



## **The Influence of Fear of Missing Out on the Menstrual Cycles of Adolescent Girls**

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### **ABSTRACT**

*Social media has become the primary platform for adolescents, especially girls, to connect, express themselves, and obtain information. However, easy access often triggers Fear of Missing Out (FoMO), leading to constant use that increases stress and anxiety. Persistent stress interferes with hormones such as luteinizing hormone (LH) and follicle-stimulating hormone (FSH), contributing to irregular menstrual cycles. This cross-sectional analytical study at the Midwifery Department, Sutomo Campus, Poltekkes Kemenkes Surabaya, used simple random sampling among 215 first-year students, with FoMO as the independent variable and menstrual cycle status as the dependent variable. FoMO was measured using the FoMO scale, cyclical patterns via questionnaire, and the data were analyzed using binary logistic regression. FoMO levels were categorized based on means and standard deviations; cycles were classified as normal or abnormal. Results showed that 58% of participants had high FoMO and 65.58% experienced abnormal cycles. Logistic regression revealed that higher FoMO was strongly associated with abnormal menstrual cycles ( $p < 0.001$ ), with elevated FoMO carrying about 6.191 times greater odds of menstrual irregularity compared to lower FoMO. The findings support integrating psychosocial interventions into student health services, including routine FoMO screening and digital wellness workshops, to reduce menstrual disturbances and promote adolescent reproductive health in the digital age.*

**Keywords: Adolescent Girls, Fear of Missing Out, Menstrual Cycle**

## INTRODUCTION

Advances in digital technology and social media have profoundly reshaped the social interaction patterns and lifestyles of adolescents. These platforms have emerged as the central hubs for young people, especially adolescent girls, to connect, share their thoughts, and access vital information (Dam et al., 2023). Yet, this widespread accessibility has also introduced a novel psychological condition termed Fear of Missing Out (FoMO), characterized by apprehension or distress over missing key events or updates within one's social circle. This FoMO trend has drawn worldwide scrutiny owing to its far-reaching consequences on the mental health and overall well-being of youth (Khalaf et al., 2023)

A study by (Malouf, 2022) reveals that need to belong was positively associated with social media use. Such dynamics tie directly into FoMO, as they amplify stress from the compulsion to remain perpetually online. Contributing elements to FoMO encompass unease about exclusion from peers' experiences or events, envy over others' seemingly superior activities, habitual surveillance of others' lives via social channels, and frequent posting of personal updates on one's profiles (Servidio et al., 2024)

FoMO propels teenagers to relentlessly track and participate in virtual social

exchanges, fostering the risk of persistent stress and worry. Contemporary global research highlights FoMO's association with heightened anxiety, tension, and sleep disruptions in this demographic. Beyond mental effects, these states disrupt endocrine equilibrium, with chronic stress interfering with key menstrual regulators like luteinizing hormone (LH) and follicle-stimulating hormone (FSH), thereby inducing irregular cycles among teenage girls (Ediati et al., 2025)

The World Health Organization (WHO) reports that anxiety affects 20% of the world's population, with nearly half of cases involving adolescents. Within Indonesia, adolescent anxiety prevalence spans 65-78%, disproportionately impacting females over males, and often surfacing amid adverse circumstances (WHO, 2025)

Domestic studies in Indonesia identify academic and interpersonal stress as primary triggers for menstrual irregularities in adolescent females. Compounding influences include erratic diets, sleep deficits, and suboptimal nutrition. The present work underscores how psychosocial pressures, such as FoMO-induced worry and irritation, significantly undermine hormonal regulation of menstrual rhythms (Saadah et al., 2024)

Anxiety surrounding initial menstruation (menarche) demands focused consideration among adolescent girls. Nationwide figures reveal that close to 49.1% of teens grapple with puberty- and menstruation-related fears. Such intense distress intensifies both emotional and bodily issues, encompassing painful periods (dysmenorrhea) and cycle inconsistencies, further aggravated by inadequate awareness of pubertal shifts, societal demands, and incessant digital engagement (Istikomah & Atika, 2025).

FoMO's push for nonstop social media involvement among adolescent girls heightens stress and anxiety, with repercussions for reproductive wellness (Gupta & Sharma, 2021).

