

Health research capacity in Pakistan

**A country report prepared for the WHO and COHRED Regional Consultation
on
Health Research for Development**

24 - 26 June 2000, Cairo

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1. Health and demographic profile of the population

Pakistan is a South Asian country with a population of 130.6 million according to the 1998 national census. The population growth rate of the country is 2.6% per annum. The national infant mortality rate is 90 per 1000 per year and the maternal mortality rate is 300–399 per 100 000 per year. Life expectancy at birth is 60 years for both men and women. The under-14 years age group accounts for 44% of the population, with the age group over 65 years forming 5% of the population. The national literacy rate is 38%. The country's economy is agrarian.

The social sector has suffered from years of neglect. Low financial inputs, the lack of coherent long-term policies and of human resource development has resulted in the continued poor showing of social indicators of the population. The country's per capita income of US\$480 is above average for South Asian countries. However, according to the UNDP listing of countries on the basis of their Human Development Index (HDI)² Pakistan is ranked 138 among 174 countries. In the health sector the programme/project approach has been used to deal with the immense health problems of the population. These programmes and projects have been specific objective-focused and have been mostly vertically implemented. Three critical deficiencies have been present in all the programmes to date:

- lack of an information base;
- lack of community participation; and
- lack of a cross-sectoral approach to implementation.

As a result, despite decades of effort, not much change has occurred.

The Family Planning/Population Welfare Programme has been ongoing since the early sixties, yet the population growth rate of the country is among the highest, not only globally, but also regionally. A Primary Health Care Programme has been implemented since the Alma-Ata Declaration, but universal access and equity are far from achieved. Despite the implementation of focused programmes like the Maternal and Child Health (MCH) programme, Accelerated Health Programme (AHP), and Child Survival Programmes, more than 70% of pregnant women do not receive antenatal care and 80% of deliveries continue to be attended by untrained traditional birth attendants and family members. The poly-immunization Programme that has been running for more than two decades has yet to achieve the coverage target, and neonatal tetanus and poliomyelitis continue to take a heavy toll of children in Pakistan. The ongoing Prime Minister's Programme for Primary Health Care and Family Planning is displaying the same shortcomings and is unlikely to bring about significant change.

There are many reasons for the failure of years of effort to make a positive impact on the health status indicators of the population. A critical factor is the lack of an information base for policy and planning. The health sector has no organized system to generate information. Routine documentation and record keeping are extremely poor. A research culture has failed to develop and, as a result, there is no research capacity and no demand for research. Since the beginning of the 90s, an effort has been under way to introduce a Health Management Information System (HMIS), but it is still too unsatisfactorily established to contribute to decision making.

2. Health sector development

Pakistan became an independent sovereign state on 14 August 1947. At the time of independence the territories that became Pakistan had one medical teaching college and attached hospital and one university at Lahore. The health care delivery system consisted of a few district and civil hospitals. As early as 1954 a Medical Reforms Commission was set up to advise the Government on the organization and structure of the medical services. One of the recommendations of the Commission was to establish a Medical Research Fund. In 1962 a subsequent Medical Reforms Committee recommended the establishment of the Pakistan Medical Research Council (PMRC), which was created under the Ministry of Health and assigned responsibility for promoting, organizing and coordinating medical research in the country, and for linking medical research to overall national socio-economic planning.

In the first two decades of independence, rapid expansion occurred in the health sector. By the early 1960s, there were 5 medical colleges and one postgraduate institute, The Jinnah Postgraduate Medical Centre (JPMC). The National Health Laboratory, now called the National Institute of Health (NIH), was also set up in the sixties. A journal for the publication of original research, called the Journal of the Pakistan Medical Association (JPMA), was also launched. The Pakistan Medical and Dental Council was established to set standards and oversee medical education. Today the country has 18 undergraduate medical colleges in the public sector, with 4 postgraduate medical institutes, the National Institute of Health, the Pakistan Institute of Medical Sciences, the National Institute of Cardio-Vascular Diseases, the Armed Forces Institute of Cardio-Vascular Diseases, the Armed Forces Institute of Pathology, the Pakistan College of Physicians and Surgeons, two institutes of public health, two health service academies and three provincial health development centres. The private sector has founded three medical universities and five medical colleges.

Over the years, and especially in the 1980s, many commissions and committees were constituted to advise the Government on health sector reform and development. (See Annex I: Chronology of Health Sector Development in Pakistan). The Health Survey and

Development Committee (Bhore Committee) was set up in 1946, just a year before partition of the subcontinent. The Committee's recommendations encompassed the concepts of universal access, equity, quality and community participation in the provision of health care, concepts that were to be incorporated in the recommendations of subsequent commissions and committees. However, to date they have eluded the kind of implementation envisioned.

3. Health policy

The expansion and development of the health sector, as outlined above, has not been in the framework of any policy or long-term planning. Since the early 1960s, development has occurred in the context of 5-year plans and annual development plans. An abortive attempt at health policy making was undertaken in 1990. It was in 1997 that the first national health policy was announced. The policy aims to improve the health status of the nation by providing universal coverage of quality health care through an integrated primary health care (PHC) approach. The 2010 vision for the health sector development, as set out in the policy document, provides for comprehensive and quality health care for all segments of society.

