

Table 2*Tools and Biomarkers*

Author (Year)	Wearable Tool	Behavioral or Psychological Marker Tracked
Chum et al. (2017)	Fitbit One®	Physical activity, motivation, and behavioral activation in depression.
Condominas et al. (2025)	Fitbit® wrist-worn device	Nocturnal heart rate, sleep disturbance, anxiety levels, and depression severity.
Cormack et al. (2019)	Wearable cognitive/mood assessment tool	High-frequency mood and cognitive function in major depressive disorder.
Cormack et al. (2024)	Apple Watch®	Daily mood, cognitive performance, step count, and average heart rate.
Costa et al. (2017)	EmotionCheck® wrist device	Perceived heart rate feedback and anxiety regulation.
Costa et al. (2016)	EmotionCheck® wearable	False slow heart rate feedback and emotional/anxiety response.
Jacobson et al. (2021)	Wearable passive sensor	Daytime movement and nighttime sleeping patterns are linked with anxiety deterioration.
Kim et al. (2019)	Actiwatch®	Activity data, EMA depressed mood reports, and depression group prediction.
Matcham et al. (2019)	Smartphone and wrist-worn wearable device	Sleep, physical activity, stress, mood, sociability, speech patterns, and cognitive function.
Matcham et al. (2024)	Fitbit® device	Sleep duration, sleep efficiency, sleep fragmentation, sleep regularity, relapse, and depression severity.
Mishra et al. (2021)	Wearable mobility sensor	Mobility, physical activity, sleep patterns, and depression symptoms.
Moshe et al. (2021)	Oura Ring® and smartphone	Sleep-related wearable features, self-reported mood, depression, and anxiety symptoms.
Nadal et al. (2021)	Smartwatch	Mood, sleep, and physical activity self-monitoring during depression intervention.
Nishida et al. (2017)	Waist actigraphy	Rest-activity cycle, physical activity, and sleep disturbance during rTMS treatment.

Author (Year)	Wearable Tool	Behavioral or Psychological Marker Tracked
O'Brien et al. (2017)	Wrist-worn activity monitor	Physical activity patterns and reduced activity are linked with late-life depression.
Ryan et al. (2019)	Wearable activity trackers	User anxiety, empowerment, affective response, and perceived behavior change
Siepe et al. (2025)	Garmin VivoSmart 4®	Stress, tiredness, sleep, and self-reported daily experience using EMA.
Swanson et al. (2018)	Wearable light therapy device	Mood improvement, depression symptoms, sleep, and circadian rhythm response
Tazawa et al. (2020)	Multimodal wristband device	Steps, energy expenditure, body movement, sleep time, heart rate, skin temperature, and ultraviolet light exposure.
Tiwari et al. (2019)	Smart shirt and smart bracelet	Heart rate and heart rate variability are linked to stress and anxiety levels.
Zhang et al. (2021)	Fitbit® wristband	Sleep features and depressive symptom severity measured with Patient Health Questionnaire 8-item (PHQ-8).
Zhang et al. (2025)	Fitbit® and study app	Sleep patterns, physical activity, heart rate, mood, depression severity, and anxiety severity.