

FOGARTY RESEARCH ETHICS TRAINING PROGRAMS IN THE ASIA-PACIFIC: THE MERGING OF CULTURES

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ABSTRACT: IN-DEPTH INTERVIEWS WERE undertaken with nine principal investigators and 16 former trainees from eight FIC programs recruiting trainees from the Asia-Pacific to assess the impact of training. Incorporation of new knowledge into teaching, research, and medical practice; advanced training; and ethics committee participation were the most common outcomes identified. When attempting to implement ethics activities post-training, trainees often had to contend with opposition from more senior staff. Approaches that enhanced the cultural relevance of program content were identified as necessary, including comparing/contrasting non-Western principles and religions with Western bioethics, using region-specific case studies, and integrating clinical and research ethics. Best practices associated with program and trainee success included selecting more senior trainees clustered within Asia-Pacific institutions, offering a variety of degree and nondegree options, and post-training mentorship and networking support. This paper is part of a collection of papers analyzing the Fogarty International Center's International Research Ethics Education and Curriculum Development program.

KEY WORDS: Asia-Pacific, cross-cultural training, Fogarty International Center

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THE FOGARTY INTERNATIONAL CENTER (FIC) of the National Institutes of Health (NIH) began funding research ethics training programs in

2000 for individuals from low- and middle-income countries (LMICs) as part of its wider commitment to strengthen research ethics capacity globally. In this study, eight FIC programs funded from 2000–2010 that accepted trainees from the Asia-Pacific region were examined. Four programs were offered by institutions in high-income countries and four in LMICs (see Table 1). Qualitative analysis of interviews with program directors and former trainees captured opinions on the relevance of course content to their cultural context, challenges experienced during and after the programs, program impact, and how programs might be improved.

BACKGROUND

There has been significant growth in the number of clinical trials funded by entities based in high-income countries and carried out in LMICs (Glickman et al., 2009; Parker & Bull, 2009). This phenomenon was a precipitating factor in the development of these FIC programs. In its 2001 report on international research ethics, the US National Bioethics Advisory Commission noted that capacity for ethics review in LMICs was variable (NBAC, 2001). This report and research ethics guidance documents have advocated for the development of research ethics capacity in LMICs (CIOMS, 2002; Nuffield Council on Bioethics, 2002; UNAIDS/WHO, 2007).

The countries from which trainees were drawn vary in wealth, religion, culture, and health spending (see Table 2). The growth in externally funded health research is similarly variable across Asia-Pacific countries. For example, a sizeable number of international clinical trials are being performed in India, where the annual growth rate of pharmaceutical clinical trials is 19.6% (Thiers, Sinskey, & Berndt, 2008). An increasing amount of international research is being done in Indonesia, Bangladesh, and the Philippines, but the volume is much lower than in India or China (see Table 2). A small amount of research is done in Pacific Island countries presumably, in part, because of their small populations. It is difficult to attract international research investment to countries in which security may be an issue such as Pakistan or Afghanistan.

TABLE 1. FIC Bioethics Programs Accepting Trainees from Asia.

Name of Program	Years Funded	Awardee Institutions	Degree or Nondegree	Length of Training Program [range or by course]	Locations of Teaching	Nationalities of Trainees
International Research Ethics Training Program	2000-2015, extended to Tajikistan from 2011-2015	Case Western Reserve University (USA)	Degree	One year	Cleveland, OH, USA	Tajikistan
University of Toronto Master of Health Science in Bioethics International Stream	2000-2012	University of Toronto (Canada)	Degree	Two years	Toronto, Canada	India, Pakistan
Monash University Master of International Research Bioethics	2002-2013	Monash University (Australia)	Degree	One year	Melbourne, Australia	India, Pakistan, Philippines, Sri Lanka, Myanmar, Nepal, Vietnam, PNG, Thailand, Fiji
Training on Research Bioethics (TORB)	2002-2006	Bangladesh Medical Research Council	Nondegree	Certificate Course runs for 10 weeks and Advanced Course runs for 6 days	Bangladesh	Bangladesh
Curriculum Development and Intensive Training in Research Ethics	2002-2006	University of the Philippines	Degree and nondegree	Master's degree program is 2 years, Diploma Program is 1 year, Intensive Course is 5 days	Quezon, Philippines	Cambodia, Vietnam, Laos, Thailand, Indonesia, Sri Lanka, Malaysia, Fiji, PNG, India, Pakistan, Nepal
Centrally Coordinated Bioethics Education for India	2004-2013	Indian Council of Medical Research	Nondegree	Awareness-raising programs are 1-5 days; Short course for trainers is 8 weeks; Intensive course for trainers is 6 months; post-graduate diploma is 1 year	Courses for trainers are hosted in different Indian cities; Post-graduate diploma is conducted through distance learning	India
Aga Khan University Bioethics Training Programme	2007-2012	Aga Khan University (Pakistan)	Degree	Two years	Karachi, Pakistan	Pakistan
International Biomedical Research Ethics Fellowship	2007-2011	University of Washington (USA)	Nondegree	One year	Seattle, WA, USA	Indonesia

