

Health Information Services and Public Healthcare Awareness: A Behavioral Study of Rural Inhabitants of the Balasore District of Odisha

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Abstract:-

Purpose:The purpose of the study is to explore the healthcare awareness of the rural inhabitants of the Balasore district. It also assesses the healthcare information needs, satisfaction about healthcare services and programs, channels through which health information is disseminated, and challenges they have faced concerning health care services in the absence of proper health information services.

Methodology/Approach:A survey was conducted in the rural area of the district through a structured questionnaire to study the behavior of the rural inhabitants(N = 240)concerning healthcare services. The data is analyzed by applying inferential statistics Chi-Square (χ^2) test with the help of ‘Sigma-Plot’ software.

Results:The authors found that the rural people belong to the higher income group and literates are more conscious than the lower income group and illiterates regarding health information’s impact on a healthy life.

Conclusion:There are inadequate facilities in the district concerning disseminating health information services, and most rural people are not conscious of it. The government should avail the facilities of health information services in rural areas of the district and create awareness among the rural inhabitants to use the services for the sustainability of healthy life.

Keywords:- Public Health, Health Information, Health Information Service, Rural Health, Health Information Seeking Behavior, Healthcare Awareness.

I.INTRODUCTION

Health is key to nationwide progress in any sphere of human life. In terms of resources for economic development, nothing can be considered of higher importance than people’s health. Even the ancient proverb ‘Health is Wealth’ also confirms this fact.

The World Health Organization (WHO) defined health as “*a state of complete physical, mental, and social well-being and not merely the absence of the disease or infirmity*”. In recent years, this statement has been amplified to include the ability to lead a “*socially and economically productive life*”[1].

According to Herophilus¹(300 B.C.),

*“When health is absent
Wisdom cannot reveal itself
Art cannot manifest
Strength cannot fight,
Wealth becomes useless
And Intelligence cannot be applied”*

[2].

Thus, good health must be a primary objective of national development programs. It is a precursor to improving the quality of life for a major portion of human beings.

Public health refers to “*the science and art of preventing disease, prolonging life and promoting human health through organized efforts and informed choices of society, organizations, public and private, communities and individuals*”[3].

Public health identifies, measures, and monitors people’s health needs by monitoring disease and risk factors

¹ Herophilus, (born c. 335 BC, Chalcedon, Bithynia—died c. 280); Alexandrian physician was an early performer of public dissections on human cadavers, and regarded as the father of anatomy.

trends. Analyzing these trends and a functioning health information system for predicting or anticipating future public health needs is indispensable.

A. Health information

Health information is the knowledge relevant to physical or mental well-being. It indicates that health information is more than mere data; it has a more intelligent nature and has been processed, codified, and formatted, and its implications have been delineated. Health information is simply the health or medical information produced or intended for non-health professionals. It facilitates people's understanding of health and makes health-related decisions. It is available anywhere in pharmacies, grocery stores and food stores, bookstores, physicians' offices, libraries, and the World Wide Web [4].

Health information deals with the organized data produced in the health sector, which can be communicated through various communication mediums.

B. Health information-seeking behavior

Health information seeking is a human process to stop the information gap between the health information seeker/receiver and the provider. It involves active or purposeful health information to get a proper solution to make an easier step for health decision making. The patient may interact with manual information systems (doctors, nurses, newspapers, books, etc.) and digital information systems like the internet in information seeking. Thus, health information seeking is a process where stakeholders in the system engage with other individuals and media to upgrade the state of knowledge.

Depending on the health information-seeking behavior, reliable health information can be obtained through a proper communication strategy. At the same time, it should be noted that health information must be allocated to the common people for their welfare. Thus, communication is an essential component without which health information cannot reach its defined destination.

The study explores the various approaches of the rural inhabitant of the Balasore district of Odisha, such as information needs, use patterns, information-seeking behavior, sources and channels used, etc., regarding public health information services.

II. OBJECTIVES

- To assess the healthcare information needs of the rural people.
- To examine their awareness and satisfaction concerning health services and programs.
- To know the channels through which the information relating to health is obtained.
- To identify the barriers which affect the people to follow good health practices.

III. METHODOLOGY

A great majority of Indians live in rural areas. In an information-based society, every human being seeks and uses the information to meet the all-fundamental requirements of life. Seeking health information is an integral part of human need, and the delivery of healthcare service constitutes an indispensable part of the national health system.

