A Study of Sanitation of Toilets in Anganwadi Centres Located In Rural Areas of Uttarakhand State in India

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***Abstract*-This paper is based on the primary data collected from the Anganwadi Workers situated in rural areas of the state of Uttarakhand in India. The study was conducted in six districts of Uttarakhand. All these Anganwadi Workers were randomly selected. The data were collected through an interview schedule in an unbiased manner. The sample included 300 Anganwadi Centres situated in the rural areas of six Districts of Kumoun Mandal (Commissionary) of Uttarakhand.**

Keywords-Anganwadi centre, Anganwadi worker, sanitation, toilets

I. INTRODUCTION

The study is related to the sanitation of lavatories used in Anganwadi workers situated in the rural areas of Uttarakhand. Therefore, before discussing the issue, it is desirable to present the definition of sanitation, Anganwadi, workers, rural areas and Uttarakhand

1) *Sanitation*

Sanitation is basically a hygienic disposal or recycling of waste. It also is considered as a practice that allows protection of health with the help of hygienic measures. It is also commonly understood as a term that is used for treatment of waste in its original form2. "Sanitation" is understood to mean "the promotion of hygiene and prevention of disease by maintenance of sanitary conditions".In the nineteenth century the term "sanitary" was understood to mean something "relating to health, or relating to or used in the disposal of domestic waterborne waste" (Merriam-Webster's Collegiate Dictionary, eleventh edition 2003pp84) 3.: The 1999 Protocol on Water and Health to the 1992 Convention on the Protection and Use of Trans-boundary Watercourses and International Lakes defines sanitation as "the collection, transport, treatment, and disposal or reuse of human excreta or domestic water-waste, whether through collective systems or by installation, serving a single household or undertaking".This understanding of the term includes not only the removal of waste from direct contact with human beings, but also its streatment and possible safe reuse4. It has been found that poor water and sanitation facilities have many other seriourepercussions. A direct link exists between water, sanitation and health, and nutrition and human well-being. Consumption of contaminated drinking water, improper disposal of human excreta, lack of personal and food-related hygiene and improper disposal of solid and liquid waste have been major causes of many diseases in India and it is estimated that around 30 million people suffer from water-related diseases. Children, particularly girls and women, are the most affected. Therefore, India is burdened with sanitation related diseases as listed below. (Central Bureau of Health Intelligence, Ministry of Health and Family Welfare 1998-99)

1 About 30 million persons in rural areas suffer from sanitation-related diseases

2 Five of the top killer diseases of children aged 1-4 years in rural areas are related to water and sanitation.

3. There is economic loss of rupees 12 billion annually due to loss of man-days on account of diseases

4 As far as Anganwadi Centres sanitation is concerned UNICEF (Central Bureau of Health Intelligence, Ministry of Health and Family Welfare 1998-99) in its assessment on School Sanitation and Health Education (SSHE) has noted that there are about 600,000 primary schools in rural India in which only one in every 10 schools has adequate toilets and urinals. According to the WHO report, 2000 children die every day due to lack of sanitation in India6

2) *Anganwadi Centres*

The children of today will be the adults of tomorrow. By focusing on children today and by giving those tools and knowledge to change behavior, future generations can be stronger, healthier and more prosperous. Schools, being the ideal setting for promoting learning, stimulate positive change among children and subsequently, in turn, the community. Schools and in particular Anganwadi are equally important places to address the health issues of the children provided that necessary infrastructure is available. Improved health and quality learning are not possible in schools and Anganwadi as long as basic hygiene is lacking or sanitary facilities and water supply are missing or broken or not properly used. Lack of healthy environment is already resulting in high infant mortality and under five-mortality rate.There are approx. 6 lakh Anganwadi Centers in India and most of them are without toilet facilities. These Anganwadi Centers reach out to 12.5 million children (ICDS, MOHRD). In addition, There are about 6.3 lakh

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rural schools both primary and upper primary with 8 crore school going children (Education Survey, 1993-94, MOHRD-GOI). As per the NFHS-II, 1998, 75 percent of the children in the age group of 6-14 are attending schools in rural areas. But it is also a fact that only 10-15 percent of schools have the sanitation facilities in the school premises. Out of 6.3 lakh primary and upper primary rural schools, only 44 percent have water supply facilities, 19 percent have urinals and 8 percent have lavatory facilities. Only 19 percent have separate urinals and 4 percent lavatory facility for girls. Such conditions result in high absenteeism and low enrolment. These issues are particularly important for girls. Studies show that not having access to proper, are and private sanitation substantially increases absenteeism among girl learners, and contribute to their dropping out of schools altogether. This is evident from high dropout rate in particular girls, for example, only 42 percent of the girls reach class VIII as reported by Indian Child, MOHRD-2002.Rural Areas: Rural areas (referred to as "the countryside") are large and isolated areas of a country, often with low population density

