



Published in the USA  
Media Education (Mediaobrazovanie)  
Issued since 2005.  
ISSN 1994-4160  
E-ISSN 1994-4195  
2024. 20(3): 408-418

DOI: 10.13187/me.2024.3.408

<https://me.cherkasgu.press>



## Harnessing Mass Media and Media Education to Enhance Health Literacy on Maternal Health through IEC Materials

Kamna Kandpal <sup>a, \*</sup>, Piyashi Dutta <sup>a</sup>

<sup>a</sup>Amity University, Noida, Uttar Pradesh, India

### Abstract

The media actively participates in disseminating health information to a large audience. It has the power to educate communities to take proactive measures to enhance their health. The media plays a key role in increasing public awareness of health issues through information, advocacy, and education. Health education through Information, Education, and Communication is essential in maternal health, influencing pregnant women's access to information, decision-making, and healthcare-seeking behaviour. Effective communication between healthcare providers and pregnant women fosters informed decision-making and creates a supportive environment for discussing health concerns. Information, Education, and Communication (IEC) resources, such as pamphlets, posters, and films, are essential for spreading important health information and fostering favourable outcomes for maternal health. These materials cater to diverse literacy levels and cultural backgrounds, improving comprehension and retention of key health messages. In Uttarakhand's Bageshwar district, female literacy significantly lags behind male literacy, impacting maternal health outcomes. An observational study in Bageshwar's villages reveals that IEC materials, though available, often fail to engage the target audience due to language barriers and cultural mismatches. Enhancing female literacy through targeted education and empowerment initiatives is pivotal. Effective IEC strategies must include clear objectives, culturally relevant messages, and diverse communication channels to overcome these obstacles.

**Keywords:** Bageshwar, IEC materials, maternal health, Uttarakhand, health communication.

### 1. Introduction

The media greatly influences people's beliefs about health in traditional communities. The definitions and understanding of health can have far-reaching effects, influencing areas such as health education and promotion. The media's portrayal of health has a significant social impact because it can change people's perspectives, habits, and beliefs about health. It can also increase the intended audience's understanding of health-related topics (Marinescu, Mitu, 2016). Media education should be integrated into broader health communication strategies to ensure a comprehensive approach to maternal healthcare education. This involves collaboration between media educators, healthcare providers, government agencies, and community organizations.

Studies have argued of the main causes of the increased maternal death rate is low literacy rates. J.E Corrarino (Corrarino, 2013) emphasized the significance of health literacy in women's health, pointing out that it poses a significant challenge. The study highlighted how health literacy impacts women's understanding, their ability to adhere to medical instructions, and ultimately,

\* Corresponding author

E-mail addresses: [kamna.kandpal@s.amity.edu](mailto:kamna.kandpal@s.amity.edu) (K. Kandpal), [piyashi.dutta@gmail.com](mailto:piyashi.dutta@gmail.com) (P. Dutta)

their health outcomes. Women's literacy directly correlates with their capacity to comprehend and retain information. The study similarly underscored the importance of literacy among pregnant women, stating that it enables them to recognize warning signs during pregnancy, care for themselves adequately, and follow advice from healthcare professionals, leading to a safe and healthy pregnancy (Mojoyinola, 2011). Literacy is crucial for interpreting and implementing information found in written materials, as well as for adhering to guidance and raising awareness provided by community health workers. There is a reduction in maternal mortality per 100,000 females with every 1% increase in female literacy (Batool et al., 2020). The research highlighted the direct correlation between literacy levels and maternal mortality rates.

According to the study by N.Naveena (Naveena, 2015) the role of mass media is instrumental in assisting health communicators to extend their outreach, which is essential given that direct communication methods often require substantial human resources and tend to engage only a small audience in extensive, underserved rural areas.) The study *Role of Media in Health awareness* (Ouchene et al., 2024) emphasizes upon the media's social responsibility in the health field requires providing accurate and objective information and news to the public.

This duty entails a commitment to accuracy, the promotion of diversity, the assurance of fair representation, protection of freedom, and encouragement of social participation aimed at fostering interaction and yielding a positive effect. The dynamics surrounding health awareness are deeply intertwined with the societal challenges and health risks that confront the community. Thus, Health education encompasses a variety of educational experiences intended to encourage individuals to voluntarily adopt health-promoting behavior. Its primary goals are to enhance understanding and consciousness, making it a crucial element of health promotion.

The media serves an essential function in the distribution of information and the education of the public over time. This, in turn, contributes to the improvement of the audience's attitudes, knowledge, and practices (KAP) towards achieving better health (Catalan, 2011). Health education is an essential element in promoting health. Mass media plays a critical role in distributing health information and enhancing awareness of health education (Sharma, Gupta, 2017).

Health information and awareness about health education are effectively communicated through the mass media. By not only spreading awareness but also educating the community over time, the media plays a crucial role in fostering positive changes in audience attitudes and behaviours towards achieving optimal health. The media serves as a powerful tool in instigating behavioural changes by influencing knowledge, beliefs, and attitudes regarding health and healthy behaviours.

