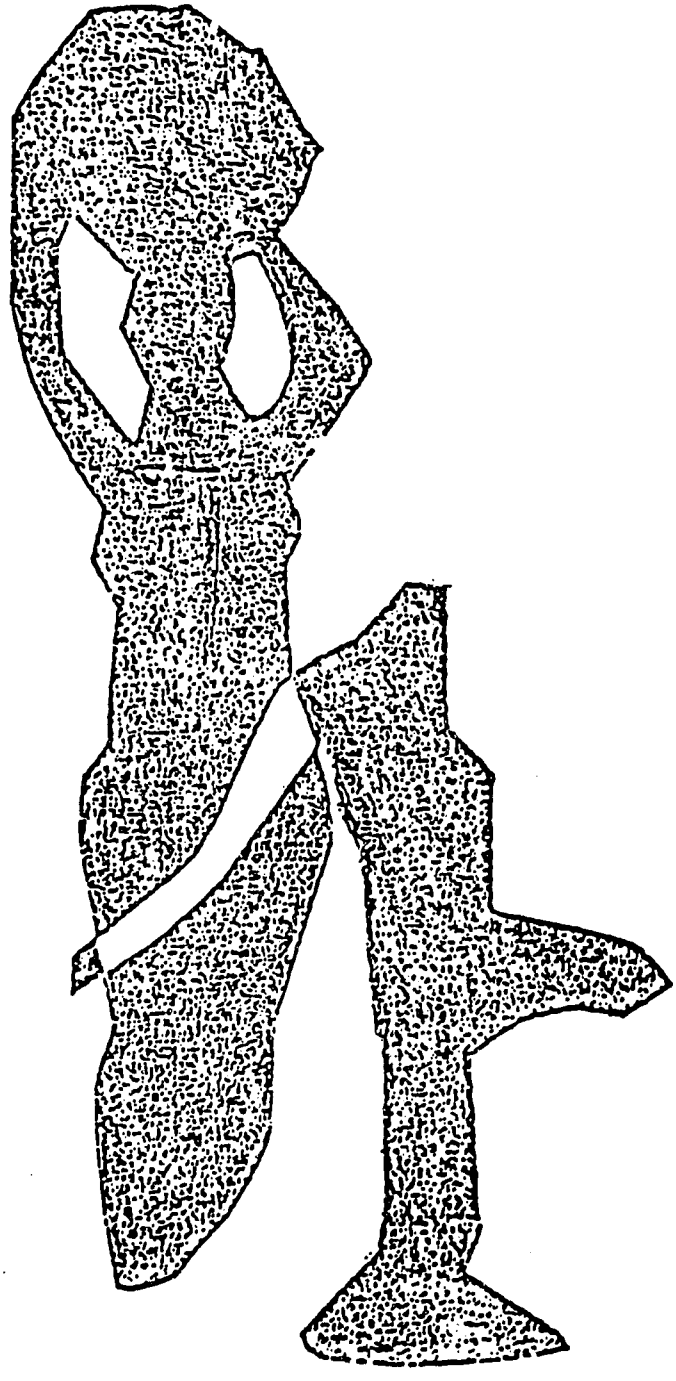
Women, Water and Waste: Beyond Access



by

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WOMEN, WATER AND WASTE

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BACKGROUND

The Problem:

In attempts to meet the 1990 target for providing everyone with safe drinking water, improved sanitation,*/ and "health for all by the year 2,000,"**/ increased emphasis must be given to the interdependence of these laudable goals for enhancing the quality of life. Because a disproportionate number of the poor in the world is made up of women and children, a concerted attempt must be made to assess the social impact of interventions in water supply and sanitation on this group. The major thrust of this paper, therefore, will be to: (1) examine the impact of improved water supply and sanitation programs on the lives of poorer women and children and (2) highlight those ways in which women can be the key agents in assuring that such projects will have a more significant impact on all the target population.

It has been stated that: "If the drinking water of the world could be cleaned up overnight it would, by some estimates, cut the infant mortality worldwide by 50 percent." (Ref. 1) Not everyone is in agreement with this statement, however. Feachem, in his book on rural water supply programs in Lesotho, states: ". . . our conclusions are that no measurable reduction in water-related disease has resulted so far from improving village water supplies. (Ref. 2)

Neither pragmatic peasants nor dogmatic scientists seem to be able to prove that interventions in water supply and sanitation alone bring about better health.

