

# Effectiveness of Social Media-Based Health Promotion Interventions in Increasing Physical Activity Among Urban Adolescents

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## ABSTRACT

*The decline in physical activity among urban adolescents has become a significant public health concern due to its association with increased risks of obesity, metabolic disorders, cardiovascular diseases, and poor mental health. This study aimed to evaluate the effectiveness of social media-based health promotion interventions in increasing physical activity among urban adolescents and to identify factors contributing to intervention success. A quasi-experimental study with a non-equivalent control group design and pre-test and post-test measurements was conducted among 80 adolescents aged 15–18 years. The intervention was delivered over 4–8 weeks through social media platforms using educational content, physical activity demonstration videos, weekly challenges, self-monitoring activities, and peer interactions based on Social Cognitive Theory and the Theory of Planned Behaviour. The intervention group showed a significant increase in physical activity of +655 MET-minutes/week ( $p < 0.001$ ), while the control group showed no significant change. Multiple regression analysis ( $R^2 = 0.58$ ) revealed that social media intervention ( $\beta = 0.62$ ), participant engagement ( $\beta = 0.41$ ), and frequency of social media access ( $\beta = 0.28$ ) significantly predicted increased physical activity. Activities promoted included brisk walking, light jogging, cycling, aerobic exercise, bodyweight training, dancing, and recreational sports, supporting integration into school- and community-based health promotion programs. Overall, social media-based interventions effectively increased physical activity among urban adolescents regardless of gender or nutritional status. Structured and interactive digital content enhanced self-efficacy, motivation, and sustainable behavioural change beyond passive information exposure.*



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## INTRODUCTION

Physical activity is a key determinant of health, playing a crucial role in preventing non-communicable diseases (NCDs) and improving individuals' quality of life. However, in recent decades, a global trend of declining physical activity among adolescents has become a serious public health concern. The World Health Organization (WHO) reports that more than 80% of adolescents worldwide do not meet the recommended daily physical activity levels, increasing the risk of various long-term health problems (Syalfina et al., 2025). This situation indicates that physical inactivity has become a global epidemic that requires strategic and innovative interventions.

In Indonesia, the problem of physical inactivity among adolescents is also showing a worrying trend, particularly in urban areas. Modern lifestyles, coupled with the development of digital technology, lead adolescents to spend more time on passive activities such as using gadgets and social media. Research shows that sedentary behavior in adolescents is correlated with an increased risk of obesity, cardiovascular disease, and other metabolic disorders (Yusuf et al., 2023). Furthermore, low physical activity also impacts mental health, including an increased risk of anxiety and depression.

Adolescents as a transitional age group (10–19 years) have unique biological, psychological and social development characteristics. (Fakhrurrozi et al., 2024). During this phase, individuals experience significant changes that affect health behavior patterns, including physical activity. Urban environments reinforce inactive lifestyles, characterized by limited green open spaces, high levels of pollution, and a lack of youth-friendly sports facilities. This situation is further exacerbated by high exposure to digital technology, which encourages dependence on electronic devices.

The development of information and communication technology has significantly changed adolescents' social interaction patterns. Social media platforms such as Instagram, TikTok, and YouTube have become integral to their daily lives, serving not only as entertainment but also as sources of information and social interaction. Studies show that more than half of adolescents are active social media users (Rahman & Dina, 2025). This creates both opportunities and challenges for health promotion efforts.

In the context of public health, health promotion has a strategic role in encouraging behavioral changes towards a healthy lifestyle. (Rahmaniza et al., 2025). Based on the principles of the Ottawa Charter, health promotion aims to improve individuals' ability to control factors that influence their health. Behavioral theory-based approaches such as the Health Belief Model (HBM), the Theory of Planned Behavior (TPB), and Social Cognitive Theory (SCT) have been widely used to understand and modify health behaviors, including physical activity.