II. UTTARAKHAND

Uttarakhand is a state located in the northern part of India. It was carved out of Himalayan and adjoining districts of Uttar Pradesh on 9 November 2000, becoming the 27th state of the Republic of India. It borders Tibet on the north, Nepal on the east, the Indian states of Uttar Pradesh to the south, Haryana on the west and Himachal Pradesh on the North West. The region is traditionally referred to as Uttarakhand in Hindu scriptures and old literature, a term which derives from Sanskrit uttara meaning north, and kha□ □a meaning country or part of a country. It has an area of 20,682 sq mi (53,566 km ²)[9]Describing a clean environment as an indicator of nation's development, President A.P.J Abdul Kalam called for a mission to provide sanitation to all rural homes by 2010 (President's address at the Nirmal Gram Puraskar Function at Vigyan Bhawan, 23.03.2006.New Delhi). He also called upon all concerned to "educate children right from the age of three to make use of sanitary facilities". Some other points, which he highlighted, are as follows:

1 amilies and Anganwadi workers should take up the task as a part of the sanitation campaign. Inadequate sanitation facilities were the greatest health hazard for rural India with water-borne diseases such as hepatitis, leprosy and tuberculosis, commonly affecting people10.
2 Provision of sanitation facilities to all homes, Anganwadi centres, hospitals and community halls in rural areas should be made.
3 The sanitation mission must be executed through Village Panchayats.

Human excreta form an important cause of pollution and every society has a responsibility to ensure its safe removal. The problems of improper excreta disposal can lead to:

- Soil pollution
- Water pollution
- Contamination of foods
- Propagation of files

The diseases, which can occur due to environmental pollution and inadequate sanitation, are typhoid and Para-typhoid fever, dysenteries, diahorreas, cholera, hookworm, ascariasis, viral hepatitis and a host of other intestinal infections and parasitic infestations11.Of course, several national level surveys have been conducted on the status of Anganwadi centres sanitation, yet, few studies have been conducted on their use, cleanliness and technology used in the toilets in Anganwadi centres. Moreover, scant studies have been conducted in the field of sanitation in Anganwadi centres. On these grounds, the present study has a special significance for the policy makers, educationists and researchers to get details of the sanitation facilities available and their quality in various Anganwadi centres, in rural areas of the state.

Objectives: The objectives of this study are follows:

1. To study the status of toilets in Anganwadi centres situated in rural
areas of Uttarakhand state.
2. To study the type of infrastructure used in toilets of these Anganwadi
centres.
3. To study the status of cleanliness of these toilets.

II. RESEARCH METHODOLOGY

With a geographical area 53,485 sq. km spread across 13 districts Uttarakhand is unique in its topography and large rural population - 75% of total. The study was conducted in six districts of Uttarakhand. The Anganwadi workers were covered in the study. All these Anganwadi centres were randomly selected. The total numbers 300 of Anganwadi centres. The sample covered sufficient number of Anganwadi centres from each district of kumaun mandal (Commissionary) of Uttarakhand state. This paper is based on Simple and rapid comparisons of frequency percentages are suggested as an alternative to scoring and scaling methods in analyzing simple percentages of status of toilets where more mathematical sophisticated ones are now in use. The only apology is that for some data and purposes a quick and easy method seems more sensible than a time consuming and complex one. This is most obviously so when the data to be analyzed are subject to large biased errors or when assumptions underlying the more advance techniques are not even approximately met. Unfortunately, at present much sociological research has been conducted against such odds. A typical illustration is current study of status .Although the term "status'' is a highly intangible

concept and is not subject to exact measurement. Therefore, simple percentage method is used in analyzing the status of toilets in Anganwadi centres located in the rural areas of Uttarakhan

Table.1Number of Anganwadi centers included in the sample

Almora	Pithoragarh	Nainital	Bageshwar	Champawat	U.S.Nagar	Total
37	48	52	28	74	88	300