TABLE 2. Bioethics Trainee Home Countries.

Country	Main Religion (CIA)	Population (07/2013 est.) (CIA)	Area (sq km)	GDP per Capita (2012 est.) (CIA)	Human Development Index (2012) [UNDP]	% below Poverty Line [CIA]	Health Expenditure		Corruption Perceptions Index (2012) [Transparency International]	Gender Inequality Index (2012) [UNDP]	Registered Clinical Trials [Clinical Trials.gov as of 9.2013]
							%GDP [CIA]	Per Capita [WHO]			
Bangladesh	Muslim 89.5% (2004)	163,654,860	143,998	\$2,100	0.515	31.51% (2010 est.)	3.5%	\$18	26	0.518	175
China	Daoist (Taoist) (2002 est.) ^a	1,349,585,838	9,596,961	\$9,300	0.699	13.4% (2011 est.)	5.1%	\$182	39	0.213	4618
Fiji	Protestant 55.4% (2007 census)	896,758	18,274	\$4,900	0.702	31% (2009 est.)	4.9%	\$135	NA	0.391	8 since 13/09/2005
India	Hindu 80.5% (2001 census)	1,220,800,359	3,287,263	\$3,900	0.554	29.8% (2010 est.)	4.1%	\$38	36	0.610	2440
Indonesia	Muslim 86.1% (2000 census)	251,160,124	1,904,569	\$5,100	0.629	12.5% (2011 est.)	2.6%	\$46	32	0.494	243
Pakistan	Muslim 96.4% (2010 est.)	193,238,868	796,095	\$2,900	0.515	22.3% (FY05/06 est.)	2.2%	\$20	27	0.567	236
Papua New Guinea	Protestant 69.4% (2000 census)	6,431,902	462,840	\$2,800	0.466	37% (2002 est.)	3.6%	\$60	25	0.617	12 since 26/08/2005
Philippines	Catholic 82.9% (2000 census)	105,720,64	300,000	\$4,500	0.654	26.5% (2009 est.)	3.6%	\$47	34	0.418	623
Sri Lanka	Buddhist (official) 69.1% (2001 census)	21,675,648	65,610	\$6,200	0.715	8.9% (2010 est.)	3.0%	\$69	40	0.402	35
Tajikistan	Muslim 90% (2003 est.)	7,910,041	143,100	\$2,300	0.622	46.7% (2009 est.)	6.0%	\$31	22	0.338	1
Thailand	Buddhist 94.6% (2000 census)	67,448,120	513,120	\$10,300	0.690	8.1% (2009 est.)	3.9%	\$244	37	0.360	1407
Vietnam	Buddhist 9.3% (1999 census)	92,477,857	331,210	\$3,600	0.617	14.5% (2010 est.)	6.8%	\$76	31	0.299	226

^a While China is officially atheist, the most practiced and predominant religion is Taoism followed by Buddhism.

Methods

Sample. Participants were selected purposively, based on the ability of program directors and former trainees to provide the information required for our evaluation (i.e., perspectives on the content, benefits, and challenges of FIC bioethics programs) (Yin, 2008). Trainees were sampled for each course option (e.g., short course, postgraduate diploma) offered in each program and from the countries in the Asia-Pacific from which programs recruited.

Recruitment. Asia-Pacific-focused training program directors were contacted by e-mail by the lead investigator (BL). Of the eleven investigators approached, nine consented to be interviewed, representing all eight FIC programs. Principal investigators were asked to nominate three to five former trainees who spanned the course options and countries from which their trainees were recruited. FIC programs and countries of origin for the 16 of 31 trainees who consented to participate are summarized in Table 3. We were unable to interview former trainees from the University of the Philippines' program.

