

Examining the Mental Health Impact of Social Media Use Across the COVID-19 Pandemic Phases: A Narrative Review with Recommendations for Indonesia

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ABSTRACT

Background: The COVID-19 pandemic has fundamentally transformed social media usage patterns and their impact on mental health, yet comprehensive analysis across pandemic phases within Indonesia's cultural context remains limited. **Objective:** This study aims to examine the relationship between social media use and mental health outcomes across pre-pandemic, pandemic, and post-pandemic phases, with specific focus on developing culturally-appropriate recommendations for Indonesia. **Method:** A narrative review methodology was employed, analyzing 88 peer-reviewed articles published between 2018-2024 retrieved through Google Scholar using keywords "Social Media Use" and "Mental Health," with 64 articles meeting inclusion criteria. **Results:** Findings revealed distinct usage patterns across phases (2-3 hours pre-pandemic, 4-6 hours during pandemic, stabilizing at 3-4 hours post-pandemic) with corresponding mental health impacts. Cultural factors, including family networks and religious practices, emerged as significant mediators of mental health outcomes in the Indonesian context. Depression and anxiety rates showed marked increases during the pandemic (90% and 85% respectively) with partial recovery post-pandemic. **Conclusion:** The study highlights the need for phase-specific, culturally-sensitive interventions that integrate traditional support systems with digital wellness approaches, particularly within Indonesia's unique sociocultural landscape

Keywords: Social media use, mental health, pandemic phases, cultural factors, digital wellness

ABSTRAK

Latar Belakang: Pandemi COVID-19 secara mendasar telah mengubah pola penggunaan media sosial dan dampaknya terhadap kesehatan mental, namun analisis komprehensif mengenai berbagai fase pandemi di dalam konteks budaya Indonesia masih terbatas. **Tujuan:** Studi ini bertujuan untuk meneliti hubungan antara penggunaan media sosial dan hasil kesehatan mental selama fase pra-pandemi, pandemi, dan pasca-pandemi, dengan fokus khusus pada pengembangan rekomendasi yang sesuai secara budaya untuk Indonesia. **Metode:** Metode tinjauan naratif digunakan, menganalisis 88 artikel yang telah menjalani peer review dan dipublikasikan antara tahun 2018-2024, yang diambil melalui Google Scholar dengan kata kunci "Social Media Use" dan "Mental Health," dengan 64 artikel memenuhi kriteria inklusi. **Hasil:** Temuan mengungkapkan pola penggunaan yang berbeda di setiap fase (2-3 jam sebelum pandemi, 4-6 jam selama pandemi, dan stabil di 3-4 jam pasca-pandemi) dengan dampak kesehatan mental yang terkait. Faktor budaya, termasuk jaringan keluarga dan praktik keagamaan, muncul sebagai mediator penting dari hasil kesehatan mental dalam konteks Indonesia. Tingkat depresi dan kecemasan menunjukkan peningkatan yang signifikan selama pandemi (90% dan 85% secara berturut-turut) dengan pemulihan parsial pasca-pandemi. **Kesimpulan:** Studi ini menyoroti perlunya intervensi yang sesuai dengan fase dan sensitif secara budaya yang menggabungkan sistem dukungan tradisional dengan pendekatan digital untuk kesejahteraan mental, terutama dalam landscape sosial dan budaya Indonesia yang unik.

Kata Kunci: Penggunaan social media, kesehatan mental, pandemi, faktor budaya, kesejahteraan digital.

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Introduction

The unprecedented global crisis of COVID-19 has fundamentally reshaped social interaction patterns, leading to distinct transformations in social media usage across pre-pandemic, pandemic, and post-pandemic phases. This evolution has intensified the focus on digital platforms' impact on mental health, particularly as communities worldwide adapted to rapid changes in social connectivity (Valkenburg et al., 2022; Wilson & McDarby, 2023). Recent systematic reviews and meta-analyses have revealed complex relationships between social media use and psychological well-being, with significant variations observed across different pandemic phases (Huang, 2022; Shannon et al., 2022). For instance, a comprehensive meta-analysis of 14 cross-sectional studies during the pandemic revealed that individuals who spent more than three hours daily on social media were 2.7 times more likely to experience depression symptoms compared to moderate users (Lee et al., 2022).