Under item 6 of the policy document - Resource development for health - community-oriented medical education, the Pakistan Medical and Dental Council, and nursing and paramedical staff development are listed. Under item 8 - Priority health programmes - it lists the National EPI Programme, the Prime Minister's Programme for Family Planning and Primary Health Care, maternal and child health, reproductive health, the National ARI and Diarrhoeal Disease Control Programme, Malaria Control Programme, National Tuberculosis Control Programme, National AIDS Control Programme, nutrition, mental health, oral and dental health, Health Promotion and Health Education, School Health Programme. Under item 22 - Health systems research (HSR) - the policy acknowledges the neglect of health research and promises to give it due importance, promote a research climate in academic institutions, and institutionalize HSR.

4. Health research resources

Research in Pakistan has remained a low priority area in all fields. This is amply illustrated by the total scientific and technical manpower of 14 576 and a total number of 1843 PhDs in all fields in a country of over 130 million (Figures 1 and 2). The total allocation to R & D organizations and universities in the annual national budget has ranged from Rs. 8336.396 million (US\$ 154 million) in 1988-89 to Rs 12 878.313 million (US\$ 239 million) in 1994-95.

The allocation to the health and population sector research institutions is a fraction of this paltry expenditure (Figure 3).

Figure 1

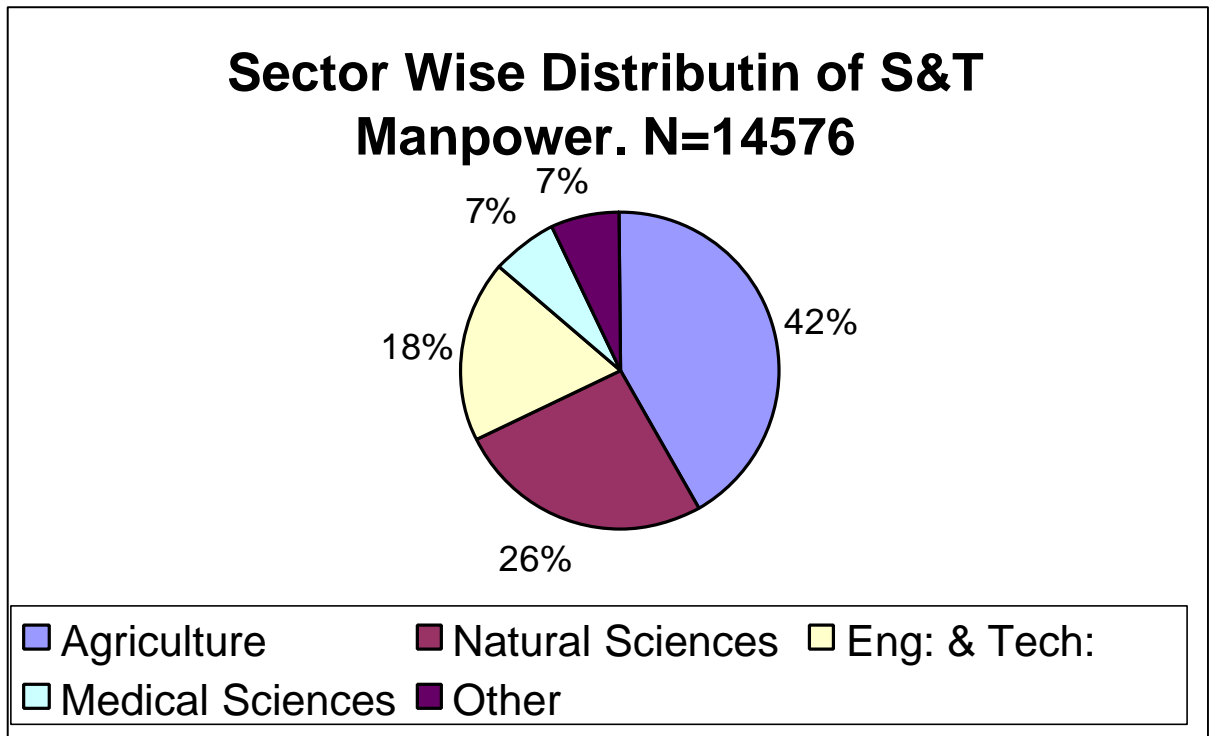
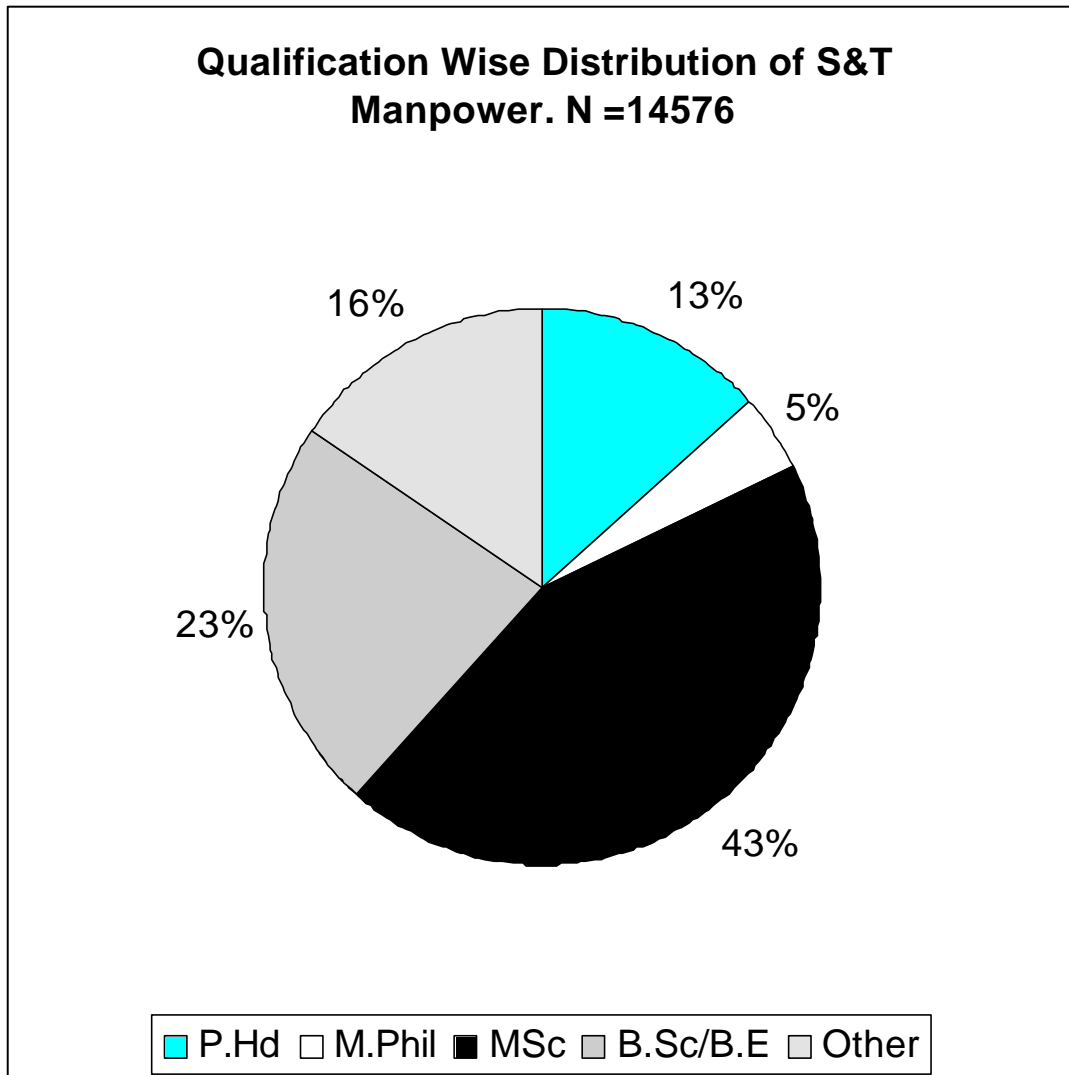


