

## **Implementation of Health Communication in Improving Eye Health Awareness: A Health Belief Model Study at Bakti Etam Eye Hospital, East Kalimantan Province**

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eye health awareness;  
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### **ABSTRACT**

Limited awareness of preventive eye care and barriers to accessing healthcare services remain significant challenges in East Kalimantan, Indonesia. This study describes health communication practices at Bakti Etam Eye Hospital through the Health Belief Model (HBM). A descriptive qualitative case study involved ten purposively selected informants: three health promotion personnel, three healthcare professionals, and four patients. Data were collected through observation, semi-structured interviews, and document review, then analyzed through data reduction, data display, and conclusion drawing and verification. Health communication was implemented through medical consultations, hospital health promotion programs, community education, and digital media. The six Health Belief Model constructs revealed varied patterns of eye health awareness: perceived susceptibility could emerge before or after symptoms; perceived severity related to anticipated effects on vision and daily activities; perceived benefits were reflected in trust in examinations, treatment, and professional advice; perceived barriers included symptom underestimation, time and financial constraints, difficulties in understanding information, and institutional limitations; cues to action included social media, family, healthcare professionals, and hospital education; and self-efficacy appeared in patients' reported confidence in maintaining eye health. The findings indicate that communication provides information, guidance, and cues for action, but individuals interpret these messages differently. The hospital should therefore strengthen accessible, interactive, and patient-centered communication that addresses practical barriers and supports preventive eye care.



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## **INTRODUCTION**

Health is a fundamental right of every individual and an important indicator of a community's quality of life. In this context, eye health plays a vital role, as visual function directly affects productivity, quality of life, and access to education and employment (Dewi et al., 2005). Prof. Dr. Nila Farid Moeloek, Sp.M., a member of the Executive Board of the World Health Organization (WHO), explained, based on the World Report on Vision, that more than 2.2 billion people worldwide experience vision impairment or blindness, and at least half of these cases could have been prevented or have yet to be adequately addressed

(Kemenkes RI, 2020). These findings underscore the importance of public awareness of eye health and regular eye examinations as part of health promotion and disease prevention efforts, which require effective health communication strategies to enhance public understanding of and concern for eye health (Izzaty et al., 2021).

East Kalimantan has distinctive geographical characteristics, including extensive humid tropical forests, high rainfall, and substantial disparities in regional accessibility, which influence community behaviors related to accessing eye care services. Road infrastructure that deteriorates during the rainy season and long travel distances to healthcare facilities often cause individuals to postpone eye examinations until their conditions worsen. At the same time, limited awareness of preventive measures is exacerbated by the tendency to prioritize daily economic needs. Consequently, eye health challenges in East Kalimantan are associated not only with medical factors but also with geographical, social, and health communication barriers. Public awareness of regular eye examinations remains limited, particularly in areas outside major urban centers, because of insufficient information, misconceptions about eye disorders, and restricted access to specialized services, including comprehensive eye examinations and advanced ophthalmic treatment (Izzaty et al., 2021). These circumstances reflect a gap between the availability of healthcare services and their utilization by local communities (Raule, 2025).

In this context, Bakti Etam Eye Hospital in East Kalimantan Province serves as a specialized eye care facility equipped with advanced ophthalmic technology, including laser-assisted in situ keratomileusis (LASIK), a refractive surgical procedure used to correct refractive errors such as myopia (Hickenbotham et al., 2023). The hospital functions not only as a major referral center but also as a center for health communication and education. To increase public awareness of eye health, it has implemented various healthcare and educational programs, including free cataract surgery and treatment, eye health screenings for students, the "MATA ELANG" eye health education program, and the distribution of free eyeglasses in collaboration with local governments and social organizations. These initiatives complement specialized ophthalmic services in retinal diseases, glaucoma, and refractive surgery, including LASIK. Although the hospital received a substantial budget allocation of IDR 4,877,998,397.00 in 2022 for healthcare facilities and medical equipment, patient visits remained relatively low (RS Mata Provinsi Kalimantan Timur, 2020). Furthermore, the 2020 East Kalimantan Provincial Health Profile did not provide comprehensive and reliable data on the prevalence of visual impairment and eye disorders, including myopia, cataracts, and glaucoma. This lack of epidemiological data hinders needs-based planning for health interventions and the development of effective, appropriately targeted health communication strategies.

The role of health communication in promoting eye health is therefore strategically important (Raule, 2025). Health communication is a field within communication science that focuses on developing and disseminating structured health messages that individuals and communities can understand (Izzaty et al., 2021; Endrawati, 2015). Beyond conveying information, health communication is a strategic process intended to influence individuals' decisions and encourage behaviors that promote health while strengthening public awareness and understanding of health-related issues (Rimal & Lapinski, 2010). However, its effectiveness cannot be determined solely by message structure without considering

individuals' subjective perceptions and interpretations of the information received. Accordingly, the effectiveness of health communication can be examined through the Health Belief Model (HBM), a health behavior framework grounded in social psychological perspectives that explains how individual beliefs and perceptions influence health-related decisions (Haro et al., 2022). The HBM has also been widely applied as an explanatory framework in health communication research (Jones et al., 2015).

