



Assessing awareness and practice of solid waste

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INHERENT TO ALL towns of Ethiopia, solid waste Problem is also one of the important health problem in Jimma town. Health and Social Division of municipality carry out solid waste management in Jimma town. One tipper lorry with a capacity of four cubic meters is available for waste collection. Although collection is undertaken for small portion of the town, it is arbitrary, neither following a definite program basis nor a prescribed routes (Faris,1993). It is also estimated that over 80 per cent of the cities of developing countries do not possess an adequate and meaningful refuse management (UNCS,1994).

There are piles of rotting vegetables, fruits and other wastes around streets, riverbanks, market areas, and open lots. The study done in Jimma town indicated that 79 per cent of wastes are organic in nature (faris,1993) that arises primarily from the preparation of food for human consumption (WHO,1971).

Dumped refuse are scattered by dogs, cats, goats and vultures, and children are also observed playing and scavenging among the rotting solid wastes. Uncontrolled domestic waste frequently piles up around low-income family homes and neighbourhoods, representing a permanent risks of pollution, infection and injury (Giroult,1995). Such risks are carried through waste scavengers, like dogs, rodents, flies, etc., and surface and underground routes of risk transmission.

In most cases direct contacts with the waste pose a health hazard to the exposed. Decreased waste collection service can also be a source of malodors as a result of waste putrefaction. If the refuse is contaminated with human excreta, then the health danger for getting faco-oral communicable diseases become substantial.

The health effect of wastes are not gender specific, although women may be more exposed than men to some forms of contact with wastes emanating from wastes due to their social roles (Giroult,1995).

All these risk factors, unless properly managed, will still continue to be operational subjects for public health managers.

A cross sectional study was undertaken in Jimma town to assess the awareness and practices of households to solid waste management.

Methods

A total of 179 households were selected randomly from Jimma town using multistage method of sampling for interview and observation. The first stage included a profile of the town. The second stage involved selection of kebeles

Table 1. Education and awareness of respondents to what happens to waste

Education	What happens to waste		
	Decompose	Dry	not known
Illiterate	14	2	14
Read and write	20	6	13
Grade 1-6	28	5	6
Grade 7-12	39	6	5
³ grade 12	11	-	-
Total	122 (68%)	19 (11%)	38 (21%)

Table 2. Awareness on problem associated with waste

Response	Male	Female	Total
Pose problem	87	64	151 (84%)
Did not know	16	12	28 (16%)
Total	103	76	179 (100%)

from which samples were drawn using simple random sample. The final stage involved random sampling of households by using random table.

Environmental health students were recruited and trained. Pre structured questionnaires and observation checklists were used to gather information from the households on their awareness and practices to solid waste management.

Results and discussion

The study found that most respondents (68 per cent) replied positively to waste decomposition, while only 21 per cent had no idea at all if waste stayed for long period in home storage areas or dump sites (Table 1).

Accordingly majority of respondents (84 per cent) at least knew one problem associated with solid waste (Table 2).

People interviewed claim to have information about health from various sources including health workers, community health agents, community development agents, etc. This is a clear indication of the wide range of potentially useful resources for spreading proper waste management methods; message emphasising the cause and solution of faulty awareness.

Among the households surveyed 66.5 per cent have no storage facilities as a result house sweepings, garbage and discarded items alike were left on the floor of homes or thrown in the streets or in the premises.

The study found that only 7 per cent of respondents got municipal collection service. Lack of public service may encourage dumping of waste in street, waterway, market are or any vacant lots. In addition in most developing countries there is no public services for collection of solid waste as a result households must transport their waste to public disposal site themselves. However, since neither the disposa nor its access road are well maintained the number of illegal dumping incidence is high (WHO, 1993).

It may be practical and also appropriate to use modified horse drawn carts or tractor equipped with wagons to transport the waste to land fill site or any processing site where it could be manually unloaded or processed (Faris, 1993).

Most people (59 per cent) either dumped the waste in refuse piles near the house or just littered the waste all over their immediate surroundings (Table 3). Such dirty environment may help to propagate the breeding of flies and rodents, which are the primary carrier and dispersal agents of diseases in many developing countries. Disposal methods, space available in their compounds, and waste observed within 20-meter radius were statistically significant (P<0.05).

The refuse disposal problem was associated with attached houses that have no space to dig for refuse pits. City dwellers, especially those in crowded areas lack the space to dispose waste, such crowded areas need efficient municipal services.

Since 37 per cent of respondents used waste materials for soil conditioning (Table 4), and since 65 per cent of respondents have available space composting of organic waste could be feasible. Composting operation provide useful materials to improve the soil condition and increase agricultural production (Geres, 1989).

Table 3. Waste disposal methods used

Option	Space available		Waist within 20m radius			Total
	Yes	No	Yes	No	no. %	
In yard	40	14	33	21	54	30
Out yard	19	33	38	14	52	29
Waste pit	41	2	33	10	43	24
Municipal disposal site	3	9	9	3	12	7
Burning	14	4	4	14	18	10
Total	117	62	117	62	179	100

Table 4. Use of waste materials for other purpose

Response	Number	Percent
Yes	66	37
No	113	65
Total	179	100

In Addis Ababa recycling is already undertaken by informal sectors, in desperate, to provide a subsistence existence (Gordon,1994).

Therefore, recycling of solid waste materials to the extent feasible, should be encouraged as a basic objective of every solid waste management system (Salvato,1992).

Although most of the community throw their wastes around streets, market areas, open lots etc., 38 per cent of respondents admitted buying cooked foodstuffs from street vendors. This is may be due to lack of appreciating the link between waste-insect-disease relationship.

Although majority of households (76 per cent) has pit latrine, excreta was observed in 44 per cent of households. This may indicate misuse or no use of latrine. The observed excreta in the surroundings has an access to solid wastes which can highly exaggerates the problem of solid waste.

Conclusion

It was encouraging to find that the community’s awareness were good. However, practical applications were limited. The lack of appreciating the link between problem associated with solid waste and proper handling and disposal of waste can be big constraints to the community’s effort of promoting healthy behaviour.

Community inability to recognis the significance of their active participation is also a factor. The community rather expect the municipal cleaning and collection service. Resource constraints are other factor for community’s inability to promote healthy behaviour.

The study concluded that health education play an important role to correct attitude of community regarding the role of the community and municipality in solid waste management. Health education and demonstration should be conducted on the use of individual composting operation. Municipality should provide waste collection services especially for over crowded areas. It may be more practical to use modified horse drawn carts to transport solid waste (Faris,1993).

The promotion of appropriate solution for this complex environmental problem, requires broader assessment and co-operative effort of concerned state agencies and the community.

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