



Investigating the cancer awareness status, underlying determinants leading to Late detection, navigating the suspicious cases, and addressing the challenges with grassroots solutions during the Covid-19 pandemic in the villages adopted by Breast Cancer Hub (BCH) in Cachar, Assam, India



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Key Areas of Research/ Expertise/ Skills

Breast Cancer Research, Epidemiological Research Study

Key Collaborations

Cancer Registry, St John's Medical College Hospital,

Impact of research

Breast Cancer Hub (BCH) is the pioneer in conducting door-to-door Breast Cancer Screening, Oral Cancer Screening & discussing the signs & symptoms of other types of Cancer in the untapped villages in Assam who had no awareness about Cancer. We package the BCH-produced Early Detection Cancer Screening Cards & provide them to each household. Any suspicious cases, we take to Cancer Hospital for further diagnosis, Treatment, Management & palliative care. We take accountability for each patient. BCH is revolutionizing the healthcare scenario in North-East India, especially Assam, and has been instrumental in taking care of pre-cancerous or cancerous cases end-to-end during the most challenging circumstances, even during the Covid-19 lockdown time with our grassroots solutions

Facilities/ infrastructure for Research

In-person survey in the Breast Cancer Hub adopted villages: Bantarapur habitat (Sunadari Part-II, Sundari Part-III, Sundari Part-IV, Boalihaor, Senticatherine) and Bhorakhai (Division of Silcoorie Tea-Estate).

Collaboration within St. Johns

Dr Rakesh S. Ramesh, In-charge Cancer Registry, St John's Medical College Hospital, Bangalore

Funding Source

Breast Cancer Hub Corporation

Background

Cancer is a leading cause of death globally. Every year, millions of cancer patients could be saved from premature death and suffering if they had timely access to early detection and treatment [1]. Healthcare providers in rural India regularly see women coming in advanced stage to Breast Cancer as access to the healthcare facility is compromised due to sociocultural, economic and environmental factors. In the villages of Northeast India, the situation is grimmer, with Cancer screening as the least priority. Breast Cancer Hub adopted eleven revenue villages in Cachar, Assam for door-to-door cancer screening awareness-education, treatment management and epidemiological research study [2]

Aims and Objectives

We aim to conduct a door-to-door survey in India in the villages Breast Cancer Hub adopted for Cancer to uncover various factors that correlate with breast cancer intending to push for earlier detection, help destigmatize breast cancer, encourage to seek out mammograms, ultrasounds, breast-self exams, and clinical breast exams, evaluate the effects of lifestyle & environment affecting the community with the occurrence of Cancer focusing on Tobacco consumption in any form.

Methods and Materials

The study is conducted in person, the obtained data is subsequently de-identified for analysis. Consent is taken from each participant with clear transparency.

We go door to door, conduct an in-person survey, interviewing each member of the family (above the age of 18) asking questions if they actively pursue or/and understand the importance of cancer screening, queries regarding lifestyle, food habits, environment, tobacco consumption & alcohol.

We are using excel spreadsheets to visualize and analyze patterns in the data. For simple categorization and enumeration, we use excel's inherent ability to calculate statistical values (i.e., mean, median, mode, standard deviation, ratios, and count). We are also running multi-dimensional regression analysis to obtain the R square, adjusted r square, and p-value. These statistics as well as the identification of dependent and independent variables will help us obtain reliable inferences. Finally, we will visualize the data for reporting using graphs, charts and histograms

Results

Study report period: February – October 2020, areas of villages covered – **Bantarapur habitat (Sunadari Part-II, Sundari Part-III, Sundari Part-IV, Boalihaor, Senticatherine) and Bhorakhai (Division of Silcoorie Tea-Estate)**. The population is Manipuri (Meitei), Bhojpuri, Desuali, Bengali, occupation as daily wage earners or farmers, economically below the poverty line.

