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The Effectiveness Of Instagram Social Media Interventions On Changes In Dental Health Care Knowledge, Attitudes, And Practices In Patients At Fairy Dental Clinic Care Range 2026

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ABSTRACT

The results of Basic Health Research (RISKESDAS) state that the prevalence of dental and oral health problems in Indonesia is around 57.6%. The proportion of cavities or sick teeth in East Kalimantan Province is 48.04%. In the age group of 15-24 years, the proportion of tooth problems with damaged, cavities or pain is around 46.74%. The purpose of this study was to determine the effectiveness of Instagram Social Media interventions on changes in dental health care knowledge, attitudes, and practices in patients in the range of dental care clinics. This study uses a Quasi Experimental Design (Non-Equivalent Control Group Design). In this study, the population was 400 people and the sample of this study was patients who met the inclusion criteria, which was 80 people. The results showed that there was a significant difference between the knowledge score before and after the intervention in both the control group and the experimental group with a value ($p<0.05$). The intervention also showed a meaningful change in attitudes and practices in dental health care. The greatest improvement was found in the knowledge aspect, followed by attitude, while practice showed an improvement although relatively lower. The conclusion of this study shows that Instagram social media is effective as a health promotion medium in increasing dental health literacy caused by the large number of people who use Instagram Social Media. So that Instagram Media can increase information for the public. The suggestion in the research is that the public can disseminate information about dental and oral health to other groups with more interesting content.

Keywords: Social Media, Instagram, Knowledge, Attitude, Practice, Health

ABSTRAK

Temuan Penelitian Kesehatan Dasar (RISKESDAS) menunjukkan bahwa prevalensi masalah kesehatan mulut di Indonesia sekitar 57,6%. Proporsi orang dengan gigi yang karepot, rusak, atau sakit di Provinsi Kalimantan Timur adalah 48,04%. Pada kelompok usia 15–24 tahun, proporsi pasien dengan gigi yang rusak, berlubang, atau nyeri sekitar 46,74%. Tujuan studi ini adalah untuk menentukan efektivitas intervensi media sosial Instagram terhadap perubahan pengetahuan, sikap, dan praktik perawatan mulut di antara pasien di klinik Fairy Dental Care di Kisaran. Studi ini menggunakan desain kuasi-eksperimental (desain kelompok kontrol yang tidak ekuivalen). Populasi studi terdiri dari 400 individu, dan sampel terdiri dari 80 pasien yang memenuhi kriteria inklusi. Hasil penelitian menunjukkan bahwa terdapat perbedaan signifikan antara skor pengetahuan pra- dan pasca-intervensi baik pada kelompok kontrol maupun kelompok eksperimental (hlm < 0,05). Intervensi ini juga menunjukkan perubahan signifikan dalam sikap dan praktik perawatan kesehatan mulut. Peningkatan terbesar ditemukan pada pengetahuan, diikuti oleh sikap, sementara praktik menunjukkan perbaikan, meskipun pada tingkat yang relatif lebih rendah. Kesimpulan dari studi ini menunjukkan bahwa Instagram efektif sebagai media promosi kesehatan untuk meningkatkan literasi kesehatan mulut karena banyaknya orang yang menggunakan Instagram. Dengan demikian, Instagram dapat meningkatkan kesadaran publik. Rekomendasi dari studi ini adalah agar publik berbagi informasi tentang kesehatan mulut dengan kelompok lain menggunakan konten yang lebih menarik.

Kata kunci: Media Sosial, Instagram, Pengetahuan, Sikap, Praktik, Kesehatan

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INTRODUCTION

Dental and oral health is one of the important indicators in determining the quality of public health. The World Health Organization (WHO) reports that dental and oral disease is still one of the most common health problems in the world, with billions of people experiencing dental caries, periodontal disease, and tooth loss that impact

quality of life, productivity, nutritional status, and systemic health. This condition shows that promotive and preventive efforts are still a big challenge in health services, especially in developing countries such as Indonesia.

Based on a WHO report on the status of dental and oral health in 2022, around 3.5 billion people around the world or almost half of the world's population suffer from dental and oral diseases. *The Oral Health Country Profile* issued by WHO states that Indonesia is the second ranked country in Southeast Asia, which has total expenditure on dental health care.

Globally, the cost of treating dental and oral diseases is €90 billion and ranks as the 3rd most expensive type of health care and on average takes up 20% of people's out-of-pocket spending in high-income countries. According to the World Health Organization (WHO), social determinants of health. The environmental conditions in which a person is born, grow, live, work, and age have a significant impact on health and well-being. Caries is affected by several factors that result from the interaction between environment, behavior, and genetic factors.

Other factors that affect are accessibility factors which include distance and unavailability of transportation, lack of awareness and dental care costs affecting the use of dental and oral health services. Access to dental and oral health services is still uneven, especially in rural areas, the problem is medical personnel who work in the private and urban sectors.

In Indonesia, some dental and oral health problems include high dental caries, low levels of accessibility of dental care and lack of education about the importance of taking care of dental and oral health. Based on data from the results of the 2023 SKRT (Household Health Survey) – Surkenas (National Health Survey) morbidity study, it is stated that the 10 groups of diseases that the most complained about by the public are dental and oral diseases which occupy the first 60% of the population.

