

Sociodemographic, physical, psychosocial and behavioural factors associated with excess skin after metabolic and bariatric surgery: a mixed methods study

Aurélie Baillot, Jennifer Brunet, Lucie Lemelin, Shaina A. Gabriel, Marie France Langlois, André Tchernof, Laurent Biertho, Rémi Rabasa-Lhoret, Pierre Y. Garneau, Annie Aimé, Stéphane Bouchard, Ahmed J. Romain, Paquito Bernard



CONFLICT OF INTEREST DISCLOSURE

I have no potential conflict of interest to report




BACKGROUND



> **70% patients report ES after BS**

BACKGROUND

What Is Known About the Correlates and Impact of Excess Skin After Bariatric Surgery: a Scoping Review

Aurélie Baillet^{1,2,3}  · Elsa Brais-Dussault⁴ · Anne Bastin¹ · Caroline Cyr⁴ · Jennifer Brunet^{3,5,6} · Annie Aimé⁴ · Ahmed J. Romain⁷ · Marie-France Langlois⁸ · Stéphane Bouchard⁴ · André Tchernof⁹ · Rémi Rabasa-Lhoret¹⁰ · Pierre-Yves Garneau¹¹ · Paquito Bernard¹²

- ES quantity and inconveniences are variable
- Factors to help explain observed interindividual differences
 - **Women** reported more ES quantity and inconveniences compared to men
 - Higher **body image concerns** is associated with higher ES inconveniences
 - **Age or time since surgery** not associated to ES quantity
 - **Others factors** = conflicting or insufficient evidence

Additional research is required to better understand factors associated with ES quantity and inconveniences to identify patients in greater need of intervention and inform intervention strategies.

OBJECTIVE

To explore the relationships between ES quantity, ES inconvenience and sociodemographic, clinical, psychosocial, and behavioural factors.

Methods : design and procedure

- Multicentric cross-sectional study (Gatineau, Quebec City, Montréal, Sherbrooke (Canada))
- Mixed method study : sequential explanatory design
- **Data collection** = 2 phases
 - **Phase I** = quantitative phase ; in-person 2-hour visit
 - **Phase II** = qualitative phase ; 7 focus groups
- **Data integration** : triangulation ; convergences, complementarities, and dissonances



Methods : population



- 124 adults (92% women, M_{age} 46.5±9.9 years, $M_{\text{time post-bariatric surgery}}$ 34.2±27.6 months)
- **Inclusion criteria:**
 - Age ≥18 years;
 - French- or English-speaking;
 - Having undergone MBS >18 months ago.
- **Exclusion criteria:**
 - Current pregnancy;
 - Plastic surgery to remove ES.

Methods : quantitative data

- Dependant variables assessment:

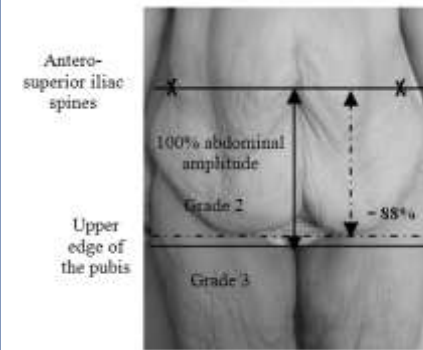
1. ES inconveniences : total, abdomen, arms, thighs

Sahlgrenska Excess Skin (SES) questionnaire

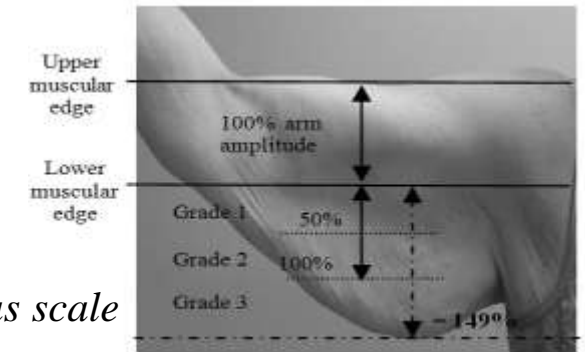
If you are bothered by excess skin on one or more parts of your body, cross off how much this affects you on the scale below:

No problems 0 1 2 3 4 5 6 7 8 9 10 worst possible problems

2. ES quantity on abdomen, arms and thighs



Iglésias scale



Methods : quantitative data

- Independant variables assessment : questionnaires

- ✓ Sociodemographic data : (e.g. age, sex, ethnicity, education)
- ✓ Anthropometric data, and weight history : (e.g. maximal body mass index (BMI) reached pre-surgery, weight loss)
- ✓ Clinical data : (e.g. previous pregnancy, skin illness, obesity related conditions)
- ✓ Psychosocial data : social physique anxiety, body esteem, body image, social support, marital satisfaction, sociocultural attitudes towards appearance, quality of life
- ✓ Lifestyle habits : smoking, alcohol consumption and physical activity

