

Influence of social media influencers on adolescents' confidence and emotions in health education

Nancy Sylvia Bawiling^{a*}, Suprpto^b

^a Universitas Negeri Manado, North Sulawesi, Indonesia

^b Departement of Nursing, Politeknik Sandi Karsa, South Sulawesi, Indonesia

*Correspondence: Universitas Negeri Manado, North Sulawesi, Indonesia

Email: nancybawiling@unima.ac.id

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ABSTRACT

Introduction: The growing popularity of social media has positioned influencers as essential agents in shaping adolescents' attitudes, behaviors, and perceptions toward reproductive health topics. Adolescence is a critical developmental period when understanding and confidence regarding reproductive issues are often limited. This study aimed to analyze the influence of exposure to influencer-generated content on adolescents' positive emotions and self-confidence in the context of reproductive health education.

Methods: A quantitative quasi-experimental design was employed, involving 100 students, divided equally into intervention and control groups. Data collection instruments included the Positive and Negative Affect Schedule (PANAS) to assess positive emotions and the Rosenberg Self-Esteem Scale to measure self-confidence. The intervention group received reproductive health education through influencer-created social media content, while the control group did not receive any exposure. Data were analyzed using the Paired Sample T-Test and the Independent T-Test.

Results: The findings showed significant improvements in the intervention group across all variables: reproductive health knowledge ($p < 0.0001$), self-confidence ($p < 0.0001$), and positive emotions ($p < 0.0001$). In contrast, the control group exhibited no significant changes, indicating that influencer-based education did not affect enhancing adolescents' cognitive and psychological aspects.

Conclusion: Exposure to accurate, empathetic, and relatable influencer content significantly improved adolescents' emotional engagement and confidence. Therefore, collaboration among health educators, professionals, and social media influencers is recommended to develop credible, appealing, and youth-centered digital reproductive health communication strategies.

Keywords: Adolescents; Influencers; Positive Emotions; Reproductive Health Education; Self-Confidence; Social Media.



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INTRODUCTION

Adolescence is a transitional stage of life characterized by rapid physical, psychological, and social development. During this period, individuals often experience profound biological changes associated with puberty while facing new social roles and expectations (Adhikari, 2025). These transformations are frequently accompanied by confusion, anxiety, and social pressure, which can significantly influence adolescents' decision-making processes and overall well-being (Babu et al., 2025). One of the most critical areas affected during adolescence is reproductive health, as young people are often vulnerable to risky behaviors, unplanned pregnancies, and sexually transmitted infections (STIs) due to a lack of accurate knowledge and supportive emotional resources. Approximately 16 million adolescent girls aged 15–19 years give birth annually worldwide, with the majority of these cases occurring in developing countries. This highlights the pressing need for effective reproductive health education strategies that empower adolescents to make informed and responsible choices (Bagratuni et al., 2025).

Traditional reproductive health education has typically emphasized biological and medical information, such as anatomy, contraception, and disease prevention (Ballering et al., 2024). While this knowledge is undeniably essential, such approaches often neglect the psychological and emotional aspects of adolescence. Low self-confidence and limited positive emotions in navigating puberty can reduce the effectiveness of educational interventions, leaving young people vulnerable to misinformation, peer pressure, and harmful behaviors (Bhugra et al., 2024). Adolescents who lack confidence in managing their reproductive health are less likely to resist negative peer influences or seek appropriate health services when needed (Blasberg et al., 2025). Therefore, reproductive health education should convey factual knowledge and address the emotional and psychological dimensions of adolescent development. Building positive emotions and self-confidence is crucial for shaping healthy reproductive behaviors (Calderone et al., 2025).

The rapid advancement of digital technology and the widespread use of social media platforms have transformed how adolescents seek and consume information. Platforms such as Instagram, TikTok, YouTube, and Facebook have become primary sources of information and interaction among young people (Tetteh & Kankam, 2024). While these platforms offer unprecedented access to knowledge, they also expose adolescents to unverified content, myths, and rumors regarding reproductive health (Castro & Czura, 2025). Inaccurate information disseminated through social media can further exacerbate confusion and anxiety, leading to risky decision-making (Comolli et al., 2024). On the other hand, social media presents a unique opportunity to deliver reproductive health education in ways that are engaging, accessible, and relatable to adolescents. This is where the role of social media influencers becomes particularly significant (Ellis & Rowlands, 2024).

