



How 'Healthy' are Villages in District Ambala, Haryana: A Pilot Study?

¹Madhanraj Kalyanasundaram, ²Amarjeet Singh, ³Navpreet Singh

ABSTRACT

Background: A 'healthy village' concept as a healthy setting approach is lacking in India, where approximately 70% of population lives in villages. Despite various village development programs, the quality of life in Indian villages continues to be poor.

Objective: To evaluate some villages in district Ambala as healthy villages.

Materials and methods: This cross-sectional study of seven villages under a sub center was conducted during January to April 2010. These villages were compared on the basis of scores obtained on a checklist developed for evaluating 'healthy village'. The village headmen, committee members, various health workers, accredited social health activists and anganwadi workers were also interviewed.

Results: The sub center headquarter, the largest village, scored maximum among seven villages (90/130; 69.2%). Lowest score was observed in the smallest village (49/130; 37.7%). Most villages fared poorly on intersectoral coordination, youth activities, and historical/cultural heritage. Performance of all villages on 'availability of basic statistics' and 'animal shelter' was excellent.

Conclusion: Apparently, population size of a village was linked with its being a healthy village. None of the village had an excellent score. Overall, an average rating can be assigned to these villages as healthy village.

Keywords: Healthy village, Health promotion, Primary health care, Health situation in rural India.

How to cite this article: Kalyanasundaram M, Singh A, Singh N. How 'Healthy' are Villages in District Ambala, Haryana: A Pilot Study? *J Postgrad Med Edu Res* 2014;48(1):19-23.

Source of support: Nil

Conflict of interest: None

¹Assistant Professor, ²Professor, ³Senior Lecturer

¹Department of Community Medicine, Pondicherry Institute of Medical Sciences, Puducherry, India

²Department of Community Medicine, Postgraduate Institute of Medical Education and Research, Chandigarh, India

³Department of Community Medicine, Government Medical College, Chandigarh, India

Corresponding Author: Amarjeet Singh, Professor Department of Community Medicine, Postgraduate Institute of Medical Education and Research, Chandigarh, India e-mail: amarminhas56@rediffmail.com

INTRODUCTION

Starting in 1986, Healthy Cities Programmes were launched in developed countries and later spread to developing nations. Today, more than 1,000 cities worldwide are part of the Healthy Cities network in all WHO regions.¹⁻³ Similar principles have been applied to rural settings in the form of healthy village Programs in all six WHO regions.⁴

Government of India has made various efforts for rural development and poverty alleviation through various programs.⁵ Still, the quality of life in Indian villages continues to be poor. The concepts of healthy cities and healthy villages are lacking in India. In this context, the present study was carried out with an objective to evaluate the some villages in Haryana, North India as healthy villages.

MATERIALS AND METHODS

This cross-sectional evaluation of villages was done during January to April 2010 in district Ambala, Haryana. A sub center was purposively selected as this was field practice area of authors. All seven villages under a chosen sub center were evaluated.

After having extensive literature review available on healthy village concept globally, a checklist was first prepared to develop healthy village indicators with the help of logical framework analysis.⁶ Sixteen domains for healthy village were finalized after having consensus and face validity. For each domain, number of objectively verifiable indicators (OVI) and their means of verification (MOV) were evolved. These were first pilot tested in a randomly selected village (from non-study area) to standardize the checklist. Each positive response for every indicator was given a score. Responses to particular indicator were either nominal (yes or no) or ordinal (graded which were scored according to grades). Maximum attainable score was 130 (Table 1).

Interviews were conducted by authors themselves (one author was MD, Community Medicine, and another was doing MD, Community Medicine). The interview schedule was prepared firstly after consultation with stakeholders. After that, total 24 interviews were conducted: village headmen of all study villages (n = 7), all health workers of study villages, i.e. multipurpose health workers (n = 2), auxiliary nurse midwife (n = 1), accredited social health activists (n = 7) and anganwadi workers of study villages

Table 1: Healthy village scoring of study area villages

S. no	Healthy village indicators	V ₁	V ₂	V ₃	V ₄	V ₅	V ₆	V ₇	Max. score
1	Community organization and community consultation	10	5	4	5	5	6	6	13
2	Women's empowerment and development	5	6	4	4	6	4	4	7
3	Health and disease	8	6	4	6	5	5	3	12
4	Raise local awareness regarding health, nutrition and sanitation	5	1	0	2	4	3	2	5
5	Income generating schemes and employment opportunities	6	4	0	2	4	1	3	8
6	Youth activities	4	1	0	1	3	2	2	8
7	Infrastructure and basic life amenities	19	18	13	15	17	18	21	28
8	Animal shelter	2	2	2	2	2	2	2	2
9	Environment	4	3	2	3	3	3	3	7
10	Transportation	4	4	4	4	3	4	4	5
11	Communication	12	9	7	8	6	9	7	13
12	Education and literacy	4	4	4	4	5	5	5	8
13	Intersectoral coordination	0	0	0	0	0	0	0	2
14	Historical and cultural heritage	1	2	0	2	0	2	1	4
15	Availability of basic statistics	2	2	2	2	2	2	2	2
16	Projects/Initiatives	4	4	3	3	3	5	3	6
Score: Absolute		90	71	49	63	68	71	68	130
Percentage		69.2	54.6	37.7	48.5	52.3	54.6	52.3	100

