

Enhancing the quality of health education through distance education

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ABSTRACT : Distance education in India is making it easier to close the educational gap between rural and urban areas. By making educational opportunities easily available to everyone, distance education is opening up career options for the less privileged segments of Indian population. An experimental study was conducted to enhance the quality of health education through distance education with the objective to assess the knowledge of rural school dropout girls and women at pre and post stage of the distance education. The sample consisted 120 respondents who were selected from four villages namely Harobelawadi, Uppinbetageri, Mansur, Garag of Dharwad taluka. Village wise knowledge of respondents after the education revealed that majority (88%) of the respondents gave correct answer about family sanitation, followed by personal hygiene (85%), community sanitation (83.34%), environmental sanitation (82.50%) and additional useful information for rural sanitation (75%). The knowledge about family sanitation shows that high majority of the respondents answered rightly for importance of proper light and aeration at home, followed by place for washing of pesticide equipments and material used in the gobar gas plant. Cent per cent of the respondents gave correct answer for colostrum feeding and proper washing of hands after toilet. Majority of the respondents answered with respect to spraying of DDT powder to drainage and stagnant water to control mosquitoes, which are the causes of malaria. More than 80 per cent of the respondents were able to answer about methods to burry dead rats and pets, place to keep the milch animals in the house and source of solar cooker. Similarly, majority of the respondents answered rightly about astra chullaha/ or smokeless chullaha and department in-charge to distribute solar cooker.

KEY WORDS : Enhancing, Quality health, Distance education

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INTRODUCTION

Distance education, in its present form, originated in the West. It has been defined as methods of teaching, in which the teacher bears the responsibility of imparting knowledge and skill to student, who does not receive instruction orally, but who studies in place and at a distance determined by his individual circumstance (Erdos).

The system of education which operates on the philosophy that factors like geographical remoteness, poverty

or any other type of social advantage, poor health or disadvantageous physical conditions or any psychological condition that inhibit one from undergoing institutionalised education should in no way stand in the way of one's achieving the desired educational goals is popularly known as distance education. Theoretical concept of distance education places emphasis on the importance of self study. Hence, the present study was undertaken with the objective to assess the knowledge of selected rural girls/ women about health at pre and post stage of the distance education and to analyze the

impact of distance education provided to the respondents.

METHODOLOGY

The study was carried out during the year 2011 -2012 in randomly selected four villages namely Harobelawadi, Uppinbateri, Mansur, Garag of Dharwad taluk. Purposive random sampling method was used to select 120 school dropout girls and women, 30 in each village to know the knowledge level of health before and after the distance education. To study the impact before and after type of experimental study was adopted. To know the level of knowledge about health, pre test of the selected respondents was conducted with the help of structured schedule through 'Multiple choice' and 'True or False' type of questions.

A booklet on health was prepared by the researchers with elaborated information in local simple language kannada. To make it effective and attractive, relevant pictures and live photographs about health were taken. Every care was taken to understand the content easily by the readers. It consisted of five areas namely Personal hygiene, Family sanitation, Community sanitation, Environmental sanitation and Additional useful information for rural sanitation. At the end of each chapter some simple questions were asked in the form of exercise and all chapters were summarized in the form of

"Important points to be remembered".

The booklet was distributed to each of the selected respondents and they were given two months time to read, understand and clarify the doubts of the contents of the distributed booklet. During these two months' time, contact classes were conducted in each village at the end of each week to clarify the doubts in the lessons of reading material supplied. After two months of study duration, post test was conducted with the help of schedule developed for pre test to know the impact of distance education. Change in knowledge about health was measured by assessing pre and post-test results of distance education by using frequencies, mean, percentage and paired 't' test.

OBSERVATION AND ASSESSMENT

Table 1 shows the knowledge of the respondents before and after distance education about health. It includes five chapters on personal hygiene, family sanitation, community sanitation, environmental sanitation and additional useful information for rural sanitation.

