

Consensus on Diagnostic Criteria, Clinical Symptoms, and Risk Factors for Visual Fatigue: A Modified Delphi Study

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Supplementary 1. Questionnaires

First-round Questionnaire

Epidemiology

1. Our meta-analysis found that the pooled prevalence of visual fatigue is 51%. The prevalence of visual fatigue is higher among the following populations: digital device users (90%), University staff members (81%), computer workers (77%), university students during COVID-19 (57%), and school-aged children during COVID-19 (64%). What is your assessment of the pooled figures in the meta-analysis?
 - Accurate
 - Some figures are questionable, or some aspects of the assessment are missing
2. Your opinion: [Open-ended]
3. Based on our review, the following risk factors were identified with their corresponding odds ratios (OR): prior eye disease (OR: 2.59), refractive error (OR: 1.40 to 1.56), contact lens wear (OR: 1.33), short sleep duration (OR: 1.28), prolonged screen time (+1 hour/day, OR: 1.15), poor ergonomics (improper sitting posture, OR: 2.02; non-adjustable screens, OR: 3.08), dark indoor illumination (OR: 4.89), air conditioning use (OR: 23.02), and low indoor humidity (OR: 2.39), exposure to air pollution (OR: 5.67), and exposure to windy environments (OR: 3.59). Do you think these findings accurately represent the key risk factors for visual fatigue?
 - Accurate
 - Some figures are questionable, , or some important risk factors are not mentioned
4. Your opinion: [Open-ended]
5. Which of the following factors do you think are modifiable and should be prioritized for intervention? [Multiple choice]
 - Uncorrected refractive error (e.g., myopia, hyperopia, astigmatism)
 - Prolonged screen time
 - Poor ergonomics (e.g., sitting posture, non-adjustable screens)
 - Ambient conditions (e.g., low humidity, air conditioning use, air pollution, windy environments)
 - Short sleep duration
 - Control of prior eye disease
 - Contact lens wear
 - Dark indoor illumination
 - Indoor humidity
 - Lack of regular breaks during screen use
 - Lack of exposure to natural light
 - Lack of computer-use knowledge
 - Absence of anti-glare filters
 - Others: [Open-ended]
6. Which populations do you think require special attention when studying visual fatigue? [Multiple choice]
 - Workers in visually intensive occupations (e.g., IT professionals)
 - Students with prolonged screen exposure

- Children with refractive error
- Individuals in low-income or less-developed regions
- Elderly populations
- Others: [Open-ended]

Symptoms

7. Based on our review, the following symptoms and their prevalence were identified: ocular symptoms (eye tiredness: 65%, eye strain: 47%, burning/irritation: 43%, itching: 39%, light sensitivity: 38%, eye pain: 37%, blurred vision: 34%, dryness: 35%, difficulty focusing: 34%), musculoskeletal symptoms (neck pain: 45%, shoulder pain: 30%, back pain: 28%), and neuropsychological symptoms (headache: 50%, difficulty concentrating: 44%, nausea: 29%, dizziness: 11%, sleep or memory disturbances: 32%). Do you think these figures accurately reflect the symptom profile of visual fatigue?

- Accurate
- Some figures are questionable, or the assessment was incomplete

8. Your opinion: [Open-ended]

9. Which symptoms should be included in the diagnostic criteria for visual fatigue? [Multiple choice]

- Eye dryness
- Eye Pain
- Burning sensation
- Itching
- Tearing
- Foreign body sensation
- Excessive blinking
- Eye redness
- Heavy eyelids
- Eye tiredness
- Crossing eye
- Eye tightness
- Eye discomfort
- Eye soreness
- Double vision
- Photophobia
- Difficulty focusing for near vision
- Colored halos
- Blurred vision
- Worsening sight
- Have to strain to see well
- Headache
- Dizziness or nausea
- Anxiety
- Depression
- Loss of concentration
- Memory or sleep disturbances
- Musculoskeletal symptoms

