

Enabling Change in Attitudes Among Medical Students During a Pediatric Emergency Medicine Elective

Valani R^{a-d}, Verma M^d, Sriharan A^{c,d}, Scolnik D^{b-d}

^a Department of Emergency Medicine, Sunnybrook Health Sciences Centre, Toronto

^b Division of Paediatric Emergency Medicine, The Hospital for Sick Children, Toronto

^c Peter A Silverman Centre for International Health, Mt. Sinai Hospital, Toronto

^d University of Toronto

Abstract

Background: Globalization has broadened the scope of international health electives available to medical students. Among the wide variety of personal and professional opportunities they offer is provision of a framework to foster attitudinal changes. The International Paediatric Emergency Medicine Elective (IPEME) is an innovative program designed to inculcate the ideal of “health for peace” among medical students from the Middle East and Canada during an intensive four-week course held in a neutral country (Canada).

Objectives: The purpose of this study was to determine if there were any changes in attitude and behaviour among the participants during the course of the IPEME. Graduates of the program were included in the study to assess the degree to which changes made in past years had been sustained.

Methods: Pre- and post-course semi-structured interviews and focus groups were used to gather information from the four pairs of Canadian, Israeli, Jordanian and Palestinian medical students who participated in the 2007 elective. Interviews with seven former participants were also conducted to identify factors affecting sustainability. The data were analyzed qualitatively using grounded-theory analysis to pick out common themes among the study group and graduates.

Results: The students gave many reasons for their interest in the IPEME. Several students described shifts in attitude and behaviour related to peace-building, relationship formation, and acceptance of others. Factors such as program organization, clinical sessions, and role-modeling by teachers were identified as instrumental in effecting the changes.

Conclusion: This study showed that a carefully designed international health elective can foster better communication, collaboration, leadership, and teamwork among students with different social and geopolitical backgrounds and from countries with a history of mutual hostility. However, more effective ways must be found to help participants maintain their contacts and work together after they return to their homelands.

Introduction

Globalization has opened the doors for medical students and residents to undertake international medical electives, most often in developing

countries [1-6]. In 2006, for example, over 27 per cent of graduating medical students participated in an international health elective (IHE) in contrast to only 6 per cent in 1984 [7]. The World Health Organization (WHO) medical

educators have called for a new cross-cultural paradigm to facilitate the worldwide training of “five-star doctors” who would exemplify quality of care, new technologies, health promotion, individual and community health requirements, and efficient teamwork. In addition, health as a bridge to peace is now a recognized WHO concept.

Electives can incorporate non-medical themes to promote development in such areas as professionalism, communication, and attitudinal change. Participation in international electives has been associated with selecting primary care as a career, presumably by increasing awareness of the importance of public health, health service delivery, and cross-cultural communication [8]. Several grass-roots initiatives dedicated to health for peace have been launched within conflict zones, many of them through the efforts of non-governmental organizations as well as by McMaster University's medical faculty [9-10]. While these programs may differ in ideological fine points, they are all designed to help conflicting groups cooperate and reconcile differences between their respective nations through the work of health care professionals.

A second, less common type of program takes place outside regions in conflict, in countries like Canada, where the IPEME was developed through academic collaboration. It is a four-week elective that brings together eight medical students each year, two each from Canada, Israel, Palestine, and Jordan, selected on the basis of applications, brought to Toronto, and housed in a university residence. The program was introduced in 2004, using Emergency Medicine as the vehicle, and integrating four specific areas to provide the structure: Paediatric Emergency Medicine, Global Health, Leadership, and Peace-building. The program comprises topics such as diversity in the workplace and conflict resolution, and activities such as practical clinical seminars, formal peace-building components, and organized social activities. The informal components – including being housed in the same residence-- provide a rich environment for the students to interact and learn from each other. To further promote teamwork and collaboration, the group is divided into two sections and each asked to develop a research project that can be carried out on their return home.

The purpose of this paper was to measure, using qualitative methods, changes in attitude and behaviour among the medical students while they were enrolled in this four-week elective. Understanding behavioural changes and the factors that contribute to and help sustain them can provide valuable resource material for developing future medical electives.

Methods

Data Collection

This was a qualitative study in which information was gathered through semi-structured interviews, focus groups, and field notes. Common themes were identified and then analyzed. The study was approved by the Institutional Research Ethics Board by the Hospital for Sick Children. After the students had given their consent, pre- and post-course interviews and group discussions were conducted by a single person (MV), who was not a participant in the program but had close contact with it to obtain supplementary field notes. The focus groups were intended to give students more opportunity to reflect on issues and subjects they may not have considered during the interviews and allowed for a comparison of results related to changes in behaviour and attitude. Twenty-two graduates of past programs were also invited to participate through interviews, seven of whom agreed. They provided information on the sustainability of relationships developed during the program.

Outcome measures

Changes in behaviour and attitude were considered around three main themes: relationship formation and acceptance of others; peace-building and building bridges of cooperation; and leadership, confidence and team-building. Participant change in these areas was assessed by an adaptation of Prochaska's Criteria [11]. This model divides progression of change into five stages: pre-contemplative, contemplative, preparation, action, and maintenance, each characterized by a person's set of thoughts and actions with reference to a certain topic. A panel of medical, educational, and global health professionals adapted the original criteria to reflect the stages that apply to IPEME (Table 1), reaching consensus on the final version through the Delphi process.

