# Social Media and Mental Health: Moral Panic or Modern Epidemic?

**Abstract:**

The rapid integration of social media into daily life has raised significant concerns regarding its effects on mental health, particularly among adolescents and young adults. This study seeks to address the empirical gap in establishing a causal relationship between social media usage and negative mental health outcomes, such as depression, anxiety, and self-harm. While previous research highlights correlations and potential causative effects, complexities like self-diagnosis, reverse causality, and methodological variability pose challenges to definitive conclusions.

By synthesizing findings from existing longitudinal and experimental studies, this research will attempt to clarify the existing body of work instead of adding to the noise. Key focus areas include the influence of problematic social media behaviors, such as addiction-like use, on mental health and the role of online environments in fostering social comparison, cybervictimization, and normalization of mental health conditions. The study further investigates protective factors, including social support and community building, as potential counterbalances to these risks.

The methodology involves a systematic review of studies targeting adolescents aged 12–18, with data extracted from peer-reviewed sources to ensure robustness. Statistical analyses will evaluate pooled effect sizes and explore heterogeneity across demographic and platform-specific factors. Findings are expected to clarify the causal dynamics of social media's impact on mental health, offering critical insights for interventions, policy development, and future research directions aimed at enhancing adolescent well-being.

This research contributes to the ongoing discourse on balancing the risks and benefits of social media in the context of public health, underscoring the importance of nuanced, evidence-based approaches to mitigate harm while leveraging digital platforms for positive mental health outcomes.

**Introduction:**

Social media has become increasingly ubiquitous in today's world, especially for adolescents and young adults. Simultaneously, mental health issues are at all time highs, with teen mental health issues in particular being attributed to increased use of social media.

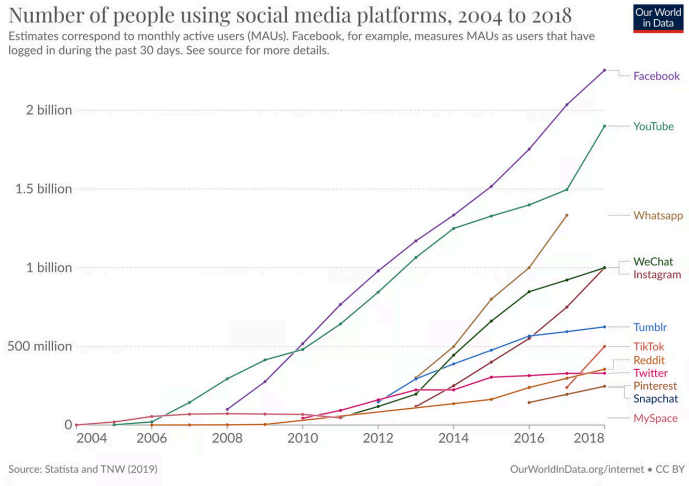



Figure 1: Number of people using social media. Graph depicts social media users by platform over time.

Braghieri Levy & Makarin (2022) quantified that the introduction of Facebook to colleges increased the proportion of students who would be classified as depressed by 2%. Furthermore, correlation exists between social media usage time and lower mental health.