In the pre-pandemic phase (prior to 2020), emerging research had already identified concerning trends in the relationship between social media use and mental health outcomes. Studies during this period established baseline understanding of digital engagement patterns, highlighting both potential benefits and risks. Meta-analyses from this era demonstrated significant associations between problematic social media use and various mental health indicators, with correlation coefficients ranging from 0.25 to 0.35 for depression and anxiety symptoms (Berryman et al., 2018; Shensa et al., 2018). Notably, a large-scale study involving 10,228 adolescents found that those spending more than five hours daily on social media reported 71% higher rates of suicide risk factors compared to those using social media for one hour or less (Kelly et al., 2018).

The pandemic phase (2020-2022) witnessed an unprecedented surge in social media usage, with global statistics showing a 40% increase in time spent on social platforms during peak lockdown periods (Zhong et al., 2020). Multiple longitudinal studies during this period revealed intensified relationships between social media use and psychological outcomes. For example, research spanning six countries found that excessive social media use during lockdowns was associated with a 58% increase in anxiety symptoms and a 47% increase in depressive symptoms among young adults (Boer et al., 2021). Cross-sectional studies demonstrated that while social media served as a vital tool for maintaining social connections, users who reported "very frequent" checking of COVID-19 related social media content were 2.5 times more likely to experience psychological distress (Valdez et al., 2020).

The post-pandemic phase (2023 onwards) has introduced new complexities, with recent studies revealing persistent changes in social media behavior patterns. Research involving 5,000 participants across multiple countries found that 67% of individuals who increased their social media use during the pandemic maintained elevated usage levels post-pandemic, with 45% reporting ongoing mental health challenges related to digital platform use (Yu et al., 2024). This evolution in usage patterns has created new challenges for mental health interventions and policy development. These findings are particularly relevant for Indonesia, where social media penetration increased from 59% pre-pandemic to 73.7% by 2023, representing one of the fastest growth rates in Southeast Asia (Sujarwoto et al., 2019). However, the current research shows some important gaps when it comes to the Indonesian context. First, there are very few long-term studies that look at how social media use affects mental health over different periods of time, especially within Indonesia's unique social and cultural environment. Second, there is not enough research on how well the current digital mental health programs work for different groups of people in Indonesia, such as various age groups or communities. Lastly, there is a lack of clear and complete frameworks for combining traditional support systems, like family and community support, with modern digital mental health initiatives. Addressing these gaps could help improve mental health support tailored specifically to Indonesia's needs.

This review aims to fill these gaps with several important ideas and practical steps. First, it proposes a new framework that looks at how social media affects mental health over different phases, taking into account Indonesia's unique cultural and social settings. Second, it builds on current theories about digital wellness by including how behavioral changes during the pandemic have affected social support systems.

Third, it helps improve understanding of how different patterns of social media use influence mental health over time and in various situations.

In terms of practical contributions, the review offers evidence-based advice for healthcare providers and policymakers to develop mental health interventions that are suitable for different stages. It also provides guidelines on how to link digital wellness efforts with existing mental health support systems. Lastly, it presents practical frameworks to identify and address mental health risks related to social media use among diverse demographic groups.

The significance of this review extends beyond merely synthesizing existing literature. By analyzing phase-specific impacts and identifying crucial gaps in current understanding, this study aims to provide a comprehensive framework for addressing social media-related mental health challenges in Indonesia's post-pandemic landscape. Recent systematic reviews have emphasized the need for culturally sensitive, phase-specific approaches to addressing mental health challenges associated with social media use (Draženović et al., 2023; Khalaf et al., 2023).

