Qualitative research: A need to uncap its potential

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INTRODUCTION

It is a paradox and challenge that research in health technology and interventions makes rapid progress in India while organized basic care for the majority of patients lags far behind. This gap seems to be widening: the true beneficiaries of research—the patients at large—are unaware of the advances in medicine and primary care providers are unable to deliver the benefits of research. It is necessary to find out why the health care available at present is not effective and why the results of quantitative research are not implemented. We need to use a research methodology which offers detail, depth and understanding and which takes context and socio-economic factors into account. Qualitative research is particularly effective for discovering why the results of quantitative research are often not implemented. Qualitative research methodologies are the most appropriate when questioning why the presently available health care interventions/services are not as effective as they should be. Using the methodologies, it is possible to get answers that will help improve health care/health care delivery at possibly no extra cost. Moreover, the results give clues and insights into practical intervention strategies.

Qualitative research may seem unscientific and anecdotal to many clinicians. However, as the critics of evidence-based medicine are quick to point out, medicine itself is more than just an application of scientific rules. Clinical experience based on personal observations, reflection and judgement is also needed to translate scientific results into the treatment of individual patients. Qualitative methods can help bridge the gap between scientific evidence and clinical practice. Though decried by the proponents of quantitative methods, the two approaches are complementary rather than competitive. Although qualitative approaches seem alien alongside experimental and quantitative methods in clinical and biomedical approaches, they should be an essential component of health services research. They not only enable us to access areas not amenable to quantitative approaches, but also because qualitative description is a prerequisite for good quantitative research, particularly in areas that have previously received little attention.

ATTRIBUTES OF QUALITATIVE RESEARCH THAT MAKE IT PARTICULARLY USEFUL IN THE INDIAN CONTEXT

Unearthing of sensitive and undesirable practices

To encourage reporting of practices in medical health care delivery which may not be taken to kindly by their contemporaries, practices which may be less desirable will only be reported if there is enough rapport between those researched and the researcher. Qualitative research methods need to be used for this.

Exploratory studies

In India, there is a paucity of baseline data on the core facts and the nitty-grittys of health care delivery, especially at the primary care level. We need to initiate exploratory studies which inherently require a flexible approach. These should allow exploration and discovery of new and unexpected areas which may not have been visible before the researcher went into the field, as against a predefined set of questions and data collection methods in survey research. Concepts and variables may emerge that may be totally different from those predicted at the outset. The primary strength of the research is its flexibility. Instead of working with predetermined categories and theories, the research generates categories and posits the linkages among them. It is a loosely structured, emergent, inductively 'grounded' approach for gathering data. A meaningful setting and actors cannot be selected prior to field work; instruments, if any, have to be derived from the properties of the settings and its actors' views of them.

Understanding variables in their natural context

An apt analogy to this is the importance of in vivo studies; these are irreplaceable by in vitro studies. To understand health behaviour and health care delivery in its natural context, qualitative research methods should be used. Many health intervention programmes are designed for application to the areas under jurisdiction, the underlying premise being that the entire region has a homogeneous culture. However, in India with its rich cultural diversity, diverse subcultures exist in various socio-economic groups, which need to be understood.

Qualitative methods are best suited to understand the dynamics of each case, and the local web of causality in different social and economic situations. This is especially so in India where the disparity between socio-economic classes in the same city is very stark and social norms, time, money and material resources can impede or promote certain types of behaviour or a behavioural change process. Qualitative studies cannot be substituted by quantitative studies in explaining human behaviour, as qualitative research holds very strong tools for exploring the socio-cultural aspects of human behaviour.

People's interpretation, voices and feelings

A distinctive feature of qualitative research is its reliance on the opinions of the people being studied. It is important to understand what various symptoms, treatments and terminology, and doctor-patient interactions mean to both doctors and patients. For example, the quality of interaction between stroke patients and health professionals had an important impact on the recovery of a patient's self-esteem. Advice by doctors to patients to give up smoking deterred patients from seeking medical help when they needed it and acted as a hindrance to doctor-patient communication. In a study describing the antibiotic prescribing patterns of...
general practitioners in the UK, it was found that an aspiration for a better relationship between the doctor and his patients outweighed the doctor's awareness about the marginal effectiveness of antibiotics in sore throats and the theoretical community risk of resistant bacteria.  

Qualitative studies also contribute to understanding and investigating how medical practitioners and patients relate to various variables. In asthmatics, a peak flowmeter reading of 300 may have different interpretations for children and adults and a different therapeutic meaning for a respiratory specialist, as compared to a general practitioner. Subjective meanings are crucial to the understanding of how treatment regimens integrate with everyday life. Adams et al. found that half the asthmatics they interviewed did not visualize themselves as asthma sufferers. In another study an assessment of the results of peptic ulcer surgery were different for patients as compared to the surgeons. In stroke patients in the UK, it was realized that the much disputed admission of a patient to hospital meets important psychosocial needs during the critical stages. Patients and physicians may perceive the symptoms of diabetes and hypoglycaemia differently in therapeutic terms.

Temporal changes
It is vital to understand the evolution/change of events, meanings over time, and the process of development of meaning. For example, compliance patterns change over time in patients whose prime concern is control of symptoms.

Life is a social process, and the interventions and changes brought about by diseases and their therapy have to be accommodated within the patient's biography. A private doctor delivering health care is also earning his livelihood. Patients with asthma have to integrate the management of practical and psychological aspects of their symptoms into their daily life. A study of epileptics showed that in an attempt to control their disease, they experimented and developed their own medication practices over a period of time.

