

ORIGINAL

Social Media Predicts Bedtime Procrastination In Adolescents

Las Redes Sociales Predicen La Procrastinación A La Hora De Dormir En Los Adolescentes

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ABSTRACT

Introduction: bedtime procrastination has emerged as a significant issue among adolescents, as it reduces sleep quality and affects both physical and psychological health. The increasing use of social media has been identified as one of the major contributing factors.

Method: this study applied a descriptive quantitative design. Data were collected from 275 Indonesian adolescents aged 17-22 years (182 females and 93 males). Bedtime procrastination was measured with the Bedtime Procrastination Scale (BPS), while social media use was assessed using the Social Media Addiction Scale (SMAS). Data analysis employed Pearson's product-moment correlation.

Results: the findings indicated a positive and statistically significant relationship between social media use and bedtime procrastination ($r = 0,27$, $p < 0,01$). No meaningful gender differences were observed in either social media intensity or procrastination behavior.

Conclusion: the study shows that higher social media use is associated with increased bedtime procrastination among adolescents. These results highlight the need for effective regulation of media use to maintain healthy sleep patterns

Keyword: Social Media; Bedtime Procrastination; Adolescents.

RESUMEN

Introducción: la procrastinación a la hora de acostarse se ha convertido en un problema importante entre los adolescentes, ya que reduce la calidad del sueño y afecta tanto a la salud física como psicológica. El uso cada vez mayor de las redes sociales se ha identificado como uno de los principales factores que contribuyen a ello.

Método: este estudio aplicó un diseño cuantitativo descriptivo. Se recopilaron datos de 275 adolescentes indonesios de entre 17 y 22 años (182 mujeres y 93 hombres). La procrastinación a la hora de acostarse se midió con la Escala de Procrastinación a la Hora de Acostarse (BPS), mientras que el uso de las redes sociales se evaluó con la Escala de Adicción a las Redes Sociales (SMAS). El análisis de los datos se realizó mediante la correlación producto-momento de Pearson.

Resultados: los resultados indicaron una relación positiva y estadísticamente significativa entre el uso de las redes sociales y la procrastinación a la hora de acostarse ($r = 0,27$, $p < 0,01$). No se observaron diferencias significativas entre los sexos en cuanto a la intensidad del uso de las redes sociales o el comportamiento de procrastinación.

Conclusión: el estudio muestra que un mayor uso de las redes sociales se asocia con un aumento de la

procrastinación a la hora de acostarse entre los adolescentes. Estos resultados ponen de relieve la necesidad de una regulación eficaz del uso de los medios de comunicación para mantener unos patrones de sueño saludables.

Palabras clave: Redes Sociales; Procrastinación a la Hora de Acostarse; Adolescentes.

INTRODUCTION

Bedtime procrastination has emerged as a central concern in contemporary sleep research. The term was first introduced by Kroese et al.⁽¹⁾, who defined it as the voluntary and intentional delay of going to bed without any external reasons. Unlike insomnia, which is driven by physiological or clinical factors, bedtime procrastination is a self-regulatory failure: individuals stay awake by choice, despite recognizing the negative consequences. This behavior has attracted attention because of its growing prevalence among adolescents and young adults, a group particularly vulnerable to sleep disruption due to their developmental stage and social demands.⁽²⁾

The consequences of bedtime procrastination extend beyond short-term fatigue. Sleep deprivation and poor sleep quality have been associated with impaired cognitive functioning, reduced academic performance, weakened immune response, and higher risk of mental health problems, including depression and anxiety.^(3,4) Adolescents are especially sensitive to these outcomes because sleep plays a crucial role in neurocognitive development, memory consolidation, and emotional regulation during this stage of life.⁽⁵⁾ Thus, understanding why adolescents postpone sleep is not only of theoretical interest but also of significant practical importance for public health.

