



Use of ICT in build up health awareness among women and adolescent girls in Uttarakhand state (India)

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ABSTRACT

Bharat Ganarajya is one of the oldest civilizations with more than 1.2 billion people and most populous self-governing Socialist Secular Democratic Republic with a Parliamentary system of Government in the world. India is the seventh-largest country by area as well as world's seventh-largest economy and it has achieved socio economic progress during the last 70 years of its independence. The country has become self sufficient in agricultural production and is one of the top industrialized country in the world and emerged as an important regional power. A healthy population can undoubtedly contribute to economic growth and development of a country. India has made considerable progress in many health indicators. Life expectancy at birth has increased, infant mortality and crude death rates have been greatly reduced, diseases such as small pox, polio and guinea worm have been eradicated, and leprosy has been nearly eliminated. In a recent report of India Council of Medical Research (ICMR), titled India: Health of the Nation's States: The India State-Level Disease Burden Initiative (2017), it is observed that the disease burden due to communicable, maternal, neonatal, and nutritional diseases, as measured using Disability adjusted life years (DALYs), dropped from 61 per cent to 33 per cent between 1990 and 2016. In the same period, disease burden from non-communicable diseases increased from 30 per cent to 55 per cent. Importantly, it is a major source of information on various communicable and non-communicable diseases that are not covered under any other major programmes. Information and Communication Technology (ICT) has significant impact on all areas of human activity. Ensuring good nutrition and a healthy lifestyle can contribute significantly to women's health throughout their lives. In India Status of women in terms of education, employment and health is low compared to men. Women of Uttarakhand is perform agricultural practices and contribute a major share of family economy in terms of food grains, oilseeds, vegetables, fruits, milk, wool, fuel, fiber, timber etc. The average sex ratio of the region is low. The literacy status of the women is also lower than their male counterpart. The participation of women in the tertiary sector such as medical, teaching, administrative and other official services is lower than the male population. In this part of Himalaya, excess workloads coupled with inadequate nutritious food have led normal to severe under-nutrition problem among the women. Women of this rural based region are busy since early morning to late night in various household activities. The purpose of this the paper is to find out the use of ICT in building up Health Awareness among Women and adolescent in Uttarakhand state. The present study is based on secondary as well as primary data. This study on the overall demographic traits of women in Uttarakhand is based on Census 2011.

Key words: Uttarakhand, ICT, Women & Adolescent girls Health, Computer, Internet, Smartphone

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INTRODUCTION

India is the seventh-largest country by area as well as world's seventh-largest economy and it has achieved socio economic progress during the last 70 years of its independence. The country has become self sufficient in agricultural production and is one of the top industrialized country in the world and emerged as an important regional power. During the past two decades, India has emerged as one of the fastest growing economies in the world. The progress has made can be attributed to reforms in the financial sector, the collaborative efforts of the corporate and civil society and above all, the role of ICTs and new media technologies in enabling information enabled growth at the bottom of the pyramid. The Government of India has been successful in inducing healthy policy competition among the states which in turn has been able to accelerate the overall development of the country. The progressive policies of

Indian Government such as the National e-Governance Plan (NeGP), Right to Information Act (RTI), Jawaharlal Nehru National Urban Renewal Mission (JNNURM) Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), National Rural Health Mission (NRHM), Sarva Siksha Abhiyaan (SSA) etc. over the past decade have helped the country make significant headway in tapping the potential of ICTs and new media technologies in rapidly progressing towards the achievement of MDGs. These initiatives have resulted in increased communication, interactions and collaboration among the citizen, government agencies, industry and the service providers at various levels. From a global perspective, India accounts for 19 per cent of all live births and 27 per cent of all maternal deaths [1]. Rural women are key actors in solving the major issues on the development agenda for the coming century, including the need to manage the environment in a sustainable manner, control the exploding rate of population and urbanization, food security, human needs with regard to health, education and literacy and in the elimination of poverty. Information technology has a profound effect on education. Digital learning is faster and better than the traditional learning since it integrates multimedia, instructor - led and real - time learning techniques into a facilitated, collaborative learning environment [3-6].

Use of ICTs and new media technologies based upon its own priorities. While the models adopted by the developed countries have their own learning's from which the Indian efforts have surely drawn benefits, the formulation of Indian policies have been based upon cultural and contextual needs of Indian citizen, government agencies, federal structure and the priorities of grassroot communities. In that sense, Indian journey of transformation from the knowledge economy to an inclusive information society is a unique model that may provide insight to other developing countries. Some of the salient features that make Indian journey towards transformation into inclusive information society are: Vibrant ICT industry, Localized policy and deployment models suitable for the needs of a developing country. Centralized planning and decentralized implementation approach, Participative policy formulation marrying top down and bottom up approach, Continuous assessment and performance management The report 'India – Journey from Knowledge Economy to Inclusive Information Society' provides a high-level update and an overview of the progress made by India in transforming itself into inclusive information society as well as progress on WSIS action items.

