



Comparison of the Influence of Instagram Reels and TikTok on Increasing Adolescents' Attitudes to the Dangers of Using Fashion Braces

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ABSTRACT

Keywords:

Fashion Braces, Instagram Reels, TikTok, Adolescent Attitude, Dental Health Promotion

This study aims to analyze the influence of health promotion through social media, specifically Instagram Reels and TikTok, on improving adolescent attitudes toward the dangers of fashion dental braces usage. This quasi-experimental research used a non-equivalent pre-test post-test control group design with 120 junior high school students aged 12-16 years in Karangroto Village, Genuk District, Semarang City. Respondents were divided into three groups: Instagram Reels intervention group (40 respondents), TikTok intervention group (40 respondents), and control group (40 respondents). Data were collected using validated questionnaires and analyzed using Wilcoxon signed-rank test, Mann-Whitney test, and Kruskal-Wallis test. Results showed significant improvement in positive attitudes from 42.5% to 90% in the Instagram Reels group and from 45% to 95% in the TikTok group. Statistical analysis revealed significant differences in attitude scores before and after intervention ($p=0.000$) for both intervention groups. However, no significant difference was found between Instagram Reels and TikTok effectiveness ($p=0.377$). Both intervention groups showed significantly better outcomes compared to the control group ($p=0.000$). This study concludes that both Instagram Reels and TikTok are effective media for health promotion regarding fashion dental braces dangers among adolescents, with TikTok showing slightly better improvement in attitude scores.

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INTRODUCTION

Dental and oral health is an integral part of general health that has an important role in a person's quality of life. One of the problems that is often encountered in the field of dental health is malocclusion, which is an abnormality of the arrangement of teeth that can interfere with the functions of chewing, swallowing, speaking, and facial aesthetics (Kusnoto, 2015).

Basic Health Research (Riskesdas) data in 2018 shows that the prevalence of dental and oral problems in Indonesia reached 57.6%, an increase compared to 2012 which was 25.9%. The prevalence of malocclusion in Indonesia is relatively high, reaching 80% (Laguhi, 2014). This condition

requires special attention, especially in adolescents who are experiencing a period of growth and identity formation.

The phenomenon of using braces or braces has evolved from a medical necessity to a fashion trend among teenagers. Since 2002, braces have become popular after many artists used them to support their appearance (Sulmayeti, 2015). This tendency gives rise to the practice of installing illegal braces that are not carried out by competent medical personnel, thus potentially endangering dental and oral health.

Research by Hakami et al. (2020) shows that the use of fashion dental braces has a negative effect on dental and oral function and can cause physical disability. Fashion braces users reported having more trouble pronouncing words, decreased sense of taste, and difficulty chewing.

Social media has become a major platform in the dissemination of health information and education, especially among adolescents. Instagram Reels and TikTok are two of the most popular platforms with engaging short video features. According to Data Digital Report Indonesia in 2022, Instagram users reach 99.15 million people, while TikTok has around 30.7 million active users in Indonesia.

This study aims to analyze the comparison of the effectiveness of Instagram Reels and TikTok as a health promotion medium in improving adolescents' attitudes towards the dangers of using fashion braces.

RESEARCH METHODS

2.1 Research Design

This study used a quasi-experimental design with a non-equivalent pre-test post-test control group design. The research was carried out in three junior high schools in Karangroto Village, Genuk District, Semarang City in the February-May 2025 period.

2.2 Population and Sample

The research population is all junior high school/MTs students aged 12-16 years in Karangroto Village. The sample was determined using a calculation formula for quasi-experimental design with a total of 120 respondents divided into three groups: the Instagram Reels intervention group (40 respondents), the TikTok intervention group (40 respondents), and the control group (40 respondents).

Inclusion criteria include: teenagers aged 12-16, have a smartphone, have Instagram and TikTok accounts, and are willing to participate. The exclusion criteria are respondents who do not fill out the complete questionnaire or do not submit the questionnaire on time.

2.3 Research Instruments

The research instrument was in the form of an attitude questionnaire consisting of 15 statements with a four-point Likert scale. The questionnaire has gone through a validity and reliability test with a Cronbach's Alpha value of 0.847. Educational materials in the form of short videos about the dangers

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of using fashion braces were delivered through the Instagram Reels and TikTok platforms.

2.4 Research Procedure

The research was conducted in several stages: (1) pre-test to measure respondents' initial attitudes, (2) intervention for one month through Instagram Reels and TikTok, (3) post-test to measure attitude change, and (4) data analysis using SPSS 25.0.

2.5 Data Analysis

Univariate analysis was used to describe the characteristics of respondents. The bivariate analysis used the Wilcoxon signed-rank test to compare attitudes before and after the intervention, the Mann-Whitney test to compare the effectiveness between the two media, and the Kruskal-Wallis test to compare all three study groups.

RESULTS AND DISCUSSION

3.1 Characteristics of Respondents

Table 1. Characteristics of Research Respondents

Characteristic	Instagram Reels		TikTok		Control	
	n	%	n	%	n	%
Gender						
Man	15	37,5	16	40,0	14	35,0
Woman	25	62,5	24	60,0	26	65,0
Age						
12 years	3	7,5	2	5,0	0	0,0
13 years	8	20,0	9	22,5	0	0,0
14 years	18	45,0	16	40,0	9	22,5
15 years	10	25,0	13	32,5	27	67,5
16 years old	1	2,5	0	0,0	4	10,0
Socio-Economic						
Intermediate to upper	12	30,0	12	30,0	15	37,5
Mid-to-Lower	28	70,0	28	70,0	25	62,5

The majority of respondents were women with a middle to lower socioeconomic level. The age distribution is most in the range of 14-15 years. All respondents have Instagram and TikTok accounts, with the majority preferring the TikTok platform.

