

Internship Training

at

PATH, New Delhi

**From Gaps to Solutions: A Qualitative Analysis of Challenges and Strategies in
SBCC (Social and Behaviour Change Communication) of anaemia under the
Anaemia Mukht Bharat program**

by

Sudiksha Gupta

PG/22/130

Under the guidance of

Dr. Nidhi Yadav

PGDM (Hospital & Health Management)

2022-24



International Institute of Health Management Research

New Delhi

(Completion of Dissertation from the respective organization)

The certificate is awarded to

Sudiksha Gupta

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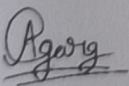
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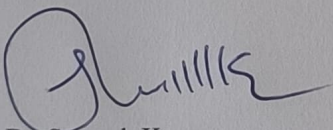
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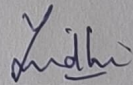
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Associate Dean, Academic and Student Affairs

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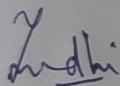
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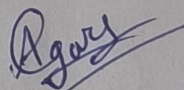


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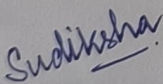
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Name of the Organisation in Which Dissertation Has Been Completed: PATH, New Delhi

Area of Dissertation: Social and Behavioural Change communication for Anemia

Attendance: 100%

Objectives achieved: Yes

Deliverables:

1. Secondary Research and Analysis: Conducting secondary research on various topics, performing cost analysis of private sector IFA supplements in India.
2. Presentation and Documentation: Drafting and finalizing team presentations on multiple topics, assisting in the development of training manuals for PATH's programs, drafting concept notes for various projects.
3. Primary Research: Conducted KIIs with communication experts to understand gaps and challenges in SBCC of anaemia under the Anaemia Mukht Bharat program

Strengths: 1. She is extremely dedicated and diligent towards her work. She is a quick learner and can grasp new fields of knowledge easily.

2. She is multi-tasking and has an eye for detail which helps her deal with complex problems with ease.

3. She has learned qualitative data collection and analysis within a short period of time with consistent improvements based on feedback.

Suggestions for Improvement: 1. More field experience is required to improve practical knowledge and understanding of the field settings.

Suggestions for Institute (course curriculum, industry interaction, placement, alumni):



Signature of the Officer-in Charge/Organisation Mentor (Dissertation)

Date: 05th July 2024

Place: New Delhi



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PRIMARY SOURCES

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5	Erica Sedlander, Michael Long, Satyanarayan Mohanty, Ashita Munjral, Jeffrey B. Bingenheimer, Hagere Yilma, Rajiv N. Rimal. "Moving beyond individual barriers and identifying multi-level strategies to reduce anemia in Odisha India", Research Square, 2019 Publication	<1%

Abstract

Anaemia is characterised by insufficient haemoglobin levels in the circulatory system, primarily stemming from iron deficiency, and is implicated in approximately 50% of global cases. Nutritional deficiencies, such as those in folate or vitamin B12, as well as medical conditions like malaria, high concentrations of certain helminth infections, particularly hookworm, and other inflammatory or infectious disorders, can all result in anaemia. The effects of anaemia vary and can impact adult productivity, overall quality of life, and school performance. It can lead to developmental delays and behavioural issues such as reduced motor activity, social interaction, and focus.

In India, significant rates of anaemia persist despite decades of government investment in its prevention and treatment. Communication is pivotal in public health endeavours, particularly in behaviour modification across various levels. For example, nurses, doctors, and other healthcare professionals must proficiently assess and address anaemia in patients. Effective communication is essential for educating individuals with anaemia, gathering information from clients, devising screening programs or policies, and training medical personnel.

Numerous programs in India aim to combat anaemia and provide vital nutrients to vulnerable groups. The National Nutritional Anaemia Prophylaxis Programme (NNAPP) started in 1970, evolved into several initiatives, including the National Nutritional Anaemia Control Programme (NNACP) in 1991, the Weekly Iron and Folic Acid Supplementation (WIFS) in 2012, and the National Iron Plus Initiative (NIPI) in 2013, each expanding coverage to various age and demographic groups. In 2018, the Anaemia Mukta Bharat initiative under POSHAN Abhiyaan intensified these efforts to combat anaemia through targeted IFA (Iron and Folic Acid) supplementation.

The Test, Treat, and Talk (T3) camp for anaemia is a comprehensive strategy developed as part of the Anaemia Mukht Bharat program. It is designed to increase awareness of anaemia, promote public understanding of the condition, and generate interest in anaemia control initiatives. Despite its strong appearance and good intentions, the Anaemia Mukht Bharat initiative has numerous implementation flaws.

There is enough evidence to conclude that repeated interaction with consistent key messaging is necessary for any behaviour to change or for a new behaviour to be initiated and become ingrained in one's routine. Thus, an understanding of the gaps and challenges in the implementation of SBCC under the Anaemia Mukht Bharat program in India is crucial in boosting the country's efforts in its fight against anaemia.

Internship report at PATH

Introduction

PATH is a global organization that works to accelerate health equity by bringing together public institutions, businesses, social enterprises, and investors to solve the world's most pressing health challenges. With expertise in science, health, finance, technology, advocacy, and dozens of other specialties, PATH develops and scales solutions—including vaccines, drugs, devices, diagnostics, and innovative approaches to strengthening health systems worldwideⁱ

Launched in 1977 by three intrepid researchers, PATH was a new kind of health organization: a nonprofit that would deliver the expertise, resources, and innovations of private industry to improve health for all.

PATH's global team of scientists, clinicians, designers, engineers, advocates, and experts from dozens of other specialties, all share the same goal: health equity. They partner with public institutions, businesses, grassroots groups, and investors to solve the world's most pressing health challenges.ⁱⁱ

For more than four decades, PATH has been a trusted partner to government leaders, social investors, grassroots groups, and businesses of every size and type. They specialize in matching each partner's expertise with their unique strengths to develop, deploy, and scale up innovations that remove roadblocks to health.

PATH Indiaⁱⁱⁱ: Since 1978, PATH has been working with public and private partners in India to develop local solutions, support homegrown innovation, and share their technical expertise. PATH develops, introduces, and scales up cutting-edge technologies and methodologies to tackle existing diseases and emerging health concerns. A few of their many successes in India include finding new methods to deliver nutritious food to schoolchildren, creating and implementing successful public-private partnership models

to combat diseases, and expanding access to lifesaving vaccines for new mothers and their infants.^{iv}

Organisational profile

Mission:

Their mission is to advance health equity through innovation and partnerships.

Strategy:

Their five-year strategy, launched in 2021, is designed to respond to the current crises they face as a global community and to the needs and priorities of their local partners and ministries of health in low- and middle-income countries.

Along the way, they will transform PATH into an even better agent of change within the global health sector^v.

Values:

These six values are essential to achieving their mission. They hold themselves accountable to these values because they guide their behaviour, decisions, and actions toward a future where good health is within reach for everyone.

1. Respect. They treat everyone with dignity, compassion, and appreciation.
2. Equity. They strive to eliminate the obstacles created by their conscious and unconscious biases and prioritise diversity, equity, and inclusion in everything they do.
3. Integrity. They do the right thing even when it is difficult.
4. Impact. They prioritize solutions to the most significant health issues in the communities of greatest need.

5. Innovation. They test new ideas, challenge the status quo, and apply what they learn.

6. Collaboration. They partner across teams, sectors, and borders.

PATH India

Since 1978, PATH has worked with Indian public and private organizations to exchange technical expertise, encourage homegrown creativity, and develop regional solutions. PATH develops, distributes, and broadens the use of cutting-edge instruments and methods to treat both novel and emerging health problems. A few of their many accomplishments in India include creating and implementing successful public-private partnership models to combat diseases, coming up with creative ways to give schoolchildren nutritious meals, and expanding access to vaccines that can save lives for expecting mothers and their unborn children (PATH India, Country Brochure).

Program Areas include:

- Tuberculosis
- Neglected Tropical Diseases and Malaria
- Vaccines
- Maternal, Newborn, Child Health and Nutrition
- Impact Lab and Digital Health
- Rice Fortification

Services provided by PATH

Today, they are harnessing the power of data and digital tools. Forging unexpected partnerships across borders and sectors. Defending against new disease threats and epidemics. Creating models to transform health care delivery. And fostering innovation

in communities everywhere to bring good health—and the jobs and economic stability that come with it—within reach of more people faster.

- 22+ states where PATH is accelerating health equity in India.
- 700+ staff working towards health impact.
- 40M+ lives improved by their work every year.

Observations/Learning, Roles and Responsibilities:

During my internship at the PATH India office, my internship journey commenced with a meticulous immersion into the operational guidelines crafted by the Ministry of Health and Family Welfare (MoHFW). These guidelines, forming the bedrock of the Anaemia Mukht Bharat (AMB) program, provided a comprehensive roadmap encompassing various facets, from beneficiary identification to the intricate protocols governing anaemia screening, testing, and treatment.

One notable endeavour during my internship involved the creation of a spreadsheet meticulously mapping the roles and responsibilities across different departments. This endeavour was not merely about data entry; it was a journey of understanding the intricate interplay between the health, education, and nutrition sectors. This endeavour underscored the importance of holistic approaches in addressing complex public health challenges.

Moreover, my internship was punctuated by active engagement in a myriad of activities, from proposal meetings to document refinement sessions. Each interaction was an opportunity to contribute meaningfully to ongoing projects. Whether it was providing insights during proposal discussions or ensuring clarity through document translation, every task was approached with diligence and dedication. In essence, my internship experience was more than just a series of tasks; it was a journey of growth and learning.

Learnings

1. Conducted extensive literature searches on various topics throughout the internship period dedicating significant hours to data compilation and synthesis.
2. Utilized research findings to inform the preparation of Information, Education, and Communication (IEC) materials tailored for various stakeholders in the Anaemia Mukht Bharat Program.
3. Developed an Excel sheet to delineate the roles and responsibilities of different departments, refining its content to enhance clarity and coherence.
4. Carried out a data collection on the IFA supplements available in the private sector, especially on e-pharmacies and developed a detailed cost analysis of the supplements by categorizing them according to formulation, form of supplement and price per mg or ml of salt. The results were summarized in a factsheet presented later on to the donors of the project by the team.
5. Contributed to the preparation of first drafts and final versions of several presentations during the internship period on a variety of topics.
6. Assisted in dashboard indicator research for the AMB program.
7. Actively engaged in meetings to provide insights and support project planning and implementation.
8. Collaborated with colleagues on the translation of materials from Hindi to English and vice-versa, coordinated with stakeholders such as CHO, Distt. Satara, Maharashtra to assist them in completing e-learning modules on AMB dashboard.
9. Participated in workshops, including sessions on qualitative analysis using NVivo, to enhance research skills and methodological understanding.
10. Drafted the zero draft of a concept note on early childhood development mother support groups for the team.

Any projects undertaken other than the dissertation

Besides participating in several minor projects, I was primarily responsible for the following project from inception:

A Landscape Analysis of availability and Costing in the Private and public sector

Through extensive research across major e-pharmacies and 12 private platforms in India along with several local pharmacies in Uttar Pradesh, Maharashtra, Jharkhand and Karnataka, a total of 462 medicines in various forms including tablets, capsules, gummies, and syrups were analysed. The aim was to gather detailed information on IFA formulations, including salt combinations, product forms, brand names, manufacturers, MRP, volume/quantity, and unit cost.

Reporting extraordinarily good/adverse events without naming the hospital/department

PATH is an exceptional organization with incredibly supportive colleagues and a robust learning environment. The team is composed of highly knowledgeable individuals, who provided me with rich insights throughout my internship. PATH places a strong emphasis on fostering discussions and advancing research, creating numerous growth opportunities.

Acknowledgements

I would like to express my heartfelt gratitude for the support and guidance I have received throughout my dissertation from various people. I would also like to thank everyone for sharing their wonderful experiences and giving me an opportunity to grow under their guidance. Their collective wisdom has not only enriched my academic pursuits but has also broadened my perspectives, fostering personal and professional growth. My sincere appreciation goes out to each individual who has contributed to my learning and development during this transformative journey.

Firstly, I would like to extend my heartfelt gratitude to my mentors and supervisors at PATH, Jayendra Kasar (Senior Program Officer), Ankur Garg (Program Associate), Anil MH (Senior Program Officer), Paayal Bose (Consultant) and Divya Soni (Consultant), for their dedication and commitment to imparting knowledge. From the inception of my endeavours, they have graciously extended their expertise, providing me with comprehensive assistance and direction every step of the way. Their support, insightful feedback, and willingness to go the extra mile have played a crucial role in shaping my understanding and enhancing my skills. I am deeply appreciative of their continuous support and the profound inspiration they have instilled in me.

I am also immensely grateful to my mentor at IIHMR Delhi, Dr Nidhi Yadav, Associate Professor, for sharing her wisdom and guiding me throughout this project. Her expertise, patience, and willingness to share her knowledge have helped me put my learnings into action. She has not only helped me overcome challenges but has also encouraged me to explore new possibilities.

In addition, I extend my gratitude to Dr Pijush Kanti Khan for his continuous motivation, support and guidance throughout this new chapter. He has been extremely encouraging throughout this journey and his support has been invaluable, complementing the mentorship I received from my primary mentors.

Lastly, I would also like to thank my friends and colleagues, whose collaboration has been essential in the successful completion of this project.

I am sincerely thankful to have had the chance to work with such inspiring individuals. Their belief in me has inspired me to continuously improve myself for the better. Their unwavering support and encouragement have been pivotal in my growth and development, and I am deeply appreciative of their positive influence on my journey.

