

**Role of newspapers in health awareness of water borne diseases
(With special reference to arsenicosis)**

Kamal Kishore Upadhyay
PhD Scholar,
Assam University, Silchar
Upadhyaykamal17@gmail.com

Dr. Partha Sarkar
Assistant Professor
Assam University, Silchar
parthasarkarsil@gmail.com

Abstract

Among various types water pollution, arsenic polluted water also exists. This pollution is nature generated water pollution. This pollution occurs due to excessive quantity of arsenic in the water source. The quantity of arsenic in this water is hundreds of times more than the standard. According to local newspapers about 100 people have lost their lives by drinking arsenic water during last ten years. 310 villages of Ballia are grip of arsenic. According to the World Health Organization, water should contain only 10 ppb (billion in parts) of arsenic, but in Ballia it has crossed the 500 ppb level. Scientists believe that due to excessive exploitation of ground water, arsenic contained water comes out. In this studies, the general nature of health news coverage in newspapers published from Ballia and health awareness news covered by print media have been studied. For this study, the content analysis of two newspapers with the highest circulation of Ballia has been done. March-April 2017 newspapers have been selected through systematic demonstration method.

Key Words – Health awareness, Media, Water born diseases, Arsenicosis

Introduction

Water is life, but today due to water pollution, this water is becoming poison. The cause of water pollution is human, but somewhat it is a natural too. One of the different types of water pollution is arsenic polluted water. This pollution is nature borne water pollution. It is caused due to excessive arsenic in the water source. Along with various countries of the world, many states of India, Uttar Pradesh, Bihar, Jharkhand, West Bengal as well as many states of the northeast are sorely affected by this. On the basis of two UNICEF reports in Uttar Pradesh, it has been reported that 20 districts of Uttar Pradesh are affected by arsenic and there are 31 districts where the possibility of arsenic has been expressed. Ballia is also among these twenty districts.

Ballia, the eastern district of Uttar Pradesh, situated between the two rivers Ganges and Ghaghra, was once known on the world stage for its contribution in the independence of the country, Maharishi Bhrigu's penance place and Hazari Prasad Dwivedi's literary contribution, but today its identity has been changed. Now a days, Ballia is worldwide famous for arsenic polluted water. The amount of arsenic in water is hundreds times more than the standard here. According to India Water Portal and local newspapers about 100 people have lost their lives by drinking arsenic water during last ten years. 310 villages of Ballia are in the grip of arsenic. According to the World Health Organization, water should contain only 10 ppb

(billion in parts) of arsenic, but in Ballia it has crossed the limit of 500 ppb level. Scientists believe that due to excessive exploitation of ground water, the borewells are spewing arsenic here. An investigation by Jadavpur University's School of Environment Studies (SES) found that groundwater in Varanasi, Allahabad and Kanpur has also been hit by arsenic. Arsenic levels have reached 707 ppb at Lailapur Kalan in Allahabad and presence of 316 ppb at Shuklaganj in Unnao, adjoining Kanpur. That is, the whole state is moving towards serious diseases like arsenicosis, caritosis, lung, skin, and kidney and bladder cancer due to arsenic. Soil of Ballia, is very fertile due to being situated between two rivers. But due to lack of proper distribution of water for irrigation in the fields, people exploited ground water in uncontrolled way. Due to extreme exploitation of water, arsenic started to come out from ground water. Scientists believe that Ganga has brought arsenic in it's bottom from Himalayas. Human settled in the areas where Ganga changed its way. Now a days, these ghetto are most arsenic effected. Not only India, many more countries of the world are polluted from arsenic. Most of these aquifers have been found in vast areas of Bangladesh, Taiwan and North China. Asian countries like Laos, Cambodia, Myanmar, Pakistan, Nepal and Vietnam are affected by this. Hungary, Mexico, USA, Chile and Argentina are the other countries from where significant reports of groundwater contamination due to arsenic have been found.

Diseases caused by arsenic - Due to drinking arsenic affected water, people can suffer skin diseases, black white spots, palm roughness and hardening, wounds etc. as well as cancer of various parts of body, including skin cancer. The entire state is moving towards serious diseases like arsenicosis, caritosis, lung, skin, kidney and bladder cancer. Arsenic caused disease is called arsenicosis. There is no proper and enough system for the treatment of arsenicosis in the district. People are dependent on community health centers and district hospitals. But the condition of these institutions is that due to lack of resources, treatment of common diseases is even not possible here.