To date, dedicated inquiries into FoMO's link to menstrual patterns in this group remain scarce domestically and abroad, marking a vital literature shortfall—particularly urgent for preserving the psychological and physiological vitality of future generations (Selfianti et al., 2024).

Worldwide, scholarship on FoMO's toll on teen mental and physical states is advancing steadily. Investigations from South Korea and the US illustrate that curbing FoMO via digital proficiency training and controlled platform habits can alleviate stress, enhance rest, and bolster reproductive outcomes. Tailored for Indonesia's context, these strategies align with rampant social media

adoption among youth and surging psychogenic menstrual complaints (Giancola et al., 2025) (Szawłoga et al., 2024).

This study is novel in positioning Fear of Missing Out (FoMO) as a distinct, technology-mediated stressor and examining its psychobiological impact on menstrual cycle regulation among adolescent girls. Unlike prior research that treats stress as a generalized construct, this investigation integrates behavioral, psychological, and reproductive health dimensions, offering a targeted and contemporary framework for understanding how digital-era stressors influence female physiological outcomes (Lv et al., 2021)

## **METHOD**

This study employed a cross-sectional design using a simple random sampling technique. The population consisted of 466 first-year midwifery students at the Sutomo Campus of Poltekkes Kemenkes Surabaya. The sample included 215 first-year midwifery students from the same institution who met the predefined inclusion criteria. Data were collected using a structured questionnaire to assess menstrual cycle patterns and the Fear of Missing Out (FoMO) Scale. The operational definition of the menstrual cycle was the interval between the first day

of the previous menstruation and the first day of the subsequent menstruation. Menstrual cycles were categorized as normal if they ranged between 21 and 35 days, and as irregular if they fell outside this range. The FoMO instrument, consisting of 10 positively worded items, was adapted from Przybylski and further modified by Daravit (2021). Prior validity testing indicated that all items were valid, as evidenced by correlation coefficients with significance values ( $p < 0.05$ ). Reliability testing of the FoMO variable using Cronbach's Alpha yielded a value of 0.772, exceeding the acceptable threshold of 0.60, thereby indicating good internal consistency. Responses to the FoMO Scale were measured using a four-point Likert scale: Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD). Hypothesis testing was conducted using simple logistic regression analysis to examine the effect of FoMO on menstrual cycle patterns. Statistical significance was

determined based on the p-value: a p-value (sig.) of less than 0.05 indicated a significant effect of FoMO on menstrual cycles, whereas a p-value greater than 0.05 indicated no significant effect. This research received ethical clearance from the Health Research Ethics Committee of Poltekkes Kemenkes Surabaya, documented under reference EA/3796/KEPK-Poltekkes\_Sby/V/2025.

## RESULTS AND DISCUSSIONS

### Result

The respondents in this study consisted of 215 first-year students from the Applied Bachelor's and Diploma 3 Midwifery Programs at Sutomo Campus, Poltekkes Kemenkes Surabaya. Empirical means and standard deviations for Fear of Missing Out (FoMO) data were computed to enable comparative scoring across respondents, thereby facilitating an assessment of individual standings within the cohort.

**Table 1. Mean and Standard Deviation of Fear of Missing Out (FoMO)**

<i>Fear of Missing Out</i>				
N	Xmin	Xmax	Mean	Std.Deviasi
215	1	4	2,65	0,84

*Source: Primary data (2025)*

Table 1 indicates that the FoMO variable registered a mean value of 2.65 alongside a standard deviation of 0.84. The FoMO

variable was stratified into low, moderate, and high classifications based on the normative thresholds detailed in Table 2.

**Table 2. Fear of Missing Out Categorization**

Category	Norm Formula	Result
Low	$X < M - 1SD$	$X < 1,81$
Moderate	$M - 1SD \leq X < M + 1SD$	$1,81 \leq X < 3,49$
High	$M + 1SD \leq X$	$3,49 \leq X$

*Source: Primary data (2025)*

**Table 3. Frequency Distribution of Fear of Missing Out Among Midwifery Students at Sutomo Campus**

<i>Fear of Missing Out</i>	Frequency (n)	Percentage (%)
Low	20	9
Moderate	71	33
High	124	58
Total	215	100

Source: Primary data (2025)

Table 3 demonstrates that the majority of students in the Applied Bachelor's Midwifery and Diploma 3 Midwifery programs at Sutomo Campus experienced

high levels of Fear of Missing Out, with 124 individuals (58%) falling into this category.