With warm regards and sincere gratitude,

Sudiksha Gupta

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List of Abbreviations

AI	Artificial Intelligence
AMB	Anaemia Mukht Bharat
AMH	Anaemia Mukht Haryana
AMLAN	Anaemia Mukht Lakhya Abhiyan
ANC	Antenatal Care
ANM	Auxiliary Nurse Midwife
ASHA	Activated Social Health Activist
AWCs	Anganwadi Centres
AWWs	Anganwadi Workers
FLWs	Frontline Workers
GDP	Gross Domestic Product
Hb	Haemoglobin
HBM	Health Belief Model
HIPP	Health Information Package Program
IDA	Iron Deficiency Anaemia
IEC	Information, Education, Communication
IEG	Institute of Economic Growth
IFA	Iron and Folic Acid
IFAS	Iron and Folic Acid Supplementation
IPC	Interpersonal Communication
IUD	Intra Uterine Devices
IVR	Interactive Voice Response
IYCF	Infant and Young Child Feeding
KIIs	Key Informant Interviews

MMS	Multiple Micronutrient Supplements
MNP	Micro Nutrient Powders
NFHS	National Family Health Survey
NGO	Non- Governmental Organization
NHM	National Health Mission
NIPI	National Iron Plus Initiative
NNACP	National Nutritional Anaemia Control Programme
NNAPP	National Nutritional Anaemia Prophylaxis Programme
PHWs	Public Health Workers
POSHAN	Prime Minister's Overarching Scheme for Holistic Nutrition
PRIs	Panchayati Raj Institutions
PVTGs	Particularly Vulnerable Tribal Groups
RBSK	Rashtriya Bal Swasthya Karyakram
RUTF	Ready-to-use Therapeutic Food
SBCC	Social and Behaviour Change Communication
SPRING	Strengthening Partnerships, Results, and Innovations in Nutrition Globally
T3	Test, Treat and Talk
TIPs	Trials of Improved Practices
UNICEF	United Nations Children's Fund
VHSNDs	Village Health, Sanitation and Nutrition Day
WASH	Water and Sanitation, Health
WHO	World Health Organization
WIFS	Weekly Iron and Folic acid Supplementation
WRA	Women of Reproductive Age

Introduction

Anaemia is characterised by insufficient haemoglobin levels in the circulatory system, primarily stems from iron deficiency and is implicated in approximately 50% of global cases (1). Nutritional deficiencies, such as those in folate, or vitamin B12, as well as medical conditions like malaria, high concentrations of certain helminth infections, particularly hookworm, and other inflammatory or infectious disorders, can all result in anaemia (2).

The symptoms of anaemia differ depending on its severity, and can include fatigue, weakness, dizziness, and drowsiness, and may also hinder the cognitive development of children and elevate morbidity rates (1).

Anaemia can impact adult productivity, overall quality of life, and school performance. It can lead to developmental delays and behavioural issues such as reduced motor activity, social interaction, and focus. During pregnancy, it can contribute to adverse outcomes such as low birth weight, premature delivery, and maternal mortality. Besides its health implications, anaemia imposes substantial financial burdens on individuals, families, communities, and nations. Making investments to reduce anaemia in women could result in an estimated economic gain of US\$12 for every US\$1 spent (3).

Children under the age of five, particularly newborns and young children under two, menstruating adolescent girls and women, and pregnant and postpartum women are the populations most susceptible to anaemia. Worldwide, anaemia is projected to affect 269 million children aged 6 to 59 months and 500 million women aged 15 to 49. Anaemia afflicted 37% (32 million) of pregnant women and 30% (539 million) of non-pregnant women aged 15 to 49 in 2019. The most impacted WHO (World Health Organization) regions are Southeast Asia and Africa, where anaemia affects 244 million women and 83 million children in Southeast Asia and an estimated 106 million women and 103 million children in Africa (3,4).

Low- and lower-middle-income countries with rural populations and limited access to formal education bear the greatest burden of anaemia (3). From the time that anaemia monitoring began in the NFHS-2 (National Family Health Survey) (2005–06) in India, there has been a downward trend for anaemia prevalence for all groups in the subsequent NFHS surveys until NFHS 4. However, during NFHS-5, there was a rapid increase in the prevalence of anaemia for all groups, with children under the age of five showing the greatest increase, with 67% exhibiting haemoglobin levels below 11.0 g/dl (3). The rates of anaemia in adolescents aged 15-19 years have climbed to 60.2% according to the NFHS-5, compared to the 54.1% recorded in the NFHS-4 data (5). Similarly, among individuals aged 15-49, 57% of women and 25% of men are affected by anaemia (6).

The prevalence of anaemia in India is increasing, especially in states like Bihar and Uttar Pradesh. In Bihar, around 63.5% of children aged 6-59 months and 58.3% of pregnant women aged 15-49 years are anaemic, while in UP, 66.4% of children aged 6-59 months are affected (6,7).

One of the Global Nutrition Targets for 2025 set by the World Health Assembly is to reduce anaemia and aims for a 50% reduction in anaemia among WRA by 2025. While there has been some progress in reducing anaemia, global efforts are not currently on track to meet the target set (8).

Programs to prevent nutritional anaemia include interventions like iron and folic acid supplementation (IFAS), fortification, and dietary diversity enhancement. However, food fortification has mixed results due to compliance issues and the impact of deworming programs on anaemia is inconclusive. Additionally, antenatal multiple micronutrient supplements (MMS) are now recommended over IFAS alone. Studies have also shown that water, sanitation, hygiene interventions, and delayed cord clamping reduce anaemia risks (8).

Communication is crucial in public health, especially in changing behaviours. For example, healthcare professionals need to communicate effectively to address anaemia in patients, educate individuals, collect information, develop screening programs, and train medical personnel (2).

Effective health education initiatives rely on relevant theories and models like the Health Belief Model (HBM) which emphasizes preventive behaviours, considering factors like perceived severity, susceptibility, benefits, barriers, cues to action, and self-efficacy. For instance, women are more likely to adopt preventive behaviours when perceived benefits outweigh barriers. Understanding the seriousness of an illness prompts behavioural changes, highlighting the importance of theory-based health education (9).

Recognizing the critical need for effective intervention, international organizations, national governments, and non-governmental organizations have launched numerous initiatives aimed at addressing and mitigating the burden of anaemia.

- SPRING by USAID in the Kyrgyz Republic raised awareness about anaemia and its prevention by training healthcare providers to counsel pregnant women on taking IFA supplements. They also educated communities on consuming iron-rich foods with vitamin C for better absorption and emphasized the importance of involving NGOs (Non-Governmental Organizations) and training local women like the mothers-in-law who educated their daughters-in-law and motivated them to stick to IFAS (10).
- A project by Nutrition International targeted adolescent girls in Africa and Asia with weekly IFA supplementation and nutrition education. In Ethiopia, 'motivator' girls were trained to educate peers on nutrition and anaemia. The program prevented an estimated 1.2 million anaemia cases. Adolescents played a key role in program activities for continuity (11).

- A 2021 study in Odisha, India found that women's intentions to take iron supplements were influenced by social expectations, particularly by their husbands. The study recommended targeting husbands in SBCC (Social and Behaviour Change Communication) efforts and focusing directly on anaemia testing to efficiently address the population's needs (12,13).
- Nepal's success in improving maternal anaemia from 2002-2016 was due to government commitment, increased health facilities, ANC coverage, and mobilization of frontline health workers. Decentralized governance structures and Female Community Health Volunteers played a crucial role and the maternal nutrition services were brought closer to communities through community-based health worker networks and strong social mobilization (14,15).

Numerous programs in India aim to combat anaemia and the efforts started back in the 1970s with the National Nutritional Anaemia Prophylaxis Programme (NNAPP) which targeted children aged 1–5 years, pregnant and lactating women, and IUD acceptors. It was succeeded by the National Nutritional Anaemia Control Programme (NNACP) in 1991, with similar beneficiaries. The Weekly Iron and Folic Acid Supplementation (WIFS) program, launched in 2012, focused on school adolescent boys and girls aged 10–19 years, along with out-of-school girls in the same age group. In 2013, the NIPI (National Iron Plus Initiative) expanded coverage to include children aged 6–59 months, children aged 5–9 years, adolescents aged 10–19 years (both in and out of school), and women aged 15–49 (including pregnant and lactating women).

Subsequently, the Anaemia Mukht Bharat initiative under the POSHAN Abhiyaan was launched in 2018, intensifying efforts against anaemia (16,17). The Anaemia Mukht Bharat strategy has been designed with a multifaceted approach and a more robust operational and accountability framework. It builds upon the technical and operational evidence from the NIPI and WIFS programmes.

The program is based on a 6x6x6 strategy and caters to 6 beneficiary groups, has 6 interventions and utilizes 6 institutional mechanisms. The policy aims to target 450 million beneficiaries with specific anaemia prevalence goals for 2022, which will be achieved across a range of demographic groupings. From 2018 to 2022, the Anaemia Mukht Bharat strategy aimed to annually decrease the prevalence of anaemia among children, adolescents, and women in the reproductive age group (15–49 years) by 3 percentage points (1).

Current programs to reduce anaemia mainly focus on giving people IFA tablets or syrups as treatment (17). Under the Anaemia Mukht Bharat program, recommendations for IFA supplementation vary according to age and life stage (1). The AMB strategy suggests that adolescent girls and boys will undergo anaemia testing using digital hemoglobinometers annually, conducted by RBSK (Rashtriya Bal Swasthya Karyakram) teams in schools. Likewise, pregnant women will undergo anaemia testing at all ANC (Antenatal care) contact points using digital hemoglobinometers. Additionally, haemoglobin estimation will be conducted using Semi-Auto Analysers at all high case load facilities at the block level and above (18).

The Test, Treat, and Talk (T3) camp for anaemia is a comprehensive strategy developed as part of the Anaemia Mukht Bharat program. It is designed to increase awareness of anaemia, promote public understanding of the condition, and generate interest in anaemia control initiatives. Each T3 camp lasts one day at a fixed location and time, serving around 500 beneficiaries who may belong to various groups like pregnant women or adolescents. The camp includes three main components: anaemia testing using a digital hemoglobinometer, administration of iron-folic acid (IFA) tablets with referrals as needed, and counselling on nutrition and healthy lifestyle choices emphasizing iron, protein, and vitamin C-rich foods (19). Named for its purpose, the T3 camp operates on widely accessible platforms and aims to reach a diverse range of beneficiaries.

Participants undergo anaemia testing using digital hemoglobinometers, and those diagnosed with anaemia receive IFA tablets. Additionally, participants engage in discussions focusing on iron and vitamin C-rich diets as part of the camp's educational component (20).

Successful SBCC interventions in anaemia in India:

1. Haryana: In line with national and global commitments, the National Health Mission (NHM) and the Government of Haryana developed a comprehensive program called Anaemia Mukht Haryana (AMH) to reduce the prevalence of anaemia in Haryana. AMH included several strategies, including the distribution of Gud-chana, a combination of jaggery and chickpeas, at T3 camps and the use of visual mediums such as posters, banners, and hoardings to promote the AMH campaign's message (21).
2. Shrivasthi: Regular campaigns engaged adolescents and families, promoting the benefits of IFA consumption. Posters and pamphlets highlighting IFA advantages were distributed in schools and other venues. Department officials received training on anaemia and IFA supplementation. As a result, IFA supplementation coverage among 10-19-year-olds in Shrivasthi increased from 8% to 87% in 2022-23 (22).
3. Odisha: The chief minister launched AMLAN (Anaemia Mukht Lakshya Abhiyan), an initiative to eradicate anaemia from Odisha. T3 camps are held twice a year at the community health centre level and once a quarter at the district level, ensuring testing for haemoglobin levels. Special attention is given to tribal groups and PVTGs, with a customized SBCC strategy to address their specific needs (23).

Despite its strong appearance and good intentions, the AMB has numerous implementation flaws and in India, significant rates of anaemia persist despite decades of government investment in its prevention and treatment (7,24). Health practitioners

frequently confuse effective communication involving dialogue with the community with one-way distribution and rely just on posters to alert pregnant women about iron supplements (2). Due to their desire to avoid liability for student medication, the majority of private schools choose not to participate in the program. Often parents are also sceptical of the quality of government-purchased, subsidized medications and as a result, most of the children attending private schools get left out. The lack of a consistent and long-term platform makes it difficult for the program to reach children who are not in school as well as children who are migrants (25).

Rationale

There is enough evidence to conclude that for any behaviour to change and become ingrained in one's routine, repeated interaction with consistent key messaging is necessary. As SBCC is one of the 6 interventions under the AMB, the four main behaviours that the present AMB program aims to target are:

1. Adherence to deworming and iron-folic acid supplementation
2. Appropriate Infant and Young Child Feeding (IYCF), with a focus on providing children six months and older with sufficient and age-appropriate supplementary foods
3. Increase consumption of foods high in iron, protein, and vitamin C by varying the diet's quantity, frequency, and kind as well as by fortifying food.
4. Encouraging all births in medical facilities to delay cutting the cord for at least three minutes, or until the cord pulsations stop, and then to start nursing as soon as possible—within an hour of the delivery (1).

Behaviour changes are crucial for public health programs. Strategies may include educating specific groups and improving healthcare and institutional effectiveness. Simply informing people about health concerns is not enough to change behaviour, as factors such as culture, past experiences, and societal acceptance play a significant role.

The environment in which an individual lives plays a critical role in shaping their behaviour. While it may be easy to change an individual's behaviour in the short term, altering long-term behaviour patterns without reinforcement is extremely challenging (2).

Thus, an understanding of the gaps and challenges in the implementation of SBCC under the Anaemia Mukht Bharat program in India is crucial in boosting the country's efforts in its fight against anaemia.

Objectives

The study aims to answer what are the gaps and challenges of Social and Behaviour Change Communication (SBCC) in anaemia under the Anaemia Mukht Bharat program in India.

Research objectives:

- Primary objective-
 - To identify the gaps and challenges in the implementation of the SBCC component in Anaemia Mukht Bharat
- Secondary objective-
 - To draw inferences from best practices across the world and identify what worked well for them during their struggle against anaemia

Literature Review

Understanding the causes of anaemia

Anaemia occurs when the haemoglobin (Hb) concentration drops below a defined cut-off value, thus, decreasing the blood's capacity to transport oxygen to the body (26). Anaemia among women of reproductive age (WRA) can result from a variety of factors, including consumption of an inadequate diet, infectious diseases such as hookworm infestation, malaria, tuberculosis, and HIV, as well as chronic diseases. Additionally, childhood

anaemia may be caused by deficiencies in folate, vitamin A, and vitamin B12, as well as malaria infection, hookworm infestation, and hemoglobinopathies (26,27).

There is a close relationship between diet and the incidence of anaemia. A poor diet, which may include skipping breakfast and inadequate intake of iron, protein, and vitamin C, can lead to anaemia (28). Staple foods provide almost 70% of the daily iron intake but the ingested iron is often poorly absorbed (29). Furthermore, drinking tea or coffee shortly after meals can also limit the absorption of iron, impacting haemoglobin levels (28).

Anaemia: implications and outcomes

In developing countries, the social and economic ramifications of iron deficiency anaemia (IDA) are significant. Estimates suggest that the effect of IDA on children aged 6 to 59 months could lead to total lifetime production losses equivalent to a 1.3% reduction in India's GDP (29).