In first chapter: Personal hygiene, after the education there was a great increase in number of respondents who answered rightly for 'proper washing of hand after toilet' from 87.50 to 100 per cent; 'colostrum feeding' from 79.16 to 100 per cent; 'food required for healthy skin' from 55.84 to 82.50 per cent; and 'reasons for dysentery, cholera and typhoid' from 55.84 to 90.84 per cent. In pre test 32.50 per cent of the respondents answered for 'proper hand wash' which was increased to 71.66 per cent after the education.

In family sanitation chapter, cent per cent of the respondents answered for 'importance of proper light and aeration at home' after the education which was 91.66 per cent in pre test. Similarly after the education change was found from 89.16 to 95.00 per cent in 'gobar gas plant', and from 60.00 to 85.00 per cent in 'requirements to maintain good health of family members'. Very less respondents who answered for 'causes of smoke while cooking' before the education (35%) increased to very high *i.e.*, 75.84 per cent after the education (Table 1).

In chapter III, knowledge about community sanitation showed that the lowest scored respondents with respect to 'sources for fuel energy' (18.34%), 'causes for cholera' (29.16%) before the education, increased to a high percentage of 65.84 and 62.50, respectively. Cent per cent of the respondents gave correct answer after the education with respect to the knowledge of 'spraying of DDT powder to drainage and stagnant water' which was 94.16 per cent before the education. There was not much increase in the number of respondents who answered for 'mosquito and malaria' (91.66% to 93.34%) and 'harms of dirty stagnant water' (87.50% to 89.16%).

In environmental sanitation chapter, cent per cent of the

Course outline developed for the syllabus of health

Chapters

Personal hygiene :

Importance, protection of body parts like eyes, ears, nose, tongue, skin, hair, nails, teeth; important points to be remembered by adolescent girls in keeping good health hygiene.

Family sanitation :

Importance, sanitation in kitchen and other parts of house, surrounding of the house.

Community sanitation :

Importance, role and functions of gram panchayat, health department and community people;

Environmental sanitation :

Importance, control and solutions for air pollution, water pollution; drinking water sources and protection.

Additional useful information for rural sanitation :

Advantages, availability and persons to be contacted for installation of fuel saving devices like smokeless chulha, community chulha, bio-gas or gobar gas, solar cooker, wind energy; importance of village sanitation by construction of toilets, soakage pit.

Questions :

Multiple choice and true or false type.
Important points to be remembered

respondents gave correct answer for 'methods to burry dead rats and pets' in post test. There was increase from 62.50 to 89.16 per cent for 'place to keep the milch animals in the house' and 'source of drinking water' from 69.16 to 76.66 per cent. Very less respondents answered for 'preferred chullaha for cooking' (35.84%) and 'impure drinking water' (39.16%) before the education, which was increased to a high per cent of 73.34 and 75.00, respectively after the education.

With respect to IV chapter: Additional useful information for rural sanitation, very less respondents gave correct answer

for 'officer in charge for toilet construction'(22.50%), 'soakage pit for proper disposal of waste water' (25.84%), and 'advantage of community chuallha'(32.50%), which were increased to high percentage of 79.16 and 60.84 (each), respectively, after the education among all women readers. After the education there was very good increase in the number of respondents for 'Astra chulha' (78.33% to 95.00 %) 'solar cooker' (60.84% to 88.34%) and 'toilet construction' (22.50 % to 79.16%).

Jackson *et al.* (2004) conducted a similar study and

Table 1 : Knowledge of respondents before and after distance education about health (n= 120)