Data Collection. Data were collected during October and November 2012 through in-depth, semi-structured interviews and an examination of annual reports from the eight FIC programs. In-depth interviews were conducted according to the technique of thick description (Geertz, 1973) in which open-ended interview questions prompt interviewees to

describe their experiences rather than answer targeted questions. Interviews ran for approximately one hour and were conducted by phone or on Skype. BL and BP jointly conducted interviews with principal investigators. BP and CV or CV and ET conducted interviews with trainees, with BL supervising during the first trainee interviews to ensure issues were comprehensively addressed. Interviews were recorded by audio tape recorder, transcribed, and assigned a unique identifier. Transcripts were reviewed for accuracy. Due to poor audio connection by both phone and Skype, interviews with two trainees (TR13 and TR14—see Table 3) were abbreviated. Their data were, nonetheless, included in the analysis process.

Data Analysis. A coding framework for the data, comprising approximately 25 categories, was developed iteratively (Strauss & Corbin, 1990). Each category in the framework consisted of a short description or phrase that summarized passages of interview transcripts such as "Impact on trainee," "Challenges faced by trainees after FIC program," or "Principal investigator perspectives – Program strengths." To develop this coding framework, BP, CV, and ET each independently coded six transcripts (three principal investigator transcripts and three trainee transcripts). They then engaged in a process of reconciliation to produce a single list of categories that all three parties agreed upon. For each transcript, reconciliation involved going through the transcript category by category and discussing them until one category (or more)

TABLE 3. FIC Programs and Home Countries of Interviewed Trainees.

Trainee Number	Program(s)	Country of Citizenship
TR01	ICMR Intensive Course (6 months); Toronto Masters	India
TR02	ICMR 5-week course; ICMR Graduate Diploma (online)	India
TR03	Monash MIRB	India
TR04	AKU Masters	Pakistan
TR05	Monash MIRB	Vietnam
TR06	University of Washington Graduate Diploma	Indonesia
TR07	ICMR 5-week course; Toronto Masters	India
TR08	University of Washington Graduate Diploma	Indonesia
TR09	Case Western Masters	Tajikistan
TR10	University of Washington Graduate Diploma	Indonesia
TR11	Bangladesh 10-week course	Bangladesh
TR12	Toronto Masters	Pakistan
TR13	Bangladesh short course	Bangladesh
TR14	Case Western Masters	Tajikistan
TR15	Bangladesh 10-week course	Bangladesh
TR16	Monash MIRB	Fiji

was agreed upon for each passage of text. Collectively, the identified categories comprised the final coding framework and summarized the data in all six transcripts. BL reviewed the identified categories to ensure that all the relevant issues of which she was aware were covered. The coding framework was subsequently used to code the remaining 19 interview transcripts. To ensure reliability, six of these transcripts were co-coded independently by BP, CV, and ET. Given the strong consistency between co-coders' application of the coding framework, the remaining thirteen transcripts were coded by BP. NVivo 10 (QSR) was used to apply the coding framework to all transcripts and to generate reports of coded text segments for further analysis.

Ethics Approval. Ethical approval for the study was obtained from Monash University's Human Research Ethics Committee.

Results

FIC RESEARCH BIOETHICS TRAINING PROGRAMS—FORMAT AND CONTENT

Main Characteristics of FIC Programs. Of the eight FIC programs taking trainees from Asia-Pacific countries, four were run by institutions in high-income countries and required trainees to come to the United States (US), Canada, or Australia for a period of ten months to one year. The US and Canadian programs include a re-entry project component, where trainees spent up to 14 months working on a project in their countries supervised by a faculty mentor.¹ Upon completion, University of

Washington trainees earned a graduate certificate. Trainees in the other three programs earned a master's degree (see Table 1). The University of Washington program recruited physicians whereas the Case Western University program did not. Trainees in the US and Canadian programs were recruited from one or two Asian countries while the Australian program recruited from a broad spectrum of countries in the Asia-Pacific (see Table 1).² Programs of the Bangladesh Medical Research Council, Indian Council for Medical Research (ICMR), and Aga Khan University recruited trainees primarily from within their respective countries. The University of the Philippines program recruited trainees from a number of countries in the Asia-Pacific (see Table 1). Collectively, a large number of trainees in the eight programs were recruited from India (see Figure 1, [insert URL here]).