The implications of anaemia include delayed mental development, reduced earnings due to illness and fatigue, escalated healthcare expenses, and hindered economic progress (30). Anaemia in young women profoundly affects their well-being, leading to irregular menstruation. If unaddressed, it can impact the reproductive health of young women, who are prospective mothers (28). Women experiencing anaemia are at elevated risk of mortality, illness, postpartum bleeding, and adverse birth outcomes such as premature deliveries and low birth weight (31). Anaemia during pregnancy hinders oxygen supply to the foetus and disrupts normal foetal growth, resulting in adverse outcomes for both mother and child (26).

Threat perception anaemia in the community

Many young women lack a complete understanding of how to consume folic acid tablets, such as taking them with coffee or tea where drinking coffee or tea can lower ferritin levels in the blood (32).

In a study conducted by Erica Sedlander in Odisha to understand the individual barriers in IFA uptake, at the individual level, participants knew iron supplements prevent anaemia but underestimated its prevalence and risk in their community. At the community level, only pregnant women and adolescents were reported to be taking iron supplements, ignoring non-pregnant women. Unequal gender norms further hinder non-pregnant women from prioritizing their health to obtain iron supplements (33).

From the researches conducted by Faradina Annisa et al. and Riri Aprianti et al, it can be concluded that there is an influence of perceived self-efficacy on the intention of adolescent girls to consume Fe tablets as a prevention effort for anaemia. There is no influence between perceived benefit with the intention of adolescent girls in consuming Fe tablet as an anaemia prevention effort (34,35).

In a formative study conducted by Pamella Williams et al, most women were aware of anaemia but did not understand its serious consequences. Many women were not adherent to IFA supplements due to side effects and lack of information from healthcare providers (36).

IFA supplementation

The regularity of IFA supplementation is influenced by various factors including side effects, correct consumption methods, socio-cultural aspects, and difficulty in swallowing tablets (32). In a study to examine behaviours women could use to prevent and treat anaemia, including adhering to IFA supplements and dietary changes, women expressed confidence in preparing and consuming healthier foods, but many lacked control over food resources, such as shopping for groceries (31,32).

Young women hold misconceptions about IFA supplements, such as believing that iron tablets cause menstrual irregularities (32). Participants also thought that excessive iron

supplement intake during pregnancy could lead to a larger baby, resulting in a painful birth and an expensive caesarean section (33).

In the same study, it was found that mothers-in-law were generally unsupportive of their daughters-in-law taking regular iron supplements during pregnancy, while the husbands were supportive (33). However, husbands appeared to be less involved in their spouses' anaemia treatment or health decisions. Additionally, household members, especially elders, may discourage taking IFA supplements by sharing negative opinions and incorrect information (36).

Strategies to reduce anaemia

In the global context, interventions addressing anaemia include both nutrition-specific and nutrition-sensitive approaches. In certain regions of Asia and Africa, agricultural initiatives such as home gardens and irrigation have increased food security and reduced anaemia rates. Water, Sanitation, and Hygiene (WASH) interventions, implemented in schools and households, have also demonstrated effectiveness in decreasing anaemia rates. Some nutrition-specific interventions include the distribution of micronutrient powders (MNPs), fortification of milk, and the provision of supplementary food to vulnerable women, infants, and children. Ready-to-use therapeutic foods (RUTFs) and complementary feeding programs have also been employed in the prevention and treatment of malnutrition and anaemia (30).

Supplementation, the direct provision of vitamins and minerals through liquids, pills, tablets, or dispersible formulations, is a widely adopted intervention in clinical and public health settings. Universal IFAS for anaemia prevention in pregnant women is considered one of the most effective therapies for improving maternal survival and may also contribute to increased newborn and child survival (29,31).

Socioeconomic factors that influence service uptake

Socioeconomic determinants include joblessness, poor wages, poor sanitation and poverty, which may play a significant role in promoting IDA (27,29). A high level of parental education is regarded as a significant socioeconomic factor in preventing anaemia. Higher education levels enhance employment opportunities, leading to easier access to iron-rich foods. Education is also associated with various other health-related factors, such as access to sanitation facilities and health behaviours like handwashing or proper treatment of diarrhoea (27).

Even with household food security, certain cultural norms, such as the practice of "women eating last," may exacerbate food insecurity among this population, leading to iron deficiency anaemia (29). Unemployment, low income, inadequate housing, and substandard health conditions are potential factors contributing to anaemia. As a result, individuals of all age groups, particularly children under 2 years old living in rural areas or on the outskirts of urban areas, are at a heightened risk of developing anaemia (27).

Role of SBCC in health programs

In the global health context, Social and Behaviour Change Communication (SBCC) is vital for introducing and promoting desired health behaviours and norms. SBCC employs various communication methods including mass media, social media, digital communication, community-level activities, interpersonal communication, and advocacy to shape social norms and behaviours (37).

For instance, SBCC interventions significantly improved IYCF practices in Ethiopia, surpassing the effectiveness of traditional nutrition education programs that solely target individual behaviour change. The most successful SBCC interventions employed multiple platforms, segmented the audience, included multiple contact points, and were multisectoral (38).

Impact of SBCC on anaemia reduction programs

Social mobilisation and community awareness regarding IFA/albendazole intake, hygiene promotion, and improved dietary practices are crucial for the success of any anaemia control strategy (39). Educational interventions based on the HBM can enhance dietary IFA intake among pregnant women in primary healthcare settings (40).

In several experimental studies, it has been shown that BCC and SBCC strategies are quite effective in improving haemoglobin and haematocrit levels for the anaemic population, improving knowledge on anaemia and consumption of iron-rich foods (41,42). Chandran et al. found that mothers attending a tertiary care government facility in India who received IEC interventions showed a greater increase in haemoglobin levels compared to those who did not receive any intervention (43). A study conducted by Abebe Ferede found that a nutrition behaviour change intervention positively impacted haemoglobin levels in children aged 6-59 months, highlighting the need to expand such interventions to combat anaemia in this age group. (44).

SBCC challenges

Determining the best indicators for measuring the effectiveness of nutrition-specific interventions with SBCC components is challenging. Isolating the specific impact of SBCC is difficult due to its role in multi-faceted interventions. More research is needed to understand the "dose-response" relationship, or the minimum SBCC exposure required for significant effects (45).

Leveraging Technology in SBCC to Combat Anaemia

Traditionally, SBCC interventions used mass media like TV and radio, and offline methods such as community meetings and door-to-door campaigns. These methods have limitations, as street plays and door-to-door efforts are hard to scale, and TV and radio often have limited reach. However, the growing use of mobile phones offers a scalable way to conduct SBCC campaigns (46).

Smartphones offer a practical and efficient means for information dissemination compared to traditional print media. Given the widespread usage of smartphones among teenagers, they can serve as a platform for interpreting reminders and monitoring changes over time (28).

A challenge for mobile phone interventions is ensuring that the target group has access to phones and the necessary technological skills which might be affected due to the digital divide between urban and rural areas, and the gender gap in technology ownership. To address these issues, Interactive Voice Response (IVR) technology may be used, which works over standard phone calls and is more accessible than smartphone apps (46).

Anaemia Mukht Bharat

Following the AMB strategy implementation, IFA supplementation coverage increased for all beneficiary groups from 2017–18 to 2019–20. States such as Gujarat, Himachal Pradesh, Andhra Pradesh, and Madhya Pradesh demonstrated better coverage across beneficiary groups. Significant progress was seen in Himachal Pradesh, Haryana, and Bihar. IFA supplementation coverage was highest among pregnant women (90.3%) and lowest among children aged 6–59 months (14.9%). Notably, there were no gender disparities in IFA supplementation coverage among school-going girls and boys (47).

An AMB dashboard and portal provide a centralized platform for a wide range of anaemia-related resources including webinars, presentations, posters, brochures, training materials, recipe booklets, operational guidelines etc. The portal is regularly updated with various resources such as logos, intervention posters, pamphlets, GIF videos, anaemia scorecards, progress reports, radio spots, policy briefs, and nutrient cards (48).

Challenges in Anaemia Mukht Bharat program

Non-pregnant, non-lactating WRA, though targeted, are not effectively receiving the interventions under the program. They are expected to receive IFA supplements through

home visits by healthcare workers, adding to the workload of already overburdened frontline staff (49).

The lack of inter- and intra-departmental coordination in program implementation is a significant cause of inefficiencies in coverage. The system not only faces challenges regarding logistics and resources but also suffers from incentive issues (47).

Textbooks and policy documents lack specific information on iron-rich foods, mentioning only broad food groups. However, commonly consumed foods within these groups, like rice, red gram dal, spinach, and mustard leaves, are not the highest in iron content. This deficiency in specific information may hinder efforts to promote iron-rich food consumption and address iron deficiency anaemia (50).

Innovative approaches and novel theories for implementation

In a study led by Judith Noronha et al., a health information package program (HIPP) effectively improved knowledge, food selection ability, and haemoglobin levels in anaemic pregnant women. HIPP is defined as a structured program comprising education on anaemia in pregnancy, its prevention, IFA supplementation, and deworming if necessary (51).

Deanna Olney et al. conducted a 2-year integrated agriculture and nutrition program in Burkina Faso targeting women. The program focused on seven essential nutrition actions and included bi-monthly home visits from older female leaders or health committee members. During these visits which had positive outcomes, women learned about optimal practices and discussed their successes and challenges in adopting them (52).

The Human-Centred Design (Living Labs) workshop for anaemia and the AMB program conducted by PATH in the Indian states of Uttar Pradesh and Bihar aimed to gather frontline workers' perspectives, understand their implementation challenges, and co-design solutions. This approach bridges field insights and policymakers (53).

The TIPs (Trials of Improved Practices) approach effectively improved pregnant women's nutritional status through interpersonal communication, family involvement, and reminder materials. The intervention included three home visits over 12 weeks: an assessment visit to measure haemoglobin, dietary intake, and weight; a negotiation visit with counselling and reminder materials, asking women to try new practices; and an evaluation visit to assess practice adoption, motivations, barriers, and remeasure haemoglobin, dietary intake, and weight. The authors suggest exploring TIPs on a larger sample (54).

Methodology

To gain a better understanding of the gaps and challenges in the SBCC of Anaemia Mukht Bharat, an exploratory qualitative research study was conducted in New Delhi, India from March to May of 2024. Inferences from case studies around the globe were also used to understand what strategies worked well for them in their fight against anaemia.

Study design and setting

An exploratory qualitative research study to identify the gaps and challenges in implementing the SBCC strategy for Anaemia Mukht Bharat in India was implemented. The study took place in New Delhi and involved conducting 10 (or more) Key Informant Interviews (KIIs) with communication and anaemia experts from both private and public sectors in India until data saturation was achieved.

Eligibility criteria for study participants

The study utilized organizations and experts who were involved in implementing campaigns to screen, prevent, and cure anaemia. The participants could also be project managers, program administrators, or technical experts working on anaemia and/or nutrition projects in India or abroad. Additionally, a background in SBCC was desirable for potential participants.

Sampling technique and sample size

In this qualitative study, a purposive sampling technique was utilized to identify the organizations and experts engaged in implementing campaigns aimed at screening, preventing, and treating anaemia. An extensive review of prior studies conducted across India was employed to initially pinpoint these organizations and experts. The communication experts were initially contacted via LinkedIn. Following their confirmation and expression of interest in participating in the discussion, a formal invitation containing the details of the discussion was sent to them.

The next step involved using a snowball sampling approach to increase the number of respondents. Interviewees were also asked to recommend any other relevant organizations that are involved in programs related to SBCC for anaemia or other nutrition-related issues.

To ensure a diverse range of perspectives, participants were chosen from both the public and private sectors, each with at least 15 years of experience. Additionally, 10 KIIs were conducted with experienced communication and anaemia experts during the study.

Interview guide

To conduct IDIs with subject matter experts, a semi-structured interview guide was created based on the evidence found in the available literature. The interview guide included many topics, including a discussion of global success stories, barriers and facilitators in the implementation of Anaemia Mukht Bharat program, with a special focus on the SBCC component, the government's policies and preventive actions to tackle anaemia in India, learnings from the participants' work on the ground, learnings from the private sector, role of PRIs (Panchayati Raj Institutions), NGOs and influencers in bringing about a behaviour change and the reasons for a low threat perception of anaemia in the community.

The interview guide was also piloted to find any flaws and they were fixed before interviewing the study participants. Open-ended, semi-structured interview questions and probes were included in the interview guide to delve further into study participants' perspectives of the goals of the research.

Data collection

In a demonstration of their interest in participating in the study during interaction on LinkedIn, the participants were shared a brief overview of the study and an ethically approved informed consent form over the mail. They were explained about the research objectives and asked to share the signed consent form at their convenience.

The interviews lasted between 40-60 minutes and 9 KIIs were conducted using MS Teams, while one was conducted in person. The virtual meetings were documented after receiving verbal approval from the participant. Throughout the KIIs, an open exchange of information, and follow-up questions were encouraged to delve into the participants' viewpoints and comprehend their on-site work more thoroughly. Written records were also made simultaneously with the interviews to capture the non-verbal signals. Each participant was given a unique code to help maintain confidentiality during analysis.

Analysis

Data was analysed using an inductive thematic approach. All KIIs were audio-video-recorded, transcribed verbatim and translated wherever needed into English and double-checked before starting the coding process. Following transcription of the audio recordings, codes and sub-codes were formulated using an online qualitative software, *Taguette*.

The codes were discussed and discrepancies were addressed with the help of mentors at PATH and IIHMR, Delhi. The codes were then categorized into themes and sub-themes

on MS-excel and thematic data analysis was carried out to generate inference from the data collected.

Ethical considerations

The International Institute of Health Management Research, New Delhi's Student Review Board reviewed the protocol of the study and approved the same. The SRB ensures adherence to ethical standards and guidelines in research endeavours undertaken by students. The eligible study participants provided written informed consent before collecting data from them. Permission was also taken from the study participants to audio record the interviews and use anonymized quotes. They were informed about the voluntary nature of their participation and they were given complete right to ask any questions or withdraw from the study at any time during data collection.

Results

Understanding the progress and perceptions of the AMB program

The current progress of the AMB program in the field

The participants were happy with the increasing awareness of anaemia in the community due to the program. They felt that the program had extensive coverage and that people were receiving the necessary pills. While there is room for improvement, they thought the AMB strategy was well-designed. One participant described the strategy as "inclusive" because it focused on SBCC, school activities, engaging stakeholders, and other areas. They also noted the positive impact of initiatives like AMB and POSHAN Abhiyaan, referred to as "Jan-Andolans", and mentioned the hype created around anaemia through advertisements. Another participant emphasized that women now have more knowledge about anaemia, which is a big win and calls for celebration.