Influencers possess substantial followings on social media and are perceived as credible, relatable, and trustworthy by their audiences (Gnambs & Hawrot, 2025). Due to their popularity and influence, these figures can act as change agents in promoting healthy behaviors and disseminating accurate information. Their informal and relatable communication styles allow them to connect with adolescents in ways that traditional educators and health professionals may struggle to achieve (Gruber et al., 2025). By integrating evidence-based reproductive health content into engaging, interactive, and visually appealing formats, influencers can help improve adolescents' reproductive health literacy while simultaneously enhancing their emotional well-being and confidence (Suprpto et al., 2024).

Several studies support the potential of social media as an effective medium for health promotion. Research has shown that digital platforms can enhance knowledge retention and audience engagement compared to traditional classroom-based or leaflet-based methods. Health promotion through social media has significantly improved healthy lifestyle behaviors among adolescents, highlighting the capacity of digital interventions to effectively reach young audiences (Head et al., 2024). Emphasized that social media campaigns can positively shape adolescents' attitudes and behaviors regarding reproductive health, although information accuracy and

sustainability challenges remain (Hershberger et al., 2025). These findings underscore the importance of designing interventions that deliver accurate knowledge and enhance adolescents’ emotional resilience and decision-making capacity (Johri et al., 2024).

The effectiveness of influencer-led reproductive health education can be attributed to the alignment between influencers’ communication styles and adolescents’ media consumption patterns. By delivering content through familiar platforms and formats such as short videos, interactive stories, or live sessions, influencers can bridge the gap between formal health education and the lived experiences of adolescents. This relatability enhances credibility, encourages engagement, and motivates young people to internalize and apply the information they receive.

RESEARCH METHODOLOGY

This study employed a quantitative approach using a quasi-experimental design with two groups: an intervention group and a control group. The total population consisted of 479 students, from which a sample of 100 students was selected using purposive sampling. The sample was divided into 50 participants in the intervention group and 50 in the control group.

Instruments

Data collection instruments included: a Questionnaire to measure adolescents’ positive emotions and self-confidence. The Positive and Negative Affect Schedule (PANAS) scale is used to assess both positive and negative emotions. The Rosenberg Self-Esteem Scale is used to evaluate self-confidence. All instruments used a Likert scale to quantify participants’ responses.

Intervention

The intervention consisted of providing reproductive health education content through social media influencers. Participants in the intervention group were exposed to educational posts, videos, and interactive sessions created by selected influencers. The control group did not receive any such exposure during the study period.

Data Collection Procedure

Pre-test: Both groups completed questionnaires to assess baseline levels of positive emotions and self-confidence. Implementation of Intervention: The intervention group was monitored for engagement with influencer-generated content on reproductive health. Post-test: After the intervention, both groups completed the same questionnaires to measure variable changes.

Data Analysis

Data were analyzed using statistical tests, including a Paired Sample T-Test to examine differences before and after the intervention within each group. An independent sample T-test was used to compare the differences between the intervention and control groups. A significance level of $p < 0.05$ was used as the threshold to determine statistical significance.

RESULT

Table 1. Univariate Analysis (n=50)

Variable	Category	Intervention Group (n=50)	Control Group (n=50)
Age	16 years	21 (42.0%)	21 (42.0%)
	17 years	24 (48.0%)	25 (50.0%)
	18 years	5 (10.0%)	4 (8.0%)
Most Used Social Media	Instagram	23 (46.0%)	16 (32.0%)
	TikTok	27 (54.0%)	19 (38.0%)
	Facebook	0 (0%)	10 (20.0%)
	YouTube	0 (0%)	5 (10.0%)

The univariate analysis revealed that most respondents in both groups were aged 16–17, representing the typical mid-adolescent phase when reproductive health issues

become highly relevant. Regarding social media usage, the intervention group reported TikTok (54%) and Instagram (46%) as the most frequently used platforms. In contrast, the control group showed a more diverse pattern, with a notable portion also using Facebook (20%) and YouTube (10%). This finding suggests that adolescents predominantly engage with visual and interactive platforms such as TikTok and Instagram, which positions these channels as strategic tools for delivering health education content effectively.

