

Making War a Part of Medical Education

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The current edition of *IMAJ* contains three articles that discuss the impact of war, displacement and violence on the health status of three populations. In this editorial I will discuss their findings with a focus on the implications for medical education. The recent rocket attacks from Gaza in the fall of 2012 make the study by Madsen et al. [1] which examined foreign medical students' reaction to a previous war all the more timely. In many respects, this study may be understood as an example of action research rather than a well-planned research investigation. The rocket attacks seem to have taken the medical school by surprise, as it did most of Israel. Rather than a well-conceived plan of how to act in time of emergency, the medical school staff improvised. Improvisation is a core characteristic of Israeli culture but not a normal part of American cultural norms, which prefers long-term planning and 'going by the book'. The study looked at how their foreign students reacted individually, as well as the impact on the medical school as a whole [1].

The authors seem unaware that the impact of war on medical education has a long history. Serious discussion began in World War I [2] and continued during World War II [3] especially during the Blitz [4]. Medical educators working in the context of recent violent conflicts have reported their experiences in the Lebanon [5], the Balkans [6] and Liberia [7]. Batley et al. [5], using focus groups and in-depth interviews, found to their surprise that most students reported positive effects of their wartime experience, that they became

more resourceful, felt more emotionally connected with their patients and less cynical, despite higher patient loads [5]. In addition, they developed practical skills, i.e., those associated with treatment of wartime injuries, and found opportunities to express their humanitarianism as well as clarify life priorities. Batley and co-authors significantly titled their article, "War as a positive medical educational experience" [5]. Marusic [6] also reported that during the Balkan conflict Croatian medical students obtained invaluable experiences working as medics, collecting medical documentation on war victims and providing humanitarian help to refugees. Some Beer Sheva students also reported positive effects such as increased solidarity within the student body, although conflict and cultural miscommunication with administration occurred as well [1].

A number of medical educators have recently called for integrating war-related topics into the regular medical curriculum [8,9]. Suggested topics include human rights in wartime, impact of post-traumatic stress disorder and other medical or psychosocial consequences of war, nuclear war, medical innovation during wartime, among others. The Physician's Charter [10] with its emphasis on the principles on Social Justice and professional responsibilities for improving access and quality of care may serve as a guide. Times of conflict, rocket attacks and war are opportunities for medical students to learn practical skills, connect with patients, and even make a genuine contribution and regain a sense of idealism and altruism. Two articles, also in the current issue of *IMAJ*, might well be added to such a curriculum. The first, "Health Ramifications of the Gush Katif Evacuation" [11], provides a unique study of changes in the health status of evacuees. The authors, Kory et al.,

observed clear increases in diabetes and hypertension in middle-aged men (45–65 years old), but not in heart disease, nor in middle-aged women. Since forced evacuations and personal upheavals are common in conflict situations, these results raise important questions including the importance of identifying at-risk populations.

There is an old maxim, "If you want to learn surgery, go to war." The second study [12] compared the surgical outcomes of two types of injuries: bomb and gunshot. Luria and co-researchers demonstrated how bomb explosions caused different patterns of injury from gunshot wounds with important treatment implications. Voelker [13] reported on efforts at American medical schools to increase the preparedness of medical students to threats of bioterrorism and terrorism. The active role many medical students played in medical relief following the recent earthquake in Haiti is a good case in point. Madsen and team, the authors of the study in Beer Sheva [1], also understood that it is crucial to help students define a role in the community during times of war, which can lead not only to better coping but also to character building. Medical schools must plan for the unthinkable and clarify educational and practical options for what medical students might do in times of an emergency.

FOREIGN MEDICAL STUDENTS IN ISRAEL

The Madsen study is also a welcome addition to the sparse literature on unique stresses and coping strategies of foreign medical students in Israel. Despite the fact that there are three programs for foreign medical education in Israel, there is little systematic research on the students themselves or on comparing them with their Israeli counterparts. Foreign medical students are required to make a double adjustment to the combined stresses of

studying medicine and living in a foreign country. Schreier and Abramovitch [14] and Abramovitch et al. [15] found that the better the foreign students adjusted to living in Israel, the better they coped in medical school. Additional stressors, such as loan burdens, unfamiliarity with language, culture shock and homesickness may also play a role [16]. Recent publications [17,18] suggest that American medical students report different levels of satisfaction, perceptions of workload, professionalism and harassment, as compared with Israeli medical students. These studies taken together highlight the need for an extensive and specialized support system to address their unique and culture-specific needs.

One study compared the reaction of American and Israeli medical students in Israel during a period of terror. Kovatz et al. [19] found that American medical students reported higher levels of anxiety, lower levels of social functioning, more fear and greater change in daily activities than Israeli students. Unfortunately, Madsen and colleagues [1] did not compare Israeli and American students. What is striking in their findings, which combined quantitative and qualitative data, is that student responses were highly polarized: some became dysfunctional while others carried on more or less normally. One American medical student reported: "Listen, I was devastated. I wasn't sleeping, there was a perpetual knot in my stomach, I couldn't handle other people discussing the war, and I was a mess..." A classmate, however, reacted with only minimal disruption: "I carried on as usual, albeit more cautiously." The need to explain some difference in students' reactions remains a challenge. Why do certain students remain relatively calm while others do not? The authors discuss such differences in terms of risk assessment. Students with high risk assessment were more likely to leave Beer Sheva, while those with low risk assessment were more likely to stay. But this seems more of a description than an explanation. The authors claimed that various factors influenced students' risk assessment (e.g., the opinion of family members, trust and

access information, past experience in conflict situations, and link to the local community) but provide no data to support it. The reliability of their finding is uncertain since so few foreign students were actually in Beer Sheva at the onset of the rocket attacks which began during the semester break. Of those 20 students who remained, half left and half remained. One would have expected a more thorough analysis of the difference between the two groups and whether integration in the local community played a significant role. An analysis of friendship patterns of medical students with Israeli medical students and/or other Beer Sheva residents might be revealing.

The study used an anonymous electronic survey that included closed and open questions concerning their experience of war, which was administered 6 months after the ceasefire [1]. Electronic surveys are especially valuable for gathering data simultaneously from many different geographical locations. It might have been especially appropriate to sample, simultaneously, medical students who were away or left Beer Sheva and those who stayed. In this case, the advantages of an electronic survey of a resident population are unclear and one wonders why they did not use focus group and/or in-depth interviews, as Batley and collaborators did [4]. Similarly, one wonders why there was no follow-up. Studies have shown that even a single adverse experience can have a lasting negative impact on medical students [20]. One wonders how well students recovered.

The medical school in Beer Sheva seems to have learned lessons about the necessity to address issues of cross-cultural communication, vital in a program uniquely dedicated specifically to train physicians to work internationally [1]. To increase communication they set up a special committee to prepare students for possible threats to security. When further rockets fell, students seemed better prepared. One wonders how they and the other foreign medical students in Israel fared during the very recent rocket attacks and whether it was a positive or traumatizing medical educational experience.

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