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# The Computer-Generated Figure Rating Scale (CGFRS) for Women

## Own Body (OB) and Ideal Body (IB) Versions

**If you use the CGFRS in your research, please cite as follows:**

Moussally, J. M., Grynberg, D., Goffinet, S., Simon, Y., & Van der Linden, M. (2017). Novel assessment of own and ideal body perception among women: Validation of the Computer-Generated Figure Rating Scale. *Cognitive Therapy and Research*, *41*, 632–644. doi:10.1007/s10608-016-9827-4

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## Description of the CGFRS

The Computer-Generated Figure Rating Scale (CGFRS) is composed of 27 computer-generated women's bodies (without heads) dressed in white panties and undershirts. The bodies were selected from Moussally et al.'s (2017) database and represent a continuum of body shapes from extreme underweight to morbid obesity (estimated BMIs range from 12.69 to 69.56 kg/m<sup>2</sup>). The 27 bodies are distributed into the BMI classes proposed by the World Health Organization (1995, 2000, 2004) as follows: (1) *moderate to severe underweight*: eight bodies with a BMI < 17.00 kg/m<sup>2</sup>; (2) *mild underweight*: three bodies with a BMI between 17.00 and 18.49 kg/m<sup>2</sup>; (3) *normal range*: five bodies with a BMI between 18.50 and 24.99 kg/m<sup>2</sup>; (4) *overweight*: three bodies with a BMI between 25.00 and 29.99 kg/m<sup>2</sup>; and (5) *obesity*: eight bodies with a BMI > 30.00 kg/m<sup>2</sup>.

The CGFRS comes in two different versions to measure the participants' perceptions of their own (CGFRS–OB) and ideal (CGFRS–IB) bodies; both use the same continuum of 27 bodies. In the CGFRS–OB, participants have to indicate which body on the continuum best fits their own body. The raw score obtained corresponds to the subtraction of the participant's BMI from the chosen body's BMI (*perceived BMI*). A positive score indicates that the participant perceives herself as bigger than she is; a negative score indicates that she perceives herself as thinner. The absolute value of this raw score can be computed to obtain the distance (without taking into account the direction of the divergence) between the two BMIs, corresponding to the participant's perception/estimation bias for her own body.

In the CGFRS–IB, participants have to indicate which body on the continuum is the closest to their ideal body. The raw score obtained corresponds to the subtraction of the *ideal BMI* (chosen body's BMI) from the *perceived own BMI* (obtained with the CGFRS–OB). A positive score indicates that the participant would like to be thinner than she perceives herself; a negative score indicates that she would like to be bigger. Again, the absolute value of the raw score allows one to obtain the absolute distance between the two BMIs, corresponding here to the participant's body satisfaction/dissatisfaction (the greater the discrepancy between the *ideal* and the *perceived BMI*, the more dissatisfied she is).

## Instructions for the CGFRS

Prior to starting, place the cursor at the center of the continuum of body shapes (i.e., where the name of the version and the instructions are written).

Start with the OB version and continue with the IB version.

### Written instructions

#### **OB version**

*[English Instructions – translated by the authors]*<sup>1</sup>

Perception of own body

Using the scale below, indicate where you are by clicking under the corresponding body:

*[Original French Instructions]*

*Perception de son propre corps*

*Indiquez où vous vous situez à l'aide de l'échelle ci-dessous en cochant sous l'avatar correspondant:*

#### **IB version**

*[English Instructions – translated by the authors]*

Perception of ideal body

Using the scale below, indicate which of these bodies is the closest to your ideal body by clicking under the corresponding body:

*[Original French Instructions]*

*Perception du corps idéal*

*Indiquez, à l'aide de l'échelle ci-dessous en cochant sous l'avatar correspondant, lequel de ces avatars est le plus proche de votre idéal corporel:*

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<sup>1</sup> The validation of the CGFRS was performed in a French sample. Therefore, the English instructions are not validated.

## Oral instructions

### *Both versions*

- 1) Explain to the participant that she can move the cursor to the left as well as to the right. Illustrate this action by showing the participant that the bodies go from thinner (extreme left of the screen) to bigger (extreme right of the screen).
- 2) Mention that the differences between the computer-generated bodies are minimal, but can be observed at different locations (collarbone, chest, ribs, belly, thighs, etc.).
- 3) Specify to the participant that she can take her time exploring the continuum, observing the bodies, and choosing one.
- 4) When you let the participant complete the task, be careful to replace the cursor at the center of the continuum (in order not to introduce bias toward one side of the continuum to the detriment of the other side).
- 5) If a participant asks a question about the bodies (e.g., asks your opinion to compare two bodies), tell her that you are interested in her own perception of these bodies.

