

COHRED paper
Research to Action and Policy

PAKISTAN

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Pakistan faces a wide array of health challenges, including communicable diseases and nutritional deficiencies connected with poverty and low levels of development, as well as non-communicable conditions more commonly associated with affluent countries. The former are major contributors to the national disease burden. The extent to which they continue to threaten and diminish the well-being of Pakistan's children is of particular concern. Conquering them will require a wide range of resources and actions, some well beyond the concerns of health policy. But how effectively health policy and programs address the challenges remains critical, and health research can potentially be an important contributor to effective, efficient, and equitable policies and programs.

Since at least 1953, with the founding of the Pakistan Medical Research Council (PMRC), Pakistan has officially recognized the importance of research in solving the health problems of the country. There have been repeated calls for more support for health research and for such research to be utilized more fully in policy. The 1990 and 1998 National Health Policies both mentioned research utilization as important and pledged to strengthen it (Government of Pakistan, Ministry of Health, 1990 and 1998). A process of defining an essential national health research agenda occurred in the early nineties and recently has been rejuvenated (COHRED 1999).

We conducted a study to understand better the role that research plays in child health policy and programs in Pakistan.¹ In open-ended, in-depth interviews, we asked informants about their views on health research and policy generally in Pakistan and about their own experience in linking research with policy. This gave us an overall picture of research, policy, and linkages between them. In addition to the overall view, we focused on three program areas: control of diarrheal disease (CDD), acute respiratory infection (ARI), and iodine deficiency disorders (IDD). For these three areas, along with carrying out interviews, we reviewed research studies and program documents.

We interviewed 16 decision-makers who are or have been in positions of responsibility for policy formulation or implementation in the government, the central ministry of health, the planning commission, or provincial health authorities, including as many people as possible who are or have been involved with the ARI, CDD, and IDD programs. We interviewed 22 researchers and heads of health education and research institutions.² The researchers were in a wide variety of institutions—federal or provincial hospitals, universities, training institutions, and research institutes. Most were involved with research in the three focus areas, and some in

¹ The Pakistan case study was prepared under the USAID-sponsored Applied Research for Child Health (ARCH) project. Financing for the field research, conducted in 1998, was provided by the Milton Fund. The Pakistan Medical Research Council (PMRC) helped to facilitate the research in Pakistan.

² There was some overlap, with a few of the policy makers and program managers also researchers. They are reported in this analysis on the decision-making, rather than the research, side.

related areas. They represented a mixture of types of research, including clinical/biomedical, community health, and demographic. We also interviewed relevant program staff of international and bilateral agencies.

The case study was guided by several questions: To what extent did the evolution of the programs reflect learning from research? How did research affect the programs? What factors were important in shaping the role of research? We looked at four major factors, or sets of factors, which we hypothesized were important in shaping the role of research. These were the environment, the availability of relevant research, the demand for research by decision-makers, and linkage strategies, or the ways in which researchers tried to get research into policy and programs.

The focus areas

Diarrhea, acute respiratory infection, and iodine deficiency are major challenges for child health in Pakistan. Diarrhea and acute respiratory infections are the leading causes of loss of healthy life in Pakistan (Hyder 2000). Diarrheal disease is one of the leading causes of death among infants between one month and one year old, and by far the most important cause among children 1-5 years. (Khan, Fikree and Ahmed, n.d.: 18,69; and Midhet, Karim and Berendes 1997: 82.) Acute respiratory infection is the second leading killer of children under five. (Khan, Mushtaq, 1993: 3; Khan, A.J., et al. 1990.) Disorders resulting from iodine deficiency—which inhibits physical and mental development, causes lethargy, and leads to an increased rate of miscarriages and stillbirths—are most severe in the north, an area long known for its lack of naturally occurring iodine. But there is also evidence that the problem exists throughout the country (Government of Pakistan and UNICEF 1994: 5-8) Even moderate levels of iodine deficiency harm children's mental development: the resulting diminution in IQ levels and human potential is a high cost for affected individuals and society as a whole.