Print media, such as newspapers, magazines, leaflets, and brochures, have a significant impact on informing and educating the public about important events in their daily lives. Additionally, newspapers are one of the most crucial sources of health-related information globally (Sharma, 2015). Print media offers comprehensive details on nearly every health-related topic. The global health television channel has significantly influenced health outcomes, providing essential access to vital health information in developing nations (McConnell et al., 2024).

Mass media acts as a significant bridge connecting rural communities with crucial national information. Through platforms such as radio and television, it effectively influences target audiences to embrace new behaviours and serves as a reminder of essential information. Beyond raising awareness about new diseases and guiding individuals on where to seek assistance, mass media also plays a key role in keeping the public informed. Television recognized as an effective audio-visual medium, can reach a large audience and is a fundamental communication tool for delivering healthcare messages through advertisements and various health initiatives. However, Information, Education and Communication (IEC) stand out as a potentially powerful mechanism in addressing maternal health Challenges. The objective of health education is to improve overall health by influencing people's attitudes and expanding their knowledge by imparting health information to communities and individuals (Kumar, Preetha, 2012a). National health programs serve as the foundation for health promotion, and community involvement drives their execution. The government has made an effort to use information, education, and communication (IEC) to address health disparities.

Disparities in the use of services and their results, which are driven by structural variables including education, caste/ethnicity, economic status, and cultural traditions, make maternal health a critical public health concern (Hamal et al., 2020). Studies show that institutional and societal inadequacies contribute to the high rates of maternal death, which emphasizes the need for maternal health to be given top priority in the Sustainable Development Goals (SDGs). India's goal

is to bring down the rate of maternal death to 70 per 100,000 live births by the year 2030. With disparities in service use and outcomes affected by structural factors such as economic status, caste/ethnicity, education, and cultural traditions, maternal health continues to be a critical public health concern.

Studies underscore that persistently high maternal mortality rates reflect societal and systemic shortcomings, reinforcing the urgency to prioritize maternal health within the Sustainable Development Goals (SDGs). India is striving to achieve the target of reducing the maternal mortality ratio to 70 per 100,000 live births by the year 2030.

Efforts to address these challenges include state-initiated health schemes and educational programs aimed at enhancing maternal health awareness and service accessibility (Ray, 2006). The National Rural Health Mission (NRHM) was established in the year 2005 exemplifies broader efforts to deliver quality healthcare services in rural areas, with a particular focus on states facing significant health disparities, including those within the Empowered Action Group (EAG) (Vellakkal et al., 2017).

Despite these initiatives, significant gaps in the utilization of maternal healthcare services persist, particularly among young married women, necessitating targeted policies and improved program implementation, especially in economically disadvantaged states (Singh et al., 2021). Enhancing access to comprehensive antenatal care (ANC) and skilled birth attendance (SBA) remains crucial to mitigating maternal mortality risks and improving overall maternal health outcomes across India. While strides have been made in maternal healthcare in India, persistent challenges underscore the need for sustained efforts to reduce maternal mortality and improve maternal health outcomes, particularly among vulnerable populations and within underserved regions.

The International Communication Association initially presented the idea of health communication in 1975. The American Public Health Association then acknowledged health communication as a broad field within public health education and health promotion in 1997. A comprehensive approach to health and well-being promotion can empower individuals and communities, thereby addressing health concerns as emphasized in the study (Kumar, Preetha, 2012b). Furthermore, Communication is a crucial tool for educating, persuading, and inspiring people, organizations, and the general public about important health issues (Bernhardt, 2004).

Information, Education, and Communication (IEC) are vital for delivering health information and effectively influencing health attitudes and behaviours. They pointed out that printed formats like newspapers, leaflets, handouts, and articles can create significant barriers for illiterate individuals (Halliday, Agnes, 2020). Therefore, it is imperative to focus on the age, literacy levels, and geographical locations of the intended audience. Additionally, the authors argue for prioritizing audio-visual materials over printed educational content. IEC is a multifaceted process aimed at facilitating behaviour change, which involves stages such as receiving information, changing health behaviours, modifying those behaviours, and sustaining them over time (World Health Organization, 2001). Health communication serves as a proactive approach to disseminating health messages through various media technologies and organizations to raise awareness about diseases and illnesses (Oyama, Ngozi, 2017).

Information, Education, and Communication (IEC) are designed to empower individuals to make informed decisions and alter behaviours through educational processes. The Indian government has acknowledged communication as an essential element of the healthcare delivery system (Kumar, 2022). Communication is now integrated into all national health and family welfare programs through Information Education Communication (IEC) initiatives. By providing information, education, and communication (IEC), individuals are empowered to make informed choices regarding their health and overall well-being. Effective communication of reliable information is crucial in achieving this objective. The primary aim of the IEC is to enhance the utilization of health and family welfare services by generating demand and promoting better access. Communication is vital in maternal health, influencing pregnant women's access to information, decision-making, and healthcare-seeking behaviours. Effective communication facilitates the exchange of information between healthcare providers and pregnant women, empowering them to make informed decisions regarding their health and that of their unborn child. It fosters a supportive environment where women feel comfortable discussing their concerns and receiving guidance from healthcare professionals in health programs, IEC aims to raise awareness and transform attitudes to promote better health practices. The essential components of

an IEC strategy involve developing initiatives, identifying challenges and resources, establishing evaluation frameworks, executing plans with the support of community leaders, engaging audiences, and utilizing interpersonal and mass media platforms.