The Bangladesh short-courses focused solely on research ethics, whereas the seven other programs provided training in clinical and research ethics. A number of programs included training in law and other areas of ethics, as well as a research ethics committee practicum. Programs run by the University of Toronto, ICMR, and Aga Khan University provided training on teaching methods.

Degree programs were not necessarily attractive to potential trainees. In Bangladesh, at present, individuals are unlikely to invest in a bioethics degree, as it will not assist career development. In Indonesia, however, possession of a degree is regarded as important, particularly for junior staff when attempting to promulgate new ideas.

Relevance of Course Content. A number of trainees described the lack of locally pertinent case studies and

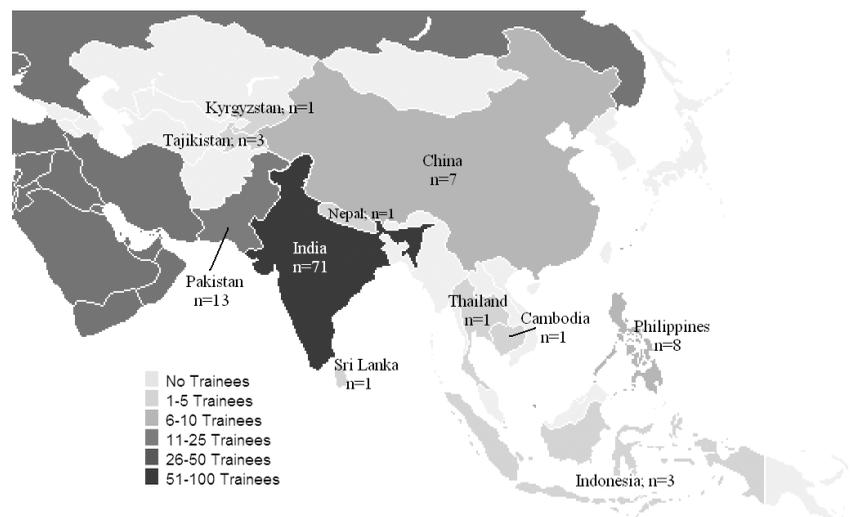


FIG. 1. Asia long-term trainees by country.

lecturers who were familiar with their countries as weaknesses of their programs. Trainee 03 stated:

... almost all of us were from Asia, or Southeast Asia, and there was a lot of work that many of us had done, and a lot of experience from our part of the world, but a lot of the things that were being discussed were not drawn from those places.... They were cases from different places, but we rarely—I don't remember cases from Asia at all. Similarly, lectures, or lecturers were also I think people who had not worked in those settings, although they had worked in similar settings.... I think there was not the experience to unravel the complexity of those situations among the people who actually talked to us about it.

Trainee 09 similarly suggested not enough of her lecturers were knowledgeable about the situation in her country:

If there was somebody—like [name of PI] was the one who was very familiar with [country name], and if I would have several other professors who would be like the same, who had the same experience, then it would be absolutely amazing, right? They would know more about [country name], and they could help me to resolve some specific issues, that would be more wonderful.

In addition, trainees from countries in which clinical ethics is almost as undeveloped as research ethics felt the emphasis on research ethics was misplaced. While some programs did incorporate clinical ethics training, it was suggested that general inclusion of such training would better serve trainee and country needs. Trainee 12 discussed why she thinks it is essential to incorporate teaching in clinical ethics:

I feel that for countries like [country name], ethics is giving a skewed emphasis in research ethics, which is not right. I think this is wrong. In fact, I feel this is wrong. Because again clinical ethics is such an important component, and where clinical ethics is not practiced, supplied, or clinical care is not available, there you can have perfect research ethics, and yet you are not doing a good ethical job to me.

FIC programs attempted to make their course content relevant to trainees in five ways. Programs incorporated the following five elements to different degrees:

1. *Teaching and applying the principles of non-Western philosophies and religions.* Many cultures have prominent religious and philosophical traditions that impart teachings on ethics. ICMR courses addressed Hinduism,

Buddhism, Islam, and Jainism as well as traditional systems of medicine. At Aga Khan University, teaching incorporated Islamic philosophies. The Monash University program offered Comparative Moral Theory, where trainees read and discussed Confucianism, Buddhism, and Hinduism and considered their application to health care and research.