(n = 7) with the help of checklist to ensure that all indicators were covered. Consent of the respondents was taken for interview. Interviews were conversational in nature and centered on their viewpoints on village environmental, social and health conditions. Village health and nutrition days, meetings of *Sakshar Mahila Samooh*, visit to anganwadis were utilized to interact with these personnel. Record checking and on the spot observations were also done to verify the information collected. Confidentiality of data was ensured.

These villages were compared on the basis of scores obtained for healthy village. Simple descriptive statistics (percentage) were used in describing characteristics of study variables in relation to healthy village.

Results (Villages are named as V₁-V₇ to Conceal Identity)

The sub center head quarter (V₁), scored maximum among seven villages (90/130; 69.2%) while a small village (V₃), scored the lowest (49/130; 37.7%) (Table 1).

Community Organization and Community Consultation

'Gram sabha' (village level panchayat) were actively involved in village development in all studied villages. There were many committees in study villages viz village level core committee, school committee, Mandir committee, village level health and sanitation committee. However, roles of the members were not clearly defined. Female participation

in committees and decision making was limited. Maximum numbers of these committees (three) were in V₁ followed by V₄ and V₇ (two each). These were actively involved in implementing the new government schemes in villages. V₁ scored maximum (10/13) for 'community organization and community consultation'.

Women Empowerment and Development

Sakshar Mahila Samooh (SMS; literate women group) were actively working in all seven villages. In addition, there were Mahila Mandals (women's groups) in villages V₂ and V₅. There was equal representation of women in panchayat (33%) of all villages. Most of the girls (>90%) in all villages were enrolled in schools. Women from all studied villages had access to healthcare services. Sewing machines were provided to women under governmental scheme of women welfare. Even bicycles were given to females so that they could go to schools for higher classes in neighboring villages. There were craft centers in two villages (V₂ and V₅). A government scheme based financial support was provided to women of V₁ to produce and sell (at cheap price) sanitary napkins. V₂ and V₅ scored maximum (each 6/7) for 'women empowerment and development'.

Health and Disease

V₁ had a sub center and V₄ had a government ayurvedic dispensary, catering to primary healthcare needs of these two and other nearby villages. Primary health center is at a distance of about 13 km and civil hospital at distance of about 16 km from V₁. Delivery hut at V₁ was functioning

well. Free ambulance service was also available to transport pregnant women for referral. Health camps were also held in preceding years in study villages except for V₃ and V₇. Health workers visited their field area regularly.

There was no report of any disease outbreak in study villages during preceding year. There was no community involvement in direct health related issues in any of the study villages. However, efforts were made by local committees and health workers in raising awareness regarding health, nutrition and sanitation in V₁, V₄₋₇. Tobacco products (bidi, zarda, khaini and cigarette) were available at shops in study villages V₁, V₃₋₇ but in V₂, none of shop sold any tobacco product. There was no liquor shop in or around these villages. V₁ scored maximum for indicators: 'health and disease' (8/12); and for 'raising local awareness regarding health, nutrition and sanitation' (5/5).

Infrastructure and Basic Life Amenities

V₂, V₆₋₇ had maximum number of houses with masonry construction (pucca) while rest of study villages had many semi-pucca houses. Very few houses (less than 5%) were kachcha in these villages. More than 75% of houses in all study villages had electricity connection. But, its supply was erratic, i.e. less than 3 hours supply in a day in V₃, between 3 and 6 hours in a day in V₄ and for 6 hours or more in a day in remaining study villages. Similar was the situation with piped water supply to houses. There were hand pumps with concrete platform and drainage in all villages, as an alternate source of water. Water tanks had also been provided to villagers under 'Indira Gandhi Peyjal Yojna' (drinking water scheme). Wells have been closed down in villages except V₇. Between 50 and 75% houses in four study villages (V₂, V₄, V₆₋₇); between 25 and 50% houses in V₁ and less than 25% houses in V₃ and V₅ had improved sanitation facility. There was no sewerage system in any of study villages. Except V₃ and V₅, in rest of villages, villagers had constructed their personal septic tanks for excreta disposal. None of the village had any community latrine. There were common waste collection sites at outskirts of villages. V₇ scored maximum (21/28) for 'infrastructure and basic life amenities'.

