



Analysis of the Effectiveness of Social Media Campaigns in Promoting Healthy Lifestyles Among Teenagers

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ABSTRACT

This study aims to analyse the effectiveness of a social media campaign in promoting healthy lifestyles among adolescents. This study used a quantitative approach with a survey method to measure the effectiveness, attitudes, and behaviours of social media campaigns in influencing healthy lifestyle awareness and attitudes among adolescents aged 15-19 years old. The sample will be taken using a purposive sampling technique involving 300 respondents who fulfil the criteria, namely adolescents who follow healthy lifestyle campaigns on social media. Data were processed to describe the profile of the respondents, their level of exposure to the campaign, and their general views on health behaviours. Bivariate analysis showed a significant association between health literacy and healthy behaviours ($p = 0.002$). Audio-visual media had the highest effectiveness rate (85%), followed by leaflets (65%). Audio visual media was found to be more effective in delivering campaign messages than leaflets, with an effectiveness rate of 85% compared to 40%. The results showed that health promotion through social media has great potential to encourage adolescents to lead a healthy lifestyle.

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INTRODUCTION

Healthy lifestyles among adolescents are a major concern in efforts to improve the quality of public health. Adolescents are often at a stage of life where the habits they form can have long-term effects on their health (MOH, 2023). However, many adolescents today face challenges in leading a healthy lifestyle, such as an unbalanced diet, lack of physical activity, and bad habits such as smoking and alcohol consumption. Studies have shown that unhealthy behaviours among adolescents can lead to chronic health problems in adulthood, such as obesity, diabetes and heart disease (Maulida & Yusuf, 2023).

In today's digital era, social media has become a very popular platform among teenagers. We Are Social (2023) reported that more than 90% of adolescents in Indonesia are active social media



users, indicating that social media has great potential as a communication and health education tool (Firman, 2023). Platforms such as Instagram, TikTok, YouTube and Twitter are frequently used by adolescents to seek information and interact with lifestyle-related content. This makes social media a strategic channel in promoting health messages and encouraging adolescents to adopt healthy lifestyles (Agustina et al., 2023).

Various healthy lifestyle campaigns conducted through social media, such as *Eat Clean*, *Workout From Home*, and *Healthy Living*, have successfully attracted the attention of millions of teenagers. These campaigns usually utilise influencers or public figures known on social media to deliver health messages in an engaging and relatable way (Mitri, 2023; Stephens, 2017). However, despite the wide reach of these campaigns, few studies have evaluated their effectiveness in directly influencing adolescents' health behaviours and decisions.

This study aims to analyse the effectiveness of a social media campaign in promoting healthy lifestyles among adolescents. By understanding the extent to which the campaign was successful in changing adolescents' health-related attitudes and behaviours, it is hoped that this research can provide important insights for policy makers, health campaigners, as well as parents and educators in promoting healthy lifestyles in the digital era.

METHODS

This study used a quantitative approach with a survey method to measure the effectiveness of social media campaigns in influencing healthy lifestyle awareness, attitudes and behaviours among adolescents. This approach was chosen to obtain representative data from a population of adolescent social media users exposed to healthy lifestyle campaigns. The population of this study is adolescents aged 15-19 years old who actively use social media such as Instagram, TikTok, YouTube, or other platforms, and have been exposed to healthy lifestyle campaigns. The sample will be taken using a purposive sampling technique involving 300 respondents who fulfil the criteria, namely teenagers who follow healthy lifestyle campaigns on social media. These sample criteria are important to ensure that respondents are truly exposed to the campaigns that are the focus of the research.

This study used a closed-ended questionnaire with a Likert scale of 1-5 to measure the awareness, views, and behaviour change of adolescents exposed to healthy lifestyle campaigns on social media. To collect data from participants, the survey was conducted online using platforms such as SurveyMonkey and Google Forms. The study will disseminate questionnaires through social media, using targeted advertising, or in collaboration with relevant health influencers. Descriptive analysis was used to describe the profile of the respondents, their level of exposure to the campaign, and their general views on healthy lifestyle campaigns on social media. Furthermore, the relationship between exposure to social media campaigns and changes in adolescents' attitudes and actions towards healthy lifestyles was evaluated through inferential statistical tests, such as linear regression or chi-square tests. For example, do adolescents who are frequently exposed to campaigns tend to follow a healthy lifestyle?