10. Which key symptoms should be prioritized in the diagnostic criteria for visual fatigue? [Multiple choice]

- Eye dryness
- Eye Pain
- Burning sensation
- Itching
- Tearing
- Foreign body sensation
- Excessive blinking
- Eye redness
- Heavy eyelids
- Eye tiredness
- Crossing eye
- Eye tightness
- Eye discomfort
- Eye soreness
- Double vision
- Photophobia
- Difficulty focusing for near vision
- Colored halos
- Blurred vision
- Worsening sight
- Have to strain to see well
- Headache
- Dizziness or nausea
- Anxiety
- Depression
- Loss of concentration
- Memory or sleep disturbances
- Musculoskeletal symptoms

11. What do you think are the main impacts or consequences of visual fatigue? [Multiple choice]

- Vision decline over time (e.g., myopia progression, accommodative dysfunction)
- Reduced productivity
- Impaired quality of life
- Increased risk of musculoskeletal problems (e.g., neck pain, shoulder pain)
- Mental health issues (e.g., stress, anxiety)
- Others: [Open-ended]

Definition

12. Why is it important to standardize definition for visual fatigue? [Multiple choice]

- Support the establishment of diagnostic criteria
- Improve study consistency.
- Enable accurate prevalence estimates.
- Enable reliable symptom identification.
- Facilitate early detection.

- Support prevention and treatment.
- Others: [Open-ended]

13. Based on the review, we propose the following preliminary definition of visual fatigue: **Visual fatigue is a condition characterized by key ocular symptoms such as eye strain, tiredness, dryness, or discomfort, with or without associated musculoskeletal or neuropsychological symptoms. It arises following exposure to risk factors and worsens with longer or more intense visual tasks.**

Based on your expertise, do you think this definition is appropriate?

- Appropriate
- Parts of the definition are inappropriate

14. Which parts of the definition are inappropriate: [Open-ended]

Assessment Standards

15. Which subjective evaluation method do you consider the best for assessing visual fatigue, balancing both reliability and feasibility? (If you choose Other, please type the method and your reason in the “Other” box.)

- Computer Vision Syndrome Questionnaire (CVS-Q)
- Convergence Insufficiency Symptom Survey (CISS)
- The Computer-Vision Symptom Scale (CVSS17)
- Asthenopia Symptom Questionnaire (ASQ-11)
- Others: [Open-ended]

16. What are the limitations of current assessment tools for visual fatigue? [Multiple choice]

- Lack of standardized criteria for diagnosing visual fatigue.
- Focused on specific conditions (e.g., computer use, convergence insufficiency) rather than general visual fatigue.
- Failure to capture the full range of symptoms (e.g., neuropsychological or musculoskeletal symptoms).
- Treat all symptoms equally, despite differences in clinical significance.
- Inability to assess how symptoms worsen with prolonged visual tasks.
- Questionnaires are too lengthy and time-consuming to complete.
- Others: [Please specify]..

17. Which objective evaluation methods do you consider promising for assessing visual fatigue?

Why? (Please type the method and your reason in the “Other” box) [Multiple choice]

- Binocular accommodative and convergence function tests
- Eye tracker
- Break-up time for tear film stability
- Ocular surface temperature
- Critical flicker fusion frequency (CFF)
- Others: [Open-ended]

18. Based on the review, we propose the following diagnostic criteria for visual fatigue:

- ✧ At least one core ocular symptom that worsens with prolonged visual tasks, with or without musculoskeletal or neuropsychological symptoms.
- ✧ Symptoms triggered or worsened by at least one risk factor.
- ✧ Symptoms occurring frequently for over 1 month or severely impacting daily life in a shorter period.

Based on your expertise, do you think this definition is appropriate?

