

INFORMATION LITERACY, HEALTH CARE SERVICES AND DIGITAL INFORMATION SYSTEM: A PLAN FOR TRIBAL DEVELOPMENT IN NORTHEAST INDIA

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Abstract: The paper introduces with the concept of Health Literacy. Community Information Service also discussed as a central theme of the paper. The relation between Community Information Service and Health Literacy is inseparable for building a better nation. It throws light on Community Information Service through Public Libraries. Public Library System in India has been narrated in brief. The paper unfolds the various facets related to health care system of Karbi which is in existence in a tribal dominant area through an Anthropological investigation. On the basis of survey, it suggests a plan for better deployment of information related to health A) Central government should set up village information kiosk for every village which will be available through local language of that region. By the directives of the centre government it should be mandatory for all the medical practitioner that the prescription of doctor should be legible to the patient and it should be in either in English or in local language, for this an interpreter to be appointed in Government hospital with a degree in Library and Information Science. The Ministry of Health along with other bodies such as AYUSH, National Health Mission should consider village healer known as doctor specially in tribal areas of North East India as one of the key informant while developing health literacy plan for that particular region/state etc. The undertaking form of a hospital or used in laboratory should also be interpreted and recorded both audio and video before doing any investigation and operation for record of the patient. A central database of all the patient should be made with investigation made and so on. Online help should be provided through out the country for second opinion for any specific treatment if patient desires so. B) At Education Level, the Community

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Information and Health Literacy to be incorporated as a part of National Literacy Mission. Secondly, for the Higher Education Level (i.e. University and Colleges) should have a curriculum both in graduate and Master's programme. The government of India should provide scholarship to do research in the field of Health Literacy as a special drive to cater the need of the community on priority. Thirdly, a module to be developed right from primary level to 10th standard to make them understand the minimum health requirement their own and for the society. C) The development of infrastructure for public libraries and with inclusion of village libraries for North East India with Internet connectivity and PCs etc. Training of Library and Information Professionals for Community Information Service and Health Literacy D) Finally , it projects an outcome of health literacy drive of a particular village, as a specimen of health literacy to be developed with consideration of local alternatives medicine available with no cost involvement. Concludes with a note that Health Literacy as part of Community Information Service to be given utmost priority for overall growth of the nation with the cooperation from various sections of the people including government, private, organization, institutions etc.

Key words: Health Literacy, Community Information Service, Public Library, Information kiosk, village library.

INTRODUCTION

The advancement of science and technology has made this world rich in many folds. This is possible because of explosion of information in almost all the field. This also result division amongst the various sections of the society. This created information have and have not in the society. This is prominent in developing society than that of developed nations. But in today's parlance information is very much important for survival in the society, this envisage further that a country is more powerful which is rich with information. Where as WSIS, ITU, and United Nations are committed to give access to information for all sections of the society.

In India, the access of information for the certain section is limited, amongst all the sections, the tribal society of India and North east India in particular, 91% of tribal population are living in villages. There is lack of mechanism for deployment of information to this section of people.

Health information is another aspect responsible for building a nation as good health lead to good life. WHO in this regard

committed that by 2015 every one on this earth should have access to Health Information known as Health Information for All (HIFA-2015). But in India, health information literacy is growing in its own way, there is need for formal health literacy awareness programme through designated agencies/organization/institutions etc.

HEALTH INFORMATION AND HEALTH INFORMATION LITERACY

Health literacy is the ability to obtain, read, understand and use healthcare information to make appropriate health decisions and follow instructions for treatment. There are multiple definitions of health literacy, in part, because health literacy involves both the context (or setting) in which health literacy demands are made (e.g., health care, media, internet or fitness facility) and the skills that people bring to that situation (Rudd, Moeykens, & Colton, 1999).[3] Studies reveal that up to half of patients cannot understand basic healthcare information. Low health literacy reduces the success of treatment and increases the risk of medical error. Various interventions, such as simplified information and illustrations, avoiding jargon, “teach back” methods and encouraging patients questions, have improved health behaviors in persons with low health literacy. Health literacy is of continued and increasing concern for health professionals, as it is a primary factor behind health disparities. The proportion of adults aged 18 and over in the U.S., in the year 2010, who reported that their health care providers always explained things so they could understand them was about 60.6%. This number increased 1% from 2007 to 2010.[4] The Healthy People 2020 initiative of the United States Department of Health and Human Services has included it as a pressing new topic, with objectives for addressing it in the decade to come.[5]