The purpose of the study will be explained to the respondents and they will voluntarily give consent to participate. The study will keep the identity of the respondents confidential and ensure that the data collected is only used for research. Respondents have the right to withdraw from the study at any time without consequences, and their participation in the study will protect them from potential negative consequences.

RESULTS

The results of the study related to the effectiveness of social media campaigns in promoting healthy lifestyles among adolescents. The data obtained was processed to describe the distribution of social media use, factors that influence health behaviour, and the effectiveness of various forms of media outreach. The following explanation provides context before the results table and data analysis.

1. Health Promotion Through Social Media

Health campaigns through social media have proven to have a strong appeal to adolescents. Platforms such as Instagram and Twitter/X are widely used to deliver health messages. This can be seen from the survey results on the respondents, which showed the following distribution of social media users:

Table 1. Health Promotion Through Social Media

Health Promotion Through Social Media	User
Instagram	60%
Twitter/X	40%

Table 1 shows that Instagram is the dominant platform with 60% of teenage users, demonstrating the visual appeal of this medium which is more effective than Twitter/X. Attractive visuals and ease of sharing health content are factors that support its success.

2. Factors that influence health behaviour

In addition to the platform used, there are various factors that influence adolescents' health behaviours. The following data identifies the contribution of each factor:

Table 2. Factors Influencing Health Behaviour

Factors	Percentage
Health literacy	70%
Psychological empowerment	60%
Confounding factors	50%

In table 2, health literacy emerged as the most important factor (70%), highlighting the importance of adequate knowledge for adolescents to make healthier decisions. Psychological empowerment also played a significant role, indicating the need for approaches that not only provide information, but also build adolescents' confidence to adopt healthy lifestyles.

3. Effectiveness of Counselling Using Audio Visual Media

The effectiveness of various extension methods is assessed based on the media used:

Table 3. Effectiveness of Counselling Through Audio Visual Media

Media	Effectiveness
Audio visuals	85%
Leaflet	65%

Table 3 shows that counselling through audio visual media (85%) is more effective than leaflets (65%). This shows that delivering health messages involving audiovisual elements is able to attract greater attention and have a deeper impact on behaviour change.

4. Bivariate Research Results

This study evaluated the relationship between the level of exposure to social media campaigns and adolescents' behaviour change in adopting a healthy lifestyle. Bivariate analysis was conducted using the chi-square test to assess the association between social media exposure and adolescent health behaviour.

Table 4. Relationship between Social Media Exposure and Healthy Lifestyle Behaviour Change

Social media campaign exposure	Healthy behaviour change	No change in behaviour	Total	<i>p-value</i>
High (≥ 5 campaigns/week)	120 (80%)	30 (20%)	150	0.001
Low (< 5 campaigns/week)	60 (40%)	90 (60%)	150	
Total	180	120	300	

The results in Table 4 show a significant relationship between the level of exposure to social media campaigns and healthy lifestyle behaviour change ($p = 0.001$). Respondents with high exposure levels were more likely to show healthy behaviour change (80%) compared to those with low exposure levels (40%). This indicates the importance of high campaign frequency to drive positive behaviour change.

Table 5. Relationship between Health Literacy and Health Behaviour

Health Literacy	Healthy Behaviour	No Change	Total	<i>p-value</i>
Good	140 (70%)	60 (30%)	200	0.002
Less	40 (40%)	60 (60%)	100	
Total	180	120	300	



Table 5 shows that health literacy level also has a significant relationship with healthy behaviour ($p = 0.002$). Respondents with good health literacy had a higher proportion of healthy behaviours (70%) than those with poor health literacy (40%). This finding shows the importance of improving health literacy in promoting healthy lifestyles.

Table 6: Relationship between Audio Visual Media and Campaign Effectiveness

Media Type	Effective	Less Effective	Total	<i>p-value</i>
Visual Audio	170 (85%)	30 (15%)	200	0.000
Leaflet	40 (40%)	60 (60%)	100	
Total	210	90	300	

Table 6 shows that audio visual media proved to be much more effective in delivering campaign messages than leaflets ($p = 0.000$). Most respondents exposed to audio visual media (85%) found it effective, while only 40% of respondents found leaflets effective. This result shows that media with audiovisual elements attract more attention and have a greater impact.