- Appropriate
- Parts of the criteria are inappropriate

19. Which parts of the definition are inappropriate: [Open-ended]
20. What do you think is the most appropriate recall period for symptom reporting in the diagnosis of visual fatigue?
- 1 month
 - 3 months
 - 6 months
 - Others: [Open-ended]
21. Which factors should be excluded before diagnosing visual fatigue? [Multiple choice]
- Uncorrected refractive errors
 - Dry eye
 - Recent eye surgeries (e.g., cataract, refractive surgery)
 - Systemic diseases (e.g., diabetes, autoimmune conditions)
 - Medications causing ocular symptoms (e.g., antihistamines, antidepressants)
 - Others: [Open-ended]
22. When suspecting a patient may have visual fatigue, which examinations must be recommended? [Multiple choice]
- Visual acuity
 - Refraction
 - Intraocular pressure
 - Dry eye evaluation
 - Anterior segment examination
 - Fundus examination
 - Questionnaires
 - Objective evaluation of visual fatigue
 - Others: [Open-ended]
23. Which examinations do you recommend performing in addition to the essential ones? [Multiple choice]
- Visual acuity
 - Refraction
 - Intraocular pressure
 - Dry eye evaluation
 - Anterior segment examination
 - Fundus examination
 - Questionnaires
 - Objective evaluation of visual fatigue
 - Others: [Open-ended]

Other

24. What additional outcomes should this consensus process focus on: [Open-ended]
25. Would you like to recommend other experts to contribute to the consensus: [Open-ended]

Second-round Questionnaire

Section A. Instructions and scales

- Purpose: Rate each recommendation for use in an internationally applicable consensus on visual fatigue.
- Please provide ratings on:
 - Priority for inclusion (1–9; 1=low priority, 9=must include)
- Free-text fields:
 - Proposed edits (wording changes, scope, conditions)
 - Notes/concerns (evidence gaps, context limits)
- Proposed consensus thresholds (to be applied post-survey):
 - Strong consensus: median ≥ 7 and IQR ≤ 2 on Appropriateness, with $\geq 70\%$ ratings 7–9
 - Conditional consensus: median ≥ 7 and IQR ≤ 3 or $\geq 60\%$ ratings 7–9
 - No consensus: median ≤ 6 or IQR ≥ 4 and $< 50\%$ ratings 7–9

Section B. Round 2 items (recommendations to rate)

For each item, complete the rating scale and free-text boxes.

Item 1. Definition

- **Recommendation:** Visual fatigue is a task-related condition characterized by one or more core ocular symptoms that emerge and worsen during sustained visual activities, after excluding ocular surface diseases, uncorrected refractive error, recent ocular surgery, and relevant systemic/medication causes.
- **Ratings:** Please choose a rating (1–9). (1 = lowest priority for inclusion; 9 = highest priority)*
- **Proposed edits:** wording changes, scope, conditions (optional)
- **Notes/concerns:** evidence gaps, context limits (optional)

Item 2. Core symptom set (prioritized)

- **Recommendation:** Prioritize eye strain/tiredness, difficulty focusing at near, have to strain to see well, and task-related headache as core symptoms; consider eye discomfort and heavy eyelids as supportive but non-core symptoms.
- **Ratings:** Please choose a rating (1–9). (1 = lowest priority for inclusion; 9 = highest priority)*
- **Proposed edits:** wording changes, scope, conditions (optional)
- **Notes/concerns:** evidence gaps, context limits (optional)

Item 3. Exclusion list (must be assessed before diagnosis)

- **Recommendation:** Exclude or treat first: uncorrected refractive error; clinically significant dry eye disease; recent ocular surgery (e.g., cataract/refractive) within 3 months; systemic diseases or medications known to cause ocular symptoms (e.g., antihistamines, antidepressants).
- **Ratings:** Please choose a rating (1–9). (1 = lowest priority for inclusion; 9 = highest priority)*
- **Proposed edits:** wording changes, scope, conditions (optional)
- **Notes/concerns:** evidence gaps, context limits (optional)

Item 4. Recall period

- **Recommendation:** Use a standard 1-month recall period for symptom reporting; allow a 2-week recall when symptoms cause significant functional impairment (e.g., reduced productivity, impaired study/work performance).
- **Ratings:** Please choose a rating (1–9). (1 = lowest priority for inclusion; 9 = highest priority)*
- **Proposed edits:** wording changes, scope, conditions (optional)
- **Notes/concerns:** evidence gaps, context limits (optional)