Government efforts for availability of arsenic-free water - There are a total of 1830 villages in 17 development blocks of district Ballia, among which there are a total of 5132 habitations. Out of these, arsenic content in India Marka-2 hand pumps installed in 310 settlements has been found to be more than 50 ppb.

Blockwise number of settlements is as follows

	Name of Block	Number of Arsenic Affected Villages	Total number of hand pumps installed in arsenic affected villages	Number of hand pumps with arsenic detected from the total hand pumps installed	The amount of arsenic found in the installed hand pump
1	2	3	4	5	6
1	Belahari	31	411	193	60-500
2	Bariyan	68	715	237	60-150

3	Murli Chhapra	40	417	129	60-140
4	Reoti	70	437	276	60-140
5	Hanumanganj	7	76	10	60-90
6	Sohaon	10	138	22	60- 100
7	Maniar	19	143	59	60-140
8	Bansdih	10	46	31	60-140
9	Sear	4	20	6	60-145
10	Nawa nagar	3	24	3	60-80
11	Chlkahar	1	4	1	60
12	Dubhan	47	481	160	60-110
	Total	310	2912	1127	

Details of works being done to supply pure drinking water in arsenic affected settlements of district Ballia (31-07-201)

221 habitations have been benefited from 66 piped drinking water schemes based on additional deep tube wells. Construction of 17 piped drinking water schemes based on additional deep tube wells is in progress to benefit 29 habitations. Out of the remaining 60, 51 are included in the 20 pipe drinking water scheme approved under World Bank Batch-2. And pipe drinking water schemes have been considered for 9 ghettos. Arsenic removal plants with 364 India Marka-2 hand pumps and ARUs based on 30 solar have also been installed in 310 arsenic affected habitations.

Awareness –The government has neither any plan nor any delineation for making people aware .Newspapers are the only source to gather information about it. When we see the status of drinking water investigation, then come to know that , apart from the District Testing Center, there is no provision of Arsenic testing in water anywhere else.

Prevention remedies - Scientists believe that it is very important to make people aware for a permanent solution. People can get rid of it only by storing rainwater. For this, renovation of ponds and making new ponds will be an important step. When we start harvesting rainwater, our dependence will be reduced by exploitation of ground water. Second important solution is that People should start using well water again because arsenic is not found in the well water, due to continuous oxidation in the wells, the amount of arsenic does not increase in the water. This step depends entirely on the strong will of the people. By ignoring these natural solutions, we are becoming dependent on the filter and pipeline supply water. This is completely wrong. All other ways are immediate and will only increase the problem rather than reducing the problem in the long run.

Objectives of research-

The objectives of the study are as follows:

- To study the general nature of health news coverage,
- To study the news of arsenicosis in health awareness news covered by print media.

Research question-

Are newspapers producing enough material related to arsenic poisoning to create awareness among the people?

Literature review

1. Arsenic Poisoning of Water Rajya Sabha TV Special Report (14 August 2015) Study
2. Study of the September 2004 issue of 'Down to Earth' magazine based on arsenic
3. Study of an article posted on the India Water Portal titled "Arsenic poisoning in the waters of Uttar Pradesh" (17 March 2017)
4. India's 154th Rank in Health Services' (program aired on 20 May 2017 on ABP News)

Research methodology-

Descriptive method has been used in the presented research study. Under this, content analysis technique has been adopted for data compilation. Primary and secondary data have been used in the study. Selection of the content has been analyzed by selecting two-month pages of dailies (Dainik Jagran and Hindustan) under systematic sampling. In the presented research paper, both qualitative and Quantitative analysis has been done.

Content analysis-

The subject of the study is Content analysis of newspapers published from Ballia as per the objective for the study "Role of newspapers in awareness of water borne diseases with special reference to Arsenicosis ". In which health related news has been studied on the basis of the location (column inch), page number, location in the page, photo etc. published in the newspapers.

Under qualitative analysis, what is the effect of news and how to understand the metaphysics of news has been analyzed. In this chapter, more emphasis is given on calculative values and what is the headline of the published news, how it has been written and how it has been presented and what effect it has on the readership is presented in a qualitative manner.

