

Research non-guides

I totally support the views expressed by Subba Rao¹. The title is evocative. He has clearly defined the human interaction between the two partners in pursuit of research – the student *aspiring* to do something creative and the guide *inspiring* the activity. Both components are assumed to exist when the student enrolls under the guide. The common traits which Subba Rao have listed thrive in our higher education system!

When they come to the surface, the higher academic authorities – be it Director or Vice-Chancellor – just watch the scene, because it demands judging what is effective and dynamic supervision.

Research brings the student into close personal association with the guide or supervisor². Problems are created when students see no results are forthcoming, and lose patience; and, in many cases, they arise because of little involvement on the part of the supervisor or due to procrastination because there is ample time, namely three years to go.

With the examination-oriented courses in our higher education system, the student has a real handicap; he does not get any idea of the qualities that research work demands. A Ph D candidate starts with optimism, flushed with the success of his examination performance; if he does not see any meaningful progress in research in a reasonable time, depression and disillusionment set in, all too soon. It results in routine work which eventu-

ally becomes a 'filler' in the thesis. It is here that the guide can steer the student to a fresh approach. Otherwise, precious research time will be continually lost, embittering the relation between the two.

I have seen some theses drag on for over ten years, eventually culminating in the award of a doctorate degree. Does the topic of research remain static during the decade?

The way Rutherford inspired research work is graphically described in the book edited by Boag *et al.*³, which is an authentic record of the research career Kapitza started under his guidance. Kapitza says, 'I learned a great deal from Rutherford not physics but how to do physics...'

The book by Salmon⁴ deals with two aspects: *supervisory relationship* and *students' requirements* drawn on experiences of thesis work of students whom the author had supervised.

I can speak with some justification from my experience in guiding successfully three research degrees in IIT Madras, Chennai. I continued with the investigations till retiring as Professor in 1985 on the main problem in my doctoral thesis (1975), namely Cauchy continued fraction techniques for model reduction. I would suggest the following self-corrective mechanism.

It is adding another dimension, namely the objective of an impartial assessment

of the quality of supervision. This should not just be entrusted to the doctoral committee, which does not act when crucial problems arise. The external supervisor for the thesis project, so appointed by the Director, should have independent authority. This will build in the system confidence for the dissatisfied student and help the guide to vindicate his position and implement corrective measures. This would be like an audit of the supervisor, who would be *penalized* and *prevented from taking on more students*, if standards of supervision were not met.

1. Subba Rao, C., *Curr. Sci.*, 2002, **82**, 1415.
2. *The Hindu*, Science and Technology Supplement, 23 August 1996.
3. Boag, Rubinin and Shoenberg (eds), *Kapitza in Cambridge and Moscow*, North-Holland Publishers, New York, 1990.
4. Salmon, P., *Achieving a Ph D: Ten Students Experiences*, Trenham Books, London, 1992.

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Health situation in the relief camps of Ahmedabad

Gujarat has been engulfed by unprecedented violence since 27 February 2002 following the Godhra train massacre. Systematic and gruesome attacks have been unleashed against local communities. Hundreds have lost their lives and even larger numbers have been injured. Over a lakh of people continue to live in refugee camps.

We, a team of health professionals undertook medical relief in the refugee camps of Ahmedabad, Gujarat between 28 May and 4 June 2002 in response to

the request of a group of Non Governmental Organizations (NGOs).

Our primary objective was to provide medical services to refugees in the relief camps of Dariakhan Ghummat, Shahalam and the Vatwa Dargah camp No. 2 located in various parts of Ahmedabad. The first two camps are the largest among the 35–40 camps in the city. On the basis of our initial experiences in providing medical care, our team also undertook an assessment of the public health situation in these three camps.

When violence erupted, the riot victims fled to mosques, dargahs and burial grounds for refuge. These have spontaneously been converted into relief camps. In two of the three camps people were housed in makeshift shelters consisting of shamanas (cloth erected on poles as roof and cloth as floor). Families have been staying in these camps for over three months and despite this length of time, a more physically secure structure has not been erected. The shelters do not protect the people from the intense

heat of summer. We observed numerous cases of heat-related skin conditions and heat exhaustion. The monsoons, which are imminent, will flood these camps and make them inhospitable, exposing people to cold and constant damp. A large number of people have to share a few toilets. Food rations are minimal. People huddle together with a few belongings without privacy or protection. In this physical condition, people are struggling to cope with loss of family members, homes and livelihood in an atmosphere of extreme mistrust, physical and emotional insecurity. This is the scenario three months after the camps came into being. These conditions do not meet the basic living standards and are inimical to health.

In this context the community members and NGOs, through their own efforts and resources, have played an outstanding role in ensuring that minimum services and relief are available in the face of extreme odds. However their efforts are overstretched.

Water supply in the camps has been met by the Municipal Corporation. There are few water points compared to the international standard of one water point for 250 people¹. Chlorination of drinking water has been ensured. The drinking water source has been segregated from the toilets. There is a potential threat of outbreak of acute gastroenteritis and other water-borne diseases with the coming of the monsoon. Currently, sporadic cases of gastroenteritis and viral hepatitis are being reported.

The lack of adequate and coordinated medical facilities has been and continues to be a major problem. While the bigger camps have managed to organize at least skeletal outpatient and referral systems, the smaller camps have little or no facilities. Whatever facilities are in place here are due to efforts of the local communities and various NGOs. People in the camps are reluctant to access public and private hospitals in view of the perceived discrimination. Post-traumatic stress disorder and other psychiatric problems

related to extreme physical violence, sexual abuse, loss of life and property are widespread among men, women and children. There has been no provision for specialized counselling and psychological support required to manage these problems. The persisting physical and emotional insecurity has prevented any improvement of these problems. Patients with chronic diseases such as tuberculosis, hypertension, diabetes, ischaemic heart disease, seizure disorder and psychiatric disorders are unable to continue their regular medical care. Special needs of women and children have not been addressed adequately.

The food supplies provided by the government do not meet optimal dietary requirements. The camp organizers have to purchase extra supplies to meet the shortfall. Pregnant women and children are nutritionally vulnerable, and no extra provision has been made for them. We have seen several cases of anaemia and malnutrition.

We recommend the following: (i) The current camp shelters be upgraded to more secure and protective structures. This is urgently required in view of the prevailing conditions and the imminent arrival of the monsoons. (ii) The provision of coordinated, comprehensive and acceptable medical care at the camps with adequate referral services. Sensitive counselling and psychological support to the survivors of sexual assault, physical violence, and traumatized and bereaved children by trained health professionals is urgently required. (iii) The quality of diet provided at the camps be improved. Pregnant women, lactating mothers and children require special attention. (iv) An increase in the number toilets and in the quality of their maintenance. (v) A comprehensive and innovative rehabilitation programme, keeping in mind the physical, mental, and social aspects of health. The NGOs and the local communities do not have adequate resources for this. The state must endeavour to carry out this work.

These camps should not be closed down in view of threat to life and property that still continue in the original localities. The facilities in the camps must be upgraded, so that they meet minimum standards required for healthy living.

An independent assessment² of the health situation in the relief camps of Gujarat between 15 and 29 April, demonstrated an identical health scenario. Over a month later, there is no evidence of any improvement in the poor living conditions and inadequate health care provision. In this context, a concerted effort by national agencies is desirable.

1. Humanitarian Charter and Minimum Standards in Disaster Response, www.sphereproject.org/handbook.
2. Report of the Investigation by Medico Friend Circle, May 2002, www.mfcindia.org.

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