A. Population of the Balasore district

According to the 2011 census of India, Balasore district has a population of 2,320,529, roughly equal to the nation of Latvia or the U.S. state of New Mexico. This comparison gives it a ranking of 195th in India (out of 640). The district has 609 inhabitants per square kilometer (1,580/sq. mi). Over the past decade, its population growth rate from 2001 to 2011 was 14.47%. Balasore district has a sex ratio of 957 females for every 1000 males [5].

B. Rural population

As per the 2011 census, 89.08 % population of the Balasore district lives in rural areas of villages. The total Balasore district population living in rural areas is 2,067,236, of which males and females are 1,056,466 and 1,010,770, respectively. It has a sex ratio of 957 females per 1000 males, and the child sex ratio is 943 girls per 1000 boys. The child population in the age 0-6 is 260,819, of which males were 134,260 and females were 126,559. The child population comprises 12.71% of the total rural population of Balasore district. The total number of rural households is 4,77,434 in 12 Blocks, consisting of 289 Gram Panchayats (*village councils*) and 2953 villages [6].

C. Data collection from rural people

Two blocks are selected randomly viz. *Balasore and Jaleswar* for the study and a survey was conducted as per the objectives. A questionnaire was prepared in English and Odia languages bilingually to get information from the rural people. It consists of questions to know their social status, healthcare information needs, awareness and satisfaction about health services and programs, reading habits, channels used to obtain health information, the use of the library in getting health information, health information-seeking behavior, etc. The data was collected with the help of a questionnaire from the heads of selected rural households (N = 240) in the two blocks, as mentioned earlier, which comprises 1,00,640 rural households.

The questionnaire in Odia language was written with the help of Microsoft Indic Language Input Tools. The copies of the questionnaire (Odia version) were given to those heads of households who were literates and able to fill up. The investigator clarified the doubts while filling up the questionnaire by the respondents and collected the filled-in questionnaires. The illiterate heads of households were interviewed with the help of a questionnaire, and the investigator recorded the replies.

D. Analysis of data

After collecting the data from the respondents, the data were analyzed according to the objectives stated. First, the data were re-coded on the datasheets and analyzed using the 'Sigma-Plot' software package. However, percentages and other necessary calculations were done with the help of a calculator. Both descriptive and inferential statistical techniques were employed. The χ^2 method was used to test the significance of the data collected from rural people.

IV. RESULTS AND DISCUSSION

The following results have been found and discussed based on the data collected from rural people of the Balasore district of Odisha.

A. Significance of health information services

The study revealed that a significant part of rural people (72.50%) does not know the significance of health information services. They have shown their interest in understanding the importance of health information services if disclosed and publicized.

On that account, the investigator perceives that the rural people, especially illiterates and economically impoverished, should be informed about the significance of health information services. Once they are conscious of the importance of health information services, they can take care of their health and the health of their family members. Accordingly, this may lead to their socio-economic development. Thus, the rural inhabitants should be informed about the significance of health information and its services rendered by the government. That must be conveyed by health professionals, librarians, and voluntary organizations to them.

B. Kind of health information needed

The study revealed that the rural people of the district preferred to get necessary health information on infectious diseases, maternal and child health, especially health information for neonates, immunization programs, and family planning. They are also desirous to get health information on non-communicable diseases like cancer, cardiovascular diseases, hypertension, diabetes, and obesity. Hence, the rural people should be well informed of health information by health professionals, librarians, and voluntary organizations.

C. Derivation of healthcare advice

Since there is a diversity of population among rural inhabitants in the district, their health information requirements vary greatly. Consequently, rural people receive advice on healthcare from different categories of people in their area such as elders, friends, social workers, school teachers, Anganwadi workers, health workers *viz.*, ASHA².

D. Awareness of the existence of PHCs

The majority of rural people (58.75%) are not conscious of the services rendered by Primary Health Centers. Even some of them are fully unaware of the existence of these

centers. It may be due to their lack of knowledge or awareness. The services and facilities available in these centers are not utilized to the fullest possible by the rural people due to unawareness of services rendered by these centers. It is the sole responsibility of the government to publicize the PHCs services through mass media, health workers, and libraries so that these services can be utilized outrightly.

E. PHIS at locale or doorstep

It is quite apparent from the study that a considerable percentage (20.42%) of rural people revealed that the health professionals are not providing health information services at their locality. Hence, the health workers such as ASHA and MPW³ should either arrange a general meeting of health communication at villages or visit the houses of rural people at regular intervals and dispense health information required by them.