Figure 2



In the field of health, the number of research scientists is 966, with no more than 42 PhDs (24 of whom are at the Aga Khan University, Karachi)^{5, 6}. The neglect of health research and development in the country cannot be blamed on the early planners and decision makers, since the Medical Research Fund was established as early as 1954 on the recommendation of the Medical Reform Commission, and the PMRC was created in 1962 on the recommendation of the Medical Reforms Committee. Why the early promising start could not be built on is a matter for further study. Currently, health research is individual-based, fragmented, uncoordinated, of poor quality and largely irrelevant to the health policy and planning needs of the country.

5. Health research institutions

5.1 The Pakistan Medical Research Council (PMRC)

The PMRC was assigned the functions of promoting, organizing and coordinating health research and linking it to national socio-economic development planning. To achieve its objectives, the PMRC adopted the strategy of establishing research centres in medical teaching institutions, where it was assumed the research capacity was concentrated. The Council has 18 such centres at present, located in major public sector undergraduate and postgraduate medical institutions.

Unfortunately this strategy has failed to deliver the desired results. Again the reasons could be many and need to be researched. However, one reason is the failure of the PMRC to attract competent researchers and develop a core of research trainers. With a severe lack of capacity in its own research centres it has been unable to develop health research human resources in the country. The PMRC's assumption that adequate research capacity is available within medical institutions, and that all that is needed is the provision of technical and logistical facilities through the centres to promote research, has proved wrong. Research know-how is severely deficient, and the PMRC needs to concentrate on capacity building for several years to come before any change can be brought about.

5.1.1 The National Health Survey of Pakistan (NHSP)

The PMRC carried out the NHSP in collaboration with FBS and the National Center for Health Statistics (NCHS), USA, in 1990 – 1994. The sample size of 80 primary sampling units of 30 households each was selected by the FBS within its sampling frame. The objectives of the survey were:

- to provide a general health profile of the people of Pakistan;
- to provide a health profile of high risk groups;
- to assess the utilization of health services; and
- to provide this data in a form relevant to the health programme, policy and planning needs of the Government of Pakistan.

The model for the survey was the National Health and Nutrition Examination Survey (NHANES) of the NCHS, USA.

Data collection for the survey was completed in June 1994. The first preliminary presentation of the data was made to a special session of the biennial Medical Research Congress of PMRC, at the Aga Khan University, Karachi in December 1995. The Secretary of the Ministry of Health was the guest of honour at the session. A second presentation of the preliminary report was made in Islamabad at a special session of the World Bank in February 1996. The

Special Assistant to the Prime Minister was the guest of honour on that occasion and senior officials and researchers participated. Both the secretaries of Science and Technology and Health, and the Director General for Health were present. A conference on the NHSP was held in September 1997. Analyzed data in eight fields selected by the PMRC Technical Committee (health services utilization, nutrition, child health, maternal health, chronic diseases, smoking, disabilities, and dental health) were presented at the conference. Key politicians, officials, researchers and academics participated in the conference. The report of the survey was released on that occasion.

5.2 The National Institute of Health, Islamabad

The National Institute of Health (NIH) was established in the early 1960s with the title of National Health Laboratories. The scope and functions of the Laboratories were expanded in the 1980s and the institution was renamed the National Institute of Health. Vaccine and diagnostics development are the major functions of the NIH, for which research was an essential requirement. The Institute has the largest number of health science personnel in the public sector, but in the field of research its contribution has been negligible, due largely to a lack of know-how.