The IEC initiatives play a crucial role in bringing government policies to the grassroots level. They are essential for raising awareness about different programs and policies among the beneficiaries, particularly in rural areas. The government's welfare programs heavily rely on the active involvement of rural communities, which can only be achieved through the widespread dissemination of information. The significance of the IEC lies in its thorough research and consultation with target groups, enabling a better understanding of their needs and requirements.

*Empowering Communities through Information, Education and Communication (IEC) interventions* (Hasan, 2024) discusses the essence of careful planning and consideration in developing effective Information, Education and Communication (IEC) materials. The steps include: 1. Conduct a comprehensive evaluation of the target audience's requirements, literacy levels, language preferences, and cultural background. This will assist in 1. customizing content and messaging to effectively engage the desired audience 2. establishing the goals of IEC materials 3. identifying the specific behavioural changes or knowledge dissemination that the materials aim to accomplish 4. working closely with the subject matter experts to create precise and pertinent content. Ensure that the information is clear, easy to comprehend, and addresses the identified needs of the audience. Use language that is familiar to the audience and suitable for their literacy levels. Keep sentences brief and use plain language to enhance comprehension. 7. Before finalizing the materials, conduct pre-tests with representatives from the target audience. Collect feedback on clarity, relevance, and cultural appropriateness to make any necessary adjustments. Choosing the right medium is crucial for effectively communicating the message to the intended audience. Engaging with different levels of government, NGOs, and local support groups, collaborating with the media for widespread coverage, supplying resources, and training IEC workers are all indicators of a successful IEC campaign.

The success of health and developmental initiatives in rural areas relies on the implementation of effective IEC strategies. Building strong relationships with the community, crafting compelling messages, choosing the right communication channels, gathering feedback, and ensuring the availability of necessary resources are all crucial factors in determining the efficacy of these strategies.

In this context, Information, Education, and Communication (IEC) materials serve as essential tools in disseminating crucial health information and promoting positive maternal health outcomes. These materials encompass a wide range of formats, including posters, leaflets, brochures, videos, and audio messages, designed to cater to diverse literacy levels and cultural backgrounds. By presenting information in visually engaging and culturally relevant ways, IEC materials help to improve comprehension and retention of key health messages. The effective use of communication and IEC materials has been associated with positive maternal health outcomes, including increased antenatal care attendance, improved maternal nutrition, higher rates of institutional delivery, and reduced maternal and neonatal mortality.

## 2. Materials and methods

The state of Uttarakhand has been recognized for its poor performance, particularly as a primary contributor to maternal fatalities. The National Health Family Survey Report (NHFS-4, 2017) highlights significant disparities in literacy rates, especially in rural areas. Historical data reveals that female literacy in Uttarakhand has improved over the decades: from 4.8 % in 1951 to 7.8 % in 1961, with a substantial increase to 60 % by 2001. During the same period, male literacy rose dramatically from 32 % to 84 %. The Census of India 2011 reports female literacy at 70.01 %. Despite these improvements, significant disparities in female literacy persist, impacting health outcomes.

Women's literacy is crucial for maintaining higher health standards. Low literacy rates adversely affect women's health, leading to complications during pregnancy. Bageshwar district exemplifies Uttarakhand's challenges in maternal health, with female literacy at a mere 63.7 %, compared to male literacy at 80.36 %, according to the 2011 census. The district, encompassing 947 villages illustrates the stark literacy disparity between genders. Literacy empowers women to make informed decisions and access vital information for reproductive health. Enhancing maternal health literacy is instrumental in improving knowledge and awareness, enabling effective



management of pregnancy-related complications. There is a strong correlation between their utilization of maternal health services and women's literacy (Kateja et al., 2007). Thus, addressing female literacy is pivotal for advancing maternal health outcomes in Uttarakhand.

Set in this milieu, this exposition discusses health literacy and IEC materials concerning the Bageshwar district of Uttarakhand. Notably, the education and empowerment of women are intrinsically intertwined with maternal health literacy, serving as a pivotal determinant of both maternal and child health outcomes. In Bageshwar, female literacy lags significantly behind males, at 69.03 % as reported in the (Census Handbook, 2011). Health literacy, encompassing mothers' ability to access, evaluate, and utilize information regarding women's and children's health, directly influences maternal and child health-related risks and nutritional factors. Given the significance of maternal health literacy in influencing health behaviours and outcomes, addressing the disparity in female literacy rates becomes imperative for promoting optimal maternal and child health in Bageshwar and similar regions. The arguments of this exposition are based on an observational study conducted in the villages of Kathayatbara, Bilonasera and Mandalsera and Bajinath community health centre of Bageshwar district, Uttarakhand.