The main objective of the study was to design and develop nutrition education communication strategy and assess its effectiveness on the nutritional knowledge, and attitudes of rural women. Specific Objectives: 1) to identify existing knowledge about nutrition among rural women and adolescent girls in the study area 2) Pre - testing of nutrition education material developed. 3) To design a communication strategy for enhancing the nutritional knowledge level of the women.

MATERIAL AND METHODS

BACKGROUND INFORMATION

India's maternal mortality rates in rural areas are among the world's highest. Research into women's status in society has found that the health of Indian women is intrinsically linked to their status in society and also the contributions they make to families are often overlooked. Instead, they are often regarded as an economic burden and this view is common in rural areas. The preference for a male child and high dowry costs for a female child results in the mistreatment of daughters. Indeed, Indian women have low levels of both education and formal labor - force participation. Poor health has repercussions not only for women but also for their families. Education takes us away from tradition backwardness, darkness, poverty, misery and overpopulation and directs us towards enlightenment, prosperity and happiness. Education of rural women also assumes great importance to enable them to get the fullest benefit of globalization and it is also of paramount importance for the development of individuality as an instrument for strengthening socially useful skills, habits and attitudes of common citizenship. It is the women who nurture the child and take care of his/her overall development particularly in formative years. Hence, she has to be educated to provide a sound knowledge base for upbringing of the child. The information and communication technology provides us with an opportunity to capture, store and distribute information in the form of text, pictures and illustrations which include multimedia - based simulations of simple and complex processes which are cheaply accessible.

As described by [2] when computer - supported learning is coupled with the limitless connectivity of the Internet, educational opportunities expand beyond the barriers of traditional learning environments. With its low - cost delivery, interactive capabilities and accessibility, provides convenient and affordable opportunities for skills and career growth. Multimedia helps in creating messages that enhance learning, giving direct information without bias, promoting medical decision support and expert advice with tailoring information to age, sex, language, literacy level, ethnic background, socio - economic status, medical history and helps consumers ask better questions and get involved in their nutrition treatment plans.

RESULT AND DISCUSSION

Maximum number of respondents (47.524%) was middle aged. Further, 42.7 per cent respondents were illiterate and another 49.6 per cent of the respondents could only write their name. Formal education was very low in the study area as only 2.9 percent respondents had studied up to primary level. The data pertaining to family type indicates that majority (56.5 per cent) of the respondents belonged to nuclear family and 68.4% were not engaged in paid work outside their homes. Another 30.6% were engaged in labour work along with household chores. This indicates that the individual purchasing power of women is rather low in the area.

Table 1: Distribution of respondent according to different socio personal variable

Sl.No.	Variable	Category	No. of respondents (N = 101)	%	Total
1.	Age	Young (15-25yrs)	22	21.9	101 (100)
		Middle (25-35 yrs)	47	47.5	
		Old (35- 45 yrs)	32	31.6	
2.	Educational	Illiterate (no formal education)	43	42.7	101 (100)
		Only write her name	50	49.6	
		Primary school	3	2.9	
		High school	1	0.99	
		Intermediate	2	1.9	
		Graduate	1	0.99	
		postgraduate	1	0.99	
3.	Family type	Nuclear	57	56.5	101 (100)
		Joint	44	43.5	
4.	Occupation	House wife	69	68.4	101 (100)
		Labor	31	30.6	
		Government service	1	0.99	
5.	Income	Low < Rs 3000/-	26	25.5	101 (100)
		Medium Rs 3001-Rs 6000/-	15	14.05	
		High > Rs 6001/-	1	0.99	
6.	Caste	General	101	100	101 (100)

Table 2: Distribution of respondents according to mass media ownership

Sl. No.	Type of media	No. of households (N = 101)	Percentage
1.	TV	63	62.3
2.	Radio	48	47.5
3	Newspaper	5	4.9
4	Magazine	4	3.9
Total		101	100

Majority of the households (62.3 per cent) owned television followed radio which was owned by 47.5 per cent of the households. Subscription to print media is very low in the study area, with 4.9 per cent buying a newspaper and only 3.9 per cent subscribing a magazine.

Table 3: Distribution of respondent according to information sources (N=101)

S. No.	Type of media	Number of respondents			
		Primary	%	Secondary	%
1.	Radio	49	48.5	2	1.9
2.	TV	61	60.3	-	-
3.	Newspaper	2	1.9	-	-
4	Magazines	2	1.9	-	-
5.	NGO/private agency	-	-	1	0.99
5.	Health/Extension work	7	6.9	69	68.3
6.	KVK	-	-	1	0.99
7.	Anganwadi worker	-	-	83	82.1

(a) Primary sources

Primary sources of information are those which are regularly used by the women when they need information on health. It is evident from the data that electronic mass media and localite sources were primary sources of information for the women. Data also indicates that print media (magazines) served as primary source of information for negligible number (3 %) of women. It also points that print media's role would be minimal as, though five families subscribe to newspapers; their use by the women is negligible.

