

## COMPLETION OF THE FRENCH TRANSLATION AND LINGUISTIC VALIDATION OF THE BODY-Q

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### SUMMARY

**Background:** The BODY-Q is a new patient-reported outcome (PRO) instrument designed to measure patient perceptions of weight loss and/or body contouring procedure. A report regarding the translation procedure into French and its preliminary results has been previously published. We here describe the finalization of the translation process and cultural validation.

**Materials and methods:** The translation process followed guidelines established by the International Society for Pharmacoeconomics and Outcome Research (ISPOR) and the World Health Organisation (WHO). The process included two forward translations, one backward translation, a review by a panel of expert and cognitive debriefing interviews with patients.

**Results:** The 26 scales of the BODY-Q were translated and adapted into French. Each step of the process allowed to make changes leading to a conceptually and culturally equivalent French version. Backward translation comparison to the English version led to the identification of 16 differences necessitating re-translation. Overall feedback from patients over the final version was excellent.

**Conclusions:** The BODY-Q proved to be a reliable and suited PRO for bariatric and body contouring patients. The thorough method of translation and cultural adaptation allowed us to achieve a conceptually and culturally valid French translation of the BODY-Q.

**Key words:** translation - linguistic validation - patient-reported outcome - body-image - bariatric surgery - body contouring surgery

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### INTRODUCTION

Massive weight loss (MWL) after bariatric surgery often leaves the body with substantial amounts of excess hanging skin that may have both physical and psychological consequences. The goal of post-bariatric body contouring surgery (BCS) is to improve and/or restore body image, physical comfort and/or health-related quality of life (HR-QOL). Evaluation of outcomes from the patients' perspective is becoming increasingly important in clinical research, especially in the context of "reconstructive surgery".

To address the absence of a specific patient-reported outcome (PRO) instrument for MWL and/or BCS patients, Klassen et al. designed the BODY-Q (Klassen et al. 2016).

This specific PRO measures three domains (appearance, HR-QOL and experience of health care) via 26 independently functioning scales and an obesity-specific symptom checklist (Klassen et al. 2014, 2016). Each scale analyses 4 to 10 items (total 201 items) and is evaluated by numerical appreciation (i.e. value from 1 to 4). The raw summed score is then converted into a score from 0 (worse) to 100 (best), without total score, using the Rasch method (Rasch 1993).

The aim of this paper is to present the finalization of the French translation process. Care was taken to ensure a conceptually equivalent translation that could be understood by the French-speaking population, that was

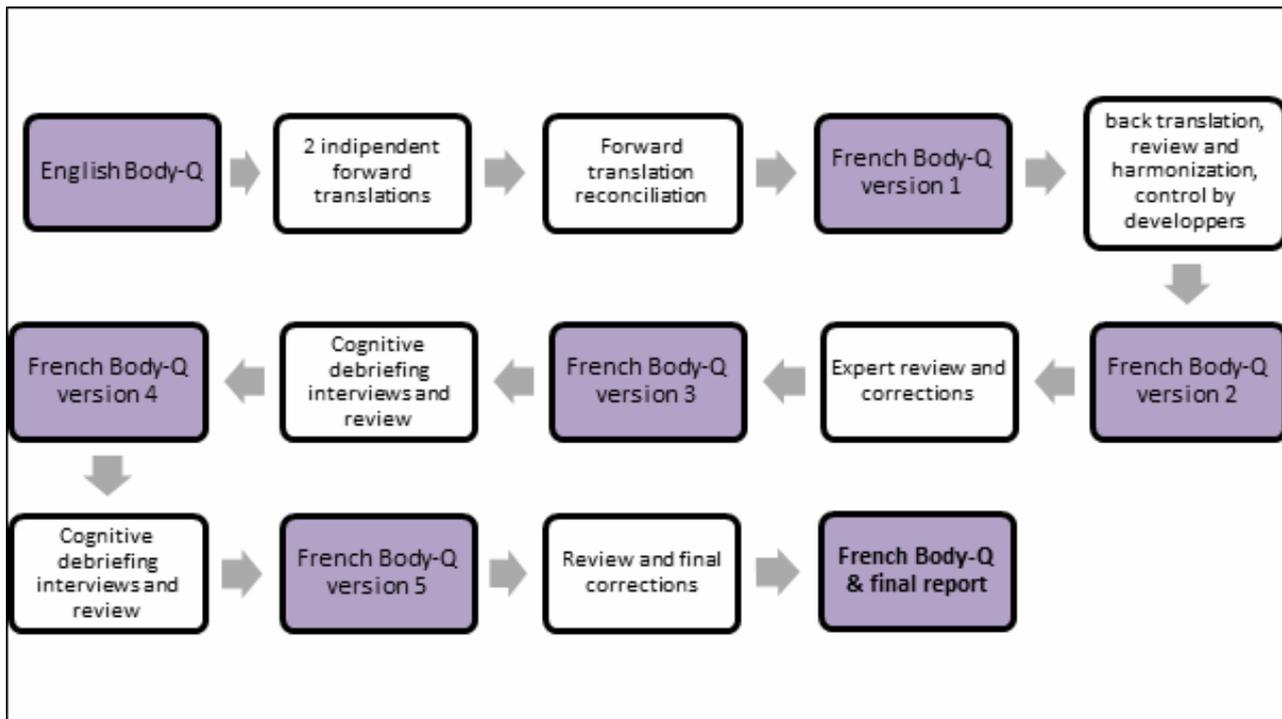
not initially involved in the development of the BODY-Q. The translation was performed following the guidelines for translation and cultural adaptation set forth by the International Society for Pharmacoeconomics and Outcomes Research (ISPOR) and the World Health Organization (WHO) (Wild et al. 2005, WHO 2016).