Note, WHO suggests adhering to the following framework principles when creating, carrying out, and assessing IEC interventions, i) well-defined goals ii) client-centeredness iii) suitable research design iv) focus on positive behaviour modification v) meticulously developed and evaluated instructional messaging appropriate lines of communication, vi) the use of low-cost instructional resources, and graphic messages with cultural relevance that can be used at home vii) integration with the healthcare delivery system and viii) oversight, assessment, and feedback systems.

IEC Materials included posters, wall paintings, brochures, flipcharts, placards and the maternal and child health card disseminated by Accredited Social Health Activists (ASHA). IEC materials analysed were available at the community health centre, Bajinath and Block coordinator office, National Health Mission in Bageshwar district. Schemes highlighted in the materials included (Pradhan Mantri Surakshit Matritva Abhiyan, 2016; Janani Suraksha Yojana, 2005; Poshan Abhiyaan, 2018; Ayushman Bharat Yojana, 2018).

In Uttarakhand, the Family and Health Welfare Society established a functional Information and Communication (IEC) cell under the Director-General to address maternal health issues effectively (IEC Cell, 2011). "Conventionally, the IEC approach is used in the field of reproductive health for creating awareness, increasing knowledge, changing attitudes and moving people to change their behaviour or adopt an innovation" (Akhund, Avan, 2011). The execution of IEC strategies follows a methodical and comprehensive approach, beginning with the development of an action plan tailored to specific needs and areas. This is followed by the creation of messages by professional media agencies, pre-testing of materials, and their subsequent dissemination. The strategy also includes the formulation and implementation of media strategies, and the evaluation of the impact of IEC materials. The IEC strategy employs a variety of media to ensure wide reach and impact.

Healthcare professionals are in charge of using various health learning resources to educate the public about health issues mainly,

i) Electronic media includes radio and TV commercials focusing on key topics such as antenatal care, breastfeeding promotion, vasectomy, and adolescent reproductive health, under the National Rural Health Mission (NRHM).

ii) Print media includes resources that highlight maternal health, such as calendars, flipbooks, pamphlets, folders, and posters.

iii) Outdoor media includes buses, video vans, hoardings, and lit signs that draw attention to important issues like female foeticide.

Furthermore, interpersonal communication plays a crucial role through population education programs for higher secondary schools, orientation training camps for service providers and Integrated Child Development Services (ICDS) workers, and workshops on Reproductive and Child Health (RCH) and NRHM. These multifaceted communication strategies aim to enhance maternal health literacy and promote positive health behaviours among women and their families. The National Health Policy places significant emphasis on utilizing visual communication materials to elucidate the benefits available under various health schemes.

Despite concerted governmental efforts, a noticeable gap has been identified in the optimal utilization of resources. This gap poses a significant challenge to the attainment of desired goals outlined within the framework of sustainable development. Therefore, there is an imperative to

delve deeper into understanding the underlying factors influencing individuals' interest levels in engaging with communication materials. This critical examination is essential for addressing barriers and fostering effective communication strategies to enhance health outcomes.

The significance of Information, Education, and Communication (IEC) materials in enhancing maternal health literacy cannot be overstated. This encompasses the capacity to identify risks and make informed decisions regarding nutrition throughout the maternity journey. Maternal health literacy also plays a pivotal role in facilitating the smooth adaptation of newborns during the postnatal period and contributes to overall health outcomes. The interpersonal aspect of this skill is particularly pertinent in the context of newborn healthcare.

Maternal health literacy encapsulates both cognitive and social abilities necessary for accessing, comprehending, evaluating, and utilizing health-related information and services to promote the well-being of both mother and newborn. Proficiency in health literacy empowers mothers to assess their health, make well-informed healthcare choices, and seek medical assistance promptly when needed. Thus, nurturing maternal health literacy through the effective utilization of IEC materials is vital for enhancing maternal and newborn health outcomes.

### 3. Discussion

*The influence of education on health: an empirical assessment of OECD countries for the period 1995–2015* (Raghupathi, 2020) discusses how Individuals with advanced educational qualifications tend to experience improved health outcomes and longer lifespans than those with lower levels of education. It is important to emphasize that higher education, especially at the tertiary level, plays a significant role in affecting factors such as maternal and infant mortality rate, life expectancy and vaccination. Education significantly influences health by fostering greater self-awareness regarding personal well-being and enhancing access to healthcare services.

Health education plays a vital role within the healthcare system and holds the promise of enhancing global health outcomes (Rizvi, 2022). Health education initiatives play a crucial role in shaping positive attitudes and behaviours related to global health. By enhancing these programs through digital platforms and broadening the range of health education topics, we can ensure that these interventions have a meaningful and lasting impact.

Effective health communication plays a crucial role in influencing individuals' decision-making processes that encourage healthier choices. Thoughtfully crafted health communication resources can significantly shape social norms and behaviours, ultimately contributing to improved health outcomes (Handebo et al., 2022).

There are major direct and indirect effects on the usage of maternal health care from the Maternal and Child Health Book. Mothers who use the Maternal and Child Health Book are more likely to directly seek maternal health care, which takes into consideration several influencing factors. Through increasing mother awareness, the book also indirectly supports the use of maternal health services. It is essential to encourage the Maternal and Child Health Book's successful use to improve maternal health habits. The impact of maternal literacy and paternal occupation was shown to be quite small on crucial outcomes such as the use of family planning services, TT vaccination, skilled birth attendance, and prenatal care (Lengkong, 2023).