COMMUNITY INFORMATION AND COMMUNITY INFORMATION SERVICE

Community Information (CI) is the information for the survival and growth of the community or it is that information which is required by the member of the community to make effective use of the available resources around them. In this context it is noteworthy to

mention as stated by Kempson has rightly defined CI as “information of self-reliance and self-determination”. [6] Thus CI is that information which helps to solve their day to day problems related to survival such as health, education, housing, legal protection, sound economic development, political rights etc and also to participate in social, political, cultural, legal and economic progress of the society either individually or collectively.

The information services through which community information (CI) is provided to communities is called Community Information Service (CIS).

RELATION BETWEEN COMMUNITY INFORMATION SERVICE AND HEALTH INFORMATION

Health Information is one of the main aspects of Community Information Service through which health of the people in that particular community can be addressed. As the complexities of health problem has gone up enormously since last decade it is very much impertinent to make a mandatory part of community information service for the villages specially where there is no proper medical facilities like cities/towns. The information which is pertinent to local/regional health to be given for care and precautions. Further, in villages where the economic condition is not sufficient enough to provide treatment in a private hospital or so. Under this circumstances a proper health information literacy through Community Information Service may bring a healthy environment towards better care of health.

COMMUNITY INFORMATION SERVICE AND PUBLIC LIBRARIES (PUBLIC INFORMATION CENTRES)

Public Library is the library for the people, for the community or for the common mass. It is known as Peoples University. This library has started functioning in different ways and in different mode to record the happenings of the past in different format nay it be clay tablet to the modern days tablet, print materials to non-print materials. Later on this library turned into a treasure of knowledge and become the custodian of information of the human race.

UNESCO (1972) states that the “public library must offer to adults and children the opportunity to keep in touch with their times, to educate themselves continuously and to keep abreast of progress in sciences and arts. Its contents should be a living demonstration of the evaluation of knowledge and culture, constantly reviewed, kept up-to-date and attractively presented. In this way it will help people from their own opinions, and develop their creative and critical capacities and powers of appreciation. The public is concerned with the communication of information and ideas, whatever the form in which these may be expressed.” The task of public library to solve the social problem including education, health, hygiene, etc. for development of community or society and nation is very crucial and important. Here it can be mentioned that the Public library is providing in one way Community Information Service to the community. The New York Public Library with its each branch has current information on local community and city-wide services through which People can find information about community groups, consumer and educational organizations, health and social service agencies and religious, recreational and cultural institutions.

PUBLIC LIBRARY SYSTEM IN INDIA- AN OVERVIEW

Public Libraries in India

Public libraries in India is spread all over the countries, consist of state central libraries in every state, district libraries, urban public libraries at the cities and rural public libraries at the villages. Public libraries are mainly supported by state governments and local authorities, and some times by the central government, developmental agencies, nongovernment organizations and private trusts. The Delhi Public Library (DPL), established in 1951 by government of India in collaboration with UNESCO, caters library and information services to the National Capital Territory of Delhi. It has 176 service points spreads over five regions and consists of branch libraries, sub-branches, community libraries resettlement colony libraries, reading rooms, mobile library points, Braille library and deposit stations. The DPL is a recipient of books published in

