

SANITATION PRACTICES AND SAFE DRINKING WATER TECHNOLOGY IN RURAL HOMES OF MEWAT (HARYANA)

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ABSTRACT

The study was conducted in three villages of Mewat area viz., Ghasera, Kalwari and Kaliaka to study the sanitation practices and safe drinking water facilities. Hundred women of low, and middle socio-economic groups were assessed. The sanitary and hygienic conditions were very poor in these villages. People were quite ignorant about personal and environmental hygiene. Main source of drinking water were tap and hand pump. Water was generally stored in earthen pots, plastic and metal buckets. The rural women were educated regarding the importance of sanitation, use of safe drinking water and methods of water purification with special emphasis on - Janta Water Filter through lectures, campaigns and trainings. Results revealed a significant increase in knowledge. The educational status of women was strongly correlated with the adoption of technology. Among these, twenty interested women were selected for action research. The acceptability of Janta Water Filter was quite high but was adopted by only 55 per cent families due to some constraints. Local availability of the critical input i.e. water filter candle was the major constraint. This technology has good scope if popularized through extensive education programme. Exposure to health education programme enabled the beneficiaries to acquire certain desirable health habits significantly ($P \leq 0.01$) in daily living.

Key words: Sanitation practices; Knowledge; Janta Water Filter;

INTRODUCTION

In India where nearly 76% of the population lives in villages, safe drinking water is hardly available within their easy reach. Protected water supply facility is available to only 31 % household (Sanyal, 1987). Water for drinking must be pure. Water quality, howsoever good at source, deteriorates during transfer in domestic containers. Various diseases like diarrhoea, dysentery, cholera and jaundice are transmitted through contaminated water and poor sanitation. Two third of all illness in India are related to water borne diseases such as typhoid, diarrhoea and dysentery (Basu, 1986). As usual, children and women were the worst sufferers, due to lack of safe drinking water regarding hygienic practices. Therefore, there is an urgent need to educate the rural women regarding hygienic practices and provide safe drinking water in rural areas. Few methods are being used at household level to make water safe for drinking in rural areas, namely, boiling and filtering through muslin cloth. Chlorine tablet is rarely used at home. The water filters available in the market are not used, as they are expensive. Thus, the rural families for obtaining safe drinking water have designed a Janta Water Filter made of locally available and cheap material, which is an appropriate technology for adoption. Considering the importance of providing safe drinking water for good health of rural people, this study was planned with the following objectives: i) To study the existing sanitation practices and safe drinking water facilities. ii) To assess the knowledge of rural women regarding various techniques of water purification and iii) To investigate the acceptability of Janta Water Filter in rural homes through action research.

METHODOLOGY

The study was conducted in three villages of Mewat area in Gurgaon District i.e. Ghasera, Kalwari and Kaliaka under Mewat Area Development Project. Data were collected in two phases. In the first phase, data relating to existing sanitation practices, safe drinking water facilities and knowledge of various water purification techniques were collected through interview-cum-questionnaire method from 100 rural women belonging to low and middle socio-economic group, selected purposively. Sanitation campaigns, lectures and trainings were organized to educate the women regarding importance of sanitation with special emphasis on safe drinking water in daily living. In the second phase, action research was conducted. Out of these, a sample of twenty interested respondents were selected. Construction and use of Janta Water Filter was demonstrated to these twenty women and the technology given for use. After a fortnight, the acceptability of the Janta Water Filter was assessed. The constraints in adoption of the technology were also determined. The data collected were analyzed using frequency, percentages and correlation of attributes to draw inference.

RESULTS AND DISCUSSION

Sanitation and hygienic condition of the villages: Survey revealed that sanitary and hygienic conditions were very poor in the selected villages of Mewat area. People were quite ignorant about the personal and environmental hygiene. Outbreak of any epidemic in these villages will thus not be surprising.

