DRINK BOILED WATER: A CULTURAL ANALYSIS OF A HEALTH EDUCATION MESSAGE

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Abstract—Water boiling is recommended by health educators in Sri Lanka, and boiled water is given to ill and vulnerable people, but it is not widely consumed by the public. The reasons for this behavior derive from long-standing notions about health care. This study complements one presented some years ago by Wellin, based on the health culture of Peruvians.

To learn why preventive intervention has been unsuccessful for water-related diarrheal diseases, I studied the main forms of behavior in the spread of these diseases: defecation habits, food handling and drinking water. This paper is confined to the latter variable.

Public health inspectors and family health workers have encouraged people to drink boiled water for well over three decades. Despite their efforts, field workers now that the message is largely unheeded. One health inspector with whom I spend considerable time in the field, estimated that less than 10% of the rural families he visited regularly used boiled drinking water. Why do literate Sri Lankan people pay so little attention to this health precaution? Health workers who urge boiling water have a respectable status in the community [5], so it cannot be that they are dismissed as outsiders. Let us consider two other possibilities:

(1) Is the underlying issue one of fuel scarcity? In some areas of Sri Lanka this may be an important variable, but it was not important in the Horana–Ratnapura region of southwest Sri Lanka. Firewood was available, and even wastefully used.

(2) Is the underlying issue that the local culture does not attend to the qualities of water? This certainly is not the case anywhere in Sri Lanka. Indeed, one of the few material possessions a Sinhalese Buddhist monk is prescribed to carry is a water filter, and everywhere the taste, smell and inherent qualities of water are important concerns. Villagers are keen to see the source of their drinking water. This is one reason that closed wells are not popular. Another reason is that a limited amount of sunlight is considered necessary for keeping water fresh. Drinking water of unknown origin is considered a hardship. In fact, one way a villager expresses to a friend the hardship of having to remain in Colombo for a period of time is to exclaim “uyyot pipe water—you have to drink and bath in it!”

While daily commuting to Colombo from a village, I observed passengers in crowded buses jostle their water bottles and lunch packets. Bringing lunch packets was easy to understand in relation to micro-economics, but water? My commuter friends ex-

The trend of decreasing disease specific mortality in hospitals without parallel decreases in morbidity, suggests that, for specific diagnosis (e.g. gastroenteritis, typhoid fever, and malnutrition), there is an awareness of the availability of curative intervention, but the preventive intervention components have not been emphasized or have been unsuccessful.
plained that they did not trust Colombo 'pipe water'. They spoke of pipe water as marana vatura—dead water or kiri vatura—water tasting of iron and associated with urinary problems. They disliked the 'medicinal' smell of chlorinated water. On the other hand, they felt that boiled water was tasteless, so they preferred to transport small bottles of unboiled well water an hour and a half by crowded bus. Why did they ignore the public health advice, which they all knew very well, to boil their drinking water?  

Before considering why people do not do something, it is more prudent to consider why they do what they do. In the present case, I talked to people about my observation that boiled water was routinely prepared for ill people, but not consumed by other members of the household. The reason offered to me by public health colleagues seemed insufficient, for they reasoned that because the advice to drink boiled water was originally introduced and most adamantly repeated during epidemics of cholera, typhoid and gastroenteritis, people associated the practice with illness [7].

I identified three reasons for boiling water in discussions with lay people. The first requires an appreciation of indigenous water management. The qualities of water from different sources affect the purposes for which it is used. When water is plentiful villagers use different sources for drinking and bathing in accord with the clarity of the water, the depth from which it comes and its exposure to the sun. When water is scarce, an available source is used for many purposes, but efforts are differentially expended to transform the qualities of water used for drinking. Strong and healthy people are little concerned about the water they routinely use, unless its color, smell or taste changes. When people are ill or in a transitional body state, e.g. infants and pregnant women, the qualities of water are tended to. For example, water from a deep well is thought to have a cooling quality that is harmful to someone who is suffering from or vulnerable to illnesses associated with coolness, such as stiffness and pain, or with an excess of phlegm [8]. On the other hand, water directly exposed to the sun is said to be 'sun baked' [9] and inappropriate for administering tepid water to the ill than on fully boiling it. They may boil water for the ill or vulnerable person, and then contaminate it by adding cool unboiled water to make it tepid. Nevertheless the point not to be lost sight of is that the preparation of water is an act of caring accorded positive social value. This introduces some irony into the context of hospital care, where tepid water is not available even though patients and their families feel that they need it. This fact is cited by laypeople as an example of the poor care in public health institutions.

Another idea associated with boiled water involves the Sinhala concept of sehellar, lightness. Digestion is a central health concern in Sinhalese popular culture, and in the learned system of ayurvedic medicine. Dietary regulations vary in accord with the ascribed characteristics of different illnesses. Regardless of the specific characteristics of an illness, however, a general restriction will prevail against the consumption of heavy, bhatara foods. A light diet helps to restore normal digestion to an ill person. Indeed, it is fundamental to balancing the humors, and the restriction against heavy foods includes a conception of heavy, bhatara, foods. When you eat vegetables. They lose their life and wilt. When you cook vegetables, they lose their freshness rapidly. It is like that with water. When water is running or in a well exposed to the sunlight, it is fresh. If you collect it and transport it through pipes it is marana vatura, dead water; if you boil it water loses its guna, its strength.