F. Information on hazardousness of environment pollution on health

Undoubtedly, people must be conscious of environmental pollution; otherwise, they can be afflicted with diseases by intake of polluted air and water and contact with the contaminated land.

The current study reveals that a considerable percentage of rural people (56.25%) are not conscious of environmental (air, water, and land) pollution. The information about polluted air and water and contaminated land (due to deposition of solid and liquid waste materials) and its adverse health effects should be disseminated through health workers, mass media, and public libraries. The health professionals should exhibit audio-visual presentations regarding environmental pollution and its health hazards to rural people.

G. Awareness of sanitation and hygiene

Maintaining personal hygiene and sanitation is very important for many reasons like personal, social, psychological, health, etc. Proper hygiene and sanitation stop the unfolding of diseases and infections. If each individual on the earth maintains sensible hygiene for himself and the things around him, diseases can eradicate to a reasonable level.

The present study explores that a considerable percentage of rural people (34.17%) are unaware of sanitation and hygiene. The finding reveals that the awareness is more, in the case of literates than illiterates, and the case of a higher-income group than a lower-income group.

The prime sources of information for the awareness of sanitation and hygiene are television, books, magazines and newspapers, and health workers. Since there is less awareness among illiterates and lower-income groups on sanitation and hygiene, the awareness among them is to be created and propagated through health conferences, motion pictures exhibition by health professionals. The public

²Accredited Social Health Activist

³Multi-Purpose Health Worker.

library should circulate leaflets on sanitation and hygiene to literates so that they can elucidate the illiterates most effectively.

H. Awareness of human nutrition and importance of vitamins and minerals

Nutrition could be a science dealing with all aspects of the interaction between a living organism and the substances that facilitate it to grow and sustain itself. There being three kinds of living organisms (plants, animals, and humans), nutrition is also the same to possess completely different specialties, viz., plant nutrition, animal nutrition, and human nutrition.

Human nutrition deals with food and nutritional requirements of a person at completely different ages, sex, and physiological standing, nutritional imbalances in persons, and varied measures for overcoming such deficiencies and imbalances [7].

Hence, it is evident that a person has to take nutritious food to remain healthy. Malnutrition gives rise to various disease syndromes. Thus, people must know the food and its nutritional value for health. Rural people have some reluctance towards food, which may cause malnutrition.

The current study reveals that a considerable percentage of rural people (28.33%) are unaware of nutrition, and (53.75%) of rural people are unaware of the importance of vitamins and minerals. It also reveals that the awareness is more in literates than illiterates and higher-income group than lower-income group about significance of vitamins and minerals to sustain healthy life than illiterates. The prime sources of health information on vitamins and minerals are health workers, television, friends, and elders.

Since there is less awareness among illiterates on vitamins and minerals, the awareness among them is to be created and propagated through health conferences, motion pictures exhibition by health professionals. Public libraries should circulate leaflets on the nutritional value of food and the significance of vitamins and minerals to rural people for sustainable health.

I. Information on family planning

India is the second-most inhabited country in the world. Population explosion results from a high birth rate in India which reduces the health and welfare of women. Frequent pregnancy without having a gap creates health hazards to the mother and the baby. This ends up in a high death rate among women of reproductive age due to early marriage. The problem of population explosion in India has been tested to be an enormous hindrance to the success in every sphere of national development. Hence, to improve the welfare and status of women in our society and control population explosion in India effectively, we have to reduce the birth rate.

The current study reveals that the rural people obtain healthcare information on family planning predominantly

from health workers such as ASHA and Anganwadi⁴ workers, television, books, magazines, and newspapers. However, a considerable percentage of rural people (12.08%) are unaware of the significance of family planning. Thus, these rural people must be provided health information on family planning by upgrading the existing communication channels and adding new health communication channels such as evidence-based digital health solutions, i.e., eHealth or mHealth communication. The health information services regarding family planning must be provided to rural people by public library rendering services in their area.