The results of Basic Health Research (RISKESDAS) state that the prevalence of dental and oral health problems in Indonesia is around 57.6%. The proportion of cavities or sick teeth in East Kalimantan Province is 48.04%. In the age group of 15-24 years, the proportion of tooth problems with damaged, cavities or pain is 46.74%. Based on the level of education graduates of universities in Indonesia, the caries rate reaches 39.6%, while in East Kalimantan Province the caries rate of the university graduates reaches 43.79%, this figure is quite high compared to the university graduates in Indonesia.

Dental and oral health problems in Indonesia are still a significant public health challenge. Based on the results of the Indonesian Health Survey (SKI), most of the Indonesian population still experiences dental and oral health problems, while the percentage of people who regularly check on health workers is still relatively low. This condition shows that the behavior of maintaining the community's dental and oral health is not optimal, both in efforts to prevent and detect diseases early.

The low number of routine dental check-up visits indicates that the dental health promotion and education efforts that have been carried out have not fully succeeded in encouraging changes in people's behavior. Although various outreach activities have increased access to health information, knowledge enhancement is not always followed by the formation of positive attitudes and good dental health care practices. In fact, behavior change is the main goal of any health promotion intervention.

This condition shows the need for a more effective, innovative, and educational approach in accordance with the development of information technology. The use of social media as a health promotion medium is one of the alternatives that has the potential to increase the reach of information delivery and encourage changes in knowledge, attitudes, and practices of the community in maintaining dental and oral health. Therefore, it is important to evaluate the effectiveness of social media, especially Instagram, as a medium for dental health education interventions.

The development of information and communication technology has brought significant changes in various aspects of life, including in the delivery of health information to the public. If previously health education was mostly carried out through face-to-face counseling, print media, and conventional electronic media, now people increasingly rely on digital media as the main source of information. The ease of internet access supported by the high use of smartphones has encouraged changes in people's behavior in searching, receiving, and sharing health information quickly and without being limited by space or time. This condition opens up great opportunities for health workers to utilize digital media as a means of health promotion that is more effective, efficient, and reaches a wider range of targets.

Among the various digital media available, social media has developed into one of the platforms that has great potential in supporting health promotion activities. Social media not only serves as a means of communication and information sharing, but also allows for two-way interaction between information providers and the public. These characteristics provide opportunities for the public to obtain health information repeatedly, provide feedback, discuss, and build a better understanding of a health topic. Continuous exposure to information received through social media also has the potential to increase knowledge, form a more positive attitude, and encourage changes in health behavior if the information conveyed is accurate, interesting, and easy to understand.

One of the social media platforms that has great potential as a health promotion medium is Instagram. Instagram is a platform that integrates the delivery of information through images, infographics, short videos, reels,

carousels, and other interactive features so that it is able to convey health messages in a more attractive way than conventional educational media. The presentation of information in visual form accompanied by a short and easy-to-understand narrative can increase the user's attention, memory, and understanding of the educational material provided. In addition, the comment, share, save, and direct message features allow for more active interaction between health information providers and users, so that the education process is not only one-way, but also participatory.

RESEARCH METHODS

This research method uses Quasi Experimental Design (Non-Equivalent Control Group Design). In this study, the population was 400 people and the sample of this study was patients who met the inclusion criteria, which was 80 people. Data is collected through a structured questionnaire that has been tested for validity and reliability. The analysis of this study uses Univariate Analysis and Bivariate Analysis with Paired T-Test Statistical Test.

RESULTS AND DISCUSSION

1. Differences in Patient Knowledge Scores Before and After Instagram Social Media Intervention

Based on the results of the *Paired Sample T-Test statistical analysis* test on the knowledge variable, values (were obtained in both the control group and the experimental group. However, the experimental group that was given intensive Instagram content education for 14 days experienced a much higher increase in the mean$p$-value $< 0{,}05$ knowledge score than the control group.

The results of this study are in line with the research of Andriani, et al. (2025) and Sitanaya, et al. (2024), which stated that health education through Instagram social media has proven to be effective and superior in increasing knowledge compared to conventional methods.

Knowledge is a cognitive domain that is formed through the process of sensing. The use of Instagram media that combines attractive visuals, infographics, and demonstration videos makes it easier for patients to absorb and remember information related to how to take care of teeth, the causes of caries, and the importance of regular control. According to the researchers' assumptions, material that is structured and presented regularly every day triggers a *repetition effect* that strengthens the patient's memory and comprehension level.

The increase in knowledge in this study can be explained through the mechanism of repeated and easily accessible information exposure. Visual content such as images and videos allows respondents to understand information faster and more effectively than conventional methods. In addition, a consistent frequency of intervention also strengthens the process of internalizing information.