Several explanations have been offered for bedtime procrastination. The self-regulation framework suggests that procrastination results from failures in self-control, where immediate gratification outweighs long-term goals such as sufficient rest.⁽⁶⁾ More recently, the notion of revenge bedtime procrastination has been proposed to capture the deliberate decision to sacrifice sleep in order to reclaim personal time after structured daily routines.⁽⁷⁾ This pattern reflects broader lifestyle changes in which adolescents, constrained by schoolwork and extracurricular obligations, perceive nighttime as the only available moment for leisure. Importantly, this distinction between restorative leisure and harmful procrastination underscores the complexity of the behavior: while short breaks can enhance recovery, consistent delays in bedtime disrupt circadian rhythms and undermine restorative sleep.

Among the most powerful drivers of bedtime procrastination is digital media use. The rise of smartphones and social media platforms has introduced an endless stream of content, notifications, and social interactions that are particularly engaging during the evening hours. Woods and Scott⁽⁸⁾ demonstrated that nighttime social media use is strongly associated with reduced sleep duration and poorer sleep quality in British adolescents. Similarly, Vernon et al.⁽⁹⁾ found that problematic Facebook use was significantly related to bedtime procrastination among American university students. Studies in Switzerland⁽¹⁰⁾ and Belgium⁽¹¹⁾ further confirmed that screen exposure in the late evening predicts later bedtimes and shorter sleep. These findings collectively suggest that social media plays a central role in bedtime procrastination across different cultural contexts.

Despite consistent international evidence, most studies have been conducted in Western populations with advanced digital infrastructures. Developing countries, however, remain understudied despite their rapid increase in digital connectivity. Indonesia presents a compelling case. According to global reports, Indonesia is among the top ten countries with the highest number of social media users, with more than 167 million active users as of 2023.⁽¹²⁾ National statistics indicate that over 72 % of Indonesian youth aged 16-30 use social media daily, with an average screen time exceeding four hours.^(13,14) Platforms such as Instagram and TikTok dominate this digital landscape, offering highly interactive and visually stimulating content that encourages prolonged use. Given these figures, Indonesian adolescents are at considerable risk of experiencing bedtime procrastination.

Nonetheless, empirical studies directly examining the relationship between social media use and bedtime procrastination in Indonesia remain limited. Research in this area is essential because cultural practices, family routines, and educational pressures may interact with digital behaviors in unique ways. For instance, in collectivist societies like Indonesia, parental supervision and family expectations may influence adolescents' media use differently compared to individualistic cultures.⁽¹⁵⁾ Moreover, infrastructural differences such as internet accessibility may shape patterns of online engagement. Without empirical evidence, it remains unclear whether findings from Western contexts can be generalized to Indonesian adolescents.

This research seeks to address that gap. By focusing on Indonesian adolescents, the study not only tests whether the established relationship between social media use and bedtime procrastination applies in this context but also contributes new insights into how digital lifestyles intersect with cultural and developmental

factors. In doing so, the research responds to global calls for a more inclusive understanding of adolescent sleep behaviors across diverse societies.⁽⁵⁾

Therefore, the present study aims to examine the relationship between social media use and bedtime procrastination among Indonesian adolescents. The objective is general in scope, designed to provide both theoretical contributions to the global literature on procrastination and practical implications for adolescent health promotion in developing countries.

METHOD

Type of Study

This research was designed as an observational, descriptive, cross-sectional study, aimed at examining the relationship between social media use and bedtime procrastination among adolescents.

Universe and Sample

The study universe consisted of adolescents aged 17-22 years residing in Padang City, West Sumatra, Indonesia. From this universe, a sample of 275 adolescents (182 females and 93 males) was recruited. Participants were selected using purposive sampling, with the inclusion criterion of being active users of social media platforms such as Instagram and TikTok.

Variables

Two main variables were analyzed in this study:

- Independent variable: social media use, measured with the Social Media Addiction Scale (SMAS).
- Dependent variable: bedtime procrastination, measured with the Bedtime Procrastination Scale (BPS).