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*/ UN Conference on Water in Mar del Plata, Argentina 1979.

**/ WHO/UNICEF Primary Health Conference at Alma Ata, Russia, 1978.

Why not? It seems that the problems in our programs today are not primarily in the engineering aspects but, in the

- o ways they are introduced
- o missing links in their effective use

Sanitation and Infant Mortality

Before looking specifically at some of the impacts of improved water supply and sanitation on women, I want to review the world-wide tragedy of infant death caused by diarrhea and dehydration. If we recognize that the value placed upon children is universal and that infant mortality takes a serious toll on the psychological and physical well-being of women as mothers, there is no way to separate the incidence of water and sanitation-related morbidity and mortality from the overall social impact of improvement.

Aware of the seriousness of widespread high infant mortality, the United States Agency for International Development has funded a five-year Mass Media and Health Practice Project aimed at rural mothers and other child-rearing family members to promote the adoption of practices that will help to treat and prevent acute infant diarrhea. Midwives serve as one vital link in the development communication process, reinforcing project messages relevant to environmental sanitation, personal hygiene, continued breastfeeding and oral rehydration.

But oral rehydration only prevents death from dehydration. What of preventing diarrhea itself? To a great extent, diarrheal diseases are related to a lack of adequate sanitation or safe water. And yet, there have been few attempts to integrate health sector programs such as oral rehydration, nutrition, and population with the planning for increased investment in water supply and sanitation. Even less recognized is the need for local scatalogical data in order to understand attitudes

toward human excreta and diarrheal infection, and women's roles in changing behavior.

ORAL/FECAL ROUTE OF INFECTION

The perception (belief) that children feces are "harmless" (Ref. 3) can be a continuing link in chains of reinfection whether the feces are thrown on a nearby garbage heap or baby diapers are washed with dishes in an urban home with a newly installed standpipe. These practices should be understood and analyzed as part of the preparation of audiovisual messages. In the Yucatan, no diapers are used, but mothers are so attuned to their children's needs that they merely hold them away from them usually over the dirt floor of the hut or just outside to urinate or defecate.

Evidence shows as mothers begin to understand the dangers of even infant feces -- not necessarily the "germ theory" -- but the cause/effect relationship between water and diarrhea, they will change their behavior. For instance, Chan Kom, a Maya village has had piped water since 1974. In 1976, when the water system was inoperable for the first time, the women started complaining that their children were suffering from diarrheal illnesses. They clearly saw the relationship between the lack of clean water and the increased incidence of illness and went to the mayor to complain. (Ref. 4)

MOTHERS AS TRAINERS OF CHILDREN

Mothers are the socializers and teachers of their children in personal hygiene and sanitation practices. In most societies mothers handle infant stools with great care, but where are the toddlers to go?

Do latrines have to continue to be so far from the homes when there is no well to pollute? Do privies have to emit such an unpleasant odor that they cannot be nearer

to or attached to the home? Sanitary engineers say there are ways to make aesthetically pleasing as well as healthy or safe latrines. Rather than continue to spend millions of dollars on malodorous, unattractive, inconvenient latrines as we enter the Water Decade, let us focus on the accelerated interventions in water and sanitation characterized by more appropriate technologies.

Another point to think about is the relationship of water availability to the latrine. The faecal-oral reinfection route is well known, but there has been very little designing of facilities to help break this vicious circle. How can water for hand-washing be made easily available to the latrine? How might people be successfully motivated to adopt hygienic practices such as handwashing? What are the usual local behavior patterns? Can there be more dialogue with the women with respect to where they wash clothes/dishes/hands/children/themselves? Behavioral mapping, as well as participant observation, are needed as we work together on designing culturally acceptable solutions. If water development projects are to have a successful impact, considerable attention must be paid to local socioeconomic variables.

