

Literature review

Post-procedure experiences

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Introduction

This review summarises how people describe their experiences *after* undergoing a cosmetic procedure. It draws on evidence from academic literature between 2000 and 2016. Analysis includes:

- an assessment of the levels of post-procedure satisfaction / dissatisfaction
- why recipients of cosmetic procedures may be satisfied / dissatisfied with their results;
- whether any dissatisfaction / satisfaction 'lasts';
- whether recipients of cosmetic procedures would, hypothetically:
 - undergo a different cosmetic procedure in the future
 - undergo the same procedure again
- whether cosmetic procedure recipients would recommend their procedure to other people.

At the beginning of each section, summary boxes are provided which highlight overarching, broad conclusions of that particular area of investigation. However, in assessing these conclusions, the limitations of the evidence identified must be borne in mind.

Evidence quality

Where appropriate, this review highlights instances where studies may be subject to significant bias: for example, where participant samples are drawn from patient lists of cosmetic procedure clinics and/or where the research is undertaken by the professionals who undertook the original procedure itself. Most evidence identified by this review also draws conclusions from studies with small sample sizes, with self-selecting participants. In addition, authors' analyses of results, and subsequent extrapolation of conclusions arising out of those results, are of varying quality. Therefore, in assessing conclusions drawn from this review, each of these caveats must be borne in mind.

This review also draws on literature from a wide range of countries, contexts, and across a number of different types of cosmetic procedure. Researchers also vary from individuals who are practitioners who have undertaken cosmetic procedures with their research sample, to social science researchers based in university departments. Thus, in collecting this evidence together to make overarching conclusions, and in cross-comparing studies, caution must be exercised.

Satisfaction levels

Section summary

Literature on general levels of satisfaction / dissatisfaction among recipients of various types of cosmetic procedures suggests that most people who take part in research studies are satisfied with their procedure. In some cases, 100% of recipients who take part in research indicate satisfaction with the procedures. Although such very high levels of satisfaction are not observed across all procedures, the levels of satisfaction nevertheless remain high. Recipients of cleft palate procedures are the only group identified by this review where most research participants indicate dissatisfaction with the results of their procedure.

Some literature relevant to this review is limited to assessments of general levels of satisfaction among people who have undergone various types of cosmetic procedures, rather than examining explanations of satisfaction / dissatisfaction. These reasons are varied, and are discussed in the sections below which focus on [psychological and social explanations of satisfaction](#); and [physical reasons](#), before examining the literature around [explanations of dissatisfaction](#) following cosmetic procedures.

Unspecified / various cosmetic procedures

Some studies do not focus on specific cosmetic procedures, but rather take a general approach in their samples, recruiting participants who have undergone a wide range of procedures. The overarching findings of these general studies - which span countries - indicate that those who have had a cosmetic procedure are predominantly satisfied with the results.

For example, a Dutch study of 135 participants found that 86 per cent were pleased with the direct outcome of the procedure.¹ A study of ten Brazilian cosmetic surgeons, reporting on the outcomes of 1,447 surgery recipients, also concluded that “over 97% of surgeons and patients were satisfied with the surgery results, with 84% of surgeons and 79.6% of patients rating the surgery results as excellent. Less than 1% of the surgeons and patients were not satisfied with the surgery results.” However, the reporting methods of this particular study – that is, patients feeding back to the surgeons who had treated them – must be borne in mind.² High levels of post-operative satisfaction are also indicated by the results of a US study of 45 women who had received a range of cosmetic surgeries: on a scale of one (“extremely dissatisfied”) to five (extremely satisfied), 87 per cent of participants described themselves as “extremely satisfied”. The same study also found that participants reported significant improvement in the degree

¹ Mulkens S, Bos AER, Uleman R *et al.* (2012) Psychopathology symptoms in a sample of female cosmetic surgery patients *Journal of Plastic, Reconstructive & Aesthetic Surgery* **65(3)**: 321-7.