### MATERIALS AND METHODS

We obtained permission to use the BODY-Q from the developers (Klassen et al. 2016) and ethical approval from a local ethics committee was applied prior beginning of the study. Translators and expert panel participants were recruited and aimed to use a simple and clear wording in order to create a translation that would be understandable for the largest number of patients. The translation process was described in our previous report and will not be extensively explained here (Rillon et al. 2019). Figure 1 presents the different steps of the procedure.

### RESULTS

Translation process led to the production of a conceptually and culturally equivalent French version of the original English version of the BODY-Q. Each step allowed to identify discrepancies with the original questionnaire, to correct them and adapt the language and expressions into French.



**Figure 1.** Summary of the BodyQ translation methodology

**Table 1.** Cognitive interviews: patients' characteristics

		First round	Second round
Post bariatric surgery	Total (n)	2	1
	Female / Male (n)	1 / 1	1 / 0
	Age, years (mean (min-max))	59.5 (57-62)	57
	BMI, kg/m <sup>2</sup> (mean (min-max))	27.9 (26.9-29)	21.8
Pre-body contouring surgery	Total (n)	3	2
	Female / Male (n)	1 / 2	2 / 0
	Age, years (mean (min-max))	50 (36-66)	47 (37-57)
	BMI, kg/m <sup>2</sup> (mean (min-max))	28.3 (23.7-34.3)	26.65 (25.6-27.7)
Post body contouring surgery	Total (n)	5	2
	Female / Male (n)	4 / 1	2 / 0
	Age, years (mean (min-max))	43.4 (35-55)	61.5 (55-68)
	BMI, kg/m <sup>2</sup> (mean (min-max))	30.86 (23-45.9)	25.95 (24.8-27.1)

BMI: body mass index

During this “second round” of translations, no major corrections and/or modifications were recorded. Minor grammatical and wording modifications were performed after review by the developers and by an expert panel. Major changes performed during the “first round” of translations were described in our previous report (Rillon et al. 2019). All 26 scales of the BODY-Q were translated and approved.

## DISCUSSION

The BODY-Q is nowadays the most comprehensive PRO instrument designed for body contouring patients. With a complete overview of the patients' concerns, the BODY-Q can be used to follow patients over their entire weight lost and body contouring journey. As such, it provides a new perspective on the patients' outcomes in

bariatric and reconstructive surgery and its use may lead to more scientific and clinically relevant results (Singh et al. 2012, Tremp et al. 2015).

We applied the ISPOR and WHO guidelines to develop a French conceptually equivalent translation of the BODY-Q. As pointed out by other teams dealing with the translation exercise, using a combination of the two guidelines allowed us to obtain a high-quality French version of the BODY-Q (Poulsen et al. 2017). Expert panel review and cognitive interviews led to essential changes in wording of instructions and items. Furthermore, cognitive debriefings gave crucial feedback leading to linguistic changes that improved intelligibility and acceptability of the final scales. We were able to include patients representing the different steps of the weight loss journey (Table 1). Our limitation was the small number of patients interviewed.

Major modifications were necessary during our first translations as presented in our preliminary report and occurred during all steps of the translation process (Rillon et al. 2019). Strong of our first experience, this “second round” of translations was much smoother and needed only minor linguistic corrections. Moreover, patients’ feedback was positive since the first field test.

We would like here to remember some of the major changes that were performed during our first translation experience, since we consider those of relevance for appropriate clinical use of the French BODY-Q: (1) grouping the scales with similar response options together and present them in sequence (i.e. present all the scales with response option “satisfied/dissatisfied” together followed by those with the “bothered/not bothered” response options and then the remaining scales); (2) placing the Appearance-Related Psychosocial Distress scale first in the questionnaire. This to avoid any confusion for patients due to the scale’s negative connotation compared to the other positively worded scales. We recommend this sorting if a clinician wants to use the complete BODY-Q questionnaire during the same consultation; (3) importance to be given to the Scar scale assessment as it appeared to be a major concern for the patients.

French translation of the 26 scales covering the 3 domains of the original English BODY-Q was completed and validated by the developers. Overall, participants were very pleased with the final version of the French BODY-Q: they felt it adequately reflected their concerns before and after surgery and that it was able to correctly transmit these feelings to the healthcare provider. With the French translation added to the other versions of the BODY-Q, common grounds could be set to create a database regarding MWL and BCS patients. Information gathered using this common internationally validated specific PRO, would be directly accessible and ready to interpret by the healthcare providers (surgeon, psychiatrist, psychologist, endocrinologist, nurse etc...).

## CONCLUSION

We translated the BODY-Q from English into French following the ISPOR and WHO guidelines and tested the translation with a selected group of pre- and postoperative body contouring patients. The expert panel meetings and cognitive debriefing interviews were very useful for ensuring an understandable, culturally and linguistic equivalent translation. The French version of the BODY-Q is suitable for assessing outcomes in post bariatric and body contouring surgery in the French-speaking population. With such a tool, it would be possible to compare findings across countries and bring a whole new scientifically validated knowledge to the bariatric and body contouring surgery population.

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**Conflict of interest:** None to declare.

## Contribution of individual authors:

Adriano-Valerio Schettini & Perle Rillon participated in the writing of the paper.

Perle Rillon, Geneviève Pirson & Christine De Coninck made substantial contributions to conception and design, and/or acquisition of data, and/or analysis and interpretation of data.

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