Attitudes and beliefs
Health workers need to have an intimate and detailed knowledge of people's behaviour, beliefs, attitudes and knowledge before attempting to introduce any intervention. While this principle is frequently violated in practice, it is not a new concept in public health. A step further is the need to evaluate the psychological, social and economic functions of these behaviours, practices and beliefs. A study explored the barriers to guideline implementation by primary care providers in diabetics. In-depth interviews revealed aspects not elucidated by a survey used in the same study.

I cannot help but comment on the frequently used survey (quantitative)-based technique to describe attitude and behaviours. Patients/respondents cannot be asked about 'their' experiences and then made to agree/disagree to questions, which the 'researcher' has set. As this may frustrate the respondent immensely. Moreover, can qualities such as patient self-centredness be given a score of 1.45 and doctor satisfaction one of 8.85? These numbers, to calculate such averages or percentages is meaningless, since the relationship between points 1 and 2 and between 5 and 6 in a series may be completely different. In the absence of baseline data, the use of quantitative survey instruments could lead to a loss of contextual validity, meaning (interpretative and evaluative validity) and miss out on key issues (descriptive validity).

The two examples given below are probably the earliest exemplars of the potential of qualitative research in improving health and care.

Dr John Cassel, an epidemiologist at the Department of Epidemiology, School of Public Health, North Carolina, realized the importance of qualitative research in formulating, developing and implementing health intervention strategies. In a study in which he widely used qualitative research techniques, he demonstrated a drop in infant mortality from 276 to 96 per thousand population, disappearance of the much prevalent kwashiorkor and marasmus and an increase in the average birth weight of infants. This was in sharp contrast to the findings in nearby villages where qualitative research techniques were not used for health interventions.

In 1950, The Lancet published a research paper that changed British practice profoundly for the better. The paper written by an Australian was 30 pages long at a time when the median length of research papers in The Lancet was 2 pages. This was the only piece of qualitative research published in The Lancet between 1946 and 1955. Using ethnographic research methods, J. S. Collings (a physician working as a research fellow at the Harvard School of Public Health) showed that general practice was getting from bad to worse. He used 'active observations and achieved nearly complete identification with the doctors' work and behaviour'. His report included graphic evidence. 'I noticed on some occasions that a perfectly serviceable cough was plied with boxes and bottles.' The result was 'The Royal College of General Practitioners' and a renaissance in general practice in the UK.

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An Eye on the Web

Web-based medical textbooks (Part I)

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INTRODUCTION

Web-based medical textbooks are popularly referred to as ‘e-textbooks’. Many physicians all over the world are now seeking their professional references from web-based medical textbooks, augmenting their information from traditional hard copies of textbooks and sometimes replacing them totally. Needless to say, the concept of web-based medical textbooks has its share of ‘pros and cons’. Here we address some of these core issues, besides reviewing a wide range of web-based medical textbooks. At this time there is a gradual intensification of web-based learning as well as a further evolution of internet technologies.

DYNAMICITY OF THE INTERNET AND ITS INFLUENCE ON MEDICAL EDUCATION

The internet is conceived as a rich, multilayered, complex, ever-changing textual environment.1 It is important to understand that the basic fabric of the internet is inherently dynamic. This feature expectedly exerts its influence on web-based medical learning and web-based medical textbooks. It is therefore not surprising to experience the expeditious emergence or the tacit disappearance or the swift relocation of web-based medical textbooks. Despite these anticipated fluctuations and constant flux, in times to come web-based medical textbooks will be at the forefront of successful prototypes of web-based learning.

Textbooks, journals and continuing medical education (CME) programmes, which collectively form the pillars of any education model, are now in a state of remarkable metamorphosis with sweeping changes occurring under the influence of technological advances. Not surprisingly, the interaction between medical practitioners and web-based learning is nowhere near any measurable or defined end-point. Clearly, an optimistic impression prevails amongst educators all over the world that the best is yet to come. A review of some of the popular web-based medical textbooks is described here. These were accessed in mid-2001. For convenience, the web-based medical textbooks are largely categorized into preclinical, paraclinical, clinical and miscellaneous groups.

The search for web-based medical textbooks3 and their locations is undeniably crucial for the online academician. A host of sites keep track of medical textbooks that spring forth on the internet. Two sites that emerge as among the foremost, by virtue of their completeness as well as constant updating, are **Medie 8 Links** at http://www.medie8.com/MedicalTextbooksOnline.htm and **Glen Library Links** at http://www.glennlibrary.co.uk/Textbooks.htm. There are other websites which offer a variety of links to web-based medical textbooks (Table I).

| ELO | http://www.elo.com.br/~gacferro/dtexts.html |
| Louisiana State University | http://lib-sh.lsumc.edu/ejournals/books.html |
| Medical student | http://www.medicalstudent.com/ |
| Medmatrix | http://www.medmatrix.org/~spages/Textbooks.asp |
| Med Webplus | http://www.medwebplus.com/subject/Textbooks |
| PEIR UAB Dept of Pathology | http://peir.path.uab.edu/reslinks/Online_Medical_Textbooks/ |
| OMNI textbook | http://omni.ac.uk/search/ |
| RMIS | http://rmis.com/dilib/bookmedic.htm |
| State University of New York | http://www.uhsc.sunysb.edu/nyrsr/textbooks.htm |
| University of Texas | http://www.uth.tmc.edu/~atonesse/refdata/textbook.html |