² Psillakis JM, Facchina PH, Kharmandayan P *et al.* (2010) Review of 1,447 breast augmentation patients using PERTHESE silicone implants *Aesthetic Plastic Surgery* **34(1)**: 11-5.

of satisfaction with the specific body feature altered by cosmetic surgery.³ In addition, a 2007 survey by the American Society of Plastic Surgeons indicated that 80 per cent of respondents reported being very satisfied or satisfied with their elective cosmetic surgery experience: only four per cent of respondents reported that they were dissatisfied or very dissatisfied.⁴ Satisfaction rates have also been found to be high among young people who have undergone unspecified cosmetic procedures. For example, a Turkish study of 86 adolescents found participant satisfaction rate to be at 93 per cent.⁵ In addition, low levels of *regret* were identified by Norwegian researchers who found that, of 130 female recipients of various forms of cosmetic surgery, 93 per cent disagreed in part or completely with the comment that they regretted having undergone surgery.⁶

A small-scale Chinese study of 12 young women (age 15-25) who had undergone cosmetic procedure in part to “fulfil their parents’ wishes” also raises an interesting observation on how satisfaction might be perceived by recipients of cosmetic procedures. The researchers observed that “our participants continued to deny any experience of post-surgery pain; even though one of our participants had experienced a leg breaking operation and [had] been bed-ridden for six months.” They suggest that participants’ denial of any post-surgery pain “may lie in the pleasure that the participants perceived they experienced after their operations from their parents and wider Chinese society. None of the participants reported any regret, instead describing their experiences in terms of transforming their lives... opportunities, enhancing their sense of face, and the happiness and joy they brought to their parents.” They further cite the comment of one participant that “I can find good work after graduation and my parents will be satisfied with my excellent performance. They will be proud of me.” This small study highlights that satisfaction may be a rather nebulous concept for some participants: physical discomfort, for some, might be a small price to pay for perceived social acceptance.⁷

Breast procedures

Several studies highlight levels of satisfaction among recipients of breast procedures (reconstruction, reduction, and augmentation).

³ Sarwer DB, Wadden TA, and Whitaker LA (2002) An investigation of changes in body image following cosmetic surgery *Plastic and Reconstructive Surgery* **109(1)**: 363-9. However, 21% of women who answered the first questionnaire did not answer the second, which may have influenced the final results of this study.

⁴ Cited in Adams J (2010) Motivational narratives and assessments of the body after cosmetic surgery *Qualitative Health Research* **20(6)**: 755-67; ASPS survey no longer available online; no information about sample size available.

⁵ Kamburoğlu HO, and Özgür F (2007) Postoperative satisfaction and the patient’s body image, life satisfaction, and self-esteem: a retrospective study comparing adolescent girls and boys after cosmetic surgery *Aesthetic Plastic Surgery* **31(6)**: 739-45.

⁶ von Soest T, Kvaalem IL, Skolleborg KC, and Roald HE (2011) Psychosocial changes after cosmetic surgery: a 5-year follow-up study *Plastic and Reconstructive Surgery* **128(3)**: 765-72.

⁷ Lindridge AM, and Wang C (2008) Saving “face” in China: modernization, parental pressure, and plastic surgery *Journal of Consumer Behaviour* **7(6)**: 496-508.

Reconstruction

The literature exploring satisfaction levels among participants who have received a reconstructive breast procedure includes a Turkish study of 577 women who had a mixture of three different breast operations following breast cancer found that satisfaction levels varied according to the type of operation the women had undergone. Participants were asked “how satisfied are you with the cosmetic result of your operation?” In this study, 121 women underwent breast reconstruction following mastectomy; 97 of these women (80%) stated that they were ‘very much’ or ‘moderately’ satisfied with the cosmetic outcome.⁸ Very high levels of satisfaction are also indicated by a Finnish study involving 115 reconstruction recipients found that 94 per cent of participants indicated good or very good outcomes. Similarly, the same study also found that 59 per cent of reconstruction recipients felt that the outcome of the operation was better or much better than they had expected.⁹ A Canadian study of 206 breast reconstruction patients also found that 88 per cent stated that they were satisfied with the outcome of the procedure. Of the 12 per cent who were dissatisfied with the procedure in this study, the author observes that they had experienced many more complications than those who were satisfied (61% of the dissatisfied group experienced complications vs. 27% of the satisfied group). The dissatisfied group also had a higher incidence of serious complications.¹⁰

Reduction

According to the literature, the level of satisfaction for BR (BR) procedures category is overwhelmingly high. For example, a Danish study of 125 women who had undergone this procedure found that, six months after the procedure, 89 per cent evaluated the result of the procedure to be good or very good. However, this fell to 80 per cent when assessed one year after the initial procedure (see below for [further examination](#) of whether satisfaction ‘lasts’ for recipients of cosmetic procedures).¹¹ Very high rates of satisfaction were also observed in a Brazilian study of 40 BR recipients: six months after the procedure, 97.5 per cent were satisfied.¹² A US study of 178 BR recipients also found that over 95 per cent of those surveyed were satisfied with the procedure, and

⁸ Al-Ghazal SK, Fallowfield L, and Blamey RW (2000) Comparison of psychological aspects and patient satisfaction following breast conserving surgery, simple mastectomy and breast reconstruction *European Journal of Cancer* **36(15)**: 1938-43.