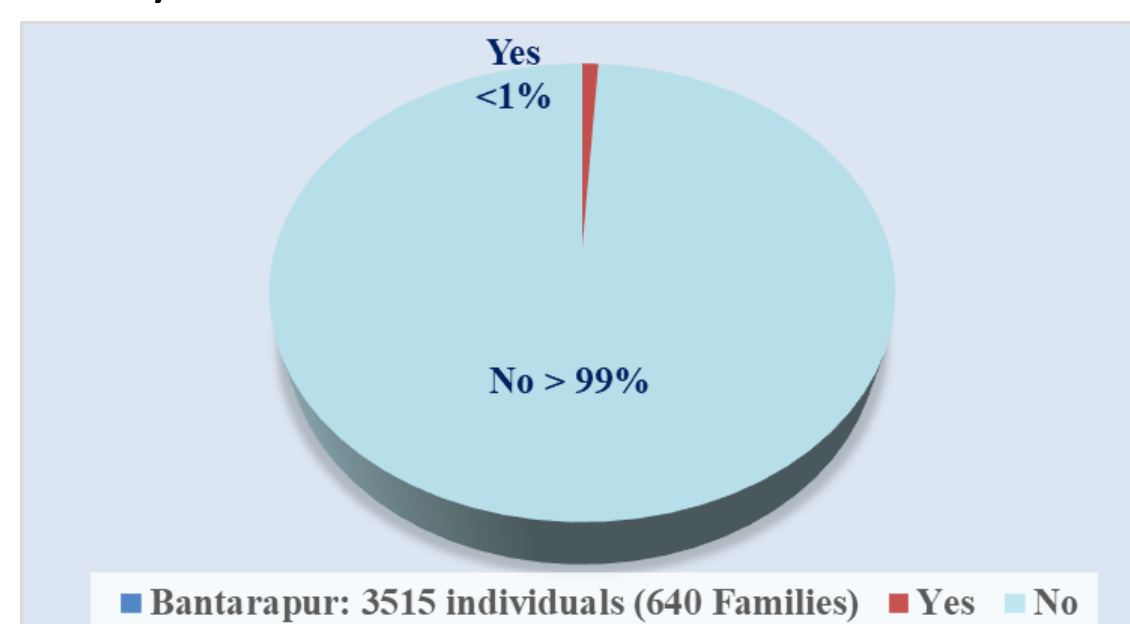


Figure 1 : Awareness of Cancer at Bantarapur Habitat

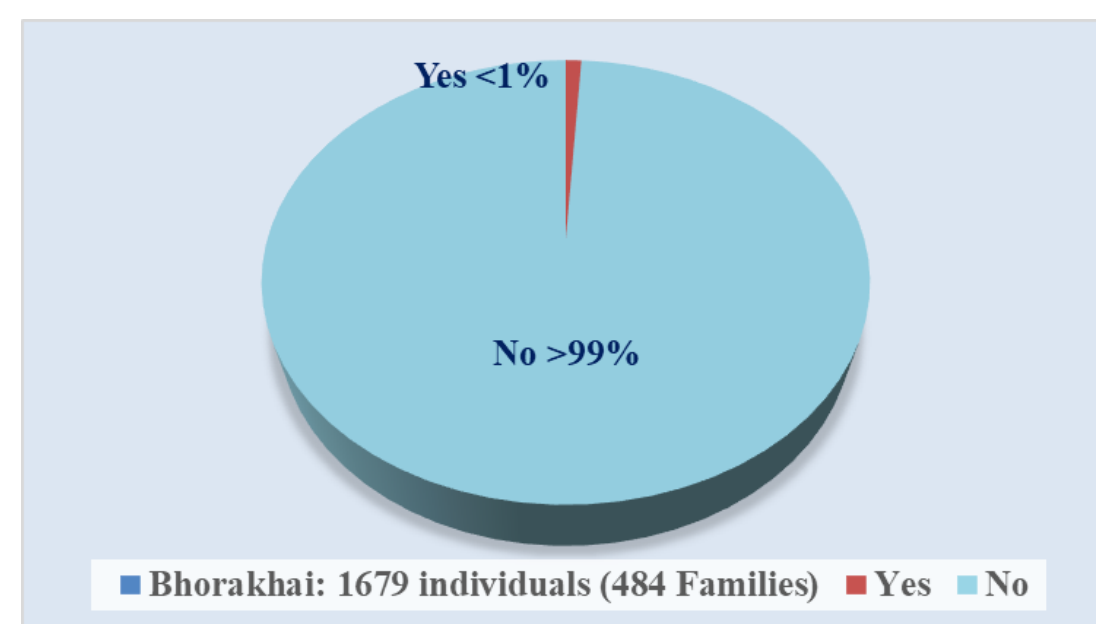
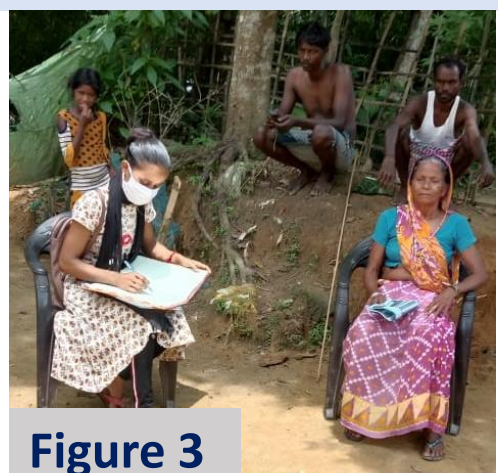


Figure 2 : Awareness of Cancer at Bhorakhai Tea garden area

Figure 1 and Figure 2: In Bantarapur, 640 families (3513 individuals) and in Bhorakhai, 484 families (1679 individuals) were interviewed. From the data, we