

EDITORIAL

Homeopathy and intellectual honesty

EASAC, the European Academies' Science Advisory Council, which includes 27 European national academies of science, published a statement on homeopathy, entitled '*Homeopathic products and practices: assessing the evidence and ensuring consistency in regulating medical claims in the EU*' in September 2017.¹ Its purpose was to 'reinforce criticism of the health and scientific claims made for homeopathic products', and to call for the implementation of 'a standardised, knowledge-based regulatory framework'. The EASAC statement purports to have examined mechanisms of action, alleging that homeopathy is implausible and inconsistent with established scientific concepts; that there is no evidence of its effectiveness beyond placebo and that it may cause delay in patients, including veterinary patients, receiving evidence-based treatment.

Selective citation

The EASAC statement 'cherry picks' the evidence, systematically selecting negative publications and citing almost exclusively hostile commentary and opinion pieces. To take a few examples: in 2007 Homeopathy published a special issue on 'Memory of Water': this included 13 scientific papers.² Of these, the EASAC statement references the only one which took a sceptical view.

In claiming that there is no evidence beyond placebo the statement ignores the 43 published systematic reviews of homeopathy as a whole, individualized, or for specific conditions or groups of conditions. Of these 21 were clearly or tentatively positive and 9 inconclusive.³ It discusses only the Shang meta-analysis, ignoring the fact that it failed to meet elementary standards of quality and transparency.⁴ It did not reference the publications on which it was based; on the contrary all clues to their identity were removed. In another fundamental flaw the data were 'dredged': during the review process the inclusion criteria for study inclusion were changed from 'high quality' to 'larger high quality'. It has since been shown that, had the goalposts not been moved and the meta-analysis conducted as originally intended, the result would have been positive.⁵ Its negative result was almost entirely due to a single large trial on prevention of muscle soreness in long-distance runners.

Biased reports

Homeopathic products and practices cites other publications by authoritative bodies which were also fundamentally flawed. These include the 2010 UK House of Commons Science and Technology Committee report '*Evidence Check 2: Homeopathy*', which was highly critical of homeopathy.⁶ The committee took evidence from witnesses but did not itself review or analyse the scientific evidence. Examination of the methods by which this report was prepared reveals unacceptable practices. Of the 14 MPs who were members of the Science and Technology committee, only 4 signed the report, one of them dissenting. Of the 3 MPs who supported it, only one attended any hearing of the committee on this report. Immediately after its publication a House of Commons Early Day Motion highly critical of the report, including its selection of witnesses, was signed by 70 MPs before being curtailed by the UK general election of May 2010.⁷ In that election the solitary MP who attended hearings of the committee and supported the report, Dr Evan Harris, lost his parliamentary seat. This had the unfortunate consequence that he was never held to account for his role in this report.

Homeopathic products and practices also cites the 2015 Australian National Health and Medical Research Council (NHMRC) report on homeopathy which concluded that there is no reliable evidence that homeopathy is effective for any condition.⁸ Here again, there is shocking evidence of bias. Most important are the unprecedented criteria for 'reliability'. To be considered 'reliable' by the NHMRC committee, trials had to have at least 150 participants and very high quality score. The NHMRC found 58 systematic reviews which included 176 individual studies, but excluded all but 5 studies (The number of systematic reviews differs from that quoted above³ because the NHMRC included studies which included homeopathy alongside other therapies. In fact it appears to have missed some systematic reviews of homeopathy).

This criterion of reliability appears to have been introduced by the committee specifically for homeopathy. No other study conducted by the NHMRC has set such a high bar. Other NHMRC reviews do not have a minimum trial size: for example, the NHMRC Information Paper on The Effects of Lead on Human Health included all trials regardless of size with numbers of participants ranging from 52 to 780.⁹ The NHMRC's Clinical Practice Guideline for the Management of Borderline Personality Disorder (BPD) includes studies with as few as 16 subjects.¹⁰ Other highly-respected review bodies have no such criteria: the Cochrane Collaboration does not exclude randomized controlled trials (RCTs) on the basis of numbers of participants alone¹¹; BMJ Clinical Evidence's default criteria for inclusion of RCTs are that they included at least 20 people and at least 10 per study arm.¹²

There is also evidence of malpractice: the NHMRC concealed the fact that it reviewed the evidence twice. The published report was the second version; the first report has never been published and the NHMRC has refused Freedom of Information requests to release it. The original chair of the committee, Prof Peter Brooks, was a member of Friends of Science in Medicine, a sceptical group, a fact which his signed disclaimer omitted to mention. Again without precedent, the committee did not include a homeopathy expert. This report is currently the subject of a complaint to the Ombudsman.