⁹ Tykkä SA-SHHE (2001) Patients' satisfaction with breast reconstruction and reduction mammoplasty *Scandinavian Journal of Plastic and Reconstructive Surgery and Hand Surgery* **35(4)**: 399-405.

¹⁰ Andrade WN, Baxter N, and Semple JL (2001) Clinical determinants of patient satisfaction with breast reconstruction *Plastic and Reconstructive Surgery* **107(1)**: 46-54.

¹¹ Breiting LB, Henriksen TF, Kalialis LV, Gramkow C, and Høyer AP (2012) A prospective study of short- and long-term cosmetic outcome after reduction mammoplasty from three different perspectives: the patient, a department surgeon, and an independent private practitioner in plastic surgery *Plastic and Reconstructive Surgery* **130(2)**: 273-81.

¹² Freire M, Neto MS, Garcia ÉB, Quaresma MR, and Ferreira LM (2004) Quality of life after reduction mammoplasty *Scandinavian Journal of Plastic and Reconstructive Surgery and Hand Surgery* **38(6)**: 335-9.

would do it again.¹³ A UK study of 34 teenage recipients of BR also found that, eight weeks after surgery, 94 per cent were satisfied with the procedure when asked at their postoperative visit to the clinic.¹⁴ A Finnish study of 93 BR recipients also indicated that 88 per cent of participants thought that the outcome of the procedure was good or very good. In addition, 43 per cent felt that the outcome of the operation was better or much better than they had expected.¹⁵ In addition, high levels of satisfaction with postoperative breast size are also noted by 80 per cent of respondents in a Dutch study of 94 women who had undergone the procedure two years' previously.¹⁶

Augmentation

Breast augmentation (BA) procedures have also been shown to generate high levels of satisfaction among recipients. A US study of 360 women who had BA found that over 90 per cent were "consistently satisfied with surgery" at six-, 12-, and 24-month assessment points.¹⁷ A US study of 429 women who had undergone breast surgery found similarly that, on a scale of one-to-five, those who had BA had a mean satisfaction rate of 4.4.¹⁸ A Canadian study of 41 BA recipients also found that 83 per cent of participants reported improvements in their satisfaction with their breasts after the procedure was undertaken.¹⁹ Additionally, a Swedish study similarly indicates very high satisfaction rates among BA recipients: in its sample of 74 women who were interviewed five years after their procedure, 98 per cent reported that they were 'satisfied' or 'very satisfied'.²⁰ The same proportion of participants - 98 per cent - were also found to lead to a 98 per cent level of "high overall satisfaction" in a small US study undertaken by the proprietor of a private clinic,²¹ and good levels of satisfaction were

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- ¹³ Gonzalez MA, Glickman LT, Aladegbami B, and Simpson RL (2012) Quality of life after breast reduction surgery: a 10-year retrospective analysis using the Breast Q questionnaire: does breast size matter? *Annals of Plastic Surgery* **69(4)**: 361.
- ¹⁴ Sharma K, Lim P, Baines R, and Brotherton TM (2014) Reduction mammoplasty in adolescents: a review of the indications, timing, and outcomes in a regional plastic surgery unit *European Journal of Plastic Surgery* **37(12)**: 661-6.
- ¹⁵ Tykkä SA-SHHE (2001) Patients' satisfaction with breast reconstruction and reduction mammoplasty *Scandinavian Journal of Plastic and Reconstructive Surgery and Hand Surgery* **35(4)**: 399-405.
- ¹⁶ Hermans BJE, Boeckx WD, De Lorenzi F, and van Der Hulst RRWJ (2005) Quality of life after breast reduction *Annals of Plastic Surgery* **55(3)**: 227-31.
- ¹⁷ Cash TF, Duel LA, and Perkins LL (2002) Women's psychosocial outcomes of breast augmentation with silicone gel-filled implants: a 2-year prospective study *Plastic and Reconstructive Surgery* **109(6)**: 2112-21.
- ¹⁸ Handel N, Cordray T, Gutierrez J, and Jensen JA (2006) A long-term study of outcomes, complications, and patient satisfaction with breast implants *Plastic and Reconstructive Surgery* **117(3)**: 757-67.
- ¹⁹ McCarthy CM, Cano SJ, Klassen AF *et al.* (2012) The magnitude of effect of cosmetic breast augmentation on patient satisfaction and health-related quality of life *Plastic and Reconstructive Surgery* **130(1)**: 218-23.
- ²⁰ Niechajev I, Jurell G, and Lohjelm L (2007) Prospective study comparing two brands of cohesive gel breast implants with anatomic shape: 5-year follow-up evaluation *Aesthetic Plastic Surgery* **31(6)**: 697-710.
- ²¹ Stokes RB (2004) Breast augmentation in thin women: patient satisfaction with saline-filled implants *Aesthetic Plastic Surgery* **28(3)**: 153-7.