In this chapter, both type of qualitative and quantitative analysis has been done. Under the quantitative analysis, news number, column number, variety of content, area, presentation of content etc. have been made. As well as data presentation has been done through graphs and table, which is also presented through qualitative analysis. Following is the type of data analyzed in the presented chapter-

- 1 Quantitative content analysis of the contents of selected newspapers
- 2 Qualitative content analysis of the content of selected newspapers

Quantitative content analysis of the contents of selected newspapers

Description of Hindustan newspaper in front page, local page, regional page, national and International page, Economic page, sports page and moving page

1 Home page	$33 \times 52 = 1716 \text{ cm}^2$
4 National Page / Country-Foreign Page	$33 \times 56 = 1848 \text{ cm}^2$
2 local pages	$33 \times 56 = 1848 \text{ cm}^2$
3 Regional page	$33 \times 56 = 1848 \text{ cm}^2$
5 Economic Page	$33 \times 56 = 1848 \text{ cm}^2$
6 Sports Page	$33 \times 56 = 1848 \text{ cm}^2$
7 moving page	$33 \times 56 = 1848 \text{ cm}^2$

Details in Dainik Jagran newspaper: First page, local page, regional page, economic page, sports page, national / international page and special page

1 Home page	33 x 52 = 1716 cm ²
4 National Page / Country-Foreign Page	33 x 56 = 1848 cm ²
2 local pages	33 x 56 = 1848 cm ²
3 Regional page	33 x 56 = 1848 cm ²
5 Meaning Page	33 x 56 = 1848 cm ²
6 Khale Page	33 x 56 = 1848 cm ²
7 moving page	33 x 56 = 1848 cm ²

1-Page Classification of health-related news content in selected newspapers (based on the number of news reports): March to April 2017

Month	The most Circulated newspapers of Ballia edition	
	Hindustan	Dainik Jagran
March + April	35	30

This table presents publication of health related news according to their number in the most read newspapers of Ballia (Hindustan, Dainik jagran). It is clear from the analysis that health related news was published in all newspapers in March and April 2017 and analysis of the data shows that Hindustan newspaper has published more than 5 news stories from Dainik Jagran.

2 . The number of news published in selected newspapers and their comparative study on all pages including health news

Dainik Jagran							
First Page	Local page	Regional Page	Economic Page	Sports Page	National / International Page	Special page Health	No of Health News
105	426	299	179	127	293	5	30

In the present table, the most read s daily newspaper Dainik Jagran of Ballia edition shows the total news published on all pages and the publication of total health-related news reports in two months. It is clear from the analysis that March and April 2017 health related news was published much less than other news and analysis of data shows that Dainik Jagran newspaper has reported the most local pages on the other side. On the regional page is the place of published news, while in the third place ,the news published on the national and international page. It is a place. After that there are Economy page and Sports page respectively.

3. The number of news published in the selected newspaper on all pages including health news and their comparative study

Hindustan							
First Page	Local page	Regional Page	Economic Page	Sports Page	National / International Page	Chalte Chalte Page	No of Health News
160	579	529	113	254	398	42	35

In the present table, based on their number, the total news published on all pages in the Hindi Hindustan, the most read newspaper of the Ballia edition, and the total health-related news in two months. It is clear from the analysis that March and April 2017 health related news was published much less than other news and analysis of the data shows that Hindustan newspaper has reported the news on the most local pages, while in the second place News published on the regional page is ranked, while in the third place the news published on the national and international page. After that , place of local news is exists. While, on third priority, national and international news has taken place. After that, Economic page and Sports pages are respectively.

4. Number of photographs published in selected newspaper on all pages and their comparative study

Hindustan							
First Page	Local page	Regional Page	Economic Page	Sports Page	National / International Page	Chalte Chalte Page	Chalte Chalte
58	247	123	20	126	525	16	

In the present table , the publication of the total photographs published on all pages in daily Hindi Hindustan, the most read selected newspaper of Ballia edition, is displayed on the basis of their number. It is clear from the analysis that in March and April 2017, a total of 1115 photographs have been published on various pages. An analysis of the data shows that Hindustan newspaper has placed the photos on the most national international pages, while in the second place is the location of the photographs published on the local page, while in the third place is the location of the photo published on the sports and regional page. . After that, the economic page and “chalet chalet” pages are respectively.