J. Satisfaction with family planning services

A considerable percentage of rural people (25.83%) were not satisfied with the family planning services provided by the Ministry of Health and Family Welfare, Government of India. A few suggestions given by them deserve to be discussed. The underneath suggestions are specified by them and validated by the investigator:

- The potential of family planning services to promote preconception care is restricted by the underutilization of the services and inadequate attention to preconception care during family planning visits. The family planning services typically embrace counseling, and counseling provides a chance to debate the benefits of preconception care. Hence, the Department of Health and Family Welfare should organize meetings for counseling with the rural people at least biannually to impart health information in connection with family planning programs, to elucidate their feeling of uncertainty or lack of conviction, and additionally to provide eligible couples with information and guidance on family planning methods and services obtainable, to ensure singles and couples bring about a healthy life. The advantages of a small family may be explained to the rural people in these meetings.
- An adequate fund should be allocated for the free distribution of contraceptives in villages by the Department of Health and Family Welfare.
- Health education should be included in the secondary education curriculum, and family planning should be included as one of its topics.
- The cinematography or motion picture should be displayed in villages regarding the importance of family planning.
- Wall posters and billboards on family planning should be displayed at various facilities like marketplaces, bus stands, railway stations, etc. Leaflets providing information on family planning should be distributed to rural people.
- The health department should establish a quality healthcare task force at the district and blocks level to ensure quality care in family planning services.

⁴Anganwadi (courtyard shelter) is a form of rural child care center in India. It was started by the govt. in 1975 as a part of the Integrated Child Development Services (ICDS) program to combat child hunger and malnutrition.

K. Awareness of immunization programs

Routine immunization is one of the foremost cost-efficient public health interventions. Immunization, also referred to as 'vaccination,' gives a vaccine to the person to protect them against disease. Immunity (protection) by immunization is comparable to the immunity someone gets from disease, but the person receives a vaccine instead of getting the disease. This is what makes vaccines such powerful medication. Most vaccines are given by needle (injection); however, some are given by mouth (orally) or sprayed into the nose (nasally).

It is indispensable to reduce morbidity and mortality for every individual, and the rural people have no exception to this. Hence, it is inevitable for the rural people of India must know concerning immunization programs launched by the Ministry of Health and Family Welfare, Government of India.

The present study explores that a considerable percentage of rural people (15.83%) are unaware of immunization programs. The finding reveals that the awareness is more, in the case of literates than illiterates, and the case of a higher-income group than a lower-income group.

The prime sources of information for the awareness of immunization programs are health workers, television, and newspapers. Since there is less awareness among illiterates on immunization programs, the awareness among them is to be created and propagated through health conferences, motion pictures exhibition by health professionals. Public libraries should circulate leaflets on immunization programs to literates so that they can elucidate the illiterates most effectively.

L. Utilization of PHC services

The study reveals that most rural people (59.58%) are not utilizing the services rendered by the PHCs. It may be due to the dissatisfaction with medical services, inaccessibility of doctors, lack of transport facilities, distant location of PHCs, ignorance, and dilemma of health services offered by PHCs.

An investigation will be conducted to determine the number of rural people not utilizing the PHC services due to their unawareness. Awareness is to be created by publicizing the PHCs services in newspapers, television, radio, public exhibition through conferences and motion pictures.

M. Type of hospital used

The present study reveals that rural people typically use both government and private hospitals for their treatment. It is indispensable that the type of hospitals and the services offered by them is to be disseminated to take the felicitous and timely decision for treatment of their illness. The facilities and services delivered by different hospitals may be compiled by the district chief medical authorities and disseminated to the rural people. Such information should be uploaded to the library database to be available in the web portal of the public library as a part of community information services disseminated to the public. It should be

easily accessible to the rural people via computer or mobile phones having internet connectivity.

N. Medical system followed

Rural people are following diverse medical methods to treat diseases in India. The present study reveals that the allopathy or modern system of medicine is being used predominantly by the rural people. The information concerning different medical systems available in the rural area, its comparative cost-effectiveness (approximately) for the treatment of major communicable and non-communicable diseases available in their area, its efficaciousness in the treatment of major diseases and disorders, either curative or palliative in a particular system of medicine from evidence-based practice should be disseminated to rural people for taking an appropriate decision to the system of medicine to be followed. The Department of Health Research should investigate to collect this type of information. The information may be publicized and disseminated to the rural people for their welfare.

O. Introduction of sex education

Adolescence is a transformational stage of physical and psychological development that typically occurs during the transition period from puberty⁵ to adulthood. Adolescence is generally related to the teenage years; however, biological, psychological, or cultural expressions might begin earlier and end later. The World Health Organization (WHO) defines adolescents as anyone between ages 10 and 19. It's a fragile age owing to vital changes in sex and physique [8].

The present study reveals that most rural people (51.67%) favored the introduction of sex education in academic studies. Hence, it should be introduced at the level of secondary education.

Sex education is intended to control unsafe sex and instill personal precaution before, during, and after exposure to risky contacts.