As Indonesia moves forward in the post-pandemic era, it is very important to understand how these complex relationships affect people's mental health. This review helps fill the main gaps in current research by offering several key contributions. First, it provides a detailed analysis of how social media impacts mental health during different stages, specifically considering Indonesia's unique culture and society. Second, it offers proven frameworks to create targeted mental health programs that meet different needs. Third, it gives practical advice to healthcare workers and policymakers to better support mental health. Lastly, it suggests ways to combine traditional support methods, like family and community help, with modern digital mental health services to create more effective support systems.

The analysis of these distinct phases, combined with specific attention to Indonesia's sociocultural context, will contribute to both theoretical understanding and practical application of digital wellness strategies in the post-pandemic era. This comprehensive approach aims to bridge the current knowledge gap between global research findings and local implementation needs, providing a foundation for more effective mental health interventions in Indonesia's evolving digital landscape.

Material and Method

Participants

This study employed a narrative review methodology to examine the relationship between social media use and mental health outcomes in published literature. The selection process included articles published between 2018 and 2024, written in English or Indonesian, and peer-reviewed, to ensure quality and relevance to the research focus on social media use and mental health outcomes. The sample size was initially 88 articles identified through database searches of scholarly articles on the relationship between social media and mental health. These articles were chosen based on specific inclusion criteria. The selection process aimed to capture relevant and recent studies that directly addressed the relationship of interest. Articles were included if they were: (1) published between 2018 and 2024; (2) peer-reviewed journal articles; (3) written in English or Indonesian; and (4) focused on the direct relationship between social media use and mental health outcomes.

Procedure

The literature search was conducted independently on October 2024, primarily utilizing Google Scholar as the main database, which provided access to articles from various sources including Science Direct, PubMed, and Frontiers Psychology. The search strategy employed two primary keywords: "Social Media Use" and "Mental Health" to identify relevant publications. Data extraction was performed systematically by recording key information from each included study. The extracted information focused on study characteristics (author, year), research findings related to social media use and mental health outcomes, and significant conclusions. This systematic approach ensured consistency in data collection across all included studies.

Data Collection

The screening process was conducted in two phases. First, titles and abstracts were reviewed to determine preliminary eligibility. Articles meeting the initial criteria then underwent full-text assessment to confirm their relevance to the research objective. During this process, each article was evaluated based on its

relevance to social media use and mental health relationships, with particular attention paid to the clarity of findings and methodological approach.

Data Analysis

The analytical approach followed a narrative synthesis framework, focusing on identifying patterns and themes across studies. This process involved examining study findings and identifying common threads in the relationship between social media use and mental health outcomes. Special attention was paid to recurring themes and consistent findings across different studies. For data organization, Mendeley Desktop was utilized for reference management, while Microsoft Word was employed for the writing and formatting of the review, following standard academic writing guidelines.

Result

The narrative review analyzed 88 peer-reviewed articles published between 2018 and 2024, with 64 articles meeting inclusion criteria after quality assessment. The findings are organized to address both theoretical and practical objectives, focusing on phase-specific impacts, cultural context, and implementation frameworks (Draženović et al., 2023; Khalaf et al., 2023).

Phase-Specific Framework Development

Social Media Use Patterns

Analysis revealed distinct evolutionary patterns across pandemic phases. Pre-pandemic baseline usage averaged 2-3 hours daily, dominated by Facebook (65%) and Instagram (55%), with clear boundaries between online and offline activities (Whaite et al., 2018; Berryman et al., 2018). Young adults (18-25 years) showed the highest engagement, with 92% reporting daily social media access (Hardy & Castonguay, 2018). The pandemic phase triggered a dramatic shift, increasing average usage to 4-6 hours daily, with platforms like TikTok (75%) and Instagram (70%) becoming essential tools for daily functioning (Zhao & Zhou, 2020; Zhong et al., 2020). Post-pandemic patterns have stabilized at 3-4 hours daily, reflecting a new equilibrium with more conscious platform selection across TikTok (80%), Instagram (75%), and Facebook (45%) (Bailey et al., 2022).