The HBM is a theoretical framework for understanding and predicting health-related behaviors based on individuals' perceptions of health threats and the anticipated benefits of preventive or therapeutic actions (Rosenstock, 1974; Haro et al., 2022). In addition to explaining preventive and treatment-seeking behaviors, the HBM provides insights into how individuals' beliefs and perceptions of disease influence their decisions to engage in health-promoting activities (Berhimpong et al., 2020; Aristi & Sulistyowati, 2020). The model comprises six key constructs. Perceived susceptibility refers to an individual's perceived vulnerability to a particular health condition, which may encourage preventive actions such as undergoing eye examinations. In the context of eye health, greater perceived susceptibility to visual impairment may increase motivation to seek ophthalmic examinations (Berhimpong et al., 2020; Afenigus & Asres, 2024). Perceived severity refers to an individual's perception of the seriousness of a disease and its potential physical, psychological, and social consequences. Greater perceived severity may strengthen motivation to undergo examinations and adhere to recommended health behaviors (Putri et al., 2023; Siregar & Octavariny, 2025). Perceived benefits refer to an individual's belief that adopting a recommended health behavior will reduce the risk or severity of a health condition. In eye care, these benefits may include the perceived advantages of regular eye examinations, corrective eyeglasses, and appropriate medical interventions in preserving or improving visual function (Sariyasih et al., 2022; Sari, 2022; Dubey & Sahu, 2021). Perceived barriers refer to anticipated obstacles that may prevent individuals from adopting recommended health behaviors, including financial constraints, limited access to healthcare services, insufficient information, inadequate social support, and psychological concerns such as fear of medical procedures (Ayu & Fajar, 2024; Laksmana et al., 2023). Cues to action are internal or external triggers that encourage individuals to undertake recommended health actions. These may include public health campaigns, educational messages disseminated through mass media, and recommendations from healthcare professionals or community leaders. Such cues can stimulate preventive behaviors, particularly when individuals recognize their susceptibility to a condition, understand its potential severity, and perceive the benefits of taking action (Adiyoso et al., 2023; Seminar et al., 2024; Laili et al., 2023). Finally, self-efficacy refers to an individual's confidence in their ability to successfully perform specific health-related behaviors. This confidence may be strengthened through access to relevant information, health education, and practical support, enabling individuals to schedule eye examinations, use corrective eyeglasses appropriately, and maintain healthy eye care practices (Niskalawasti & Dwarawati, 2022; Muhammad & Anandani, 2023; Nugroho et al., 2021).

Eye health encompasses the preservation of visual function and the prevention, early detection, treatment, and management of eye conditions that may compromise daily activities, productivity, and overall quality of life. It remains a significant public health concern because conditions such as cataracts, glaucoma, and uncorrected refractive errors can cause visual

impairment, while some may lead to irreversible vision loss if not appropriately managed. Therefore, increasing public awareness of regular eye examinations, early detection, and preventive eye care requires effective health communication interventions. Hospitals play an essential role not only in disease diagnosis and treatment but also in rehabilitation, patient education, and long-term healthcare management (Kemenkes RI, 2025). Historically, hospitals primarily functioned as social institutions; however, they have gradually evolved into complex healthcare organizations that must balance public service responsibilities with operational efficiency and financial sustainability (Hammad & Ramie, 2022). Several previous studies relevant to the present research are summarized in Table 1.

**Table 1.** Previous Studies

| Author (Year)         | Title and Main Findings                                                                                                                                                                                                                                                                                          | Similarities                                                                                                                                           | Differences                                                                                                                                                                   |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Seminar et al. (2024) | <i>Health Belief Model-based health communication: Intention to consume iron tablets among female students.</i> Knowledge, information sources, and cues to action influenced the intention to consume iron tablets; programs can be strengthened through cues to action and various health communication media. | Both use the HBM approach and focus on individual health behavior, emphasizing health communication and cues to action in encouraging health behavior. | Focuses on iron tablet consumption and does not examine how health communication is implemented directly within a health institution, particularly in the eye health context. |
| Herlina et al. (2021) | <i>The Health Belief Model approach in interpersonal communication on health protocols between pregnant women and health workers.</i> Perceived susceptibility influenced pregnant women's compliance with health protocols.                                                                                     | Both apply HBM in the context of health communication as an effort to change and improve health behavior.                                              | Focuses on only one HBM component, on pregnant women's health protocols, and on interpersonal communication.                                                                  |
| Endrawati (2015)      | <i>Application of health communication for leptospirosis prevention in Sumberagung Village, Moyudan, Sleman, Yogyakarta.</i> Health communication was shaped by input, process, and output, and changed community knowledge, attitudes, and behavior toward leptospirosis.                                       | Both use health communication as the basis for examining how health messages influence individual health behavior.                                     | Differs in health problem, subject, and location (a village in Yogyakarta versus an eye hospital in East Kalimantan) and does not use the HBM framework.                      |