Addressing health issues can lead to an overall enhancement of the population's health status. Individuals with strong social support tend to achieve higher health literacy scores. Conversely, those with restricted financial and social resources are more prone to experiencing lower health literacy (Sabaghinejad, 2023).

In contrast, maternal education and parity emerged as the most significant factors impacting these outcomes. Specifically, maternal education demonstrated a positive correlation with maternal awareness of the safest birth attendants, as well as with the utilization of antenatal care and skilled birth attendance. Maternal education was associated with an increased understanding of antenatal care immunization, which subsequently had a favourable effect on the utilization of antenatal care immunization services.

IEC intervention programs deliver information and raise awareness in a culturally sensitive manner to specific groups of individuals through various media. This approach is designed to enhance knowledge and skills while persuading and motivating individuals to modify their behaviour. The process of IEC involves several stages to effect behavioural change: receiving information, altering health behaviour, and ultimately, sustaining these changes (National..., 1998).

The importance of IEC is a vital tool for disseminating health information and promoting positive changes in health attitudes and behaviours. However, they noted that printed materials such as newspapers, leaflets, handouts, and write-ups present challenges for illiterate individuals (Halliday, Agnes, 2020). Additionally, the authors advocated for the use of video and visual materials instead of printed educational resources to enhance comprehension and effectiveness. Therefore, it is crucial to consider factors such as age, literacy level, and location when targeting specific audiences. Factors such as age, gender, marital status, availability of adequate time for delivering health education, and the recognition of the importance of printed IEC materials in conveying fundamental concepts were found to have a significant correlation with the use of these materials (Geleta et al., 2022).

**Utilizing Diverse Media Channels:** Leveraging mass media channels, including television, radio, and digital platforms, can effectively reach a wider audience. These channels can broadcast culturally sensitive and linguistically appropriate content that addresses maternal health issues, ensuring that information is accessible to diverse populations.

**Incorporating Visual and Audio Materials:** Given the challenges faced by illiterate individuals, using video, animations, and audio materials can significantly enhance understanding and retention of health information. Visual aids such as infographics and pictorial representations can simplify complex health concepts, making them more comprehensible.

**Media Literacy Education:** Training community health workers and educators in media literacy is essential. Media education can empower them to create and distribute engaging and relevant IEC materials. These professionals can also guide mothers on how to access and interpret health information from various media sources, fostering informed decision-making.

**Community-Based Media Initiatives:** Implementing community-based media initiatives, such as local radio programs or community theatre, can provide platforms for disseminating health information interactively and engagingly. These initiatives can also facilitate discussions and address specific concerns of the community, promoting greater involvement and adherence to health practices.

**Monitoring and Evaluation:** Continuous monitoring and evaluation of IEC campaigns are crucial to assess their impact and effectiveness. Feedback from the target audience can inform the refinement of strategies, ensuring that the materials remain relevant and impactful.

The integration of mass media and media education is critical in overcoming the challenges associated with the effective utilization of IEC materials for maternal healthcare. Employing diverse media channels, incorporating visual and audio materials, and providing media literacy education can enhance maternal health literacy. This, in turn, empowers mothers to make informed health decisions, improving maternal and newborn health outcomes. Using mass media in conjunction with targeted educational initiatives can significantly contribute to achieving better health standards and behavioural changes in maternal healthcare.

**Case 1:** It was noted that the printed materials available at the Community Health Centre were presented in the local language. However, there was an absence of posters in the Kumaoni Language, which created difficulties for rural women regarding their ability to read the information. Additionally, most posters contained excessive text, which further complicated readability. Only a limited number of posters achieved a suitable balance between minimal text and ample illustrations.

*“Mamta, an 18-year-old mentioned during a focussed group discussion I feel interpersonal communication with the Community health worker in the native language Kumaoni is more comfortable than reading the information from posters, flipcharts or Maternal and Child health books.”*

**Case 2:** The IEC printed materials contained illustrations in some posters, while most of them were filled with information that rural women struggle to read. Additionally, the use of graphics does not match the cultural settings of the district. This mismatch between the content and cultural context makes the IEC printed materials less engaging and comprehensible.

*“Tanuja, a 17-year-old woman from Kathayatbara, discussed in the interview I cannot read and write properly as I have done schooling till Class5th. I have been engrossed with household activities since then, and have not finished my education. I am not interested in reading the booklets distributed by the Community health workers.”*

**Case 3:** The IEC printed materials highlighted the disparity in literacy levels between the government and non-government agencies responsible for creating the posters. A significant

portion of rural women are unable to read communication materials and instead rely on community health workers for information on maternal health. The inadequate literacy levels concerning IEC material have been identified as a gap, leading to further investigation.