Each of these diseases or disorders has been the focus of a national program in Pakistan. The earliest, the CDD Program, was linked with the expanded program of immunizations (EPI) from its founding in 1982. The ARI Program, launched in 1989, is much newer. Both continue to exist, but neither was very active by the end of the 1990s. For the CDD program, the ending of USAID funding in the early 1990s left it without resources to continue many of its activities. The ARI program, which had never enjoyed very strong support within the ministry of health, was further sidelined by a move toward greater integration of health issues rather than vertical programs. The activities of the Iodine Deficiency Disorders (IDD) Program began in 1986 with the Iodized Oil Injection Project in the north; more recently it has focused on an effort to iodize salt nationally.

The role of research in policy and programs

The interviews found that decision makers and researchers agreed that there was a gap between research and policy. Although program managers tended to characterize programs and research as being intimately connected in their own programs, there was general agreement on the decision-making side that research was utilized little overall. Similarly, among the researchers interviewed, 15 said that research had no or very little effect, while four felt that it sometimes played a role. Several perceived that there had been improvement in the last few years, at least at the national level.

Despite the pessimistic assessment of the role of research generally, a number of researchers could cite instances in which their own research had had an effect on a policy or a

program. (Not all of these were in child health.) Examples included: research on cotrimoxazole and on community perceptions of ARI that supported the ARI program, research on general practitioners that raised awareness of a problem, and studies on maternal mortality and on Vitamin A that attracted a provincial government's interest and led to its willingness to support further research or engage in joint research. Another researcher's work on the magnitude of injuries as a public health problem resulted in their inclusion in the national health policy document for the first time. In addition, a few researchers mentioned other examples of research affecting policy, including early CDD research, breastfeeding research underlying the pediatric association's call for a policy on infant formula, and the "hew and cry" by the medical colleges that led to a greater recognition of the high incidence of polio.

At least seven researchers reported having been involved personally in some way in policy discussions. These involvements were diverse, including researchers serving as a member of the steering committee for the national health policy, advising the provincial government, contributing to the provincial five-year plan, providing data to the government, and (most frequently reported) serving as staff on one of the national disease control programs. One researcher also noted her involvement in discussions on the medical college curriculum.

Looking at the three programs, there was considerable variation in the extent to which their evolution reflected learning from research. In the ARI program, there was a close relationship between the program and research. Research was carried out within the program on an ongoing basis to review and support decision-making on case management and communication programs. The program used the research as the basis for decisions and program improvements.

In contrast, the CDD program did not substantially reflect research. For the most part, the CDD program was transferred whole into Pakistan from global institutions and programs, and it was not substantially altered through further research in Pakistan. There were, however, a couple of specific instances in which there was a linkage between a particular research finding and a change in a specific policy. In the first, hospital officials changed feeding policies as a result of research findings. In the second, standardization of ORS packages followed research finding that two different sizes were confusing to users. It seems likely that the effort (reportedly on the part of the CDD program director) to get ORS producers to standardize the packages resulted from the information gained through research.

IDD is also a case of a smaller role for research than ARI; but, in addition, it demonstrates a very different role for research. For the most part, the program has used research for persuasion and advocacy rather than as the basis for policy or program decisions. The evolution of the program has reflected international pressure and approaches, along with learning from experience. Research on the incidence of goiter and, more recently, iodine deficiency, has been utilized to support already-taken decisions regarding the regional scope of the program and to try to get IDD and salt iodization on the policy agenda beyond the program level. In addition, the NGO implementing the communication campaign has done test marketing and some very limited behavioral studies to inform its work.

