

FACE-Q | Aesthetics[©]

A Guide for Researchers and Clinicians

USER'S GUIDE

VERSION 1.0

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1. What is the FACE-Q | Aesthetics©?

The FACE-Q© is a patient-reported outcome (PRO) measure that can be used to measure outcomes of aesthetic facial procedures and products from the patient's perspective. The FACE-Q© can be used to measure outcomes that matter to patients having any type of surgical or minimally invasive facial aesthetic treatment.

The FACE-Q© measures 3 domains: Facial Appearance, Health-Related Quality of Life and Adverse Effects. These domains form the basis of the FACE-Q© conceptual framework. Each domain includes multiple scales and/or checklists. The FACE-Q© modular approach means that only the subset of scales most relevant to a specific research objective or clinical patient population need be administered.

2. How was the FACE-Q | Aesthetics© Developed?

Figure 1 shows the multiphase mixed methods approach used by our team to develop PRO measures. The FACE-Q© conceptual framework was developed from extensive qualitative research with facial aesthetic patients (50 initial interviews and 35 cognitive interviews), close examination of the research literature and engagement of 26 healthcare professionals working with facial rejuvenation patients. We followed internationally recommended guidelines for patient-reported outcome instrument development to ensure the FACE-Q© meets requirements of regulatory bodies.

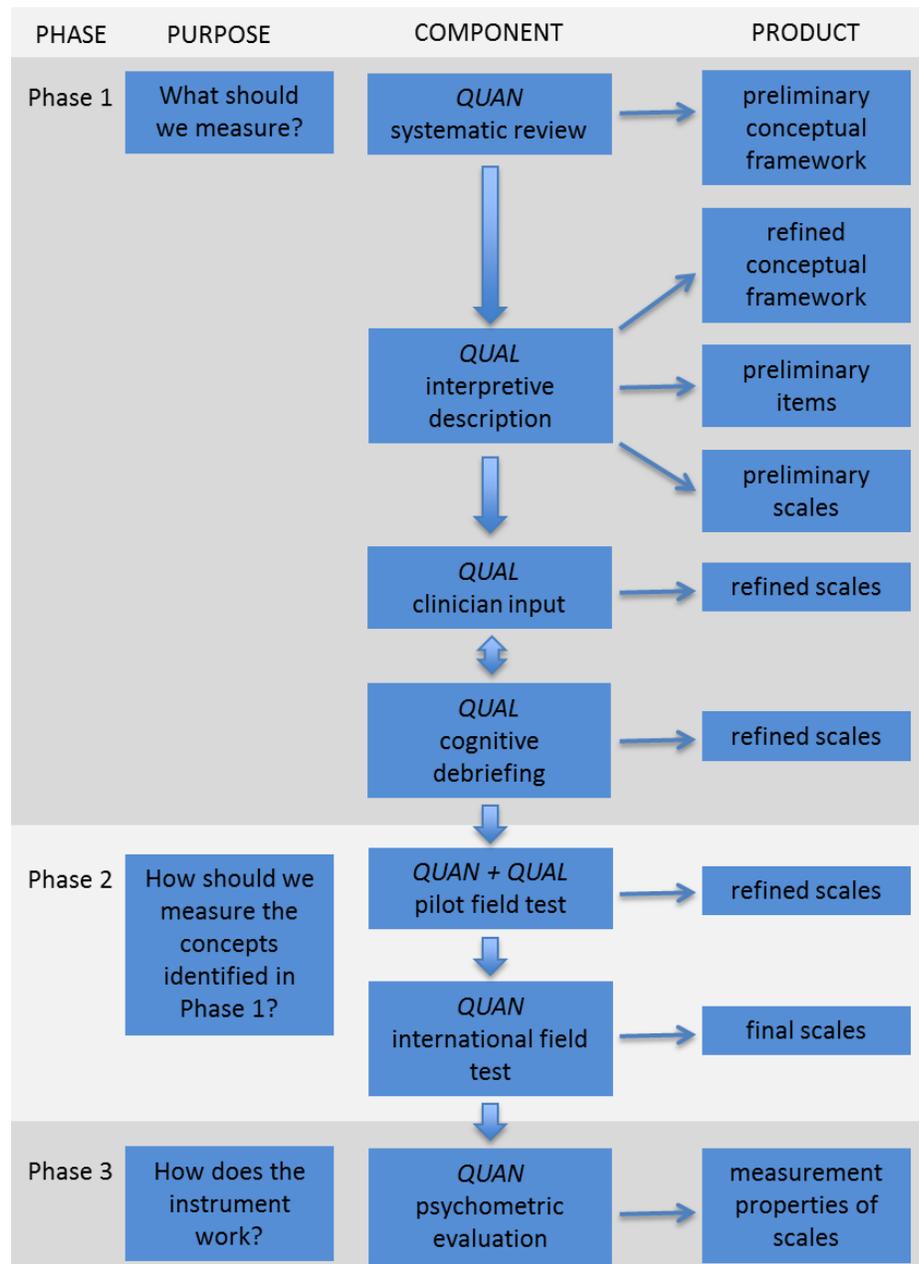
Each FACE-Q© scale is composed of a series of items (or questions) that evaluate a concept of interest. Patient responses to items are on a four-point scale and are asked to answer with their face/facial appearance in mind. Answers for a scale are summed and converted to a score from 0 to 100. For most FACE-Q© scales, a higher score indicates a better outcome. There is no total score for the FACE-Q©, only scores for each independently functioning scale.