*“Rekha, a 22-year-old woman from Mandelsera, revealed in the interview that I had to discontinue my education when my marriage was finalized. As a result, I was unable to complete my studies. I also have a two-year-old child and am currently occupied with managing household duties, with no plans of pursuing further education”.*

#### 4. Results

The comprehension and effective use of Information, Education, and Communication (IEC) materials for maternal healthcare face significant obstacles, primarily due to low literacy rates among women, some of the challenges are:

**Language:** *Evaluation of IEC Materials* (Pathfinder..., 2018) the criticality of minimizing text density in materials intended for public consumption. They emphasized the necessity of ensuring that information intended for rapid assimilation is not burdened with superfluous textual content. In the Bageshwar district, the community health centre provided printed materials in Hindi, not a single poster was available in the Kumauni Language. This discrepancy prompted concerns among rural women regarding the readability of the posters. Furthermore, a majority of the posters contained excessive text, posing readability challenges. Only a few of the posters featured minimal textual content and a greater emphasis on illustrative elements.

**Limited Literacy:** Low literacy levels hinder women's ability to read and understand the information presented in IEC materials. Complex medical terminology and detailed instructions become inaccessible to those with limited reading skills, reducing the efficacy of these educational resources.

**Graphics and Illustrations:** The integration of layout and design in printed materials should be tailored to suit the intended audience (Jahan et al., 2014). Printed materials must be visually appealing and well-structured. Numerous printed materials tend to present an excessive amount of information under subheadings (Arnold, Boggos, 2020). Similarly, the importance of ensuring that visuals complement rather than compete with textual content is stressed in his study. Drawings and photographs must be easily comprehensible and culturally, socially, and economically appropriate. In the context of the Bageshwar district, the IEC printed materials featured illustrations in some posters, albeit most were inundated with information that rural women found challenging to grasp. Furthermore, the use of graphics did not align with the cultural settings of Bageshwar, this mismatch between content and cultural context rendered the IEC printed materials less engaging.

**Cultural and Linguistic Barriers:** The IEC materials are often not tailored to the local dialects and cultural contexts of rural areas like Bageshwar. Without translations into local languages such as Kumauni, the materials fail to resonate with the target audience, further limiting their impact.

**Lack of Visual Aids:** The predominance of text-heavy IEC materials, as opposed to visual aids, poses a significant obstacle. Visuals and illustrations can bridge literacy gaps, but their limited use of current materials reduces the effectiveness of health communication efforts.

**Health Literacy and Behavioural Change:** Even when women can access and understand IEC materials, translating this knowledge into practical health behaviours is another challenge. Low health literacy impedes the ability to critically evaluate and apply health information, which is crucial for effective maternal healthcare. Maternal and child health cards are distributed by ASHA; the beneficiaries are not inclined towards reading the content of the booklet. Women have access to Healthcare services and visit the community health centre. However, they would not make time to pause and read the health information. Regular meetings are conducted in the office of the block coordinator with beneficiaries. Placards and flip charts are shown by the community health workers to educate women on Poshan under the Anaemia Mukht Bharat Scheme.

To overcome the obstacles in effectively utilizing Information, Education, and Communication (IEC) materials for maternal healthcare in Bageshwar, it is essential to develop and distribute resources that are both linguistically and culturally appropriate. Incorporating more visual aids is crucial to cater to audiences with low literacy levels. Efforts should be concentrated on enhancing female literacy rates through targeted education and empowerment initiatives.

The current educational materials are often in the official mother tongue but lack translation into local dialects such as Kumauni. This linguistic gap significantly impairs the comprehension



and engagement of the intended audience. Additionally, the graphical representations in these materials fail to reflect the cultural relevance of health issues, diminishing their impact. For instance, at the community health facility in Baijnath, posters and wall inscriptions aim to raise awareness about maternal health. However, the pictorial representations do not resonate culturally, reducing their effectiveness.

Some suggestions to narrow the identified gap include ensuring that community health workers and health professionals are well-informed about the educational qualifications and marital status of the community they serve.

1) Efforts should focus on the dissemination of health information in the local dialect, complemented by visual aids to enhance understanding.

2) The communication strategy must maintain a neutral and approachable tone to foster women's comprehension and dialogue.

3) Effective health communication and health literacy are vital to the roles of community health workers and healthcare providers must receive training in these areas.

4) This objective can be achieved through regular assessments of the materials and methods employed by stakeholders, alongside training in both verbal and written communication skills.

5) When designing interventions, it is vital to take into account the cultural beliefs and practices of the community to improve health literacy.

6) Existing programs may be modified and restructured based on insights gained from the evaluation and monitoring of projects and their results. Additionally, policies at the national, local, and state levels can be adjusted to enhance health literacy outcomes.

7) According to the first five indicators of the Millennium Development Goals, health literacy is a potent tool that empowers women to achieve long-term objectives and enhance their health.

Thus, these suggestions may serve as a spur to improve maternal health literacy in Uttarakhand's Bageshwar district. The state government programs must ensure that women receive relevant messages that will enhance their health and help them achieve policy goals within the maternal health sector of the Ministry of Health and Family Welfare, Uttarakhand.