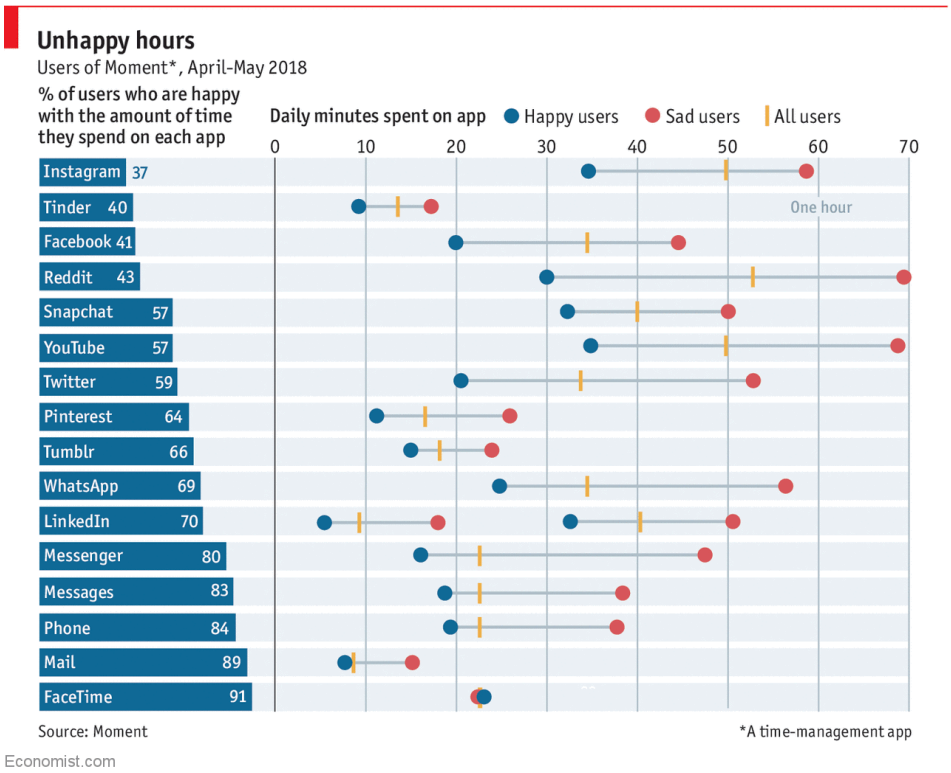



Figure 2: % of users who are happy/unhappy with their social media usage. Chart depicts daily minutes spent on each app, separated by happy or unhappy users.

However, empirical and quantifiable analysis of social media's impact on mental health at a causal level is somewhat limited. Studies are frequently simple longitudinal analyses of small cohorts. Moreover, what casual empirics exist tend to use self-reported or subjective metrics as a dependent variable. This greatly complicates assessment because of the uncontrolled confounding effect of increased self-diagnosis as a result of social media use. Hasan, Foster, & Cho (2023) found that viewing normalizing content related to anxiety on social media can increase self-diagnoses by ~10%, with an increased effect of the post was considered likable or relatable. Other complications include a reverse causality effect - where negative mental health contributes to higher use of social media. Thus, a study which conducts empirical analysis of the expansion of social media on objective and quantifiable mental health measures should be conducted to resolve the research gap in proving a connection, or lack thereof, between negative mental health effects and social media usage. This research will work towards answering the question of the causal link between social media access and mental health issues,

especially among adolescents, and sorting through the maze of empirics that currently characterize this research space.

**Definitions:**

To briefly define key terms: Per Naslund et. al (2020), "social media refers broadly to web and mobile platforms that allow individuals to connect with others within a virtual network (such as Facebook, Twitter, Instagram, Snapchat, or LinkedIn), where they can share, co-create, or exchange various forms of digital content, including information, messages, photos, or videos." Mental health issues is an incredibly broad term, covering everything from diagnosable disorders like schizophrenia and post-traumatic stress disorder to common terms like depression and anxiety. Because of the self-diagnosis confounding effects mentioned previously, this research will focus on events of self-harm, especially suicide and suicide attempts.

**Literature Review:**

Social media use has been linked to a variety of negative mental health outcomes, particularly in adolescents and young adults. Boer et al. (2021), in "Social Media Use Intensity, Social Media Use Problems, and Mental Health Among Adolescents," highlight that while high-intensity use alone shows a weak association with mental health issues, problematic or addiction-like behaviors strongly correlate with increased depressive symptoms and reduced life satisfaction. They argue that such addiction-like use, characterized by compulsive behaviors and a loss of control, harms mental health by displacing offline interactions and fostering unhealthy online dynamics, such as cybervictimization (Boer et. al. 2021). Braghieri et al. (2022), in "Social Media and Mental Health," take a novel approach to establishing a causal relationship by leveraging Facebook's staggered rollout across U.S. colleges as a natural experiment. Using a difference-in-differences methodology, they found that the introduction of Facebook increased poor mental health indicators by 0.085 standard deviations, a statistically significant effect. They attribute this increase to mechanisms like unfavorable social comparisons, as students were exposed to highly curated and idealized portrayals of peers' lives. For example, the study notes, "The introduction of Facebook increased depressive symptoms, equivalent to a 2 percentage point rise in the prevalence of depression"(Braghieri et. al. 2022). By focusing on a well-defined experimental setting, this

study offers some of the strongest causal evidence connecting social media use to negative mental health outcomes. Moreover, Macrynikola et al. (2021), in “Does Social Media Use Confer Suicide Risk? A Systematic Review,” further support this causal link by documenting how social media facilitates frequent social comparisons and exclusion, which predict long-term depressive symptoms. Their meta-analysis of longitudinal studies found that these effects are especially pronounced in vulnerable populations, such as adolescents with pre-existing mental health issues. A top level analysis  would indicate some consensus that social media usage and mental health are at the very least correlated, if lacking evidence for a causal relationship.