Table 2. Bivariate Analysis

Variable	Group	Pre-test Mean $\pm$ SD	Post-test Mean $\pm$ SD	p-value
Reproductive Health Education	Intervention	35.92 $\pm$ 5.158	53.80 $\pm$ 5.280	0.000
Reproductive Health Education	Control	33.96 $\pm$ 3.828	34.70 $\pm$ 2.682	0.013
Self-Confidence	Intervention	24.14 $\pm$ 5.406	33.56 $\pm$ 4.807	0.000
Self-Confidence	Control	23.00 $\pm$ 2.587	22.96 $\pm$ 2.579	0.569
Positive Emotions	Intervention	44.46 $\pm$ 5.128	60.02 $\pm$ 6.702	0.000
Positive Emotions	Control	40.64 $\pm$ 2.746	39.90 $\pm$ 3.541	0.280

The paired t-test indicated that the intervention group experienced significant improvements in all three key variables: reproductive health knowledge increased markedly ($p < 0.000$). Self-confidence improved significantly ($p=0.000$). Positive emotions also rose substantially ($p=0.000$). In contrast, the control group showed a minor yet statistically significant change in reproductive health knowledge ($p = 0.013$). No substantial change in self-confidence ($p=0.569$). No significant change in positive emotions ($p=0.280$). The results demonstrate that health education delivered by social media influencers effectively enhanced cognitive (knowledge) and psychological (confidence and emotions) aspects among adolescents. The lack of meaningful change in the control group indicates that adolescents are unlikely to experience improvements in these areas without structured educational exposure.

Table 3. Multivariate Analysis

Variable	Stage	t-test	p-value
Reproductive Health Education	Pre-test	2.158	0.033
Reproductive Health Education	Post-test	22.806	0.000
Self-Confidence	Pre-test	1.345	0.183
Self-Confidence	Post-test	13.740	0.000
Positive Emotions	Pre-test	4.644	0.000
Positive Emotions	Post-test	18.769	0.000

The independent t-test confirmed significant differences between the intervention and control groups in the post-test stage across all three variables: reproductive health knowledge ($p = 0.000$). Self-confidence ($p=0.000$). Positive emotions ($p=0.000$). While pre-test comparisons revealed no differences in self-confidence ($p = 0.183$), significant gaps already existed in reproductive health knowledge ($p = 0.033$) and positive emotions ($p < 0.0001$). These findings indicate that after the intervention, adolescents exposed to influencer-based education developed substantially higher knowledge, stronger self-confidence, and more positive emotions than those in the control group. This highlights the role of influencers as effective agents of behavioral and psychological change, particularly when the content is relatable and delivered through familiar social media platforms.

DISCUSSION

The findings of this study reveal that reproductive health education delivered through social media influencers significantly improves adolescents' positive emotions and self-

confidence. Adolescents in the intervention group experienced notable changes after receiving influencer-led education, while the control group showed no significant differences. These results underscore the importance of adapting educational methods to the realities of adolescents' digital lifestyles.

Effectiveness of Reproductive Health Education

The study reinforces the idea that social media is an effective medium for health promotion. Social media is an interactive and relatable medium, unlike conventional methods such as printed leaflets or classroom lectures. Adolescents are highly engaged with platforms like TikTok and Instagram, so health messages delivered by influencers resonate more strongly. Influencers serve as role models with credibility and relatability (Mmari et al., 2024). Their way of presenting content, casual, personal, and visually engaging, facilitates adolescents' comprehension of reproductive health issues. Social media campaigns effectively raise awareness and encourage healthy lifestyles. This study extends that evidence by focusing specifically on reproductive health and psychosocial outcomes (Punjani et al., 2025).