5.3 The Pakistan College of Surgeons and Physicians (PCSP)

This is a fully autonomous institution at the federal level, established with the objective of capacity building in specialized fields of medicine. The college trains for, and awards, fellowships in different specialties (FCPS). The Government recognizes the degree as equivalent to the memberships and fellowships awarded by the Royal Colleges in Britain and the equivalent awards of the American Board.

5.4 Health Services Academy, Islamabad

The Health Services Academy, Islamabad was established to train personnel in health management, public health and related subjects. The academy teaches and also undertakes HSR. The Academy is currently offering a one-year course for a Master's degree in Public Health and short courses in health management and administration. It has organized a field demonstration area for HSR.

5.5 Institutes of Public Health, Lahore and Quetta

These are provincial government institutions established for the purpose of health sector human resource development in the fields of public health and health management. Some research activity is undertaken mainly by the students of the different courses as part of their theses. Both the quantity and quality of the research are poor.

5.6 Provincial Health Services Academy, Peshawar

This is a provincial government institution, recently established to organize, coordinate, supervise and monitor in-service and on-the-job training of all cadres of health personnel in the Northwest Frontier Province. Twenty-six training institutions in the province, including a postgraduate college of nursing and nursing schools, divisional health development centres, institutes of paramedic technology and public health schools, have been attached to the Academy. Its major objective, and that of its affiliated institutions, is to optimize capacity for health management and service delivery in the health sector of NWFP. Its role in health human resource development (HHRD) is critical for health sector reform efforts of the NWFP government.

HSR is an integral part of the HHRD agenda of the Academy. It is part of the curriculum of all short and long courses of the Academy, and its faculty organizes and undertakes HSR studies. Development of a Field Demonstration Area and a Health Information Resource Centre are on the Academy's agenda. However, the major problem it faces is the lack of research capacity.

5.7 Postgraduate Medical Institutions

Pakistan has at present two federal and two provincial postgraduate medical institutes, the Pakistan Institute of Medical Science and the Institute of Cardio-Vascular Diseases. These institutions primarily impart training for specialization in clinical fields of medicine. Both the faculty and the course participants of these institutions undertake research, the former as a requirement for career development and the latter as a course requirement. In the absence of research capacity and the lack of understanding of research, the actual research undertaken is merely a required exercise and is generally of a poor standard.

5.8 Undergraduate Medical Institutions

Pakistan has 18 medical undergraduate institutions in the public sector alone, which collectively add about 8000 medical graduates annually to the country's pool of resources. Research, however, is not a part of the curriculum of these institutions. The medical students may get some exposure to research in their community medicine training year, but in general they are, at no stage of their training and their five years and more of study, systematically exposed to the basics of research.

5.9 Armed forces undergraduate and postgraduate medical institutions

These include the Medical College, the Armed Forces Institute of Pathology (AFIP) and the Armed Forces Institute of Cardiology (AFIC). Research work is undertaken in these institutions but a major contribution has yet to be made.

5.10 The Federal Bureau of Statistics (FBS)

This is an establishment of the Statistics Division of the Federal Government. The FBS uses the cross-sectional survey methodology to collect health-related data from a nationally representative sample. The important health related surveys of FBS include the National Health Survey (NHS) 1982-83, the Pakistan Demographic Survey (PDS) and the Pakistan Integrated Household Survey (PIHS).

5.10.1 The National Health Survey (NHS) 1982-83

This survey was carried out by the Federal Bureau of Statistics (FBS) to collect morbidity data at the national level. This was the first morbidity survey carried out in the country on the recommendation of the National Statistical Council. Data were collected through interviews of the selected sample of 11 000 households. The objectives were to determine the prevalence of sickness, estimate the extent and nature of the disease, estimate the curative measures taken, estimate the expenses incurred and ascertain the impact of environment on health conditions. The report of the study was published in 1986.

5.10.2 The Pakistan Demographic Survey (PDS)

This is a periodic survey carried out by FBS since 1984. The most recent study was done in 1992. The objectives are:

- to collect statistics of births and deaths in order to arrive at the various measures of fertility and mortality;
- to estimate the current rate of natural increase in the population; and
- to collect information on selected characteristics of the population.

The FBS has developed a sampling frame for such surveys. For the PDS a sample of 24 000 households is taken.

5.10.3 The Pakistan Integrated Household Survey (PIHS)

PIHS is a national sample survey, designed to provide household and community level data. It is the main instrument for the monitoring and evaluation of the impact of the Social Action Programme. It was conducted in 1992 and 1996, and will be continued at least every other year. It contains two sets of data: 1) a central module with a core set of questions that monitor information, which can be measured regularly; and 2) special modules, which focus on key activities that cannot, or need not, be measured on a frequent basis. There are plans to strengthen PIHS in order to develop government capacity for handling the increasing requirements of monitoring, to enable analysis of the poverty impact and distributive effects

of SAP, and to reorient FBS from being a data collection agency to a more analytical and research-oriented institution. In addition to PIHS, a range of mutually agreed studies on various areas of impact (i.e. gender and poverty assessment) of the programme is planned by the Government, with the support of various SAPP donors.

5.11 National Institute of Population Studies

This institution comes under the Population Welfare Division. The studies it carries out focus on population growth and reproductive health. The descriptive, cross-sectional surveys undertaken by NIPS are mostly focused on the study of fertility rates and contraceptive prevalence rates. Some qualitative research has also been undertaken.