The causal links established by studies like Braghieri et al. (2022) and Macrynikola et al. (2021) are challenged by alternative theories and complicating factors. Hartanto et al. (2021), in “Does Social Media Use Increase Depressive Symptoms? A Reverse Causation Perspective,” argue that much of the evidence linking social media to poor mental health may reflect reverse causality. According to their analysis, individuals with pre-existing depressive symptoms often turn to social media for validation or distraction, leading to overuse and problematic behaviors. They propose the compensatory internet use theory, which posits that individuals seek online validation to cope with offline insecurities and unmet social needs. As Hartanto et al. (2021) explain, “Social media use may be a consequence rather than a cause of poor mental health”(Hartano et. al. 2021). This explanation directly counters the causal claims made by Braghieri et al. (2022), suggesting that even well-controlled studies might fail to fully account for the bidirectional nature of these relationships. Complications also arise from the role of self-diagnosis and normalization in shaping how users perceive and report their mental health. Corzine and Roy (2024), in “Inside the Black Mirror: Current Perspectives on the Role of Social Media in Mental Illness Self-Diagnosis,” highlight how platforms like TikTok foster communities where users self-diagnose mental health conditions based on anecdotal experiences and algorithmically tailored content. This trend can skew survey data by encouraging users to adopt medicalized identities without clinical verification. As Corzine and Roy note, “The merging of personal advice, psychobabble, and professional help blurs the line between mental well-being and mental illness”(Corzine &

Roy 2024). Hasan et al. (2023), in “Normalizing Anxiety on Social Media Increases Self-Diagnosis of Anxiety,” reinforce this concern, finding that exposure to relatable content normalizing anxiety increases self-reported diagnoses without necessarily reducing stigma. Their study found that “normalization of anxiety led to a greater likelihood of self-identification with disorders,” suggesting that survey-based measures of mental health could overestimate the prevalence of clinical conditions due to social contagion(Hasan, Foster, & Cho, 2023). These insights directly challenge the findings of Braghieri et al. (2022), as they raise questions about the validity of self-reported mental health outcomes in surveys. If students exposed to Facebook’s rollout were simultaneously influenced by social media to self-diagnose or exaggerate symptoms, this could inflate the measured effects of social media on mental health. As such, while Braghieri et al. and similar studies provide robust causal evidence, it must be interpreted cautiously in light of these broader social dynamics.

Despite the risks, social media can offer significant mental health benefits. Naslund et al. (2020), in “Social Media and Mental Health: Benefits, Risks, and Opportunities for Research and Practice,” highlight how platforms enable users to form supportive communities that reduce feelings of isolation. They found that “individuals with mental disorders turn to social media to share personal experiences, seek information, and give and receive support,” illustrating how these platforms can counter stigma and promote resilience(Naslund et. al. 2020). Similarly, O’Reilly (2020), in “Social Media and Adolescent Mental Health: The Good, the Bad, and the Ugly,” emphasizes the role of social media in normalizing mental health discussions among adolescents, who use platforms to create peer networks and share coping strategies. O’Reilly notes, “Adolescents differentiate between personal use and societal perceptions, using social media to foster well-being while acknowledging its risks”(O'Reilly 2020). Social media also offers opportunities to enhance mental health interventions. Naslund et al. (2020) explore how interactive features, such as live sessions and group chats, can support evidence-based mental health programs. They suggest that campaigns leveraging social media’s wide reach can effectively reduce stigma and encourage help-seeking behaviors. However, Corzine and Roy (2024) caution that these benefits depend on addressing the risks of misinformation and unmoderated content, as highlighted in self-diagnosis trends. When paired with professional oversight, social media can bridge gaps in

traditional care, particularly for underserved populations(Corzine & Roy 2024)(Naslund et. al. 2020). Social media may be dangerous, but it is possible that overreaction may be throwing the baby out with the bathwater.

Naslund et. al. (2020) points out "the gap in clinical knowledge about the impact of social media on mental health." Empirical and quantifiable analysis of social media's impact on mental health at a causal level is somewhat limited. Moreover, what casual empirics exist tend to use self-reported or subjective metrics as a dependent variable. Though studies like Braghieri, Levy, & Makarin (2022) have expanded on the connection, such research relies on self-reported data and surveys of the quasi-experimental treatment group to measure mental health impacts. This greatly complicates assessment because of the confounding effect of increased self-diagnosis as a result of social media use. Hasan, Foster, & Cho (2023) found that viewing normalizing content related to anxiety on social media can increase self-diagnoses by ~10%, with an increased effect of the post was considered likable or relatable.