Along with the digital transformation, health promotion strategies are also shifting from conventional methods to technology-based approaches. Social media has become a potential



platform for health interventions due to its wide reach, high accessibility, and ability to deliver messages interactively and personally (Abas et al., 2025). Compared with traditional methods such as direct outreach or print media, social media allows for higher engagement with target audiences.

Various studies have shown that digital-based interventions, including mobile health (mHealth) and social media, have the potential to increase physical activity in adolescents. Literature studies have found that the use of smartphone-based applications and digital platforms can increase adolescent motivation, awareness, and participation in physical activity (Fitriani & Mulyono, 2023). Furthermore, social media-based interventions have also been shown to leverage peer influence to encourage behavior change.

The effectiveness of social media in health promotion is inextricably linked to the concepts of social modeling and peer support, where individuals tend to imitate behaviors observed in their social environment. Furthermore, innovative approaches such as gamification and challenge-based interventions, often used on digital platforms, can increase adolescent engagement and motivation to participate in physical activity.

The development of social media as a space for digital interaction has significantly changed the behaviour patterns of teenagers. However, its use in the context of health is still often passive and informative, not yet structured as a behavioural intervention. Therefore, an approach is needed that not only conveys information but also systematically integrates physical behaviour stimulation through digital content.

Social media-based interventions need to be designed as a combination of health education and physical behaviour activation. In this context, social media serves as the delivery medium, while physical activity becomes the targeted behavioural outcome. Recent literature shows that the effectiveness of digital interventions increases when the content contains interactive elements such as challenges, self-monitoring, and peer reinforcement.

The justification for social media-based physical interventions is based on the integration of SCT and TPB theories, where behaviour observation (modelling), social norms, and perceived behavioural control can be stimulated through repetitive and contextual digital content. For example, simple exercise videos that can be done at home, combined with weekly challenges, have been proven to increase the intention and practice of physical activity.

Additionally, this approach is relevant to the characteristics of the teenage generation, which has a high attachment to digital platforms. By utilising algorithms and content consumption patterns, interventions can be personalised, thereby increasing engagement and the effectiveness of behaviour change.

Thus, research is needed that not only tests the effectiveness of social media as a communication channel but also as an integrated behavioural intervention system that simultaneously combines education, motivation, and physical activity practice.

## **METHODS**

This study uses a quantitative approach with a quasi-experimental non-equivalent control group design combined with pre-test and post-test measurements to evaluate the effectiveness of



the intervention. This design was chosen because it allows for the empirical testing of causal relationships even without full randomisation, while still maintaining a systematic comparison between the intervention group and the control group. The research population consists of adolescents aged 15–18 years living in urban areas with high social media usage characteristics. The sample was determined through purposive sampling techniques with inclusion criteria including active social media use of at least two hours per day, no physical limitations to perform sports activities, and willingness to participate in the entire intervention series. The sample size was determined through power analysis calculations to ensure adequate statistical power.

This study involves two groups, namely the intervention group and the control group. The intervention group received a social media-based health promotion program for 4–8 weeks, while the control group only received conventional health information without structured intervention. The intervention was designed as an integration of health education and physical activity stimulation through social media platforms such as Instagram and TikTok. The substance of the intervention content consists of three main components: cognitive education in the form of infographics about the benefits of physical activity and the risks of sedentary behaviour, behaviour activation through simple home-based exercise videos with a duration of 5–15 minutes, and social reinforcement through weekly challenges, comment interactions, and peer support. The content is published regularly 3–5 times a week to ensure consistent exposure and user engagement. All content designs are based on the framework of the Social Cognitive Theory (SCT) and the Theory of Planned Behaviour (TPB) to enhance self-efficacy, subjective norms, and perceived behavioural control.

The independent variable in this study is the social media-based health promotion intervention, while the dependent variable is the level of physical activity among adolescents. Covariate variables such as gender, body mass index (BMI), engagement level, and frequency of social media access were also controlled to minimise bias. Physical activity was measured using a valid instrument, the short version of the International Physical Activity Questionnaire (IPAQ), which measures the frequency, duration, and intensity of physical activity in MET-minutes per week. Engagement is measured based on the level of interaction with the content (such as likes, comments, and participation in challenges), while access frequency is measured based on the intensity of exposure to the intervention platform.