**Table 4. Frequency Distribution of Menstrual Cycles Among Female Adolescents in Midwifery Programs at Sutomo Campus**

Menstrual Cycle	Frequency (n)	Percentage (%)
Normal	74	34,42
Abnormal	141	65,58
Total	215	100

Source: Primary data (2025)

Table 4 indicates that the majority of adolescent girls in the Applied Bachelor's Midwifery and Diploma 3 Midwifery

programs at Sutomo Campus—specifically 141 individuals (65.58%)—exhibited abnormal menstrual cycles.

**Table 5. Cross-Tabulation of Fear of Missing Out and Menstrual Cycle Status Among Adolescent Females in Midwifery Programs at Sutomo Campus**

<i>Fear of Missing Out</i>	Menstrual Cycle				Total	
	Normal		Abnormal		F	%
	F	%	F	%		
Low	18	90	2	10	20	100
Moderate	29	40,8	42	59,2	71	100
High	27	21,8	97	78,2	124	100
Total	74		141		215	

Source: Primary data (2025)

Table 5 highlights a pattern where disrupted menstrual cycles were most frequent among those with high FoMO, while

regular cycles appeared more often in the moderate FoMO category.

**Table 6. Logistic Regression Summary**

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Step 1 <sup>a</sup>	FoMO	1.823	.291	39.329	1	.000	6.191	3.502	10.945
	Constant	-3.542	.670	27.921	1	.000	.029		

Source: Primary data (2025)

The logistic regression results indicated that FoMO was significantly associated

with the occurrence of abnormal menstrual cycles ( $p < 0.001$ ). The odds ratio (Exp(B))

of 6.191 (95% CI: 3.502–10.945) suggests that students with higher FoMO had approximately 6.191 times greater odds of

## Discussion

The study findings reveal that a majority of students with irregular menstrual cycles exhibited elevated levels of Fear of Missing Out (FoMO), with bivariate analysis confirming a significant association between FoMO and menstrual cycle disruptions among adolescent girls in the Applied Bachelor's Midwifery and Diploma 3 Midwifery programs at Sutomo Campus. The average FoMO score was 2.65 (SD = 0.84), with 58% of participants in the high FoMO category and 65.58% displaying abnormal menstrual cycles—a critical reproductive health issue. Notably, irregular cycles prevailed among high FoMO individuals (78.2%). Binary logistic regression analysis showed that FoMO was strongly associated with the occurrence of abnormal menstrual cycles ( $p < 0.001$ ). The odds ratio (Exp(B)) of 6.191 (95% CI: 3.502–10.945) indicates that students with higher FoMO had approximately 6.191 times greater odds of experiencing abnormal menstrual cycles compared to those with lower FoMO, after controlling for other variables. This suggests that FoMO substantially increases the risk of menstrual irregularities, reinforcing its role

experiencing abnormal cycles compared to those with lower FoMO.

as an important psychosocial determinant of reproductive health in digitally immersed adolescent populations.

Contemporary literature links FoMO among adolescents and university students to social anxiety, excessive social media engagement, emotional distress, and compromised mental health (Giancola et al., 2025). Scientifically, anxiety triggered by the desire to stay connected on social media activates chronic stress that disrupts the balance of LH and FSH hormones through the HPA axis. The contribution of FoMO to variations in menstrual disorders confirming that digital psychosocial factors are important determinants of reproductive health in the modern era (Nillni et al., 2021). Psychosocial stressors like FoMO-induced tension disrupt hormonal regulation (Mayasari & Fauziah, 2022) and menstrual rhythms via chronic stress on the hypothalamic-pituitary-adrenal (HPA) axis, a pathway consistent with studies on technology-related stress and digital anxiety (Marsh et al., 2022). These outcomes reinforce FoMO's pivotal role in precipitating cycle irregularities, extending beyond mental health to physical

reproductive impairments (Einstein et al., 2023).