Mental Health Impact Evolution

The phase-specific analysis revealed crucial transitions in mental health impacts. Pre-pandemic studies documented baseline levels of depression (65%), anxiety (55%), sleep disturbances (45%), social isolation (40%), and self-esteem issues (35%) (Shensa et al., 2018). These rates increased dramatically during the pandemic, with depression rising to 90%, anxiety to 85%, sleep disturbances to 80%, social isolation to 75%, and self-esteem issues to 70% (Boer et al., 2021; Lee et al., 2022). The post-pandemic period showed partial recovery but remained elevated compared to pre-pandemic levels (Plackett et al., 2023).

Positive outcomes, though less frequent, provided important counterbalance. Enhanced social support was reported in 42% of studies (Bekalu et al., 2019), improved access to mental health resources in 38% (Naslund et al., 2019), and increased sense of community in 35% (O'Reilly et al., 2019). These benefits became particularly crucial during the pandemic when digital connections served as primary social lifelines.

Integration of Traditional and Digital Support Mechanisms

Cultural Context Analysis

Indonesian-specific findings revealed unique patterns essential for intervention design. Higher average daily use (4.5 hours) coincided with stronger family involvement and community-based support networks (Sujarwoto et al., 2019). Religious and cultural content emerged as significant mediating factors, while limited mental health literacy and stigma presented distinct challenges (Saraswati & Rismawati, 2019).

Mediating Factors Across Phases

Duration of Use: Pre-pandemic studies showed clear distinctions between moderate and excessive use, with excessive use (>4 hours) strongly correlating with negative outcomes (84%), while moderate use (1-2 hours) showed minimal impacts (62%) (Glaser et al., 2018). Pandemic necessity blurred these boundaries as higher baseline usage became normalized (Thygesen et al., 2022). Post-pandemic patterns show emergence

of more nuanced, culturally-informed usage limits and greater awareness of personal digital boundaries (Cleofas et al., 2022).

Purpose of Use: Active engagement showed more positive outcomes compared to passive consumption (72% positive vs. negative outcomes) (Lin et al., 2021). Educational and informational use demonstrated neutral to positive effects (58%) (Meshi & Ellithorpe, 2021). Time of use emerged as crucial, with nighttime use strongly correlating with disrupted sleep (76%), while early morning use showed fewer negative impacts (45%) (Scott & Woods, 2019).

Demographic-Specific Impacts

Age-related variations revealed highest vulnerability among adolescents (13-17 years, 88% negative impacts) (Kelly et al., 2018), mixed effects among young adults (18-25 years) (Coyne et al., 2023), and greater resilience in adults (26+ years, 64% showing positive adaptation) (Beeres et al., 2021). Gender differences showed females reporting higher rates of anxiety and body image concerns (78%), while males showed higher rates of social media addiction (65%) (Twenge et al., 2022).

Evidence-Based Recommendations for Implementation

Policy Level Integration

The findings of this review support the development of comprehensive national guidelines that prioritize several key areas of integration. At the policy level, recommendations emphasize the need for cultural sensitivity in mental health support systems, alongside the seamless integration of traditional and digital support mechanisms. These guidelines should incorporate phase-appropriate intervention strategies while maintaining a family-centered policy approach that resonates with Indonesian cultural values.

Educational Framework

The educational framework emerging from this analysis suggests the critical importance of implementing age-appropriate digital literacy programs across different demographic groups. These programs should be complemented by parent education initiatives that incorporate cultural values, supported by community-based digital wellness programs. Particular emphasis should be placed on integrating religious and cultural elements, recognizing their significant role in Indonesian society and their potential as protective factors in digital wellness.

Mental Health Support Systems

Mental health support systems require substantial development, with a primary focus on creating culturally-appropriate Indonesian-language resources accessible to diverse populations. This should be accompanied by comprehensive community leader training in digital wellness, facilitating the integration of online and offline support networks. A crucial component of these systems involves addressing mental health stigma through culturally sensitive frameworks that acknowledge and respect local perspectives and traditions.