also indicated by a further small US study of 13 BA recipients.²² However, a Chinese study of 144 BA recipients found that 76 per cent of participants indicated that they were 'satisfied' with the outcome, which the authors suggest is a low rate.²³

Gynaecomastia

This review identified one study which examined levels of satisfaction among male recipients of surgery to address gynaecomastia. In this study of 74 male recipients, the authors conclude that 62.5 per cent of patients were 'satisfied' to 'very satisfied' with the results, concluding that "this more detailed study has shown that satisfaction rates are not as high as previously published. Patients must be appropriately counselled post-operatively to ensure they have realistic expectations of what can be achieved with surgery."²⁴

Cosmetic facial procedures

A small number of studies explore satisfaction rates among participants who have undergone facial procedures, for example where people have received injectable substances, rhinoplasty, or procedures focused on the teeth / jaws. For example, with procedures to smooth frown lines between the eyebrows (glabellar rhytides), one study found recipient-reported satisfaction was 95 per cent 30 days after the procedure, and 86 per cent at 120 days after the procedure.²⁵ In addition, a low rate of regret is noted in the results of a study involving recipients of orthognathic surgery: two years following the procedure, eight per cent of participants regretted having undergone the operation.²⁶

Rhinoplasty procedures have also been reported to have a high level of patient satisfaction. For example, a study of secondary rhinoplasties (undertaken where the primary rhinoplasty was deemed unsatisfactory, predominantly because of the development of a "new deformity") found that 97 per cent of participants were happy

²² Spear S, Pelletiere C, and Menon N (2004) One-stage augmentation combined with mastopexy: aesthetic results and patient satisfaction *Aesthetic Plastic Surgery* **28(5)**: 259-67.

²³ Shi H, Cao C, Li X, Chen L, and Li S (2015) A retrospective study of primary breast augmentation: recovery period, complications and patient satisfaction *International Journal of Clinical and Experimental Medicine* **8(10)**: 18737-43.

²⁴ Ridha H, Colville RJI, and Vesely MJJ (2009) How happy are patients with their gynaecomastia reduction surgery? *Journal of Plastic, Reconstructive & Aesthetic Surgery* **62(11)**: 1473-8.

²⁵ Stotland MA, Kowalski JW, and Ray BB (2007) Patient-reported benefit and satisfaction with botulinum toxin type A treatment of moderate to severe glabellar rhytides: results from a prospective open-label study *Plastic and Reconstructive Surgery* **120(5)**: 1386. General satisfaction among Botox recipients is also observed by Sepehr A, Chauhan N, Alexander A, and Adamson P (2010) Botulinum toxin Type A for facial rejuvenation: treatment evolution and patient satisfaction *Aesthetic Plastic Surgery* **34(5)**: 583-6.

²⁶ Zhou Y, Hägg U, and Rabie A (2000) Patient satisfaction following orthognathic surgical correction of skeletal Class III malocclusion *The International Journal of Adult Orthodontics and Orthognathic Surgery* **16(2)**: 99-107.

with the secondary procedure.²⁷ However, in an exploration of satisfaction rates for recipients who have been diagnosed with body dysmorphic disorder (BDD), a UK study of 25 participants who had undergone a total of 46 procedures found that, for those who had received rhinoplasty, satisfaction rating was relatively low. The author of the study also reported that “after 50% of the procedures the preoccupation transferred to another area of the body.” Indeed, as more procedures were performed on this group, satisfaction levels fell from a rate of 3.9 after one procedure, to 2.8 by the second or third procedure. The study also observed that nine of the participants “either in desperation at being turned down for cosmetic surgery or because they could not afford it, had performed their own ‘DIY’ surgery in which they attempted by their own hand to alter their appearance dramatically.”²⁸