## Methodology:

The initial inquiry approach was as follows: Because there was an abundance of individual longitudinal studies but a lack of larger analyses establishing causality, the methodology was designed to avoid replicating existing research and focused on synthesizing it. By synthesizing findings from existing studies, this hybrid approach integrated observational and experimental data to analyze complex causal relationships. The systematic review concentrated on identifying and evaluating studies, while the meta-analysis statistically quantified relationships. This combined approach ensured the research captured both qualitative trends and quantitative effects, making the results comprehensive and actionable.

The study primarily relied on quantitative data extracted from empirical research measuring variables such as social media usage frequency, mental health outcomes (e.g., depression and anxiety), and effect sizes. Quantitative data was essential for statistical meta-analysis to calculate pooled effect sizes and assess the strength of associations. Where available, qualitative insights—such as narrative descriptions of psychological mechanisms like social comparison or cyberbullying—supplemented the findings, providing valuable context.

Conducting the research required several resources and tools, including access to academic databases such as PubMed, PsycINFO, Scopus, and Google Scholar for locating relevant studies. Statistical software like R or Stata was utilized for the meta-analysis, and tools such as the Cochrane Risk of Bias Tool were employed to assess study quality.

However, several challenges were anticipated. Variability in study quality and methodologies introduced heterogeneity, complicating the meta-analysis. Access to full-text articles was sometimes limited due to paywalls, and publication bias potentially skewed the available data. Additionally, isolating causality proved difficult because most studies in this area were observational.

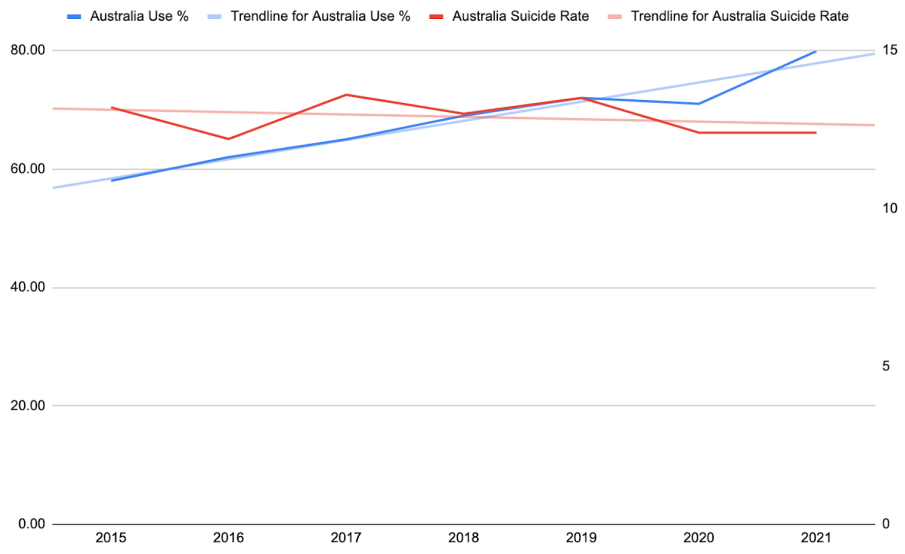
The methodology combined observational data from longitudinal and cross-sectional studies with experimental evidence where available. The target population for this research was adolescents aged 12–18 years, as they were significant users of social media and exhibited heightened vulnerability to mental health issues. The sample consisted of studies that included participants within this demographic and met the predefined inclusion criteria. Studies were excluded if they focused on adult populations, lacked rigorous methodologies, or were non-peer-reviewed. The systematic review followed a structured process. Relevant studies were identified through comprehensive database searches using keywords such as "social media AND mental health AND adolescents," combined with Boolean operators. Each study was screened for relevance through title and abstract reviews, followed by a full-text review to ensure eligibility. Data were extracted using a standardized form capturing variables such as study design, sample size, measures of social media use, mental health outcomes, effect sizes, confounding factors, and limitations.