The environment for policy-research linkages

In general, the environment has not been conducive for linking research to policy. Low levels of economic and human development contribute to weaknesses in research and policy. Health policy, and social policy more generally, have never been high priorities of political leaders. As evidenced by the 1998 policy document, which serves only as a general guideline,

the health policy framework is inadequate. Without a political commitment to solving health problems, there is little interest in research to find solutions and inform policy. Similarly, outside a few favored areas (such as nuclear sciences), research has not received much emphasis or support. Therefore, there is weak research capacity in most fields; health is no exception. The lack of interest and resources on the part of the government leaves the donors in a central role in both health research and health policy. To the extent that there is financial or other support for research on social development, including health, it comes mainly from donors.³

The donor environment varied somewhat across the three program areas. They were similar in that all three involved the adoption and implementation of internationally accepted approaches (e.g., Oral Rehydration Therapy, ARI case management recommendations, and universal salt iodization). But the CDD and the ARI programs both included significant donor support for local applied research and research capacity building,⁴ while the IDD program did not emphasize a strong local research component to complement the global approach.

Availability of relevant research

The interviews found that both decision-makers and researchers perceived the low supply of relevant, high quality research as a constraint on its utilization in policy and programs. Some of the decision makers interviewed blamed the gap on various deficiencies in the available research: its weakness, sketchy coverage, and lack of relevance. One (who was generally positive about the value of and need for research) mentioned that there were often questions about its soundness and that findings needed to be reproduced for potential users to have confidence in them. Also cited was the problem of research being done in only one region, raising questions about whether the findings could be generalized to other parts of the country. Furthermore, one noted that researchers often do not have a close connection with either the government or the community and doubted whether they really understand community needs or the relevance of their research to policy questions.

Researchers, while mainly attributing the limited role for research in policy to weaknesses on the policy side, were also quite critical of research. These assessments were shared widely among the researchers interviewed. Responses included the following:

- Research quality is low;
- there is very little research;
- it is hard to find community-based, primary health care research;
- most research is descriptive, not analytical;
- it is often based on questionable data;
- most research is not based on any set of priorities beyond the individual's own interests and promotion needs; and
- research capacity is weak.

Reasons for research weakness included lack of trained researchers; lack of research jobs for people who do come back with training; little requirement in undergraduate or post-graduate

³ Throughout, “donors” refers to both bilateral development assistance agencies and international agencies, such as UNICEF and WHO.

⁴ During the late 1980s and early 1990s, USAID’s Applied Diarrheal Disease Research (ADDR) project and Pakistan Child Survival Project (PCSP) supported an active effort to build local capacity to conduct applied research in these areas; these projects were carried out under HIID’s leadership.

training for research; and low research requirements for faculty members in universities and medical colleges (although those have recently been raised somewhat).

We also found that research “communities”—where researchers shared their work, commented on that of others, debated arguments, and assessed evidence—were weak. Several researchers commented on the absence of scientific interaction. Without it, there did not seem to be a strong sense of an accumulation of knowledge or overall understanding of the state of knowledge in particular fields.

In the three program areas, there were some significant differences on the research side. There has been at least some research available that was relevant for each program, but again with variation in the amount and kinds of research. Available research on IDD was the most limited in amount and range, with a number of studies of prevalence of goiter and fewer of iodine deficiency more generally. Ethnographic and behavioral research has rarely been carried out. For the others, there have been more studies and a wider range. For ARI, this includes bacteriology, clinical trials of drugs and resistance, behavioral studies of doctors and parents, and ethnographic research on how mothers understand the treat the illness. CDD studies include clinical studies of ORT and locally acceptable foods, behavioral studies of ORS use in the household and doctors’ treatment of diarrhea, ethnographic research, evaluation of the effectiveness of program training, and household surveys. All these kinds of research are relevant for the programs’ issues and challenges.