Table 1.1. The Difference in Social Media Scores Against Patient Knowledge

	Groups	N	Red	Std. Deviation	Std. Error Mean	Sig. (2-Tailed)
Knowledge	Controls	40	12,1067	1,17652	,18602	
	Eksperimen	40	14,1500	1,45972	,23080	,026

Based on the results of the research conducted by the researcher, it was obtained that the results of the Paired Sample T-Test statistical test showed that there was a significant difference between the mean value of the Control group and the Experimental Group after the intervention with a value of (0.026 < 0.05). The interventions also showed meaningful changes in knowledge. So it can be concluded that Instgram social media can affect patient knowledge in the Fairy Dental Care range.

2. Differences in Patient Attitude Scores Before and After Instagram Social Media Intervention

The results of the *Paired Sample T-Test* statistical test showed a significant change in attitude in the experimental group after intervention through Instagram social media with a value of .p-value $< 0{,}05$

These findings support the research of Setyarini, et al. (2023) who revealed that visual education and interactive promotion are able to change the mindset and attitude of the audience in a positive direction. Attitude is an affective tendency or evaluative response of a person to an object. Before the intervention, some patients were indifferent and thought dental care was only necessary when they felt pain.

After being exposed to interactive education in the form of sharing dental disease risks and treatment testimonials on Instagram, there is a shift in perception where patients begin to view preventive dental care as a basic need. The researcher's assumption confirms that the delivery of persuasive and flexible educational messages on social media successfully builds positive emotions and affective awareness of patients.

Table 1.2. The Difference in Social Media Scores Against Patient Attitude

	Groups	N	Mean	Std. Deviation	Std. Error Mean	Sig. (2-Tailed)
Attitude	Control	40	19,2879	4,98570	,78831	
	Eksperimen	40	21,4250	5,23738	,99416	,034

Based on the results of the research conducted by the researcher, it was obtained that the results of the Paired Sample T-Test statistical test showed that there was a significant difference between the mean value of the Control group and the Experimental Group after the intervention with a value of (0.034 < 0.05). The intervention also showed a meaningful change in aspects of attitudes. So it can be concluded that Instgram social media can affect the attitude of patients at Fairy Dental Care Range.

The patient's attitude is formed from the knowledge, experience, and exposure to the information received. Through educational content on Instagram, patients can gain a better understanding of a health condition. Repeated exposure to information can affect perceptions and ultimately shape patients' attitudes towards the importance of maintaining health.

3. Differences in Dental Health Care Practice Scores Before and After Instagram Social Media Intervention

The results of bivariate analysis of the dental health care practice variables showed a significant increase in scores after intervention in the experimental group (). However, the rate of improvement in this domain of practice is relatively lower when compared to the improvement in the aspects of knowledge and attitudes.p-value $< 0{,}05$

These results are relevant to the concept of Lawrence Green's theoretical framework and the research of Ningtyas, et al. (2024), where changes in actions (*practices*) require a continuous strengthening process. Increasing knowledge and forming a positive attitude does not always automatically change the patient's daily habits, such as proper brushing techniques, the use of *dental floss*, or regular visits every 6 months.

The researcher assumes that changing practices requires time lag as well as the support of supporting facilities. Nonetheless, Instagram's social media interventions have proven to be effective as an early *trigger* that encourages patients to start implementing better dental care habits in their daily lives.

Table 1.3. The Difference in Social Media Scores Against Patient Care

	Groups	N	Red	Std. Deviation	Std. Error Mean	Sig. (2-Tailed)
Care	Controls	40	19,6789	4,14567	,65549	
	Eksperimen	40	21,5250	3,94830	,62428	,007

Based on the results of the research conducted by the researcher, it was obtained that the results of the Paired Sample T-Test statistical test showed that there was a significant difference between the mean value of the Control group and the Experimental Group after the intervention with a value of (0.007 < 0.05). The intervention also showed a meaningful change in the care aspect. So it can be concluded that Instgram social media can affect patient care at Fairy Dental Care Range.

The development of social media, especially Instagram, has brought significant changes in the world of health, including in dental and oral health practices. Fairy Dental Care Clinic A range of clinics that provide services such as dental fillings, tooth extraction, braces installation, and other treatments. Social media can be an important factor in helping health habits and behaviors.

Educational content and patient testimonials on Instagram can increase patient confidence and motivation to follow the recommendations of health professionals. Patients at the Fairy Dental Care Range Clinic tend to be more compliant in undergoing treatment after viewing educational content, such as post-action control or maintaining oral hygiene after braces.

CONCLUSION

1. The use of Instagram social media has a significant effect on increasing patient knowledge about dental and oral health. Most of the respondents experienced an increase in knowledge after being given an intervention through social media with a p value *of 0.026 < 0.05 which* means that there is a significant difference. Thus the research hypothesis is accepted.
2. The use of Instagram social media has a significant effect on increasing the change in patients' attitudes regarding dental and oral health. Most of the respondents experienced a change in the patient's attitude with *a p value of 0.034 < 0.05* which means that there is a significant difference.

3. The use of Instagram social media has a significant effect on improving dental health practices. Most of the respondents experienced an increase in dental health practices with *a p value of 0.007 < 0.05* which means that there is an increase in dental health practices in patients at Fairy Dental Care Kisaran.

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