India as per the provision in the Delivery of Books and Newspapers (Public Libraries) Act, 1954. The DPL has collections about 2 million books and other documents. Raja Rammohun Roy Library Foundation (RRRLF) is the nodal agency of the Government of India to support public library services and system and promote public library movement in the country. The RRRLF undertakes different functions in each state and union territory through a State Library Planning Committee (SLPC) or State Library Committee (SLC). Its headquarter is located at Kolkata and it has four zonal offices in Kolkata, Delhi, Mumbai and Chennai. RRRLF provides financial and technical assistance to public libraries and organisations engaged in the promotion of public library development through different schemes. Schemes of RRRLF broadly categorized as Matching Schemes and Non- Matching Schemes. Assistance under matching schemes is given from the resources shared on 50:50 matching basis with the state governments. Assistance under non matching schemes does not have share of the state governments. Table 1 shows the number of different public libraries in India which also indicates that there is lack of existence of public libraries in some villages even after 60 years of independence. The Public Library penetration has been given in following table:

Table 1
Public Library system in India

<i>Demography of India</i>	<i>Number</i>	<i>Public Libraries*</i>	<i>Number</i>	<i>Percentage covered</i>
States and Union Territories	35	State Central Libraries	28	80%
Districts	592	District Libraries	451	76%
Talukas	3,987	Taluka Libraries	501	12.5%
Villages	587,226	Rural Libraries	28,820	4.9%

*Source: *Ghosh, 2005 [8]*

PUBLIC LIBRARIES IN NORTH EASTERN STATES

In the North Eastern states of India, only two states i.e. Manipur and Mizoram have the library act which even yet to implement,

other states are yet to enact library acts. Public Library system in the North Eastern States has always been given less important by the concerned Governments. Public library system of North Eastern States other than Assam state has been given in a table below:

Table 2
Public Library System in North Eastern States

<i>State</i>	<i>Central District</i>	<i>Sub-Divisional</i>	<i>Block</i>	<i>Circle</i>	<i>Rural</i>	<i>Branch</i>	<i>NGO Library with RRRLF Grant</i>	<i>Total</i>	
Arunachal Pradesh	1	12	13	18	38	-	-	84	166
Manipur	1	6	-	-	-	-	1	120	128
Meghalaya	1	7	-	-	-	-	-	15	23
Mizoram	1	5	-	-	-	-	-	410	416
Nagaland	1	7	-	-	-	-	-	244	252
Sikkim	1	3	-	-	-	-	-	159	163
Tripura	1	3	7	10	-	2	-	100	123
Total	7	43	20	28	38	2	1	1132	1271

Source: Brahma, Sangrang, 2011[9]

PUBLIC LIBRARIES IN ASSAM

The Directorate of Library Service, Assam was formed in the year 1984 under the Ministry of Cultural Affairs Department, Govt. of Assam, to improve, supervision and control with better administration of Library system in the state of Assam. The total number of libraries of different level has been given in a table below:

Table 3
Public Library System: Assam

<i>Directorate of Library Service</i>	<i>District</i>	<i>Sub-Divisional</i>	<i>Branch</i>	<i>Rural</i>
01	23	14	04	204*

* 200 in plain areas and 04 in hill areas. [10]

AN INVESTIGATION OF VILLAGES (TRIBAL DOMINANT) IN ASSAM

Area of the Survey

The Karbi Anglong District is situated in the central part of Assam in India. The district with dense tropical forest covered hills and flat plains. The population of the district is predominantly tribal. Karbis are the indigenous community of the said region. According to Census 2011, there were total 421,156 Karbi people among whom the male and female population was 212,996 and 208,160 respectively. It has the total geographical area of 10,434 sq. K.M.s. It mostly consists of undulating and hilly terrain with numerous rivers and streams. The district can be broadly divided into two physiographic units viz. hills and plains. About 85 percent of the district is covered by the hills. As per the State of Forest report 1999 of Forest Survey of India, Dehradun, 6044 sq. Km of the district are under dense forest cover while 2776 sq. km are under open forest cover. According to the Forest report of 2011 total 152945.852 hectre of land in the district are forest covered.

However according to the data available in the Office of Karbi Anglong Autonomous Council, in the studied district rapid deforestation and environmental degradation could be noticed during the recent period. This can be represented through the following table-

The study was conducted among 300 families with a total population of 1653. Among them there were 852 males and 801 females. The study was conducted under the UGC funded project.