Table- 2 Percentage of toilet in Anganwadi centers

District	With toilet	Without toilet	Total Anganwadi
Almora	11(29.7)	26(70.3)	37
Pithoragarh	12(25.0)	36(75.0.)	48
Nainital	8(15.4)	44(84.6)	52
Bageshwar	4(14.3)	24(85.7)	28
Champawat	7(14.8)	40(85.1)	47
Udham Singh Nagar	28(31.8)	60(68.2)	88
Total	70(23.3)	230(76.6)	300

Note: figures in parenthesis shows percentages to the total

The above table shows that total 76.6 percent of Anganwadi centers in six district of Uttarakhand are functioning without any toilet facility, whereas 23.3percent of Anganwadi centers in six district of Uttarakhand are functioning with toilet facility. Due to the above reasons the Anganwadi workers of the Anganwadi centers use their homes for defecation or to defecate in filthy open places already filled up with night soil .The use of unsanitary field for defecation resulted in worm infection in Anganwadi workers.

Table -3 Percentage of Anganwadi centres functioning in Government and Private Buildings toilets Toilet facility

District	Govt. Buildings	Pvt. Buildings	Total
Almora	26(70.2)	11(29.7)	37
Nainital	40(83.3)	8(16.6)	48
Pithoragarh	35(67.3)	27(52.0)	52
B ageshwar	8(28.5)	20(71.4)	28
Champawat	30(63.8)	17(36.2)	47
U.Singh Nagar	65(73.8)	23(26.1)	88
Total	125(68.0)	96(32.0)	300

Note: figures in parenthesis shows percentages to total

The above table shows the percentage of Anganwadi centers functioning in government and private buildings. It has been noted that 68 percent of government buildings and 32.00 percent of private buildings are having Anganwadi cente rs having toilets respectively

Table: 4 Percentage of toilets cleaned by Staff and sweepers in Anganwadi centres

District	By Staff	By Sweeper	Not Cleaned	Total
Almora	8(57.14)	4(28.57)	2(14.28)	14
Nainital	-	11(91.06)	1(8.04)	12
Pithoragarh	11(68.75)	3(18.75)	2(12.05)	16
Bageshwar	3(75.00)	-	1(25.00)	4
Champawat	5(45.45)	3(27.27)	3(27.27)	11
U.Singh Nagar	5(45.05)	3(27.02)	3(27.27)	11
Total	32(47.05)	24(35.29)	12(17.64)	68

Note:figuresin parenthesis shows percentages to total

As far as cleanliness of toilets is concerned, as depicted in table four 47.5percent of Anganwadi toilets are cleaned by Anganwadi helpers(by staff) ,35.29percent by sweeper and 17.64 percent of toilets are not cleaned at all. These uncleaned toilets were found unrestricted and few of them have become totally non-functional. Moreover, the sanitary materials such as phenyl, harpic, etc are rarely being used for cleaning such toilets.

Table:-5Techniques used in the construction of toilets

District	Single pit lined pour flush	Single pit unlined pour flush	Double pit lined pour flush	Double pit Unlined pour flush	Single direct pit lined pour flush	Single direct pit unlined pour flush	Septic tank	**Total**
Almora	00	00	4(36.04)	1(9.01)	00	00	6(54.05)	11
Nainital	00	00	00	00	4(33.03)	8(66.07)	00	12
Pithora garh	1(25.00)	1(25.00)	00	00	00	00	2(50.00)	4
Bagesh war	00	00	00	00	00	00	4(100.00)	4
Champ awat	3(37.05)	00	00	00	3(37.05)	1(12.05)	1(12.05)	8
U. singh Nagar	00	4(33.03)	2(16.06)	00	00	00	6(50.00)	12
Total	4(7.84)	5(9.08)	6(11.76)	1(1.96)	7(13.72)	9(17.06)	19(37.05)	51

Note: figures in parenthesis show percentage to total

Use of the appropriate and user-friendly technique in the construction of toilets motivates Anganwadi workers to use them and keep them clean for a large period. As far as technology used in toilets of Anganwadi centres are concerned, 37.05 percent of them are with Septic tank and the rest are pit toilets of various categories depicted in table -5.

III. Discussion

The Causes of poor sanitation of toilets in Anganwadi centers are as follows:-

1.Lack of appropriate sanitary facilities.
2. Backwardness in workers regarding sanitary techniques.
3.Lack of literacy in workers regarding sanitation.
4.Lack in construction and maintenance of Anganwadi centers in particular area.
5.Lack of awareness in workers regarding sanitation standards and the adverse health impact of unsanitary conditions.
6.Lack of social mobilization regarding implementation of sanitation Programmes.
7.Lack of sanitation training starting with information, education, communication, implementation and follow-up services.