Research on ARI, as well as CDD, has been of excellent quality and has at times been part of international research efforts. Pakistan had been part of the original multi-site studies that had supported the development of ARI case management guidelines. Thus, even before the beginning of the ARI program Pakistan had a history of participation in international ARI research teams, and the experience had allowed it to build up credible local research capacity (Bale 1988; and Qazi and Simon 2000). For ARI and CDD, there have been small networks of researchers who have worked together and who have created some real capacity for research, at least over a period of time. At the end of the 1990s, ARI research was continuing, but CDD was no longer prominent on the research agenda. There does not seem to be an IDD research community to identify questions and make progress toward answering them and finding solutions.

The difference in research-policy linkages between ARI and CDD on one hand and IDD on the other probably reflected to some extent the difference in availability of relevant, high quality research on which to draw. One can only partially trace the differences between the ARI and CDD programs to such a distinction. But ARI does stand out for the quality and longevity of the research effort, the demonstrated research capacity, and the extent to which there is a (small) ARI research community.

Demand on the policy and program side

Almost all of the decision-makers interviewed indicated that they believed research was important for policy and programs, although to some extent that response may have been conditioned by what interviewees thought they should say. Seven mentioned particular studies, although their degree of familiarity with the work mentioned clearly varied. Going beyond perceptions to actions, there was less evidence of active usage of research. A few indicated that they did use research or had asked to have research done on a particular question, but others (including some who believed that it was important) indicated that they had not commissioned research or used it to any great extent, if at all.

Current decision-makers pointed mainly to their concern for quick results as a policy process factor in limiting demand for research. Former decision-makers joined researchers in also citing an emphasis on short-term political considerations, the fact that senior policy-makers often do not have a background in health; a tradition of intuitive, impressionistic policy-making, without empirical evidence or systematic assessment of options; and attitudes among people in the ministry that they know what they need to know, and therefore fail to see the need for research.

In the three program areas, the variation in utilization clearly reflected different demand within the programs themselves for research. A major difference among the programs is in the importance that program directors and staff put on research in meeting their program's challenges. In the ARI program, from its outset until recent changes in leadership, the program director and staff defined research as essential to provide guidance for their decisions and programs. Significantly, the staff were themselves researchers, and they saw little distinction between their roles as researchers and as program staff. In CDD, doing regular household surveys was defined as part of program work. While program directors (not generally researchers themselves) expressed varying degrees of interest in research and belief in its importance, it was quite different from the ARI program with its central research focus. IDD program leadership also did not in practice define research as essential to their work, but they were aware of existing research and used it as a resource in efforts to build support among policy makers and the public. They were only likely to have research done if it could be used strategically in the advocacy effort.

Demand had less to do with whether the program directors had a research background, although that played some role, than with their perception that the problem facing them was one to which research could (or could not) contribute. This was partly a result of the policy situation. For example, the IDD goal of national salt iodization required operating in the legislative arena rather than just within a narrow program. That made the immediate policy situation different from that of either ARI or CDD, and made advocacy rather than problem-solving and program adjustment the priority. The perception that research was needed was also partly a result of how the donor presented the global approach and whether it encouraged questioning and adjustment of the recommendations through local research.

Linkage strategies

The interviews found a revealing difference between decision makers and researchers regarding the importance attributed to communication by researchers. Decision makers cited lack of communication between researchers and policy makers as one factor behind the low level of research utilization. They complained that researchers did not always understand the real issues, and especially did not understand the needs and pressures faced by policy makers and implementers, including resource and time limitations. This resulted in researchers not presenting their work in accessible ways that took account of policy makers' and managers' time constraints. On the other hand, not many researchers expressed particular concern about their methods of communicating their research with government. Also, few seemed to feel that researchers had a responsibility for narrowing the gap between research and policy. While agreeing that researchers should work on topics that were relevant and important for Pakistan, most researchers interviewed seemed to feel that, as long as they did relevant research, its "uptake" was the government's responsibility.