Abuse of authority

Homeopathic products and practices make no attempt at a transparent, objective or scientific view of homeopathy. It is an abuse of authority by the European Academies of Science. The UK Royal Society, a member of EASAC, proudly claims to be the world's oldest independent scientific academy. Its motto, 'Nullius in verba' means 'Take nobody's word for it'. Readers of the statement should heed that advice.

Long history

Such attacks are not new: as long ago as 1855 a report on the London cholera epidemic of 1854 omitted the mortality figures of the London Homoeopathic Hospital. This was the famous Broad Street pump epidemic which came to an abrupt end when Dr John Snow had the handle of the pump removed. The London Homoeopathic Hospital was, at the time, located in Golden Square. It was the hospital closest to the pump and admitted significant numbers of patients. Mortality at the homeopathic hospital was 19% compared to 33–53% at other London hospitals. When challenged in the House of Lords to explain the omission of the Homoeopathic Hospital mortality data, the Treatment Committee of the Medical Council of the Board of Health stated '*That by introducing the returns of homoeopathic practitioners, they would not only compromise the value and utility of their average of cure, as deduced from the operation of known remedies, but they would give an unjustifiable sanction to the empirical practice alike opposed to the maintenance of truth and to the progress of science*'.¹³ EASAC's conviction that the prejudices of its members justify suppressing facts is remarkably similar.

The statement '*operation of known remedies...maintenance of truth and to the progress of science*' merits further examination. The mainstays of treatment of cholera in the mid-19th century included the emetic Calomel, a mercury salt, and blood-letting. The main cause of death and serious morbidity in cholera is hypovolaemic shock due to profuse vomiting and diarrhea. In pathophysiological terms emetics and blood-letting; presumably '*known remedies*' for a Board of Health concerned with '*maintaining truth*'; are the worst treatments for cholera.

What further parallels may emerge in future between the position of the Board of Health in 1855 and that of EASAC

in the age of big pharma, polypharmacy and antimicrobial resistance? The 19th century Board of Health was forced to admit to its prejudices. Whether EASAC will ever confess to its prejudices remains to be seen.

Scientific principles

This issue of Homeopathy features a sharp rebuke to EASAC's claim that homeopathy is '*inconsistent with established scientific principles*'. Michel van Wassenhoven and colleagues, building on the work of Jean-Louis Demangeat and others, demonstrate that dilution and succussion processes can be measured through NMR spin-lattice T1 and spin-spin T2 relaxation times for a metal- and a plant-derived homeopathic medicine.¹⁴ In an important innovation, a new mathematical procedure which enables data to be plotted and statistical tests to be applied is introduced.

Van Wassenhoven *et al.* conclude that dilutions have a specific configuration influenced by the potentized substance, the chemical nature of the containers and dissolved gases, and the electromagnetic environment. They end with a ringing call for the demystification of the principles involved in the preparation of homeopathic medicines.

Challenges to the journal

One sometimes wonders what is the point of publishing a journal dedicated to homeopathy when important work is ignored by national academies of science because it threatens their beliefs. Homeopathy, this journal, has faced challenges of its own. In 2016 we lost our Impact Factor: the journal was suppressed from the 2016 citation report based on 2015 Web of Science data. The reason given for this was 'self-citation'.

But this was an unusual form of self-citation. Self-citation usually refers to reprehensible practice of certain authors citing their own work excessively. But this was not self-citation by authors, it was 'journal self-citation': citation of papers published in the same journal but by other authors. This was the result of the two special issues we published in 2015, particularly the special issue 'Ultra High Dilution 1994 revisited after 21 years'.¹⁵ This reviewed the evidence which had accumulated over the previous 21 years. Homeopathy had published many of the papers reviewed, and became a victim of its own success. However our publishers, Elsevier, appealed and I am delighted to report that Homeopathy's impact factor has been restored with a value of 1.16, one of our highest ever annual impact factors.

New Publisher

The journal has faced other challenges: after 15 years we are parting ways with Elsevier. From 2018 Homeopathy will be published by Thieme Medical Publishers, an international publisher of medical journals and books which already publishes several homeopathic and integrative medicine titles including Homeopathic Links and the

German-language Allgemeine Homöopathische Zeitung and Zeitschrift für Klassische Homöopathie.

We are taking the opportunity to make a number of improvements. The cover will be redesigned but will remain recognisable, retaining the signature blue water drop, but we will increase publication of well documented case reports, among other changes.

Rising to the challenges

Homeopathy has faced many challenges over many years. Ultimately it has been survived, grown and spread because it helps many sick people. The attacks on homeopathy are becoming increasingly shrill, perhaps because we are approaching a tipping point where the weight of scientific support for homeopathy overcomes the inertia of prejudice. This journal will continue to play a leading role in that scientific struggle.

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