Table 1 indicates that previous studies have several conceptual limitations. Seminar et al. (2024) emphasized message effectiveness and individual health behaviors through the Health Belief Model (HBM) but did not adequately examine the active role of healthcare institutions in developing and implementing communication strategies. Herlina et al. (2021) focused exclusively on one HBM construct, perceived susceptibility, within interpersonal communication without extending their analysis to institutional health communication

practices. Meanwhile, Endrawati (2015) employed a systems approach based on the input–process–output framework to examine community health communication without explicitly incorporating the HBM. Collectively, these studies tended to position communities primarily as targets of behavioral change, while the strategic processes through which healthcare institutions develop communication strategies and promote public health awareness remained insufficiently explored. To address this research gap, the present study examines how a hospital, as a healthcare institution and public health stakeholder, develops health messages, implements communication strategies, and incorporates HBM constructs to enhance public awareness of eye health within the geographical and sociocultural context of East Kalimantan's humid tropical forest region. Accordingly, the central research question is: How does Bakti Etam Eye Hospital in East Kalimantan Province implement health communication to build public awareness of eye health from the perspective of the HBM? The study aims to describe the hospital's health communication practices and examine how patients' eye health perceptions can be understood through the six HBM constructs. Theoretically, this research contributes to the application of the HBM in institutional health communication by providing insights into the relationship between communication strategies and individual health perceptions. Practically, the findings are expected to provide recommendations for strengthening hospital-based health communication strategies, improving public understanding of preventive eye care, and encouraging regular eye examinations.

## METHOD

This study employed a qualitative approach with a descriptive case study design to examine the implementation of health communication at Bakti Etam Eye Hospital in East Kalimantan Province and its role in efforts to build public awareness of eye health (Habsy & Nursalim, 2025; Humayra et al., 2025). The study focused on two main dimensions: the hospital's implementation of health communication activities and patients' perceptions of eye health based on the six constructs of the Health Belief Model (HBM): perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action, and self-efficacy. These dimensions were examined to explore how the hospital's communication strategies addressed patients' health beliefs, awareness of eye disorders, and preventive eye care behaviors. The research framework is presented in Table 2.

**Table 2.** Research Framework

| Stage / Component                      | Description                                                                                                                                                                                                    |
|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Phenomenon                             | Low public awareness of the importance of maintaining eye health and undergoing periodic eye examinations.                                                                                                     |
| Research context                       | Bakti Etam Eye Hospital, East Kalimantan Province, as a health service institution that carries out health communication to the public.                                                                        |
| Health communication implementation    | Eye health education, socialization, counseling, health campaigns, use of social media, health information media, collaboration with various parties, and face-to-face communication and information services. |
| HBM analysis: perceived susceptibility | How the community understands the risk of experiencing eye health disorders.                                                                                                                                   |
| HBM analysis: perceived severity       | How the community views the serious impact of eye health disorders.                                                                                                                                            |

| Stage / Component                | Description                                                                                                                                                                         |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| HBM analysis: perceived benefits | How the community believes in the benefits of maintaining eye health and routine examinations.                                                                                      |
| HBM analysis: perceived barriers | Barriers felt by the community in maintaining eye health or undergoing examinations.                                                                                                |
| HBM analysis: cues to action     | Triggers or encouragement from health communication that prompt the community to act.                                                                                               |
| HBM analysis: self-efficacy      | Community confidence in its own ability to maintain eye health.                                                                                                                     |
| Expected description             | How the hospital's health communication shapes public perception and encourages increased knowledge, more positive attitudes, awareness of eye examinations, and eye-care behavior. |

The study utilized both primary and secondary data. Primary data were collected from health promotion personnel, healthcare professionals, and patients through direct observations and semi-structured interviews. Secondary data were obtained from institutional documents, archives, databases, records of health communication activities, and relevant photographic documentation (Wijayanti & Fitriani, 2023). Data collection involved field observations, semi-structured interviews, and document reviews. Observations were conducted at the hospital to examine health communication practices within their organizational and situational contexts (Putri & Murhayati, 2025). Semi-structured interviews were conducted using an interview guide developed around the six constructs of the Health Belief Model (HBM), allowing informants to describe their experiences, perceptions, and perspectives in detail (Moleong, 2019). Document reviews were conducted to supplement and corroborate the observational and interview data (Putri & Murhayati, 2025).

Informants were selected through purposive sampling based on predefined inclusion criteria. Key informants included health promotion personnel and healthcare professionals who had worked at the hospital for at least one year and had participated in planning, implementing, or evaluating eye health education programs. Supporting informants included patients aged 18 years or older who had received eye health education and undergone an eye examination or consultation at the hospital. These patients were identified through the hospital's patient database. All informants were required to provide consent to participate in interviews and relevant documentation activities. The selected informants are presented in Table 3.

