Why has so little changed in maternal and child health in south Asia?

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"Fate has allowed humanity such a pitifully meagre coverlet that in pulling it over one part of the world, another has to be left bare"

Rabindranath Tagore, who won the Nobel Prize for literature in 1913, uttered these prophetic words almost a century ago.[1] He might have said this as he witnessed the plight of the starving multitudes in Bengal. As I write this piece at the turn of the new millennium, I am painfully aware of the masses of people in western India and Pakistan who are caught once again in the grips of an unprecedented drought and an acute shortage of food. Yet, while much has remained unchanged, in many ways the subcontinent has made tremendous strides since securing independence almost 50 years ago. It boasts a modern industrial infrastructure; globally, it exports the bulk of people with expertise in computer software and information technology; and it has nuclear weapons capability. But recent policies of structural adjustment have led to an increase in poverty and social inequity and comparatively few resources have been allocated to health care and health related research.[2] In south Asia, especially in India and Pakistan, indicators of the health of mothers and children remain poor, and statistics on health and nutrition in the area rank among the worst in the world (table 1).[3–6]

Summary points

- Despite south Asia's nuclear capability and technological skills, indicators of maternal and child health rank among the worst in the world
- The health of mothers and children is intertwined with the poor status of women in society and with economic inequity
- Few research programmes are aimed at understanding and tackling the basic determinants of health, and there is little applied research
- Funds available for health care and health related research are limited and subject to structural adjustments dictated by international financial institutions
- In future, research projects and intervention programmes should involve national groups and be based on evidence not political expediency

The Asian enigma

In 1997, the economist Mahbub ul Haq said that "South Asia is fast emerging as the poorest, the most illiterate, the most malnourished, the least gender-sensitive—indeed, the most deprived—region in the world. Yet it continues to make more investment in arms than in the health and education of its people!"[7] Although these problems have been known about for decades and successive governments and action plans have focused on redressing them, progress has been pitifully slow. In contrast, the rest of South East Asia and neighbouring Sri Lanka have made remarkable progress, forcing an examination of the factors that may underlie this "Asian enigma"[8]; in this case the enigma is that although levels of poverty and agricultural productivity in south Asia are similar to those in sub-Saharan Africa, rates of malnutrition in south Asia are significantly and persistently higher.

The difficulty in examining this enigma lies in the fact that while information on health budgets is available, it is very difficult to obtain reliable figures for spending on health research. In south Asia these data are not available to the public, and my successive requests for information from regional and national medical research councils have been unfruitful. The data shown in this paper therefore rely primarily on published information from the region (fig 1).

Little long term improvement in neonatal mortality

Trends in infant mortality in Pakistan shows that there has been slow but steady progress over the past 30 years.[9] (Additional information can be found on the *BMJ*'s website.) However, much of the progress has been made against diseases such as diarrhoea and acute respiratory infections, where there have been global initiatives and vertical national programmes. Neonatal mortality has remained almost unchanged (dropping from 94 deaths/1000 live births during 1950-4 to 55 deaths/1000 live births during 1992-8). Of every 1000 children born live in Pakistan today, more than 90 will fail to see their first birthday. Of these over half will die within the first four weeks after birth and the majority will die within the first few days.[10]

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BMJ 2000;321:809–12

bmj.com

An additional figure on neonatal mortality in Pakistan appears on the BMJ's website

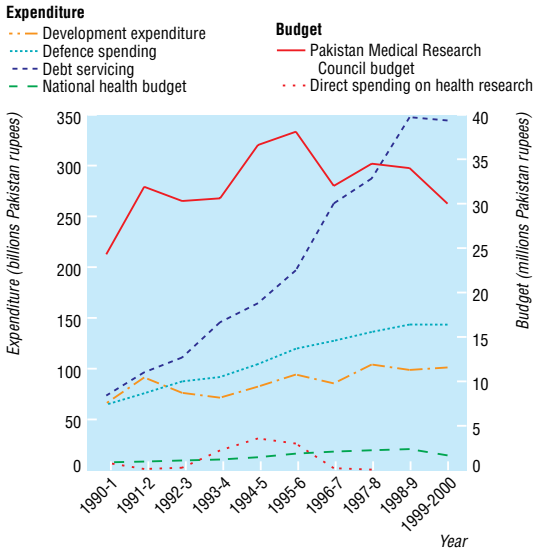
Table 1 Malnutrition among mothers and children. All percentages are means for 1990-8 unless indicated otherwise[3-6]

	% of infants with low birth weight* (1990-7)	% of children with wasting†	% of children with stunting‡	% of underweight children§	Rate of maternal anaemia (%)
Latin America and the Caribbean	9	3	18	10	30
Middle East and North Africa	11	8	25	18	50
Sub-Saharan Africa	15	9	41	32	50
East Asia and the Pacific	10	NA	36	22	40
South Asia:	33	18	52	51	70-80
Bangladesh	50	18	55	56	77
Bhutan	NA	4	56	38	59
India	33	18	52	53	49-87
Maldives	13	17	27	43	68
Nepal	NA	11	54	47	65
Pakistan	25	9	50	38	8-33
Sri Lanka	25	14	18	34	39-65
Developing countries	18	11	37	30	56
Industrialised countries	6	<1	<1	<1	18

NA=data not available.
*Low birth weight was defined as weighing <2500 g at birth.
†Wasting (being low weight for height) was defined as being below 2 standard deviations of the reference population.
‡Stunting (being low height for age) was defined as being below 2 standard deviations of the reference population.
§Underweight (being low weight for age) was defined as being below 2 standard deviations of reference population.