5. The number of photographs published in selected newspapers on all pages and their comparative study

दैनिक जागरण						
First Page	Local page	Regional Page	Economic Page	Sports Page	National / International Page	Special page
30	158	82	55	70	65	4

The table presents the publication of the total number of photographs published on all pages in Dainik Jagran, the most read newspaper of the Ballia edition, based on their number. It is clear from the analysis that a total of 465 photographs have been published on different pages in March and April 2017. Analysis of the data shows that the Dainik Jagran newspaper has placed the pictures on the most local pages, while the second place has the location of the photographs published on the regional page, while in the third place the sports and then on the national / international page. After that, there are first page and special page respectively.

2. Qualitative content analysis of the content of selected newspapers –

When we talk about the newspapers of Ballia edition, here comes Dainik Jagran, Hindustan, Amar Ujala, Rashtriya Sahara, Today, Janasandesh Times printed and published from Banaras. Apart from this, many daily, weekly and monthly local newspapers are published.

Dainik Jagran and Hindustan newspaper are the most read newspapers in Ballia. This is the reason that they have been selected for content analysis. In the remote areas of Ballia, where the newspaper reaches at the evening, people eagerly wait for the newspaper. For the people here, newspaper is the only medium through which the local news of Ballia district reaches to the common people. TV and radio do not focus on local news, but only broadcast news at state level and national and international level. Their debate issues are national. The local issues on their canvas are minimal. But in newspapers every day, every kind of news is focused on the National International Sports Economic Literary Editorial, local news as well as the basic problems here.

These problems are related to education, roads, transport, infrastructure, security, water, electricity as well as health.

In an analysis of the newspapers of March, April 2017, it was found that most of the newspapers, whether it was Hindustan or Dainik Jagran, did use to publish local news most. Local news related to all areas of Ballia district has been published. The newspapers of this place are sometimes of 14 and 16 pages, then according to the advertisement, sometimes even 28 and 32 pages are made. When we talk about the serial page, then the first page, second page is sometimes regional and sometimes local Ballia Jagran. 4 pages have been set for local news, Purvanchal, Apna Pradesh, National International Jagran, Khel Jagran, Economic Jagran, Editorial, as well as special pages.

Similarly, according to the advertisement, if the advertisement is of 12 and 14 pages at any time, then the paper can be of maximum 28 and 32 pages. Apart from the first page, there are 4 local pages in the name of Ballia. The regional page is called Purvanchal. A separate page is set for the news of Banaras. There is also a page for the news of the entire state by state name. There is a page running along with sports, investment, country and editorial. Most of the health, research and routine news are published on the moving page.

When we talk about the role of newspapers in the awareness of water-caused diseases, then newspapers are very backward in this matter. In the number of health related news that has come up in calculative research, most of the news is published about research, catering and routine.

On the first page of the March 17 issue of Dainik Jagran, two health-related news stories have been published, titled "Now preparing for TV-free country", three columns (12 x 6 sq.

Centimeters) and "App will show the way to reach the doctor". (6.5 x 4 square centimeters), on the same day, on page 4 of Ballia Jagran, a news paper titled "Supply stopped from water tank" has appeared in a single column (5 x 4 square centimeters). On the present day number 7 page "useless ANM Centre" "Lack of doctors in animal hospital" "Parking continues to become hospital premises" On the local page of March 25, three news "Water crisis on PHC" "government doctor will go home, who will practice privately" "Women hospital also failed in test of cleanliness", "MLA watched the arrangement of the hospital" On the special page of Sangini "Fasting with health" on the international page "exercise can give relief from parkison" on this day editorial page is an article entitled "who is responsible for bad conditions of rivers."

On the local page of Dainik Jagran of 29 March, "Minister's instructions, improve health services", on the national international page, "A new way of detecting liver cancer," Five news have appeared on the special health page named Saptrang. "Excessive fatigue ;is it myasthenia" "Lung diseases detected by bronchoscopy" "Spinal tumor is easy to treat" "Heart of the children should be instinctive". April 2 newspaper has three health news on the Purvanchal page "deployment doctors on PHC;raised voice. "relief in insomnia from Ashwagandha leaves" and "Increase in maternal death rate since 2014" "Patient Welfare Committee constituted" on local page "Patients suffering with agony, doctors are sleeping" on rashtriya jagran page "Poor health care should be take care" national international page "High level of magnesium protects from fracture" in April 22 paper One news on the National Jagran page "Berry has been helpful in preventing breast cancer" while on the local page of April 30, "health test of 600 patients done in the camp absolutely free".