confirm that the awareness of early signs and symptoms of Breast, Cervical, Oral and other types of Cancer was <1%. The Awareness of Breast Cancer in Men is negligible.



Figures 3, 4, 5 : In- person survey and awareness screening outreach for each member of families, during the Covid-19 scenario

Contact

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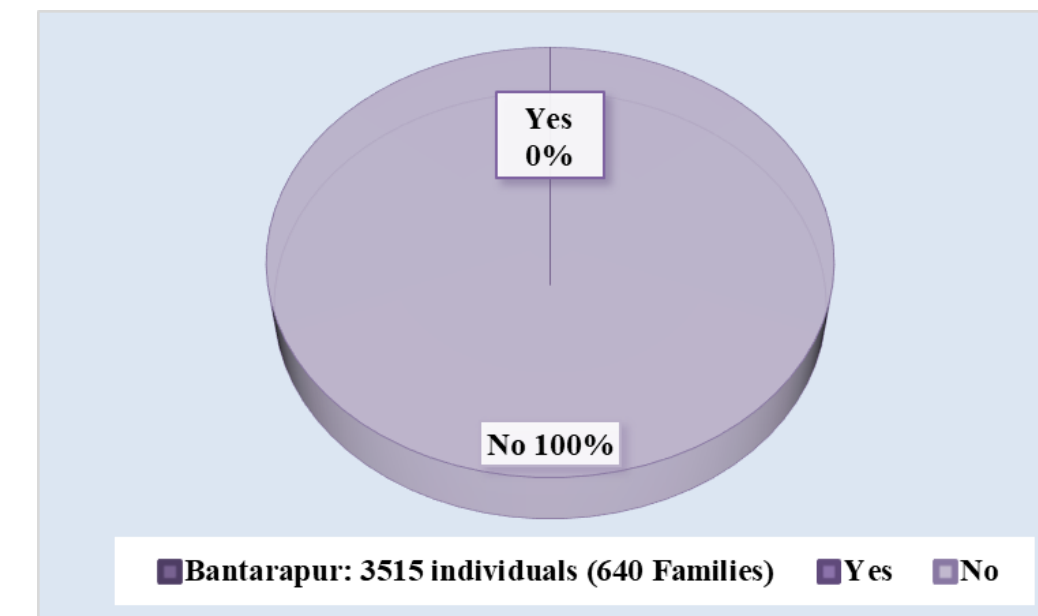


