

DEVELOPMENT OF “SEHAT SAKTI” AS AN EVIDENCE-BASED HEALTH EDUCATION MEDIA: AN INSTAGRAM-BASED COMMUNITY EDUCATION INITIATIVE TO STRENGTHEN HEALTH LITERACY

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ABSTRACT

Improving public health literacy is vital to achieving optimal health outcomes. In the digital era, social media has become an effective tool for expanding health promotion, enhancing public understanding, encouraging adherence to health recommendations, and supporting participation in health-related decision-making. As part of a community health initiative, the team developed an evidence-based health literacy medium using Instagram as an educational platform. The development approach emphasised scientifically validated content and clear communication. The final product is an engaging visual booklet in a Question-and-Answer (Q&A) format, designed to support comprehension, increase user engagement, and reduce the risk of misinformation commonly found on social media. The development process included assessing user needs, creating educational visual content, expert validation, and acceptance testing with target users. The results show that the Q&A booklet is accessible, appealing, and aligned with Instagram users' preferences. By leveraging the interactive and widely accessible nature of social media, this intervention has the potential to enhance public health literacy more broadly. This work underscores the importance of evidence-based strategies in digital health promotion to ensure information quality and message effectiveness.

Keywords: social media, health literacy, Instagram platform, health promotion

ABSTRAK

Peningkatan literasi kesehatan masyarakat sangat penting untuk mencapai derajat kesehatan yang optimal. Di era digital, media sosial menjadi alat efektif untuk memperluas promosi kesehatan, meningkatkan pemahaman, mendorong kepatuhan, dan mendukung pengambilan keputusan terkait kesehatan. Sebagai bagian dari pengabdian masyarakat di bidang kesehatan, tim mengembangkan media literasi berbasis evidence-based dengan memanfaatkan Instagram sebagai platform edukasi. Pengembangan menekankan validitas ilmiah dan komunikasi yang jelas. Produk yang dihasilkan berupa booklet visual menarik dalam format tanya jawab (Q&A) untuk mempermudah pemahaman, meningkatkan keterlibatan, serta mengurangi misinformasi. Proses pengembangan meliputi identifikasi kebutuhan pengguna, perancangan konten visual edukatif, validasi ahli, dan uji penerimaan. Hasilnya menunjukkan bahwa booklet Q&A mudah dipahami, menarik, dan sesuai preferensi pengguna Instagram. Dengan memanfaatkan karakteristik media sosial yang interaktif dan mudah diakses, intervensi ini berpotensi meningkatkan literasi kesehatan masyarakat secara lebih luas. Kegiatan pengabdian ini menegaskan pentingnya pendekatan berbasis bukti dalam promosi kesehatan digital untuk memastikan kualitas dan efektivitas informasi.

Kata kunci: sosial media, literasi kesehatan, platform Instagram, promosi kesehatan

INTRODUCTION

Health education is one of the most effective strategies for improving public knowledge, which directly leads to healthier behaviours and better population health outcomes.¹⁻⁴ Increased health literacy is associated with enhanced ability to understand medical information, make informed health decisions, and reduce the risk of chronic disease.^{5,6} The WHO highlights that structured health education strengthens disease prevention, expands access to reliable information, and empowers communities to maintain their health.³ Therefore, continuous health education is essential for promoting population health and improving the quality of life.^{1,4}

Social media use has increased significantly over the past decade, making it one of the primary channels through which the public seeks information, including health-related content.^{7,8} However, much of the circulating information lacks scientific accuracy and may be misleading or false, potentially influencing public health decisions.⁹ Instagram remains one of the most popular platforms in Indonesia, with tens of millions of active users.¹⁰ While this trend creates opportunities for the broad dissemination of health content, it also increases the spread of non-evidence-based information that may misinform the public.¹¹⁻¹⁴

Compared to conventional face-to-face education, which requires substantial resources, social media offers significant advantages: digital content can be accessed anytime, anywhere, remains permanently available, and can be reshared widely.^{15,16} Instagram's visual features, including infographics, carousels, images, and



interactive tools, make it particularly effective for delivering complex health information clearly and engagingly.
17–19

Most health-related social media content centres on popular themes such as nutrition, healthy lifestyles, fitness, reproductive health, and common diseases. Many significant health issues, including metabolic diseases, chronic under-recognised conditions, and disorders with vague symptoms, remain underrepresented despite their considerable public health impact.

To address this gap, the *SEHAT SAKTI* Instagram channel was developed as an evidence-based health education platform. It aims to raise awareness of essential yet under-discussed health topics, promote early recognition of symptoms, encourage timely medical consultation, and support appropriate treatment. All content is developed from scientific literature, distinguishing the initiative from channels relying on opinion or misinformation. This approach is especially relevant in Indonesia, where health literacy varies widely, and access to conventional education is limited.