While FoMO shows a strong association with abnormal cycles, other unexamined factors, such as nutritional deficiencies, physical activity levels, sleep patterns, polycystic ovary syndrome (PCOS), thyroid disorders, or lifestyle stressors, likely contribute to the remaining variability in menstrual outcomes and should be explored in multivariate logistic models in future research.

Self-report bias may inflate FoMO and cycle irregularity estimates due to recall inaccuracies or social desirability. The cross-sectional design precludes causality inferences, capturing associations at a single point rather than tracking changes over time.

As a vulnerable cohort, adolescent girls with pronounced FoMO face heightened risks to physical well-being, academic performance, and midwifery training. Student health services should integrate psychosocial support, including psychological counseling, mindfulness-based stress management, and social media moderation strategies (Ulusen, 2023). Addressing reproductive health demands a holistic framework emphasizing digital anxiety mitigation through targeted interventions like counseling and media guidelines to restore

cycle regularity and sustain academic productivity.

Adolescent and student health services require comprehensive interventions incorporating psychological counseling, stress management techniques, and guidance on responsible social media habits to counteract enduring health threats, including menstrual irregularities and compromised reproductive well-being. Such initiatives aim to lower FoMO intensity, safeguard psychological health, and promote peak reproductive outcomes for teenage girls amid the swift evolution of digital technologies (Mawaddah & Indriani, 2025). Integrating these programs into school clinics and community outreach enables educators and clinicians to tackle the connections between excessive digital engagement, emotional strain, and bodily effects, building durability in youth facing today's tech-driven world.

## CONCLUSION

This study shows that the psychological phenomenon of Fear of Missing Out (FoMO) has a significant impact on the physiological health of adolescent girls, particularly on their menstrual cycles. The majority of study subjects experienced high levels of FoMO (58%), which is directly proportional to the high rate of irregular menstrual cycles, reaching 65.58%.

Therefore, integrated interventions that include psychological counseling, stress management, and education on healthy social media use are needed in adolescent and student health services to mitigate long-term health risks such as problems with the menstrual cycle and overall reproductive health. These efforts are expected to reduce FoMO levels, maintain mental health, and support optimal reproductive health for adolescent girls amidst the rapid development of digital technology.

## BIBLIOGRAPHY

- Dam, V. A. T., Dao, N. G., Nguyen, D. C., Vu, T. M. T., Boyer, L., Auquier, P., Fond, G., Ho, R. C. M., Ho, C. S. H., & Zhang, M. W. B. (2023). Quality of life and mental health of adolescents: Relationships with social media addiction, Fear of Missing out, and stress associated with neglect and negative reactions by online peers. *PLoS ONE*, 18(6 June). <https://doi.org/10.1371/journal.pone.0286766>
- Daravit, K. S. (2021). Hubungan Antara Kepuasan Hidup Dengan Fear of Missing Out ( Fomo ) Pada Mahasiswa Fakultas Psikologi Uin Malang Pengguna Media Sosial Hubungan Antara Kepuasan Hidup Dengan Fear of Missing Out ( Fomo ) Pada Mahasiswa Fakultas Psikologi [Universitas Islam Negeri Maulana Malik Ibrahim] <http://etheses.uinmalang.ac.id/id/eprint/27776>
- Ediati, A., Sakti Kaloeti, D. V., Martono, K. T., & Ardhiani, L. N. (2025). Resilience and symptoms of depression and anxiety in adolescents: the mediating role of fear of missing out. *Current Issues in Personality Psychology*, 13(1), 42–49. <https://doi.org/10.5114/cipp/174520>
- Einstein, D. A., Dabb, C., & Fraser, M. (2023). FoMO, but not self-compassion, moderates the link between social media use and anxiety in adolescence. *Australian Journal of Psychology*, 75(1). <https://doi.org/10.1080/00049530.2023.2217961>
- Giancola, M., Mari, E., Palmiero, M., Burrari, J., Quagliari, A., Lausi, G., Cordellieri, P., Frascchetti, A., Giannini, A. M., & Piccardi, L. (2025). Adolescence and online vulnerability: The role of fear of missing out (FoMO): A cross-sectional study during the third wave of the COVID-19 pandemic. *PLOS ONE*, 20(9 September). <https://doi.org/10.1371/journal.pone.0332147>
- Gupta, M., & Sharma, A. (2021). Fear of missing out: A brief overview of origin, theoretical underpinnings and relationship with mental health. *World Journal of Clinical Cases*, 9(19), 4881–4889.