The FACE-Q© represents a new generation PRO measure that was developed using a modern psychometric approach called Rasch Measurement Theory (RMT). In RMT, scales that compose a PRO measure are each designed to measure and score a unidimensional construct. A RMT scale can be conceptualised as a ruler, with an ordered arrangement or hierarchy of items from a low to high 'amount' of the construct. For example, the items of the Satisfaction with Facial Appearance scale measure appearance with a set of items that span a clinical hierarchy from "...how symmetric your face looks?" to "...how your face looks under bright lights?"

RMT analysis provides interval-level measurement, or a scale where the notches on the scale are evenly spaced, as opposed to ordinal-level measurement, or a scale where the notches are not necessarily evenly spaced. Interval-level measurement allows for accurate tracking of change over time.

This modern psychometric RMT approach, together with extensive qualitative research with patients in the development of the FACE-Q©, are what set the FACE-Q© apart from other PRO measures in the same clinical area.

Figure 1: The multiphase mixed methods approach for developing the PRO measures (Reprinted from Riff KW, Tsangaris E, Goodacre T, et al. International multiphase mixed methods study protocol to develop a cross-cultural patient-reported outcome instrument for children and young adults with cleft lip and/or palate. *BMJ Open*. 2017;7(1):015467.)



3. FACE-Q |Aesthetics© Scales

The table below shows the FACE-Q© scales, including number of items, response options, time frame and grade reading level. Below Table 1 is a brief description of each scale.

| Name of scale | Items | Response options | Recall period | FK grade |
|--|-------|-------------------------------|---------------|----------|
| Appearance | | | | |
| Satisfaction with facial appearance | 10 | dissatisfied/ satisfied | past week | 0.9 |
| Satisfaction with skin | 12 | dissatisfied/ satisfied | past week | 2.5 |
| Satisfaction with forehead, eyebrows | 6 | dissatisfied/ satisfied | past week | 6.2 |
| Satisfaction with eyes | 7 | dissatisfied/ satisfied | past week | 2.1 |
| Satisfaction with eyelashes | 7 | dissatisfied/ satisfied | past week | 6.2 |
| Appraisal of lower eyelids | 7 | dissatisfied/ satisfied | past week | 5.0 |
| Appraisal of upper eyelids | 7 | dissatisfied/ satisfied | past week | 5.7 |
| Satisfaction with cheeks | 5 | dissatisfied/ satisfied | past week | 2.6 |
| Satisfaction with cheekbones | 10 | dissatisfied/ satisfied | past week | 4.1 |
| Satisfaction with nose | 10 | dissatisfied/ satisfied | past week | 0.8 |
| Satisfaction with nostrils | 5 | dissatisfied/ satisfied | past week | 1.4 |
| Satisfaction with lips | 10 | dissatisfied/ satisfied | past week | 1.0 |
| Satisfaction with lower face, jawline | 5 | dissatisfied/ satisfied | past week | 3.0 |
| Satisfaction with chin | 10 | dissatisfied/ satisfied | past week | 1.1 |
| Appraisal of area under the chin | 5 | not at all/extremely bothered | past week | 2.8 |
| Appraisal of neck | 10 | not at all/extremely bothered | past week | 1.6 |
| Appraisal of lines: overall | 10 | not at all/extremely bothered | past week | 0.2 |
| Appraisal of lines: forehead | 7 | not at all/extremely bothered | past week | 3.5 |
| Appraisal of lines: between eyebrows | 7 | not at all/extremely bothered | past week | 5.6 |
| Appraisal of lines: crow's feet | 7 | not at all/extremely bothered | past week | 0.3 |
| Appraisal of lines: lips | 6 | not at all/extremely bothered | past week | 2.8 |
| Appraisal of lines: marionette | 7 | not at all/extremely bothered | past week | 4.8 |
| Appraisal of lines: nasolabial folds | 5 | not at all/extremely bothered | past week | 6.0 |
| Health-related quality of life | | | | |
| Aging appraisal (perception of appearance in context of facial aging) | 7 | agree/ disagree | today | 2.8 |
| Age visual analogue scale (perceived age in comparison to actual age) | 1 | -15 years to + 15 years | n/a | 3.6 |
| Appearance-related psychosocial distress | 8 | agree/ disagree | n/a | 2.7 |
| Early life impact of treatment | 12 | not at all/most of the time | past 2 days | 8.4 |
| Expectations (how appearance and quality of life might change after treatment) | 8 | agree/ disagree | n/a | 1.5 |
| Psychological function | 10 | agree/ disagree | past week | 4.5 |
| Recovery early symptoms | 17 | not at all/extremely bothered | past 2 days | 6.3 |
| Satisfaction with decision | 6 | agree/ disagree | n/a | 0.2 |
| Satisfaction with outcome | 6 | agree/ disagree | n/a | 3.0 |