## Description of the Computer-Generated Bodies

Number	Name <sup>1</sup>	BMI <sup>2</sup>	WHO categories <sup>3</sup>
1	T330	12.69	
2	T300	13.19	
3	T270	13.77	Severe Underweight
4	T240	14.28	
5	T210	14.87	
6	T180	15.49	
7	T150	16.12	Moderate Underweight
8	T130	16.64	
9	T100	17.28	Mild Underweight
10	T080	17.77	
11	T060	18.26	
12	T040	18.77	Normal Range
13	T020	19.30	
14	N000	19.79	
15	H010	21.55	
16	H020	23.35	
17	H030	25.37	Overweight (Pre-obese)
18	H040	27.37	
19	H050	29.57	
20	H060	31.84	Obese Class I (Moderately Obese)
21	H070	34.13	
22	H090	39.10	Obese Class II-III (Severely to Very Severely Obese)
23	H110	44.55	
24	H130	50.23	
25	H150	56.26	
26	H170	62.64	
27	H190	69.56	

*Note.* <sup>1</sup> In the stimulus name, “T” corresponds to manipulation of the thinness dimension (i.e., slider “thin”), “H” corresponds to manipulation of the fatness dimension (i.e., slider “heavy”), and “N000” correspond to the basic model proposed by the modeling software (i.e., unmanipulated body). <sup>2</sup> BMI = body mass index. <sup>3</sup> This column refers to the BMI categories proposed by the World Health Organization (1995, 2000, 2004).

The stimuli are derived from the database of Moussally et al. (2017). They can be downloaded, independently of the CGFRS (i.e., as individual stimuli), from the web:

<http://www.unige.ch/fapse/PSY/groups/upnc/BodyImageStimuli.zip>

**If you use the stimuli derived from the database of Moussally et al. (2017) in your research, please cite as follows:**

Moussally, J. M., Rochat, L., Posada, A., & Van der Linden, M. (2017). A database of body-only computer-generated pictures of women for body-image studies: Development and preliminary validation. *Behavior Research Methods*, *49*, 172–183. doi:10.3758/s13428-016-0703-7

## Scoring

### *OB version*

- 1) *Perceived BMI* = BMI of the body chosen by the participant (see BMIs indicated in the table above, which describes body details, p. 5)
- 2) *Raw score* [indicating the distance of the perception/estimation bias as well as its direction] = (Perceived BMI – BMI of the participant)

If the score is positive: the participant perceives herself as bigger than she is.

If the score is negative: the participant perceives herself as thinner than she is.

- 3) *Perception/Estimation Bias* = [ABS(Perceived BMI – BMI of the participant)], where ABS is the absolute value

This score corresponds to the absolute distance between the two BMIs and therefore it could be interpreted as the perception/estimation bias of the participant for her own body.

### *IB version*

- 1) *Ideal BMI* = BMI of the body chosen by the participant (see BMIs indicated in the table above, which describes body details, p. 5)
- 2) *Raw score* [indicating the distance of the ideal to achieve as well as its direction] = (Perceived BMI – Ideal BMI)

If the score is positive: the participant would like to be thinner than how she perceives herself.

If the score is negative: the participant would like to be bigger than how she perceives herself.

- 3) *Satisfaction/Dissatisfaction* = [ABS(Perceived BMI – Ideal BMI)], where ABS is the absolute value

This score corresponds to the absolute distance between the two BMIs and could thus be interpreted as a measure of the participant's **body satisfaction/dissatisfaction**. More specifically, the farther the ideal BMI the participant wants to achieve from how she perceives herself, the more dissatisfied she is (i.e., the greater the score, the higher the absolute value will be).

## Details of CGFRS files

### Infopath files

Software: Microsoft Office InfoPath Filler

File format: XSN

Availability: all computers with the professional version of Microsoft Office

These files allow one to export the participant's data to Excel. Excel will indicate the number of the body that is chosen: You will have to transform the number to the associated BMI (see the table above, p. 5).

### PDF files

Software: Adobe

File format: PDF

Availability: –

These files can be read from any computer. We recommend them if you do not have access to Infopath or if the Infopath files are not displayed correctly on your computer.

Data encoding (i.e., the numbers associated with each body chosen) will have to be done manually. For this purpose, we created scales with the numbers of the bodies indicated (to find the associated BMI, see the table above, p. 5).

## References

- Moussally, J. M., Rochat, L., Posada, A., & Van der Linden, M. (2017). A database of body-only computer-generated pictures of women for body-image studies: Development and preliminary validation. *Behavior Research Methods*, *49*, 172–183. doi:10.3758/s13428-016-0703-7
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