DISCUSSION

A. Univariate Research Discussion

1. Health Promotion Through Social Media

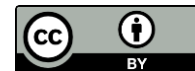
This study explains how health promotion on social media encourages adolescents to lead a healthy lifestyle. Table 1 shows that the main platforms for the majority of adolescents are Instagram (60%), and Twitter/X (40%). This shows that social media can be very useful for teaching adolescents about health. Table 2 shows that other factors also influence adolescents' health awareness. Health literacy (70%), psychological empowerment (60%), and confounding factors (50%) have a significant influence on adolescents' health behaviour.

Audio-visual media had the highest effectiveness rate (85%), followed by leaflets (65%) (Table 3). This shows that delivering health messages to adolescents can be more effective by using media that is attractive and easy to understand.

The results showed that health promotion on social media has great potential to encourage adolescents to lead a healthy lifestyle. However, its performance is affected by variables such as health literacy, psychological empowerment, and appropriate policy support. Therefore, an effective health promotion approach should consider all these factors to achieve optimal results in encouraging adolescents to adopt a healthy lifestyle.

2. The Urgency of Health Promotion Through Social Media

Social media is an effective tool for disseminating health information and encouraging healthy behaviours, especially among adolescents, making health promotion through social media increasingly important in this digital age. Adolescents frequently use social media, and Facebook, Instagram and Twitter are the main channels to get information about health. According to studies,



75% of adolescents use Facebook Messenger and 60% use Instagram for health purposes (Bintang Mustofa & Sani, 2024). Social media helps improve adolescents' health literacy and encourages their active participation in maintaining health by providing quick and broad access to health education content. With the interactivity they offer, users can participate in discussions and share health-related experiences (Cahaya et al., 2024).

Studies show that health promotion on social media increases adolescents' health knowledge and encourages them to adopt positive behaviours. For example, campaigns on Twitter have shown that they help people quit smoking, demonstrating how the use of social media can help prevent disease. Health promotion through social media has many benefits, but it also faces problems: the spread of inaccurate information, limited access and digital literacy, and privacy and data security issues. Therefore, appropriate strategies are needed to address these issues, such as establishing regulations to ensure accurate health information. Social media offers new opportunities for innovation in health communication. Health messages can be delivered in a more engaging and easy-to-understand way by using various formats, such as text, images and videos. It also enables the formation of online communities that support each other in their efforts to maintain health (Pandhika et al., 2023).

Overall, health promotion through social media not only expands the reach of information but also has the potential to create more sustainable behaviour change in the community. With the right approach, social media can be a very effective tool in achieving health promotion goals.

3. Effectiveness and Constraints of Social Media Health Promotion for Adolescents

Despite significant results, adolescent health promotion through social media has some challenges. Social media are useful for improving adolescents' knowledge about health as they allow adolescents to quickly access information and increase their health literacy. In addition, social media can motivate others to adopt healthy behaviours. Campaigns on Twitter, for example, have helped people quit smoking, demonstrating the benefits of using social media in disease prevention. Social media facilitates better co-operation and communication between adolescents and health professionals. It helps in providing easier access to relevant and targeted health information. (Rahmatika & Rahman, 2019).

Social media allows anyone to post information without verification, which may expose adolescents to incorrect or scientifically unsubstantiated health information. If this information is followed without consulting a health professional, it could put them at risk. Not all adolescents have sufficient internet access or digital devices, so they may be left behind in getting important information about their health. The varying digital literacy of adolescents also impacts their ability to find, evaluate and use health information. Social media is full of different types of content, so adolescents can get distracted from health messages quickly. This can lead to important messages not being fully understood or remembered. Teens may not realise all the dangers associated with sharing personal data on platforms.



Digital literacy education is needed to improve adolescents' ability to find, evaluate and use health information effectively (Bintang Mustofa & Sani, 2024). It is crucial to establish regulations to ensure that health information conveyed on social media is accurate. This may include verifying data before it is published. Collaboration with health workers, including nurses, can help with health promotion through social media. Health workers can provide more accurate advice by monitoring and verifying the information shared.

Appropriate strategies can be used to improve health promotion for adolescents by understanding the strengths and weaknesses of health promotion through social media.

B. Bivariate Research Discussion

1. Relationship between Social Media Exposure and Health Behaviour Change

Results showed that high exposure to social media campaigns was significantly correlated with healthy behaviour change among adolescents ($p = 0.001$). Respondents exposed to more than five campaigns per week had a greater likelihood of healthy behaviour change (80%) than those exposed to less than five campaigns (40%).