Figure 6: Early Detection Screening - Bantarapur

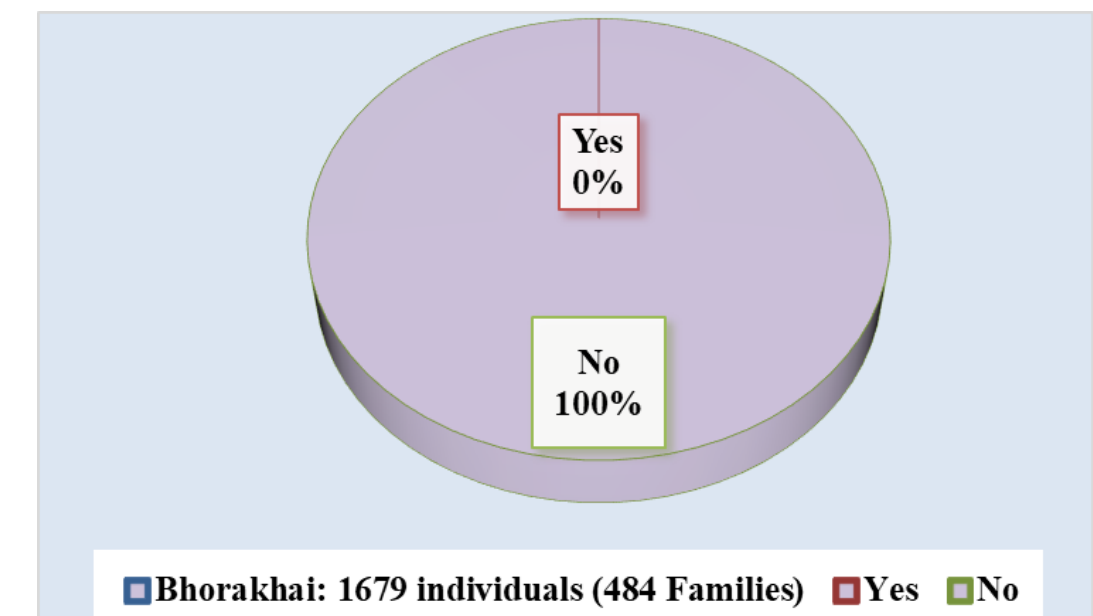


Figure 7: Early Detection Screening - Bhorakhai

Figure 6 & Figure 7: The concept of early detection screening - Breast Self-Exam, Clinical Breast Exam, Mammogram or Ultrasound, Pap & HPV tests is zero. Women & men visit the doctors only when the situation goes beyond control leading to late detection.