METHODS

The implementation of health education through the *SEHAT SAKTI* Instagram channel followed several systematic steps. First, the team identified health issues that are rarely discussed by the public but are significant in terms of disease burden, including metabolic diseases, hidden chronic conditions, and disorders with nonspecific symptoms, using a search engine to find hashtags that are used in the health education area. Based on search results and several other considerations regarding prevalence data and their impact on Indonesian public health, the team decided to create content on Graves' disease as the theme for the first post. Second, relevant scientific literature and clinical guidelines were reviewed to ensure that all educational materials were evidence-based. The team then developed content in a question-and-answer format to enhance clarity, accessibility, and relevance for the general public. The number of questions and answers is adjusted to the disease's complexity and its impact on public health. Visual educational materials were designed as booklets/infographics with appealing layouts optimised for mobile-phone readability. Before being posted, the booklet was read by two lay people (not health workers) to assess their ease of Reading comprehension.

A public (non-private) Instagram account named *SEHAT SAKTI* was created to ensure open access. Content was uploaded according to schedule. When materials exceeded Instagram's posting limits, they were divided into acceptable, separate, but sequential posts. The initial evaluation used indicators such as followers, likes, comments, shares, and reach to assess audience response.

RESULTS AND DISCUSSION

The development of the *SEHAT SAKTI* channel aims to improve public health literacy. Indonesia's digital literacy index is rising, indicating that Indonesians are becoming increasingly skilled in using digital technology.²⁰ Enhancing digital health literacy can improve overall health outcomes, reduce disparities in access to medical care, and empower people to make well-informed health choices.²¹

The development of the *SEHAT SAKTI* channel used a 4D methodological approach,²² including the define, design, develop, and disseminate stages. In the define stage, we found that although the use of social media as a platform for health promotion is increasing, there are still very few health promotion efforts that facilitate improvements in health literacy. In addition, misinformation can create anxiety and confusion within communities when they need to make decisions about the health issues they face.^{11–14} Therefore, the goal of the *SEHAT SAKTI* channel is to improve health literacy among Instagram users by creating digital booklets that discuss diseases or other health problems using an evidence-based approach. In the design stage, we developed the content structure in a question-and-answer format and included visuals to illustrate the material. To provide evidence-based health information, a literature review must be conducted. This literature review can take time, depending on the number of journals covering a particular health topic.²³ During development, the completed booklet was validated by a subject-matter expert and a layperson with a non-health background. The booklet was then tested by posting it online to gather feedback and assess how effectively it could reach the digital user community. Figures 1 and 2 represent the development process of the booklet.

The use of visual models such as booklets or infographics, particularly in a question-and-answer format, offers notable benefits. Visual materials enhance comprehension, capture the attention of social media users, and are especially suitable for individuals who prefer visually oriented information over long text. Infographics have been shown to convey health information clearly and memorably.^{17–19} Compared with short videos, booklets or infographics allow users to read independently, skip to essential sections, or return to specific slides for reference, features that video formats may not always provide. Recent studies indicate that infographics may be even more effective than videos in improving theoretical knowledge, such as in clinical education.²⁴

To introduce this channel, the team of community service shared the channel link to familiar family groups and asked group members to provide feedback. This method was quite effective, as there was an increase in



the number of followers and comments each within one day, although the numbers were smaller than the target (Figure 3). Although the number of followers remains small, the initial posts received a favourable response (likes and comments). This suggests strong growth potential if the channel is managed consistently and with appropriate content strategies.

Instagram is a suitable platform for visual booklet-style educational materials; however, it imposes limitations on the number of images per post. While standard carousels allow a maximum of 10 images, recent updates now permit up to 20 photos or videos in a single post. Nevertheless, not all accounts gain access to this feature simultaneously. As a result, some content must still be divided into two separate posts. Complex topics, such as chronic metabolic disorders, may require extended visual explanations. For example, the first digital booklet ("Grave Disease") required 14 slides. Dividing such content into two posts may disrupt narrative continuity, as users may view only the first part and overlook the second, potentially reducing comprehension. Therefore, it is essential to evaluate whether a two-part series provides comparable understanding to a single complete post and to design content that maintains coherence despite segmentation.