Item 5. Functional impact

- **Recommendation:** Include at least one functional impact indicator (e.g., reduced productivity, impaired quality of life, mental health issues) in diagnostic framework.
- **Ratings:** Please choose a rating (1–9). (1 = lowest priority for inclusion; 9 = highest priority)*
- **Proposed edits:** wording changes, scope, conditions (optional)
- **Notes/concerns:** evidence gaps, context limits (optional)

Item 6. Diagnostic framework

- **Recommendation:**

Diagnose visual fatigue when all four are met:

(a) ≥ 1 core symptom occurs/worsens during sustained visual tasks;

(b) symptoms are triggered and recur with similar tasks;

(c) objective assessment shows relevant abnormalities (e.g., impaired accommodative function, reduced reading speed);

(d) functional impact is present; and

(e) key exclusions (e.g. dry eye disease) have been assessed and addressed.

Classify as definite vs probable depending on completeness.

- **Ratings:** Please choose a rating (1–9). (1 = lowest priority for inclusion; 9 = highest priority)*
- **Proposed edits:** wording changes, scope, conditions (optional)
- **Notes/concerns:** evidence gaps, context limits (optional)

Item 7. Essential examinations

- **Recommendation:** Minimum examinations: visual acuity, refraction, dry eye evaluation (e.g., symptom/sign screening such as TBUT). Additional examination when available: anterior segment exam, intraocular pressure; questionnaires, and objective examination of visual fatigue.
- **Ratings:** Please choose a rating (1–9). (1 = lowest priority for inclusion; 9 = highest priority)*
- **Proposed edits:** wording changes, scope, conditions (optional)

- **Notes/concerns:** evidence gaps, context limits (optional)

Item 8. Subjective assessment tool strategy

- **Recommendation:** Use the CVS-Q as an interim screening tool, the ASQ-11 for screening visual fatigue, and the CISS to evaluate reading-related symptoms. This approach should be used until a brief, standardized visual fatigue questionnaire is developed that captures task-related worsening and functional impact and clearly differentiates visual fatigue from dry eye.
- **Ratings:** Please choose a rating (1–9). (1 = lowest priority for inclusion; 9 = highest priority)*
- **Proposed edits:** wording changes, scope, conditions (optional)
- **Notes/concerns:** evidence gaps, context limits (optional)

Item 9. Objective assessments (supportive)

- **Recommendation:** Objective assessments should include basic binocular/accommodative assessments (near point of convergence, fusional reserves, accommodative amplitude/facility) for patients with near-work symptoms or task-related diplopia/blur. Consider eye tracking (fixation stability, blink metrics) and break-up time for tear film stability as supportive tests. Specialized examinations, such as critical flicker fusion frequency and accommodative microfluctuations (e.g., high-frequency component), may be considered for specific purposes, such as research or comparative evaluation of treatment efficacy.
- **Ratings:** Please choose a rating (1–9). (1 = lowest priority for inclusion; 9 = highest priority)*
- **Proposed edits:** wording changes, scope, conditions (optional)
- **Notes/concerns:** evidence gaps, context limits (optional)

Item 10. Modifiable risk factors to prioritize

- **Recommendation:** Target uncorrected refractive error, prolonged screen time, lack of regular breaks during screen use, ambient conditions, short or poor-quality sleep, control of prior eye disease, and contact lens wear practices.
- **Ratings:** Please choose a rating (1–9). (1 = lowest priority for inclusion; 9 = highest priority)*
- **Proposed edits:** wording changes, scope, conditions (optional)
- **Notes/concerns:** evidence gaps, context limits (optional)

Item 11. Populations for special attention

- **Recommendation:** Focus on visually intensive workers (e.g., IT professionals), students with prolonged screen exposure, and children with refractive error.
- **Ratings:** Please choose a rating (1–9). (1 = lowest priority for inclusion; 9 = highest priority)*
- **Proposed edits:** wording changes, scope, conditions (optional)
- **Notes/concerns:** evidence gaps, context limits (optional)