Table 1. IPEME Adaptation of Prochaska's Change Framework

Stages	Prochaska's Criteria	IPEME Adapted Criteria
1. Pre-contemplative	Feels unable to change (demoralized) Not ready to take action Requires assistance & interventions to help increase level of confidence & belief that change is something within their power	Has thought about cross-border cooperation and has chosen to apply to this global elective Has not yet begun voluntarily discussing issues or interacting with students from other nations Interested in global/middle eastern cooperation, but has not yet taken any action Interested in global training in medicine
2. Contemplative	Seriously thinking about making a behavioural or attitude change Aware of pros of attitude modification but also aware of the cons Has profound ambivalence – wants to change, but contradictions can keep them stuck in this stage	Has short discussions with students of different cultural groups Open to learning about opportunities for peace building & global cooperation Becoming more accepting of others Open to learning about and incorporating new skills and knowledge
3. Preparation	Serious intentions to change Has formed a plan Pros outweigh cons Anxiety about failure Action-oriented programs prove beneficial	Accepts & participates in opportunities for peace building Is beginning to form meaningful relationships with other participants Realizes importance of professional collaboration and demonstrates new ways of thinking
4. Action	Processes of change are in place & active Individual works hard towards achieving goals	Actively pursues meaningful contact with other participants Is an active participant of peace-building and cooperative initiatives Promotes collaboration amongst the group Handles conflict respectfully & knowledgeably Often utilizes new knowledge and methods of thinking
5. Maintenance (for use with past participants)	After 6 months of action/change Behavioural, attitude changes are maintained	Maintains relationships formed during the summer elective (emails, phone calls etc.) Is still active in global cooperation measures; provides leadership to others in terms of peace building

Table 2. Changes in Attitude and Behaviour

Stage of Change	Pre-contemplative	Contemplative	Preparation	Action
Relationship Formation & Acceptance of Others	“I never met someone from [Region A]...I thought that they were [not friendly] ...” (P4)	“When I hear there are people from [Region A] ...I think it will be good to know people from this country because...we have different opinion, we have a lot of problem between us...what I want to know, what is the opinion of the young people there?” (P1)	“...we live in the same country, we must share everything...we must be thankful with each other ...and this change...it’s going to be from the young people...we can modify beliefs, our ideas, our way of thinking.” (P1)	“..a lot of things changed...my personality changed...I know I can live with other people, I know I can learn more about other people...I don’t have to judge them like they’re from [region A], they’re from [region B]Palestine...I don’t have to do that anymore...it’s not important from where you are...it’s like who you are.” (P4)
Peace-Building & Building Bridges of Cooperation	“I don’t think that we’ll do anything that really helps peace-building on a national level...we might...there’s a small chance we’ll continue to keep in touch...” (P5)	“I believe whenever there is a problem between [Region A and B], for the land or whatever...the medical field always...always collects people together.” (P2)		“I learned a lot about the others’ way of life...in general its very good...if you could take all the [Region A] population, get all the [Region B] kids...and to meet them...it might actually help bring peace.” (P5) “If they’ll give me the chance, I may collect a lot of students, and make them in contact with [Region A] people to do projects...” (P2)
Leadership, Confidence & Team Building	“I didn’t come in wanting to learn this because I don’t think I had the right idea about what the elective was...but...only in two days, I’m looking forward to seeing...and sort of learning about how things can be done...” (P7)	“...the opportunity with another group in another country is a very different experience...you can find the different things about your neighbours, about you, about what they think, about how they act...” (P6)	“All our projects are made together...so we work together...we have lessons about...to respect each other and to listen to each other...there were couple of cases that we needed to decide what to do, which project to take and how to build it so...we worked as a team” (P6) “...you have 4 people, from 4 countries and three of those countries don’t necessarily get along together...so there was maybe a little bit of conflict resolution that we learned, I learned...but as a team-worker, I don’t know that I really learned any new strategies...” (P7)	

Data analysis

All interviews and focus group discussions were voice-recorded, transcribed, and then analyzed using NVivo programme software (QSR International, Cambridge, MA). The transcripts were coded using a grounded theory analysis approach throughout the data collection period to address new issues or topics that emerged from earlier meetings. Accuracy of coding was ensured by randomly selecting 30 percent of transcripts for parallel manual coding by an independent reviewer (AS). There was over 95% agreement. Based on the criteria described in Table 1, the information gathered was categorized to a specific stage during the first and last interactions.

Results*Participant benefits*

Eight students from the present cohort – two from each region – were interviewed, and 7/22 from prior years agreed to participate. Personal reasons given for enrolling in the IPEME were a desire to explore the host city of Toronto, improve proficiency in English, meet people of different cultures and nations, and finally, get acquainted with other medical students from regions of conflict. Professional reasons included gaining knowledge in paediatric emergency medicine, learning about new technologies and best practices at a tertiary care centre, and making contacts for future collaboration.