Public Library system: There is no public library concept in this villages, however, for dissemination of information the earlier method such discussion in the panchayat level and then in block level takes places. Only one District Library in Diphu to cater the need of the people, however, no extension service or any community information service is not reported. Community Information Centre are not functional as on date.

Health Care system: For general health care they use their indigenous medicine. For child birth and mother care during

Table 4
Forest area in the District of Karbi Anglong, Assam

<i>Year</i>	<i>East Karbi Anglong (In Hectre)</i>	<i>West Karbi Anglong (In Hectre)</i>	<i>Toatl Forest Area (In Hectre)</i>
1994	1,11,855	1,02,64	122,119
1997	4,37,37	1,00,57	53,794
1999	7,27,20	89,372	162,092
2002	4,80,42	85,654	133,696
2003	4,80,48	82,087	130,135
2004	4,37,37	79,654	123,391
2005	4,35,34	76,532	120,066
2006	4,29,24	75,324	118,248
2011	4,19,12	72,865	114,777
2013	4,16,12	70,765	102,377

Source: Official record of Karbi Anglong Autonomous Council, 2014.[11]

pregnancy they do visit village PHC, however, 80% of the population during child birth they take the help of elderly village nurse. It is to be mentioned here that, in the studied area there were a number of medicinal plants and the concerned people had adequate knowledge about their utilization. Such plants and their medicinal properties had provided the scope to the concerned people for their ailment related with a number of ill health condition. It is to be mentioned here that some instances of the utilization of the medicinal plants like leaves of *Bap kaen* plants collected and washed with water. It was then squashed and the juice was used as coagulant of blood physical portion is met with any injury and also sometimes during malaria and belly ache. The leaves of *Thui ang* and *Thui ache* were washed and then squashed. The juice was then used as antidote during snake bite which is believed to prevent the spread of the poison through the blood. For this purpose they also used the extract of honey comb known as *Joram*. The leaf extract of *Thui ang* and *Thui ache* were also utilized for the treatment of dog bite. During the period of recovery there food taboo related with spice, turmeric and garlic. The fruit of Prampri and Pramso plants were utilized for

the remedy of cold and cough. Again their leaves were mixed together, grinded and the extract or juice was drunk to prevent the skin rash. Apart from these stomach ache and dysentery were a few other major health problems of the concerned people. For its ailment they used to mix the leaves of lemon and guava. Further it was grinded and consumed by them. So they had the scope and knowledge to utilize the local resources and medicinal plants for the ailment of a number of health problems which were a common occurrence. Besides them the concerned people utilized some wild varieties of plants, both as vegetables and indigenous medicinal resources in their daily livelihood. There are 57 variety of vegetable, plants, shrubs, herbs etc are used as medicine and 19 variety of fishes for different ailments.

They do not have concept of modern method of sanitization and hygiene.

A study shows that the medicine which were prescribed by the Doctor not understandable to them, they do not know the name of the medicine, the use and frequency intervals as instructed etc.

The villagers who were undergone operation in hospital they exactly do not know what for their operation took place and moreover they do not any evidence as report such as X-ray, blood report etc. with them which were retained by the Government hospital.

The information as floated by the Government both Centre and State for the community with regard to sanitation, child birth, early marriage, mother care during pregnancy are not sufficiently reaches to these area owing to less digital access not even through TV. The scheme related to Health for the mother and child are not covered in such villages.

THE PLAN FRAMEWORK

In this section a plan has been laid out on the basis of the survey made and literature review on Health Literacy for the villages of India specially for the North eastern states of India.

Plan- 1: At Government Level

- (a) **Central:** In make health information available to every nook and corner of the nation, the central government should set up village information kiosk for every village which will be available through local language of that region. The staff of library/information centre will be held responsible to disseminate information as and when required for the community of that locality to help the community to access that information related to health. The public libraries of that region will act as nodal agency for deployment of the information.

The Ministry of Health along with other bodies such as AYUSH, National Health Mission should consider village healer known as doctor specially in tribal areas of North East India as one of the informant while developing health literacy plan for that particular region/state etc.