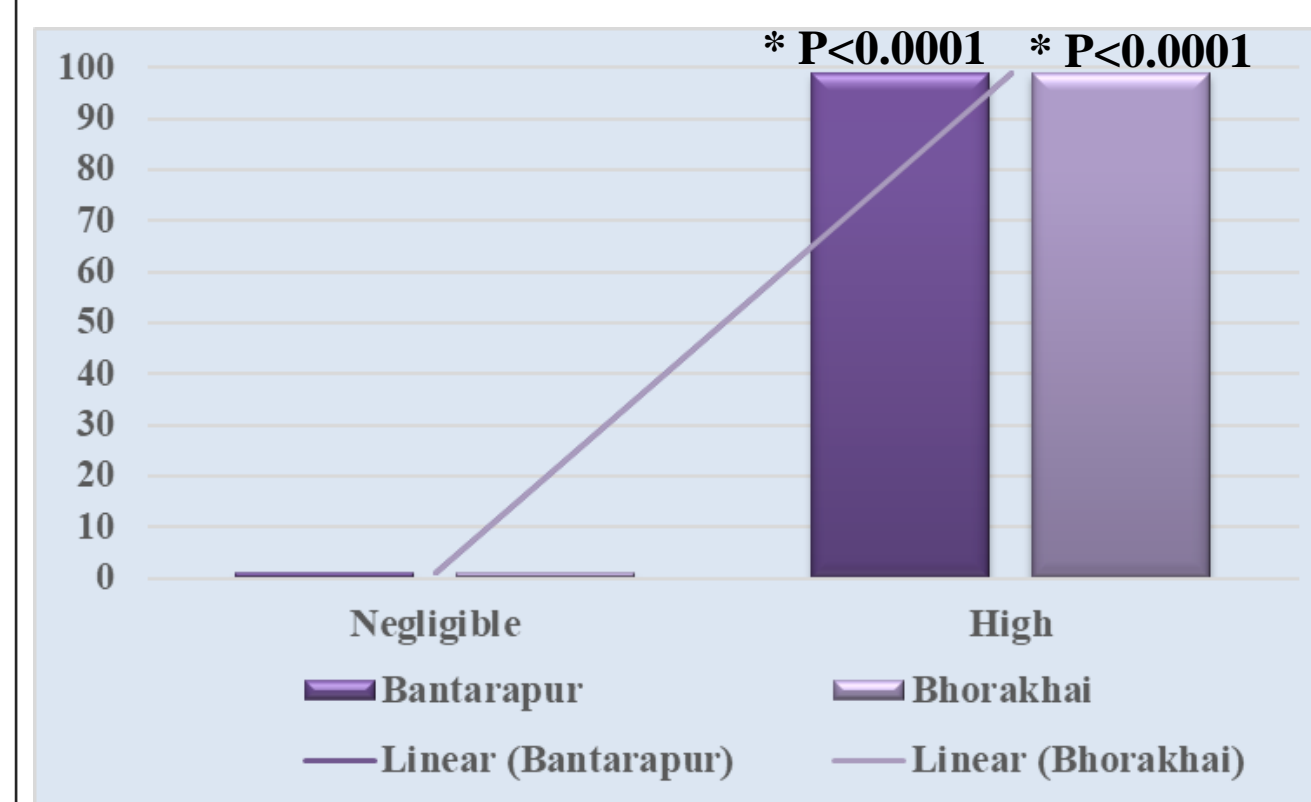


Figure 8: Significant increase in awareness & education

Figure 8: Impact: Our work created significant increase in the awareness, education & understanding screening methodology in the villages as BCH teaches the Breast Self Exam, Oral Self Exam in addition to guiding with signs & symptoms of other Cancers as we distribute the BCH produced Screening cards to each family. With our intervention, now each family is aware, knowledgeable and reach out to us with any ailments. We accompany suspicious cases to Cachar Cancer hospital or Silchar Medical College for further diagnosis. We manage each patient individually with our counseling & treatment management