5.12 Atomic Energy Commission's Institutes of Nuclear Medicine and Radiotherapy

There are seven such institutions in the country. These centres are equipped with diagnostic and treatment facilities in the fields of oncology and nuclear medicine. With the equipment and human resources available, much good research could be done, but unfortunately this is not happening.

5.13 Private medical institutions

The private health sector's contribution to the GDP of the country exceeds that of the public sector. The National Health Survey of Pakistan has shown that 80% of curative care visits are to private health practitioners. Some very well equipped and high quality hospitals have been established by the private sector, the notable ones being the Aga Khan University (AKU) Hospital, the Shaukat Khanum Cancer Hospital, the Al-Shifa Eye Trust Hospital and the Shifa International Hospital. The specialists in these hospitals contribute to the research effort, with the AKU especially in the forefront of medical research. However, their impact on the research environment has yet to be seen. In the field of capacity building, the private sector is a latecomer, but is expanding fast. Already there are three private sector medical universities (all in Karachi) and several medical colleges.

6. Strategies to promote health research

6.1 Establishment of Pakistan Medical Research Council

As mentioned above, the need for health research was felt early in the history of Pakistan and first a Medical Research Fund and then the Pakistan Medical Research Council (PMRC) were established. The major function of PMRC is to promote, organize and coordinate health research and link it to the socio-economic development plans of the country. The major

strategy adopted by PMRC to achieve its objectives, is collaboration and the establishment of linkages within the country and abroad. This is reflected both in its organization and administrative structure, as well as in its research activities.

6.1.1 Representation of all stakeholders on the PMRC Board and Committees

The Council was established in 1962 as an autonomous institution of the Ministry of Health. It was transferred to the Ministry of Science and Technology in 1972 and back to the Ministry of Health in 1997. On the Governing Board of the Council, which is chaired by the Minister for Health with the Federal and the Provincial Secretaries of Health as members, the relevant public and private sector ministries, departments and organizations are represented. This ensures that the policy makers and planners, the top decision makers and academia are involved in decision making, as well as being aware of the research activities, problems and constraints faced by the Council. The Council also has a Technical Advisory Committee and several expert panels to advise and guide it on technical matters. The researchers of the majority of the academic institutions of the country are represented on these panels.

6.1.2 Establishment of research centres

On the assumption that health research capacity is present in the medical teaching institutions, and in order to promote collaboration in health research, the Council established research centres in different public sector undergraduate and postgraduate medical institutions. To date 18 centres have been set up with the following functions:

- Provision of technical facilities to researchers of their respective host institution and others. The centres are required to extend all forms of assistance to researchers at all stages of their research.
- Research capacity building in the host institution and others in the area/region of the country.
- Promotion, organization and coordination of health research.

The heads of the host institutions of PMRC Research Centres are the administrative heads of the respective Research Centres, serving in an honorary capacity (honorary directors). Advisory Boards, on which local stakeholders are represented, identify research priorities, and supervise and guide the work of the centres. In addition, senior faculty members of the host institution are nominated as honorary Principal Research Officers in their respective centres to act as liaison between the researchers of the host institution and the research centre personnel.

6.2 Original research publications

The PMDC is the regulatory body for medical education in the country. The Council requires a specified number of original publications for induction to, and promotion in, the teaching profession. This should have helped to promote health research in academia but, unfortunately, many ways have been found to get around it. Owing to a lack of research expertise, mostly inexperienced persons review the publications submitted by candidates. Therefore, all sorts of substandard publications are approved.

6.3 Monthly research allowance

A regular monthly research allowance for research/technical staff of research organizations was announced in the budget of 1988, but has not yet been awarded to any researcher because of wrangling between the Finance Division and beneficiary institutions as to which institution qualifies as a research institution/organization

7. Health research funding

The funding of health research in Pakistan is carried out through three sources as set out below.

7.1 Allocation to research funding institutions

The PMRC is the only health sector organization with health research as a primary function. The Council undertakes, as well as funds, research from the budget allocated to it. The Council's annual budget has varied from Rs 14.4 million in 1989–90 to Rs 26.17 million in 1993–94 to Rs 31.95 million in 1996–97 to Rs 34 million in 1998–99, to Rs 30 million in 2000–2001. Over 95% of this meager amount is for salaries and overhead costs. The actual funds allocated for specific research projects ranged from Rs 0.28 million in 1989–1990, Rs 3581 in 1994–95, to nil in the last two years (Table 1).

However, in the period 1994–98 a sum of Rs 70 million was made available for funding HSR under the World Bank and IDA funded Family Health Project 2. The money was made available through the PMRC, which not only invited institutions and individuals directly to submit research proposals for funding, but also undertook a series of HSR orientation and in-depth proposal development workshops to help researchers to understand HSR and to prepare adequate proposals for funding. At the end of the project period 105 research proposals had been received. Unfortunately, only 35 (at a total cost of about Rs 7–8 million) were accepted for funding by the project's independent Technical Committee, mostly with a lot of concessions and disregard for quality. This underscores the lack of research capacity in the country.

Table 1: Yearly breakdown of funds received by PMRC from the Government under non- development, development and research for the last 10 Years

Year	NON- Development		Development		Research	
	MoST	MoH	MoST	MoH	MoST	MoH
89-90	14,400,000		8,100,000		.280 Million	
90-91	18,758,000		5,561,000		.849 M	
91-92	23,365,000		8,535,000		.141 M	
92-93	26,170,000		4,100,000		.280 M	
93-94	26,128,000		4,467,000		2.228 M	
94-95	31,950,000		4,557,000		3.581 M	
95-96	34,477,000		3,611,000		3 M	
96-97		31,956,000			.231 M	
97-98		34,530,000				.072
98-99		34,004,000				NIL
99-2000		30,000,000				NIL
2000-2001		30,000,000				

MoST = Ministry of Science and Technology

MoH = Ministry of Health

Another national funding agency for health research (and other fields of science) is the Pakistan Science Foundation (PSF). This autonomous body receives its funds through the Ministry of Science and Technology. Enquiries and personal experience have shown that very few health research funding proposals are received by the Foundation. The quality of the few received is mostly poor.