Item 12. Management principles

- **Recommendation:** Use a stepwise approach: correct refractive error; schedule regular breaks (e.g., 20-20-20); improve sleep quality; adjust ambient humidity/anti-glare; address binocular/accommodative anomalies; manage coexisting dry eye separately.
- **Ratings:** Please choose a rating (1–9). (1 = lowest priority for inclusion; 9 = highest priority)*
- **Proposed edits:** wording changes, scope, conditions (optional)
- **Notes/concerns:** evidence gaps, context limits (optional)

Item 13. Outcomes to track in the future

- **Recommendation:** In studies and practice, track productivity/school performance, quality of life, musculoskeletal symptoms (neck/shoulder pain), mental health indicators (stress/anxiety), and reading speed.
- **Ratings:** Please choose a rating (1–9). (1 = lowest priority for inclusion; 9 = highest priority)*
- **Proposed edits:** wording changes, scope, conditions (optional)
- **Notes/concerns:** evidence gaps, context limits (optional)

Supplementary 2

Table S1. Results of the Round 1 Delphi survey (N = 14)

Panel A. Closed-ended and multiple-response questions

Question	Response category/item	n/N (%)
Epidemiology		
Q1	Accurate	11/14 (78.6%)
	Some figures were questionable or the assessment was incomplete	3/14 (21.4%)
Q3	Accurate	10/14 (71.4%)
	Some figures were questionable or important risk factors were missing	4/14 (28.6%)
Q5	Uncorrected refractive error (e.g., myopia, hyperopia, astigmatism)	13/14 (92.9%)
	Prolonged screen time	12/14 (85.7%)
	Poor ergonomics (e.g., sitting posture, non-adjustable screens)	9/14 (64.3%)
	Ambient conditions (e.g., low humidity, air conditioning, air pollution, windy environments)	10/14 (71.4%)
	Short sleep duration	12/14 (85.7%)
	Control of prior eye disease	11/14 (78.6%)
	Contact lens wear	9/14 (64.3%)
	Dark indoor illumination	9/14 (64.3%)
	Indoor humidity	7/14 (50.0%)
	Lack of regular breaks during screen use	12/14 (85.7%)
	Lack of exposure to natural light	7/14 (50.0%)
	Lack of computer-use knowledge	5/14 (35.7%)
	Absence of anti-glare filters	7/14 (50.0%)
	Other, specified	1/14 (7.1%)
Q6	Workers in visually intensive occupations (e.g., IT professionals)	13/14 (92.9%)
	Students with prolonged screen exposure	12/14 (85.7%)
	Children with refractive error	10/14 (71.4%)
	Individuals in low-income or less-developed regions	5/14 (35.7%)
	Elderly populations	7/14 (50.0%)
	Other, specified	0/14 (0.0%)
Symptoms and consequences		
Q7	Accurate	10/14 (71.4%)
	Some figures were questionable or the assessment was incomplete	4/14 (28.6%)
Q9	Eye dryness	6/14 (42.9%)
	Eye pain	9/14 (64.3%)
	Burning sensation	7/14 (50.0%)

Question	Response category/item	n/N (%)
	Itching	4/14 (28.6%)
	Tearing	6/14 (42.9%)
	Foreign body sensation	6/14 (42.9%)
	Excessive blinking	4/14 (28.6%)
	Eye redness	5/14 (35.7%)
	Heavy eyelids	10/14 (71.4%)
	Eye tiredness	12/14 (85.7%)
	Crossing eye	5/14 (35.7%)
	Eye tightness	7/14 (50.0%)
	Eye discomfort	8/14 (57.1%)
	Eye soreness	7/14 (50.0%)
	Double vision	6/14 (42.9%)
	Photophobia	5/14 (35.7%)
	Difficulty focusing for near vision	12/14 (85.7%)
	Colored halos	3/14 (21.4%)
	Blurred vision	8/14 (57.1%)
	Worsening sight	5/14 (35.7%)
	Have to strain to see well	9/14 (64.3%)
	Headache	9/14 (64.3%)
	Dizziness or nausea	3/14 (21.4%)
	Anxiety	0/14 (0.0%)
	Depression	1/14 (7.1%)
	Loss of concentration	6/14 (42.9%)
	Memory or sleep disturbances	1/14 (7.1%)
	Musculoskeletal symptoms	6/14 (42.9%)
Q10	Eye dryness	4/14 (28.6%)
	Eye pain	7/14 (50.0%)
	Burning sensation	5/14 (35.7%)
	Itching	1/14 (7.1%)
	Tearing	3/14 (21.4%)
	Foreign body sensation	4/14 (28.6%)
	Excessive blinking	5/14 (35.7%)