Figure 9: Tobacco (Smoking/Chewing) Consumption

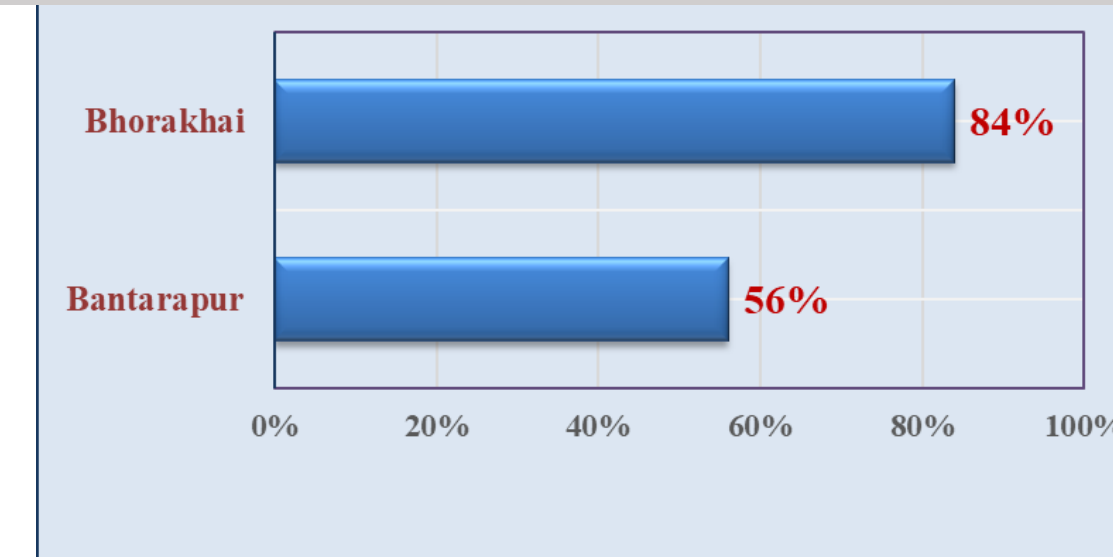


Figure 9: In Bhorakhai 1414 individuals (84%) and in Bantarapur 1983 adults (56%) consumed tobacco (smoking/chewing) with hardly any knowledge of the detrimental effects of tobacco.

BCH Anti – Tobacco Campaign



Figures 10 and 11: Breast Cancer Hub's anti-tobacco campaign driving a change by motivating the populace to reduce the consumption of tobacco, a major cause of high incidence of Cancer rate, especially Head & Neck Cancer in North-East India



Figure 12: Despite Covid -19 challenges, BCH work continued, detected suspicious cases of Breast, Oral, Cervical, Colon & others. Mostly all families are financially/economically extremely challenged and categorized under Below Poverty Line. We accompany suspicious cases to Cachar Cancer hospital or Silchar Medical College for further diagnosis, and treatment care. We monitor and manage each patient individually



Figure 13: Covid-19 created delays in suspicious cases due to fear in patients of contracting Covid thereby avoiding hospitals. Besides, unavoidable strict protocols in Hospitals restricted the potential cases. BCH helped many of the cases receive treatment by providing support from an emotional and financial standpoint via counseling & guidance

Discussion

The Covid-19 situation has aggravated the already worsened situation with everyone's health & most importantly related to Cancer which if not detected early, may lead to death. We studied many thought-provoking cases in terms of women's health & with Covid-19 the scenario became grimmer. With our suspicious cases who needed additional screening, living in far-flung interior rural areas, commute had become a huge challenge. The restrictions on movement, new norms of public vehicles, etc. had increased the fares more than thrice. Many hospitals' outpatient departments were closed or had restricted entry. Since March 2020, new protocols got introduced in the hospitals restricting the regular clinical screening or OPD process. BCH was determined and with our efforts, helped many of the suspicious cases receive treatment by providing support from an emotional and financial standpoint.

Conclusion

Our intervention has made each family aware, knowledgeable, and has built the connectivity to BCH field workers to openly discuss and communicate their emerging or ongoing issues with confidence and trust. We provide BCH screening cards to each household. We accompany suspicious cases to Cachar Cancer hospital or Silchar Medical College for further diagnosis. We manage each patient individually with our counseling & treatment management. Our anti-tobacco campaign helped reduce the consumption of tobacco. We continued our efforts to help save lives during the Covid-19 Pandemic addressing the challenges, thereby serving at the grassroots level.

Acknowledgements

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Team



References: [1] Sung et al., 2021. Global Cancer Statistics 2020: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. <https://doi.org/10.3322/caac.21660>

[2] Breast Cancer Hub: <https://www.breastcancerhub.org/research>

Ethics Committee Approval: IRB USA #20204167, IEC India #1/34/2021 (St John's Medical College & Hospital)