Sr. No.	Subject particulars of part C	Distance education			
		Before		After	
		Correct answer		Correct answer	
		F	%	F	%
Chapter I : Personal hygiene					
1.	Proper hand wash	39	32.50	86	71.66
2.	Food required for healthy eyes	47	39.16	76	63.34
3.	Food required for healthy skin	65	54.16	109	90.84
4.	Reasons for dysentery, cholera and typhoid	67	55.84	99	82.50
5.	Colostrum feeding	95	79.16	120	100
6.	Proper washing of hands after toilet	105	87.50	120	100
Chapter II : Family sanitation					
1.	Requirements to maintain good health of family members	72	60.00	102	85.00
2.	Keeping house clean and tidy	66	55.00	98	81.66
3.	Material used in the gohar gas plant	107	89.16	114	95.00
4.	Causes of smoke while cooking	42	35.00	91	75.84
5.	Importance of proper light and aeration at home	110	91.66	120	100
6.	Place for washing of pesticide equipments	96	80.00	114	95.00
Chapter III : Community sanitation					
1.	Sources for fuel energy	22	18.34	79	65.84
2.	Harms of dirty stagnant water	105	87.50	107	89.16
3.	Causes for Malaria	98	81.66	108	90.00
4.	Causes for Cholera	35	29.16	75	62.50
5.	Mosquito and Malaria	110	91.66	112	93.34
6.	Spraying of DDT powder to drainage and stagnant water	113	94.16	120	100
Chapter IV : Environmental sanitation					
1.	Source of solar cooker	73	60.84	98	81.66
2.	Source of drinking water	83	69.16	92	76.66
3.	Preferred chulha for cooking	43	35.84	88	73.34
4.	Impure drinking water	47	39.16	90	75.00
5.	Methods to burry dead rats and pets	133	94.16	120	100
6.	Place to keep the milch animals in the house	75	62.50	107	89.16
Chapter V : Additional useful information for rural sanitation					
1.	Officer in-charge for toilet construction	27	22.50	95	79.16
2.	Department in-charge to distribute solar cooker	73	60.84	106	88.34
3.	Advantage of community chulha	39	32.50	73	60.84
4.	Soakage pit for proper disposal of waste water	31	25.84	73	60.84
5.	Astra chulha and/ or smokeless chulha	94	78.33	114	95.00
6.	Light from gohar gas	63	52.50	78	65.00

reported that pre and post-assessment of pre-schoolers showed that distance education programme was successful in positively impacting the literacy skills of pre-school children.

Table 2 shows the chapter wise knowledge of respondents before and after distance education with regard to health. Among all the 5 chapters, in ‘Family sanitation’, ‘Community sanitation’ and ‘Environmental sanitation’ chapters, number of respondents increased from 68.33 to 88.33 per cent, 66.67 to 83.33 per cent and 63.33 to 82.50 per cent, respectively after distance education. In V chapter, ‘Additional useful information for rural sanitation, there was 30 per cent increase in the knowledge of the respondents after the education *i.e.*, from 45.00 to 75.00 per cent. So, there was noticeable change found in ‘Personal hygiene’ chapter *i.e.*, from 58.33 to 85 per cent. Julian and Kirunda (2004) conducted similar study on role of open and distance learning in health education which showed that distance education program helped in the improvement of quality of life in rural areas.

Chapter wise knowledge of respondents after the education reveals that majority (88%) of the respondents gave correct answer about family sanitation followed by personal hygiene, community sanitation, environmental sanitation and additional useful information for rural sanitation. The knowledge about family sanitation shows high majority of the respondents answered rightly for importance of proper light and aeration at home followed by place for washing of pesticide equipments and material used in the gobar gas plant. Cent per cent of the respondents gave correct answer for colostrum feeding and proper washing of hands after toilet. Majority of the respondents answered with respect to spraying of DDT powder to drainage and stagnant water, mosquito and malaria, causes for malaria. More than 80 per cent of the respondents were able to answer about methods to burry dead rats and pets, place to keep the milch animals in the house and source of solar cooker. Similarly majority of the respondents answered rightly about astra chulha/ or smokeless chulha and department in-charge to distribute solar cooker.

Now-a-day’s accredited social health activist (ASHA) workers along with anganwadi and health workers are giving more stress about importance of colostrum feeding and personal hygiene aspects. With respect to food to be taken to keep their body healthy, not only the urban women even rural

women are also very eager and interested towards beauty tips and health tips due to mass media exposure. Hence, this consciousness towards keeping their skin healthy made them to collect information and remember by reading the supplied booklet.

Cow dung is easily available in every house and after reading book-let they came to know about the advantages of biogas as fuel and light and even the reuse of slurry to their fields. Hence, more number of respondents might have given right answer.

Chapter I: Personal hygiene :

Table 3 indicates the impact of distance education on knowledge about health. In chapter I, the pre-test mean knowledge score about personal hygiene was found to be low in Garag (9.03) followed by Mansur (9.16), Uppinbetageri (9.56) and Harobelawadi (10.16), whereas post test mean score was found to be high in Harobelawadi (11.20) followed by Uppinbetageri (11.13), Garag (11.10) and Mansur (10.90).