Contrary to the images beamed from Africa, over 50% of the world's malnourished children and low birthweight infants live in south Asia.[4]

For the predominantly agrarian economies of India and Pakistan, which have vast natural resources, the persistently high rates of stunting and wasting are both mystifying and alarming. Almost 50% of all children aged between 1 year and 5 years are classed as stunted, and the improvement or secular trend over the past three decades has been painfully slow, averaging < 1% annually.[11]



Trends in spending on health, development, and defence in Pakistan, and budget allocated to the Pakistan Medical Research Council, 1989-2000. 1 000 000 Pakistan rupees=£12 929 ($18 281)

Why has so little changed?

A key problem underlying these dismal statistics is the lack of coordination between policymakers and specialists in public health. Additionally, scant attention has been paid to the determinants of health. Successive generations of politicians, health professionals, and planners have brushed these problems under the carpet, waiting for "quick fix" solutions. Perhaps, in some ways, the success of the global smallpox eradication programme sent the wrong signal to policy planners and governments in developing countries: it may have suggested that there were "magic bullets" for global problems. Several decades on, with the failures of the malaria eradication initiative and the safe motherhood initiative now evident,[12] the quest for quick fixes is still on. Resources and efforts remain focused largely on finding microsolutions for mega-problems.

How much of the blame for this torpor can be apportioned to developing countries themselves? Some would say that a fair bit could. Apart from poor governance, there has been a tendency for policymakers and planners to promote grandiose, vertical programmes—such as the integrated child development services programme implemented by the government of India. This covers only 50% of the target population of 63 million children younger than 6 years and 13.6 million pregnant and lactating women and has had little impact on indicators of nutrition.[13] Little has been achieved because of inadequate monitoring, poor accountability, and a failure to address underlying determinants of maternal health. Governments in south Asia have been reluctant to address these issues squarely. The reproductive health of women is closely intertwined with basic issues of social status, access to education, empowerment, and fertility, and without tackling these issues other measures are at best perfunctory. Issues such as gender imbalances in health and education as well as humane governance have been highlighted in several influential reports from south Asia, but the findings of these reports have not been translated into action through national or regional programmes.[14 15]

Weak health institutions

The lack of sufficient indigenous planning and undue dependence on external aid have led to frequent changes in national health policies. Many of the small and shrinking group of health researchers in Pakistan work in a state of perpetual despondency, frequently with little access to policymakers and planners. The state sponsored institutions, set up with considerable fanfare to stimulate essential health research, have gradually become both irrelevant and moribund. The Pakistan Medical Research Council was once a vibrant and active institution but has been progressively starved of funds and is not in a strong position to play a leading part in policymaking. The figure shows the relation between recent spending on health, development, and defence in Pakistan and the amount of money allocated to the Pakistan Medical Research Council (statement issued to Pakistan Medical Research Council from the Ministry of Finance, Pakistan, 1999). It is difficult to imagine any meaningful national health research being done with less than

£13 300 ($20 000) annually. Unfortunately, when there are economic crises, the health sector's budget is one of the first to be sacrificed. Given the current spending on defence in south Asia and the recent 25% increase in defence spending by India, it is difficult to foresee any growth in the spending on health and education.

Restrictions imposed by donor agencies

It is unfair to blame everything on national governments and institutions. In economies that are struggling to stay afloat, international donors and agencies also play a part. External assistance to the health sector in developing countries represents less than 3% of the health expenditure in those countries,[16] and from this external assistance the amount allocated for research into health related issues is woefully small.[17] Furthermore, such aid usually comes with strings attached, limiting the scope and benefit of such assistance. These restrictions include requirements to purchase materials from donor countries (frequently at exorbitant costs) and high consultancy costs. The recent failure of the Development Assistance Committee of the Organisation for Economic Cooperation and Development to reach an agreement to untie the strings that are attached to assistance given to the poorest countries of the world is a stark illustration of this fact.[18] Added to this there is little coordination between the agencies that focus on economic restructuring and those involved in maintaining and improving existing health systems and health policy. Thus, in many heavily indebted countries, where the bulk of the budget is swallowed by debt servicing and expenditure on projects that do not aid development (known as non-developmental expenditure), health policy is determined largely by ministers of finance.[19]

Economic globalisation may increase poverty

Many developing countries find themselves caught in a vicious cycle of dependency on international financial institutions and an increasing spiral of debt. The data on the transfer of funds from major financial donors to Pakistan and then back to them again during the financial year 1999-2000 illustrate this fact (table 2).