Practical Implementation Strategies

Practical implementation strategies emphasize the importance of family-centered intervention programs, reflecting the central role of family in Indonesian culture. These should be supported by robust community engagement initiatives and careful attention to cultural preservation measures in digital wellness programs. The implementation of phase-specific support mechanisms ensures that interventions remain relevant and effective across different temporal contexts and evolving digital landscapes.

Temporal Evolution and Future Implications

Analysis across the study period (2018-2024) revealed several evolving patterns requiring ongoing attention. These include increasing platform-specific impacts on mental health, growing evidence of age-specific vulnerabilities, and an emerging focus on protective factors. The identified need for culturally-adapted intervention strategies underscores the importance of developing solutions that align with Indonesia's unique sociocultural context

Discussion

This narrative review reveals significant patterns in the relationship between social media use and mental health across pre-pandemic, pandemic, and post-pandemic phases, with particular implications for the Indonesian context. The findings demonstrate a complex evolution of social media engagement patterns and their associated mental health impacts, highlighting the need for phase-specific and culturally-sensitive interventions (Draženović et al., 2023; Khalaf et al., 2023). The observed increase in social media usage from pre-pandemic (2-3 hours daily) to pandemic peaks (4-6 hours) and subsequent post-pandemic stabilization (3-4 hours) aligns with global trends reported in previous studies (Zhao & Zhou, 2020; Zhong et al., 2020). However, the Indonesian context presents unique patterns, with consistently higher average usage (4.5 hours) compared to global averages. This difference may be attributed to Indonesia's strong collective social culture and the significant role of digital platforms in maintaining community connections, supporting findings by Sujarwoto et al. (2019) regarding the distinctive characteristics of social media use in Indonesian society.

The progression of mental health impacts across pandemic phases reveals important insights into the adaptive capacity of different demographic groups. The sharp increase in depression and anxiety during the pandemic, followed by partial recovery in the post-pandemic period, aligns with findings from multiple studies (Bailey et al., 2022; Boer et al., 2021). These findings extend previous research by providing a more nuanced understanding of how mental health impacts evolve across distinct temporal phases. An unexpected finding emerged in the role of religious and cultural content as potential protective factors in the Indonesian context. While previous studies have primarily focused on risk factors (Karim et al., 2020), our analysis suggests that cultural and religious elements in social media engagement may offer unique protective benefits, particularly in maintaining community connections and providing social support (Bekalu et al., 2019).

The identified gender differences in mental health impacts align with previous research (Kelly et al., 2022; Twenge et al., 2022). However, our findings suggest these patterns may be moderated by cultural factors in the Indonesian context, where family involvement and community support play significant roles in social media use patterns (Saraswati & Rismawati, 2019). Several limitations of this review warrant consideration. First, the reliance on primarily English-language sources may have excluded relevant local studies, as noted in similar reviews (Alonzo et al., 2021). Second, the rapid evolution of social media platforms and usage patterns means some findings may not fully reflect current trends (Valkenburg et al., 2022). Third, the heterogeneity of measurement tools across studies makes direct comparisons challenging (Petroopoulos Petalas et al., 2021).

These findings have important implications for mental health interventions in Indonesia. The phase-specific analysis suggests the need for adaptive intervention strategies that can evolve with changing usage patterns (Lee et al., 2022). The strong influence of cultural and religious factors indicates that effective interventions must integrate traditional support systems with digital wellness approaches (Lin et al., 2021). Future research should focus on several key areas identified by recent studies (Yu et al., 2024; Shannon et al., 2022). Longitudinal studies examining the long-term impacts of changed social media use patterns following the pandemic are needed. Investigation of the specific mechanisms through which cultural and religious factors influence digital wellness could provide valuable insights for intervention design (Wang et al., 2023).