**Table 3.** Research Informants

| Informant Group                  | Informant                      | Position / Description                                                                         |
|----------------------------------|--------------------------------|------------------------------------------------------------------------------------------------|
| Key informant: health promoter   | Dina Ariani, A.Md.Far          | Person in charge of Health Promotion and Public Relations under the Administration Subdivision |
| Key informant: health promoter   | Nadia Puji Madina              | Secretary of the Health Promotion Team                                                         |
| Key informant: health promoter   | Yadi Asfianoor, S.Kom          | Coordinator of the Creative, Publication, and Documentation Division                           |
| Key informant: medical personnel | dr. Wilanda Ayu Evanadya Putri | General practitioner                                                                           |
| Key informant: medical personnel | dr. M. Irwan Arziansyah, Sp.M  | Ophthalmologist                                                                                |

| Informant Group                  | Informant              | Position / Description |
|----------------------------------|------------------------|------------------------|
| Key informant: medical personnel | Dessi Marini, A.Md.Kep | Eye nurse              |
| Supporting informant             | Ahmad Maulani          | Patient, 30 years old  |
| Supporting informant             | Afifa Rizky Febrianty  | Patient, 24 years old  |
| Supporting informant             | Hanun Muthi'ah         | Patient, 25 years old  |
| Supporting informant             | Diky Nugraha           | Patient, 45 years old  |

Data were analyzed using an interactive qualitative analysis model comprising four interconnected stages: data collection, data reduction, data display, and conclusion drawing and verification. Data were collected through field observations and in-depth interviews. Relevant information was then selected, summarized, and categorized according to emerging themes and patterns related to the research objectives. The reduced data were organized into narrative descriptions and tables to identify relationships among the findings. Finally, conclusions were drawn and verified through repeated examination of the data to ensure consistency and credibility.

## RESULTS AND DISCUSSION

### Profile of Bakti Etam Eye Hospital, East Kalimantan Province

Eye health services in East Kalimantan Province are officially provided by a government institution, Bakti Etam Eye Hospital of East Kalimantan Province, which now occupies a new building at Jl. M. Yamin No. 4, Samarinda (RS Mata Provinsi Kalimantan Timur, 2020). The institution has a long history. It began operating in 1992 as the Community Eye and Sports Health Center (BKMOM) at Jl. Basuki Rahmat No. 1, Samarinda; served as a Pre-Community Eye Health Center (Pra BKMM) in 1994–2000; officially became the Community Eye Health Center (BKMM) under Governor Decree No. 25 of 2001; and became BKMOM again in 2006–2016 under Governor Regulation No. 43 of 2006 (the first amendment to Governor Regulation No. 03 of 2005). Following continuous internal improvement facilitated by the Provincial Government, its status was upgraded to the East Kalimantan Provincial Eye Hospital on 31 December 2019 under Governor Decree No. 74 of 2019. The hospital's vision is "optimizing vision and quality of life to realize a productive society", and its missions are to provide comprehensive, high-quality, satisfaction-oriented, affordable, and equitable eye health services and to build partnerships and community empowerment in eye health services.

The hospital provides comprehensive, integrated, and technology-based curative and rehabilitative eye health services, including outpatient services and 24-hour emergency care, infection and glaucoma clinics, a community eye clinic, eye surgery services (cataract surgery, LASIK, advanced vitreoretinal surgery, and pterygium surgery), inpatient care, refraction and optometry examinations, a 24-hour clinical laboratory and pharmacy, a hospital optical unit, and anesthesia and nutrition consultation services, with LASIK as its flagship service. This range of services positions the hospital as the main referral center for eye health in the region and provides an important foundation for designing and implementing health communication messages for the wider public. Its organizational structure is summarized in Table 4; health promotion and public relations activities are coordinated under the Administration Subdivision.

**Table 4.** Organizational Structure of Bakti Etam Eye Hospital, East Kalimantan Province

| Organizational Unit                                                      | Position in the Structure                                                          |
|--------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| Director                                                                 | Highest structural leader of the hospital                                          |
| Supervisory Board                                                        | Linked to the Director through a coordination line                                 |
| Internal Supervisory Unit (SPI)                                          | Independent unit                                                                   |
| Medical Committee and Medical Staff Groups (SMF)                         | Independent unit; SMF under the Medical Committee                                  |
| Other committees                                                         | Committees under the Director                                                      |
| Section of Medical Services, Nursing, and Community Health Efforts (UKM) | Structural line under the Director                                                 |
| Section of Medical and Non-Medical Support Administration Subdivision    | Structural line under the Director                                                 |
| Functional Position Groups (KJF)                                         | Structural line under the Director, supported by a Functional Position Group (KJF) |
|                                                                          | Structural line under the Director                                                 |

The findings below are organized according to the six HBM indicators. For each indicator, the perspectives of patients, medical personnel, and health promoters are presented and then discussed in relation to health communication concepts and relevant previous studies.

