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### Cultural challenges and their effect on international research integrity

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International research collaborations have many benefits but also many barriers. The number of international collaborations, measured by the number of authors listed in publications, is growing exponentially.<sup>1</sup> Recognition that researchers have limited opportunities to consider the impact of cultural issues led to the first international conference on *Challenges and Tensions in International Research Collaborations*,<sup>2</sup> organised by the US Office of Research Integrity and the University of Minnesota and held in Minneapolis, USA on 2-3 October 2008.

The ability to move back and forth through cultural, linguistic, institutional and political boundaries is essential. Ways of handling data differ between nations. Within research teams, negotiations on power and status may reflect different expectations of authorship or control over research design. Conventional work habits, including pacing, workloads or sensitivity to deadlines and reporting requirements, may vary<sup>3</sup>.

Designing research may pose many difficulties, including whether concepts and words mean the same thing. In a study on chronic diseases aimed at developing a comparable quality-of-life measure, finding appropriate words for 'cough' and 'mucus' become central to the project's success.<sup>4</sup> There may be inconsistencies in the understanding of conditions such as 'stroke' and 'Alzheimer' in developing nations such as Uganda.<sup>5</sup> Another planning concern is whether proposed questions are politically or culturally permissible. In China, asking parents how they choose their child's school may be sensitive because families do not make these choices.<sup>3</sup> Another issue is the availability of researchers in less-developed countries, who often hold down several jobs to earn a living wage.<sup>6</sup> One unpleasant reality for Western researchers is that, in some cultures, research will not be started or completed without a bribe, as reported.<sup>6,7</sup>

During the planning phase, ethical issues should be considered in more detail than usual, as what is considered adequate protection may differ. The concept of consent differs throughout the world. Parental consent is not legally required

in China, where the state and schools are responsible for child protection.<sup>3</sup> Institutional review boards may impose unrealistic, over-bureaucratised demands on research teams, such as translating consent forms into various languages.<sup>4</sup> Trying to explain placebo and risk become hard to resolve. Community reactions to a study must be handled *in situ* as in Romania, where the researchers, in identifying children for inclusion in a child development study, were accused of putting the children's names on the black market for adoption.<sup>8</sup>

The second phase, creating and managing international datasets, presents other challenges. Terminology and constructs must be checked for comparability and to limit bias. Ownership and access are delicate issues. Researchers may disagree on data control, but study populations, such as the indigenous Australians who assumed that data based on their responses belonged exclusively to them, must be considered.<sup>3</sup> Researchers from different countries may also have different work and time constraints. In some developing countries, there is high staff turnover due to staff being attracted to private practice, or emigration to developed countries.<sup>9</sup> Unforeseen time constraints interfered with a US-Ugandan study where daily data collection had to finish by sunset because the village had no lighting. Participant compensation may be an incentive but requires discussion between international colleagues about what is appropriate for participant time.<sup>5</sup>

During the third phase, the focus turns to dissemination, where different cultural expectations on authorship, interpretation and ownership of data can occur. Revising manuscripts across both languages and distances and also between different styles of academic writing and etiquette, especially the order of authorship, is more time-consuming than domestic publishing.<sup>3</sup> The larger number of authors in Japanese compared with US articles, for instance, may result from different national conventions for giving credit. In Japan, all professional participants in the research process can expect authorship attribution.<sup>10</sup> Likewise, collaborators may rely on gift and ghost authorship, as occurs in France.<sup>11</sup> Similar findings have been observed in Chile and in China, where only one-third of authors of articles published in three Chinese clinical journals were reported to meet International Committee of Medical Journal Editors criteria.<sup>11</sup>

Conducting culturally responsible research is a major factor in building research that demonstrates integrity. There is also a need to focus on building all countries capacities to handle research misconduct when it does occur (Panel). A recent study highlighted key ways to build and promote a culture of integrity and prevent misconduct.<sup>12</sup>

In conclusion, crossing international borders to conduct research requires openness and flexibility, a willingness to learn the culture and cooperate against a background of differing institutional arrangements, educational backgrounds, research habits, funding patterns, and public policy concerns. Researchers must acquire skill in the manner of anthropologists.<sup>4</sup> Specifically, walk softly, spend time in the culture, get to know collaborators, observe how things happen, be less demanding and assume nothing. Cross-cultural studies can only have integrity if all this is done thoughtfully.

**PANEL.** Strategies to champion integrity \*

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1. *Adopt zero tolerance:* Specify all suspected misconduct be reported and investigated
  2. *Protect whistleblowers:* Create, disseminate and implement protection
  3. *Clarify report process:* Who is in charge and what are the procedures?
  4. *Train the mentors:* So they can educate students on global issues of conducting responsible and ethical research
  5. *Use alternative mechanisms:* Institutional quality standards on research should include more assessment and intervention, for instance auditing research records
  6. *Model ethical behaviour:* Leaders need to repeat the message that cheating is unacceptable.
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\* Adapted from Titus et al <sup>12</sup>

**CONFLICTS OF INTEREST**

The authors have no conflict of interest related to the contents of this manuscript. Dr. Titus's views represent her own views and do not necessarily represent the position of the Office of Research Integrity (ORI) or the Department of Health and Human Services. The ORI co-organised the Conference on Challenges and Tensions in International Research Collaborations.

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