

## Light Exposure Behaviour Assessment (LEBA): Long Form (v1.0.2, 2 June 2022)

### Participant Instructions

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.					
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 five-factor latent structure with 23 items.

Factor name	Items	Internal consistency reliability coefficient Ordinal $\alpha$
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  $\omega_t$  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

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