| | | | | |
|--|----|-------------------------------|-----------|-----|
| Social function | 8 | agree/ disagree | past week | 4.9 |
| Adverse effects | | | | |
| Adverse effects: cheeks, lower face, neck | 15 | not at all/extremely bothered | n/a | 4.7 |
| Adverse effects: eyes | 6 | not at all/extremely bothered | n/a | 9.7 |
| Adverse effects: forehead, eyebrows, scalp | 12 | not at all/extremely bothered | n/a | 7.3 |
| Adverse effects: lips | 8 | not at all/extremely bothered | n/a | 4.7 |
| Adverse effects: nose | 4 | not at all/extremely bothered | n/a | 6.2 |
| Adverse effects: skin | 10 | not at all/extremely bothered | n/a | 3.0 |

FK = Flesch-Kincaid grade level.

APPEARANCE SCALES

Satisfaction with facial appearance: This scale measures the appearance of the entire face with items that ask about symmetry and proportion, as well as how the face looks in photos, bright lights and at the end of the day.

Satisfaction with skin: This scale measures the appearance of facial skin (complexion) with items that ask about tone, radiance and smoothness, as well as appearance upon waking up and at the end of the day.

Satisfaction with forehead and eyebrows: This scale measures the appearance of the forehead with items that ask about position and height of eyebrows, as well as how youthful and smooth the forehead looks.

Satisfaction with eyes: This scale measures the appearance of eyes with items that ask about how youthful, attractive and open the eyes look, as well as their shape.

Satisfaction with eyelashes: This scale measures the appearance of natural eyelashes with items that ask about fullness, length and color, as well as how attractive and feminine the eyelashes make the eyes look.

Appraisal of upper eyelids: This scale measures the appearance of the upper eyelids with items that ask about how droopy, saggy or heavy the eyelids look, as well as how tired or old they make someone look.

Appraisal of lower eyelids: This scale measures the appearance of the area under the eyes with items that ask about the bags and wrinkled skin located in this area, as well as how tired or old these features make someone look.

Satisfaction with cheeks: This scale measures the appearance of cheeks (side of the face below cheekbones) with items that ask about fullness, symmetry and attractiveness.

Satisfaction with cheekbones: This scale measures the appearance of cheekbones with items that ask about shape, contour and symmetry, as well as how attractive, high and well-defined the cheekbones look.

Satisfaction with nose: This scale measures the appearance of the nose with items that ask about size, length and width, as well as how the nose looks in profile and in photos.

Satisfaction with nostrils: This scale measures the appearance of nostrils with items that ask about size, shape and how well-matched they look.

Satisfaction with lips: This scale measures the appearance of the lips with items that ask about size, shape and fullness, as well as how their lips suit their face and how the lips look when smiling.