The rigid enforcement of structural adjustment as the sole mechanism for strengthening an economy frequently leads to increases in social inequity: this has a direct impact on health and nutrition. This is immediately evident among the most vulnerable members of the population, namely women and children.

Recent moves towards globalisation of the world's economy are fraught with the risk of increasing poverty and social inequity in the medium term, as has happened in Pakistan.[20 21] Until recently the World Bank seemed to have accepted that social development and social equity were important components of national development, but now it seems to have given way to the forces of growth and "trickle down" benefits.[22 23] The International Monetary Fund bears equal responsibility for the virtually stagnant state of the health budget in Pakistan.

Table 2 Cash flow from major financial institutions to Pakistan and from Pakistan to donors, 1999-2000. Amounts are millions of dollars

	Cash flow		
Donor	Into Pakistan	Out from Pakistan	Net amount
World Bank	250	514.2	–264.2
Asian Development Bank	423	363.5	59.5
International Monetary Fund	0	329.1	–329.1
Total	673	1206.8	–533.8

PENNY TWEEDIE/PANOS PICTURES

A child with cholera is taken to a health centre in Bangladesh. In south Asia the indicators of maternal and child health remain poor, and statistics on health and nutrition in the area rank among the worst in the world

"The international system fails to meet the scientific and technological needs of the world's poorest"

This quote from Sachs is telling.[20] When poverty is ubiquitous and increasing, most new activities and programmes in the health sector in developing countries become dependent on the global initiatives of international agencies such as the World Health Organization, Unicef, and private foundations. More often than not, these initiatives are based on rigid global programmes that have little flexibility and show little sensitivity to local needs. The integrated management of the sick child initiative, jointly sponsored by the WHO and Unicef, is a notable exception: considerable effort has been made to adapt the programme to local conditions.[24] As a rule, however, the "one size fits all" approach has led to the eventual failure of many programmes.

A recent review of programmes to control diarrhoeal diseases found that although mortality from these diseases has been reduced, there has been little change in the overall incidence of diarrhoea in developing countries.[25] Few current research projects are focusing on reducing the incidence of diarrhoea, and, of those that are, most are looking for quick, simplistic solutions. The most intuitive and sustainable solutions for controlling childhood diarrhoea would be to provide clean water and environmental sanitation.[26]

The global application of vertical health programmes may also cause new and unforeseen problems. When the WHO's acute respiratory infections programme was being implemented—it advo-

cated administering co-trimoxazole to every tachypnoeic child—many warned that this approach was likely to lead to the overuse of the drug and over the counter prescribing, and that it had the potential to speed the emergence of bacterial resistance. A decade later these premonitions have not only been shown to be accurate but have led to a situation where there is almost ubiquitous resistance to co-trimoxazole among common respiratory bacterial pathogens.[27 28] Additionally, there has been a rise in resistance among *Shigella* isolates, which has severely restricted the choice of antibiotics used to treat dysentery. The same holds true for the widespread use of quinolones for shigellosis and typhoid.[29] It is ironic that having popularised the prompt administration of antibiotics using comparatively weak clinical algorithms, international agencies are now expending considerable effort to restrict the use of antibiotics in an attempt to contain antimicrobial resistance.[30]

The way ahead

What then is the way ahead? Irrespective of these seemingly insurmountable problems, we are better placed now than ever before to tackle the poor indicators associated with maternal and child health. The realisation that reduced intrauterine growth and malnutrition in early childhood can have long term consequences for countries in that they directly affect economic growth, is likely to force governments in south Asia to take a closer look at their policies on maternal and child health and nutrition.[31] This may stimulate a shift in the way that health is perceived: a programme of integrated social development should have education and social and gender equity at its heart.

Creating an awareness at the grass roots of human rights and demands for better status and health services is also key to changing policies. Linking health and nutrition programmes with those designed to alleviate poverty will be essential.

Where does public health research in developing countries stand in all this? Would this research be best performed by the north and its institutions while developing countries muddle through cleaning water and improving sewerage systems because in the words of Jerome Kassirer, former editor in chief of the *New England Journal of Medicine*, "there is no science there"?[32] I think not. Jawaharlal Nehru, championing the rights of developing countries, stated that "It is because we are a poor country, that we cannot afford not to do research." However, such public health research is best done by national or regional groups that have been given appropriate support from international organisations with whom they can form an open and meaningful partnership.[33 34] Stimulating essential national public health research is vital, and it requires appropriate funding. The experiences of several non-governmental organisations and independent institutions in south Asia suggest that public-private partnerships, which focus on public health priorities at the national level, work best and, most importantly, that the determination of these priorities must be based on solid evidence and epidemiological information not political expediency.[35]

Competing interests: None declared.

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Endpiece

The greater miracle

"Which is the greater miracle: to cause a stone to speak, or a philospher to stop speaking?"

Overheard at the Council of Nicaea.