A structured eight-week social media-based health promotion intervention was designed using the Instagram and TikTok platforms, integrating educational, motivational and participatory approaches. The content provided included education on the health benefits of physical activity, demonstration videos of physical activities that can be performed independently, weekly physical activity challenges, as well as peer feedback and support via the comments and online discussion features. The physical activities promoted in the intervention included brisk walking, light jogging, cycling, aerobic exercise, bodyweight exercises such as squats, lunges, push-ups and planks, as well as recreational physical activities such as dancing and sports games suitable for adolescents. To increase participant engagement, each week respondents were asked to document the physical activities they had undertaken and share them via social media as a form of self-monitoring and



peer support. This approach was developed based on Social Cognitive Theory and the Theory of Planned Behaviour, which emphasise the importance of observational learning, social reinforcement, the formation of positive norms, and increased self-efficacy in encouraging changes in physical activity behaviour.

## RESULTS

### 1. Respondent Characteristics

**Table 1. Distribution of Respondent Characteristics (n = 80)**

Variables	Intervention Group (n=40)	Control Group (n=40)	Total (%)
Age (Mean ± SD)	16.4 ± 1.1	16.2 ± 1.0	-
Gender			
Man	18 (45%)	17 (42.5%)	43.7%
Woman	22 (55%)	23 (57.5%)	56.3%
Normal BMI	28 (70%)	30 (75%)	72.5%
Overweight/Obesity BMI	12 (30%)	10 (25%)	27.5%
Social Media Intensity (>3 hours/day)	32 (80%)	30 (75%)	77.5%

Respondent characteristics between the intervention and control groups were relatively homogeneous (there were no significant differences descriptively). This indicates that both groups had comparable baselines, making it feasible to conduct comparative analyses of the effects of the intervention.

### 2. Changes in Physical Activity (In Groups)

**Table 2. Paired t-test results of Physical Activity (MET-minutes/week)**

Group	Pre-test (Mean ± SD)	Post-test (Mean ± SD)	Δ Mean	p-value
Intervention	1125 ± 320	1780 ± 410	+655	<b>0.000</b>
Control	1150 ± 300	1205 ± 315	+55	0.213

The intervention group showed significant increase in physical activity ( $p < 0.05$ ), with an average increase of 655 MET-minutes/week. The control group showed no significant change ( $p > 0.05$ ). This indicates that the social media-based intervention was effective in increasing physical activity within the group.

### 3. Comparison Between Groups

**Table 3. Independent t-test results (Difference in Changes in Physical Activity)**

Group	Mean Δ (SD)	p-value
Intervention	655 ± 210	<b>0.000</b>
Control	55 ± 180	



There was a significant difference between the intervention and control groups ( $p < 0.05$ ). The intervention group experienced a significantly greater increase in physical activity compared to the control group. This strengthens the evidence that the intervention has a significant causal effect.

#### 4. Multiple Linear Regression Analysis

**Table 4. Factors Influencing Increased Physical Activity**

Independent Variables	$\beta$ (Coefficient)	t-value	p-value
Social Media Intervention	0.62	5.87	<b>0.000</b>
Engagement (content interaction)	0.41	3.95	<b>0.001</b>
Social Media Access Frequency	0.28	2.76	<b>0.007</b>
Gender	0.10	1.12	0.265
BMI	-0.15	-1.54	0.128

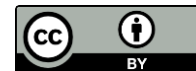
$R^2 = 0.58$

The results of the multiple linear regression analysis indicate that the model constructed is reasonably effective in explaining changes in physical activity among urban adolescents. Social media-based health promotion interventions emerged as the most significant factor in increasing respondents' physical activity. Furthermore, participants' level of engagement with the content provided and the frequency of their social media use also contributed positively to the success of the intervention. These findings indicate that the effectiveness of the programme is determined not only by the existence of the intervention itself, but also by the intensity of participants' engagement in the various designed activities, such as daily brisk walking challenges, weekly jogging, simple strength training, aerobic exercise, and the documentation of physical activity via social media. Conversely, the respondents' baseline biological characteristics did not show a significant contribution to changes in physical activity. This suggests that the intervention developed has the potential to be widely applied to various groups of adolescents without requiring specific adjustments based on these characteristics.