Environment

While work of paving of inner streets was going on in V₁ and V₂, all villages had paved inner streets with brick lay work. There was no or negligible litter on inner streets in four villages (V₁, V₄₋₆). There was no water logging in streets of three villages namely V₁₋₂, V₇. In remaining villages, water logging was told as a common feature during rainy season. Authors themselves experienced this in V₄. There were no open drains in any of study village but waste water discharge

from houses got collected on street alongside boundary walls of these houses. Ponds were present at outskirts of every village. There were no street light in any of study village. The animal shelters were situated at appropriate distance (10 meters) from human dwellings and were kept reasonably clean. The stone crushers, brick kilns, factories or poultry farms were not located in or around any of these villages. V₁ scored maximum (4/7) for a clean 'environment'.

Transportation and Communication

All study villages had access to and connected by all-weather roads. Bus service was also available but it was not frequent. None of the village had rail connectivity.

Every household had mobile phone connectivity in all study villages. More than 75% houses had cable TV connections/dish TV in study villages except in V₂ (50-75% houses). Radio was available only in few houses in V₁₋₂. Internet connection was available in V₁ and V₄. V₁ scored maximum (16/18) for transportation and communication indicators.

Education and Literacy

Each study village had a school (high school in V₄; middle school in V₁, V₅₋₇ and primary school in V₂₋₃). The school infrastructure was adequate in study villages except in V₁ and V₄. Edusat was installed in all schools but was non-functional. Exact data about adult literacy program outputs was not available. Three villages, i.e. V₅₋₇ scored maximum (each 5/8) for 'education and literacy'.

Income Generating Schemes, Youth Activities, Intersectoral Coordination

V₁ had maximum number (four) of income generating schemes/projects implemented from time to time during preceding year followed by V₂ (three). There was no provision of interest free loans. Beneficiaries were not involved in planning of village development work. There was no periodic audit of related funds received from government except for three villages (V₁, V₅ and V₇).

None of the villages had any formal sports facility except V₂. None of the village organized any cultural event involving local youth. V₅ had minimum number of unemployed youth (<25%) followed by V₁ and V₇ (25-50%); and V₄ (50-75%) whereas villages V₂₋₃ and V₆ had maximum number of unemployed youth (>75%).

Alternative sources of energy, i.e. solar cooker, solar lantern, biogas plant, were utilized by villagers in all villages. Sub center at V₁ had a solar heater. V₁ scored maximum for indicators 'income generating schemes and employment

opportunities’ (6/8) and ‘youth activities’ (4/8). V₆ scored maximum for ‘projects/initiatives’ (5/6). None of the study villages showed any evidence of optimum intersectoral coordination.

Historical and Cultural Heritage

None of the study village had any historical monument or cultural heritage. Very few cultural events were formally organized during preceding year in villages by Lok Manch (public forum). Three villages, i.e. V₂, V₄ and V₆ scored maximum (2/4) for ‘historical and cultural heritage’.

Availability of Basic Statistics

The basic statistics were available for all villages (Table 2). These records were maintained and updated by health workers during periodic surveys. All villages scored equally (2/2) for ‘availability of basic statistics’.

DISCUSSION

A village or rural community can be considered healthy when rates of infectious diseases are low, when community members have access to basic services and health care that meets their needs, and when the community lives in a state of reasonable harmony.⁷

Adoption of healthy village approach has been demonstrated to be successful in many countries viz Syrian Arab Republic, Iran, Taiwan, Malawi, Malaysia, Vietnam, Bhutan and Morocco.^{6,8-11} However, people do not wait for external support for such development. There are documented instances of efforts and initiatives at local level in different parts of country. For example, a village in Punjab has been transformed with efforts of local people (without any government funding) to lay an underground sewerage system, install a separate rainwater drainage system and constructing a biogas plant.¹² Even roads and bridges have been built by people in many villages of India themselves. A village in Meghalaya has earned the reputation for being

arguably the cleanest and best educated in India.¹³ Similar example is available from the healthy village program by Sanma (an international organization) in India.¹⁴

Healthy village approach has to be nurtured by community participation, something that may be difficult to sustain exclusively by external support. In the present study, the local village level committees were active in maintenance and operation of water supply and sanitation, construction of inner streets and for operation of funds received from central/state government.