At present, the *SEHAT SAKTI* channel is relatively new, and therefore, its follower count remains limited. The number of followers is only one of the effectiveness parameters of a social media channel.²⁵ This challenge is common among newly established social media platforms, but it does not represent a substantial barrier to growth. Several strategies may be employed to expand reach, including utilising Reels, Stories, and Story Highlights; applying relevant hashtags; posting consistently; collaborating with other accounts (e.g., health organisations, communities, or evidence-based influencers); and encouraging followers to share content within their networks. As these channels grow, they will be able to identify the characteristics of follower, whereas understanding their characteristics and preferences will help you create more relevant and engaging content.²⁶

Establishing the account as public offers advantages such as allowing users to discover and follow the channel without prior approval, thereby accelerating audience growth and enabling organic content dissemination. Conversely, private accounts restrict visibility to known users, hindering efforts to deliver health education to a broader audience. However, public accounts also pose challenges, such as exposure to "spam follow/unfollow" patterns and uncontrolled redistribution of content, which necessitate active comment management and content moderation.^{27,28}

One key indicator of successful health education is an increase in knowledge and health literacy among the audience. At this early stage, such outcomes cannot yet be measured due to the limited sample size (followers). Therefore, the current results cannot serve as definitive benchmarks of educational effectiveness. To maintain the channel's trajectory, it is essential to continue producing evidence-based content on health issues that receive little public attention, interspersed with trending health topics to attract new followers. Staying aligned with current news, popular hashtags, and emerging public health concerns may further support channel expansion. Feedback from followers, whether through comments or direct messages, is also valuable for determining future topics that align with community needs.

As the number of followers grows, a more robust evaluation of educational effectiveness can be conducted.^{29,30} Traditional measures of health education outcomes, such as paper-based pre- and post-tests, need to be modified for social media-based outreach, where communication is not face-to-face. Alternative approaches may include Google Form-based pre-tests and post-tests linked through the bio or Story Highlights; analysis of Instagram analytics (reach, impressions, saves, shares); assessment of information retention through follow-up questionnaires distributed 1–2 weeks after content publication; evaluation of comments and direct messages as indicators of increased awareness and interest in health issues; and surveys assessing user satisfaction and perceived benefit of the channel. This article aims to disseminate the process of developing an evidence-based educational channel, *SEHAT SAKTI*. It cannot yet assess its effectiveness because the activity is planned to unfold in stages over the long term. The effectiveness of evidence-based education through booklets targeting the Instagram user community will be evaluated 1 year after the first stage of the development process. There are several method to asses the effectiveness or success of health literacy including Newest Vital Sign (NVS) suitable for a quick screening tool for functional health literacy, Test of Functional Health Literacy in Adults (TOFHLA) that measures reading and numerical skills, Health Literacy Questionnaire (HLQ) that is a multidimensional tool assessing various aspects of health literacy, the European Health Literacy Survey Questionnaire (HLS-EU-Q) focuses on broader health literacy dimensions, including the ability to access, understand, appraise, and apply health information, and the eHealth Literacy Scale (eHEALS) that evaluates digital health literacy.²⁹

Experiences from community service activities and social-media-based health education campaigns demonstrate that social media channels are effective when managed with consistency, evidence-based content, appealing visual formats, and active audience engagement. Accordingly, the *SEHAT SAKTI* channel represents a relevant and promising effort to enhance public health literacy, particularly among social media users who prefer digital booklets, and it holds strong potential for continued development.

CONCLUSION

The *SEHAT SAKTI* Instagram initiative demonstrates that evidence-based social media education can serve as a strategic approach for enhancing community health literacy, especially concerning underrecognized



yet significant health issues. Its strengths include flexible access, broad reach, visually appealing content, ease of dissemination, and continuous availability.

Although the channel is still new and follower numbers remain low, early engagement suggests meaningful audience interest in less popular but essential health topics. Long-term success will depend on content consistency, optimal use of social media features, active audience engagement, and measurable improvements in knowledge and health behaviours.

Thus, evidence-based Instagram health education channels, such as *SEHAT SAKTI*, constitute a valuable model for improving health literacy in the digital era and are an essential component of modern public health strategies.

SUPPLEMENTARY DOCUMENTATION

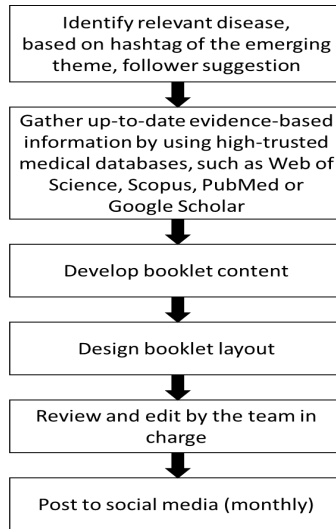


Figure 1. Procedure for compiling a booklet for Instagram posts on *SEHAT SAKTI* channel.