The post-test increase in the mean knowledge score showed by the respondents of Harobelawadi (10.16 to 11.20), Uppinbetageri (9.56 to 11.13), Garag (9.03 to 11.10) and Mansur (9.16 to 10.90) villages was significant at 1 per cent level.

Chapter II: Family sanitation :

In family sanitation chapter, pre test mean knowledge score of the respondents was found to be low in Mansur (9.66) followed by Uppinbetageri (9.76), Garag (10.03) and Harobelawadi (10.96), whereas post-test mean score was found to be equal in Uppinbetageri and Harobelawadi (11.43 each) followed by Garag (11.26) and Mansur (11.16).

The post-test increase in the mean knowledge score showed by the respondents of Uppinbetageri (9.76 to 11.43) was significant at 0.01 level. Respondents of Harobelawadi showed change in mean knowledge score from 10.96 to 11.43, but it was not significant. The mean score of Garag (10.03 to 11.26) and Mansur (9.66 to 11.16) was highly significant at 0.01 level.

Chapter III: Community sanitation :

In chapter three, the pre-test values about community

Chapter No.	Subjects of part C	Distance education			
		Before		After	
		Correct answer		Correct answer	
		F	%	F	%
I.	Personal hygiene	70	58.33	102	85.00
II.	Family sanitation	82	68.33	106	88.33
III.	Community sanitation	80	66.67	100	83.34
IV.	Environmental sanitation	76	63.33	99	82.50
V.	Additional useful information for rural sanitation	54	45.00	90	75.00

sanitation showed low mean knowledge score in Uppinbetageri and Mansur (9.96 each), followed by Garag (10.16) and Harobelawadi (10.33). In post test, high mean knowledge score was found by the respondents of Garag (11.10), followed by Harobelawadi (10.96), Uppinbetageri (10.93) and Mansur (10.70).

After the post-test, the respondents of Garag (10.16 to 11.10), Harobelawadi (10.33 to 10.96), Uppinbetageri (9.96 to 10.93) and Mansur (9.96 to 10.70) showed increase in the mean knowledge score which was significant at 0.01 level (Table 3).

Chapter IV: Environmental sanitation :

In environmental sanitation chapter, pre test mean knowledge score was found to be low in Mansur (9.36) followed by Garag (9.46), Uppinbetageri (9.50) and Harobelawadi (10.13), whereas in post test mean score was found to be high in Mansur (11.20) followed by Uppinbetageri (11.10), Harobelawadi (10.93) and Garag (10.60).

After the post test, there was a significant increase in the mean knowledge score by the respondents of Mansur (9.36 to

11.20), Uppinbetageri (9.50 to 11.10), Harobelawadi (10.13 to 10.93) and Garag (9.46 to 10.60) villages at 0.01 level.

Chapter V: Additional useful information for rural sanitation :

In the chapter five, pre-test mean knowledge score about additional useful information for rural sanitation was found to be low in Mansur (8.43) followed by Garag (8.53), Uppinbetageri (8.60) and Harobelawadi (9.33). In post test the mean knowledge score was found to be high in Uppinbetageri (10.93) followed by Garag (10.43) and equal mean score in Harobelawadi and Mansur (10.30 each).

After post-test, highly significant increase in the mean knowledge score was shown by the respondents of Uppinbetageri (8.60 to 10.93), Garag (8.53 to 10.43), Harobelawadi (9.33 to 10.30) and Mansur (8.43 to 10.30) villages at 0.01 level (Table 3).