Satisfaction with lower face and jawline: This scale measures the appearance of the lower face (lower cheeks and jawline) with items that ask about how prominent and sculpted the jawline looks.

Satisfaction with chin: This scale measures the appearance of the chin with items that ask about size, width and shape, as well as how the chin looks from angles and in photos.

Appraisal of area under chin: This scale measures the appearance of the area under the chin with items that ask about loose and sagging skin, as well as how the chin looks in profile.

Appraisal of neck: This scale measures the appearance of the neck with items that ask about hanging and sagging skin, as well as how the neck looks in profile and in collared shirts.

Appraisal of lines: overall: This scale measures the appearance of lines on the entire face with items that ask about lines seen in photos, under bright lights, when smiling or frowning and how old the lines make a person look.

Appraisal of lines: forehead: This scale measures the appearance of horizontal forehead lines with items that ask about the quantity and deepness of the lines, as well as how old or tired they make a person look.

Appraisal of lines: between eyebrows: This scale measures the appearance of lines between eyebrows with items that ask about the lines that can be seen when frowning, concentrating or when relaxed, as well as how old or angry these lines makes a person look.

Appraisal of lines: crow's feet: This scale measures the appearance of crow's feet (lines at the outer corner of your eyes) with items that ask about the lines that can be seen when smiling or squinting, as well as how old or tired they make a person look.

Appraisal of lines: lips: This scale measures the appearance of lines around your lips with items that ask about the quantity and deepness of the lines, as well as how old they make a person look.

Appraisal of lines: marionette: This scale measures the appearance of marionette lines (lines that run downward from the corner of the lips to your chin) with items that ask about how old, tired, angry or sad they make a person look.

Appraisal of lines: nasolabial folds: This scale measures the appearance of nasolabial folds (deep lines that run downward from the sides of your nose) with items that ask about the lines seen when relaxed or smiling, as well as how old they make a person look.

HEALTH-RELATED QUALITY OF LIFE SCALES

Ageing appraisal: This scale measures how a respondent feels about the age his/her face looks with items that ask about looking in the mirror and photos.

Age appraisal visual analogue scale: This VAS provides a rating of perceived age in comparison to chronological age on a visual analogue scale that runs from -15 years to +15 years.

Appearance-related psychosocial distress: This scale measures appearance-related distress using a range of emotional responses to appearance, e.g., feeling anxious, stressed and unhappy.

Early life impact of treatment: This scale measures how a respondent feels after an aesthetic treatment with items asking about ability to eat, drink and sleep, as well as in social situations.

Expectations: This scale measures how someone expects their life will change after a cosmetic procedure.

Psychological function: This scale asks respondents to answer with their facial appearance in mind items measuring concepts such as feeling happy, confidence, self-acceptance, etc.

Recovery early symptoms: This scale measures post-treatment recovery with items that ask about discomfort, swelling, itching, tingling and pain.

Satisfaction with decision: This scale measures satisfaction with their decision to undergo a facial procedure, e.g., worth the time, effort and cost.

Satisfaction with outcome: This scale measures satisfaction with the result of a facial procedure, e.g., pleased with the result, result is fantastic.

Social function: This scale asks respondents to answer with facial appearance in mind items measuring social interactions with familiar people as well as strangers.

ADVERSE EFFECTS CHECKLISTS

Cheeks, lower face and neck: This checklist asks about problems related to the lower face (cheeks) and neck with items that ask about irritation, swelling, bruising and scars.

Eyes: This checklist asks about problems related to eyes and their surrounding areas with items that ask about irritation, dryness and scars.

Forehead, scalp and eyebrows: This checklist asks about problems related to the forehead, scalp and eyebrows with items that ask about pain, tingling, hairline and scars.

Lips: This checklist asks about problems related to the lips with items that ask about asymmetry, swelling and difficulty smiling or laughing.

Nose: This checklist asks about problems related to the nose with items that ask about tenderness, swelling and difficulty breathing.

Skin: This checklist asks about problems related to facial skin with items that ask about redness, itching, burning and skin tone.

4. How Specific FACE-Q | Aesthetics© Scales Are Used

It is important to note that patients do not need to complete all of the available FACE-Q© scales in any given study or clinical encounter. Each scale is designed to function independently. Patients can thus be asked to complete a subset of scales relevant to their situation. The FACE-Q© scales that measure HR-QOL are relevant to all facial aesthetic patients. The FACE-Q© scales that measure Satisfaction with Appearance and Adverse Effects are specific to facial areas (e.g., eyes, nose, cheeks). You also have the ability to create your own custom combinations for your patients or research study.