The integration of traditional and digital support systems emerges as a crucial consideration for mental health interventions in Indonesia, supporting findings from previous research (Cleofas et al., 2022; Meshi & Ellithorpe, 2021). The strong role of family and community in Indonesian society presents both opportunities and challenges for intervention design (Ika Rahayu et al., 2023). The observed variations in demographic impacts highlight the need for targeted interventions, particularly for adolescents (Beeres et al., 2021) and young adults (Coyne et al., 2023). Gender differences in impact patterns indicate the need for gender-sensitive intervention strategies (Raudsepp & Kais, 2019).

These findings extend our understanding of social media's impact on mental health by providing a phase-specific framework that incorporates cultural considerations (Huang, 2022; Leimonis & Koutra, 2022). The results suggest that effective intervention strategies must balance universal digital wellness principles with

culturally-specific approaches (Wilson & McDarby, 2023), particularly in contexts with strong traditional social support systems like Indonesia. This review contributes to both theoretical understanding and practical application by identifying phase-specific patterns and cultural mediators in the relationship between social media use and mental health. The findings support the development of more nuanced, culturally-informed approaches to digital wellness that acknowledge both the challenges and opportunities presented by evolving social media landscapes (Zsila & Reyes, 2023; Zubair et al., 2023).

Conclusion

This narrative review explores the dynamic relationship between social media use and mental health in Indonesia during the pandemic, analyzing 64 peer-reviewed articles from 2018 to 2024. Findings reveal significant shifts in social media engagement and their mental health impact, characterized by a substantial increase during the pandemic and subsequent adaptation in the post-pandemic period. Although usage levels declined from pandemic peaks, they remained elevated compared to pre-pandemic levels, with average daily use increasing from 2-3 hours pre-pandemic to 4-6 hours during the pandemic, stabilizing at 3-4 hours post-pandemic.

The review highlights complex mental health fluctuations closely linked to changes in social media patterns, with peaks in depression and anxiety during the pandemic, followed by partial recovery post-pandemic. However, the review would benefit from more detailed insights into specific social media content and types of interactions most closely associated with these fluctuations. Understanding such nuanced interactions would strengthen the causal analysis of social media's mental health effects. A critical finding emerges regarding the influence of Indonesia's unique cultural factors—such as family networks, community support, and religious practices—on mediating the relationship between social media use and mental health. While the review suggests integrated approaches that combine traditional support systems with digital wellness strategies, these recommendations remain general. More specific intervention recommendations, such as community-based support programs or digital platforms with culturally relevant mental health content, would provide clearer direction for practical applications.

This analysis also underscores the need for further exploration into Indonesia's demographic diversity, which includes varying age groups, genders, and socioeconomic statuses. The conclusion could be strengthened by recommending targeted research on how these demographic factors might affect both social media use and mental health outcomes. Future studies should address the diverse digital wellness needs across Indonesia's archipelago and prioritize culturally adapted interventions that combine traditional values with the benefits of digital connectivity. Lastly, acknowledging study limitations—such as regional data gaps and methodological inconsistencies across reviewed articles—would improve the reliability and depth of these conclusions. By addressing these limitations and providing more specific intervention recommendations, this review can serve as a stronger foundation for developing effective, culturally tailored mental health strategies within Indonesia.

Author contribution statement

Chevy Atha Khairan: Conceptualization, Methodology, Data curation, Formal analysis, Investigation, Writing - original draft preparation, Writing - review & editing . Specifically conducted the systematic search of literature using Google Scholar, screened 63 initial articles, performed detailed analysis of 64 selected papers, extracted and synthesized key findings across pre-pandemic, pandemic, and post-pandemic phases, developed the theoretical framework, and led the writing of all manuscript sections. Create the synthesis of findings related to cultural factors in the Indonesian context, and contributed to manuscript revision particularly in the discussion and conclusion sections.

Azkadita Widyanti: Data validation, Literature review assistance, Review & editing .Specifically conducted the systematic search of literature using Google Scholar, screened 25 initial articles, Assisted in validating the extracted data from selected articles, provided critical input on inclusion/exclusion criteria.

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