## DISCUSSION

### 1. Changes in Physical Activity in Groups

The research findings indicate that social media-based health promotion programmes are capable of bringing about meaningful changes in physical activity behaviour among urban adolescents. This improvement suggests that social media not only serves as a means of disseminating health information, but can also be an effective intervention tool in encouraging active lifestyles. The success of this programme is thought to be influenced by a combination of various interactively designed intervention components, including the delivery of educational videos, demonstrations of physical activity, weekly activity challenges, and social support from fellow participants. The activities promoted in the intervention, such as brisk walking, light jogging, cycling, aerobic exercise, bodyweight strength training (squats, push-ups, planks, and lunges), as well as recreational activities like dancing, provide alternatives that are easy for adolescents to incorporate into their daily lives without requiring special facilities. This approach enables



participants to integrate physical activity into their daily routines, making the resulting behavioural changes more realistic and potentially sustainable in the long term.

The significant increase in physical activity in the intervention group is relevant to the mechanisms described in Bandura's Social Cognitive Theory (SCT), particularly through observational learning and self-efficacy. When adolescents are repeatedly exposed to physical activity content through social media platforms, they not only receive information but also witness role models engaging in similar behaviors, ultimately increasing their self-efficacy to participate in physical activity. The Theory of Planned Behavior (TPB) is also relevant: structured social media-based interventions can shape positive attitudes, subjective norms (peer influence), and perceived behavioral control, which collectively drive intention and actual action. The lack of significant changes in the control group strengthens the argument that changes in the intervention group are not simply a natural maturational effect, but rather a causal effect of the intervention.

A recent systematic review published in the *Journal of Medical Internet Research* (2025) included 24 studies totaling approximately 12,183 adolescents aged 10–19, including four quasi-experimental studies, and concluded that digital health interventions (DHI) were effective in increasing physical activity in adolescents. This finding aligns directly with the results in Table 2, which showed significant increases in the intervention group (Fan et al., 2025).

A systematic review and meta-analysis by Wang et al. (2024) published in *JMIR mHealth and uHealth* analyzed 28 RCTs with 5,643 participants and concluded that mobile health (mHealth) app-based interventions have generally been shown to improve physical activity levels and physical fitness in children and adolescents. Although focused on mobile apps, these findings support the ecological validity of digital media—including social media—as a functional intervention medium (Wang et al., 2024).

Mateo-Orcajada et al. (2023) in a 10-week RCT of 400 adolescents (experimental group  $n=240$ , control  $n=160$ ) found that a mobile app-based intervention integrated into a school physical education program successfully increased levels of physical activity outside of school hours in the early stages of the intervention, with positive benefits on fitness and body composition variables. This pattern of findings aligns with the results in Table 2, which show significant post-test improvements in the intervention group (Mateo-Orcajada et al., 2023).

The significant increase in physical activity in the intervention group indicates that exposure to structured social media content can trigger real behavioural changes. This can be explained through mechanisms in Social Cognitive Theory (SCT), particularly in the aspects of observational learning and increased self-efficacy, where individuals are encouraged to imitate behaviours observed repeatedly in the digital environment. Content in the form of simple physical exercise videos presented consistently allows teenagers to not only understand the information but also directly practice it in their daily lives. Additionally, within the framework of the Theory of Planned Behaviour (TPB), this intervention shapes a positive attitude towards physical activity, strengthens subjective norms through social exposure, and enhances perceived behavioural control. For example, teenagers who regularly watch short-duration light exercise content tend to perceive



physical activity as easy to do, thereby increasing the likelihood that they will actually engage in such activities.