Except in the evening, when it may be health promoting, drinking boiled water is associated with illness. Some cooling foods are also avoided in the evening. Since heavy food and heavy water are relatively difficult to digest, some people regularly drink 'light' tepid water in the evening. Their reasoning reflects a general concern that digestion is weakest during inactivity and sleep. The advice to drink boiled water is thus interpreted by some villagers in accord with the concept of sehellar, and deemed most relevant for people who have a weak digestive capacity. This interpretation, like that involving shock is supported by the advice about food that ayurvedic practitioners give to pregnant women, the mothers of infants and ill people.

CONCLUSION

In Sri Lanka the advice to drink boiled water is understood in the context of illness and vulnerability. Public health workers emphasize this advice during epidemics, and it is associated with ayurvedic advice to take a light diet when ill. Underscoring lay inter-
pretations of these messages are folk health concepts; ideas about the qualities of water, shock, and digestive capacity. Thus, for a health message as simple as drink boiled water to be communicated effectively, careful observation of customary behavior and the analysis of cultural systems is essential. The analysis may also generate innovative ideas by health educators. For example, the concept of _selli_ might be used in a program to persuade parents that children under three years old are vulnerable to illness and should consume boiled water [11]. Such a program would support the notion that _selli_ foods, including boiled water, are best for a child’s developing digestive and immune systems.

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REFERENCES


2. Statistics on diarrhoeal diseases were gleaned from the following sources: Pollack M. _Health Problems in Sri Lanka. Part I and II: An Analysis of Morbidity and Mortality Data_. U.S.A.I.D., Sri Lanka, 1983. Gaminiratne K. H. W. _Causes of Death in Sri Lanka: An Analysis of Levels and Trends in the 1970s_, p. 59. Colombo, Sri Lanka, 1984. It should be noted that district standardized death rates due to diarrheal diseases differ significantly. These range from 10.1 in Trincomallice and 16.5 in Matale to 127.3 in Batticaloa and 90.8 in Ampara. Percentage deaths due to these diseases range from 1.5% in Kalutara District and 2.9% in Matale to 13.1% in Ampara and 12.0% in Batticaloa. To correct any misconception that urban conditions contrast markedly with rural conditions, it may be noted that the Colombo infant mortality rate due to diarrheal diseases is 158% the national average—although for all age groups it is considerably lower than the national average.

3. Pollack M., _ibid._

4. This study, conducted by the Sri Lankan Department of Health Services, was quoted in the Marga Institute report. Intersectoral actions for health, Colombo, Sri Lanka, 1982. The report also notes that in the Mahaveli Development region, diarrhoeal disease accounts for some 40% of all persons seeking medical treatment and that the latter are largely related to contaminated water sources.

5. Public health inspectors and family health workers enjoy social status in Sri Lanka equivalent to that of a secondary school teacher. As Wellin reported of Peru, advice by the latter to alter health related behavior carries significantly less weight than the same advice offered by a doctor. This weight difference with respect to immunization and family planning, technical fixes, than in respect to water boiling as a long term enterprise related to preventive health. On this point I may note that in India boiled cooled water is not regularly used even by the educated. In a personal communication, Charles Leslie noted that drinking boiled cooled water is uncommon among New Delhi academics. He was told by a Professor of Social Medicine at Benares Hindu University that the highest rate of typhoid in Varanasi in the early 1970s was among faculty and students living in University housing.

6. I do not wish to underplay tastelessness as a factor negatively influencing water boiling behavior anymore than time or the cheap availability of fuel. My purpose is rather to identify other cultural factors impacting on water boiling behavior.

7. Routine water supply testing is not performed by Public Health Inspectors and attempts at well purification are only done during epidemics.


10. Generalizing the _selli_ rationale might even prove helpful in marketing a weaning food less likely to be shared in the family than the present weaning food, Triposha, which people ascribe both a strength giving and neutral quality suitable for general consumption. For a short discussion of the CARE weaning food, Triposha, see Nichter M. _op. cit._ A new supplementary weaning food might be marketed as _selli_ just what a child needs for its developing or weak digestive system. I am suggesting this idea as an example of how cultural concepts might be used as health resources in social marketing. I do not claim that this particular idea would prove effective, but suggest that it would be worth looking into.

11. Among infants, a rate of 242 deaths per 100,000 is reported and among children 1-4 year olds, 16% of deaths are directly related to diarrheal diseases. Much more likely to be indirectly related. During the period 1971-1979 of the ten leading causes of infant mortality, only diarrhoeal diseases showed no downward trend after 1975 (Pollack M. _op. cit._).