## 5. Conclusion

Media education plays a crucial role in overcoming the challenges associated with the effective utilization of Information, Education, and Communication (IEC) materials for maternal healthcare in Bageshwar. By equipping community health workers and educators with skills in media literacy and communication, it is possible to create and distribute materials that are culturally and linguistically appropriate. Media education can enhance the design and dissemination of visual aids, ensuring they are relevant and engaging for low-literacy audiences. Furthermore, media education can empower women by providing them with the knowledge and tools to access and interpret health information, thereby promoting better health outcomes.

### Skill Development for Community Health Workers and Educators:

Media education equips community health workers and educators with essential skills in media literacy and communication. These skills are pivotal in understanding how to effectively convey health information through various media formats. Training in media literacy enables these professionals to critically evaluate and select appropriate content that resonates with the target audience. By understanding the principles of effective communication, they can create messages that are clear, concise, and culturally sensitive, thereby enhancing the overall impact of IEC materials.

### Creation of Culturally and Linguistically Appropriate Materials:

One of the significant challenges in Bageshwar is the linguistic diversity and cultural specificity of the region. Media education provides the tools necessary to create IEC materials that are not only in the local dialects, such as Kumaun but also culturally relevant. This ensures that the materials are more relatable and understandable for the target audience. For instance, using local symbols, attire, and settings in visual aids can make the information more accessible and engaging for the community, thereby increasing the likelihood of its acceptance and utilization.

### Empowerment through Knowledge and Tools:

Media education empowers women by providing them with the knowledge and tools needed to access, interpret, and utilize health information. When women are educated on how to navigate various media sources and critically assess the information presented, they become more informed

about their health and the health of their children. This empowerment leads to better health-seeking behaviours and outcomes. For instance, women who understand how to read and interpret health posters or booklets are more likely to follow recommended health practices, attend prenatal check-ups, and seek timely medical advice.

## References

- [Akhund, Avan, 2011](#) – *Akhund, S., Avan, B.I.* (2011). Development and pretesting of an information, education and communication (IEC) focused antenatal care handbook in Pakistan. *BMC Research Notes*. 4: 1-12: DOI: 10.1186/1756-0500-4-91
- [Arnold, Boggos, 2020](#) – *Arnold, E.C., Boggs, K.U.* (2019). Interpersonal relationships e-book: professional communication skills for nurses. Elsevier Health Sciences.
- [Batool et al., 2020](#) – *Batool, N., Shah, S.A., Dar, S.N., Skinder, S., Jeelani, P.* (2020). Impact of female literacy on infant mortality and maternal mortality in Kashmir valley: a district level analysis. *GeoJournal*. 85: 1545-1551: DOI:10.1007/s10708-019-10041-1
- [Bernhardt, 2004](#) – *Bernhardt, J.M.* (2004). Communication at the core of effective public health. *American journal of public health*. 94(12):2051-2053: DOI: 10.2105/AJPH.94.12.2051
- [Catalan, 2011](#) – *Catalán-Matamoros, D.* (2011). The role of mass media communication in public health. *Health management-Different approaches and solutions*: 399-414: DOI: 10.5772/22790
- [Census Handbook, 2011](#) – Census of India. District Census Handbook Dehradun. Uttarakhand. Directorate of Census operations, 2011.
- [Corrarino, 2013](#) – *Corrarino J.E.* (2013). Health literacy and women's health: challenges and opportunities. *Journal of midwifery & women's health*. 58(3): 257-264: DOI:10.1111/jmwh.12018
- [Geleta et al., 2022](#) – *Geleta, T.A., Deriba, B.S., Dirirsa, D.E., Beyane, R.S., Nigussie, T., Legesse, E., Workneh, A.A.* (2022). Printed information, education, and communication materials utilization and associated factors among health care providers in central Ethiopia. *Frontiers in Communication*. 7: 872215: DOI: 10.3389/fcomm.2022.872215
- [Halliday, Agnes, 2020](#) – *Halliday, T.A.* (2020). Use of information, education and communication (IEC)-based materials: An effective teaching-learning strategy in nutrition education. *International Journal of Research and Scientific Innovation*. 7(9): 350-354.
- [Hamal et al., 2020](#) – *Hamal, M., Dieleman, M., De Brouwere, V., de Cock Buning, T.* (2020). Social determinants of maternal health: a scoping review of factors influencing maternal mortality and maternal health service use in India. *Public Health Reviews*. 41: 1-24: DOI: 10.1186/s40985-020-00125-6
- [Handebo et al., 2022](#) – *Handebo, S., Aduugna, A., Nigusie, A., Shitu, K., Kassie, A., Wolde, M.* (2022). Health communication materials use in providing health education among health professionals working at health-care institutions in Gondar City: a cross-sectional study. *International Journal of Health Promotion and Education*: 1-14: DOI: 10.1080/14635240.2022.2154130
- [IEC Cell, 2011](#) – Department of Medical Health and Family Welfare (2011): IEC Activities, Uttarakhand: NIC Uttarakhand state Unit.
- [Jahan et al., 2014](#) – *Jahan, S., Al-Saigul, A.M., Alharbi, A.M., Abdelgadir, M.H.* (2014). Suitability assessment of health education brochures in Qassim province, Kingdom of Saudi Arabia. *Journal of Family and Community Medicine*. 21(3): 186-192. DOI: 10.4103/2230-8229.142974
- [Kumar, 2022](#) – *Kumar, R.* (2022). Define Information Education Communication (IEC): Concept and Functions. *Fundamentals of Health Communication*. 14: 153-164.
- [Kumar, Preetha, 2012a](#) – *Kumar, S., Preetha, G.S.* (2012a). Health promotion: an effective tool for global health. *Indian Journal of Community Medicine*. 37(1): 5-12: DOI: 10.4103/0970-0218.94009
- [Kumar, Preetha, 2012b](#) – *Kumar, S., Preetha, G.S.* (2012b). Health promotion: an effective tool for global health. *Indian Journal of Community Medicine*. 37(1): 5-12: DOI: 10.4103/0970-0218.94009
- [Marinescu, Mitu, 2016](#) – *Marinescu, V., Mitu, B.* (2016). The power of the media in health communication. New York. Routledge. DOI:10.4324/9781315554068
- [McConnell et al., 2024](#) – *McConnell H, Haile-Mariam T, Rangarajan S.* The World Health Channel: an innovation for health and development. *World Hosp Health Serv*. 2004.

