

# Multidisciplinary Research on Social Media, Artificial Intelligence and Mental Well-Being

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**Abstract:** Social media and artificial intelligence increasingly occupy the same space in everyday emotional life. People encounter algorithmically selected content, discuss personal difficulties online, and may seek support from conversational systems. Yet these activities are often examined in separate academic fields. This paper develops a multidisciplinary critical review connecting social media research, psychological measurement, computational inference, and digital mental health interventions. A purposive selection of verified publications from 2020 to 2026 provides the evidence base. No primary survey, clinical experiment, or participant-level dataset is reported. The synthesis distinguishes three roles of artificial intelligence: organizing digital exposure, inferring possible mental health signals, and providing interactive support. Evidence on social media emphasizes variation between individuals and the limits of time-based measures. Research on conversational agents suggests potential benefits for selected symptoms, while broader well-being, sustained effectiveness, and safety require separate evaluation. These findings motivate an original conceptual framework linking digital experiences with social comparison, perceived support, emotional regulation, and personal agency. Four propositions specify relationships for future testing. The paper argues that a technically accurate model cannot establish the psychological value of an intervention without valid outcomes, appropriate comparison conditions, and attention to consequences. It proposes collaborative research practices for psychology, computer science, communication studies, education, and public health. The contribution is a structured explanation of how these disciplines can investigate the same digital experience without treating prediction, engagement, and well-being as interchangeable outcomes.

**Keywords:** social media; artificial intelligence; mental well-being; multidisciplinary research; digital mental health; algorithmic governance

## I. INTRODUCTION

A person browsing social media encounters more than a collection of posts. The experience combines social relationships, selected information, public feedback, and software decisions about visibility. An artificial intelligence system may influence this environment before the person knowingly interacts with a chatbot. Research therefore needs to ask how digital exposure is organized, how people interpret it, and whether subsequent support improves outcomes that matter to them.

Existing scholarship supplies useful but distinct perspectives. An umbrella review reports substantial disagreement in interpretations of social media and adolescent mental health [1]. Work on person-specific associations shows why an average relationship can conceal contrasting experiences [2]. These findings make a simple claim about universal harm or benefit difficult to defend. They also establish a starting point for examining how AI enters the relationship between digital participation and emotional life.



The purpose of this paper is to connect those perspectives in a critical review. It asks which mechanisms deserve investigation, what evidence supports different uses of AI, and how multidisciplinary teams should evaluate benefits and harms. The analysis develops conceptual propositions rather than presenting uncollected observations as research results.

## **II. LITERATURE REVIEW**

### **2.1 Social media exposure and individual differences**

Reviews interpret adolescent social media findings differently [1]. Person-specific associations also vary [2], requiring precise population and outcome definitions.

### **2.2 Development and the meaning of engagement**

Orben and colleagues identified age-related variation in observational associations with life satisfaction [3]. Fassi and colleagues found differences in engagement between adolescents with and without mental health conditions [4]. Duration alone therefore provides an incomplete description.

### **2.3 Support and vulnerability in the same environment**

Social media offers support but also risks [5]; developmental processes may amplify vulnerability [6]. Both experiences require investigation.

Mental well-being here concerns positive emotional experience, agency, and social functioning. Depression and anxiety symptoms are distinct outcomes; reduced symptoms do not necessarily establish satisfactory well-being.

### **2.4 Artificial intelligence as an instrument of inference**

Reviews by Chancellor and De Choudhury [7] and Di Cara and colleagues [8] identify problems with prediction methods, dataset descriptions, and replicability. Valid labels are essential; a text signal cannot establish a clinical condition.

### **2.5 Conversational support and clinical outcomes**

Early chatbot research did not justify definitive safety or effectiveness claims [9]. Li and colleagues found benefits for depression and distress, but no significant pooled improvement in overall psychological well-being [10].

Therabot reduced selected symptoms relative to a waitlist [11]. These findings concern the evaluated intervention; they establish neither equivalent performance by general-purpose chatbots nor equivalence to human therapy.

CBT-based chatbot benefits varied across outcomes; several effects became insignificant after publication-bias adjustment [12]. Fluency cannot establish therapeutic benefit.

### **2.6 Governance as part of the intervention**

WHO emphasizes oversight and accountability [13]. Joint links between exposure, automated inference, support, and well-being remain unresolved.

## **III. RESEARCH METHODOLOGY**

### **3.1 Review design and scope**

This critical narrative review synthesizes purposively selected, verified publications from 2020 to 2026 on social media, psychological experience, AI inference, conversational support, and governance. Its international scope does not imply geographical representativeness.

Targeted searches on 3 October 2026 combined these topics with review, person-specific effects, prediction, and randomized trial terms. Bibliographic details were checked against publisher, bibliographic, or author-institution records.

### **3.2 Source selection and interpretation**

Selection prioritized relevant outcomes and methods, excluding unverifiable sources and general media claims about clinical effectiveness. The search was non-exhaustive, without protocol registration, duplicate screening, or formal risk-of-bias scoring. English-language availability influenced selection.