“The amount of awareness campaigns that have been run by the government on anaemia, there have been many. And indeed, we did

find that awareness levels were very high. On the ground, people did know about anaemia, do people do know about the pills, because the government has done a great job in increasing awareness.”

(SBCC_04)

However, they also pointed out some shortcomings in how the program is being carried out at the local level. They mentioned that the program is facing behavioural challenges; even though the public is aware that the program provides IFA pills, the intended beneficiaries are not taking them. Additionally, the women receiving the pills are not being informed about the potential side effects. One participant noted that the strategy has not been implemented as intended. The program continues to primarily target pregnant and lactating women, which has both positive and negative implications. A significant portion of the program still emphasizes what anaemia is and how it is diagnosed and lacks in addressing the barriers to the uptake of desired behaviour. A notable point that emerged from the discussion was the observation that there has been limited effort to address the community's norms and beliefs.

“Generally the assessment that I have read, IEC material or SBCC material has rarely been used; it is not visible at all. There is hardly any visibility and therefore the needle in Anaemia Mukh Bharat is moving very slowly or it hasn't moved at all because that portion is missing.” (SBCC_02)

The participants agreed that the current strategy is multi-pronged and has several components in place which is needed for a behaviour change to happen.

“Same messages coming out of school rally, same messages coming at the PRI's so multi-pronged strategies have to be done and I think for as far as the AMB is concerned, I can say that it has been done.”

(SBCC_01)

Perceptions

The participants stated that public health workers (PHWs) are concerned about the issue of anaemia and want it resolved. However, there is currently a sense of fatigue regarding the program at the field level.

... people have got so fatigued with anaemia because they keep saying, "50 saal se program chal raha hai" (the program has been going on for 50 years), nothing is happening... (SBCC_09)

The participants seemed divided on whether the community was fully aware of the details of anaemia. Some felt that there was high awareness of the issue within the community based on their work at the ground level, while others felt the opposite.

"Conversation like no, nobody talks about anaemia. It's not a, it's not a conversation that happens in our lives, right? It's not a conversation that happens in a family or in a school or any of these places."
(SBCC_03)

Through their fieldwork, one participant highlighted that the government believes providing enough information can stimulate behaviour change. However, others suggested that merely providing information is insufficient; awareness must convert into intent, and intent into action.

"They think that agar logon ko information provide kardi, unko educate kardia, aur communicate kardia to (if you provide information to people, educate them, and communicate, then) people will start taking IFA tablets." (SBCC_02)

They also emphasized that the government's view on the severity of anaemia may not fully align with what experts believe. Additionally, there appears to be a gap in

collaboration with advertising agencies, possibly due to unfamiliarity with their operations.

One of the participants expressed a different view, challenging the common belief that oral IFA supplementation has been ineffective. They explained that within the population of women of reproductive age (WRA), only a subset becomes pregnant, and among these pregnant women, only a smaller subset experiences anaemia. Of those, an even smaller subset may develop complications that could be life-threatening; hence, the perceived ineffectiveness of oral IFA supplementation might be overstated, as the most serious complications affect only a small fraction of the overall population.

Gaps and Challenges in SBCC of Anemia

Poor Community Engagement and Skewed Perceptions

While commenting on the effectiveness of SBCC interventions, a participant highlighted that the current messaging overlooks the existing value systems. Participants shared their concerns about the current ineffectiveness of SBCC efforts. They pointed out that the strategies often focus on conveying what program managers think people need to know, rather than considering things from the users' perspective.

“Generally what happens we try to when whenever we are mobilizing or spreading awareness, we reject the indigenous behaviours and that is the point when we just lose the connectivity; there is a backlash there is a disconnect and there is a blockage.” (SBCC_06)

They also highlighted that the work under the program is frequently carried out based on written orders from superior officials, leading to a lack of passion required for the efforts to be effectively implemented at all levels.

Low threat perception of anaemia in the community

The respondents noted that anaemia is not perceived as a disease in the community. IFA supplementation is viewed as a preventive measure rather than a cure, reinforcing this perception. This reduces the perceived threat of anaemia, as it is not seen as a condition requiring treatment. Participants emphasized that anaemia is normalized within the community, often overlooked because its symptoms, such as fatigue, are attributed to general tiredness, particularly during pregnancy. They illustrated this point by contrasting how people seek medical help for headaches but typically do not get their haemoglobin levels checked when experiencing fatigue.

The majority of participants felt that since anaemia doesn't have an immediate impact on the lives of the patients, it is often difficult to show them the consequences and convince them to take preventive measures against it.

“People often don't see things that cannot be seen right, and anaemia cannot be seen and therefore people don't see it as a threat.”

(SBCC_03)

The AMB program mainly focuses on preventive measures for anaemia. Because the community perceives the threat of anaemia as very low, these measures are not a priority for anyone. A participant also emphasized that when even educated people in urban areas perceive the risk of the disease as low, it can't be expected that rural areas will take it more seriously, especially when their health is not a priority there.

“And when we in our urban educated, we know most of the things we are not practising it, we cannot imagine rural people to you know, practice it where they don't take health as a priority.” (SBCC_06)

Some participants also felt that anaemia is still considered a disease that affects only women, and the existing gender disparities contribute to making women's health the

lowest priority in a household. Women also tend to prioritize their health last and continue with life until they faint or something stops them from fulfilling their roles and responsibilities in a household.

“Are pregnant and lactating women, the decision makers of the food that is on their plate, are they not the last ones to eat even when they're pregnant and lactating, are they not the ones who are burdened with all the other work, and to influence just the group that has affected the most without influencing the group which is actually affecting them is like a huge lacuna in the work that we do.”

(SBCC_03)

They highlighted that relying solely on Behaviour Change Communication (BCC) without integrating SBCC is insufficient for the success of AMB. They stressed the importance of the social aspect, pointing out that while pamphlets and leaflets advise women to consume iron-rich foods, they overlook the reality that these women often lack autonomy in food decisions and meal preparation.

“... to make it a priority for them becomes even more work, because how do you prioritise something that is that is lower on their priority list because that's more important things up there, right?” (SBCC_03)

A respondent raised concerns about inadequate and infrequent screening of frontline workers (FLWs), contributing to a low perception of anaemia risk in the group as well. They noted from their field experience that despite ongoing efforts to reduce anaemia and the use of IEC materials, anaemia messaging tends to be overshadowed by numerous pamphlets and posters from other programs. This results in anaemia losing visibility amidst broader nutritional issues, diminishing its distinct identity.

The Dichotomy of Celebrity Influencers in Public Messaging

While using celebrity influencers could help the program reach a large chunk of the community in a short time, the participants were cautious about including national influencers in the program. They talked about how using celebrity influencers in ads could be expensive and time-consuming. They also stressed that the choice of celebrity matters, and that it could have a negative impact on the program if the celebrity is promoting soft drinks while also advocating for the AMB program.

“If the celebrity is also selling Pepsi and Coke, and the same celebrity is then talking about reducing anaemia and eating healthy, it's a kind of contradiction that might not be very apparent to people, but that would reduce the effectiveness of the message that the celebrity is giving.” (SBCC_07)

During the discussion, a respondent raised an important issue regarding the effectiveness of using nationally prominent celebrities in advertisements and how this approach might limit the audience reach to a specific demographic.

“In sab ki reach to hai, but is it the right reach? (All of these have reach, but is it the right reach?) Tum absolute reach dekh ke chaloge. (You are looking at absolute reach.) Standup comedians ki audience ko reach karoge to is that your pregnant women and adolescents? (If you reach out to the audience of standup comedians, is that your pregnant women and adolescents?)” (SBCC_05)

Skill Development and Training

The participants expressed concern that the training sessions for FLWs do not give enough attention to interpersonal communication. They observed that the focus is mainly on technical aspects such as understanding anaemia, its impact, and available treatments.

However, they feel that the training content designed for the FLWs is about information giving and is not focused on identifying the barriers and enablers in IFA supplementation at the ground level. FLWs lack training in communication skills, including how to talk with people, how to address myths, and how to overcome barriers. The participants also emphasized that FLWs require different communication skills to interact with individuals, the community, and vendors and suppliers.

The participants also felt that whether it is capacity-building efforts through training sessions or implementation of the guidelines under the AMB program, the efforts gradually dilute in intensity as we go down from the national level to the grassroots level.

“Whether it is even capacity building if it is done in cascade mode from state level to district level, master trainers are selected who are not available to go and do the training, their level training was a three-day training or a four-day training and block level training is a one-day training. If it is a one-day training it'll practically be only for a few hours, because it'll practically only be between 11:00 to 3:00.”

(SBCC_01)

A participant also observed a lack of passion in advocating for the importance of SBCC. There needs to be an understanding that strengthening IPC will require time and effort. A few participants also expressed their concern over the fact that capacity-building efforts have not been taken as seriously as they should have been.

“In many of the programs, the big challenge is even though they say capacity building is required on paper, but when it comes to making it as a program or part of the program to initiate capacity buildings, very little importance is given to capacity building in terms of availability of the stakeholders who have to be trained or whose capacities have to be built.” (SBCC_01)

A participant reflected on their experience in training sessions where the emphasis was primarily on technical content rather than developing communication skills. They also noted that the limited time allocated for improving IPC skills in those sessions was predominantly used by officials to discuss technical aspects exclusively.

The participants mentioned that when tablets are distributed to students through school teachers, the teachers have very little knowledge about why these tablets are being distributed. They are informed about anaemia, but they are not educated about the issue. Due to this lack of awareness, they do not realize it is their responsibility to ask the children whether they have had breakfast to avoid giving them pills on an empty stomach. They also do not create a positive environment for the children to adopt such practices and implement them at home. The school teachers are cautious about administering the pills to adolescents as they are unsure how to handle the potential side effects of the medicine. When the kids experience nausea, the teachers are reluctant to take responsibility as they fear potential conflict with the parents. They perceive the task of distributing IFA tablets in schools as an obligation that must be completed on paper.

“The teachers do not have any SBCC content provided to them or any training provided to them. There is simply a circular saying that ye teachers jo hain inko iss program ke antargat ye distribute karna hai (these are the teachers who have to distribute this under this program).” (SBCC_02)

Problems with IFA supplementation

Some participants found that while the supply was there at the village level, women were getting their supplements, and they were getting the pills, they were not taking them, which is both, an uptake and a behaviour change issue. The uptake of the pills is also affected by the fact that firstly, most women were not receiving any counselling when they were getting the pills, and secondly, even if they were receiving it, the counselling

was so complex that didn't resonate with them. This inadequate and ineffective counselling fails to prepare women for common side effects like nausea, upset stomach, black stools, and dizziness, leading many to discontinue the treatment. Additionally, receiving large quantities of pills at once for extended periods often overwhelms women, further hindering adherence.

*“Awareness converted into motivation, converting into you know,
action that sometimes may be missing.” (SBCC_04)*

The respondents also felt that the beneficiaries are sceptical of taking government pills as they believe that since the pills are free, they must be of poor quality and not as effective. It was also highlighted that IFA tablets might not be the best way of iron supplementation for a lot of people, especially children, who find the tablets unpalatable.

Participants also highlighted that adherence to IFA pills is a behavioural challenge. The respondents noted that there is no mechanism in place to verify whether women consistently take the pills. Consequently, it's unclear if women adhere to the regimen regularly, as they perceive it as unimportant and do not see immediate benefits from taking the pills. Additionally, women often stop taking the pills once they feel better, thinking they are healthy enough.

“It's not like one of those things where you take it first thing in the morning, you know, there's not an easy cue. So that also leads to adherence issues, because you know, there is no, you know, when should I take the pill and you know, in a busy day I'd forget.”

(SBCC_04)

Many respondents realized that the beneficiaries encountered difficulties in remembering to take their pills, which was a major obstacle they faced in their work. They observed that while women in some areas understood the importance of taking anaemia pills, the

demands of their busy schedules often caused them to forget. Additionally, there was a low perception of the threat of anaemia, which further complicated the issue.

“I understand anaemia is important, I may understand that it's a high threat, I may understand how to deal with the side effects. But how do I remember every day to take a pill, it's not a trivial thing at all. It's not about awareness. It's not about threat perception, it's nothing. It's just that I need to, as a person on a very busy day, I need to remember to take a pill and I may just forget.” (SBCC_04)

The participants also described some myths and misconceptions at the ground level that are barriers to the uptake of pills by the beneficiaries. Pregnant women are wary of taking the pills because they are afraid the pills will make their baby's head larger and result in a difficult delivery, or make their baby's complexion darker.

Confusion regarding changes in guidelines

A participant highlighted that the AMB guidelines underwent minor changes and the states are now confused as to which version of the guidelines is to be considered. They also found some discrepancies in the content provided under the guidelines and an e-learning module made by the IEG (Institute of Economic Growth) in collaboration with UNICEF (United Nations Children's Fund) which again adds to the confusion at the ground level.

Testing and Treatment Issues

Traditionally people have been using Sahli's method as the most convenient method, now for them to switch over to a digital hemoglobinometer which is now recommended under AMB, there are a lot of training challenges and investment issues that need to be overcome for the same as well.

It was also emphasized that not everyone readily takes IFA pills, especially children who find them unpalatable. Exploring alternative forms of supplementation such as syrups and gummies was suggested.

Targeting and Beneficiary Problems

A participant pointed out that the current focus of IFA supplementation on pregnant women may be misplaced. They noted that by the time pregnant women are tested, diagnosed, and begin treatment for anaemia, they are often nearing the end of their pregnancy. As a result, there may be limited time for supplementation to have a meaningful impact before delivery, potentially leading to continued anaemia throughout pregnancy. They recommended that the WRA must be more passionately targeted for IFAS and then it should be evaluated if they are anaemic when they enter pregnancy.

One of the main issues with SBCC is the reliance on measurable tools like printed flip books, hoardings, and mass media expenditures to demonstrate activity. While these tools provide tangible evidence of expenditure, they do not address the challenges faced by ASHAs conducting interpersonal communication (IPC) sessions. Monitoring the quality and outcomes of these IPC sessions is difficult. The respondents highlighted that even if the program creates good content and tries to share it through the communication channels, it is not implied that the beneficiaries will have access to those channels and the information will reach them. Moreover, the pamphlets and posters circulated at the health facilities are usually too far away from the beneficiaries.

Many women from vulnerable and marginalized families in rural areas face significant challenges in accessing and understanding communication channels due to illiteracy. They often cannot read IEC materials or posters and struggle with languages other than their local dialects. Even those considered literate may barely be able to sign their names, making complex content inaccessible.

