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The legitimacy of academic complementary medicine

Standing up for common sense

Science sets out to rigorously eliminate bias, not to assert it. The arguments mounted for the closure of complementary medicine courses in Australian universities by the Friends of Science in Medicine in a recent editorial in the Journal¹ are highly emotive and, while having a gloss of superficial reasonableness, they do not stand up to critical review. In a letter sent to Australian vice-chancellors, the Friends of Science in Medicine do not provide an evidence-based curriculum review but selective and outdated anecdotes about chiropractic in a polemic with references to six websites (Peter Lee, Vice Chancellor, Southern Cross University, personal communication).

Complementary medicine is a broad field in which generalisations have little value. The major professional and university-based disciplines of traditional Chinese medicine, chiropractic, osteopathy and naturopathy need to be differentiated from fringe practices, and the actions of rogue or unqualified practitioners should be viewed separately from the competence of the wider profession.

Two comprehensive reviews of complementary medicine practice and training have been undertaken in Australia over the past 15 years — one on traditional Chinese medicine² and the other on naturopathy and Western herbal medicine.³ Both supported the movement of these

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professions into a university setting, just as earlier reviews had done for chiropractic and osteopathy. The real benefit of an appropriately mentored and approved university education is the exposure of students to the biomedical sciences, epidemiology and population health, differential diagnosis, safe practice and critical appraisal. Removing these programs will not diminish clinical demand but may decrease the educational rigour of these courses, to the detriment of patients.

We agree that any university degrees in complementary medicine should have a strong foundation in the biomedical sciences. It is highly appropriate for anatomists to teach the relationship between each acupuncture point and its underlying tissues to ensure safe skin needling practices, and for physiologists to teach its neural correlates and any mechanisms of action beyond that of placebo.⁴ A pharmacologist asked to teach about herbal medicine would need to appraise the extensive literature base (currently over 17 000 articles). No academic practising evidence-based medicine should overlook or misrepresent this literature.

The call for removal of complementary medicine courses from universities raises deeper issues. It has been argued that the purpose of universities is to conserve the diversity of ideas in the community, and that this is as important to the survival of knowledge as genetic diversity is to the survival of species.⁵ Authoritarianism, supernaturalism, corporatism, irrationalism and political correctness have been identified as the enemies of ideas and considered to be synonymous with enemies of universities.⁵

Our academic colleagues from the social sciences usefully remind us that science — the pursuit of knowledge — is not a *thing* but a *practice*. Scientists “do science” and beliefs about what constitutes “good” science are historically and culturally contingent. The science of any topic develops, and not always in neat incremental ways. Science does not occur in a vacuum; it is a social phenomenon, a practice that is embedded in wider cultural values and power relationships in society. The debate on whether complementary medicine should be a university discipline, when seen from a sociological perspective, says much less about good science and much more about control and power. Indeed, it is not melodramatic to point out that if the Friends of Science in Medicine were to succeed in their stated aims, they would achieve a dystopia — a medical “1984” where only one way of knowing the body in health and illness is permitted in public discourse. This controversy is simply the latest episode in a long-contested battle between orthodox and divergent views.⁶

Complementary medicine, like conventional medicine, is riddled with poor scientific methodology and lacks a comprehensive evidence base. The *BMJ* compiles and updates the evidence for medical interventions (3000 to date) and currently considers that 51% of medical treatment is of unknown effectiveness and that only 11% is definitively beneficial, with another 23% probably beneficial.⁷ Citing

biological plausibility¹ as an explanation for accepting a lack of evidence in conventional medicine over complementary medicine is flawed. Biological plausibility depends on contemporary biological knowledge and we should not dismiss an association because it may be new to science or medicine.⁸ The fact is that all health disciplines are charged to increase their evidence base.

The themes of danger and risk that occur in biomedical discourse on complementary medicine⁹ likewise need to be subject to objective review. The continued assertion that chiropractic practice is unsafe because it increases the risk of vertebrasilar stroke is not evidence-based; in a Canadian study that included over 100 million person-years, the association of stroke and chiropractic manipulation for neck pain was found to be no stronger than that between vertebrasilar stroke and a general practitioner consultation.¹⁰

Voltaire wrote in an essay on tolerance: “Think for yourselves and let others enjoy the privilege to do so too.” The dialogue about complementary medicine and its legitimacy as an academic discipline needs to be patient centred, evidence-based, mindful of culture, enabling of safe professional practice, and grounded in mutual respect and common sense. There is no sustainable rationale to support the removal of complementary medicine courses from a university environment. These courses clearly develop critical thinking and fulfil the criteria for legitimate university disciplines. We can see great danger for the public if complementary medicine practice is allowed to develop outside mainstream education.

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