We asked researchers what actions they take or have taken to link research with policy. We found two approaches to be the most common: at the minimalist end, simply sending papers to the ministry, sometimes with a cover sheet highlighting key findings and their policy implications, and, at the more activist end, organizing workshops involving policy makers and program managers at the end of a research project. In addition, those who had worked with a program directly (mostly in the ARI program) felt that they had been in a position to bring their research and the research of their group into the program. One such person mentioned taking research findings to inter-provincial meetings where health officials discussed the program.

A few other types of actions were noted, but much less frequently. These included carrying out joint research with the provincial health department, serving on technical committees with people in the ministry, conducting evaluation and baseline research for programs, trying to choose topics that would be helpful in tackling a problem, seeking out opportunities to press policy makers, going to the press to act as an advocate, and helping to inform advocacy groups.

Getting at questions about linkage strategies requires looking into specific cases where research affected policy. This research identified a small number of such instances. They are suggestive about the importance and requirements of linkage strategies. The main examples were research on cotrimoxazole (Strauss et al. 1998), ethnographic research on mothers' understanding and labeling of respiratory illnesses (Kundi, Malik et al. 1993; Hussain, Waquar et al. 1997), and a piece of research on local foods in the Northern Areas appropriate for feeding during diarrhea episodes (Jan et al. 1997). The cotrimoxazole research, which tested clinical resistance to the drug as opposed to laboratory resistance, led the ARI program to maintain that drug as the primary treatment for ARI, against WHO recommendations, and, further, led WHO to change its own recommendations. ARI program staff used findings from the ethnographic research to improve the "mother cards," or the posters used to help communicate with and educate mothers on how to respond to various symptoms. The research on locally appropriate foods resulted in the head of the hospital in the Northern Areas altering the hospital's policy to use the local food. He went further and made the policy effective by allocating money for a hospital kitchen to prepare the food.

These cases of a clear-cut, immediate linkage between the research and decisions share a couple of significant characteristics: the research question was defined in terms of its relevance for policy or practice from the beginning and, furthermore, the relevant decision makers were aware of and involved with the research from the very beginning. In the ARI cases, the overlap between the program staff and the researchers meant that the research questions were defined in terms of the program's questions. In the CDD case, the researchers purposefully brought in the relevant decision-maker from the outset. These successful cases of research-policy linkages point strongly to the importance and effectiveness of strategies that involve working closely with relevant decision makers from the outset to define the questions in a way that is relevant for them and to maximize their "buying into" the importance of the research and its findings.

Lessons for researchers and donors

The analysis of research-policy linkages in Pakistan holds lessons for researchers and donors who are concerned with improving research-policy linkages. By recognizing that the research supply is only part of the picture, researchers can think strategically about how to stimulate demand from decision-makers. Further, it is clearly important to work jointly with relevant decision-makers from the beginning. The most successful cases of direct application of research results were when there was joint definition of a research question and collaboration throughout the research process.

The analysis also suggests that the potential for informing policy and programs with research would be enhanced through strengthening research “communities”. Increased scientific interaction and discussion among researchers working in the same or related areas would lead to better communication within the scientific community itself about ongoing research, findings, and important research questions. Such research communities would then be better placed to communicate to decision-makers and the public the “state of knowledge” about a particular problem—what is known and what the gaps in understanding are. Institutions that are centers of research strength could play an active role in fostering greater scientific exchange and communication beyond their own faculty, as well as efforts to inform policy discussions.

Donors are in a good position to increase the potential for research-policy linkages. The analysis suggests that, in the absence of other support, donor support for research and research capacity building is critical. At the same time, donors can work to stimulate demand for research in government institutions, as well as capacity to use that research.

How donors introduce global technologies and approaches is important. Donors can stimulate demand by working with local decision-makers and researchers to identify the local research questions that relate to the relevance, appropriateness, and implementability of global approaches, rather than mechanically applying them. This would ideally be complemented by support for the research effort and a research-policy dialogue on those critical issues. This approach sets an example of how to deal with policy questions, fosters behavior that supports research-policy linkages, and avoids supplanting local research.

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