Men's perceived role in women's health

Participants encountered challenges when involving men and other family members in behaviour change strategies. They found that many men either do not perceive a role in women's health or limit their involvement to taking their wives to ultrasounds and delivery appointments. This lack of accompanying wives to antenatal checkups means men are not present to be informed about their roles in supporting their wives' health.

A respondent also highlighted that it is not just about what food is on the plate, but also about how it is being cooked and consumed.

“... many of the people, they don't know the right methodology.... (of cooking), especially the green leaves. Some cooking practices which you will understand in their communities they will throw off the water; yes, so all the nutrients will go into that. And how they are cooking... (the food), even if they are consuming, it will not work.” (SBCC_08)

Adding on these under-informed cooking practices, a respondent also said that the Indian diet is mostly vegetarian and is usually low in iron content as compared to non-vegetarian options.

Purpose and structure of SBCC content

Most of the survey participants expressed that the current content for SBCC is not effectively framed and does not qualify as SBCC, but rather as IEC. They noted that the content aimed at women usually focuses on their long-term goal of having a healthy baby and an easy pregnancy, which may not be relatable to adolescent girls and therefore may not effectively address the barriers for this group of beneficiaries.

“And those leaflets also are actually not meant for consumers because they are meant for health workers. They are so text heavy, they have

so much jargon that if you look at them you will not feel inspired or motivated to start taking IFA tablets.” (SBCC_02)

The participants also felt that the content is not appropriate for communicating with the beneficiaries about their beliefs and misconceptions, rather it is more suitable for awareness generation by the FLWs. The participants also emphasized that due to the complex language used in the posters and pamphlets, it becomes challenging for both the FLWs and the beneficiaries to understand and absorb the message being communicated.

Before distributing the posters, pamphlets and leaflets, the media habits of the consumers are not taken into consideration. An effort to understand how the consumers take information, what channels they prefer and what kind of information are they interested in is not made which often results in wasted efforts and poor uptake of services under the program.

Moreover, whatever IPC efforts are made by the FLWs, they are directed only towards women since women alone attend VHSNDs (Village Health, Sanitation and Nutrition Day) or go to AWCs.

“And this is also because often IPC activities are run through FLWs and the AWWs and the ANMs and what ends up happening in that is also that they are connected to the women and they end up having all the counselling sessions with the women, so the women know a lot. But are unable to act upon it without the other stakeholders in the lives supporting them.” (SBCC_03)

Ineffective channels for communication

Participants also felt that many initiatives are done just to check off boxes, without truly addressing the community's needs. Participants also realized that the current program only focussed on IDA. The other causes of anaemia are often ignored and not taken into

consideration while designing strategies and developing content. Respondents also emphasized that testing for anaemia and counselling are not linked, leaving women unaware of the importance of treatment and its impact on their health and their baby's health.

The respondents highlighted that women in rural areas mainly get information from TV, radio, cinema, or wall posters, leading to limited communication reach. Not everyone watches the same channels, and regional media vary widely. Traditional platforms like VHSND cover only a small group, missing many others like school dropouts, men, and non-pregnant women. ASHA (Activated Social Health Activists) workers often hand out pamphlets without ensuring understanding, resulting in the materials being ignored or discarded.

Difficulties faced by Frontline workers

ASHAs and AWWs are burdened with multiple tasks, often lacking sufficient time for counselling and field visits due to their heavy workload. Many service providers do not visit the field regularly, impacting their ability to deliver comprehensive information and counselling, given the high number of patients they manage.

“So, that is where again that when we say balancing of the wheels also comes into picture; because we say ASHA ko itna kaam karna hai, family planning bhi hai, malaria bhi hai, kala-azar ka spray bhi hai, IRS ka spray bhi ho raha hai, rainy season aa raha hai, dengue ka bhi season hai (ASHA has to do so much work, family planning is also there, malaria is also there, Kala-azar spray is also there, IRS spray is also going on, rainy season is here, dengue season is also there), I mean, everything comes falls on ASHAs.” (SBCC_01)

Respondents also said that there's a significant gap in sensitizing service providers, as many carry out activities without passion or understanding. Consequently, frontline workers often convey information mechanically, lacking the deeper understanding necessary to engage the community effectively.

“You know, whenever we are doing something very passionately it is because we are feeling for it. Right, if I as a service provider, I am not passionate about it, because I'm not sensitized enough. So, I'll carry out the activity in a very dry manner, because that has to be done.”

(SBCC_06)

Implementation of AMB at ground level

The implementation seems half-hearted, as extensive materials created by a select group in Delhi may only be useful for the health worker. Virtual sessions or rushed presentations with PowerPoint slides cannot effectively address these issues. Underfunding campaigns hinders their potential impact, as the budget allocated often doesn't match the required resources for high-quality production and effective delivery.

The IEC content, although extensive, is often underutilized and may only be beneficial for health workers for awareness generation, as it frequently ends up unused, sitting on the project director's desk, without considering the media habits of the target audience during distribution.

In the government sector, different departments operate independently, leading to supply chain gaps and a lack of coordination. Despite initiatives like AMB advocating for convergence, effective coordination among ministries remains a challenge.

A respondent also felt that in India, the challenge lies in scaling up strategies due to the need to reach a vast population. While mass communication is commonly used, it's not as effective; hence, a localized approach involving many local actors is essential to

address the issue effectively. It was also emphasized by a respondent that there's often a lack of planning for the next steps, and donors may not support further progress, leading to stagnation after initial success.

Strategic Approaches to Anemia: Lessons from Global Initiatives and Ground-Level Implementation

Global anaemia reduction success stories

Two participants shared successful anaemia reduction campaigns from around the world. One participant described an SBCC initiative that began with school girls in Indonesia in which they focussed on promoting the benefits of anaemia-free life.

“The whole theme for that was smart, cool and healthy without anaemia. The idea was not to tell them not to promote the negative consequences, but the positive ones that if you don't have anaemia, you'll be smarter, cooler and healthier. And that is something that worked quite well with the girls in Indonesia.” (SBCC_)

They also described the use of a “care group approach” that has been successful in several different contexts for engaging the audience with the program.

“It is a kind of a cascade approach where you train, you start with neighbourhood groups and then from those neighbourhood groups you form care groups which are the leaders of those groups that are trained separately.” (SBCC_07)

The benefit of using such an approach is that such sessions are not just about giving information, but they also involve activities and games on the issue to keep it interesting for the audience and enhance participation. It's not a one-sided demonstration, but a two-way engagement where the women also actively participate and engage in a dialogue with the program implementors.

A participant also suggested employing the Trials of Improved Practices (TIPs) methodology, which has been successfully used in several other countries to facilitate desired changes within communities. TIPs involve working closely with community members to identify barriers to adopting healthier behaviours and then testing and refining solutions in real-world settings. Integrating TIPs into the Anemia Mukht Bharat (AMB) program could significantly enhance its effectiveness by tailoring strategies to the specific needs and preferences of the target population, ultimately leading to more meaningful and lasting behaviour change.

Another participant referenced studies highlighting the crucial role of proper counselling in improving adherence to IFA pills among pregnant women in Africa. These studies demonstrated that effective counselling significantly impacts adherence rates.

Lessons for SBCC from other programs in India

India has seen the implementation of numerous national health programs, some of which have been highly successful in driving behavioural change within the community. Drawing on insights from other programs, participants made comparisons relating to anaemia and provided suggestions on how India can adopt successful strategies from these health programs.

Based on the success of Do Boond Zindagi Ki in the Polio Eradication program in India, the participants stressed the importance of involving national-level influencers such as Amitabh Bachchan. They also emphasized the need to create a consistent and continuous messaging ecosystem for the community and to ensure proper delivery mechanisms are in place.

“Jaise polio ko eradicate karne ke liye vo Amitabh Bachchan ko leke aaye the (like they brought Amitabh Bachchan to eradicate polio) and they created that “Do Boond Zindagi Ki” (two drops of life) and then

that advertisement was splashed on television, it was splashed on print media, it was splashed on the radio.” (SBCC_02)

A participant also emphasized the importance of SBCC efforts focused on changing norms, noting that while this approach may take time, it will lead to long-term sustainability. They supported their point by citing the example of a norm-shaping family planning initiative in India from the 1990s, which was promoted with the tagline "Hum Do, Humare Do." This initiative successfully shifted societal norms rather than merely generating awareness.

The recent pandemic has provided compelling case studies showcasing the impact of SBCC efforts. In India, where shaking hands and hugging are deeply ingrained cultural practices, focused SBCC and authentic communication played a pivotal role in promoting awareness about the significance of sanitization and social distancing. A participant proposed that similar to the Prime Minister's initiative encouraging solidarity with health workers through utensil banging, a comparable strategy could be employed for addressing anaemia. This approach could mobilize the system to achieve significant reductions in moderate to low and low to non-anaemic status among patients.

Private Sector Perspectives

One of the participants suggested that the AMB program could learn from the private sector's approach to targeting and segmenting the audience. They emphasized that the private sector operates systematically, beginning with a survey to comprehend the community, understanding their needs and requirements, determining the necessary systems for distributing products and services, and finally, planning how to advertise their products. The private sector also operates cohesively, with all departments working together for the common good.

According to respondents, products from the private sector have a strong hold on the market because they are more widely accepted by the community. People generally perceive private sector products as being of higher quality, more effective, and as aspirational branded items. A respondent also suggested that the program can benefit from ensuring that the services and products are as easily available as they are in the private sector. This support will help drive the expected change in behaviour.

“People who have a little bit of money are able to buy, they look at urban products and private products as private branded products as aspirational products. They think that if sheher me agar ye log khaate hain to achha hi hoga (it would be good if these people eat in the city).” (SBCC_02)

Respondents mentioned that the private sector invests time and resources in conducting extensive market research before launching a new product to understand its audience. The private sector doesn't emphasize their product, but rather focuses on the goal or need it fulfils for the audience. These products are then promoted by professionals.

One participant pointed out that AMB program managers could benefit from learning how to effectively persuade and convince the community, much like the private sector does with its products. They noted that despite the absence of direct promotion in villages, private-sector products have successfully penetrated rural households, showcasing the effectiveness of private-sector marketing strategies.

Effective SBCC strategies from the respondents' local work

The participants had a wide range of experience working on projects related to anaemia and nutrition at the grassroots level. They shared valuable insights and discussed the significant challenges they encountered during their fieldwork.

One individual mentioned that, after working in the field of nutrition for a long time, they have concluded that although it is an interesting area to work in, it is also the trickiest field, as changing food-related behaviours takes a lot of time. They also noted that in discussions with organizations and government about strengthening SBCC efforts, the focus often shifts to awareness generation or providing information instead of actual SBCC.

A participant shared that in their fieldwork, they observed that men were the primary decision-makers for many of the things that women required. As a result, they launched a campaign aimed at addressing malnutrition in women by engaging with the men in their lives.

“So, I need to have the men also know that what a pregnant woman needs to eat and what we figured out is men had no clue about it. They had zero clue about what the women should be eating during pregnancy.” (SBCC_03)

Strategies for Improving IFA Uptake and Compliance

One respondent mentioned that in their work on the ground, they discovered that one of the main obstacles to taking IFA pills was forgetfulness. They felt the need for a daily reminder. One respondent created a digital app to boost adherence to the pills in Maharashtra, while another respondent is currently testing technological tools to establish a system for improving adherence to oral iron during pregnancy and lactation.

A participant noticed that the reminder messages they were sending via SMS were not reaching the women because the women did not have access to a smartphone during the day. Instead, their husbands took the phones with them when they left for work in the morning and returned home with the phones in the evening. In response, the participant tested a new strategy. They began sending SMS reminders early in the morning when the

husbands were at home and late in the evening when the husbands returned from work. This ensured that the messages could reach the women at a time when they had access to the phones.

A participant also shared that they distributed print materials and calendars to pregnant women in their program. The women were asked to track their pill consumption on the calendar. The feedback received indicated that the calendars were beneficial for the women as they could easily monitor their monthly progress and the number of missed doses. The women found the calendars user-friendly and were able to track their progress independently, which helped them develop the habit of taking IFA pills consistently.

One respondent asked the mothers to put a red sticker on a baby caricature each time they took their pill. This was done to show the women that every pill they took contributed to improving their baby's blood. Another respondent suggested that if the connection between testing and treatment is emphasized and a woman realizes that she's at a red, or severe, level of anaemia and needs to be at least at a yellow, or moderate, level, she would be more motivated to follow the regime. It was also suggested that using different forms of IFA supplements may result in increased uptake and better adherence to the treatment.

Crafting effective messaging content

Some of the participants focused on raising awareness about anaemia through their work at the grassroots level. One respondent tested various communication strategies to connect with the diverse needs of pregnant women, ranging from promoting the importance of taking IFA pills for the health of their baby and the cognitive development of their child, to emphasizing how the pills can reduce tiredness throughout the day. Additionally, they noticed that short-term goals were more relatable to the audience compared to long-term goals.

Through their work in the field, most of the participants suggested that the SBCC strategies should address the specific goals and concerns of each target group. Understanding and speaking to their problems will lead to better engagement and behaviour change.

“It's not about our problem, it's not about our issue, it is basically what is their problem? What is that woman's problem? What is her issue? And how does our product or whatever behaviour we want fit there.” (SBCC_04)

Based on their experience, the participants believe that targeting school-going children and adolescents by promoting benefits such as becoming smarter and more focused on studies can be highly effective. Children resonate with relatable goals like excelling in sports or academics, so leveraging role models to endorse these messages can have a significant impact. When targeting pregnant women, it is crucial to consistently remind them that their efforts are not just for themselves, but for the well-being of their baby. This perspective can significantly shift their perception and motivation.

Participants shared strategies to simplify messaging for better comprehension. They advised women to take IFA pills an hour before sleep, providing an easy cue for the beneficiaries.

Respondents' efforts in reducing FLW's workload

The participants explained that they were responsible for creating job aids and materials for health workers to use during home visits. One participant designed a visual counselling card for ASHAs in their program, which was distributed at the grassroots level. The card featured easy-to-understand illustrations depicting the side effects of taking IFA pills visually. The communication was not focused on explaining what anaemia is or why it's important to take the pills, but rather on addressing the actual barrier

of not taking the pills due to the side effects and how to manage them. They believed that with proper training, FLWs could play a crucial role in promoting service uptake and encouraging behaviour change.

A participant trained the leaders of self-help groups as part of their program and instructed them to pass on this training to their subordinates in a cascading manner. Another speaker designed training programs for health workers to help them understand the utilization of services in their area.