- Mojoyinola, 2011** – *Mojoyinola, J.K.* (2011). Influence of maternal health literacy on healthy pregnancy and pregnancy outcomes of women attending public hospitals in Ibadan, Oyo State, Nigeria. *African Research Review*. 5(3). DOI: 10.4314/afrrrev.v5i3.67336
- National..., 1998** – National Family Health Survey (NFHS-2). 1998–99. International Institute for Population Sciences (IIPS) and ORC Macro. 2000. Mumbai.
- Naveena, 2015** – *Naveena, N.* (2015). Importance of mass media in communicating health messages: An analysis. *IOSR J Humanit Soc Sci*. 20(2): 36-41.
- NHFS-4, 2017** – National Family Health Survey (NHFS-4), 2017, Deonar, Mumbai: International Institute for Population Sciences.
- Ouchene et al., 2024** – Ouchene, Djamila, Boussalah, Hocine, Ziane, Kheireddine. (2024). Role of the media in health awareness. *International journal of health sciences*. 8: 477-482. DOI: 10.53730/ijhs.v8nS1.14808
- Oyama, Ngozi, 2017** – *Oyama, O.A., Okpara, N.* (2017). Health communication: The responsibility of the media in Nigeria. *Specialty Journal of Medical Research and Health Science*. 2(3-2017): 1-4.
- Pathfinder..., 2018** – Evaluation of IEC Materials. *Pathfinder International*. 2018. [Electronic resource]. URL: <https://www.childrenandaids.org/sites/default/files/2018-11/Straight%20to%20Point%20-%20Evaluation%20of%20IEC%20materials.pdf>
- Raghupathi, 2020** – *Raghupathi, V., Raghupathi, W.* (2020). The influence of education on health: an empirical assessment of OECD countries for the period 1995–2015. *Archives of Public Health*. 78: 1-18: DOI: 10.1186/s13690-020-00402-5
- Ray, 2006** – *Ray, A.* (2006). Anaemia rampant in women in Bageshwar. *Down to Earth*. [Electronic resource]. URL: <https://www.downtoearth.org.in/coverage/anaemia-rampant-in-women-in-bageshwar-8860>
- Rizvi, 2022** – *Rizvi, D.S.* (2022). Health education and global health: Practices, applications, and future research. *Journal of education and health promotion*. 11(1): 262. DOI: [https://doi.org/10.4103/2Fjehp.jehp\\_218\\_22](https://doi.org/10.4103/2Fjehp.jehp_218_22)
- Sabaghinejad, 2023** – *Sabaghinejad, Z.* (2023). Factors predicting health literacy and factors associated to it; a systematic review. *Health Education and Health Promotion*. 11(4): 581-589. DOI: 9.10.58209/hehp.11.4.581
- Sharma , Gupta, 2017** – *Sharma, S., Gupta.Y.* (2017). Mass media for health education (a study in the state of Rajasthan). *Multidiscip Int J*. 1: 26-39.
- Sharma, 2015** – *Sharma, S.K.* (2015). Newspapers as a source of health related information. *Research Journal of Social Sciences & management*. 4: 55-61: DOI: 10.1186/s12884-021-03607-w
- Singh et al., 2021** – *Singh, P., Singh, K.K., Singh, P.* (2021). Maternal health care service utilization among young married women in India, 1992–2016: trends and determinants. *BMC Pregnancy and Childbirth*. 21: 1-13: DOI: 10.1186/s12884-021-03607-w
- Vellakkal et al., 2017** – *Vellakkal, S., Gupta, A., Khan, Z., Stuckler, D., Reeves, A., Ebrahim, S., Doyle, P.* (2017). Has India's national rural health mission reduced inequities in maternal health services? A pre-post repeated cross-sectional study. *Health policy and planning*. 32(1): 79-90. DOI: 10.1093/heapol/czw100
- World..., 2001** – World Health Organization. Information, Education and Communication: lessons from the past; perspectives for the future (No. WHO/RHR/01.22). World Health Organization, 2001.