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# **Literature Survey on Mood Tracking Applications**

## 1. Introduction

Mood tracking refers to the systematic recording and analysis of an individual’s emotional states over time. In recent years, mobile applications and wearable technologies have become the most popular tools for mood tracking due to their accessibility, portability, and integration into daily life. Such applications enable users to log moods, visualize trends, and in some cases, receive personalized recommendations.

This survey is restricted to digital mood-tracking systems published between 2013 and 2024, including self-report apps, clinical applications, and AI-driven systems. Non-digital tracking methods, such as diaries or paper journals, are intentionally excluded.

The general findings across the literature reveal that while mood-tracking apps excel at collecting and presenting mood data, they often lack mechanisms for **reflective engagement, ethical reasoning, and character development**. This gap motivates the integration of philosophical frameworks such as **Socratic questioning and virtue ethics** into next-generation mood-tracking systems.

## 2. Related Work

### 2.1 Early Mood-Tracking Applications

Chen et al. [1] provided one of the first systematic reviews of 32 commercial mood apps. Their study showed that most applications successfully supported self-reporting and visualization but offered little depth in terms of guided reflection or behavioral insight. Similarly, Wisniewski et al. [2] examined user perspectives, particularly among young people, and found that while personalization was appreciated, users expressed dissatisfaction with limited engagement features.

These works demonstrate that early mood apps succeeded in making mood tracking accessible but fell short of promoting meaningful self-awareness.

### 2.2 Clinical and Psychological Applications

Mood-tracking apps have also been explored in therapeutic and clinical contexts. Faurholt-Jepsen et al. [4] tested a smartphone app paired with a wearable activity tracker in a randomized trial. Results showed effectiveness in reducing recurrence of mood disorders, highlighting clinical promise. Hollis et al. [7] reviewed mobile apps for young people and concluded that while apps showed moderate reliability and usability, they lacked mechanisms for reflective or developmental practice.

Other clinical reviews (Feldman et al., 2021 [9]) emphasized the potential of mHealth interventions in supporting peripartum mood disorders, but again pointed out that engagement strategies were limited. Collectively, these works validate the clinical utility of mood apps but expose a lack of tools for **ethical self-reflection or value-driven behavior change**.

### 2.3 Machine Learning and Sensor-Based Mood Prediction

The shift from manual mood entry to passive mood detection marked a major milestone in the field. Lepri et al. [6] developed EmotionSense, an early system that utilized smartphone sensors for mood inference in social psychology. Zhang et al. [5] later applied machine learning on smartphone data to monitor mood stability in depressive patients, demonstrating predictive potential.

More recently, Ahmed and Ahmed [8] proposed an AI-driven continuous monitoring framework using multimodal data. Similarly, Liang et al. [10] explored privacy-preserving mood prediction, addressing growing concerns about user data. While these approaches improve **automation and detection accuracy**, they remain focused on **prediction**, not **reflection**.

### 2.4 Ethical and Philosophical Gaps

Despite technical advances, no existing mood-tracking systems incorporate **Socratic questioning** or **virtue ethics** into their design. Current systems treat mood primarily as a variable to be measured and predicted, not as a lived experience that requires reflection and ethical evaluation. Users are told what they feel, but rarely asked why they feel it or how their response aligns with personal virtues such as patience, courage, or temperance.

This omission represents a fundamental research gap and motivates the Socratic Virtue project, which seeks to embed reflective questioning and ethical growth into mood-tracking technology.

## 3. Conclusion

The literature on mood-tracking applications can be grouped into three broad streams: (i) **early applications** that emphasized logging and visualization, (ii) **clinical studies** that validated their therapeutic potential, and (iii) **sensor-based and AI-driven systems** that improved prediction accuracy.

Across all streams, a common shortcoming emerges: mood-tracking apps enhance awareness but do not foster **reflection, ethical reasoning, or character development**. By integrating **Socratic dialogue and virtue ethics**, the proposed project addresses this gap, aiming to transform mood apps from passive trackers into **active tools for ethical self-development**.

## 4. References

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