“We also created a lot of training programmes for the health workers and some monitoring programmes for the health workers so that they could monitor how people in their catchment area, how they are behaving in terms of the uptake of nutritive food products or supplements.” (SBCC_02)

They also shared techniques they had incorporated into their work to improve the quality of counselling being delivered by the FLWs to the beneficiaries. The counselling approach focused on addressing concerns about side effects by reassuring women about their duration and providing simple instructions for pill intake, resulting in improved adherence. Another respondent tried to inform women about the possible side effects and how long they were supposed to last. This approach aimed to ensure that the women wouldn't be scared when experiencing these side effects.

Communication strategies were tailored to tackle the actual barrier of coping with side effects rather than simply raising awareness about anaemia. They also informed women about the possible side effects and how long they were supposed to last. This approach aimed to ensure that the women wouldn't be scared when experiencing these side effects.

The respondents also felt that increasing community-level testing for anaemia can help raise risk perception in the community. Specifically, focusing on testing for FLWs can help them realize the importance of the cause they are supposed to advocate for.

A respondent had attempted to develop communication strategies at the grassroots level that could convey information while also addressing barriers to the desired behaviour change. They discovered that peer-based WhatsApp groups were very effective in reaching the targeted women and their husbands for effective communication. A participant created and utilized flipbooks and folk art forms to produce illustrations and communicate with the target audience. As a result of their study, they observed positive outcomes and behavioural changes. They felt that utilizing a combination of TV and radio dramas along with on-the-ground activities proves more effective in conveying and motivating behaviour change.

Sustaining the SBCC efforts

While emphasizing the importance of designing effective SBCC strategies, the participants also highlighted steps to ensure the sustainability of these efforts. One participant pointed out that it is crucial to maintain a balance between consumer demand, driven by awareness generation, and the supply of services at the program implementation level. If this balance is not achieved, with high demand from awareness efforts but insufficient service supply, it could negatively impact the program's effectiveness.

One participant explained that while SBCC focuses solely on communication for mobilization, SBC is a more inclusive term that encompasses interventions beyond communication aimed at facilitating behaviour change. Recognizing these subtle distinctions and the varied requirements for behaviour change will assist in developing sustainable strategies.

The participants suggested that sustainability should be integrated into the system itself and supported by the relevant stakeholders. Two participants emphasized the importance of community ownership for sustainability. They believe that when the community understands and embraces the knowledge and takes proactive steps for better health, the program will be sustainable. The program's target beneficiaries need to feel empowered to access the services and take ownership of them. By taking ownership, they will also advocate for the program, ensuring that its objectives continue for future generations. The behaviour, attitude, and abilities of the frontline workers and health providers are crucial in ensuring that the program remains top-of-mind and that the community continues to work toward the program's goals even in their absence.

“When you come to something unpleasant, we are never going to change the misconception. But then you have your people who say that this has to stay, those are your early adopters, then you have your fence-sitters, and then you come to your most resistant group. So the search for a better life, which is true for a lot of India, somehow we have to link it up to that.” (SBCC_05)

They emphasized that without community empowerment, achieving behaviour change is challenging. People cannot be forced to alter their behaviours without a supportive environment. Additionally, they suggested that the desired behaviours must align with the goals and needs of the target beneficiaries for successful acceptance and adoption. The participants also felt that the expected behaviour needs to be made easy, it should be feasible for the community to adapt to it.

“You know, even if you're surrounded with, you know, hoardings that tell us what a fantastic car or you know who's giving a car loan at 8% interest. I never actually pay attention to it till I actually have to get down to changing my car.” (SBCC_05)

One participant suggested that solutions to the problems should originate from the community itself and emphasized the need to continually highlight the importance of reducing anaemia on a broader scale. Another participant recommended that SBCC efforts should focus on changing societal norms. Additionally, another participant noted that adhering to program objectives and maintaining a consistent schedule would also contribute to building sustainability in the program.

Two participants emphasized the importance of having robust monitoring and evaluation mechanisms in place. These systems are essential for analysing what is working, identifying what is not, and determining strategies to overcome challenges.

“It has to be a continuous process of developing a strategy, implementing it, going for it, going back to the communities again to understand what the needs and issues are and then going back again to them. It's basically a process and not a one-time thing.”

(SBCC_07)

Several participants stressed the importance of delivering repeated messaging to the target beneficiaries, as a single exposure to the message is not sufficient to drive behaviour change. Repeated messaging helps prevent the message from being overlooked among other information and ensures it remains memorable over time. Furthermore, it helps to keep the issue relevant and top-of-mind within the community. A participant emphasized the need to understand barriers to behaviour change and address them using behavioural science and economics.

“We have found in our experience, that awareness or information giving is often not adequate at all for behaviour change, because awareness has to first convert into intent, intent has to convert into action.” (SBCC_04)

One participant emphasized that FLWs need to communicate convincingly and address myths and misconceptions to facilitate behaviour change. The current focus should be on transforming awareness into motivation—specifically, converting the intent to take IFA pills into the consistent action of consuming them as prescribed. The importance of program implementors identifying fast adapters in a community was also emphasized. These individuals are enthusiastic and willing to access the program's services. They not only embrace the expected behaviour themselves but also spread it throughout the community, getting everyone involved.

It was also emphasized that for behaviours to change, there need to be sound systems in place to accommodate and facilitate the desired behaviours. It would negatively affect the SBCC efforts if strategies advocate the importance of IFAS, and beneficiaries are unable to find the pills or syrups at the PHCs, thereby obstructing their change.

Respondents' take on improving SBCC efforts under the AMB program

While acknowledging the current progress of the anaemia program in India, the respondents also identified areas for further improvement, emphasizing where existing activities have been beneficial. They highlighted that this is an opportune time to address anaemia in India, as the condition progresses slowly, providing a window to effectively tackle the issue and make meaningful strides forward.

Enhancing Community Involvement for Sustainable Solutions

They suggested that engaging the community at all levels, from developing solutions to monitoring and evaluation, is crucial for sustainability. Community ownership fosters a sense of responsibility, ensuring long-term commitment and effectiveness. Involving both public and private sectors in community engagement initiatives can further enhance their reach and impact. The participants also felt that taking regular feedback from the field

after the completion of an activity will help them understand whether the community liked the activity and how well they are accepting it in their lives.

Motivating Behaviour Change with Compelling Messages

The participants suggested that to convince the audience, they need to be shown a potential benefit if they stick to the program's activities.

“Today, you are functioning at 50% capacity because of this and you feel it's good enough, what would happen if you wanted to be 100%?”

So, pitch into internal motivations.” (SBCC_05)

Moreover, the counselling and messaging needs to address the beliefs and concerns of the beneficiaries. Let's say a woman is scared of the prick while getting her Hb tested, the FLWs need to be trained enough that they can hold out a benefit for her that overpowers her fear of the prick and convinces her to get her test done.

We created period trackers for women, right? Uh, so that we can track periods every month, can we not create simple trackers for women to track whether they've taken the medication or not?”

(SBCC_03)

The participants stated that to enhance engagement and promote behaviour change, SBCC sessions must evolve beyond simple information dissemination to interactive sessions involving discussions, activities, and games centred around specific themes. These sessions will encourage active participation and seek commitments from participants to adopt desired behaviours, thereby making the communication more effective in conveying and motivating behaviour change.

The use of region-specific testimonials from real case studies was also suggested to effectively convey the message. These testimonials should include personal experiences, and it's crucial to craft compelling and relatable stories that draw from actual experiences

and transform them into locally relevant narratives. These stories should resonate with the audience's language and experiences, empowering them to share their own stories effectively. Moreover, the posters and other IEC must be put up at prominent places so that they don't get lost in the pool of posters from other programs.

Use of new mediums for communication

The participants described the importance of new channels of communication that can be utilized for the dissemination of messages. The increased access to smartphones among target segments has opened up new avenues for communication. Leveraging platforms like peer-based WhatsApp groups allows for dynamic, retrievable communication. To enhance SBCC strategies, it's crucial to be innovative in selecting mediums, including mass media, interpersonal communication, and community events, thereby making messages more engaging and impactful. Additionally, incorporating various forms of media such as flipbooks, skits, puppetry, and folk art into awareness campaigns ensures broader reach and better retention of messages. Using public and private sector spaces, like clinics and offices, for dissemination of SBCC content can effectively reach the target audience in their daily environments, maximizing the impact of the communication efforts.

Moreover, the trend of utilizing micro-influencers for SBCC has gained momentum, facilitated by increasing digitalization and the audience's familiarity with short-form videos. This signifies a shift from top-down influence to peer-based influencing, now made more feasible by technological advancements. Recognizing the importance of digital connectivity, it is essential to leverage the digital space for effective SBCC. Additionally, artificial intelligence (AI) can be intelligently employed to analyse the effectiveness of messaging and its dissemination. Rather than relying solely on AI for scripting or translation, it should be integrated with training courses that provide guidance on the intended message and the desired mindset to tap into.

“I think we are kind of moving away from this top-down influence to sort of peer-based influencing which now you know because of technology is more and more possible” (SBCC_04)

Using TV and radio dramas for SBCC offers the advantage of not only demonstrating certain behaviours but also showcasing them in diverse ways and linking them to different aspects. Dramas and videos have a captivating effect on viewers, appealing to both literate and illiterate audiences. Revamping old television ads or creating short films, lasting no more than 10 to 20 seconds can effectively convey important messages such as encouraging pregnant women to check their haemoglobin levels and adhere to iron supplement intake. Utilising a limited edition series comprising WhatsApp and YouTube videos that are not preachy for SBCC messaging was also recommended.

Empowering Communities through Tailored Messaging

A respondent suggested that in SBCC efforts, the primary focus should be on improving the diet. Families should consistently introduce nutritious foods into their diet. Although children may not initially favour these foods, parental commitment can normalize healthy choices. Over time, this practice can become a family tradition, ensuring better nutrition for future generations.

One respondent stressed the importance of audience segmentation for effective communication. They mentioned that SBCC material creation should be centralized to ensure quality and consistency, and produced in regional languages. The states should then receive funds specifically for media buying. When creating SBCC content, it should be simple, relatable, and relevant to their current situation, without causing much inconvenience, and easily adaptable to their lives.

When attempting to engage stakeholders and other influencers, the messaging should not be aimed directly at them; instead, it should be targeted towards the beneficiaries.

However, the stakeholders and influencers should be informed about their role in the utilization of services and their impact on the well-being of the beneficiaries.

“And you can use various platforms. You can have separate targeted content for them. You can use a digital platform to get those messages to them. Or you can have some joint meetings together. Around the women and men together. You can do that also. There are many different platforms that you can use.” (SBCC_08)

A participant suggested that rather than investing time and resources in developing new content, program managers should consider adapting existing content from related programs to address anaemia. They emphasized that instead of creating new programs, channels, and influencers, it would be more efficient to incorporate anaemia messaging into current initiatives. This approach leverages existing resources and ensures consistent communication.

It's important to involve everyone in orientation and sensitization from top to bottom to ensure comprehensive coverage. The passion and dedication in higher-level strategies should be mirrored at the grassroots level. It's crucial to explain the reasons behind actions and devote sufficient time to ensure understanding and adherence.

A participant suggested that the focus should shift to localized solutions, emphasizing the decentralization of SBCC efforts. This entails working with communities to develop tailored solutions rather than pursuing one-size-fits-all approaches. It involves empowering states to decentralize IEC efforts according to the needs of their local audiences, leveraging existing resources and merging with community-based initiatives.

Pilot-testing for enhanced uptake of services

It was also suggested by a respondent that whatever SBCC tools are designed for the program, they must be pilot-tested in the community before rolling them out for the entire

set of population to identify their effectiveness and uptake. It was suggested that the program should acknowledge that community members often participate across multiple platforms and thus, efforts must be made to identify and utilize all available community platforms to enhance the effectiveness and reach of the engagement efforts.

Research and Content Development

The respondents suggested that the centre design thinking principle can be applied at the beginning of strategy design to conduct quick communication-based research, providing deep insights into target audiences and informing the development of SBCC strategies and campaigns focused on effective communication in the language of the people.

The government should recognize the expertise of professional advertising agencies and collaborate with them to enhance SBCC strategies, learning from successful private sector marketing techniques. This collaboration should involve renowned agencies to develop comprehensive marketing strategies, creating tailored campaigns and utilizing various media channels. Additionally, involving management institutes can further enhance research and strategy development. Collaboration with the Ministry of Information and Broadcasting could provide additional support and resources for these initiatives.

They also suggested that the state and local levels should only receive budgets for planning and purchasing media, not for content creation, as they often lack the capacity, resulting in repetitive content. While a national-level comprehensive AMB strategy is important, states should take the lead in implementing localized initiatives to better resonate with diverse audiences.

To move beyond mere awareness generation and focus on behaviour change, it's crucial to conduct substantial formative research with the communities to understand their knowledge about anaemia and what would motivate them to take action. Messaging should evolve from emphasizing the importance of taking tablets to more personalized

and action-oriented conversations. Additionally, it's essential to address drop points in the overall strategy, such as supply interruptions, procurement issues, or production problems, by taking a macroscopic view and addressing these issues systematically.

“Anaemia Mukht Bharat needs to do, so somebody needs to step back, zoom out and really see where are the drop points. You know, in the overall picture, what are the drop points. ... So, we need to look at where the issues are and then start addressing all of that. So, it's really about zooming out and taking a macro look at it.” (SBCC_03)

An appreciative inquiry approach was also recommended. This approach advises against entering the field with preconceived notions about the community's knowledge. Instead, it encourages an open-minded perspective to discover local solutions that are sustainable in the long term.

A participant suggested that using a "positive deviance approach" to devise SBCC strategies can facilitate efforts and stimulate behaviour change. The strategy aims to identify individuals or a group of individuals in a community who, despite having the same resources and living in the same socioeconomic conditions as others in the area, are doing something differently and achieving better health outcomes for their families. This approach promotes their practices as a solution to the issue.

Identifying stakeholders for SBCC strategies

The participants believe that to effectively influence policymakers, communication must be tailored to align with their goals and present compelling evidence. Demonstrating the real-world impact of interventions is crucial. By showcasing how specific changes have led to improved outcomes, policymakers can be convinced to adopt new strategies or policies.

The respondents emphasized the important role of family members and other stakeholders in making sure that the message is understood and that services are accessed by the intended beneficiaries. Panchayats can have a significant impact by involving men, especially husbands, in communicating about women's health and nutrition. This involvement ensures support from all members of the household and addresses the need for male participation in decision-making. It is crucial to target not only women but also their husbands and mothers-in-law, as they have a significant influence on dietary and health practices within families.