Sources of water used: All the respondents consumed water

1. Sr DES (H. Sc.), 2. Sr ES (H. Sc.), KVK, CCS HAU, Bawal and 3. Sr ES (H. Sc.), KVK, CCS HAU, Rohtak

from municipal tap. In addition to this, more than fifty per cent (55%) also used water from hand pump, 33% from tube well and 11 % from public well for drinking purpose and other household activities.

Storage devices used for storing water for different activities: All the respondents were storing water for different activities as the water source was away from their homes. Table 1 reveals that for kitchen activities, all respondents stored water in earthenware followed by metal containers (89%) whereas 71% stored water in plastic ghee containers. Less than fifty per cent respondent's stored water in plastic buckets, metal buckets and drum. Water for personal and household activities was stored in plastic buckets (100%) followed by plastic ghee containers (84%) and metal buckets (78%).

Table 1. Storage devices used for storing water for different activities (N=100)

S. No.	Storage devices	Kitchen activities %	Personal and household activities %
1.	Earthenware	100.00	-
2.	Plastic bucket	45.00	100.00
3.	Metal containers	89.00	22.00
4.	Tub	-	33.00
5.	Metal bucket	33.00	78.00
6.	Drum	18.00	22.00
7.	Plastic ghee containers	71.00	84.00
8.	Cemented tank	-	40.00

Multiple Responses

Health and sanitation programme: Under this project, two days sanitation campaign was conducted in all the three villages. Houses and their environment were inspected and were found to have insanitary conditions. Women were educated through lectures on maintenance of a clean environment, proper disposal of wastewater, household and animal waste, home and village sanitation, food and personal hygiene and importance of safe drinking water. A cleanliness drive was organized in which village women actively participated. A leaflet on peene ke pani ki suraksha was published and distributed among rural people. A demonstration on construction and use of Janta Water Filter was also given. An increase in knowledge regarding water purification components was observed after imparting health and sanitation education.

Acceptability of Janta Water Filter: Acceptability has been taken as the extent to which the rural women have perceived the water filter acceptable in the future. After a fortnight the acceptability of the Janta Water Filter was assessed.

Table 2. Acceptability of Janta Water Filter N=20

Categories	Frequency	Percentage
Low (4-10)	2	15.00
Medium (11-16)	9	45.00
High (17-20)	8	40.00

Table 2 reveals that 45% respondents reflected a medium degree of acceptability followed by high acceptability (40%). It can be concluded that acceptability of this technology among the rural families is quite high but it was actually adopted by only 55 per cent families due to some constraints. Education helped in significant increase in the knowledge.

Relationship of variables: Age was found positively and significantly correlated with knowledge whereas education of the respondent was strongly related to acceptability.

Table 3. Correlation of independent and dependent variables (N=20)

S.No.	Variable	Knowledge	Acceptability
1	Age	0.3366*	-0.0393
2	Type of family	0.0130	0.0109
3	Size of family	0.2502	0.1213
4	Education	0.2539	0.3576*
5	Educational status of the family	0.3135*	-0.577
6	Monthly income	-0.01399	-0.1302

Significant at 0.1 level of significance

Major constraints in adoption of Janta Water Filter: Though women agreed in principle about the benefits of this technology, however, on adoption a lag was discovered due to the following constraints. The main constraints in adoption of Janta Water Filter was the non-availability of the critical input i.e. water filter candle. Secondly, rate of filtration is low; so one filter cannot fulfill the requirement of the family. Thirdly, technology is mainly suitable for summer season.

CONCLUSION

It can be concluded that exposure to health and sanitation education had enabled the beneficiaries to acquire certain desirable health and hygienic practices in daily living. The trend towards adoption of desirable hygienic practices was positive. This favorable atmosphere needs to be capitalized. Regarding adoption of Janta Water Filter, majority of the families showed willingness to adopt this technology provided the inputs were given free of cost or constructed water filters given to them for use. Age and education of the respondents emerged as important variables in adoption of the technology. This technology has good scope if popularized through intensive extension education programme.

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