The students generally found the program succeeded in achieving these goals. Factors contributing to its success, in their opinion, included the collaborative research projects, practical clinical sessions, program organization, and the modelling provided by the teachers.

Attitudinal and behavioural changes

Shifts in attitude and behaviour are illustrated in Table 2 by direct quotations from individual students, corresponding to Prochaska's stages, with the exception of the fifth one, maintenance. The results are summarized below in relation to the three thematic areas selected as outcome measures.

Relationship formation and acceptance of others

An encouraging aspect of the program was the strengthening of relationships among participants over the four weeks in Toronto. Although many of them said they were open to interaction with others early in the program, their acceptance of and respect for each others' cultures and beliefs showed evidence of development specifically through better communication, collaborating on tasks and projects. Every participant felt that he or she had formed friendships that promised to continue, especially through professional collaboration.

Peace-building and building bridges of cooperation.

All the participants said they gained a more positive perspective on peace-building, believing it was achievable through continued collaboration. Some participants progressed further through the five stages than others but stated they needed more time before they could become active in the field.

Leadership, confidence and team-building.

All participants said they had gained a deeper appreciation of teamwork during the elective. They thought they worked better with those from a different cultural background, controlled themselves in situations where conflict might arise, learned to listen carefully, chose the right issues on which to take a stand, and learned to delegate tasks.

Sustainability

Although the program is in its infancy, we attempted to measure its sustainability by interviewing seven past participants. Most of them said the program was still relevant to their lives and reported continued relationships with former classmates. Although the graduates still strongly supported the elective's goals and were grateful for what they had gained from it, they emphasized that sustainability needed to be a major focus of program development. More opportunities were needed to transform their compassion into action. Several participants from the prior year (2006) reported keeping in touch with other participants, and they even had the opportunity to meet again. The creation of social networks through the internet has helped participants stay in touch, although not as

frequently as they wished. Time was the main barrier identified.

Discussion

International health electives expose medical students to other cultures and health care systems, open their eyes to the medical challenges colleagues face in other regions, and offer opportunities to improve clinical skills, knowledge, and attitudes [12,13]. They have been shown to broaden students' outlook on the geopolitical and social aspects of medical practice, such as community service, especially in underserved areas, either at home or abroad [14-20]. Cross-cultural experiences also bestow benefits on both the medical schools involved and the people of the host country [21]. Inevitably, however, there are limitations to what these electives can accomplish. Their curriculum, learning processes, and outcomes have not been studied rigorously in the undergraduate medical setting. Apart from its educational aspects, students considering an international health elective have to take into account the financial, institutional, and perhaps even political risks of going abroad. Hence, innovative courses and programs that address these problems are needed. We believe that as an organized, multidimensional elective, IPEME has the potential to influence participant development in several key areas: medical practice, heightened awareness of its social context, peace-building, attitudinal change, and bridging differences in culture and political beliefs. We know that medical education can exert a positive impact on the health of people but loses its value if it is disconnected from the societal context.

The results of this study reflect Skinner and Sriharan's model that posited two levels of reasoning for involvement in health-for-peace programs: project level (capacity building, professional development) and "meta" level (knowledge exchange, relationship-building, mutual development [22]. The importance of a sense of community and mutual respect among participants is also stressed by Stein et al, who state that this intangible benefit is essential to ground-up peace building [23]. Our interviews and observations indicated that students felt comfortable exchanging knowledge and sharing feelings in the environment created by the IPEME elective.

Why is health care an effective route to peace-building and building bridges of cooperation? Perhaps the most convincing explanation

emerged from an overview of 148 studies examining Israeli – Palestinian cooperation in health and rehabilitation projects [24]. It showed that the key factors encouraging cooperation were participants' professional interests and their belief in promoting coexistence. On several occasions our students shared their enthusiasm for the common goal of caring for children, demonstrating their commitment to paediatric medicine and the common good leads naturally to discussions about cooperation.

Although this study was limited by a small sample size, data saturation was achieved. The small group of past participants who agreed to be interviewed may represent a biased sample in that their positive experience in the program motivated them to take part in the present study. Despite these limitations, this study of a four-week elective held on neutral territory for medical students living in countries in conflict with each other provides evidence for positive changes in attitude, along with a framework for development of other, similar electives. Finally, enabling attitudinal change early on can profoundly affect the future journey of a medical student, providing a link in the core competencies as outlined by the CanMEDs roles, the essential physician competencies as outlined by the Royal College of Physicians and Surgeons of Canada and adopted by other international organizations [25,26].

Conclusion

This study showed that a carefully designed international health elective can foster better communication, collaboration, leadership, and teamwork among students with different social and geopolitical backgrounds and from countries with a history of mutual hostility. However, more effective ways must be found to help participants maintain their contacts and work together after they return to their homelands.

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Correspondence:

Dr. Rahim Valani
Assistant Professor of Medicine
2075 Bayview Avenue, Room A153
Toronto, ON M4N 3M5
Tel: 416-480-4037
Fax: 416-480-4704
E-mail: rahim.valani@sunnybrook.ca