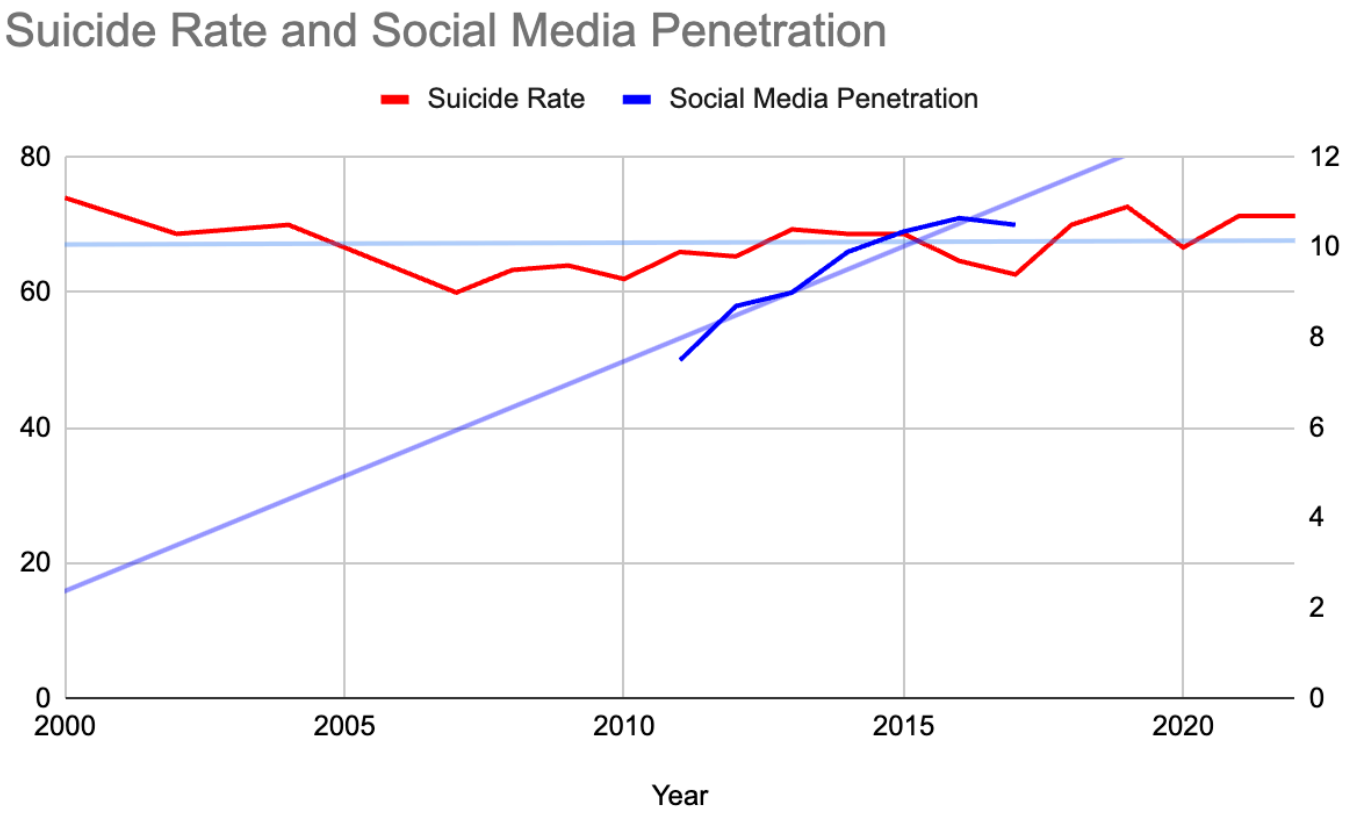
The data were analyzed using statistical meta-analytic techniques. Effect sizes from included studies were pooled to determine the overall impact of social media on mental health. Heterogeneity among studies was assessed using the $I^2$ statistic, and subgroup analyses identified sources of variability, such as differences in gender or platform use. Statistical significance was determined through p-values and confidence intervals, and sensitivity analyses evaluated the robustness of the findings.