1) *The main findings of the study:*

1. To focus the negligence of duty of Village Education Committee towards the construction, operation, maintenance and sanitation of toilets in Anganwadi centers located in rural areas.

2. To highlight the disinterest shown by Village Panchayats towards construction, operation, maintenance and sanitation of toilets in Anganwadi centres located in rural areas inspite of grant available from the government.

3. The study also focuses on the behaviour of workers Anganwadi centers towards the use of toilets.

4. Another findings of the study is that rural masses are uneducated, uninformative, non-communicative, unaware and backward therefore they lack implementation of the sanitation programmes and follow up made by the government.

5. As opined by Anganwadi functionaries, Village Panchayats do not take any interest in the functioning of the Anganwadis including the sanitation facilities.

6. This paper is general study of the status of sanitation of toilets used in Anganwadi centres located in the rural areas of Uttarakhand .Therefore, no specified test is applied to know the level of significance.

7. This paper is confined only to the study of sanitation of toilets in Anganwadi centres located in the rural areas of Uttarakhand. The urban area has been excluded because it is to do the study of both areas on wide scale in short span of time simultaneously.

8. Anganwadi workers have not been given any orientation training on sanitation.

2) *Steps to be taken by the Government towards the sanitation of toilets of the Anganwadi centres in rural areas:*

1. A nation-wide campaign is necessary to make workers aware of the adverse effects of open air defecation which is

responsible for infections and a number of diseases. The people should be motivated not to be bare-footed while going for open defecation as this will save them from parasitic diseases. This type of education will be necessary until adequate toilet facilities are available in the villages.

2. The NGOs should be identified either by the State Government s or the District Administration. The selection of NGOs should be based on their experience, expertise and infrastructure.

3. The NGOs identified for implementation of the programme should be given proper training in various aspects of the programme. A comprehensive programme of giving them training at various levels has been prepared which forms part of the Project Report.

4. The entire range of training starting with information, education, communication implementation and follow-up should be given to the same NGO. It has been experienced that if the work is divided among various organizations, it becomes a case of divided responsibilities that hamper progress of the work.

5. Interest-free bank loans should be provided to all the Anganwadi centres situated in rural areas.

6. The implementation of the programme will require social mobilization on a large scale, which will include workers belonging to various groups. Politicians and policy makers will have to be involved in a big way so that they can take interest in policy decisions in favour of sanitation programmes. The social mobilization would also include village elders, doctors, lawyers and schoolteachers. Print media, radio and television will have to be fully involved in the implementation of the programmes. .

7. The following recommendations of the Planning Commission in the 10th Five Year Plan should be accepted in implementation of the rural sanitation programme successfully.

IV. Conclusion

The conclusions were arrived at on the basis of classification of raw data collected from Anganwadi centres situated in the rural areas of six district of Uttarakhand. The collected data were related to the use of toilets, cleanliness of toilets and techniques used in the construction of the toilets. It was found that 23.3% of Anganwadi centres are having toilets and 76.06% of Anganwadi centres are without toilets. As regards the functioning of the toilets 68.00%of Anganwadi centres are runned in the government buildings and 32.00%of Anganwadi centres are runned in private buildings. However, as regards the cleanliness of toilets in Anganwadi centres, they are cleaned both by staff and sweepers. This is due to the lack of administrative facilities that sweepers do not exclusively clean them. This is a big lacuna on the part of the health department, and thus, has to be very sincerely eliminated. The 11th schedule of 73rd constitutional amendment envisages that village panchayat should look after the functioning, maintenance, operation and construction of toilets in these Anganwadi centres. Further, while analyzing data of interview schedule it was found that if village community is motivated towards the adoption of sanitation services, cross visits, interpersonal communications and demonstration workshops, a great impact would be observed on sanitation relating to the Anganwadi centres situated in these areas. The study has also depicted that efforts are being made toward this end. Despite tough terrains and weak economical condition of the rural masses in the state, continuous efforts at the village, block, district and state levels have shown some positive results in the form of increased physical and financial progress and increased number of open defecation-free status villages. Keeping in view the current increase in demand for sanitation services,it is anticipated that the state will achieve full sanitation coverage in near future.

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