### 3.3 Analytical procedure

The synthesis separated associations from intervention effects, symptoms from well-being, and prediction from therapeutic value. Tables summarize evidence; framework relationships remain untested.

### 3.4 Integrity and reproducibility boundaries

No participants were recruited, accounts scraped, or experiments conducted. No primary statistics or approval identifiers are reported. Future empirical research requires its own protocol and approvals; readers can reassess the cited evidence.

## IV. EVIDENCE SYNTHESIS AND DISCUSSION

### 4.1 What the selected evidence establishes

Table 1 separates evidence from inference. Feed-related findings cannot establish support effectiveness; trials cannot establish recommendation-related causes.

Table 1. Selected evidence and boundaries of interpretation

| Evidence                                    | Main contribution                                                    | Boundary of interpretation                                        |
|---------------------------------------------|----------------------------------------------------------------------|-------------------------------------------------------------------|
| Individual and developmental studies [2, 3] | Associations vary between people and across development.             | Observed relationships do not establish universal causal effects. |
| Adolescent condition comparison [4]         | Time and experienced engagement differ across groups.                | Group differences do not establish the direction of causality.    |
| Prediction-method reviews [7, 8]            | Label validity and reporting affect interpretability.                | Benchmark performance does not establish clinical utility.        |
| Conversational-agent reviews [9, 10, 12]    | Benefits depend on the outcome and evidence quality.                 | Symptom findings do not establish broad well-being gains.         |
| Generative chatbot trial [11]               | A defined intervention outperformed a waitlist on selected symptoms. | Findings do not establish equivalence to human therapy.           |
| Health AI guidance [13]                     | Governance belongs in health AI development and evaluation.          | Guidance is not empirical proof of intervention effectiveness.    |

*Source: Original qualitative synthesis of the cited publications.*

### 4.2 The gap between detection and benefit

Useful support requires valid inference, user acceptance, and appropriate responses. Personalization and interaction time alone cannot establish improved functioning.

### 4.3 A conditional account of digital experience

Activity, circumstances, design, and offline support condition outcomes. Shared definitions clarify disciplinary disagreements and requirements for stronger claims.

## V. PROPOSED CONCEPTUAL FRAMEWORK

### 5.1 Framework logic

Figure 1 connects AI-mediated digital experiences with psychological mechanisms and separate outcomes. Personal circumstances and governance may modify the relationships. Every arrow is proposed, not statistically estimated.



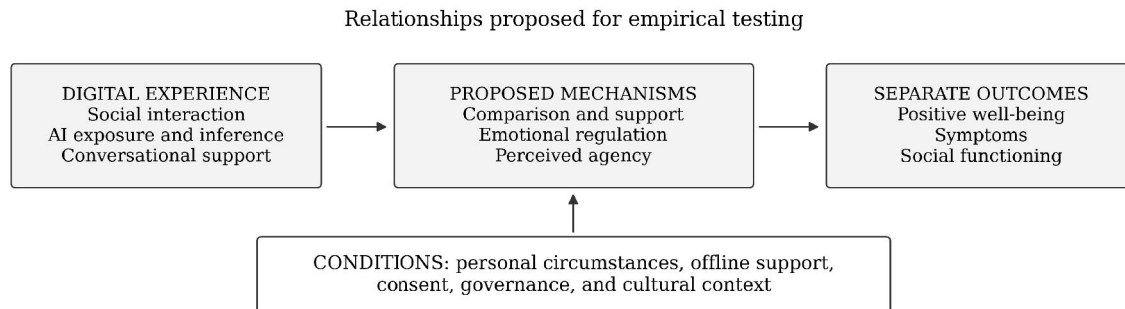


Figure 1. Proposed relationships between AI-mediated digital experiences and mental well-being

Source: Author.

## 5.2 Propositions for future testing

**Proposition 1:** Experience quality, beyond duration, connects participation with well-being. Tests should distinguish activities, previous well-being, and offline events.

**Proposition 2:** Comparison, support, and control partly connect AI exposure with well-being. Repeated measures should distinguish exposure from interpretation.

**Proposition 3:** AI support depends on response quality and human support. Testing requires active comparisons, separate outcomes, and adverse-experience assessment.

**Proposition 4:** Agency and credible governance modify AI interaction outcomes. Testing should examine practical choices about disclosure, retention, and escalation; privacy statements alone do not establish experienced control.

## VI. CONCLUSION

Multidisciplinary research on social media, artificial intelligence, and mental well-being requires a shared account of the experience being studied and the outcome being claimed. This review distinguishes AI-mediated exposure, mental health inference, and interactive support. It connects those functions through an original conceptual framework and four propositions for future testing. Computational success, engagement, symptom improvement, and positive well-being require different evidence. Digital interventions should be evaluated for consequences in users' lives. Valid psychological measures, transparent methods, contextual interpretation, and accountable implementation can guide studies that test defined relationships while retaining uncertainty about unmeasured outcomes.

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