

Light Exposure Behaviour Assessment (LEBA): Long Form (v1.0.1)

Disclaimer: This is still a work in progress. (Dated 06 April 2022)

Participant's Instruction

Please indicate how often you performed the following behaviours in the **past four weeks**

| | Items | Never | Rarely | Sometimes | Often | Always |
|----|---|-------|--------|-----------|-------|--------|
| 01 | I wear blue-filtering, orange-tinted, and/or red-tinted glasses indoors during the day. | | | | | |
| 02 | I wear blue-filtering, orange-tinted, and/or red-tinted glasses outdoors during the day. | | | | | |
| 03 | I wear blue-filtering, orange-tinted, and/or red-tinted glasses within 1 hour before attempting to fall asleep. | | | | | |
| 04 | I spend 30 minutes or less per day (in total) outside. (Reverse-scored) | | | | | |
| 05 | I spend between 30 minutes and 1 hour per day (in total) outside. | | | | | |
| 06 | I spend between 1 and 3 hours per day (in total) outside. | | | | | |
| 07 | I spend more than 3 hours per day (in total) outside. | | | | | |
| 08 | I spend as much time outside as possible. | | | | | |
| 09 | I go for a walk or exercise outside within 2 hours after waking up. | | | | | |
| 10 | I use my mobile phone within 1 hour before attempting to fall asleep. | | | | | |
| 11 | I look at my mobile phone screen immediately after waking up. | | | | | |
| 12 | I check my phone when I wake up at night. | | | | | |
| 13 | I look at my smartwatch within 1 hour before attempting to fall asleep | | | | | |
| 14 | I look at my smartwatch when I wake up at night. | | | | | |
| 15 | I dim my mobile phone screen within 1 hour before attempting to fall asleep. | | | | | |
| 16 | I use a blue-filter app on my computer screen within 1 hour before attempting to fall asleep. | | | | | |
| 17 | I use as little light as possible when I get up during the night. | | | | | |
| 18 | I dim my computer screen within 1 hour before attempting to fall asleep. | | | | | |
| 19 | I use tunable lights to create a healthy light environment. | | | | | |
| 20 | I use LEDs to create a healthy light environment. | | | | | |
| 21 | I use a desk lamp when I do focused work. | | | | | |
| 22 | I use an alarm with a dawn simulation light. | | | | | |
| 23 | I turn on the lights immediately after waking up. | | | | | |

Psychometric Properties

LEBA long form contains a 5-factor latent structure with 23 items.

| Factor Name | Items | Internal Consistency Reliability Coefficient Ordinal α |
|---|-------|--|
| F1: Wearing blue light filters | 01-03 | 0.96 |
| F2: Spending time outdoors | 04-09 | 0.83 |
| F3: Using phone and smartwatch in bed | 10-14 | 0.70 |
| F4: Using light before bedtime | 15-18 | 0.69 |
| F5: Using light in the morning and during daytime | 19-23 | 0.52 |

Internal Consistency Reliability Coefficient McDonald's ω_t for the total scale (all 23 items) is 0.68.

Scoring

(Note: R = reverse-scored item)

LEBA captures light exposure-related behaviours on a 5-point Likert type scale ranging from 1 to 5 (1 = never; 2 = rarely; 3 = sometimes; 4 = often; 5 = always; for reversed-scored item: 1 = always; 2 = often; 3 = sometimes; 4 = rarely; 5 = never). The score of each factor is calculated by the summation of scores of items belonging to the corresponding factor.

| Factor Name | Score |
|---|----------------------|
| F1: Wearing blue light filters | 01+02+03 |
| F2: Spending time outdoors | 04(R)+05+06+07+08+09 |
| F3: Using phone and smartwatch in bed | 10+11+12+13+14 |
| F4: Using light before bedtime | 15+16+17+18 |
| F5: Using light in the morning and during daytime | 19+20+21+22+23 |

Link

PDF and templates for Qualtrics and REDCap are available at <https://leba-instrument.org>

Citation

Siraji, M. A., Lazar, R., van Duijnhoven, J., Schlangen, L., Haque, S., Kalavally, V., Vetter, C., Glickman, G., Smolders, K., & Spitschan, M. (2022). Light Exposure Behaviour Assessment (LEBA) instrument (English language), v1.0.1. Retrieved from osf.io/ez6gj. DOI: 10.17605/OSF.IO/EZ6GJ.

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