7.2 Research allocation in the budgets of health sector programmes and projects

The allocation under the recently implemented Family Health Project has been discussed above. The other donor-funded programmes, which made funds available for research, were the Pakistan Child Survival Programme and the Acute Respiratory Infection Control Programme. Under the former programme the Harvard Institute of International Development (HIID) implemented a four-year research capacity development project. About 30–40 projects were developed and funded.

7.3 Funding of health and population welfare research

Trends in the funding of health and population welfare research from the science and technology budget are shown in Figure 3. In 1988–89 of the total Rs 8336.366 million

allocation to S&T, Rs 96.201 million were allocated to health and population welfare. In 1991–92 the S&T allocation was Rs 9453.168. from which health and population welfare received Rs 127.04 million. In 1994–95, of the total S&T allocation of Rs 12878.313 with health and population welfare receiving Rs 177.555.

Allocation to Health & Population out of S&T Funds

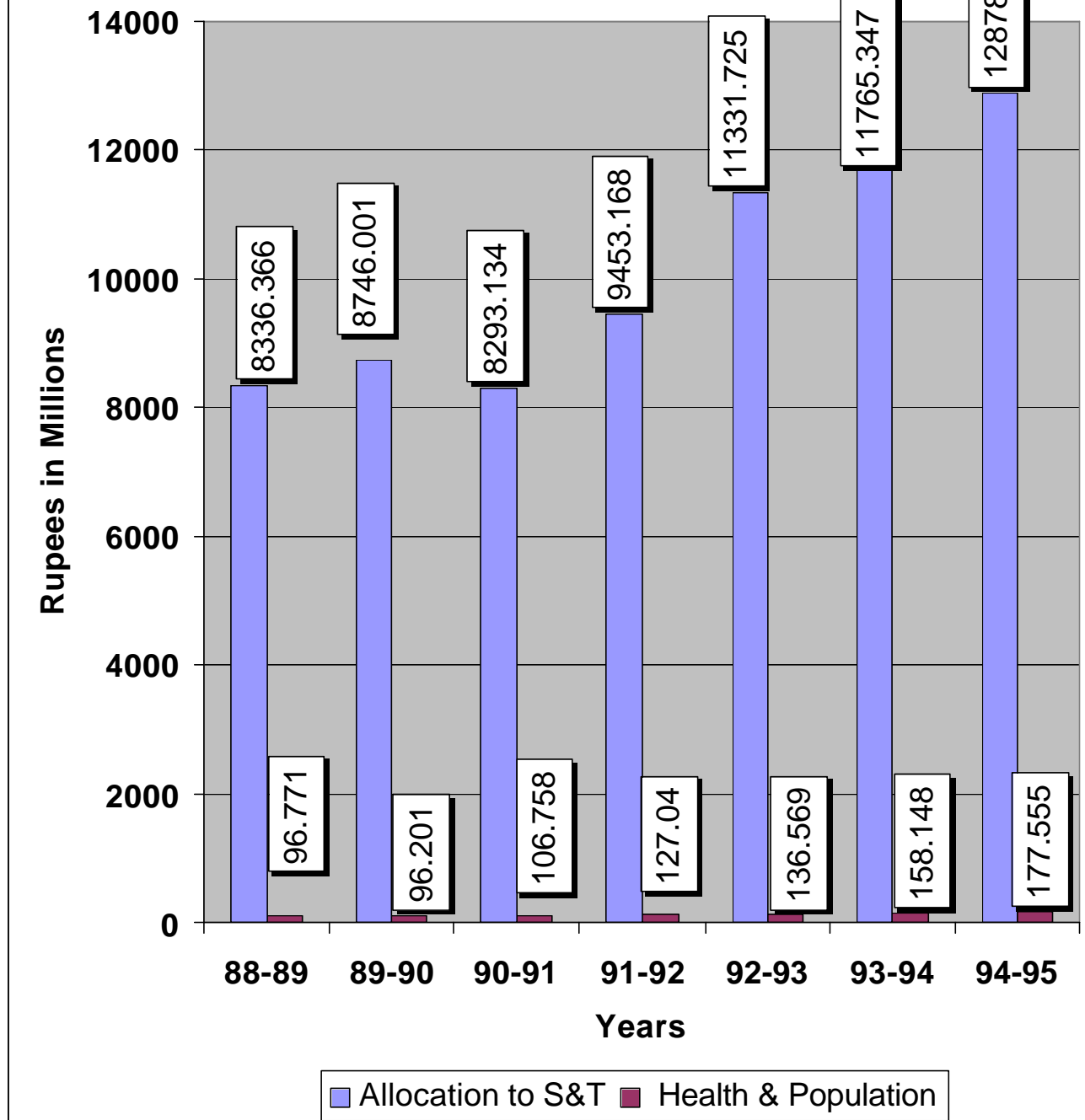


Figure 3:

Enquiries from some of the institutions listed above show that they are not being given any funds specifically for research.