## **2. Comparison of Differences in Changes Between Groups**

The findings of this study demonstrate that social media-based health promotion interventions produced substantially greater improvements in physical activity compared with conventional health information. The significant difference observed between the intervention group and the control group confirms that behaviour change is more likely to occur when health messages are accompanied by structured behavioural activation strategies rather than information delivery alone. The intervention group was repeatedly exposed to educational content, physical activity demonstrations, weekly challenges, self-monitoring activities, and peer interactions, all of which created an environment that continuously encouraged the adoption of active behaviours.

From a behavioural perspective, these findings indicate that social media can function as a mechanism for translating health knowledge into action. The intervention did not merely increase awareness regarding the benefits of physical activity but also provided practical opportunities for adolescents to engage in activities such as brisk walking, light jogging, cycling, aerobic exercise, bodyweight training (including squats, lunges, push-ups, and planks), dancing, and recreational sports. Repeated exposure to these activities through short videos and weekly challenges reduced perceived barriers to exercise and strengthened confidence in performing physical activity independently.

The significant difference between groups also illustrates the influence of digital media on behavioural modelling and social norm formation. Through social media platforms, adolescents were able to observe peers participating in physical activities, share their own experiences, and receive social reinforcement through comments, reactions, and challenge participation. According to Social Cognitive Theory (SCT), such observational learning and social reinforcement strengthen self-efficacy and increase the likelihood of behaviour adoption. Likewise, the Theory of Planned Behaviour (TPB) suggests that exposure to positive social norms and increased perceived behavioural control contribute to stronger intentions and actual engagement in physical activity.

These findings are consistent with previous evidence indicating that digital interventions are more effective when they integrate behavioural change techniques such as goal setting, self-monitoring, social support, and peer interaction rather than relying solely on informational approaches. Gunther et al. (2021), Hematabadi et al. (2025), and Kassim et al. (2025) similarly reported that social media-based interventions generate greater improvements in physical activity than conventional approaches because they actively stimulate behavioural engagement rather than passive information consumption.

Overall, the present findings suggest that the effectiveness of social media lies not only in its communication reach but also in its capacity to create a supportive digital environment that encourages adolescents to transform health intentions into sustained physical activity behaviours.



### 3. Factors Influencing Increased Physical Activity

The regression analysis revealed that social media intervention, participant engagement, and frequency of social media access were significant predictors of increased physical activity among urban adolescents. These findings suggest that successful behavioural change is influenced not only by exposure to intervention content but also by the extent to which participants actively interact with and internalize the information provided.

The strongest predictor was the social media-based intervention itself, indicating that structured digital programmes are capable of stimulating meaningful behavioural changes. The intervention combined health education, practical exercise demonstrations, self-monitoring activities, weekly challenges, and peer support, creating multiple pathways through which adolescents could adopt healthier lifestyles. Activities promoted during the programme included brisk walking, jogging, cycling, aerobic exercise, bodyweight exercises such as squats, lunges, push-ups, and planks, as well as recreational activities such as dancing and sports games. These activities were intentionally selected because they are accessible, require minimal equipment, and can be easily incorporated into adolescents' daily routines.

Participant engagement emerged as the second most influential factor, highlighting the importance of active involvement in the digital intervention process. Adolescents who frequently interacted with content through comments, challenge participation, activity sharing, and peer discussions were more likely to translate health information into actual behaviour. This finding supports the notion that social media facilitates behaviour change by creating opportunities for social interaction, emotional support, and collective motivation. Rather than acting as passive recipients of information, participants became active contributors within a digital health community.

The positive effect of access frequency further demonstrates the role of repeated exposure in behaviour formation. Frequent encounters with health messages, exercise demonstrations, and peer-generated content reinforce behavioural intentions and strengthen habit development. Through repeated exposure, physical activity becomes increasingly perceived as achievable, socially acceptable, and personally relevant. This mechanism aligns with SCT, which emphasizes observational learning, and TPB, which highlights the role of attitudes, subjective norms, and perceived behavioural control in determining behaviour.