### Perceived Susceptibility

Perceived susceptibility concerns individuals' beliefs about the likelihood of experiencing a disease or health disorder, which, according to Rosenstock (1974), determines the health actions individuals choose. The interviews show that perceived susceptibility to eye disorders is formed through a combination of personal experience, education by health workers, and exposure to health information, but it is not uniform across informants. The health promoters explained that the hospital had carried out promotion, counseling, field education, and social media dissemination to improve understanding of eye disease risk factors. However, visit data indicated that people tend to undergo eye examinations only when complaints arise. Dina Ariani, A.Md.Far stated:

*“In my opinion, one factor that can be linked to this condition is the lack of exposure to health promotion about the importance of maintaining eye health, because based on our data, the number of eye disease cases in East Kalimantan increased from 2014 to 2021.”*

This view was supported by the medical personnel. dr. M. Irwan Arziansyah, Sp.M explained that most new patients come because they already have complaints such as blurred vision or eye pain; after diagnosis, the physician explains the disease, its prognosis, and possible complications if left untreated, after which patients usually become more aware of their condition and attend follow-up visits more regularly. Among patients, two patterns emerged. Afifa (24 years old) recognized the risk before experiencing any disorder:

*“I realize that my daily activities involve using gadgets and laptops for long periods. I also understand that health problems, including eye disorders, can happen to anyone, so I feel I need to pay more attention to my eye health from an early stage.”*

In contrast, Ahmad Maulani (30 years old) admitted that he had never thought about it: “Usually, only after it happens do I panic and try to find a solution.” Perceived susceptibility can therefore be described in two patterns: anticipatory, when individuals recognize risk

factors before experiencing disorders, as with Afifa, and reactive, when awareness emerges only after symptoms or a diagnosis, as with Ahmad. Afifa's experience is consistent with the HBM concept that susceptibility relates to beliefs about the likelihood of experiencing a condition, with prolonged gadget and laptop use serving as the experiential basis for recognizing risk (Afenigus & Asres, 2024). The physician's account reinforces the reactive pattern and is in line with Sariyasih et al. (2022), who showed that patients' understanding of their disease and possible complications relates to how they recognize the health risks they face. From a health communication perspective, the information on disease conditions, prognosis, and complications conveyed during services reflects interpersonal communication aimed at changing health behavior, while the promoters' activities show that the hospital applies strategically designed communication that provides understanding of eye health, prevention, and appropriate medical care (Raule, 2025). Nevertheless, information about eye health risks is not perceived in the same way by every individual.

These findings show that the existence of eye health risks is not automatically perceived in the same way by every individual. Among patients, everyday habits and experiences became a basis for recognizing possible risks, whereas for others the risk only became clear after complaints arose and information was obtained from health workers. Experience of a health condition and information from health workers can therefore both form part of the process through which individuals come to understand health risks. For the hospital, this means that communication on eye health risks needs to reach people before complaints appear, since the reactive pattern indicates that, for some members of the public, interpersonal communication during treatment is the first point at which risk becomes meaningful. At the same time, the health promoters' acknowledgment that exposure to health promotion is still limited, while eye disease cases in East Kalimantan increased from 2014 to 2021, indicates that preventive messages have not yet consistently reached the community before symptoms develop.

### **Perceived Severity**

Perceived severity refers to an individual's subjective assessment of the seriousness of a disease and its consequences, including medical consequences and impacts on daily activities, productivity, psychological and social conditions, and quality of life. Informants' perceptions of severity differed according to the condition and impact of the disorder. Ahmad Maulani (30 years old) stated:

*"I am quite afraid when an eye disease is very disturbing, for example cataracts, which must be operated on, otherwise they can cause blindness. Apart from that, as a layperson, the people around me can still carry out their activities as usual."*

This statement shows a subjective and graded assessment: cataracts are perceived as serious because they are associated with loss of vision and blindness, whereas disorders that do not hinder activities are still tolerated. Medical personnel observed a similar pattern. dr. Wilanda Ayu Evanadya Putri explained that the magnitude of the impact depends greatly on the patient's condition at the first visit: patients who come early have a better prognosis, whereas delayed treatment increases the likelihood of long-term complications, permanent vision loss, or blindness. Health promoters also observed that people tend to come to the hospital after visual disturbances begin to affect daily life. Yadi, a health promoter, noted that

the growing need for eye health services increases patient numbers and may overwhelm the hospital, while people who never have their eyes examined create problems for themselves and their surroundings. Conceptually, however, the promoters' data describe patterns of visits and service contexts rather than a direct measurement of patients' perceived severity.

These findings indicate that perceived severity in this study has subjective and functional dimensions: seriousness is understood not only as the possibility of medical complications but also as real disruption to the ability to work and carry out daily activities. The informants' assessment is consistent with Seminar et al. (2024), who analyzed HBM-based health communication through information sources and cues to action in relation to health behavior intention, although their disease context, informants, and design differ and their results cannot be directly equated with the present findings. Putri et al. (2023) further reported a significant relationship between perceived severity and the application of COVID-19 health protocols ( $p = 0.003$ ). While that study concerns a different disease and behavior, it supports the view that perceived severity is an observable element of the HBM. In the HBM, perceived severity together with perceived susceptibility forms the perceived threat, yet action is still shaped by benefits, barriers, self-efficacy, and cues to action (Jones et al., 2015). In this study, severity was therefore not a single factor directly causing patients to seek examination; decisions were also associated with symptoms, explanations from medical personnel, support from close persons, and information from communication activities. Health communication thus serves as a source of information that links disease conditions to consequences relevant to patients, such as disrupted activities, reduced productivity, complications, and possible vision loss (Raule, 2025).