“Let’s say that there is one stakeholder in the vicinity of this, let’s suppose a pregnant woman, I’ll take as an example. So there is another stakeholder who is more influential who can support, can influence the eating practices of this woman. So now you have to engage that stakeholder.” (SBCC_08)

To effectively tackle any issue, identifying influential figures is vital. Understanding their outreach and audience engagement is crucial. A respondent described that a successful strategy involves triangulating celebrity endorsements with mass mobilization and robust monitoring.

Utilizing both national and local influencers is crucial for effective communication and behaviour change, however, the participants have emphasized the role of local influencers in ensuring better community mobilization. Micro-influencers play a pivotal role in shaping opinions and behaviours as they are trusted and respected within their communities.

“So, if I go to a village and the community doesn't know me, they can sit, they will listen but they will not accept it immediately. But if someone from their community or someone nearby, or someone they look up to, if they say something, the chances are much higher that

they will, you know, agree to that behaviour. So local leaders are very important.” (SBCC_06)

NGOs and local leaders play a crucial role in the field due to their frequent local engagements, specialized strategies, and influence. They support the government in implementing effective change. Through targeted initiatives and contests, PRIs can encourage community leaders to engage in promoting health and incentivize men's involvement, thus bridging the gap between healthcare programs and community participation.

Capacity Building and Strengthening Efforts

The participants felt that strengthening local capacities is essential for effective contextualization in SBCC efforts. Local leaders play a crucial role in ensuring delivery mechanisms and medication availability for women. Advocacy with policymakers is needed to emphasize the importance of capacity building, which must include contextualized technical training. Understanding theories of innovation diffusion and behaviour change is critical, requiring comprehensive training for both frontline functionaries and senior officials.

It is suggested that ministers and bureaucrats should participate together in training sessions, regardless of their ministry. This joint training will ensure that both parties understand the importance of SBCC and they will be more likely to allocate the necessary resources to support it.

While all types of communication materials are important, the capacity building of senior functionaries is crucial. Frontline workers use whatever IEC tools are provided to them, but the decision on which materials to produce is made by policymakers and state-level authorities. Therefore, training decision-makers at the state and district levels is essential to ensure the effective design and implementation of IEC materials and programs.

The participants emphasized the importance of coordination and collaboration between the departments to ensure smooth functioning and efficient delivery of services under the program. A system change approach should be adopted. Instead of sequentially changing behaviour, delivery, production, and procurement, these aspects should be addressed simultaneously for effective parallel progress.

“SBCC cannot be about “I” taking drops or “I” giving drops or “I” taking IFA, it has to be the entire system and it's a part of the entire system.” (SBCC_03)

To ensure compliance, states should be held accountable by requiring them to conduct the annual meetings outlined in the policy. Committees led by the Ministries of Health and Women and Child Development should oversee these meetings. States should also be required to submit reports detailing the number of meetings held and their minutes. This accountability can create pressure for states to comply.

Recommendations to improve training sessions for FLWs

AWWs and ASHAs are crucial points of contact for women and can significantly contribute to counselling efforts. It's important to prioritize their capacity building and address the barriers and challenges they face in delivering interventions effectively.

Respondents felt that it is imperative to retrain frontline workers who were trained 5, 6, or 7 years ago, as updated training would enhance their ability to counsel effectively on various health issues such as anaemia, pneumonia, diarrhoea, and contraceptives, creating a positive impact across multiple health programs.

“It's a little complicated, but we can try and simplify it for the community, for the field workers so that they are not just passing on information, but they are also trying to address the barriers at their end and they're trying to understand and work with the community,

work with the mothers to see how the behaviours can be changed.”

(SBCC_07)

To ensure effective IPC training of FLWs, it's crucial to allocate sufficient time for contextual information, examples, and situation-focused discussions. FLWs should be given the opportunity to identify and address communication-related barriers and challenges, ensuring they are not rushed. Moreover, investing time in building skills such as asking relevant questions is essential for effective communication. It's important not to underfund or rush the training process but instead dedicate a reasonable amount of time and avoid interfering with the creative process.

These trainings should also involve extensive use of tools, role-playing, and mock sessions to provide practical experience. It is also essential for SBCC training to be residential, allowing participants to engage in peer learning and showcase additional skills like singing or dancing, which can enhance communication strategies. This holistic approach ensures that participants are well-equipped and confident in their communication abilities.

“Unless you do that, you create an ecosystem of communication messages. It's very difficult through the IEC content and without training the health workers and without training the teachers, it's very difficult to expect change.” (SBCC_02)

Investing in SBCC to Prioritize Research, Media, and Training

To enhance the effectiveness of SBCC strategies, significant investment is necessary, including more funding for formative research. Government funding should prioritize planning and buying media, rather than content creation, especially at the state and local levels. Adequate budgets should be allocated for creating new content for AMB, ensuring quality and effective dissemination. Additionally, sufficient time and resources should be

dedicated to the creative process without interference, and investment in training FLWs in interpersonal communication skills is essential.

Respondents recommend focusing on strategies that reduce system burdens or solve existing problems, as these are more likely to be adopted at the policy level.

“... whenever we are trying new things on the ground. I think we must look at, you know, changes which reduce the burden from the system as opposed to adding things to the system.” (SBCC_04)

In the development sector, it's crucial to make behaviour change easy for women, ensuring it doesn't require significant time, effort, cognitive load, or resources, but rather is something easily achievable for them. Additionally, designing self-paced counselling materials can be beneficial for ensuring consistent messaging and learning, even in the absence of direct interaction. Furthermore, integrating essential information about medication intake into doctor-patient conversations can motivate pregnant women, with grassroots workers like ANMs or ASHAs reinforcing these messages.

Measuring the impact of SBCC efforts

The participants also recommended that the impact of SBCC efforts be measured to maintain high morale and ensure continuous improvement. They emphasized that attributing the reduction in the number of anaemic people solely to SBCC is misleading. In regions where IDA is not the main cause of anaemia, such a measure would fail to capture the program's success. Instead, they suggested that the indicators should focus on increased awareness and proactive behaviours. For example, measuring how many people recognize anaemia as a significant problem, how many women seek haemoglobin tests, and how many individuals start taking oral iron supplements would provide a more accurate reflection of the impact of SBCC efforts.

For instance, a participant suggested an approach to address a health issue by selecting a target district for intensive investment in social and behaviour change communication (SBCC) efforts, coupled with robust monitoring. Simultaneously, a control district with no similar initiatives should be chosen. After at least 14 months of sustained and well-resourced activity, the results can be compared between the two districts. This method is straightforward and feasible, providing valuable insights into the effectiveness of SBCC interventions.

A SWOT analysis summarizes the key findings as follows:

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> • Comprehensive coverage • Well-designed Anemia Mukht Bharat Dashboard • Local Influencers • Increased awareness of the issue 	<ul style="list-style-type: none"> • Scaling Challenges • Resource Allocation • Poor training of FLWs • Use of traditional channels of communication
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> • New Communication Channels • Incorporating Feedback • Localized Solutions • Modifying existing content • Incorporating HCD and positive deviance approach 	<ul style="list-style-type: none"> • Myths and Misconceptions • Poor interdepartmental Coordination • Inadequate focus on the communication skills of FLWs • Overburdened FLWs • Gender disparities

Discussion

In this paper, I have explored the landscape of Social and Behavioural Change Communication (SBCC) concerning anaemia under the Anaemia Mukht Bharat program identifying various gaps and challenges that need to be addressed for more effective intervention strategies.

Anaemia is a multifaceted health issue influenced by a myriad of biological, social, economic, and cultural factors. Therefore, any effective SBCC strategy must adopt a holistic approach that considers these intersecting factors.

While the current program provides comprehensive information about what is anaemia, what are its causes and the treatment options available through IEC materials, it isn't convincing enough to bring about a behaviour change. AMB needs SBCC and not just BCC because there are several deeply rooted social norms and beliefs in the community that make it difficult for the desired behaviour to be accepted by society. For instance, when it comes to eating, often women are still the last ones to eat. They tend to ensure everyone else is fed, often without anyone considering if there's enough food left for them. While the IEC material may stress the importance of nutritious food and taking IFAS, it doesn't address this gender disparity. Without addressing these underlying social norms, the program won't achieve the expected results. Hence, integrating SBCC into AMB is the dire need of the hour.

One of the key challenges highlighted by the respondents in the study was that although the awareness around anaemia is high, the action is low. There is a big gap in converting the motivation into action where the SBCC efforts need to be strengthened. Additionally, in certain areas, despite the condition's widespread prevalence, there remains a lack of understanding regarding its causes, consequences, and preventive measures. This knowledge gap poses a significant barrier to the success of SBCC initiatives. To address this challenge, SBCC programs need to prioritize educational campaigns that not only raise awareness but also empower individuals with the knowledge to recognize and address anaemia in its early stages.

Cultural norms and practices significantly influence perceptions and behaviours related to health and illness. This study also discusses some of how beliefs and value systems can be a barrier to the effective adoption of the desired behaviour under the AMB program.

The respondents also discussed how such systems can be addressed through SBCC, emphasizing how simple adjustments in existing strategies can provide an entry point into individuals' lives to stimulate behaviour change. Since anaemia discriminates between men and women, the program must be inclusive and work for both effectively. Women are often not a priority in households, and a condition like anaemia makes it even more challenging for them to convince others, as well as themselves, to take it seriously. Viewing anaemia through a gender lens provides a better perspective on the barriers and facilitators in the uptake of the desired behaviour.

Highlighting the importance of counselling during pregnancy, Christiana Titaley et al, found that women with moderate knowledge of IFA supplements were nearly twice as likely to consume a minimum of 90 IFA tablets compared to those with poor knowledge, while those with good knowledge were over four times as likely (55).

Family members can also play an important role in enhancing adherence to IFAS and can be targeted through ANC (31). Encouraging male participation in maternal health not only enhances postpartum care and birth preparedness but also fosters a supportive environment crucial for improving overall maternal and child health outcomes (10,11,31).

The trend of using micro-influencers for SBCC has gained traction due to increasing digitalization and audience familiarity with short-form videos, signalling a shift from top-down to peer-based influencing, enabled by technological advancements. Recognizing the importance of digital connectivity, it is crucial to leverage the digital space for effective SBCC. Additionally, AI can be used to analyse messaging effectiveness, but it should be integrated with training courses to guide the intended message and mindset. Leveraging technology for SBCC offers various benefits, such as utilizing TV and radio dramas to demonstrate behaviours and link them to different aspects. Creating short films or revamping old television ads can effectively convey important health messages, encouraging pregnant women to check their haemoglobin levels and adhere to iron

supplement intake. Utilizing WhatsApp and YouTube videos for SBCC messaging and playing small films continuously in Primary Health Centres can mobilize and influence people effectively.

The study also underscores the importance of partnerships and collaboration among governments, NGOs, healthcare providers, community leaders, and other stakeholders. Collaborative efforts enable the pooling of knowledge, funding, and resources, leading to more comprehensive and impactful interventions.

Recommendations

One of the main suggestions that came out through the study is to use the existing relevant content from similar programs as well as the IEC material in the AMB and modify it to suit the needs of SBCC. It will not only save time and resources but also help avoid adding the same information to the already existing pool of vast knowledge. The uptake would be better since the complexity of the information for both the beneficiaries and the frontline workers would be reduced.

The program also needs to focus on other causes of anaemia and promote preventive and treatment measures for the same. Only focusing on IDA and IFAS will not yield the desired changes in behaviour, especially in endemic regions of anaemia where anaemia is caused by causes other than iron deficiency. Currently, IFAS is the main prophylactic treatment that is promoted under the program and the desired behaviour is that the beneficiaries if found to be anaemic, adhere to the treatment schedule as described under the guidelines.

To ensure the sustainability of SBCC efforts, community ownership needs to be established. Also, SBCC is not a one-time effort. It needs regular monitoring and evaluation to identify what is working well and where improvement is needed. The target beneficiaries of the program need to feel empowered enough to access the services and

own them. When they will own it, they will advocate for it as well and thus, carry on the program objectives for the upcoming generation as well.

Utilize region-specific testimonials from real case studies to effectively convey the message. These testimonials should include personal experiences, and it's crucial to craft compelling and relatable stories that draw from actual experiences and transform them into locally relevant narratives. These stories should resonate with the audience's language and experiences, empowering them to share their own stories effectively.

To ensure effective IPC training of FLWs, it's crucial to allocate sufficient time for contextual information, examples, and situation-focused discussions. FLWs should be given the opportunity to identify and address communication-related barriers and challenges, ensuring they are not rushed. Moreover, investing time in building skills such as asking relevant questions is essential for effective communication.

Family members, especially husbands and mothers-in-law, community leaders, PRIs, NGOs, and local influencers must be involved in the strategies to communicate effectively.

The centre design thinking principle can be used at the start of strategy planning to quickly learn about the targeted audience. This will help make the communication strategies and campaigns better by using the language people understand.

The government should also recognize the expertise required in professional advertising agencies and collaborate with them to enhance SBCC strategies, learning from successful private sector marketing techniques. This collaboration should involve renowned agencies.

There is an urgent need for departments to work together smoothly to make the program efficient. The program should now adopt a systems change approach. Instead of waiting for one thing to change after the first thing changes, we should focus on improving

everything together. The entire system is like a cycle, where one part affects the others. It's neither practical nor logical to focus on improving one component at a time. Just like a wheel only moves forward when all its spokes are working well, the program can progress only when all its elements function effectively together.

Conclusion

Public health communication needs to be adapted to reach people with different backgrounds, languages, and viewpoints. A single message or approach usually doesn't work for everyone. To effectively address the needs of various groups involved in anaemia control efforts, like consumers, healthcare providers, and legislators, it's crucial to use customized communication strategies.

Supplementary

Instrumentation

1. Topic guide for SBCC experts

- Could you please briefly introduce yourself and describe your expertise in SBCC interventions and public health programs in India?
 - How long have you been in this field?
 - What lessons have you learned from your experience with SBCC interventions and public health programs in India?
- To what extent are you familiar with the goals and objectives of the AMB program?
- What causes people in a community to not see anaemia as a big threat and therefore not seek help for it as much?
- As one of the interventions under the AMB, how effective is the current approach to SBCC in reaching and engaging the community in terms of anaemia prevention and treatment?
 - Can you tell me about any interesting stories you know of where efforts to involve different types of people have either worked well or not worked at all?
- What do you think are the gaps and challenges in the implementation of SBCC under the AMB?
- What steps do you believe are necessary to ensure that SBCC messaging resonates effectively with diverse cultural norms and beliefs?
- How can the community structures such as Panchayats, AWCs, and VHSNCs be better utilized to educate the people about the program?