Young people ought to get correct sex education, as well as components of anatomy and physiology of generative organs and sex hygiene like removal of sebum and catamenial hygiene. Special attention must be paid to educating adolescents regarding the hindrance of unwanted pregnancies and sexually transmitted diseases, as well as AIDS.

Unhappy and strained married life results in extracurricular intercourse, increasing the prospect of exposure to STD. Guidance and sex steering centers ought to be established by the Ministry of Health and Family Welfare, Government of India for confidential advice by contact and through the post to rural people.

A clear plan of healthy sex life ought to be imparted to them and that they ought to be told concerning the risks of sex by the Directorate of Health in rural areas through PHCs, CHCs, and District Medical Authorities.

⁵Puberty is the time in life when a boy or girl becomes sexually mature.

Sex education can also be imparted to rural people through newspapers, television, radio, as well as through public exhibitions through conferences and motion pictures by health professionals.

The public libraries should keep books, magazines, DVDs, e-books on sex education.

P. Voluntary organizations

A voluntary organization is a group of individuals who voluntarily agree to form an organization to accomplish a purpose. They have much smaller audiences and do not include any public or local authority. It is formally constituted which actively and voluntarily enter into social work to solve the problems or fulfill the needs of underprivileged people.

It can play a crucial role in providing health information services to rural people. A small percentage of rural people revealed that voluntary organizations impart health information services in their area. Hence, it is suggested that these organizations should collect more real-time health information and disseminate these to rural people.

Q. Public library and information services

The survey indicates public libraries at the district level and at the block levels (Gandhi Pathagaras) to impart their services to the public. Moreover, these public libraries have often been found unreachable for rural people.

Hence, it is suggested that the state government emphasize the establishment of public libraries or information centers in every village council (Gram Panchayat) in the district.

These public libraries should liaise with the health organizations and make partnerships with the medical libraries to disseminate health information to rural people in the district.

Public libraries should develop web portals. Health information should be available on the website so that the public, including rural people, can access their health information requirements via the internet with the help of computers or mobile devices.

R. Reading of newspapers and magazines

The present study reveals that the majority of the rural people (72.08%) are not reading newspapers and magazines or listening while others are reading regularly.

Hence, it is suggested that the societies, associations, NGOs registered under the 'Societies Registration Act, 1860⁶' should establish a library at every Gram Panchayat (Village Council) to improve information literacy among rural people. The Gram Panchayat (Village Council) library should subscribe to regional newspapers and magazines regularly so that the rural people can get the opportunities to

⁶A legislation in India which allows the registration of entities typically involved in the benefit of society - education, health, employment etc.

read newspapers and magazines and also read the information published on healthcare to improve their health information literacy.

S. Broadcasting through mass media

In a one-to-many model, broadcasting is the distribution of audio or video content to a dispersed audience via any electronic mass communications medium, i.e., radio waves. Radio and television broadcasting which includes the production and transmission of educational, entertaining, and news-related programming, is a practical application of audio (in case of radio) and audio-visual (in case of television) technologies transmitted over the air.

The survey reveals that most rural people (98.75%) are not listening to radio programs regularly. It also indicates that a considerable percentage of rural people (75.83%) watch television regularly. Thus, television is evident the most favorable media of information than radio among rural people.

Hence, it is suggested that the government should arrange adequate health information programs through radio and television. The rural people should be encouraged to spend time listening to the radio in the age of television because of its easy portability and affordability.

T. Belief in witchcraft of witchery

Witchcraft, traditionally, the exercise or invocation of alleged supernatural powers to control people or events, practices typically involving spells, sorcery, or magic.

Most rural people believe that diseases and health disorders may be the effect of witchcraft or evil spirit. Hence, the cause of diseases or disorders should be sorted out under the supervision of doctors. The rural people are advised to have faith in the supreme lord, surrender before his holy feet, and go to hospitals to treat their diseases or disorders.

V. CONCLUSION

Rural people belong to higher-income groups, and literates are more conscious than the lower-income groups and illiterates regarding health information's impact on a healthy life. The majority of rural people are using smartphones and internet services. The majority of rural people use the Allopathy system of medicine for their treatment. The public libraries are available at the district level and in block levels (Gandhi Pathagara⁷) to impart their services. However, these public libraries have often been found unreachable for rural people. The government should avail the facilities of health information services in rural areas of the district and create awareness among the rural inhabitants to use the services for the sustainability of healthy life.

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⁷A library established by the government of Odisha at block level.

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