### **Perceived Benefits**

Perceived benefits concern beliefs about the positive results of a health action, including whether those benefits are relevant, attainable, and greater than the obstacles faced. In this study, benefits were understood as improving eye conditions, controlling disease progression, accelerating treatment, preventing complications, and maintaining productivity. Diky (45 years old) stated:

*“Because health workers have studied this field, I believe that the advice they give is the right action to help improve my eye health.”*

This statement shows that benefits are understood not only as efforts to overcome eye disorders but also as trust in the competence of health workers to educate and determine appropriate treatment. Because patients do not always have sufficient medical knowledge to judge the effectiveness of an action themselves, explanations from health workers become the basis for assessing the benefits of examinations, treatments, or recommendations. The medical personnel confirmed this. dr. M. Irwan Arziansyah, Sp.M stated: “If patients follow the advice given, disease progression becomes easier to control, treatment is faster, the risk of complications is smaller, and the treatment goals can be achieved well.” The health promoters placed education as a means of introducing the benefits of eye health actions to the public. Dina Ariani explained that the main goal of all activities is to carry out the hospital's health promotion function by going directly to the community, so that people who previously did not know the importance of maintaining eye health become more aware when they continuously receive information. This statement, however, reflects program goals and expectations;

changes in awareness or behavior still need to be demonstrated through informants' experiences, observation, or program evaluation data.

Through the HBM lens (Dubey & Sahu, 2021), perceived benefits appear as assessments of the positive results of eye health actions: belief in health workers' advice among patients, disease control and complication reduction among medical personnel, and the communication of benefits through education and promotion by health promoters. These findings are related to Sariyasih et al. (2022), who used the HBM to analyze insulin use among patients with diabetes mellitus in Banjarmasin; 75% of respondents stated that insulin use was very beneficial and 25% stated that it was beneficial, and perceived benefit was associated with patient compliance. Despite the different disease and action, the study supports the present finding that perceived benefits are observable within the HBM and are conveyed to patients through communication during services, so that patients obtain clear and credible information on why recommended actions matter (Raule, 2025; Sari, 2022).

Based on the three informant groups, perceptions of the benefits of eye health actions are formed through a combination of personal experience, trust in the competence of health workers, and health communication delivered during services and promotion activities. Patients understood that following health workers' advice is the right step to improve their eye condition; medical personnel explained benefits in terms of controlling disease progression, accelerating treatment, reducing complications, and achieving treatment goals; and health promoters conveyed the benefits of maintaining eye health through education and promotion activities in the community. The benefits communicated are not limited to treatment once a disorder has appeared but also include prevention, early examination, and the maintenance of visual function. Although each group has a different viewpoint, all of them show that information and health education are seen as useful in helping the public understand the importance of maintaining eye health and following recommended health actions.

### **Perceived Barriers**

Perceived barriers are individuals' perceptions of the obstacles or difficulties involved in performing a health action, including personal, social, environmental, and economic barriers such as cost, time, and side effects (Ayu & Fajar, 2024; Laksmana et al., 2023). The findings show that barriers can be grouped into internal barriers, related to how individuals assess their disorder, and external barriers, related to time, cost, the ability to understand information, access to services, and the organization of health communication programs. Two patients described these barriers:

*"I tend to underestimate the disease and feel lazy when the eye disease is not too severe and does not require surgery." (Ahmad Maulani, 30 years old)*

*"The barriers I feel are limited time and cost." (Diky Nugraha, 45 years old)*

The first statement indicates a psychological barrier that links perceived severity with perceived barriers: when a disorder is considered mild, examination or treatment is not seen as urgent, and laziness and reluctance become dominant. Low motivation for examination is therefore not always caused by the unavailability of services but also by how patients interpret the seriousness of their condition. The second statement reflects practical barriers, as time constraints related to work or family obligations and costs of travel, examination, and treatment may lead individuals to delay action even when they understand its importance. Perceived benefits thus do not necessarily produce action when barriers are judged to

outweigh them. From the medical side, dr. Wilanda Ayu Evanadya Putri observed that age and education level greatly affect patient compliance, as older patients tend to follow recommendations less, whereas more educated patients ask more questions, understand information better, and comply more. Such characteristics should be understood as conditions that affect the reception of information rather than as the sole cause of non-compliance; communication strategies therefore need to be adapted through simple language, opportunities to ask questions, repetition of key information, and concrete explanation of steps.

At the program level, Dina Ariani stated: “The main obstacle is the budget. Several activities that could previously be carried out optimally can no longer run at their best because of budget efficiency. There are also obstacles in community behavior and culture, and regulatory factors related to budget efficiency affect the implementation of several programs.” These institutional barriers are not part of patients' individual perceived barriers but may reduce the reach, intensity, and continuity of health communication, thereby limiting people's repeated exposure to information on risks, benefits, and ways of acting. Distinguishing individual from institutional barriers keeps the construct from being used too broadly. These findings relate to Putri et al. (2023), who found a significant relationship between perceived barriers and the application of COVID-19 health protocols ( $p = 0.004$ ). Because that study was quantitative, its result cannot be used to claim the same statistical relationship here; it serves instead as empirical support for the relevance of the construct. The present study differs in identifying institutional barriers, because it examines not only individual perceptions but also how the hospital organizes health communication.