Some trainees stated that consideration of non-Western approaches was confined to units designed for this purpose and was not incorporated into teaching in other subjects. This was particularly true of FIC programs run in high-income countries where units of preexisting degree programs were opened to trainees.

2. *Using examples of ethical issues from trainees' countries.* Reliance on examples in teaching drawn from environments similar to trainee countries was regarded as helpful, enabling trainees to work through ethical issues they would encounter upon the conclusion of their programs.

3. *Discussing difficulties in applying Western bioethical principles.* Trainees at Aga Khan University, for example, discussed differences in perceptions of autonomy between their own family-oriented society and more individualistic societies. They reflected on how these differences should be addressed in informed consent processes. This type of exercise is necessary when cultural difference is significant.

4. *In-country projects.* In-country projects allow trainees to apply what they have learned overseas at their home institutions. As affirmed by Investigator 09:

...in the very early years of our program, when we weren't working in this country, we didn't have a requirement for re-entry project and that was instituted partly to make sure that trainees had experience translating what they had learned to their own environment and partly as a way of creating opportunities for more critical analysis.

5. *Discussing difficulties trainees will face in implementing what they have learned.* Such content is essential for FIC programs, as it helps ensure that trainees are prepared for the challenges they may encounter when they return home.

Impact of Participation in FIC Research Ethics Training Programs

Incorporating new learning into teaching, research, or medical practice; undertaking further education in bioethics; and setting up or joining an ethics review committee were the most commonly discussed outcomes of participation in FIC programs. However, investigators and trainees also identified other outcomes such as

improved critical analysis skills and heightened cultural awareness.

IMPACT ON INDIVIDUALS

Teaching, Research, and Medical Practice. Nine trainees and seven investigators described incorporating program learning into teaching, research, and/or medical practice as an impact of their/trainee participation in FIC programs. This included activities such as introducing bioethics into the curriculum of the medical or nursing subjects they teach, modifying their teaching style to encourage more discussion and critical analysis, performing research on ethical issues, and/or making their own health research or medical practice more consistent with new ethical understandings. Trainee 01 notes that “there was an element of connecting the ethical principles to the context-specific issues, to the cultural issues” that she has incorporated into her teaching because it makes ethics become “very relevant” and easy to communicate to students.

Some trainees, particularly those who completed training programs in Western countries, adopted the more discussion-based, interactive teaching methods they encountered during their programs, less common in LMICs in the Asia-Pacific.

Critical Analysis Skills. Three trainees and three investigators indicated that they or their former trainees gained skills in critical analysis. Trainee 08 affirms:

I think the way of the learning approach that they use endorse me analyze things more objectively... Because they use some approach, like pros and cons for example. I don't think I had somebody, or I learn something, approach like that before. So I do tend to use that kind of critical thinking here now for myself and my students, the pros and cons, because I think it's important for each statement, or to have a strong argument, whether it is pros or cons.

Gaining a Voice. Beyond assessing concepts more thoroughly, the interactive teaching style in FIC programs helped strengthen trainee capacity to voice opinions. According to Trainee 16:

...for now, if I see that there is a problem, I would really try and look into it, and I also would like to voice out my opinion, even though it is wrong or right, or it gets accepted or not, but I would voice my opinion now. And I've got a lot of confidence ... when we go to school, we usually don't speak up. If we have questions in our head, we will never ask these, we always think that the lecturers are always

right. But when I go to classes in [country where program took place] I know I see everyone's asking questions, or voicing out their opinions, and it's being taken very well too. So it's changed my life, it's changed me, and I see things differently, I voice out things, I look at things in a very analytical way.

Further Education. Seven former trainees and two investigators highlighted that participation in FIC programs led them or their trainees to undertake subsequent degrees in bioethics. Three trainees who participated in awareness-raising and short courses went on to complete a postgraduate diploma or master's degree through a second FIC program. Three trainees who completed master's degree programs pursued PhDs in bioethics.³

Professional Advancement. Three trainees and an investigator noted that they or their trainees had been selected for new academic and government “bioethics” appointments upon completion of a program. Trainees have also published papers in international peer-reviewed publications and national bioethics journals (Fix et al., 2013).