By the directives of the centre government it should be mandatory for all the medical practitioner that the prescription of doctor should be legible to the patient and it should be in either in English or in local language, for this an interpreter to be appointed in Government hospital with a degree in Library and Information Science.

The undertaking form which is used in hospital or in laboratory should also be interpreted and recorded both audio and video before doing any investigation and operation. A central database of all the patient should be made with investigation made and so on. Online help should be provided through out the country for second opinion for any specific treatment if patient desires so.

- b) **State:** The state government should ensure the national policy on health and health literacy should be in place for every village. The village healer should be encouraged to help the Government, NGOs and other such designated agencies to develop a proper plan suitable for that region.

Plan-2: At Educational Level

Community Information and Health Literacy to be incorporated as a part of National Literacy Mission.

Secondly, for the Higher Education Level (i.e. University and Colleges) should have a curriculum both in graduate and Master's programme. The government of India should provide scholarship to do research in the field of Health Literacy as a special drive to cater the need of the community on priority.

Thirdly, a module to be developed right from primary level to 10th standard to make them understand the minimum health requirement their own and for the society.

Plan-3: Infrastructural level

Right now, the condition of public library in the region specially in north east India is to be upgraded with modern equipment such as PC, with broadband connection, a digital display board (movable/ portable), digital storage and a server for district library in every district the same will connected with all the block and villages information kiosk.

The library staff/information personnel to be trained to disseminate health information in consultation with Doctors of that locality even the village healers etc. The library staff should do the job of educating health matter as part of their basic role for nation building with god health.

PUBLIC LIBRARY AND DIGITAL INFORMATION CENTRE INVOLVEMENT

All the public libraries of the country should be networked for the cause of Health Literacy along with Information Literacy (as a modified version of general Literacy) in association with National Literacy Mission, various schemes related to health as prepared by the Central government and state government. All the libraries should have one separate section for this literacy drive. These professional will reach to cater the community information in their areas, which will be known as Community Information Service or Digital information Centre.

An association may be formed by the Health workers, doctors, librarians, information professional, villager healers to address the specific to general need of the people with respect to health awareness of the nation for this region as well for the nation. Social media facebook, twitter, whatsapp etc. can be utilized to have better network amongst all the librarians of the nation, further the same can also be interactive with other stakeholders.

SPECIMEN OF HEALTH LITERACY PLAN

As a specimen in order to test Health Literacy, a plan was developed and executed in a village called Pholongso (8 kms away from the Diphu Town of Karbi Anglong district of Assam.

On investigation it is found that the two diseases are very common one is Malaria and other is Jaundice. Accordingly, a plan to take care of these diseases with the herbs which are available in and around.

THE POSSIBLE OUTCOME

Outcome 1: After three weeks , an interview was conducted, and it is very worth mentionable that the villagers has started using this vegetables against the Malaria Fever, which is very common in this region, 12 persons got affected in a particular village. Out of 12 , 11 had recovered with traditional medicines i.e. Vorke Abap, 1 had loose motion and fever recovered with Pharchingki and fish called Kumchirui.

Outcome 2: Jaundice is another disease which is very common, as a protective measure the villagers started using vegetable called Bapduli. It is not known the percentage of Bilurubin but their condition improved and even person having chronic jaundice disease developed urge for food more than before taking Bapduli.

The health literacy drive to be made very specific so that it yield mere generalization may not yield effective result, so proper monitoring on execution and result to be taken into consideration while developing such plan.

CONCLUDING REMARKS

The Health Literacy is mandatory in the society for empowerment of oneself and for the society as well since the complexities of health is creasing due to various reasons. Amongst these use of pesticides in various harvesting procedures, synthetic materials in food and beverages etc.. The behaviors and change pattern of day to day life is also equally responsible for various ailment including gesture and posture.

The overall growth of the nation is possible if villages are given utmost priority in terms of dissemination of community information with special emphasis to health. The various helath schemes, information as precaution are to be deployed with care. The simple villages may understand in different way for various advertisement which also need to look into.

The community information services with health literacy through public libraries for the country specially for villages of north east India can be made with cooperation and initiative of various agencies, organization, institutions both Government and Private

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