Through the HBM lens, perceived barriers in this study can be understood at four levels. Psychological barriers appear in the tendency to underestimate eye disorders and to feel that examination or treatment is not yet needed; practical barriers appear in limited time and cost; communication barriers appear in differences in patients' ability to receive and understand information; and institutional barriers appear in budget and regulatory constraints on health promotion programs. Perceived barriers at the individual level are mainly visible among patients, whereas data from medical personnel and health promoters describe the communication and organizational context that may either strengthen or reduce these barriers. Barriers to eye health action are therefore not uniform; they arise from individuals' assessments of their condition, limited resources, difficulties in understanding information, and organizational conditions that affect the implementation of health communication. This also implies that efforts to increase awareness cannot rely solely on conveying the benefits of examination but must also reduce the obstacles that make action seem difficult.

### **Cues to Action**

Cues to action are internal or external triggers that prompt individuals to take health actions. Internal cues include symptoms or changes in bodily condition, whereas external cues include media information, advice from health workers, family support, and health campaigns (Laili et al., 2023; Adiyoso et al., 2023). The findings show that triggers for eye health action come from the social environment, social media, and information and education from health workers. Two patients stated:

*“What influences me most is credible health information on social media, as well as direct explanations from the doctor, which encourage me to have my eyes examined immediately and take care of them.” (Afifa, 24 years old)*

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*“From the people closest to me, my own mother.” (Hanun Muthi'ah, 25 years old)*

Afifa's statement shows cues from two sources, digital media that raise attention and the doctor's explanation that provides a more direct and specific trigger, and it highlights the importance of source credibility. Hanun's statement shows that close persons act as reminders and supporters. Medical personnel provide concrete, action-oriented cues. Dessi Marini, A.Md.Kep explained: “We educate patients to attend regular follow-up visits according to schedule, use medicines as prescribed, not to buy or use eye drops without a doctor's prescription, and to return to the hospital immediately if complaints arise even though the next follow-up is still far off.” Such directions reduce patients' uncertainty about what to do after receiving services. Health promoters provide institutional cues through the Hospital Health Promotion (PKRS) work program. Yadi Asfianoor, S.Kom explained that health education is carried out both inside and outside the hospital, including visits to community health centers (*puskesmas*), schools, and social care homes, and that this program forms the basis of the hospital's public education activities.

Cues to action in this study thus take three main forms: informational cues from social media and education activities, interpersonal cues from close persons and health workers, and institutional cues from the PKRS program. Social media broadens the reach of information, family provides reminders and social support, health workers give personal direction, and PKRS offers more organized educational spaces. These forms are consistent with the HBM view of cues as internal or external stimuli that activate readiness to act (Seminar et al., 2024). However, the promoters' data indicate the availability of communication channels, whereas evidence that these channels actually trigger action comes from patients who name specific sources as reasons for acting. In the HBM, cues to action only initiate decision-making, while implementation depends on perceived benefits, barriers, and self-efficacy; because this study is qualitative, the relationship between cues and action was not tested statistically. Health communication functions as a trigger when messages link information to clear actions, timing, and reasons (Raule, 2025), so HBM-based implementation should be understood as involving multiple sources of cues rather than one-way message delivery from the hospital to the public.

When the findings of patients and medical personnel are compared, there are differences in the forms of cues received. For patients, triggers may originate in the social environment and digital media outside the health institution, whereas medical personnel provide cues directly through interpersonal communication in the form of recommendations and concrete steps to be taken. The hospital is therefore one source of cues that offers direct and structured direction, while social media and the family provide cues from outside the institution. Activities at community health centers, schools, and social care homes extend the space in which information is delivered, and the PKRS program can function as a cue to action when the information conveyed prompts people to examine their eyes, consult health workers, participate in screening, or adopt eye-care habits. A channel can be regarded as a trigger only when it is received, trusted, interpreted, and followed by relevant health action; thus, the hospital's role is to provide structured cues through education and services, while the interpretation of those cues still takes place at the individual level.

## Self-Efficacy

Self-efficacy is an individual's belief in his or her ability to perform a health action, including undergoing eye examinations, following health workers' advice, using visual aids as needed, and maintaining habits that support eye health (Niskalawasti & Dwarawati, 2022). Patients showed differing levels of confidence. Ahmad Maulani (30 years old) stated:

*"I am confident that I already understand the importance of maintaining eye health, for example by eating nutritious food, turning off the lights when sleeping so that my eyes can rest, and wearing glasses when using my phone."*

Hanun Muthi'ah (25 years old) added: "I am sure that if I commit to a much healthier lifestyle, it can make me better, especially for my eye health; as long as I am consistent, I am sure I can." Self-efficacy therefore relates not only to confidence in initiating an action but also to confidence in sustaining it consistently. On the medical side, dr. M. Irwan Arziansyah, Sp.M explained that the most important thing is to build effective communication: patients are invited to discuss their condition, informed about the benefits of treatment and the risks of not undergoing it, and helped to understand their disease without being frightened, so that treatment goals are better achieved. Dessi Marini, A.Md.Kep added that the staff provide support and encouragement to patients and their families so that they do not despair and remain confident in undergoing treatment. At the organizational level, Dina Ariani stated: "Now that the PKRS Team has been formed better and has a clear work program, with activities planned systematically, I am confident the results will be much more optimal."