Methods : qualitative data

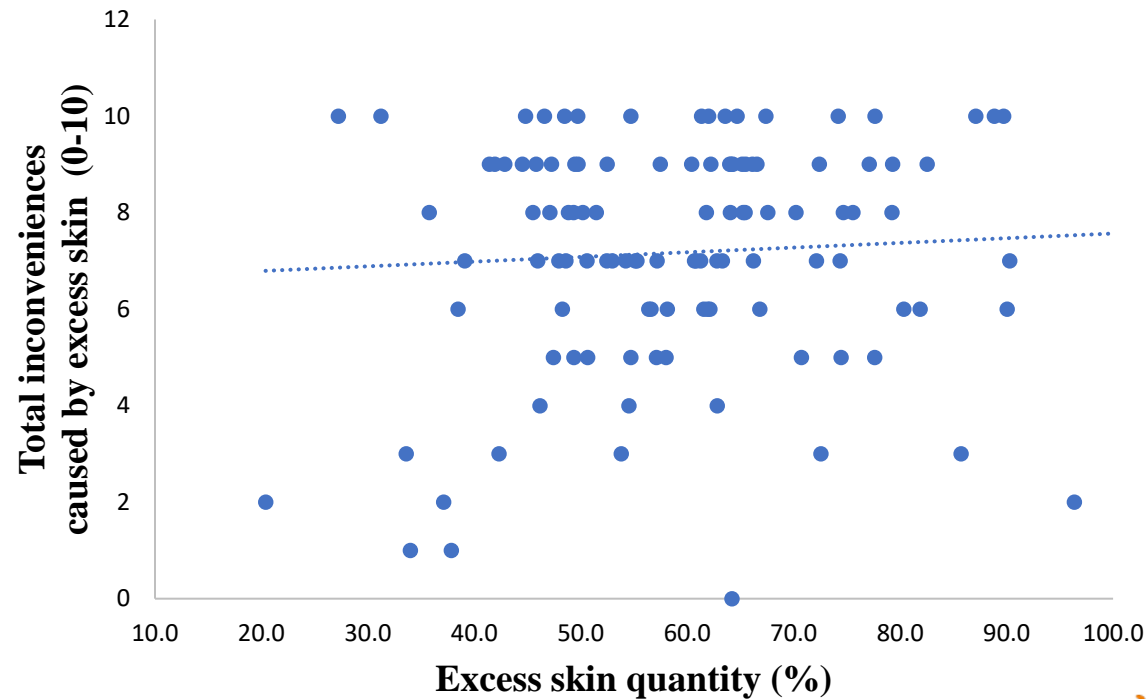


Objective: i) support (or refute) and supplement quantitative results by exploring factors related to ES quantity and inconveniences in adults post-MBS

- ✓ 7 focus group : 3-8 participants (67-78 minutes)
- ✓ Video and audio recorded, and transcribed into verbatim
- ✓ Thematic analysis approach
- ✓ Data saturation was achieved

Results : *associations between ES quantity and inconveniences*

N= 110 ; r = 0.08 p \geq 0.05



- **Arms** : **C+** between quantity and inconveniences (r=0.36 p \leq 0.05)
- **Abdomen, thighs** : **C0**

Results : *multivariate analysis*

- No multivariate analysis for **ES quantity** :
 - Maximal BMI ($r=.48, p<.05$)
 - Current BMI ($r=.35, p<.05$)
- Multivariate analyses for **ES inconvenience** :
 - ✓ Greater degree of total ES inconvenience was associated with higher social physique anxiety, and older age ($R^2=.50, p<.01$)

Results : *qualitative data*

- **4 themes :**

1. Psychosocial experiences living with ES

- Dualistic body experience : weight loss vs. ES
- Psychological discomfort in relation to ES quantity
- Judgements from others

2. Physical ailments due to ES

3. Essential support and unmet needs

“Psychological support, previously it wasn’t enough. I really would have liked to have more psychological support, and with people who are trained and specialized in that” – Denise

4. Beliefs of ES quantity causes

Conclusion

- ES inconveniences are not systematically related to ES quantity.
- Higher maximal BMI before MBS is associated with greater ES quantity after MBS.
- Greater ES inconveniences relate to greater body image concerns.
- Associations could be influenced by the location of ES and situations where ES is exposed.
- Additional support is required to better manage ES before and after surgery

THANK YOU

ACKNOWLEDGMENTS:

Researchers:

Paquito Bernard (*UQAM*)
Jennifer Brunet (*UOttawa*)
Marie-France Langlois (*USherbrooke*)
Lucie Lemelin (*UQO*)
Annie Aimé (*UQO*)
Stéphane Bouchard (*UQO*)
André Tchernof (*ULaval*)
Laurent Biertho (*ULaval*)
Ahmed J. Romain (*UMontréal*)
Pierre-Yves Garneau (*UMontréal*)
Rémi Rabasa-Lhoret (*UMontréal*)

Research assistants:

Christine Brown
Josée Gagnon
Mélanie Nadeau
Mélissa Pelletier

Grants :

SSHRC  CRSH

Fonds de recherche
Santé  Québec 



NAPOLI
2023

Students:

Shaina Gabriel
Mylène Simoneau
Cassandra Voyer
Anne Bastin
Elise Bolteau
Alexia Duciaume



CoActiv'Lab

Laboratoire de recherche collaborative
en obésité et vie active
Collaborative Obesity and Active Living
Research Laboratory

Le surplus de peau après une chirurgie bariatrique est fréquent, mais on parle peu de ses conséquences

Published: August 1, 2023 4:36pm CEST

Il n'est pas rare, après une chirurgie bariatrique, qu'une personne ait un surplus de peau. Cela peut occasionner plusieurs problèmes physiologiques et psychologiques. (Shutterstock)

- Email
- Tumblr
- Facebook
- LinkedIn
- Print

La chirurgie bariatrique, plus communément appelée la chirurgie de l'obésité, permet d'aider les personnes vivant avec une obésité sévère à perdre du poids et à améliorer leur santé. L'opération consiste globalement à réduire la taille de l'estomac avec ou sans réduction de la taille de l'intestin associée.

La chirurgie bariatrique est de plus en plus répandue, tant au Québec qu'au Canada, en raison notamment de l'augmentation de l'obésité sévère.

Cependant, la perte de poids massive est à l'origine de surplus de

Authors

- Shaina Gabriel**
Université du Québec en Outaouais (UQO)
- Annie Aïme**
Professeure au département de psychosocialisation et de psychologie, Université du Québec en Outaouais (UQO)
- Aurélië Baillet**
Professeure agrégée, expertise obésité et activité physique, Université du Québec en Outaouais (UQO)



LES PREMIÈRES RECHERCHES ANT PRIMA D'ÉTABLI QUELLES SONT LES ZONES LES PLUS TOUCHÉES PAR LE SURPLUS DE PEAU

LES PATIENTS ONT DU MAL À INDUQNER LES RÉGIONS TOUCHÉES PAR LEUR SURPLUS DE PEAU

DANS LA POPULATION SUÉDOISE, 70% DES GENS NE SUFFISSENT PAS DE SURPLUS DE PEAU

70% À 90% DES GENS AYANT SUBI LA CHIRURGIE BARIATRIQUE REPORTENT UN SURPLUS DE PEAU

LE SURPLUS DE PEAU EST CALCULÉ SELON D'ENHANT HÙ DEHANT ARRIVER LA PEAU ET L'ENHANT JUSQU'À ELLE STABISE

CE SONT LES MESURES OBJECTIVES

CE FUT LA BASE QUI PERMET DE DÉVELOPPER LE SURPLUS EN EXCESS SUR QUESTIONNAIRE (ESQ) ! CELUI CI PERMET D'ÉVALUER LA SITUATION DU PATIENT EN SE BASANT SUR SES MESURES OBJECTIVES D'EXCÈS DE PEAU ET SUR SES PERCEPTIONS SUBJECTIVES LE QUESTIONNAIRE PERMET D'ATTRIBUER UN SCORE ENTRE 0 ET 20 QUI AIDE À MEUX COMPRENDRE LA SITUATION DU PATIENT

PROBLÉMATIQUE LIÉE À LA CHIRURGIE BARIATRIQUE

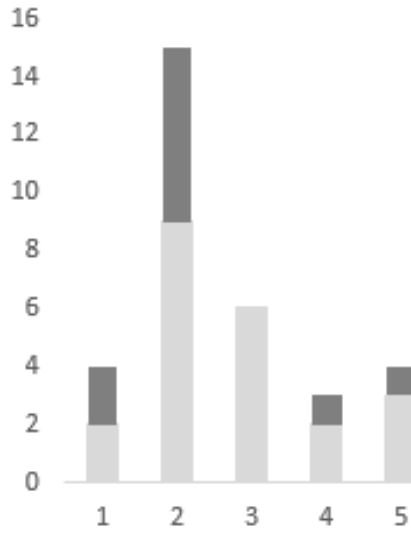
- Participants recruited were primarily female, and as such, their perspectives may not coincide with males' perspectives.
- Recruitment of participants occurred in the province of Quebec (Canada) and mostly via social media. Thus, findings may not be representative of other populations.
- The cross-sectional design precludes causal inferences.
- The researchers' interests and backgrounds are recognized as potentially influencing the collection, analysis and interpretation of the qualitative data.