3.2 Changes in Attitudes Before and After the Intervention

Table 2. Distribution of Respondents' Attitudes Before and After the Intervention

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Group	Before		After	
	n	%	n	%
Instagram Reels				
Positive Attitude	17	42,5	36	90,0
Negative Attitudes	23	57,5	4	10,0
TikTok				
Positive Attitude	18	45,0	38	95,0
Negative Attitudes	22	55,0	2	5,0
Control				
Positive Attitude	19	47,5	20	50,0
Negative Attitudes	21	52,5	20	50,0

The results showed a significant increase in positive attitudes in both intervention groups. The Instagram Reels group increased from 42.5% to 90.0%, while the TikTok group increased from 45.0% to 95.0%. The control group showed no significant changes.

3.3 Analysis of Attitude Differences

Table 3. Results of Attitude Difference Statistical Test

Group	Before	After	Δ Mean	p-value ¹	p-value ²	p-value ³
	Mean $\pm$ SD	Mean $\pm$ SD				
Instagram Reels	44.5 $\pm$ 4.08	46.43 $\pm$ 4.09	1,93	0,000**		
TikTok	42.93 $\pm$ 4.20	47.63 $\pm$ 3.13	4,70	0,000**	0,377	0,000
Control	43.63 $\pm$ 4.58	43.75 $\pm$ 4.52	0,13	0,323		

¹Wilcoxon signed rank test, ²Mann Whitney test, ³Kruskal Wallis test
**Significant p<0.05

The Wilcoxon test showed significant differences in both intervention groups (p=0.000). The Mann-Whitney test yielded p=0.377, showing no significant difference between the effectiveness of Instagram Reels and TikTok. The Kruskal-Wallis test showed significant differences between the three groups (p=0.000).

4.1 The Effectiveness of Social Media in Changing Attitudes

The results of the study showed that the use of Instagram Reels and TikTok was effective in increasing adolescents' positive attitudes towards the dangers of using fashion braces. The significant increase in positive attitudes in both intervention groups shows the great potential of social media as a means of health promotion.

This effectiveness can be explained through several factors. First, the interactive and visual characteristics of social media make it easier to convey health information to adolescents. Short videos with a duration of 15-60 seconds are in accordance with the media consumption patterns of teenagers who want quick and interesting information.

Second, the credibility of the source of information affects the reception of the message. Educational videos created by healthcare professionals and delivered through popular platforms increase respondents' trust in the information provided.

4.2 Comparison of the Effectiveness of Instagram Reels and TikTok

Although both platforms showed good effectiveness, TikTok showed a higher increase in attitude scores (Δ mean = 4.70) compared to Instagram Reels (Δ mean = 1.93). However, statistically there was no significant difference between the two media ($p=0.377$).

This difference can be caused by several factors. TikTok has a more aggressive algorithm in displaying content to users, so the reach and frequency of exposure are higher. Additionally, TikTok's interactive features such as duets, comments, and shares allow for more in-depth discussions about educational content.

4.3 Factors Influencing Attitude Change

Analysis of respondents' characteristics showed that the age variable played a role as a disruptive variable ($p=0.000$), while gender and socioeconomic status had no significant effect. This is in line with the theory of adolescent development which states that at different ages, adolescents have different levels of understanding and acceptance of information.

The majority of respondents (70%) came from families with middle-to-lower socioeconomic status. This condition is relevant to the findings of Hakami et al. (2020) who stated that the majority of fashion braces users come from low-income families who are looking for cheap alternatives to improve their appearance.

4.4 Implications for Health Promotion

The findings of this study provide important implications for health promotion practices. Social media can be an effective strategy to reach the hard-to-reach adolescent population through conventional methods. The use of platforms that are familiar and liked by the target audience increases engagement and message effectiveness.

However, the implementation of health promotion programs through social media requires consideration of quality content, source credibility, and proper distribution strategies. Collaboration between health workers and content creators can be a solution to optimize the reach and impact of the program.

4.5 Research Limitations

This research has several limitations. First, the duration of the intervention was only one month, so it was not possible to measure the long-

term impact on behavior change. Second, the research was conducted in one geographical area with relatively homogeneous socioeconomic characteristics, so the generalization of results needs to be done carefully.

CONCLUSIONS

This study shows that Instagram Reels and TikTok are both effective as health promotion mediums to improve adolescents' attitudes towards the dangers of using fashion braces. Both platforms showed a significant increase in respondents' positive attitudes with TikTok showing a slightly higher increase in scores. There was no significant difference in effectiveness between the two media, but both were significantly more effective than the control group. Age variables play a role as a disruptive factor that needs to be considered in the implementation of health promotion programs. Health workers are advised to use social media as a means of health promotion by considering the characteristics of the target audience. Further research is needed to measure the long-term impact and effectiveness on more diverse populations. Educational institutions need to integrate dental and oral health education into the curriculum by utilizing digital technology that is familiar to students.

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