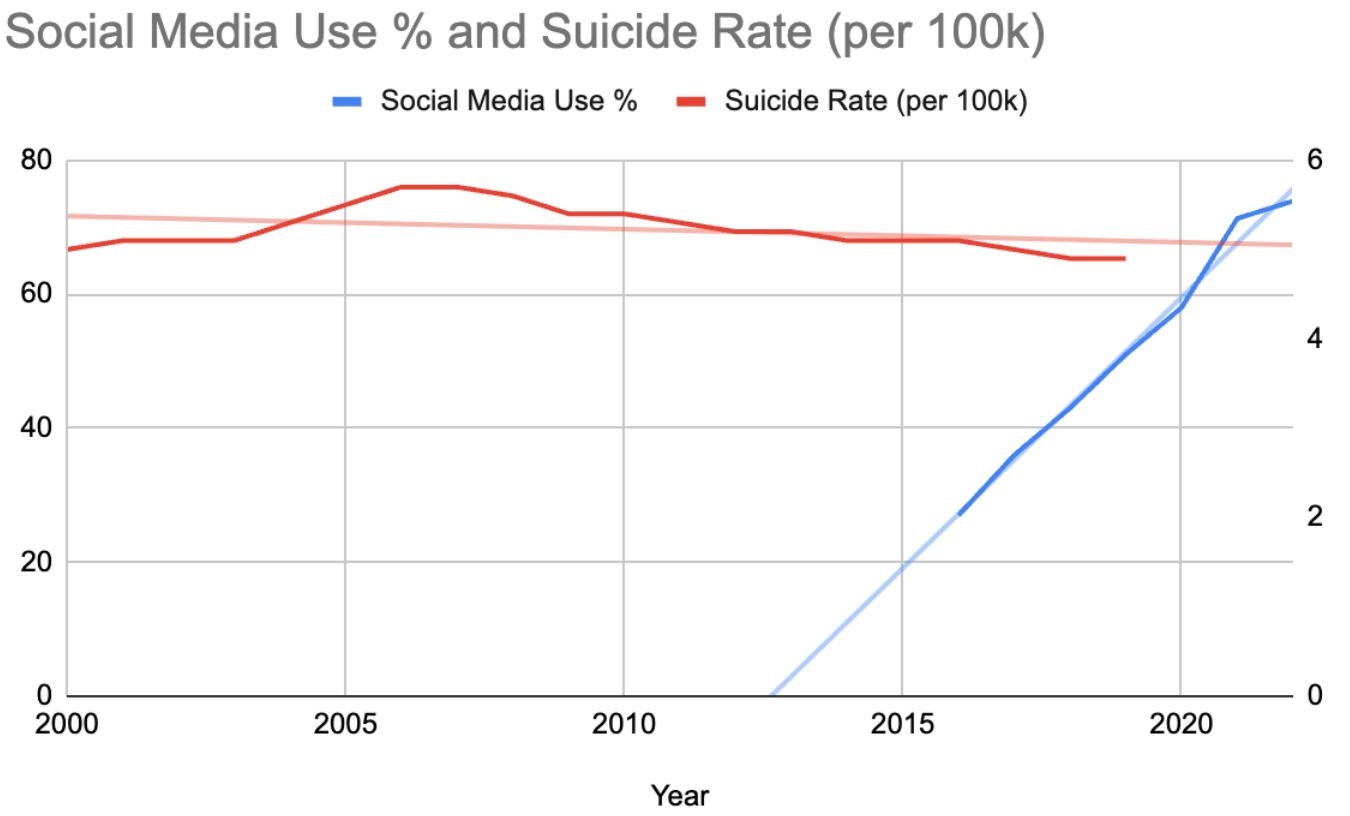
Ultimately, this research aimed to quantify the impact of social media access on mental health outcomes and clarify whether the relationship was causal or merely correlational. The findings aimed to provide critical

insights into the mechanisms of impact, inform future interventions, and guide policy decisions aimed at improving adolescent well-being.

During the research process, data accessibility was found to be insufficient to develop a full meta-analysis. Most studies were paywalled behind subscriptions to research journals, and open access studies were not high enough in number to achieve a sufficient N-value for statistical significance. Other methodological approaches were explored, and further reading of existing literature revealed an alternative methodology. Research and writing on the subject popularized by the media, such as Jonathan Haidt's book *The Anxious Generation*, are frequently predicated on the notion that there must be some inherent link between social media and mental health in large part because of the dramatic rise of both in recent years. Thus, the researcher chose to prioritize examining the correlation between the two at an international level. Data was gathered from publicly accessible sources (i.e Statista), primarily focusing on social media penetration rate and suicide rate. Countries were selected primarily based on data availability, with searches being focused on gathering a diverse range of socioeconomic and cultural conditions to analyze. After data was gathered, results were plotted in Google Sheets and trendlines were generated and compared. Examples with the greatest amount of data availability are shown below. Figure 1, 2, and 3: Showing Australia, the UK, and Malaysia, respectively.




Suicide Rate and Social Media Penetration
Suicide Rate
Social Media Penetration
80
60
40
20
0
12
10
8
6
4
2
0
2000
2005
2010
2015
2020
Year


Social Media Use % and Suicide Rate (per 100k)
Social Media Use %
Suicide Rate (per 100k)
80
60
40
20
0
6
4
2
0
2000
2005
2010
2015
2020
Year

**References**

Boer, M., Stevens, G. W., Finkenauer, C., de Looze, M. E., & van den Eijnden, R. J. (2021). Social media use intensity, social media use problems, and mental health among adolescents: Investigating directionality and mediating processes. *Computers in Human Behavior*, *116*. https://doi.org/10.1016/j.chb.2020.106645.

