

Sleep Quality Assessment (PSQI-Aligned, AI Version)

Purpose: Measure sleep quality & disturbances

Time frame: *Over the last 1 month*

Use case: Insomnia, fatigue, burnout, depression/anxiety support

Output: Global Sleep Quality Score

Instruction to user:

The following questions relate to your usual sleep habits during the **past one month**. Please answer as accurately as possible.

SECTION 1: Sleep Timing & Duration

Q1. Usual bedtime

What time did you usually go to bed?

- **Option type:** Time input (HH:MM)
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Q2. Time to fall asleep (Sleep latency)

- **0** – I usually fell asleep within 15 minutes.
 - **1** – I usually fell asleep within 16–30 minutes.
 - **2** – I usually fell asleep within 31–60 minutes.
 - **3** – I usually took more than 60 minutes to fall asleep.
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Q3. Usual wake-up time

What time did you usually wake up?

- **Option type:** Time input (HH:MM)
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Q4. Actual sleep duration per night

- **0** – I slept more than 7 hours per night.
 - **1** – I slept 6–7 hours per night.
 - **2** – I slept 5–6 hours per night.
 - **3** – I slept less than 5 hours per night.
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SECTION 2: Sleep Disturbances

How often did the following disturb your sleep?

Common Frequency Options (for Q5a–Q5j)

- **0** – Not during the past month
 - **1** – Less than once a week
 - **2** – Once or twice a week
 - **3** – Three or more times a week
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Q5a. Difficulty falling asleep

- **0** – Not during the past month
- **1** – Less than once a week
- **2** – Once or twice a week
- **3** – Three or more times a week

Q5b. Waking up in the middle of the night or early morning

- **0** – Not during the past month
- **1** – Less than once a week
- **2** – Once or twice a week
- **3** – Three or more times a week

Q5c. Needing to use the bathroom at night

- **0** – Not during the past month
- **1** – Less than once a week
- **2** – Once or twice a week
- **3** – Three or more times a week

Q5d. Trouble breathing comfortably

- **0** – Not during the past month
- **1** – Less than once a week
- **2** – Once or twice a week
- **3** – Three or more times a week

Q5e. Coughing or snoring loudly

- 0 – Not during the past month
- 1 – Less than once a week
- 2 – Once or twice a week
- 3 – Three or more times a week

Q5f. Feeling too cold

- 0 – Not during the past month
- 1 – Less than once a week
- 2 – Once or twice a week
- 3 – Three or more times a week

Q5g. Feeling too hot

- 0 – Not during the past month
- 1 – Less than once a week
- 2 – Once or twice a week
- 3 – Three or more times a week

Q5h. Having bad dreams

- 0 – Not during the past month
- 1 – Less than once a week
- 2 – Once or twice a week
- 3 – Three or more times a week

Q5i. Experiencing pain that disturbed sleep

- 0 – Not during the past month
- 1 – Less than once a week
- 2 – Once or twice a week
- 3 – Three or more times a week

Q5j. Other reasons (e.g., stress, phone use)

- 0 – Not during the past month
 - 1 – Less than once a week
 - 2 – Once or twice a week
 - 3 – Three or more times a week
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SECTION 3: Use of Sleep Medication

Q6. Frequency of using sleep medication

- **0** – I did not use sleep medication.
 - **1** – I used sleep medication less than once a week.
 - **2** – I used sleep medication once or twice a week.
 - **3** – I used sleep medication three or more times a week.
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SECTION 4: Daytime Dysfunction

Q7. Trouble staying awake during daily activities

- **0** – I did not have trouble staying awake.
 - **1** – I had trouble less than once a week.
 - **2** – I had trouble once or twice a week.
 - **3** – I had trouble three or more times a week.
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Q8. Difficulty maintaining enthusiasm / motivation

- **0** – I had no difficulty maintaining enthusiasm.
 - **1** – I had slight difficulty.
 - **2** – I had moderate difficulty.
 - **3** – I had severe difficulty.
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SECTION 5: Subjective Sleep Quality

Q9. Overall sleep quality rating

- **0** – My sleep quality was very good.
 - **1** – My sleep quality was fairly good.
 - **2** – My sleep quality was fairly bad.
 - **3** – My sleep quality was very bad.
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Component Scoring (AI Logic)

PSQI has **7 components**, each scored **0–3**:

1. **Subjective Sleep Quality** → Q9
 2. **Sleep Latency** → Q2 + Q5a
 3. **Sleep Duration** → Q4
 4. **Sleep Efficiency** → (time asleep ÷ time in bed)
 5. **Sleep Disturbances** → Q5b–Q5j
 6. **Use of Sleep Medication** → Q6
 7. **Daytime Dysfunction** → Q7 + Q8
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Global PSQI Score

Global PSQI = Sum of all 7 components

Range = 0 – 21

Interpretation (Standard PSQI Rule)

Global Score Sleep Quality

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|----------|--------------------|
| ≤ 5 | Good sleep quality |
| > 5 | Poor sleep quality |

Not a diagnosis of insomnia

AI Decision Rules

- **PSQI ≤ 5** → Normal sleep hygiene tips
 - **PSQI > 5** → Sleep improvement plan
 - **PSQI > 10** → Screen for anxiety/depression
 - **Sleep meds ≥ 2** → Flag for clinician review
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Panel-Ready One-Liner

“Our sleep module uses a PSQI-aligned framework to assess sleep quality and disturbances over one month, enabling early detection of sleep problems without medical diagnosis.”