As more water is made available from pumps or standpipes, there will be a need for appropriate vessels and patterns of use or reuse of water to enhance the health aspects. We cannot expect women to bring their stones from the river to their back yards to wash. If water is being used for laundry and bathing, can it be reused in an aqua-privy? Do we only think of bathroom planning for urban areas?

Traditional Patterns

In various remote villages, bathing areas have been set aside either in the houses or nearby.*/ Can these

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*/ In some instances, a flat stone is set in the dirt floor of a Yucatec-Maya hut as a bathing platform. In

[Footnote continued on following page]

existing local patterns be incorporated in a privy program? Can there be "dream latrines" in rural areas? (Ref. 6) If there cannot be toilets with bathing areas, there can be at least recognition of the need to understand present attitudes, beliefs, and health knowledge to motivate behavioral change in latrine usage and hand-washing following the introduction of new technology.

ADOPTION AND USE OF NEW FACILITIES: INCENTIVES

In Guatemala, as an incentive to promoting personal hygiene, a simple package containing a wash basin, soap dish, pails, and shelf to attach to the latrine, was given as a reward to each household following inspection of their new privy. (Ref. 7)

With respect to the introduction of excreta disposal facilities, limited attention has been given to matters of pride and aesthetics. A case study of water supply and excreta disposal in Colombia revealed that families preferred brightly colored cement stools and slabs over drab gray facilities. (Ref. 8) When asked about latrine preferences and practices in the Yucatan, women also cited their preference for an aesthetically attractive latrine with a shiny porcelain seat or a brightly painted cement floor or stool. (Ref. 9)

NON-USE AND MISUSE OF FACILITIES: CONSTRAINTS

The neglible impact of past programs on women and children is primarily attributable to nonuse or misuse of new facilities, rather than to engineering aspects. In

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[Footnote continued from previous page]
Guatemala and Chiapas, a temascal, the water-efficient sweat bath, is near the house. Small huts for bathing were also noted in Honduras, and Nicaragua. In Asia fenced or thatched off areas near a bathing well are often preferred to indoor showers.

thinking through the whole cause and effect relationship of water supply and waste disposal to health and social outcomes, it is important to go beyond the number of water pails carried by the women or the number of wells and latrines built, to a consideration of the overall impact once the technology is in place.

If we are looking at the impact on women and children, greater care should be taken in designing separate facilities for men and women. When only one latrine per household is available, women tend to use it preferentially. Having separate facilities or facilities in the field would solve the problem of decreased use by men.

SOCIO-CULTURAL VARIATIONS

Socio-cultural variations among villages and sexes in the same country, as well as those of different continents and climates, are to be expected. However, amazing similarities with respect to fears and constraints appear in cross-cultural studies. For purposes of effective project design, more detailed information concerning these constraints is needed. (Ref. 10)

CHANGING BEHAVIORAL PATTERNS

Mothers are the primary socializers of the very young; school-aged children, in turn, are often the socializers and educators of their parents. In fact, more care needs to be taken that rural schools have adequate hand-washing and excreta disposal facilities. Through a process of education and example, children can learn the importance of washing their hands after defecation and before eating. A simple facility, such as a barrel with a spigot, can be attached to the school latrine, or a special dipper can be used.

Teachers and other community-level agents should use these facilities to reinforce the hygienic messages being promoted within a classroom setting. Hopefully, the same behavior would be repeated in the home, and reinforced by community health and sanitation programs.

WOMEN AS DRAWERS AND CARRIERS OF WATER

> Women and children have the major (approximately 90 percent) responsibility for fetching and carrying water to provide for irrigation and domestic use in Kenyan villages. The majority must travel one to three kilometers, several times a day. Improving village water systems is a very low priority . . . perhaps because few men have to carry water the long distances required day after day. (Ref. 11)

One approach to evaluating the social impact of improved water supply on women is to measure the time and daily energy through trips for water as was done by White et al. in their classic study, Drawers of Water. (Ref. 12)

With respect to "village technology" and women's work, UNICEF reports that:

> Of all the tasks performed by African women, there is little doubt that the carrying of water imposes the most strenuous physical burden. Reliable estimates from a number of studies show that, on the average, one-sixth of all the energy expended by women in rural areas is used in the carrying of water (Ref. 13)

POSITIVE IMPACT OF WATER INTERVENTIONS ON WOMEN

If interventions in water supply are to provide a significant impact on the lives of women and children, more efficient modes of transporting water must be found, and the distance or frequency of collection must be reduced. Even though cost is higher for piped water to each household, evidence shows that many communities will be willing to make the extra effort and maintain and use the facilities effectively (Ref. 14, 15, 16). Women are the key activators in building community understanding of the importance of such facilities.