This study looks at the association of social media use with adolescent mental health, both in terms of high-intensity use and addictive problematic use. Using longitudinal data from 2,109 adolescents (mean age=13.1 years), it examines bidirectional relationships of different types of social media use with indicators of mental health-including symptoms of depression and life satisfaction-along with mediators such as upward social comparisons and cybervictimization.

Key findings indicated that problematic use, not frequency of use, predicts the decline in mental health longitudinally. That would go to suggest that it is compulsive, loss-of-control behaviors, and not necessarily the time spent online, that influence mental health. Of importance, problematic use is related to upward comparisons and cybervictimization, neither of which serves as a mediator for mental health. It is highly credible and is a sound base for my further research, given that this study used a rigid methodology based on longitudinal data and a random-intercept cross-lagged panel model.

Braghieri, L., Levy, R., & Makarin, A. (2022). Social media and mental health. *American Economic Review*, *112*(11), 3660-3693. https://doi.org/10.1257/aer.20211218

Braghieri, Levy & Makarin (2022) evaluates the impact of social media on mental health with a statistical model based on self-reported statistics in combination with facebook expansion. They use Facebook's staggered rollout of the platform across colleges as the independent variable, regressed against responses to the NCHA survey of college student mental health. It finds that the expansion of facebook caused an increase in depression and generalized anxiety among college students at large. Though they cannot separate facebook users from those who simply had peers using it, they note that it is unlikely that their results would be driven by non-user.

The American Economic Review is a very credible publisher without notable bias and is frequently used as a benchmark for publishing evaluations. All the authors are well-credentialed researchers with institutional affiliations. The data and study are rigorous. Overall, this paper is highly credible and a good baseline of research for this project

Corzine, A., Roy, A. Inside the black mirror: current perspectives on the role of social media in mental illness self-diagnosis. *Discov Psychol* **4**, 40 (2024). https://doi.org/10.1007/s44202-024-00152-3

Corzine & Roy (2024) analyzes the extent to which the push for normalization of mental health issues has led to an increase in self diagnosis of mental health pathologies like anxiety and eating disorders like anorexia. Specifically, the role of online communities which in an attempt to normalize veer towards glorifying such issues, as well as the role played by recommendation algorithms which provide a self-perpetuating loop of similar content. Corzine & Roy argue that a significant portion of self-pathologizing behavior is a result of social media communities for which acceptance or belonging is dependent on a label. This is in addition to an influence of such communities have on self-identity and a desire for an external disorder to blame for personal perceived shortcomings.

Discover psychology is a credible, though relatively new, journal without notable bias. The authors have less impressive credentials, but do have credibility and some experience. Both are associated with educational institutions and one has a long publication history. The analysis is well-researched and cited. Overall, this paper is credible and because it is a meta-analysis rather that independently conducted, credentialing is unlikely to have a serious impact.

Hartanto, A., Quek, F. Y. X., Tng, G. Y. Q., & Yong, J. C. (2021). Does social media use increase depressive symptoms? A reverse causation perspective. *Frontiers in Psychiatry*, *12*. https://doi.org/10.3389/fpsyt.2021.641934

Most of the review concludes that current research has, for the most part, overlooked this reverse causal relationship: that depressive symptoms might drive increased social media use rather than social media use causing depressive symptoms. The study suggests that initial levels of depression predict prospective social media engagement, and problematic social media use can worsen depressive outcomes. They call for more longitudinal and experimental studies to establish the directionality of the relationship and investigate what underlies the unhealthy social media behaviors that result in depression, which may be more of a symptom of existing psychological issues than a direct cause of depression. From a credibility point of view, it has been published in a peer-reviewed reputable journal with tight standards for works related to mental health. Arguments presented are well-supported, based on a review which involved existing literature, including longitudinal and experimental studies. They cite quite a number of sources within peer-reviewed journals to support their argument.

Hasan, F., Foster, M. M., & Cho, H. (2023). Normalizing Anxiety on Social Media Increases Self-Diagnosis of Anxiety: The Mediating Effect of Identification (But Not Stigma). *Journal of Health Communication*, *28*(9), 563–572. https://doi.org/10.1080/10810730.2023.2235563

Hasan, Foster, & Cho aims to calculate the effects of the increased frequency of self-diagnosis discussed in Corzine & Roy (2024) through an experimental design which shows participants media normalizing anxiety-related disorders and measures their belief that they may have that or a similar disorder. The study found that such media did not increase participants' stress or anxiety levels. However, they noted that participants were more likely to classify their stress/anxiety as being likely related to a disorder and were more likely to predict they had a disorder or were likely to develop one in the future. Though the results are not directly linked to depression and cannot strongly be extrapolated to social media overall, it does provide some empirical backing to the connection between social media and mental health disorders as it relates to the presence of normalization or more dangerously glorification of mental health issues online.