8. Health research priority setting

The PMRC undertook a programme of research on priority health problems in 1976. At a national workshop in 1976 health priorities that needed research were listed. These included anemia and nutritional disorders, infectious and parasitic diseases, gastrointestinal and

hepatic disorders, chronic diseases, cancers, urolithiasis, industrial health, community studies and medical education. In 1982 another national seminar was organized in Islamabad to review and revise national health priorities for the second phase of the programme. To the previous list were added tuberculosis and respiratory diseases, mental health, endocrine disorders, diseases of the urinary tract and evaluation of indigenous drugs. The programme was completed in 1988 and a report was published.

In March 1991, the PMRC, the Aga Khan University and the Pakistan College of Surgeons and Physicians, working in collaboration, organized a conference in Karachi to set health research priorities for the 1990s. However none of the institutions involved were able to identify and arrange funds to undertake research on the priorities identified. In fact, in the 1990s, national funding for health research registered a decline owing to the mounting economic problems of the country.

9. Health research networks

9.1 COHRED

Pakistan became a member of the newly established Council on Health Research for Development (COHRED) in 1993–94 through PMRC. The PMRC executives have regularly represented Pakistan in the meetings of COHRED.

9.2 Global Forum

Through PMRC, Pakistan acquired representation in the Global Forum for Health Research, when this organization was established in 1997. The PMRC executives participated in Forum 2 and 3.

9.3 Pakistan Public Health Network

This Network, which had its origin in a meeting in December 1998 at the National Health Services Academy, Islamabad, and materialized in the meeting organized by the Provincial Health Services Academy, Peshawar in April 1999 at Swat, is in the process of development. Public health teaching and training and the research institutions of the country are eligible for membership. The main objectives are the sharing of information and technical resources for research and training. The first secretariat for the Network has been set up at the Health Services Academy, Islamabad.

9.4 South Asian Infectious Diseases Network (SAIDNET)

The idea for the Network originated in the PMRC and was actively promoted by a group in the USA, who provided funds for organizing a reception for the would-be members of the

Network at the Infectious Diseases Conference at Atlanta in March 1998. The US group also arranged funding for the first meeting of the Network's member countries in January 1999 at the ICDDR, Bangladesh. The National Institute of Health, Islamabad was proposed as the first secretariat for the Network, with PMRC as an active partner. However, with the change of leadership in both NIH and PMRC, the initiative seems to have faltered.

9.5 Concerted Action Project

Pakistan participates in the Project, which was developed by a nine country partnership in 1997 (the tenth partner, Ghana, joined in 1999), with the Department of Tropical Health and Hygiene, University of Heidelberg, as coordinator. The project aims to develop strategies to enhance the use of research in health policy making. The European Commission funds the project, which was launched in September 1998 with the following objectives.

General objective:

To improve the use of research for more adequate and effective health sector reform.

Specific objectives:

- To enhance our understanding of the decision-making process on selected health sector reform issues.
- To assess the availability and the utilization of HSR for the formulation of health policy.
- To analyse the decision-maker's perception of HSR.
- To develop indicators of research utilization in health policy formulation.
- To identify possible strategies to increase the use of HSR in the decision-making process.

10. Issues in health research in Pakistan

10.1 Failure of the development of a research culture

Despite the establishment of the many institutions listed above and putting in place of an elaborate infrastructure for the promotion of health research, both the volume and quality of health research have remained low. The major reason is an overall lack of research culture in the country. In a socio-cultural milieu that actively discourages the questioning of authority, and an educational system where learning is mostly by rote and asking questions is taboo,

the potential for enquiry fails to develop. The essential quality of critical analysis is, therefore, lacking, even in those who attain high-level educational qualifications.

The PMRC centres were established on the premise that qualified faculties of the medical teaching institutions know and understand research, but do not have sufficient facilities to undertake it. This assumption has, unfortunately, been proved wrong. Over the years it has been observed that problem identification is the first hurdle in the research process, for most prospective researchers. Even heads of departments and senior level professors have been known to come to PMRC with a request to identify a research problem that matches their research already under way! In the research done for postgraduate degrees and diplomas, the faculties of the respective institutions maintain a stereotyped list of problems and topics, that are handed out to students without any meaningful dialogue and discussion.

10.2 Lack of demand for research

Policy, planning and decision-making are dominated by bureaucrats and politicians, who are mostly generalists with a poor understanding of research. The professional posts are generally filled by mediocre candidates, since, in the absence of attractive incentives and salaries and the lack of authority invested in most posts, high calibre professionals are not attracted. The result is that neither the generalists nor the professionals have created a demand for research. Organizations, like the PMRC, have never been asked by policy- and decision-makers to provide information for any purpose and the professionals of these organizations have themselves not effectively disseminated their research and advocated its use. The academicians of the many teaching institutions in the country are mostly clinically trained and, with their responsibilities for teaching and patient care during working hours and private practices in their free time, have hardly any time for research. The passive recipients of their teaching, the uncritical student body and the illiterate, uninformed patients, further depress any urge for critical evaluation of existing practices.

10.3 Low capacity for research

The number of scientists and researchers is very low in Pakistan, even when compared with other countries of the region and other Muslim countries of equivalent socio-economic development level. The following are some of the attempts made in the past to develop a critical mass of researchers in the country.

10.3.1 Ministry of Science and Technology (MoST)

The Government of Pakistan created a separate Ministry for Science and Technology in 1972 and over a dozen research institutions were established under it. PMRC was also transferred from the Ministry of Health to the MoST to enable it to develop and expand in a suitable environment. (It is back now with the Ministry of Health). In the field of health specifically, the MoST undertook a programme in the 1980s and early 1990s, which funded candidates who were awarded a PhD in fields like microbiology, molecular biology and oncology etc., in order to develop a critical mass of professionals in these fields. According to hearsay, 80% of those sent abroad did not return. Those who did, either did not find suitable posts or were unable to get postings in line with their training and qualifications.