Significant conclusions drawn from a survey of the impact of water supply projects on women in 12 rural communities of Kenya revealed that the women who now travel to communal water points are spending, on the average, at least as much time per day on water collection as they did when they travelled to natural water sources. In contrast with a Sudan study,*/ where women saw benefits as economic and social, the majority of the Kenyan women have perceived the primary benefits of improved water supply to be in the area of hygiene and health. Most households are using the water for the same purpose, with one exception: twice as many households are now bringing water to wash their clothes at home instead of in the streams.

A similar situation was found in Guatemala where the incidence of water carrying by only the housewives increased as the distance to be covered by them decreased. In all households which paid to have patio connections installed, laundry is done at home rather than at the river as before. Reasons for this preference include the

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*/ Released time afforded by the UNICEF handpumps to the Sudanese women was used for food processing and other productive household chores, few of the sampled women were able to incorporate time for socializing, sleeping, and resting into their daily schedules. (Ref. 17)

fact that: (1) crowded conditions at the river make it difficult to find a place to launder, and (2) home laundering facilities permit continued care of the children. (Ref. 18)

NEGATIVE IMPACTS OF INTERVENTIONS

Even though the overall health benefits are evident, the negative impact on women is illustrated by the fact that in the "before" sample only 54 percent of the women made all of the household water trips, while in the after sample, the percentage increased to 84 percent. (Ref. Whiting and Krystall ibid).

Existing research relevant to the social impact of water supply and sanitation projects frequently shows that certain behavioral patterns associated with water reuse may also have a negative impact on users. One such study of two Egyptian provinces revealed that families preferred to use the same water for washing clothes, then vegetables, and finally dishes. "It is not so much the reuse of this water that is detrimental to health as the sequence of its reuse." Also significant is the fact that multiple uses were directly related to scarcity of water and to the arduous task of transporting it. (Ref. 19)

WOMEN AS CHANGE AGENTS

During the 1977 United Nations Water Conference in Mar del Plata, 30 non-governmental organizations recommended that developing countries give serious consideration in their national plans to the following five points:

(a) include strategies to develop human resources at the community level to meet local needs;

(b) ensure equal access of women to training with regard to the maintenance, management and technology of water sources and supplies;

(c) ensure that women be included in any education programs on the use of water and its protection from contamination;

(d) ensure the participation of women in local councils and planning boards responsible for making decisions on community water supply;

(e) recognize the increasingly effective role that women, NGOs and other women's organizations can play in the education of public opinion for needed change.

("Special Situation of Women in Regard to Water"
Statement prepared by the
Non-Governmental Organizations Committee on
UNICEF for the Preparatory Committee,
United Nations Water Conference
3 - 7 January 1977 mimeo)

How much has happened since 1977? What is going to happen before 1990? Before the year 2000? Jane Stein noted in 1977 in Water: Life or Death, that planners had begun to include women in development schemes.

WOMEN AS TRAINEES, MANAGERS, MOTIVATORS

As an adjunct to an agricultural development project in Bolivia, a program was underway to train young women 17 - 25 years of age to administer immunizations and provide information on good nutrition for children, the proper maintenance of water and sanitation facilities. (Ref. 19)

A number of these young women now are in complete charge of repair and maintenance of the facilities, not just cleaning them.

Such examples, however, are still rare. Successful pilot projects such as the ones in Mexico in 1958 where women supervisors, planners and village workers, played key roles in multi-sectional programs with water supply and sanitation components are easily replicable but have not become a model. (Ref. 4) Usually they have lasted through one administration or have dwindled as private agencies have changed focus.