Bandura's Theory of Social Persuasion states that repeated exposure to relevant messages can increase an individual's confidence to adopt a particular behaviour, in this case a healthy lifestyle. Social media as an interactive mass communication tool provides an opportunity for adolescents to constantly receive positive messages that encourage behaviour change. Vannucci et al. (2020) in their meta-analysis showed that although there are certain risks associated with social media use, the potential for using it as a behaviour change tool remains significant, particularly in encouraging positive behaviours through a targeted approach (Vannucci et al., 2020).

The main assumption of this study is that high levels of exposure to social media campaigns are able to raise awareness and motivate adolescents to adopt healthy lifestyles. This is supported by the results which show that respondents with more intense exposure have a higher proportion of behaviour change. Consistent social media campaigns utilise platform algorithms to reach the target audience more effectively. With repeated content delivery, adolescents can receive relevant messages in various forms, such as short videos, inspirational images and interactive stories. This is in line with the principle of the repeated exposure effect, where repeated exposure to a particular stimulus tends to increase an individual's preference for that stimulus.

Campaigns should include varied content formats, such as short story-based videos, infographics, and online challenges (*HealthyChallenge*) to increase appeal. Use platform analytics to craft messages that match the interests and needs of the teen audience, such as light exercise tips or healthy menu ideas.

2. Effect of Health Literacy on Health Behaviour

Bivariate analysis showed a significant association between health literacy and healthy behaviours ($p = 0.002$). Respondents with good health literacy were more likely to adopt healthy behaviours (70%) compared to those with low health literacy (40%).



Based on the Health Belief Model (HBM), health literacy influences an individual's perception of the benefits and barriers to adopting healthy behaviours. The higher the health literacy, the more likely individuals are to understand the risks of unhealthy behaviours and the benefits of change. Zhang et al. (2022) found that health literacy affects health behaviours directly and through increasing perceived barriers. This suggests that health literacy can reduce perceived barriers and increase the decision to adopt a healthy lifestyle (Zhang et al., 2022).

Health literacy is one of the key factors that influence adolescents' ability to understand and evaluate information received. This research shows that higher literacy is positively correlated with healthy behaviours. Low health literacy among adolescents may limit their ability to distinguish accurate and reliable information from health hoaxes. In this digital age, where information is abundant on social media, health literacy is an important tool to filter relevant and useful content.

Health campaigns should be accompanied by training on how to recognise reliable sources of information, such as official health websites or medical professional accounts. Incorporate health literacy into the school curriculum through interactive educational programmes designed to appeal to adolescents.

3. Effectiveness of Audio Visual Media compared to Leaflet

Audio visual media was found to be more effective in delivering campaign messages than leaflets, with an effectiveness rate of 85% compared to 40% ($p = 0.000$). Teenage audiences are more interested in interactive media that involves visual and sound elements.

Mayer's Multimedia Learning Theory emphasises that the combination of text, audio and images in audio visual media enhances comprehension and retention of information. Audio visual media allows for more engaging and easily understood message transfer by adolescents compared to static leaflets (Ramlatchan, 2019).

The assumption that audio visual media is more effective than leaflets is based on adolescents' preference for more interactive and engaging media. The findings of this study support this assumption, with 85% of respondents stating that audio visual media was more helpful in understanding campaign messages. Young people who are familiar with digital technology tend to be more responsive to visually and audio-rich content than print media. Message delivery using interactive videos or animations not only attracts attention but is also easier to remember. Cognitive theory by Mayer states that the combination of visuals and audio can strengthen information processing in long-term memory.

Social media such as TikTok, Instagram Reels, and YouTube should be the main channels of the campaign with dynamic and creative content. Collaborate with influencers who have great influence to promote healthy lifestyles through relatable audiovisual content.



CONCLUSIONS

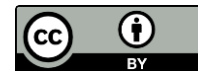
Based on the results of the study, health promotion through social media showed significant effectiveness in promoting healthy lifestyles among adolescents. Social media, such as Instagram and Twitter, play an important role in improving health literacy, psychological empowerment, and motivating positive behaviour change. Audio-visual platforms also proved effective in delivering health messages.

However, there are challenges such as inaccurate information dissemination, limited digital access, and data privacy and security concerns. Therefore, optimal health promotion needs to address these obstacles through digital literacy education, collaboration with health workers, and development of information regulation.

With the right approach, social media has great potential to expand the reach of health promotion and create sustainable behaviour change among adolescents.

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