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- <https://doi.org/10.12998/wjcc.v9.i19.4881>
- Istikomah, L., & Atika. (2025). Relationship Of Family Support And Menstrual Knowledge Toward Menarche Readiness. *Indonesian Midwifery and Health Sciences Journal*, 9(4), 379–390. <https://doi.org/10.20473/imhsj.v9i4.2025.379-390>
- Khalaf, A. M., Alubied, A. A., Khalaf, A. M., & Rifaey, A. A. (2023). The Impact of Social Media on the Mental Health of Adolescents and Young Adults: A Systematic Review. *Cureus*. <https://doi.org/10.7759/cureus.42990>
- Lv, C., Turel, O., & He, Q. (2021). The onset of menstruation and social networking site use in adolescent girls: The mediating role of body mass index. *International Journal of Environmental Research and Public Health*, 18(19). <https://doi.org/10.3390/ijerph18199942>
- Malouf, K. (2022). Does Meeting Belongingness Needs Through Social Media Impact One's Fear of Missing Out and Self-Esteem? *Psi Beta Research Journal*, 2(1), 23–28. <https://doi.org/10.54581/XODO5493>
- Marsh, E., Vallejos, E. P., & Spence, A. (2022). The digital workplace and its dark side: An integrative review. In *Computers in Human Behavior* (Vol. 128). Elsevier Ltd. <https://doi.org/10.1016/j.chb.2021.107118>
- Mawaddah, S., & Indriani, N. (2025). The Effect of Giving Positive Affirmations on Stress Levels in Adolescents. *Journal Midwifery Jurusan Kebidanan Politeknik Kesehatan Gorontalo*, 11(2), 308. <https://doi.org/10.52365/jm.v11i2.1520>
- Mayasari, A. T., & Fauziah, N. A. (2022). The Relationship of Stress Levels on Menstrual Cycle Disorders in Adolescent Girls. *Jurnal Aisyah : Jurnal Ilmu Kesehatan*, 7(S1). <https://doi.org/10.30604/jika.v7is1.1193>
- Nillni, Y. I., Rasmusson, A. M., Paul, E. L., & Pineles, S. L. (2021). The Impact of the Menstrual Cycle and Underlying Hormones in Anxiety and PTSD: What Do We Know and Where Do We Go From Here? In *Current Psychiatry Reports* (Vol. 23, Number 2). Springer. <https://doi.org/10.1007/s11920-020-01221-9>
- Saadah, N., Azizah, H., Sumaningsih, R., & Wahito Nugroho, H. S. (2024). The Effect of Stress on the Occurance of Dysmenorrhea. *International Journal of Advanced Health Science and Technology*, 4(3), 166–171. <https://doi.org/10.35882/ijahst.v4i3.351>
- Selfianti, A., Saqinah Galugu, N., Irham Zainuri, M., Pribadi, I., Fahmi, A., Muhammadiyah Palopo, U., & Selatan, S. (2024). Remaja Fear Of Missing Out : Bagaimana Pengaruh Intensitas Penggunaan Media Sosial Instagram dan Relatedness?
- Servidio, R., Soraci, P., Griffiths, M. D., Boca, S., & Demetrovics, Z. (2024). Fear of missing out and problematic social media use: A serial mediation model of social comparison and self-esteem. *Addictive Behaviors Reports*, 19. <https://doi.org/10.1016/j.abrep.2024.100536>
- Szawłoga, T., Soroka, K., & Śliwińska, M. (2024). Relationship between fear of missing-out and adolescents mental health. *Environmental Medicine*, 27(1), 18–22. <https://doi.org/10.26444/ms/187716>
- Uluşen, M., et al. (2023). The effect of midwifery students' changing life conditions and e-learning experiences on anxiety and hopelessness during COVID-19. *European Journal of Midwifery*, 7, 44. <https://doi.org/10.18332/ejm/171614>

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World Health Organization. (2023, September 29). Anxiety disorders [Fact sheet].

<https://www.who.int/news-room/fact-sheets/detail/anxiety-disorders>