- What lessons can be learnt from the private sector in terms of marketing and advertising?
- How can we ensure the sustainability of our SBCC efforts?
- Based on your expertise, what recommendations would you offer to address the gaps and challenges in SBCC implementation within the AMB program?

2. Tool for analysis:

Taguette is an open-source tool designed for qualitative research, particularly useful for coding and analysing textual data. It offers a user-friendly interface that allows researchers to highlight and tag sections of text within their documents, making it easier to organize and interpret qualitative data. Taguette supports collaboration, enabling multiple users to work on the same project simultaneously.

Appendix

1. https://media.path.org/documents/PATH-India-Country-Brochure.pdf?_gl=1*1m70zfe*_ga*MzYyNTY3Mzc4LjE2OTkzNzU3ODY.*_ga_YBSE7ZKDQM*MTcwODkyOTkzNC41LjEuMTcwODkzMDEyMi41OS4wLjA.*_gcl_au*MTY4MDMyOTgxMS4xNzA4OTI5OTM1
2. <https://www.path.org/who-we-are/>
3. <https://www.path.org/where-we-work/asia-pacific/india/>
4. https://media.path.org/documents/PATH-India-Country-Brochure.pdf?_gl=1*1m70zfe*_ga*MzYyNTY3Mzc4LjE2OTkzNzU3ODY.*_ga_YBSE7ZKDQM*MTcwODkyOTkzNC41LjEuMTcwODkzMDEyMi41OS4wLjA.*_gcl_au*MTY4MDMyOTgxMS4xNzA4OTI5OTM1
5. <https://www.path.org/who-we-are/mission-and-strategy/>
6. <https://www.path.org/what-we-do/health-and-disease-management/>

Bibliography

1. Ministry of Health and Family Welfare. Anemia Mukht Bharat: Operational Guidelines for Program Managers [Internet]. 2018. Available from: <https://anemiamukhtbharat.info/resource/amb-operational-guidelines-english/>
2. Hyde J, Agble R, Nestel P. The role of communication in comprehensive anaemia control: a framework for planning and implementing a strategic communication plan. *Journal of Tropical Pediatrics*. 2003.
3. World Health Organization W. Anaemia [Internet]. 2023 [cited 2024 May 28]. Available from: <https://www.who.int/news-room/fact-sheets/detail/anaemia#:~:text=Globally%2C it is estimated that,age are affected by anaemia.>
4. IHME. The Lancet: New study reveals global anaemia cases remain persistently high among women and children. Anemia rates decline for men. [Internet]. 2022. Available from: <https://www.healthdata.org/news-events/newsroom/news-releases/lancet-new-study-reveals-global-anemia-cases-remain-persistently>
5. Gillespie B, Katageri G, Salam S, Ramadurg U, Patil S, Mhetri J, et al. Attention for and awareness of anemia in adolescents in Karnataka, India: A qualitative study. *PLoS One* [Internet]. 2023;18(4 April):1–15. Available from: <http://dx.doi.org/10.1371/journal.pone.0283631>
6. (IIPS II of PS. National Family Health Survey 5. 2022.
7. Maji I, Randhawa JK, Bakshi D, Gautam D, Mishra SS. Status of Anaemia amongst women in India: trend analysis of NFHS data. *Indian J Community Heal*. 2023;35(3):354–8.
8. World Health Organization. Global anaemia reduction efforts among women of reproductive age: impact, achievement of targets and the way forward for

optimizing efforts [Internet]. Vol. 4. 2020. 68 p. Available from:

<https://www.who.int/publications/i/item/9789240012202>

9. Salama AM. Utilizing Health Belief Model to Enhance the Preventive Behavior against Iron-Deficiency Anemia among Pregnant Women. IOSR J Nurs Heal Sci. 2017;06(2):11–20.
10. Azhibekova N. Defeating Anemia : A Grandmother Takes Charge in Her Home and Community. 2018.
11. Bhardwaj A, Murage L, Sharma S, Dipo D, ... Weekly iron and folic acid supplementation and nutrition education for adolescent girls in Africa and Asia. F Exch ... [Internet]. 2021;(66):40–3. Available from:
<https://www.enonline.net/fex/66/ironfolicacidnutritioneducation>
12. Sedlander E, Long MW, Bingenheimer JB, Rimal RN. Examining intentions to take iron supplements to inform a behavioral intervention: The Reduction in Anemia through Normative Innovations (RANI) project. PLoS One [Internet]. 2021;16(5 May):1–16. Available from:
<http://dx.doi.org/10.1371/journal.pone.0249646>
13. SPRING Project. Supportive Families Enable Healthy Mothers and Thriving Babies. JSI Res Train Institute, Inc. 2018;(July).
14. UNICEF. Nepal ’ s success story : What helped to improve maternal anaemia ? Nepal Fact Sheet [Internet]. 2016. Available from:
<https://www.enonline.net/file/download/3144>
15. Nutrition International. Nepal’s Female Community Health Volunteers essential to success of iron & folic acid supplementation program - Nutrition International [Internet]. Available from: <https://www.nutritionintl.org/news/all-field-stories/female-community-health-volunteers-essential-success-iron-folic-acid->

supplementation-program/

16. Kulkarni PY, Bhawalkar JS, Jadhav AA. Anemia control program in india needs to be more comprehensive. *Indian J Public Health*. 2022;66(3):358–61.
17. Rai RK, Kumar SS, Sen Gupta S, Parasannanavar DJ, Anish TSN, Barik A, et al. Shooting shadows: India’s struggle to reduce the burden of anaemia. *Br J Nutr*. 2023;129(3):416–27.
18. Training Tool. Anemia Mukth Bharat. Government of India. Anemia Mukth Bharat Training Module. 2019;(November):120.
19. Child Health Division M. T3 Camps Guidance Note for State Program Managers. 2019.
20. NCEARA. Policy brief on Test, Treat and Talk (T3) Camp for Anemia. 2022.
21. PATH India. Haryana Onwards and Upwards. 2020.
22. PATH India. Coordinated Efforts to Broaden Iron Folic Acid (IFA) Coverage : The Shravasti Story. 2021.
23. PATH India. Anemia Mukta Lakshya Abhiyan (AMLAN). 2023. p. 3–6.
24. PIB Delhi. Anemia Mukth Bharat [Internet]. 2022. Available from: <https://pib.gov.in/PressReleasePage.aspx?PRID=1795421>
25. Kinjawadekar U. Aiding the Vision of an ‘Anemia Mukth Bharat.’ *Indian Pediatr*. 2023;60(5):339–40.
26. Ali SA, Feroz A, Abbasi Z, Ali SA, Allana A, Hambidge KM, et al. Perceptions of women, their husbands and healthcare providers about anemia in rural Pakistan: Findings from a qualitative exploratory study. *PLoS One* [Internet]. 2021 Apr 1 [cited 2024 Mar 5];16(4). Available from: [/pmc/articles/PMC8078764/](https://doi.org/10.1371/journal.pone.0241644)

27. Bharati S, Pal M, Chakrabarty S, Bharati P. Socioeconomic determinants of iron-deficiency anemia among children aged 6 to 59 months in India. *Asia-Pacific J Public Heal*. 2015;27(2):NP1432–43.
28. Deivita Y, Syafruddin S, Andi Nilawati U, Aminuddin A, Burhanuddin B, Zahir Z. Overview of Anemia; risk factors and solution offering. *Gac Sanit [Internet]*. 2021;35:S235–41. Available from: <https://doi.org/10.1016/j.gaceta.2021.07.034>
29. Bhatnagar RS, Padilla-Zakour OI. Plant-based dietary practices and socioeconomic factors that influence anemia in india. *Nutrients*. 2021;13(10):1–19.
30. Abu BAZ, Buttner N, Garror OD, Stefanic R, Sandow A, Pereko KA. Qualitative assessments of anemia-related programs in Ghana reveal gaps and implementation challenges. *Ann N Y Acad Sci*. 2021;1492(1):27–41.
31. Amina S, Abubakar SM, Aminu FT, Ajieroh V, Afolabi WA, Samuel F. Effect of Behaviour Change Communication and Reminder Strategies on Coverage and Adherence to Iron-Folic Acid Supplementation among Pregnant Women in Kano: A Hybrid Effectiveness Design Study. *Niger J Nutr Sci*. 2024;44(3):12–25.
32. Putri SB, Ulfiana E. Factors Affecting Iron And Folicacid Consumption Among Adolescents: A Literature Review. *Proc Int Conf Appl Sci Heal*. 2019;(4):609–12.
33. Sedlander E, Long MW, Mohanty S, Munjral A, Bingenheimer JB, Yilma H, et al. Moving beyond individual barriers and identifying multi-level strategies to reduce anemia in Odisha India. *BMC Public Health*. 2020;20(1):1–16.
34. Annisa FN, Nurmala I. Influence perceived benefit and perceived self efficacy with intention of adolescent girls in consuming FE tablet. *Indian J Public Heal*

Res Dev. 2018;9(4):326–9.

35. Aprianti R, Sari GM, Kusumaningrum T. Factors Correlated with the Intention of Iron Tablet Consumption among Female Adolescents. *J Ners* [Internet]. 2018 Apr 1 [cited 2024 Mar 5];13(1):122–7. Available from: <https://e-journal.unair.ac.id/JNERS/article/view/8368>
36. Williams PA, Poehlman J, Moran K, Siddiqui M, Kataria I, Rego AM, et al. Strategies to address anaemia among pregnant and lactating women in India: A formative research study. *Public Health Nutr.* 2020;23(5):795–805.
37. Awantang GN, Helland A, Velu S, Gurman T. Evaluating capacity strengthening for social and behavior change communication: A systematic review. *Health Promot Int.* 2022;37(1).
38. Girma M, Petros A, Alemayehu D, Samuel A. Effectiveness of Social and Behavior Change Communications (SBCC) to Improve Infant and Young Child Feeding Practices in Ethiopia: A Rapid Review. *Effectiveness of Social and Behavior Change Communications (SBCC) to Improve Infant and Young Child Feeding* . 2020;(May).
39. Bhatia V, Parida SP, Mahajan PB, Bhattacharjee S, Nayak R. Perception and health seeking behaviour of people regarding anaemia: An experience from Odisha in Eastern India. *J Int Med Sci Acad.* 2021;34(1):13–7.
40. Araban M, Baharzadeh K, Karimy M. Nutrition modification aimed at enhancing dietary iron and folic acid intake: An application of health belief model in practice. *Eur J Public Health.* 2017;27(2):287–92.
41. Nahrisah P, Somrongthong R, Viriyautsahakul N, Viwattanakulvanid P, Plianbangchang S. Effect of integrated pictorial handbook education and counseling on improving anemia status, knowledge, food intake, and iron tablet

compliance among anemic pregnant women in Indonesia: A quasi-experimental study. *J Multidiscip Healthc* [Internet]. 2020 [cited 2024 Mar 5];13:43–52.

Available from:

<https://www.tandfonline.com/action/journalInformation?journalCode=djmd20>

42. Sunuwar DR, Sangroula RK, Shakya NS, Yadav R, Chaudhary NK, Pradhan PMS. Effect of nutrition education on hemoglobin level in pregnant women: A quasi-experimental study. *PLoS One*. 2019;14(3):1–12.
43. Chandran A, M. S, Kate N. The effect of information, education and communication on knowledge and practice regarding prevention/treatment of iron deficiency anaemia among the antenatal women attending primary health centre in Puducherry, India: a randomised control study. *Int J Reprod Contraception, Obstet Gynecol*. 2019;8(6):2315.
44. Ferede A. Effect of Behaviour Change Communication to Prevent Anemia and Haemoglobin Concentration Among Children Growth Age 6 -59 Months in Central Highland of Ethiopia: Cluster Randomized Control Trial. *Biomed J Sci Tech Res*. 2020;31(5):24595–603.
45. Eileen K, Jennifer S, Meghan K, Sibhatu B. Impact of Social and Behavior Change Communication in Nutrition Sensitive Interventions on Selected Indicators of Nutritional Status. *J Hum Nutr*. 2018;2(1).
46. Chakraborty D, Gupta A, Seth A. Experiences from a mobile-based behaviour change campaign on maternal and child nutrition in rural India. *ACM Int Conf Proceeding Ser*. 2019;
47. Joe W, Rinju, Patel N, Alambusha R, Kulkarni B, Yadav K, et al. Coverage of iron and folic acid supplementation in India: Progress under the Anemia Mukta Bharat strategy 2017-20. *Health Policy Plan*. 2022;37(5):597–606.

48. Nambiar VS, Ansari SI. Review of Progress Towards Anemia Mukht Bharat. Reasons for staggered reduction in Anemia – A review. 2021;(November 2020).
49. Bhatia PV, Sahoo DP, Parida SP. India steps ahead to curb anemia: Anemia Mukht Bharat. *Indian J Community Heal*. 2018;30(4):312–6.
50. Taneja DK, Rai SK, Yadav K. Evaluation of promotion of iron-rich foods for the prevention of nutritional anemia in India. *Indian J Public Health*. 2020;64(3):236–41.
51. Noronha JA, Bhaduri A, Bhat HV, Kamath A. Interventional study to strengthen the health promoting behaviours of pregnant women to prevent anaemia in southern India. *Midwifery* [Internet]. 2013;29(7):e35–41. Available from: <http://dx.doi.org/10.1016/j.midw.2012.07.014>
52. Olney DK, Pedehombga A, Ruel MT, Dillon A. A 2-year integrated agriculture and nutrition and health behavior change communication program targeted to women in Burkina Faso reduces anemia, wasting, and diarrhea in children 3-12.9 months of age at baseline: A cluster-randomized controlled trial. *J Nutr* [Internet]. 2015 Jun 1 [cited 2024 Mar 5];145(6):1317–24. Available from: <https://doi.org/10.3945/jn.114.203539>
53. PATH India. Living Labs Report: Human-Centered Design Approach with Frontline Workers in Uttar Pradesh and Bihar. 2017.
54. Shivalli S, Srivastava RK, Singh GP. Trials of improved practices (TIPs) to enhance the dietary and iron-folate intake during pregnancy- A quasi experimental study among rural pregnant women of Varanasi, India. *PLoS One*. 2015;10(9):1–15.
55. Titaley CR, Rahayu E, Damayanti R, Dachlia D, Sartika RAD, Ismail A, et al. Association between knowledge and compliance of taking iron/folic acid

supplements during pregnancy. Asian J Pharm Clin Res. 2017;10(Special Issue October):177–82.