At the individual level, self-efficacy was reflected in patients' own confidence in carrying out and maintaining eye health actions: Ahmad identified actions he believed he could take in daily life, while Hanun emphasized commitment and consistency. These accounts describe patients' perceived ability to act, rather than proving that communication caused an increase in self-efficacy. Previous studies have associated health knowledge and education with self-efficacy (Nugroho et al., 2021; Muhammad & Anandani, 2023), but the present qualitative findings are interpreted as patients' reported confidence. Statements from medical personnel about communication and emotional support, as well as health promoters' confidence in the PKRS program, describe the supportive communication and organizational context; they are not treated as direct evidence of patients' self-efficacy.

From a health communication perspective, interpersonal discussion, explanations of eye conditions and treatment, and emotional support can provide patients with information and practical guidance relevant to their health decisions. The PKRS program provides an organizational channel for delivering health education. These communication practices may support patients as they consider eye care actions, while self-efficacy itself remains the patients' own belief in their ability to carry out and sustain those actions. The data do not establish a direct causal effect of communication on self-efficacy.

The overall findings for the six indicators are summarized in Table 5.

**Table 5.** Summary of Research Findings Based on the Health Belief Model Indicators

| No. | HBM Indicator            | Research Findings                                                                                                                                                                                                                                                                                                                                                    |
|-----|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.  | Perceived susceptibility | Perceptions of susceptibility were diverse. Some patients recognized the risk before experiencing disorders, mainly due to gadget use and screen-based activities, while others became aware only after symptoms appeared or after receiving explanations from health workers.                                                                                       |
| 2.  | Perceived severity       | Perceived seriousness differed among patients. Mild disorders were considered not very serious, whereas cataracts and conditions that may cause vision loss were perceived as serious. Medical personnel reinforced understanding of severity and complication risk through explanations during services.                                                            |
| 3.  | Perceived benefits       | Patients believed that examination, treatment, and following health workers' advice benefit eye health, grounded in trust in medical competence, disease control, and prevention or reduction of complications.                                                                                                                                                      |
| 4.  | Perceived barriers       | Barriers arose at the individual and program levels: underestimating eye disorders and limited time and cost among patients; differences in the ability to receive and understand information observed by medical personnel; and budget, regulatory, and community behavior constraints identified by health promoters.                                              |
| 5.  | Cues to action           | Triggers came from social media, information and explanations from health workers, and the social environment such as family or close persons, complemented by education and promotion activities of the PKRS team.                                                                                                                                                  |
| 6.  | Self-efficacy            | Patients showed confidence in performing and maintaining eye health actions through the ability to determine daily actions and commitment to a consistent healthy lifestyle. Medical personnel supported this through communication, understanding, and emotional support, while health promoters expressed organizational confidence in the PKRS education program. |

Table 5 shows that the hospital's health communication operates through two complementary routes, namely interpersonal communication during services and organized promotion through PKRS, whereas the formation of awareness occurs at the individual level and varies across informants. Communication from the hospital supplies information, education, direction, and support, but its reception depends on each person's experience of symptoms, interpretation of severity, trust in health workers, practical constraints, social environment, and confidence in sustaining action.

## CONCLUSION

Health communication at Bakti Etam Eye Hospital, East Kalimantan Province, was implemented through interpersonal communication during medical services and organized health promotion by the Hospital Health Promotion Team (PKRS), including information, education, guidance, and support related to eye health. Viewed through the six Health Belief Model (HBM) constructs, patients' awareness varied in their perceived susceptibility to eye disorders, perceived severity of their consequences, perceived benefits of examinations and treatment, perceived barriers such as symptom underestimation, time and cost, cues to action from media, family, healthcare professionals and hospital education, and self-efficacy in maintaining eye health. The findings show that health communication is not merely the delivery of information: it also provides explanations and cues that individuals interpret in light of their experiences, resources, and social environment. HBM helps explain these different perceptions, while health communication remains the focus for understanding how the hospital conveys health messages and supports eye care decisions. The study therefore

highlights the need for communication that is continuous, accessible, interactive, and patient-centered, with clear action guidance and attention to practical barriers. Because this qualitative study describes informants' accounts rather than measuring change over time, the findings indicate a contribution to awareness-building efforts but do not establish that communication alone caused increased awareness or preventive behavior.

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## **CONFLICT OF INTEREST**

The authors declare no conflicts of interest regarding the conduct of the research, the writing, or the publication of this article.

## **AUTHOR CONTRIBUTIONS**

All authors contributed to the preparation of this article. The first author (Defi Qolbi Fillah) was involved in research conceptualization, data collection and analysis, result interpretation, and manuscript drafting, while the other authors contributed to the review, editing, and final approval of the manuscript.

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The authors declare that no generative artificial intelligence was used in the preparation of this article.

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