Impact on Positive Emotions

A remarkable finding is the significant improvement in adolescents' positive emotions. Adolescence is a sensitive developmental stage marked by insecurity and social pressure (Qi et al., 2024). Adolescents who receive reproductive health education from trusted influencers feel understood and validated. This reduces anxiety and creates optimism about their ability to manage the challenges of puberty. The intervention group reported higher enjoyment, confidence, and motivation after being exposed to influencer content. Such emotional reinforcement is essential, as positive emotions contribute to resilience and healthy decision-making. The control group, in contrast, remained stagnant, highlighting the importance of targeted interventions (Rubin & van Es, 2025).

Impact on Self-Confidence

Self-confidence is a crucial protective factor during adolescence. This study found that adolescents in the intervention group experienced a significant increase in self-esteem after engaging with influencer-based content (Sabag et al., 2024). According to Rosenberg's self-esteem theory, recognition and positive feedback from socially valued figures foster greater self-confidence. Influencers, admired by young audiences, can thus empower adolescents to believe in themselves, make informed decisions about reproductive health, and resist peer pressure. The increase in self-confidence likely stems from adolescents' improved understanding of their bodies, reproductive rights, and preventive behaviors. By seeing relatable role models openly discuss sensitive issues, adolescents feel encouraged to take ownership of their health (Schiller et al., 2024).

Comparison with Previous Studies

Compared with earlier studies using traditional methods, this research highlights the innovative role of influencers. Demonstrated that leaflets improved knowledge but had a limited psychosocial impact (Schlechter et al., 2024). Educational games enhanced skills but were confined to classroom contexts. Influencer-led education, by contrast, is more accessible, continuous, and capable of reaching broader audiences across diverse socio-economic backgrounds (Specht et al., 2024).

The findings carry practical implications for education, healthcare, and public policy. Schools could collaborate with influencers to integrate reproductive health education into extracurricular activities. Governments should establish regulations ensuring the credibility of influencers delivering health-related content. Healthcare professionals and educators can work with content creators to design engaging and scientifically accurate messages. This model of digital health education could also be replicated in other health domains, such as nutrition, mental health, or substance abuse prevention, where adolescents face similar challenges. Despite its contributions, the study has limitations. First, it was conducted in a single school with a relatively small sample, which may restrict generalizability. Second, the intervention was short-term, so long-term impacts remain unknown. Third, the study did not investigate which specific types of

influencer content (e.g., humor, storytelling, educational infographics) were most effective in driving change.

Future studies should expand to multiple schools and cultural contexts to assess generalizability. Longitudinal research is also needed to evaluate the sustainability of emotional and behavioral changes. Moreover, mixed interventions that combine online influencer campaigns with offline school-based counseling could maximize impact. Policymakers and educators should carefully select influencers with credibility, cultural sensitivity, and a commitment to public health values. Reproductive health education through social media influencers is not only effective in enhancing adolescents' knowledge but also in strengthening their emotional well-being and self-confidence. By leveraging the digital spaces where adolescents are most active, health educators can create meaningful change in the lives of young people. This research highlights the potential of combining psychology, education, and technology to address one of the most pressing issues in adolescent development: healthy reproductive behavior.

CONCLUSION

This study concludes that reproductive health education through social media influencers is significantly effective in enhancing adolescents' positive emotions and self-confidence. Adolescents who received influencer-led interventions demonstrated meaningful improvements in knowledge, emotional well-being, and self-esteem compared to the control group. These findings highlight the transformative role of digital platforms as alternative educational tools that align with adolescents' lifestyles and communication patterns. By utilizing relatable figures and engaging content formats, reproductive health messages become informative and emotionally supportive, empowering young people to make more informed and healthier decisions.

Based on the findings, it is recommended that schools, healthcare institutions, and policymakers collaborate with credible influencers to integrate reproductive health education into broader adolescent development programs. Longitudinal studies are necessary to examine the sustainability of these impacts over time, and further research should also identify the most effective content styles for maximizing engagement and behavioral change. Additionally, regulatory frameworks are needed to ensure the accuracy and reliability of health information shared by influencers, safeguarding adolescents from misinformation while promoting a culture of digital health literacy.

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Conflict of Interest

The authors declare that they have no competing interests.

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