10.3.2 **USAID**

The US Agency for International Development (USAID) under the Child Survival Programme, trained a group of 30–40 health researchers in a series of workshops. The group's subsequent contribution to research is not known.

10.3.3 **PMRC**

Besides its routine hands-on training at its research centres, the PMRC organized several workshops in the mid-1980s and again in 1995–98, on research methodology, data analysis and report writing. The Council, in collaboration with WHO, organized workshops on HSR (1979, 1986) and research planning and management (1978). Despite all this, the present situation is such that even the Council itself has hardly any trained researchers on its staff.

10.4 Undeveloped capacity for research dissemination

The most critical lack in the health research field is expertise in data processing and reporting of research. Biostatisticians are almost non-existent and epidemiologists are in short supply. The statisticians available have poor applied skills and are generally unable to contribute adequately to the research effort. Owing to this lack of data processing expertise, a large proportion of whatever research is undertaken remains unanalysed.

The dissemination of the little research that is done is further reduced by the lack of writing and reporting skills among health professionals. Development of communication skills, especially writing and reporting, is not emphasized in any of the curricula of health professionals. The replacement of essay writing in examinations by multiple choice questions is further affecting the ability to write. Thus, effective communication of the results of research and personal experience remains low. Through individual efforts a few medical

journals are being published, but both their frequency of publication and their standard are far from satisfactory.

11. How can WHO help to improve the situation?

The status and credibility of WHO are rated highly by the Pakistan Government. It is unfortunate that the Organization has played rather a passive role vis-à-vis health research promotion in the country. From time to time WHO has brought in funds for research, especially HSR, but these have been either not utilized or ineffectively utilized. The following are suggestions for WHO to help research capacity strengthening in Pakistan.

11.1 Inclusion of health research in the priority list of the Government of Pakistan

WHO can help to emphasize the role of health research in the health sector and overall development of the country at every opportunity. It can help to convince the Government that meaningful change for the better can only be ensured if decisions are based on good quality, systematically generated information.

WHO's numerous technical publications are mostly aimed at health professionals. The decision-makers of Pakistan (and other developing countries) are generally non-technical. Therefore, a parallel system of publications for them needs to be established. These publications need to be brief, emphatic and free of jargon.

11.2 Work with research institutions for research capacity strengthening

The WHO Country Representative Offices need to become more active. Instead of waiting to be contacted, they should actively involve themselves with research institutions of the country. The existing policy of working with the Ministry of Health and its Departments only needs to be modified. For the utilization of funds for research, WHO must insist on working with the relevant research organizations without the interference of officials/bureaucracy of the Ministry or its Departments. Technical and/or financial resources must be made available for training in research methodology, proposal development, data processing, information dissemination etc.

11.3 Collaboration between Pakistani institutions and institutions abroad

WHO can help to promote collaboration between Pakistani institutions and institutions abroad especially those in the developed countries. Collaborative research helps to develop research skills, brings in funds and generates good information for the country.

11.4 Funds to fill the critical gaps in health research fields

WHO needs to develop a programme, in collaboration with PMRC and other health research training institutions, to train researchers in critical areas, such as research proposal development and data processing. Some portion of the present substantial country allocation (said to be about US\$ 5 million) could be diverted to this end. Fellowships could also be created at WHO Regional Office or Headquarters level.

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Annex I

Health research capacity in Pakistan

Chronology of health sector development in Pakistan

- ◆ August 14, 1947 Pakistan created as an independent sovereign state of South Asia.

Status of Health Services:
 - Armed Forces Medical Services
 - Civil Public Sector Medical Services
 - one medical college
 - A few district and civil hospitals

- ◆ 1954 Commission on Medical Reforms set up
 - Medical Research fund created
 - Medical education expanded
 - Jinnah Postgraduate Medical Centre established
 - Pakistan Medical and Dental Council set up

- ◆ 1962 Committee on Medical Reforms constituted.
 - Pakistan Medical Research Council established
 - Population Planning Programme started
 - College of Physicians and Surgeons established
 - Rural Health Services started. Experiments on introducing Community Health Workers introduced.
 - Malaria Eradication Programme
 - Maternal and Child Health Programme
 - Health Study Group Report (Nur Khan's Report)
 -

- 1970s:
 - Programme for the establishment of an Integrated Rural Health Complex (IRHC)
 - Tuberculosis Control Programme

- Establishment of a Data Generation Cell for Health Planning by the Planning Division
 - Poly immunization Programme
 - Diarrhoeal Disease Control Programme
 - Pakistan became a signatory of the Alma Ata Declaration. Primary Health Care concept introduced
 - First workshop on Health Systems Research organized by WHO and PMRC. Planning Division's Data Generation Cell transferred under PMRC
- 1980s:
 - Qamarul Islam Report
 - Mehbubul Haq Committee Report
 - Hospital Commission (Burhanuddin Report)
 - Accelerated Health Programme
 - ARI Control Programme
 - Rapid Expansion of Primary Health Care Infrastructure. The present three tier system established
 - Private Sector Medical Institutions established: Aga Khan University and Baqai University
- 1990s:
 - Pakistan Child Survival Programme
 - Social Action Programme
 - Health Sector Reform
 - National Health Policy
 - Rapid expansion in Private Sector Medical Teaching Institutions