# ICT for Enhancing Health Communication among Tribal Women in Assam

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## ABSTRACT

In recent years Information and Communication Technology (ICT) has seen huge  growth. These technical innovations focus on new challenges. It have led researchers to develop ICT tools aimed at improving global health. Today, ICT and Artificial Intelligence can be integrated into various aspects of healthcare. This study will explore the use and challenges of ICT in healthcare systems. The study focusing on the rural areas of Assam, India. The research will examine the usage and accessibility of ICT among tribal women in the state of Assam. The investigation will highlight examples, challenges and potential solutions regarding how ICT can be effectively utilized in improving healthcare for tribal women in Assam. This study aims to provide a comprehensive look at the role of ICT in the healthcare landscape of Assam's rural communities.

Keywords: Health Communication, Digital Healthcare, Artificial Intelligence (AI), Internet, Tribal Women

## INTRODUCTION

India's northeast region comprises eight smaller states and is the abode of many indigenous ethnic minorities. The area is mountainous, landlocked and industrially underdeveloped and the people's health is poor. Good health is a significant key to the growth and development of communities and societies. But this area has a deplorable condition of healthcare infrastructure.  This study is about the relevance of ICT activities among tribal women of Assam and how they can raise the overall quality of life. It has been observed that the tribal woman is quite an inquisitive vis-à-vis the use of technology.

Mobile phones have positively empowered tribal populations to use technology to update themselves about the outside world. However, the older generation is skeptical and hesitant regarding adopting technology and ICT activities in their lifestyle. It is equally valid that our country's urban population is slowly and steadily reaping benefits from using ICT in their curricula. The tribal people in India have been deprived of such benefits due to various factors such as issues of inequality, shortage of infrastructure, poverty disparity in sources of income between rich and poor etc. have contributed to their neglect.

Every tribe in Assam has its unique aura of richness. It can be shown in terms of its profile comprising rich cultural heritage, dietary habits, medicines, rituals, dance and music. The tribes of Assam follow a heterogeneous pattern and differ in terms of language, culture and modes of living. E-health facilitates, promotes, and empowers families, individuals, and communities through information and communication technology (ICT). E-health includes the following – Patient records in electronic forms (including assessment and care planning, patient schedules, and clinical communications) with professionals and patients (telephonic support, email, SMS texts), and telehealth (remote monitoring and video consultations), information Management includes reusing data to improve care, health care, and patient Information), Information governance covers confidentiality, data protection, and system security.

Lastly, Personal Data records consist of a repository of information considered relevant to an individual's health, development, and welfare. In 2021, ICT and Artificial Intelligence will enable betterment in many parts of healthcare. There is substantial improvement in AI for drug discovery, medical imaging, diagnostics, pathology, and clinical trials. Within 2025 we anticipate these technologies to connect across the healthcare range. The spread of mobile technology in the health care domain has created a new field of e-health. eHealth has customized and tailored services for less privileged people. The government of India launched mHealth Applications that run in certain states under various health programs. The Covid time has seen an increase in online activities, ICT, and Artificial Intelligence. Governments, Tech companies,

and MNCs are rushing toward building and deploying AI systems. Technical advancements in AI and a pull in solving further problems lead scientists and tech companies to develop AI software applications that target people's health.

BACKGROUND: World's economic, environmental and social development and subsequent lifestyle differences have led to a drastic increase in chronic diseases. With the advancement in communication and technology, it's possible to monitor patients and enable communication between them and the doctors. Today's commonly used remote patient monitoring devices are Bluetooth-enabled manometers, glucometers, spirometers, etc. These devices wirelessly send data via a mobile application, enabling doctors to monitor their patients' conditions and make suggestions accordingly. Modern technology for the innovations that have made INFO exchange and processing fast and secure. The digital mobile application is regarded as easy-to-use interactive guidance and fullfledged, enabling community health workers to assist the community women. Mobile phones use open-source software that is equipped with multimedia aids to support patient assessment, counselling, early identification, treatment and rapid referral of pregnancy. ICT has taken the healthcare industry by storm, providing cutting-edge care even to people in far-flung areas. AI techniques are revolutionizing the digital healthcare sector. AI is vital in patient monitoring systems for disease diagnosis and prevention. Moreover, in this environment, large amounts of data are generated by sensors. This Data has invaluable healthcare information, so it is essential to analyze it to improve medical technologies. The realization of ICT among tribal women has led to various use cases throughout public healthcare.