An important implication of these findings is that social media can influence health behaviour through both cognitive and social pathways. Cognitively, it increases awareness, knowledge, and perceived benefits of physical activity. Socially, it creates modelling opportunities, peer support networks, and social norms that encourage behavioural adoption. Studies by Xiao et al. (2025), Liu et al. (2025), Wei et al. (2025), and Hematabadi et al. (2025) similarly demonstrated that engagement, social interaction, and appropriate exposure to digital health content are key mechanisms through which social media promotes physical activity behaviour.

Therefore, the effectiveness of digital health promotion programmes should be evaluated not only by the quantity of content delivered but also by their ability to stimulate meaningful



engagement, social participation, and repeated behavioural practice. These elements appear to be essential drivers of sustainable physical activity behaviour among adolescents in the digital era.

## CONCLUSIONS

This study demonstrates that social media-based health promotion interventions are effective in increasing physical activity among urban adolescents. Programmes that combine digital health education, demonstrations of physical activity, weekly activity challenges, self-monitoring, and social support via social media are able to encourage more active behavioural change compared to conventional approaches. The activities promoted, such as brisk walking, light jogging, cycling, aerobic exercise, bodyweight strength training, and other recreational activities, have proven to be well-received and adopted by adolescents as part of their daily routines.

The research findings also indicate that the success of interventions is significantly influenced by the level of participant engagement with the content provided and the frequency of interaction with social media as a health promotion tool. Therefore, the development of digital health programmes for adolescents should emphasise active participation, interactivity and social support to optimise the impact on behavioural change. In practical terms, the results of this study suggest that social media can be utilised as an effective, easily accessible, and potentially widely applicable health promotion strategy to increase physical activity among adolescents in the prevention of non-communicable diseases and the improvement of quality of life in the future.

## REFERENCES

- Abas, S. N. R., Akrom, A., Wijaya, I. M. H., Hipmi, A. F., & Feangi, Y. F. (2025). The Use of Social Media as a Health Promotion Tool to Change Behavior in Drug Storage. *Jurnal Mandala Pengabdian Masyarakat*, 6(1), 80–86. <https://doi.org/10.35311/jmpm.v6i1.509>
- Fakhrurrozi, S. H., Afrina, R., & Rukiah, N. (2024). The Relationship Between Sleep Hygiene Behavior and Sleep Quality Among Adolescents Aged 10–19 Years in RW06 Cirimekar Village, Cibinong District in 2023. *Jurnal Riset Ilmu Kesehatan Umum Dan Farmasi*, 2(2), 38–48. <https://doi.org/10.57213/jrikuf.v2i2.227>
- Fan, R., Jiang, J., Zhou, Q., Zhang, X., & Wu, Z. (2025). Digital Health Interventions to Promote Physical Activity Among Adolescents: Systematic Review (Preprint). *Journal of Medical Internet Research*, 28. <https://doi.org/10.2196/82395>
- Fitriani, F., & Mulyono, S. (2023). Mobile Health and Its Effectiveness on Adolescent Physical Activity: A Literature Review. *Jurnal Riset Kesehatan Poltekkes Depkes Bandung*, 15(2), 364–372. <https://doi.org/10.34011/juriskesbdg.v15i2.2167>
- Gunther, L., Schleberger, S., & Pischke, C. R. (2021). Effectiveness of Social Media-Based Interventions for the Promotion of Physical Activity: Scoping Review. *International Journal of Environmental Research and Public Health*, 18(24), 13018. <https://doi.org/10.3390/ijerph182413018>
- Hematabadi, A., Rashidlamir, A., Radfar, B., Shourabi, P., Hajimousaei, S., Schauer, M., & Motevalli, M. (2025). Social Media in Physical Activity Interventions Targeting Obesity Among Young