Capacity to Address Ethical Issues. Two trainees affirmed they were better able to recognize ethical issues in medical practice and better equipped to determine how to respond to them. Trainee 05 stated that “when I go back to my country and so after I learn about ethics and I can see very clearly the thing I could not see before. So, I see very unequal relationships between the doctor and the patient.”

Cross-cultural Learning. Three trainees who completed FIC programs in high-income countries cited learning about other cultures as a useful outcome of their participation. These trainees gained a sense of solidarity with students from different countries. Trainee 12, who completed a master's degree in a high-income country, stated:

Before that I had this limited vision of how things should be in bioethics, because it was more from a perspective of my own social culture scenario, my own religion, my own situation, the problems that I encountered in this situation. When I went and studied with students from all over the world, I realized that everybody's facing problems, everybody's problem may be a little different from the other; however, they are working hard to deal with them in their own ways. You know, there's many ways of looking at the same thing.

A number of trainees identified undertaking coursework with students from a range of countries as a

particular strength of their programs. They confirmed that by studying in a high-income country, they were better able to comprehend why the ethical rules developed in such countries were individualistic and stressed rights.

Investigators emphasized that cross-cultural learning went both ways and was important for local students who gained insights into the ways ethical issues are understood and addressed beyond their country and culture.

Exploring non-Western Sources of Bioethics. One trainee became motivated to explore non-Western sources of bioethics after participating in a FIC training program, stating:

Although not all of the concepts I can relate or I agree with, but I think my contact there with many ways of thinking, not only American, but I think you understand that in America there are many people from all over the world there, it encourages me to think about the balance of the discourse. Because I think many journals it more came from more Western experts with Western backgrounds, so I encourage myself to explore more from Islamic, and from Eastern way of thinking, or Indonesian way of thinking, Malaysian, if you call it. To search for values that can contribute to the discourse.

Given the dominance of the voices of Western scholars in bioethics literature, trainee exploration of non-Western philosophies and their application to health and research ethics is an exceptionally important outcome of FIC programs.

IMPACT ON INSTITUTIONS

Teaching and Institutional Policies. Nine trainees and seven investigators noted that an impact on institutions has been the incorporation of program learning into teaching and practice by trainees. Medicine and nursing curricula were modified to include bioethics, and institutional policies on research and clinical ethics were revised. For example, trainee 04 implemented changes to improve the informed consent document used by her hospital.

Awareness of Bioethics. Six trainees held seminars, workshops, and symposia to build awareness of bioethics at their institutions and six trainees created or joined ethics review committees at their institution. One trainee has also created an online bioethics journal. This journal is the first of its kind in her country and is accessible on the website of the country's main medical institution.

Grants. Some trainees have become independent grant holders and others intend to apply for grants. The principal investigators of the ICMR and Aga Khan University-run FIC programs were once trainees at the University of Toronto. An investigator suggests that the trainee selection was a key factor in this achievement:

... we trained several people who all ended up as the core nucleus of a faculty. So they had people to work with and discuss, so there was a kind of community of practice within which they would connect when they returned... . And I think that's a critical success factor going forward is that taking individuals from single institutes, training them up and putting them back where they're single individuals in institutions they're not likely to, unless they're super human or extremely charismatic or they're at the full professor or decanal level or above, they're not going to be able to exert much influence.... I think our recruitment initially was to choose senior people who had some standing in their institution and were planning to build and went back and did so.... So where we started with senior leaders and helped them build faculty, that was a really successful recipe.

Training a core group, including senior staff, from the same institution facilitates the development of bioethics at the institutional level.

Challenges Faced by Trainees and Investigators

TRAINEE CHALLENGES DURING FIC PROGRAMS

Most of the challenges trainees describe arose during programs with a component in high-income countries.

Absence from Family and Work. The lengthy absence from family and jobs was an obvious issue highlighted by five trainees and one principal investigator.

Language and Course Content. Initially, some trainees found lectures and assignments in English to be difficult, but their language skills gradually improved. Writing essays was found particularly difficult by some. Eleven trainees and two investigators cited the lack of background in philosophy and research methods as challenges. Some investigators incorporated training in critical reasoning or research methods into their program curriculum in response.

Program Workload. Three trainees found the intensity of FIC programs in high-income countries to be challenging. Some programs required trainees to complete

the same number of subjects in one year that local students complete over one and a half or two years.