What is hyperthyroidism with Graves' Disease?
Graves' disease is an autoimmune disorder in which the body's immune system mistakenly attacks the thyroid gland, causing it to produce excessive thyroid hormones. Typically, thyroid function is regulated by a hormone called thyroid-stimulating hormone (TSH), which is produced by the pituitary gland. In Graves' disease, the immune system produces abnormal antibodies known as TSH receptor antibodies (TRAb). These antibodies mimic the action of TSH, continuously stimulating the thyroid gland and leading to the overproduction of the hormones T3 (triiodothyronine) and T4 (thyroxine). The excess of these hormones increases the body's metabolism, resulting in symptoms such as weight loss, rapid heartbeat, anxiety, sweating, and heat intolerance. The exact cause of the autoimmune reaction is not fully understood. Still, it is thought to involve a combination of genetic, hormonal, and environmental factors, such as stress, infection, or smoking. In some patients, the same antibodies may also affect tissues behind the eyes, leading to Graves' ophthalmopathy, which causes eye bulging, irritation, or double vision. Understanding this mechanism helps explain why treatment focuses on reducing hormone production and controlling the immune response.^{1,2,10}

What should be done if symptoms of hyperthyroidism appear?
Common symptoms of hyperthyroidism include palpitations, excessive sweating and heat intolerance, and unexplained weight loss despite a normal appetite. When these symptoms begin to appear, the first step is to record when they started and whether any medications were being taken at the time. Certain drugs can induce hyperthyroidism, including amiodarone, interferon-alpha, interleukin-2, lithium, and high-dose iodine supplements.¹⁰ It is essential to seek medical evaluation promptly for a thorough history-taking, physical examination, and laboratory tests.
A person is diagnosed with hyperthyroidism when the blood level of thyroid-stimulating hormone (TSH) is decreased, accompanied by an increase in thyroid hormone levels above the upper limit of normal. TSH is a hormone secreted by the pituitary gland in the brain, which stimulates the thyroid gland to produce thyroid hormones. The thyroid gland produces two primary types of hormones: T4 (thyroxine) and T3 (triiodothyronine). Because both T4 and T3 circulate in the blood in both free and protein-bound forms, measuring free T4 and total T3 levels provides relatively accurate results.
To determine the underlying cause of hyperthyroidism, additional tests such as thyroid-stimulating hormone receptor antibody (TRAb) assays are performed. A positive TRAb result indicates Graves' disease as the cause of hyperthyroidism. Other supporting examinations, such as thyroid ultrasonography (USO), may also be conducted if gland enlargement is palpable.¹⁰

Can Graves' Disease Be Cured?
Graves' disease is not always permanently curable, but it can be well controlled with appropriate treatment. The main goal of therapy is to normalize thyroid hormone levels (achieve a euthyroid state) and prevent relapse or complications. There are three primary treatment options: Antithyroid drugs, Radioactive iodine (RAI) ablation, and Surgical thyroidectomy. Patients with newly diagnosed Graves' hyperthyroidism should be treated with antithyroid drugs. RAI therapy or thyroidectomy may be considered in patients who prefer this approach or patients with persistently high TRAb after an adequate Antithyroid drugs programme.⁴

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Figure 2. The first images are the results of compiling relevant questions and answers based on journal sources and guidelines. The second image is the visualisation of the previous compilation.

As the SEHAT SAKTI channel's vision is to provide evidence-based content to the education community, the reference should be included in the post.

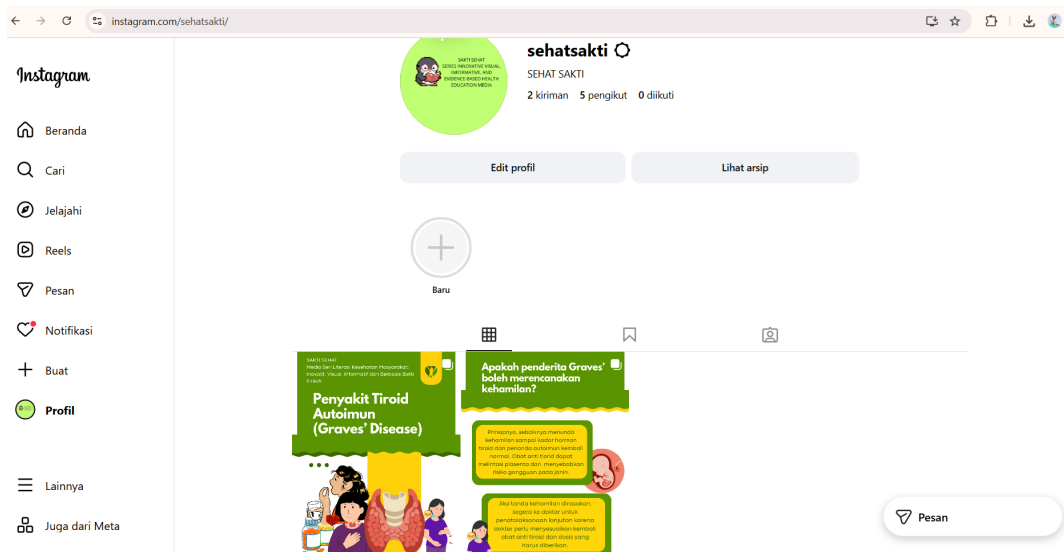


Figure 3. Screenshot of the SEHAT SAKTI channel one day after it was created

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