5. Administration of the FACE-Q | Aesthetics© Scales

The FACE-Q© scales are self-administered. Each scale takes only a few minutes to complete. Patients are given instructions in an introductory paragraph at the beginning of the questionnaire. The FACE-Q© is available in paper and pencil format or REDCap for electronic data collection.

6. Scoring the FACE-Q | Aesthetics© Scales

There is no overall or total FACE-Q© score, only scores for each independent scale. FACE-Q© scales are easy to score. The raw scores for items that make up a scale are added to provide a total score. The total score is converted to a score from 0 to 100. Higher scores for all scales, with two exceptions, reflects a better outcome. The exceptions include Expectations where higher scores indicate higher (more unrealistic) expectations, and Appearance-related Distress, where higher scores indicate more distress. If missing data is less than 50% of the scale's items, insert the mean of the completed items. Use the Conversion Tables available from the authors to convert the raw summed scale score into a score from 0 (worst) to 100 (best).

7. Conditions of Use of the FACE-Q | Aesthetics© Scales

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Use of the FACE-Q© questionnaire requires completion of a User's agreement. The use of the FACE-Q© and its modules in non-profit academic research and in clinical care is free of charge. The use of the FACE-Q© by "for-profit" organizations is subject to a fee per module per protocol.

For questions regarding fees to be paid by ‘for-profit organizations’, please contact:

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8. Frequently Asked Questions

Do I need to sign a license to use the FACE-Q | Aesthetics© scales?

Yes, you must sign a licence agreement for any use of the questionnaires, whether it is commercial or academic. The questionnaires are protected by copyright and are the exclusive property of the universities where they were developed.

Does it cost money to use the FACE-Q | Aesthetics© scales?

Use of FACE-Q© scales is free to non-profit users. For-profit users need to pay a licensing fee through Memorial Sloan Kettering Cancer Centres (see conditions of use above).

Do I have to use all of the FACE-Q | Aesthetics© scales?

Each scale functions independently, therefore patients can be asked to complete some or all FACE-Q© scales. It is not necessary for a patient to complete all of the scales as there is no overall or total FACE-Q© score. A researcher or clinician may therefore select a subset of scales depending on the particular purpose of the study or use.

Can I delete or add or change any items or response options in any of the FACE-Q | Aesthetics© scales?

You cannot make any changes to the wording of any items or response options of the FACE-Q©. There are three main reasons why deleting or adding items is not allowed. The first is that deleting or adding items would nullify the psychometric properties of FACE-Q© scales. The second reason is that by deleting or adding items, it would then not be possible to score the FACE-Q© and you would not be able to compare findings with those of other FACE-Q© studies. Finally, adding or deleting items is prohibited under copyright laws.

Can I translate FACE-Q | Aesthetics© scales into a new language?

Yes, you can translate the FACE-Q© into different languages. Check our website and with our team first to make sure there is not already a translation in the language you need. You will need to sign a licensing agreement. Please note that the developers of the FACE-Q© own the copyright of all translation of the FACE-

Q©.

Are there specific time points when patients complete the scales?

A researcher or clinician can decide the time points he/she would like to administer the scales.

Is there an electronic version I can use?

A template file of the FACE-Q© for administration via the Research Electronic Data Capture (REDCap) portal is available. Please contact the authors for more information.

9. FACE-Q | Aesthetics© Publications

1. East C, Badia L, Marsh D, Pusic A, Klassen AF. Measuring Patient-Reported Outcomes in Rhinoplasty Using the FACE-Q: A Single Site Study. *Facial Plast Surg*. 2017 Oct;33(5):461-9.
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12. Klassen AF, Cano SJ, Scott A, Snell L, Pusic AL. Measuring patient-reported outcomes in facial aesthetic patients: development of the FACE-Q. *Facial Plast Surg*. 2010 Aug;26(4):303-9.
13. Kosowski TR, McCarthy C, Reavey PL, Scott AM, Wilkins EG, Cano SJ, Klassen AF, Carr N, Cordeiro PG, Pusic AL. A systematic review of patient-reported outcome measures after facial cosmetic surgery and/or nonsurgical facial rejuvenation. *Plast Reconstr Surg*. 2009 Jun;123(6):1819-27.