In all these health news, the only one news is related to arsenic water. The rest of the news seems meaningless according to water-borne problem here. Information related to arsenic, awareness and rescue news is important to the people here. Not such types of news, when Ballia is suffering from arsenic related diseases. people of here is dieng of diseases, untimely. After seeing and reading the nature of health related news, it seems that this news is being presented to a common and healthy public mind, Not the people of the arsenic affected district and state. Uttar Pradesh is a state in which 20 districts are already affected by arsenic and the possibility of arsenic is being expressed in 31 districts. If the people here are not aware, then the nature of arsenic will be very frightening. People will continue to suffer from serious diseases.

In the March 3rd issue of Hindustan, a three-column report titled "Red Brown Bugs in the Ganges in Kanpur" has appeared on the state page (12 number pages) (7 x 12 square centimeters) on the national international page in the March 23rd issue. News has been published in 6 columns (25 x 10 square centimeters) titled 'Eight lakh people die every year from contaminated drinking water'. On March 31, special page "Health promotion" related to health "eyes reveal condition of health". On the editorial page, "The health is bigger matter than industry", on this day, a page titled "The goal of getting rid of contaminated water" has been published on the country titled "Do not fight for water". On the Ballia page in the newspaper of April 4th, the information about the sitting of the doctors sitting in the hospital, published under the title "Today in the OPD" , the second news on the same page of the single column (9 x 4 sq. Cm) titled "Pledge of cleanliness". The news has appeared. While walking, the page "If you want to avoid seasonal allergies, take care of these things" is

printed in 4 columns. At the same time, on the same page, "Drunk mother's children are at risk of many diseases" in 3 columns.

On the local page in the newspaper of April 8, "Detection of two hundred patients in Ayurvedic education" on the national page "Six delusions are keeping people away from treatment of depression" On the page titled "Every part of UP will get AIIMS" country Committed to Affordable Healthcare - Modi "news has been published. On April 12, on the Ballia page, "Homeopath is useful for life - Dr. Rai" Desh has published the news on the page "Discriminating against people suffering from HIV", "Running will not stop beating". On the Ballia page in the Hindustan newspaper published on April 16, "Doctors found missing from the spot present in the register" "X-ray and examination centers running on jugaad" "Seasonal fruits will be saved from heat and diseases" On another page "Patients doing paperwork only" "Digital 3D bandage will fix a broken heart" on the country abroad page. On April 20 on the local page "Speak in MLA ji column" "Parliament laid foundation of R.O plant" "MP listened to problems in chaupal" "Drinking water crisis in baria for four months" "PHC Kotwa still bad" Varanasi on page "Rehabilitation of victim at Asha Jyoti Center" on page titled "Action order on sex determination centres" on the page "Junk food causes risk of joint pain" "to prevent breast cancer, Drugs is coming soon. "Contraceptive pills affect mental health".

On April 24th, on the local page, "In the "boliye vidhayak ji" column," "Doctor's lack and equipment is poor" "Homeopathic doctors are not in hospitals" "Shortage of doctors on CHC" Country page

"Family left HIV victim", on the chalet chalte page, "Doing this before seven o'clock in the morning will keep you fresh for the day", the news has been published in the name " meat causes livre sickness".

On April 28th, Ballia has published 3 news stories on the page "MP obsessed with looking at the hospital" "PHC and BEO inspected" "Pharmacists also pledged" on country page "Not good for costly stunt seller" " Agreement to open more three thousand Jan Aushadhi Kendra "Do not take cold air continuously if you want to avoid sugar" Varanasi page has published the news "Arrival of Health Minister today", "Treating Parkinson from stomach operation".

Conclusion – "Role of newspapers in health awareness of water borne diseases with special reference to arsenicosis"- the study of the present research shows that newspapers of Ballia are not doing anything special to create health awareness among the population of Ballia. Here, the condition of health journalism is not enough as compared to requirement. Here the media coverage is not enough in proportion of water based disease arsenicosis is found. In the content analysis of two-month newspaper, there is only one news was found, which was related to water distribution. This news is indirect rather than direct. However, there are lots of news in this area. From the content analysis of newspapers, we come to know that whether it is a hospital or water distribution system, negligence is prevalent in most of places. When we see the publication of health news, then most of our news seems to be international, common daily routine and research based. Looking at the problem of Ballia, we can say that the media of Ballia is either not aware of the seriousness of arsenicosis or is ignoring it.

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