- Adults: Trends, Challenges, and Lessons from Instagram, TikTok, YouTube, and Facebook. *Youth*, 5(4), 111–111. <https://doi.org/10.3390/youth5040111>
- Kassim, P. S. J., Muhammad, N. A., Abdul Rahman, N. F., Sidik, S. M., Essau, C. A., & Shah, S. A. (2025). Effectiveness of Digital Behaviour Change Interventions for Promoting Physical Activity in Adolescents with Overweight and Obesity: A Systematic Review and Meta-Analysis. *DIGITAL HEALTH*, 11. <https://doi.org/10.1177/20552076251314904>
- Liu, J., Wang, C., Meng, Z., & Yu, C. (2025). Digital Interaction and Active Aging: The Impact of Social Media Use on Physical Activity Behavior Mediated by Social Capital and Self-Efficacy. *Frontiers in Psychology*, 16. <https://doi.org/10.3389/fpsyg.2025.1580936>
- Mateo-Orcajada, A., Vaquero-Cristobal, R., & Abenza-Cano, L. (2023). Gender and Academic Year as Moderators of the Efficacy of Mobile App Interventions to Promote Physical Activity in Adolescents: A Randomized Controlled Trial. *Humanities & Social Sciences Communications*, 10(1). <https://doi.org/10.1057/s41599-023-02502-3>
- Rahman, N. A., & Dina, R. A. (2025). The Relationship Between Body Image, Social Media Use Intensity, Diet Quality, Physical Activity, and Nutritional Status Among Adolescents. *Jurnal Ilmu Gizi Dan Dietetik*, 4(2), 82–95. <https://doi.org/10.25182/jigd.2025.4.2.82-95>
- Rahmaniza, Fadhli, R., & Ramayani, P. (2025). The Effectiveness of Health Promotion on Changes in Knowledge of Clean and Healthy Living Behavior in Household Settings in Pebatuan Village. *Al-Asalmiya Nursing: Jurnal Ilmu Keperawatan (Journal of Nursing Sciences)*, 14(1), 1–13. <https://doi.org/10.35328/keperawatan.v14i1.2914>
- Syalfina, A. D., Mafticha, E., Putri, A. D., Irawati, D., Priyanti, S., & Sulistyawati, W. (2025). Factors Influencing Physical Activity Among Adolescents. *Al-Tamimi Kesmas: Jurnal Ilmu Kesehatan Masyarakat (Journal of Public Health Sciences)*, 13(2), 298–306. <https://doi.org/10.35328/kesmas.v13i2.2825>
- Wang, J.-W., Zhu, Z., Shuling, Z., Fan, J., Jin, Y., Gao, Z.-L., Chen, W.-D., & Li, X. (2024). Effectiveness of mHealth App-Based Interventions for Increasing Physical Activity and Improving Physical Fitness in Children and Adolescents: Systematic Review and Meta-Analysis. *JMIR MHealth and UHealth*, 12(1), e51478. <https://doi.org/10.2196/51478>
- Wei, W., Su, R., Lin, C., Meng, M., & Zheng, R. (2025). Online Fitness Content as a Behavioral Catalyst: Extending the Theory of Planned Behavior to Unmask Time-Dependent Effects on Resistance Training Engagement. *Frontiers in Psychology*, 16. <https://doi.org/10.3389/fpsyg.2025.1575832>
- Xiao, X., Huang, D., & Li, G. (2025). The Impact of Fitness Social Media Use on Exercise Behavior: The Chained Mediating Role of Intrinsic Motivation and Exercise Intention. *Frontiers in Psychology*, 16. <https://doi.org/10.3389/fpsyg.2025.1635912>
- Yusuf, R. A., Syamsir, M. R., Muhsana, F., & Silwanah, A. S. (2023). Gadget Addiction and Physical Activity in Adolescents: A Literature Review. *Media Ilmu Kesehatan*, 11(1), 85–98. <https://doi.org/10.30989/mik.v11i1.651>