## LITERATURE REVIEW

The democratization of communication technology outcomes has led to keys being quickly developed for many real-life use points. The acceleration of the COVID-19 pandemic showed a barrage of proposed models to assist in diagnosis and cure. While medical journals prioritized the publication of such studies, researchers at Cambridge University examining over 400 models developed to diagnose COVID-19 revealed that everyone was not suited for clinical or practical use. Given the time framing and dearth of validation experiments for many of these investigations, it is doubtful they would have been deployed in real-world scenarios. (Michael Roberts, 2021) AI has been leveraged to support child health, engagement, and the ongoing COVID-19 pandemic. There has also been a significant focus on diseases that disproportionately affect countries like Ebola, Dengue, and diabetes. In India, screening diabetic patients to address this issue. Furthermore, Zambia developed a model consisting of a conventional neural network to identify cases using retinal image scans. This application was validated in a study conducted in Zambia with the Eye Service Programme. As communication technology and artificial intelligence continue transitioning from the lab to the real world, their impact and accuracy are increasingly being explored. Motivated by problems with screening for diabetic retinopathy in Southeast Asia, researchers applied deep learning methods to compress the often weeks-long procedure of having an ophthalmologist review retinal scans. (Varun Gulshan, 2019) Within South Asia, non-governmental organizations (NGOs) and private foundations play a significant role in funding and organizing the delivery of healthcare services. A report by The Rockefeller Foundation, and the Bill and Melinda Gates Foundation, surveys current practices of ICT in healthcare, analyzing the challenges of scaling AI development in the people of the global south and the investment needed to support such work effectively. As communication technology applications are increasingly being used for low-cost environments, it is even more important to test and evaluate these technologies and communities and the conditions in which they are expected to be integrated. This need becomes even greater concerning health care due to the critical nature of medical decisions. Integrating ICT tools for patient care in what may appear to be the best or most beneficial situation is challenging. Describes the shortage of AI models designed to diagnose COVID19 in primary health care facilities, the lack of transparency in data used to train such models and the flexibility of non-solid methods in many different contexts. (Yipeng Hu, 2020). High service costs and irregular power supply are the causes of the lack of use of ICTs (Malakar & Deka, 2023). ICT adoption is relevant for women entrepreneurs (Bhowal, 2020). The impact of ICT has increased since India's economic liberalization(Bhowal, 2020). ICT can enhance basic literacy and support micro-financing through Self Help Groups (Chakravarty, 2022). Mobile phones, televisions and radios are the most common ICT devices among rural women in Assam (Malakar & Deka, 2023).

The rationale of the topic : The Reconfigure project brings on this task by aiming to build a more health-aware society with an understanding of ICT Activities. Even synthesizing existing literature affords actionablesteps for each ICT practitioner and human-centred researchers to reflect and implement in their respective answers addressing healthcare issues inside low-aid environments. With a focal point on centring the end-users of ICT for healthcare, the finding of these studies, more often than not non-technical, may have a considerable effect on shaping the technical aspects of such structures. The study aims to bridge a few gaps in understanding the perception of the tribal woman towards the presence of healthcare and other related Information about health and diagnosis options available on digital and social media. It also highlights the awareness levels and preference for healthcare practices on this new virtual media and their satisfaction with the existing

hospital practices and healthcare information on new media. The the researcher also attempts to recognize the different credible sources of information on healthcare information and services concerning various demographic profiles and the types of user characteristics determining social media usage. In an try to identify the most preferred device, the frequency of use of digital and social networks for accessing Information and services, and the most popular social networks amongst people are also researched for a better understanding of the usage pattern of the people

The aim and objective of this research is to find out ICT in woman healthcare in Assam. Specific objectives are: To understand the status, problems and prospects of female health communication. Research Question : How much awareness they have towards the health communication and ICT service? Is they are known about proper use of ICT in their health care ? And What is the status of the ICT amoung those tribal women of Assam ?

Methodology : The role of ICT in health communication is primarily examined in this study. This chapter enumerates the study's theoretical framework, research design, computation of data, statistical analysis and definitions of the terms used in the study. This research evaluated ICT in healthcare research streams using the observational method. A qualitative variable has been analyzed. A methodological analysis of earlier published documents has studied.

Studies about Assam's tribal women take health care services through ICT. Including, as those about any populations who receive ICT services. Including public health and primary care services, including health promotion and disease prevention, diagnosis, treatment, rehabilitation support and care. Studies in any point of care, including community health centres, primary care networks, clinics, and outpatient departments of hospitals, were also included. The data collection has been from primary and secondary sources to realize the objectives of this study. This study adopts observational analysis to understand the factors on digital and social media, software and other apps. This is used to measure the types of healthcare information accessed on social media, choice of social media devices, preference of online healthcare services triggering online usage of healthcare services and credible sources of Information. And the secondary data will be collected from research reports, journals, books and searched on the internet through Google and Google scholar. Research Design: The primary objective of the present study is to understand the role of media in health communication about Assam. Overall, the study approached the problem through a systematic method. Analysis Methods: Try to include all data that will use ICT on health care in Assam's women topics and assess study quality by Prediction model Risk OF Bias.

Analysis: Information and Communication Technology (ICT) in health communication can potentially improve healthcare. But there are notable gaps that hinder the effective utilization of ICT for health communication in remote communities. ICT has a positive impact on tribal women. It is offering new opportunities for health education and awareness. Mobile phones and digital platforms have been very helpful in reaching tribal women with critical health information. The extent of this impacts their levels of infrastructure and literacy. Because Many rural and remote areas in Assam lack stable internet access, electricity or mobile network connectivity. This limits their ability to access digital health resources or communicate effectively with healthcare providers.