Data Collection and Processing

Data were collected through both online and face-to-face surveys between (June-July). Participants completed two standardized instruments:

- Bedtime Procrastination Scale (BPS) developed by Kroese et al.⁽¹⁾, originally consisting of nine items. The instrument was translated into Indonesian and tested on 57 adolescents. Reliability analysis showed that seven items were valid, with a Cronbach's alpha coefficient of 0,763, while two items were removed due to low validity.
- Social Media Addiction Scale (SMAS) developed by Al-Menayes⁽¹⁶⁾, initially comprising 14 items across three dimensions: social consequences (5 items), time displacement (3 items), and compulsive feelings (6 items). The scale was translated and adapted to the context of Instagram and TikTok usage. After testing, 11 items were retained, with a reliability coefficient of 0,88.

The average time required to complete both questionnaires was approximately 5-10 minutes. Data were processed using SPSS version 20.0 for Windows⁽¹⁷⁾. Descriptive statistics (mean and standard deviation) were calculated for each variable. Pearson's product-moment correlation test was used to assess the relationship between social media use and bedtime procrastination.

Ethical Standards

Ethical approval for this study was obtained from the Institutional Review Board of Universitas Negeri Padang. All participants provided informed consent before participating. Anonymity and confidentiality of responses were strictly maintained throughout the study.

RESULTS

A total of 275 adolescents aged 17-22 years participated in this study. Most respondents (72 %) were in the 17-19 age group, and the majority were female (67 %). The most commonly used platforms were Instagram and TikTok simultaneously (63 %), and more than half of the participants reported daily usage of 4-5 hours (table 1).

Descriptive statistics (table 2) indicated that the average score of social media use was 18,28 (SD = 2,73), suggesting moderate levels of engagement. The mean score of bedtime procrastination was 26,77 (SD = 4,23), which falls within the normal range.

Correlation analysis (table 3) showed a significant positive relationship between social media use and bedtime procrastination ($r = 0,27$, $p < 0,01$). This finding suggests that adolescents with higher levels of social media use are more likely to delay their sleep.

Independent-sample t-tests (table 4) revealed no significant gender differences in either social media use or bedtime procrastination. Both male and female adolescents displayed similar patterns of media use and bedtime delay.

Table 1. General Description of Study Subjects

Description	(N)	(%)
Age		
17-19	205	76
20-22	73	24
N	275	100
Gender		
Male	93	34
Female	182	66
N	275	100
Social Media		
Instagram	77	28
Tiktok	28	10
Instagram & Tiktok	170	62
N	275	100
Duration of social media access per day		
1-3 hours	135	49
4-5 hours	109	40
>5 hours	31	11
N	275	100

Table 2. Description of Bedtime Procrastination and Social Media Statistics

Variabel	Min	Max	Mean	SD
Bedtime procrastination	11	25	18,28	2,73
Social Media	15	40	26,77	4,23

Table 3. Bedtime Procrastination and Social Media Hypothesis Test

Correlations		X	Y
X	Pearson Correlation	1	0,268**
	Sig. (2-tailed)		0,000
	N	275	275
Y	Pearson Correlation	0,268**	1
	Sig. (2-tailed)	0,000	
	N	275	275

** . Correlation is significant at the 0,01 level (2-tailed).

Table 4. Mean Difference Test for Male and Female

Variable	Mean	SD	t-test	Sign.
Bedtime Procrastination				
Man	18,83	3,07	0,14	p>0,05
Woman	18,28	2,48		
Social Media				
Male	26 8526 65	5,14	0,75	p>0,05
Female		3,86		

DISCUSSION

The present study confirmed a significant association between social media use and bedtime procrastination

among Indonesian adolescents. This reinforces the view that procrastination at bedtime reflects not only poor time management but also deeper difficulties in self-regulation.^(1,6) Adolescents appear to trade off the long-term benefit of restorative sleep for the immediate gratification offered by social media. This finding resonates with the theory of revenge bedtime procrastination,⁽⁷⁾ which frames delayed sleep as a form of reclaiming autonomy in highly structured daily routines. In our sample, prolonged engagement with Instagram and TikTok may serve this very function: a way to carve out “me time” at the expense of healthy sleep.