Use of tobacco products (bidi, zarda, khaini, and cigarette) was common in our study villages. No specific efforts were made by any agency to make village environment free of smoking. In Malaysia, a strategy of imposing a fine on smoking and posting appropriate signage ‘no smoking’ inside the village; and constructing specially designated open air ‘smoking huts’ outside the village had successfully banned smoking inside villages.¹¹

Villages in India are ranked poorly as far as cleanliness of streets is concerned. In present study, the village streets were found to be reasonably clean. It could be due to fact that none of the village had kachcha (unpaved) streets.

Rural road connectivity is a key component of rural development by promoting access to economic and social services. Telecom connectivity constitutes an important part of the effort to upgrade the rural infrastructure. Mobile phones have brought revolution in communication even in remote villages. This was evident in study villages also. All study villages had good road connectivity, though frequency of bus service was poor.

Literacy is also major focus area of healthy village concept. Education facilities, up to high school, were available in study villages. More importantly, girls had equal access to education in the schools. Access to basic health services was also reasonably good in study villages.

Facilities for youth to gain and enhance their skills were lacking in study villages. Various income generating schemes are implemented from time to time. Some of this was visible in study area. For example, financial support was

Table 2: Demographic profile of study villages

Village	Population	Sex ratio (no. of females per 1000 males)	Children		Eligible couples
			<1 yr	1-5 yrs	
V ₁	1598	993	25	92	225
V ₂	1126	982	25	104	135
V ₃	565	852	12	55	95
V ₄	1932	944	35	172	325
V ₅	650	847	15	98	110
V ₆	672	904	13	78	128
V ₇	1324	976	18	104	152
Total	7867	945	143	703	1170



provided by state government to produce and sell sanitary napkins. However, there was lack of optimum intersectoral coordination.

Updated vital events and other statistics were available for all study villages. These help in planning health interventions by prioritizing the problems as well as in evaluating the impact of intervention.

Apparently, population size of a village was linked with its being a 'healthy village'. V₁, the sub center head quarter, scored maximum among seven villages. None of the village had an excellent score. Overall, an average rating can be assigned to these villages as 'healthy village'.

The healthy village programs are being carried out all over the world. These have led to various positive outcomes, e.g. improvement in water supply, sanitation, improvement in health of villagers, creating employment opportunities, social and cultural development, etc. But, this concept is still lacking in India. In such a scenario health cannot be cultivated. Authors tried to give objectivity to status of villages as 'healthy village' by using a scoring system. This scoring system could be used as baseline information (i) to evaluate the impact of government's policy and programs on healthy village in future, and (ii) for comparison with villages in other part of country. But, only such quantification and documentation of indicators is not sufficient.

There is need for central government to work with state and local governments to adopt villages that are open to change as healthy village in every aspect *viz* basic infrastructure, health system, cultural, etc.

REFERENCES

1. World Health Organization. Ottawa Charter for Health Promotion. Geneva: WHO. 1986.
2. World Health Organization. Introduction to healthy settings. Available at: http://www.who.int/healthy_settings/about/en/. [Last accessed on 2011 Mar 9].
3. World Health Organization. Healthy Cities. Available at: http://www.who.int/healthy_settings/types/cities/en/index.html [Last accessed on 2011 Mar 9].
4. World Health Organization. Healthy Villages. Available at: http://www.who.int/healthy_settings/types/villages/en/index.html [Last accessed on 2011 Mar 9].
5. Rao CNS. Sociology of Indian Society. New Delhi:S. Chand and Company. 2004.
6. World Health Organization. Evaluation of the healthy village programme in the Syrian Arab Republic. Cairo: WHO Regional Office for the Eastern Mediterranean. 2007.
7. World Health Organization. Healthy Villages: A guide for communities and community health workers. Geneva: WHO. 2002.
8. Nikniaz A, Alizadeh M. Community participation in environmental health: Eastern Azerbaijan Healthy Village Project. *East Mediterr Health J* 2007;13:186-192.
9. Chen N. I love my village. *Journal of Extension* 1994;32:1-5.
10. Kulmala T, Vaahtera M, Ndekha M, Cullinan T, Salin ML, Koivisto AM, et al. Socioeconomic support for good health in rural Malawi. *East Afr Med J* 2000;77(3):168-171.
11. Kiyu A, Steinkuehler AA, Hashim J, Hall J, Lee PF, Taylor R. Evaluation of the Healthy Village program in Kapit district, Sarawak, Malaysia. *Health Promot Int* 2006;21(1):13-18.
12. National Award for Ropar village. *The Tribune*. 2011 Mar 3.
13. India's 'green and clean' village. *BBC News Meghalaya*. 2009 Sept 25.
14. Sanma Healthy Village. Available at: <http://www.sanma.org/healthyvillage.htm>. [Last accessed on 2011 Mar 22].