Training programs such as these bode well in terms of ensuring that LDC inhabitants will benefit from development projects. Moreover, the utilization of indigenous resources for diffusing information will enable many developing countries to realize their self-reliance objectives. With respect to community water supply and waste disposal facilities, it is important to recognize that the target population may accept facilities without altering their hygienic behavior. For this reason, planners stress the relevance of creating educational programs which focus upon the "intended" as well as "perceived" benefits if development efforts are to exceed the mere adoption of the innovation.

WOMEN AS COMMUNICATORS

Understanding the needs for better sanitary habits is not a simple process, particularly in the area of human defecation -- a taboo subject in many cultures, with overtones of magic, witchcraft, or just Victorian prudishness. One key concept central to diffusion of appropriate technology in sanitation is understanding that taboo subjects are communicated between individuals who are highly similar in certain characteristics such as social status, education, beliefs, and often sex. This limiting factor is a barrier to widespread and rapid diffusion of taboo messages/ information which, in turn, "perpetuates the taboo status

of the topic." (Ref. 20) Another recognized characteristics of taboo communication is that it usually occurs in interlocking, closed networks rather than open radial networks, restricting thus the flow of messages. Women serve everywhere as crucial focal points in such networks.

WOMEN AS AGENTS OF CHANGE

The implications of these facts for effective programs in the field of improving/changing behavior patterns or technologies related to human defecation and personal hygiene are obvious: The decision-makers or leaders in the agencies and in the target communities are usually men, and they communicate with other men and not with the women. Until planners, agencies and leaders involve women who understand the importance of good sanitation we can expect limited acceptance. Once the women understand, they can play key roles in household decisions relating to changing behavioral patterns and to socializing children in similar behavior and attitudes in areas such as personal hygiene and sanitation.

When will the rhetoric about including women in development become a reality? Women are the key to the realization of our goals of water sanitation and health for all. But even with the help of women these goals can not be achieved unless we go beyond access.

> No one wants to be sick or die . . .
> Regardless of history or culture, people
> learn to protect themselves when given
> the opportunity and understanding.
> "Abel Wolman's Charter" World Health,
> (Ref. 21)

BEYOND ACCESS

We have recognized the importance of community participation, reaching decade goals, but until women's participation is applied to breaking the faecal/oral

route of infection we can not expect much improvement in health.

Village mothers will not know how to break this vicious circle until they have some important bits of equipment -- primarily soap and a hand basin, adequate carrying and storage containers, along with convenient located non-maladorous, safe latrines.

Along with the introduction of improved community facilities there should be provision for new appropriate household equipment to maximize effective use. If there is only one pail and no money to buy another of course it will be used for everything. If there is no top for the pail, a covering with leaves is a poor substitute. To use a dipper or cup is much easier than trying to lift a heavy pail or jug.

Making available ancillary kitchen, laundry, bathroom equipment and soap at inexpensive, subsidized prices or even as rewards in recognition of labor or time contributed, will make it possible for the village to take advantage of the improved interventions in water and sanitation. Audio-visual messages and health education should be related specifically to the effective use of the new equipment -- both community and household -- so that they can be efficiently used with pride and pleasure and result in better health and productivity.

SOME CONCLUSIONS

In summary, development planners and implementators must be cognizant of the fact that there is as much to learn as there is to impart. If development schemes for improved water supply and sanitation are to go beyond increased access, it is important that they include action plans and techniques for understanding the local uses of human energy in developing nations.

Women and children continue to expend inordinate amounts of time and energy on arduous taks that can be alleviated by the acceptance and continued use of

appropriate village technology. Concerted efforts to ease their burdens would provide released time and renewed energy for adult education and training of children. Increased emphasis needs to be placed on training opportunities which enable women, the ultimate primary care workers, to serve as interpersonal contacts in persuading people especially children to accept and continue using innovations for improved basic living conditions.

Together we can explore new and more appropriate techniques, both hardware and software, to help the poorest of the poor, the marginal people, meet their basic needs -- including water, sanitation and health. There is much fugitive data concerning problems and situations in social analyses of programs, in ethnographic studies and in anecdotal material which needs to be gathered, shared, and made a part of program designs.

If we really believe that community participation is the key to more effective use and maintenance of technological innovations, then women, as the primary users, must be involved, both in the selection and implementation of programs and as behavioral change agents within homes and communities.

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