The journal of health communication is a leading journal in the field and based out of the George Washington University. The authors are all university researchers with solid credentials. The experiment is rigorously designed and all data has been made available. They also do include results that do not align with their hypothesis and explicitly call it out as such, making their results more trustworthy. Overall, this is a credible source and experimental results are likely to be strong.

Macrynikola, N., Auad, E., Menjivar, J., & Miranda, R. (2021). Does social media use confer suicide risk? A systematic review of the evidence. *Computers in Human Behavior Reports*, *3*, 100094. https://doi.org/10.1016/j.chbr.2021.100094

The paper provides a systematic review of the relationship between social media use and suicidal thoughts and behaviors (STBs) across various age groups. It highlights that certain patterns of social media and smartphone use, such as frequency of use, addiction, and engagement with suicide-related content, are positively associated with STBs. The authors emphasize the need for further research to understand the mechanisms behind these associations, including cognitive and interpersonal factors, and to determine whether social media usage is a contributing factor to suicide risk or a reflection of existing vulnerabilities

The credibility of the sources cited in this paper is reinforced by the systematic approach taken in selecting studies, adhering to the PRISMA guidelines for meta-analyses and systematic reviews. The review includes a diverse range of studies from various geographic locations, and the methodology for assessing study quality is robust, employing established quality assessment tools. Additionally, the paper references a wide array of peer-reviewed research, indicating a thorough analysis of the existing literature.

Naslund, J. A., Bondre, A., Torous, J., & Aschbrenner, K. A. (2020). Social media and mental health: Benefits, risks, and opportunities for research and practice. *Journal of Technology in Behavioral Science*, *5*(3), 245-257. https://doi.org/10.1007/s41347-020-00134-x

This is a literature review of existing mental health and social media research. Naslund, Bondre, Torus, & Aschbrenner (2020) note that though the media often focuses on the negative effects and dangers of social media, a serious body of literature support positive effects, including positive social connection and self-esteem, as well as an opportunity for building community-based supports and sharing. However, an equally rigorous body notes serious dangers including worsened symptoms for depressive disorders, social isolation, and exposure to dangerous or harmful content. Naslund et al. (2020) does not make a specific determination about the positivity or negativity of social media from a mental health perspective, but it does point out a need for new research.

The Journal of Technology in Behavioral Science is a credible journal - though the parent organization has had some retractions and failed fact checks, a review does note that with its size, this is inevitable. The authors have very strong research credentials and strong institutional connects, with the majority of authors being from Harvard. It is a literature review without independently conducted experiments or studies and so is unlikely to be significantly impacted by errors or bias. It additionally does not make a concluding determination and provides different viewpoints. Overall, this paper is highly trustworthy and a strong baseline for the project.

O'Reilly, M. (2020). Social media and adolescent mental health: The good, the bad and the ugly. *Journal of Mental Health*, *29*(2), 200-206. https://doi.org/10.1080/09638237.2020.1714007

This paper reviews the complicated effects of social media on adolescent mental health in light of insights provided by adolescents and mental health practitioners. The approach is qualitative, using focus groups to obtain contrasting perspectives on the role of social media. Adolescents indicate that social media serve both positive purposes. These are concerns, however, that equally make mental health practitioners wary; there is more caution, particularly on sensitive issues such as cyberbullying and self-harm. The study concludes that mental health checks should consider social media usage in order to better support teenagers.nO'Reilly's research contributes significantly to the understanding of varied

influences of social media on mental health. This study brings together adolescents and mental health practitioners, thus offering a balanced view that would be useful for the libertarian perspective of minimal restrictions versus regulatory approaches to adolescent internet use. It also captures research related to probes into social media access as it connects to mental health, especially from the perspective of whether the freedom of youth in the digital space is more important than the risks that come with it. The study has been published in the Journal of Mental Health, which is a peer-reviewed journal, and thus academic, and funded by the Wellcome Trust; this underlines its academic credibility. Affiliation of O'Reilly with the University of Leicester and her long background in research into adolescent mental health further enhances the reliability of the study

## Appendix