The distance education by use of book-let had good impact on knowledge scores of the respondents (Table 3). The increase in the knowledge score of selected school dropout

Particulars of part C	Pre-test mean (SD)	Post-test mean (SD)	Paired t-value (n=120)
Chapter I: Personal hygiene			
Uppinbetageri	9.56(1.16)	11.13(0.68)	7.770**
Harobelawadi	10.16(1.41)	11.20(0.84)	3.387**
Garag	9.03(1.49)	11.10(1.06)	6.737**
Mansur	9.16(1.53)	10.90(0.75)	5.222**
Chapter I: Family sanitation			
Uppinbetageri	9.76(1.22)	11.43(0.72)	6.021**
Harobelawadi	10.96(1.35)	11.43(0.81)	1.606NS
Garag	10.03(1.42)	11.26(0.73)	4.306**
Mansur	9.66(1.56)	11.16(0.79)	5.232**
Chapter III: Community sanitation			
Uppinbetageri	9.96(0.85)	10.93(0.73)	5.706**
Harobelawadi	10.33(1.02)	10.96(0.92)	3.159**
Garag	10.16(1.08)	11.10(0.84)	3.558**
Mansur	9.96(0.61)	10.70(0.79)	4.428**
Chapter IV: Environmental sanitation			
Uppinbetageri	9.50(1.28)	11.10(0.88)	5.593**
Harobelawadi	10.13(1.10)	10.93(1.04)	3.449**
Garag	9.46(0.97)	10.60(1.00)	3.954**
Mansur	9.36(1.29)	11.20(0.66)	6.196**
Chapter V: Additional useful information for rural sanitation			
Uppinbetageri	8.60(1.22)	10.93(1.04)	8.694**
Harobelawadi	9.33(1.53)	10.30(1.31)	3.846**
Garag	8.53(0.89)	10.43(1.04)	7.871**
Mansur	8.43(1.40)	10.30(1.02)	5.635**

** indicates of significance of values at P=0.01, respectively; NS= non-significant; Values in parenthesis indicate SD (Standard deviation)

girls and women of all villages was found to be highly significant at 1 per cent level with respect to health. However, in health, knowledge of the respondents of Harobelawadi showed no significant change with respect to family sanitation (Table 3). The study conducted by Nithya Shree and Hiremath (2006) on rural girls supported the findings of the present study.

The results of the study clearly showed the significant impact of distance education in enhancing quality health on rural school dropout girls and women. Hence, distance education has proved to be a very effective mode of education for the people who do not have access to education through formal education system. Similar work related to the present investigation was also carried out by Agarwal (2006); Lai and Pratt (2004); Mason (2000) Mehta and Kalra (2006); Sanyal (2001) and Sharma (2003).

REFERENCES

Agarwal, P. (2006). Higher education in India : the need for a change, Indian Council For Research On International Economic Relations.

Erdos, R.F. (1977). Establishing an institute of teaching by correspondence. Paris, UNESCO.

Jackson, B., Larzelere, R., Clair, L St., Corr, M., Fichter, C. and Egertson, H. (2006). The impact of heads up! Reading on early childhood educators literacy practices and preschool children's

literacy skills. *Early Childhood Res. Quaterly*, **21**: 213-226.

Lai, K.W. and Pratt, K. (2004). Information and communication technology (ICT) in secondary schools: The role of the computer coordinator. *British J. Edu. Technol.*, **35** : 461-475.

Mason, R. (2000). From distance education to online education. *Internet & Higher Edu.*, **3**(1-2) : 63-74.

Mehta, S. and Kalra, M. (2006). Information and communication technologies: A bridge for social equity and sustainable development in India. *Internat. Inform. & Libr. Rev.*, **38**(3) : 147-160.

Nithya Shree, D.A. and Hiremath, S.U. (2006). Impact of distance education on rural girls- An experimental study. *J. Educational Res. & Exten.*, **43**(4): 18-22.

Sanyal, B.C. (2001). New functions of higher education and ICT to achieve education for all. Paper prepared for the Expert Roundtable on University and Technology-for- Literacy and Education Partnership in Developing Countries, International Institute for Educational Planning, UNESCO, September 10 to 12, Paris.

Sharma, R. (2003). Barriers in using technology for education in developing countries. *IEEE* 0-7803-7724-9103.

WEBLOGGRAPHY

Julian, B. and Kirunda, B. (2004). Role of open and distance learning in health education, A case study of masters of public health, distance education program (MPH, DE) of Makerere University. *jbbuye@iace. Mak.ac.ug.bkiruna@musph.ac.ug.*


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