Socratic Teaching. Two investigators noted that trainees often found the participatory nature of classes demanding because trainees were unaccustomed to this teaching style:

So, university education in [trainees' country] is very didactic and teachers lecture. It's lecture based. There is very little questioning from the students and interchange in a discussion way. So, the participatory nature of the students in the class was a real shock for our fellows, and they got used to it, but at first they just couldn't believe it.

TRAINEE CHALLENGES AFTER FIC PROGRAMS

The two obstacles reported most frequently by trainees when attempting to implement FIC program learning at their home institutions were lack of support and hierarchical structures.

Hierarchical Structures. Three trainees and four investigators noted that junior trainees face significant hurdles if senior staff oppose their efforts. One trainee reported that senior consultants opposed his efforts to apply new learning because he studied in a Western country. They did not believe what he had learned was applicable.

Support for Ethics Activity. Five trainees described confronting a lack of interest in bioethics, little recognition of bioethics as an academic field of study, or worse. According to one trainee:

...for the last few years, there has been an animosity towards bioethics, a palpable animosity. I don't know how—maybe something we did wrong. We never consider ourselves bioethics police, but some of us have been activists, because it's thought that unless we really work hard, unless we take a strong stand, things are not going to change.

However, some trainees returned to environments where senior staff offered support. One trainee indicated she was able to use "the formal hand of the Dean to ask people to get involved in the bioethics education." Another trainee described relying on an existing center for bioethics at her institution to build support for her initiatives—namely, incorporating bioethics teaching into the nursing subjects she teaches and revising her department's consent document for medical procedures.

Reward and Career Advancement. There may be no reimbursement for the time former trainees spend on bioethics-related activities. Investigator 08 affirms:

...whoever does bioethics in most of these institutions, they are doing it as an extra add-on, rather than decreasing their workload in some ways, and then doing bioethics.... So for the people who go back, ... there are no resources for them to rely upon, or when they give their time they have to give it off their clinical work, or their nursing work, or their dental work.

Isolated Graduates. Two investigators suggested that if a former trainee is the only FIC program graduate in his/her institution, it can be much harder to achieve ethics-related outcomes. Such trainees are like "single snowflakes that returned back to their environment and promptly melted."

Limited Understanding of Research Methods. A trainee suggested that her efforts to set up an ethics review committee and conduct research ethics workshops were obstructed by a lack of understanding of research methods at her institution. Despite having support, in theory, from her institution to undertake bioethics-related work, she has, thus far, been unable to meet her post-program objectives. She notes:

So when I came back I started looking at the student research projects, and I saw that they were writing research in different formats, their methodologies were flawed, and they understood little about research. And also one of the reasons was that their supervisors didn't have any research background. So if they don't have research background, they won't be able to teach the students about research ethics as well.

Resource Allocation Priorities. Two trainees found their governments do not consider bioethics a priority. In order to set up an online bioethics journal, one trainee was required to seek permission from senior government officials. She reports:

...the thing was that I heard like how many times it was, "Oh my god, you know that [country name] is a developing country, like we have economical regress, and we need to develop our economics so we have financial power, why are you coming and preventing us? Something now, innovation, we were quite okay with bioethics until now, why do we need bioethics?" So it was really hard to present bioethics, to tell them that we now have to lay the foundations to bioethics.

CHALLENGES FACED BY INVESTIGATORS

Investigators faced a number of challenges in the implementation and renewal of their program grants.

Funding. In cases where the NIH did not fully fund budgets requested in applications, investigators reported the need to reduce the number of trainees they accepted annually and the number of countries from which they recruited trainees.

FIC programs in high-income countries often pay for trainees' travel, tuition, health insurance, and monthly living expenses. This became more difficult to afford as currencies rose in value against the US dollar. The NIH is prohibited by law from amending the amount of funding given in a grant related to currency fluctuations. Investigators are allowed, however, to change the scope of work proposed to better match the real budget value.

Visas and Language Requirements. Trainee recruitment often required surmounting a variety of obstacles. Even though trainees were accepted into FIC programs, visas might be unobtainable. Universities in the US, Canada, and Australia often had English language and grade requirements that were difficult for trainees to meet, even for those who spoke good English and were academically strong in their countries. An investigator suggested that grade inflation in the US also contributed to this problem.

University Administration. Administrative processes at universities were often slow and burdensome. In addition, universities were reluctant to support specialty degree programs with small student numbers, particularly where trainees were matched with faculty mentors. This generated difficulty for the continuation of some FIC programs beyond the first grant.