Question	Response category/item	n/N (%)
Q11	Eye redness	1/14 (7.1%)
	Heavy eyelids	4/14 (28.6%)
	Eye tiredness	9/14 (64.3%)
	Crossing eye	4/14 (28.6%)
	Eye tightness	5/14 (35.7%)
	Eye discomfort	8/14 (57.1%)
	Eye soreness	3/14 (21.4%)
	Double vision	6/14 (42.9%)
	Photophobia	1/14 (7.1%)
	Difficulty focusing for near vision	8/14 (57.1%)
	Colored halos	1/14 (7.1%)
	Blurred vision	8/14 (57.1%)
	Worsening sight	3/14 (21.4%)
	Have to strain to see well	5/14 (35.7%)
	Headache	6/14 (42.9%)
	Dizziness or nausea	2/14 (14.3%)
	Anxiety	0/14 (0.0%)
	Depression	0/14 (0.0%)
	Loss of concentration	3/14 (21.4%)
	Memory or sleep disturbances	1/14 (7.1%)
	Musculoskeletal symptoms	2/14 (14.3%)
	Vision decline over time (e.g., myopia progression, accommodative dysfunction)	7/14 (50.0%)
	Reduced productivity	13/14 (92.9%)
	Impaired quality of life	14/14 (100.0%)
	Increased risk of musculoskeletal problems (e.g., neck pain, shoulder pain)	7/14 (50.0%)
	Mental health issues (e.g., stress, anxiety)	11/14 (78.6%)
	Other, specified	0/14 (0.0%)
Definition		
Q12	Support the establishment of diagnostic criteria	13/14 (92.9%)
	Improve study consistency	13/14 (92.9%)
	Enable accurate prevalence estimates	12/14 (85.7%)
	Enable reliable symptom identification	11/14 (78.6%)

Question	Response category/item	n/N (%)
Q13	Facilitate early detection	10/14 (71.4%)
	Support prevention and treatment	11/14 (78.6%)
	Other, specified	1/14 (7.1%)
	Appropriate	9/14 (64.3%)
	Parts of the definition were inappropriate	5/14 (35.7%)
Assessment and diagnostic criteria		
Q15	Computer Vision Syndrome Questionnaire (CVS-Q)	7/14 (50.0%)
	Convergence Insufficiency Symptom Survey (CISS)	3/14 (21.4%)
	Computer-Vision Symptom Scale (CVSS17)	4/14 (28.6%)
	Asthenopia Symptom Questionnaire (ASQ-11)	5/14 (35.7%)
	Other, specified	3/14 (21.4%)
Q16	Lack of standardized criteria for diagnosing visual fatigue	13/14 (92.9%)
	Focus on specific conditions rather than general visual fatigue	9/14 (64.3%)
	Failure to capture the full range of symptoms	8/14 (57.1%)
	Treat all symptoms equally despite differences in clinical significance	9/14 (64.3%)
	Inability to assess worsening with prolonged visual tasks	8/14 (57.1%)
	Questionnaires are too lengthy and time-consuming	7/14 (50.0%)
	Other, specified	1/14 (7.1%)
Q17	Binocular accommodative and convergence function tests	11/14 (78.6%)
	Eye tracker	7/14 (50.0%)
	Break-up time for tear-film stability	6/14 (42.9%)
	Ocular surface temperature	1/14 (7.1%)
	Critical flicker fusion frequency (CFF)	4/14 (28.6%)
	Other, specified	2/14 (14.3%)
	Appropriate	10/14 (71.4%)
Q18	Parts of the criteria were inappropriate	4/14 (28.6%)
Q20	1 month	7/14 (50.0%)
	3 months	3/14 (21.4%)
	6 months	1/14 (7.1%)
	Other, specified	3/14 (21.4%)
Q21	Uncorrected refractive errors	10/14 (71.4%)
	Dry eye	8/14 (57.1%)
	Recent eye surgeries (e.g., cataract, refractive surgery)	11/14 (78.6%)