(b) Secondary sources

Secondary sources of information include those sources which are used occasionally by women for fulfilling her information needs. Important secondary sources of information included anganwadi (82.1%) and health (68.3%) workers of the area. This indicates that group methods involving anganwadi and/or health worker of the village can play a crucial role in disseminating information and changing attitudes

**Table 4: Distribution of respondents according to credibility
(N=101)**

Sl.No.	Media	No of respondents	Percentage
1	Friend/relatives	98	97.0
2	Anganwadi worker	46	45.5
3	Health worker	42	41.5
Total		101	100

It was found that a very high percentage (97%) of women in the study area trusted their friends/relatives concerning health information. It was also found that anganwadi worker (46%) and health worker (42%) enjoyed high credibility when compared top other media, especially cosmopolite and mass media sources. This indicates that while ownership and reach of electronic mass media is high, women believe in information given by local interpersonal sources. Hence the communication strategy has to include interpersonal and group approaches involving these sources.

Table 5: Distribution of the respondents according to frequency of use

Sl. No.	Media	More than once a day	Once in a day	2-3 times in week	Once in a week	Less than once in 15 days
1.	TV	62 (61.3)	-	-	-	-
2.	Radio	46 (45.5)	4 (3.9)	1 (0.99)	-	-
3.	Magazine	-	2 (1.9)	-	-	-
4.	Newspaper	-	2 (1.9)	-	-	-
5.	Health worker /extension worker	-	1 (0.99)	62 (61.3)	13 (12.8)	-
6.	Anganawadi worker	-	-	43 (42.5)	31 (30.6)	9 (8.9)

Note: Figures in the brackets indicate percentage of respondents

An analysis of the media use pattern indicates that maximum number of respondents are exposed to television (61.3%) and radio (45.5%) more than once a day. On the other hand, data reveals that most of the respondents rarely read newspapers and magazines. High frequency of exposure of respondents to the electronic mass media indicates that they can be especially used for awareness generation and information dissemination at the early stages in the communication strategy. It is also important to note that a very high percentage of women interacted with the health worker (61.3%) and anganwadi worker (42.5%) more than once a week.

Table 6: Distribution of respondent according to purpose of utilizing following media

Sl.No.	Mass media	Information	Entertainment	Education
1.	TV	5 (4.9)	53 (52.4)	4 (3.9)
2.	Radio	-	50 (49.5)	1 (0.99)
3.	Magazine	-	1 (0.99)	1 (0.99)
4.	Newspaper	2 (1.9)	-	-

Table No. 6 reveals that majority of respondents attended to T.V (52.4%) and radio (49.5%) for the entertainment and only 4.9% of the respondents used T.V for gathering information. Data analysis indicates that while electronic mass media will constitute an important part of the communication strategy, the format used in these media has to be entertainment oriented, for example, docu-drama or drama.

On the basis of findings it is imperative that most pregnant women complained of having a problem with their eating habits, especially during the early months of their pregnancy. Weakness was associated with pregnancy. Cooking in most (73.3%) households was done in steel utensils and only 19.8% reported using iron utensils for cooking which increases iron content in the diet. The communication strategy was based on the information gaps on nutrition education among the women which were gathered by assessing their existing knowledge level on the subject. It was decided to incorporate a variety of localite interpersonal sources and mass media based on the communication characteristics of the women in the study area. Depending upon the characteristics of the selected medium, the strategy specifies the topic, target audience, medium, function, content, frequency, time, duration and venue in each case. Further, the strategy has been divided into two distinct categories based on the approach/ method used, viz; group and mass methods.

Interpersonal approach has not been included due to high number of target population and paucity of resources. The study indicates low nutrition education among women in the study area. It is clear from the fact that very few of them had information about Nutrition deficiency, its causes, symptoms, consequences and sources of iron rich food. Low nutrition education explains the poor intake of iron rich food, especially green vegetables among women, even though they are available in plenty in the village. This is further compounded by irregular visits of health and anganwadi workers for nutrition education. Their contribution is hindered by lack of communication and other infrastructural facilities. There was minimal use of group contact method for educating women, who preferred by the women for the dissemination of the health and nutrition messages. All this points towards a need for well thought out and intensive communication campaign involving women, community, health department and nutrition experts, to control Nutrition Deficiency in the study area.

CONCLUSION

The findings of study and relevant discussion are presented under the following sections in accordance with the objectives set for the study.

1. Socio-economic and communication characteristics of the respondents.
2. Knowledge level of the women related to Nutrition Deficiency.
3. Designing a communication strategy for controlling Nutrition Deficiency.

1) Implication of the study

The following implications derived on the basis of the results of the study.

- 1) A communication strategy needs to be designed and implemented for disseminating nutrition information to rural illiterate women.
- 2) Anganwadi workers should use group method and interpersonal methods, if possible, for dissemination of the health and nutrition messages.
- 3) There is a need to enhance community participation for effective delivery of health and nutrition messages. NGOs can be involved for community mobilization and action.

2) Suggestions for future research

- 1) There is need to identify training needs of anganwadi workers in imparting basic health and nutrition education to respondents.
- 2) The investigation was limited to only Udham Singh Nagar district of Uttarakhand. Future investigations may be taken up in a larger area. This will help to draw some general conclusions

about the knowledge level of women towards iron deficiency anaemia and provide information for drawing up a comprehensive community strategy.

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