Awareness-Raising and Short Course Programs. Some investigators cited the need for program funding options for awareness-raising and short course programs, as the level of awareness required to generate institutional interest in bioethics degree programs had not yet been achieved in their countries. FIC grants do not currently support programs that only conduct bioethics awareness-raising and/or short courses; however, trainees can be supported who conduct such activities as part of their practicum experience.

Recommendations

The following recommendations emerge from the data.

Clustering and Seniority. To combat the challenges of trainee isolation and institutional hierarchy, program selection strategies should aim to train at least one or two senior staff from an institution and cluster subsequent trainee selection to these institutions until there are sufficient individuals to support the implementation of institutional ethics programs.

Building Institutional Relationships. Fostering long-term institutional links between FIC programs and trainee institutions will similarly assist trainees to have an impact.

Research and Clinical Ethics. Clinical ethics training should be incorporated into programs for trainees from countries in which clinical ethics is almost as undeveloped as research ethics.

Local Relevance. Course content should be made culturally relevant to trainees, particularly in programs run in high-income countries. Obstacles that trainees may face upon returning home should be discussed. Some trainees suggested that former trainees might be involved in teaching.

Degree and Nondegree Programs. Training options from short courses to PhD programs are necessary, as LMICs in the Asia-Pacific vary in their program needs. Investigators and trainees from Tajikistan, India, and Bangladesh affirm that their countries continue to require awareness-building courses. These programs might precede and/or run simultaneously with degree programs in countries where bioethics is being introduced. (As noted above, bioethics trainees can be supported by FIC grants to conduct awareness-raising and/or short courses as part of their practicum experience.)

Trainees also need the opportunity to develop deeper expertise, possible through PhD programs. Trainee 16 indicated her motivation to undertake a PhD stemmed from wanting time to consider the theories she studied during her master's degree. When working, she could not do the mentored reflective analysis doctoral training enables.

Location of Teaching. There are advantages to in-country programs and programs where trainees experience unfamiliar environments. Despite the difficulties involved in relocating to a high-income country, it appears that understanding of the cultural basis for contemporary international ethical norms may be enhanced. Trainees also observe different ways of considering issues presented for discussion and responding to people in positions of authority.

Post-program Interaction. Given the difficulties trainees may experience after completing their programs, continuing support is essential. Post-training support described included a mentoring network consisting of an online forum through which former trainees can post queries and get advice from other trainees and investigators; bringing trainees together after completion of their in-country projects; and having workshops

for former trainees to share their ethics work and experiences. In-country steering committees might be asked to create opportunities for former trainees to engage in research ethics activities. Funding opportunities could usefully support continuing professional development of former trainees to sustain ethics capacity-building in their countries.

Conclusion

Despite a range of difficulties, it is clear that FIC programs in the Asia-Pacific have made an invaluable contribution to many of the individuals who participated and their institutions. The more a variety of such activities can be supported, the greater the opportunity will be to build a truly global bioethics community to support the ethical provision of care and conduct of research.

Best Practices

Flexibility is needed in program funding for training in research ethics to suit the variety of needs that exist in the Asia-Pacific region. Culturally relevant course content, clustering the selection of trainees, targeting individuals in senior roles as trainees, and having post-program support mechanisms are elements of best practice in research ethics training programs in this region.

Research Agenda

More empirical research is required to document the needs of research ethics systems in specific LMICs. Such information is essential to more fully ensure that FIC programs are designed to align with trainee countries' needs. Research is also necessary to explore the philosophical and religious traditions from the Asia-Pacific and their application to research and clinical ethics.

Educational Implications

FIC program design must respond to the needs of Asia-Pacific trainee countries, which may entail offering sensitization, short course and/or degree programs; integrating clinical ethics content; being culturally relevant; and selecting trainees so as to facilitate their ability to implement what they have learned.

End Notes

1. The Monash program also had a re-entry component, but with the rise in value of the Australian dollar against the US dollar, this component could not be implemented.
2. The University of Toronto and Case Western Reserve FIC programs also recruited trainees from countries outside the Asia-Pacific region.
3. Our sample of interviewees may be skewed toward the most outstanding of former trainees, explaining the high number of PhD candidates. We think that the proportion of former trainees doing a PhD is actually lower, on average, than in our sample.

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