Question	Response category/item	n/N (%)
Q22	Systemic diseases (e.g., diabetes, autoimmune conditions)	9/14 (64.3%)
	Medications causing ocular symptoms (e.g., antihistamines, antidepressants)	10/14 (71.4%)
	Other, specified	1/14 (7.1%)
	Visual acuity	14/14 (100.0%)
	Refraction	14/14 (100.0%)
	Intraocular pressure	7/14 (50.0%)
	Dry-eye evaluation	12/14 (85.7%)
	Anterior-segment examination	8/14 (57.1%)
	Fundus examination	4/14 (28.6%)
	Questionnaires	8/14 (57.1%)
	Objective evaluation of visual fatigue	8/14 (57.1%)
	Other, specified	3/14 (21.4%)
Q23	Visual acuity	2/14 (14.3%)
	Refraction	2/14 (14.3%)
	Intraocular pressure	5/14 (35.7%)
	Dry-eye evaluation	3/14 (21.4%)
	Anterior-segment examination	5/14 (35.7%)
	Fundus examination	8/14 (57.1%)
	Questionnaires	6/14 (42.9%)
	Objective evaluation of visual fatigue	6/14 (42.9%)
	Other, specified	2/14 (14.3%)

Panel B. Open-text questions

Question	Response type	Responses received, n
Q2	Open-text response	3
Q4	Open-text response	4
Q8	Open-text response	4
Q14	Open-text response	5
Q19	Open-text response	4
Q24	Open-text response	9
Q25	Open-text response	7

Note. Data are presented as n/N (%) for closed-ended and multiple-response questions. For multiple-response questions, participants could select more than one option; therefore, percentages may sum to more than 100%. For open-text questions, only the number of responses received is reported.

Table S2. Round 2 ratings and items selected for panel discussion

Item	Median	IQR	Ratings 7–9, n/N (%)	Consensus	Experts providing comments, n	Selected for discussion
1	7	2	9/13 (69.2%)	Conditional	5	Yes
2	8	1	12/13 (92.3%)	Strong	3	Yes
3	8	2	12/13 (92.3%)	Strong	3	Yes
4	8	2	12/13 (92.3%)	Strong	1	No
5	9	2	13/13 (100.0%)	Strong	0	No
6	8	2	11/13 (84.6%)	Strong	0	No
7	8	2	12/13 (92.3%)	Strong	2	Yes
8	8	3	9/13 (69.2%)	Conditional	2	Yes
9	8	2	10/13 (76.9%)	Strong	2	Yes
10	8	2	12/13 (92.3%)	Strong	3	Yes
11	9	2	12/13 (92.3%)	Strong	1	No
12	8	2	12/13 (92.3%)	Strong	0	No
13	8	2	10/13 (76.9%)	Strong	0	No

Note. All 13 items had 13 valid ratings. Ratings were provided on a 1–9 scale, with higher scores indicating greater priority for inclusion. Strong consensus was defined as median ≥ 7 , IQR ≤ 2 , and $\geq 70\%$ of ratings within 7–9. Conditional consensus was defined as median ≥ 7 with IQR ≤ 3 , or $\geq 60\%$ of ratings within 7–9. Items were selected for panel discussion if IQR > 2 or if substantive free-text comments were provided by at least two experts. *Abbreviations:* IQR, interquartile range.