What Is Known About the Correlates and Impact of Excess Skin After Bariatric Surgery: a Scoping Review

Aurélie Baillot^{1,2,3} · Elsa Brais-Dussault⁴ · Anne Bastin¹ · Caroline Cyr⁴ · Jennifer Brunet^{3,5,6} · Annie Aimé⁴ · Ahmed J. Romain⁷ · Marie-France Langlois⁸ · Stéphane Bouchard⁴ · André Tchernof⁹ · Rémi Rabasa-Lhoret¹⁰ · Pierre-Yves Garneau¹¹ · Paquito Bernard¹²

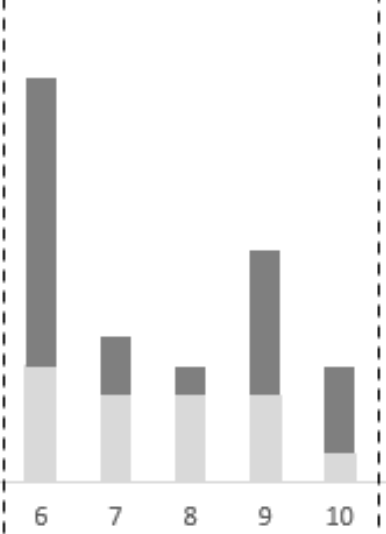
Number of studies

Psychosocial impact



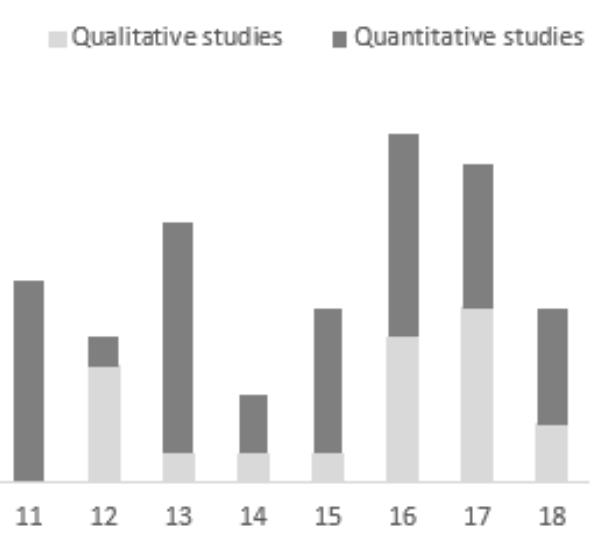
- 1 = Embarrassment due to people staring/comments; shyness in public
- 2 = Body image dissatisfaction /cosmetic problems
- 3 = Low self-esteem, self-confidence problems
- 4 = Depressive feelings
- 5 = Shame

Physical impact



- 6 = Skin problems
- 7 = Flapping/wobbling
- 8 = Bad odour/perspiration
- 9 = Pain
- 10 = Heaviness

Daily life impact



- 11 = Global score
- 12 = Mobility limitations
- 13 = Inconveniences during physical activity
- 14 = Inconveniences/ discomfort during daily activities
- 15 = Hygiene problems
- 16 = Difficulty finding suitable clothes or needing to use special clothes
- 17 = Sexual or intimacy difficulties/problems
- 18 = Avoiding places and activities where they had to be naked in front of others.



Results : *multivariate analysis*

<i>Independent variables</i>	<i>Dependent variable: Inconveniences caused by ES</i>			
	Total β (SE)	Arms β (SE)	Abdomen β (SE)	Inner thighs β (SE)
Quality of life	0.026 (0.014)	0.017 (0.021)	0.016 (0.017)	0.035 (0.020)
Anxiety	0.052 (0.052)	0.048 (0.077)	0.011 (0.063)	0.066 (0.073)
Social physique anxiety	0.181 (0.031) **	0.142 (0.046) **	0.170 (0.038) **	0.200 (0.044) **
Social attitudes towards appearance	0.001 (0.011)	0.014 (0.016)	-0.004 (0.013)	0.002 (0.015)
Body-esteem appearance	-0.529 (0.340)	-0.515 (0.504)	-0.934 (0.405) *	-0.558 (0.477)
Perceived socioeconomic status	0.085 (0.098)	-0.133 (0.147)	0.060 (0.116)	-0.046 (0.136)
Age	0.069 (0.017) **	0.064 (0.025) **	0.037 (0.020) *	0.073 (0.024) **
Observations	124	121	123	122
R ²	0.50	0.25	0.44	0.36

*p<0.05; **p<0.01