The mechanisms underlying this relationship are multifaceted. First, cognitive arousal plays a crucial role. Studies have shown that the interactive and emotionally stimulating content of social media increases alertness, making it difficult to disengage before sleep.^(18,19) Second, physiological mechanisms also contribute. Exposure to blue light from digital devices in the evening suppresses melatonin secretion and delays circadian rhythms, leading to later sleep onset and reduced sleep quality.^(20,21) These effects have been consistently reported in experimental and epidemiological studies, confirming that evening screen use disrupts both the timing and depth of sleep. Third, behavioral displacement is evident: time spent online directly replaces time that could have been used for sleep, a trend observed globally among adolescents.^(22,23)

Interestingly, our results showed no significant gender differences in bedtime procrastination, suggesting that both male and female adolescents may be equally vulnerable. This finding mirrors reports from European and North American samples,^(11,10) though some research indicates that platform-specific preferences or motivations for media use may create nuanced differences across genders.⁽²⁴⁾ Future research should therefore disentangle whether specific types of online activities—such as social networking, gaming, or video streaming—differentially predict bedtime procrastination in male versus female adolescents.

From a broader cultural perspective, this study also illustrates how local context intersects with global digital habits. In collectivist societies such as Indonesia, adolescents face unique pressures balancing family expectations, academic demands, and personal leisure. Although strong parental oversight may regulate daytime behaviors, nighttime device use may escape such control, as suggested by previous cross-cultural research.⁽¹⁵⁾ The finding that Indonesian adolescents exhibit similar patterns of bedtime procrastination as their Western peers suggests that digital media’s impact on sleep transcends cultural boundaries, reflecting a global phenomenon.

The implications are both theoretical and practical. Theoretically, the results underscore the role of self-regulation and circadian disruption as central pathways linking digital media and sleep outcomes. Practically, the findings highlight the urgency of interventions targeting digital habits before bedtime. Evidence-based strategies such as establishing screen-free periods before sleep,⁽²²⁾ promoting offline relaxation routines,⁽⁵⁾ and parental involvement in setting household “digital curfews”⁽²⁵⁾ could mitigate the risks. At the policy level, public health campaigns emphasizing the importance of sleep hygiene in adolescence are critical, especially in high-usage countries like Indonesia.

Nonetheless, this study has limitations. The reliance on self-report measures may introduce recall or social desirability bias, particularly in reporting media use. Future research should adopt objective tracking tools (e.g., actigraphy, digital usage logs) to complement self-report data.⁽²⁶⁾ Moreover, our cross-sectional design prevents causal inference. Longitudinal and experimental studies are needed to determine whether reducing evening social media use directly lowers bedtime procrastination and improves sleep outcomes.

In conclusion, this study confirms that social media is a significant predictor of bedtime procrastination among Indonesian adolescents, consistent with findings from international literature. By situating the phenomenon within both global digital culture and local Indonesian contexts, the research contributes to a broader understanding of adolescent sleep behaviors and highlights the importance of promoting healthier digital routines.

CONCLUSION

The results of this study make it clear that social media use is closely linked with bedtime procrastination among Indonesian adolescents. What appears to be a simple habit of staying up late scrolling through Instagram or TikTok is, in fact, part of a larger pattern: difficulties in self-control, the pull of emotionally stimulating content, and the disruption of natural sleep rhythms. By confirming that these processes, widely observed in Western countries, also occur in Indonesia, this study shows that bedtime procrastination is a global phenomenon shaped by both digital culture and local social contexts. These findings remind us that helping adolescents build healthier digital habits is not just about limiting screen time but about creating balance. Parents and educators can encourage screen-free periods before sleep, promote alternative ways of relaxing at night, and raise awareness of the risks of chronic sleep delay. Public health campaigns may also play a key role in addressing this issue more broadly. At the same time, future research should explore these dynamics across different regions and cultural settings, using stronger designs and objective measures, to better understand how digital life and sleep intersect in the everyday lives of young people.

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FINANCING

None.

CONFLICT OF INTEREST

None.

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