) say they have, at some point, asked a GP or other medical professional to prescribe them antibiotics. Of those who have asked for antibiotics, most (85 per cent) say their request was accepted the last time they asked, with younger adults more likely to have had their request accepted (94 per cent of those aged 18 to 34, falling to 77 per cent of those aged 65 or over).
- Of those whose request for antibiotics was refused on asking, one-third (34 per cent) believe they should have been prescribed antibiotics.

Complementary and alternative medicine

- Herbal medicine is the most popular of a number of complementary and alternative medicines asked about, having been used by 30 per cent of the public. This is followed by acupuncture (22 per cent), and homeopathy (16 per cent).
- The level of reported use of alternative or complementary medicines has not changed since 2009, with the exception of acupuncture, which has risen from 16 per cent to 22 per cent of adults reporting use.
- Sixteen per cent of the public say they have used homeopathy, with almost two in five of this group (37 per cent) having used it in the past year.
- Users of homeopathy are more likely to believe it was effective in treating their condition (42 per cent) than ineffective (17 per cent) the last time they used it.
- Among adults who have never used homeopathy, almost two in five (37 per cent) say they would never use it, while almost one-third (32 per cent) would consider using it if they thought it would be appropriate for their health problem. A further 22 per cent say they have never heard of homeopathy, or do not know what it is.
- The majority (54 per cent) of those who have heard of homeopathy but have not used it believe that homeopathy can be an effective treatment for some medical conditions. However, this group is far more likely to think that homeopathy is less effective than conventional treatments (46 per cent) than is more effective (4 per cent) or just as effective (20 per cent).

Wellcome Trust

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