Tribal women are often slow to develop a positive perception of health communication through ICT. This can be attributed to the lack of tailored health content. For many tribal women traditional health practices are deeply ingrained. The benefits of ICT health communication are also not shown. Despite the growing amount of ICT in Assam. The tribal women have not yet fully embraced them for effective health communication. Because of digital literacy, language barriers and the absence of user-friendly interfaces. Also many tribal women find ICT tools a little bit challenging in scheduling appointments, understanding medical advice or tracking health issues.

While ICT enhances health communication among tribal women in Assam. The substantial barriers also need to be addressed. These include improving access to technology and making ICT tools more user-friendly for tribal women.

**FINDING & CONCLUSION**

ICT has been shown to positively impact health communication among tribal women in Assam. It especially raises awareness about health issues. But this impact varies across different regions, influenced by the availability of technology and healthcare outreach programs. A major finding is the limited exposure to ICT among tribal women in Assam. Many face barriers of lack of infrastructure, unreliable internet and limited access to digital devices. This restricts their ability to engage with digital health resources and seek out information. The study found that tribal women often do not have a positive perception of ICT health services. Many are unfamiliar with digital tools. And some areas have traditional health practices. Some tribal women have not found ICT tools particularly useful. They face difficulty in understanding complex health information. This indicates that it currently fails to meet the needs of tribal women effectively.

To maximize the benefits of ICT for health communication in remote parts of India some efforts must be made. To improve infrastructure digital literacy programs and more user-friendly platforms should be implemented. By addressing these challenges ICT can play an important role in empowering tribal women in Assam.

## REFERENCES

[1]. Ashish Nag, S. S. (2020). ICT for Tribal Development in Himachal Pradesh: An Analysis. In M. Arora, Communication Perspectives (pp. 195-205). New Delhi: ANAMIKA PUBLISHERS & DISTRIBUTORS (P) LTD

[2]. Bhowal, C. (2020). Information and Communication Technology (ICT): Opportunities or Threats for Women Entrepreneurs – An Emperical Survey. SSRN Electronic Journal.

[3]. Bondale, N., Kimbahune, S., & Pande, A. K. (2013). mHEALTHPHC: An ICT Tool for Primary Healthcare in India. IEEE Technology and Society Magazine , 31 - 38.

[4]. Chakravarty, K. (2022). through Information and Communication Technology: A Case Study. Tenth Pan-Commonwealth Forum on Open Learning. https://doi.org/10.56059/pcf10.2983

[5]. Kamna Kandpal, P. D. (2022). Understanding the trends in Health Communication: Mobile Health Applications and Accredited Social Health Activists. Journal of Advance Research in Science and Social Science (JARSSC) , 119-133.

[6]. Malakar, P., & Deka, M. B. (2023). Study on Availability, Accessibility and Problems Associated with

[7]. Use of ICTs among Rural Women of Assam, India. Asian Journal of Agricultural Extension Economics & Sociology, 41(12), 261–264. https://doi.org/10.9734/ajaees/2023/v41i122328

[8]. Marianne Paimre, M. P. (2022). Gender Differences in ICT Acceptance for Health Purposes, OnlineHealth Information Seeking, and Health Behaviour among EstonianOlder Adults during the Covid-19 Crisis . SCITEPRESS – Science and Technology Publications , 134-143.

[9]. Misra, K. D., & Thomas, A. J. (2017). Use of Information and Communication Technology (ICT) by Tribal Women in Jharkhand. Splint International Journal of Professionals , 35-42.

[10]. Samuel Hailegebreal, T. T. (2022). Utilization of information and communication technology (ICT) among undergraduate health science students: a cross-sectional study. BMC Medical Education , 215.

[11]. Sandip Satpati, K. K. (2022). Assessing the Impact of Education, Health and Road Network Infrastructure on Information and Communication Technology Penetration in Rural West Bengal. Indian Journal of Public Administration .

[12]. Suresh, D. (2014). Tribal Development Through Five Year Plans in India– An Overview. The Dawn Journal, 3(1), 794-816.

[13]. Kalam, A. A., & through Challenges, T. P. A. J. ICT for Rural Development: An Inclusive support for North East India.

[14]. Kumar, V., & Bansal, A. (2013). Information and communication technology for improving livelihoods of tribal community in India. Int. J. Comput. Eng. Sci, 3(5), 13-21. (Sandip Satpati, 2022) (Samuel Hailegebreal, 2022) (Marianne Paimre, 2022) (Kamna Kandpal, 2022)

[15]. Majumdar, R., & Sikdar, D. P. (2017). Use of ICT in building up Women Health Awareness among Tribal Students in India. International Journal of Research in Social Sciences, 7(9), 236-246.

[16]. Banerjee, S., Mandal, K. S., & Dey, P. (2014, April). A Study on the Permeation and Scope of ICT Intervention at the Indian Rural Primary School Level. In CSEDU (2) (pp. 363-370).