Among younger research participants, very high levels of satisfaction were observed in a German study of 41 child otoplasty patients, which found that 95 per cent of those children were satisfied with the aesthetic result of the procedure.²⁹ In addition, regret levels among 50 child recipients of otoplasty are indicated as low (n=2) by a further study.³⁰

Dental procedures

In relation to procedures that focus on the teeth / mouth / jaw, the evidence also suggests good rates of satisfaction. For example, recipients of overdentures have indicated good levels of satisfaction one year after the procedure was carried out.³¹ Orthognathic (jaw) surgery recipients in a Turkish study of 30 female recipients of the procedure indicated high levels of satisfaction with the surgical results: 77 per cent were very satisfied; 17 per cent were satisfied; three per cent were satisfied; and three per cent were not satisfied.³² Similarly, the overall rate of recipients who expressed satisfaction as a result of orthognathic procedures was observed to be 92 per cent in a Norwegian study of 516 participants.³³ However, slightly lower levels of satisfaction

²⁷ Constantian MB (2012) What motivates secondary rhinoplasty? A study of 150 consecutive patients *Plastic and Reconstructive Surgery* **130(3)**: 667-78.

²⁸ Veale D (2000) Outcome of cosmetic surgery and ‘DIY’ surgery in patients with body dysmorphic disorder *The Psychiatrist* **24(6)**: 218-20.

²⁹ Braun T, Hainzinger T, Stelter K *et al.* (2010) Health-related quality of life, patient benefit, and clinical outcome after otoplasty using suture techniques in 62 children and adults *Plastic and Reconstructive Surgery* **126(6)**: 2115-24.

³⁰ Hao W, Chorney JM, Bezuhly M, Wilson K, and Hong P (2013) Analysis of health-related quality-of-life outcomes and their predictive factors in pediatric patients who undergo otoplasty *Plastic and Reconstructive Surgery* **132(5)**: 811e-7e.

³¹ Stellingsma K, Bouma J, Stegenga B, Meijer HJA, and Raghoobar GM (2003) Satisfaction and psychosocial aspects of patients with an extremely resorbed mandible treated with implant-retained overdentures *Clinical oral implants research* **14(2)**: 166-72.

³² Türker N, Varol A, Ögel K, and Basa S (2008) Perceptions of preoperative expectations and postoperative outcomes from orthognathic surgery: Part I: Turkish female patients *International Journal of Oral and Maxillofacial Surgery* **37(8)**: 710-5.

³³ Espeland L, Høgevoid HE, and Stenvik A (2008) A 3-year patient-centred follow-up of 516 consecutively treated orthognathic surgery patients *The European Journal of Orthodontics* **30(1)**: 24-30.

were identified by a study of 68 participants who had undergone surgery for cleft palates found that 58 per cent weren't satisfied with the results of the treatment.³⁴

Abdominal surgery, fat transfer, and liposuction

Few studies identified by this review consider satisfaction rates among recipients of abdominal surgery (abdominoplasty), autologous fat transfer, or liposuction. However, of those identified, high levels of satisfaction are reported: for example, a US study of 209 recipients found that 80 per cent of liposuction participants were satisfied with the results of the procedure.³⁵ Similarly, a small-scale study of 23 body contouring recipients also concluded, generally, that the procedure “lead to high and durable patient satisfaction”.³⁶ Satisfaction with the treatment was also observed to be at 85 per cent for a group of 215 Italian women who had undergone autologous fat transfer.³⁷

Satisfaction rates were also measured by a UK study of 118 abdominoplasty patients: researchers found that, over a five-year period,³⁸ 76 per cent of female respondents were satisfied with the procedure; whereas 100 per cent of men in the study stated that they were either happy or very happy.³⁹ Further, even with a high rate of complications (27%), abdominoplasty and mammoplasty following bariatric surgery also received high levels of recipient satisfaction: one study suggests that 67 per cent were satisfied with the outcome of the surgery, which “provided them with a noticeable improvement of quality of life.”⁴⁰

Genital procedures

Again, high rates of satisfaction are noted in the literature for procedures that focus on genital areas. For example, a post-operative questionnaire completed by 166 women two weeks after they had undergone labia minora or clitoral hood reduction (out of an original sample of 407 patients) assessed their satisfaction by using a satisfaction scale rating from one to ten. The authors found that the average score across the

³⁴ Marcusson A, Paulin G, and Östrup L (2002) Facial appearance in adults who had cleft lip and palate treated in childhood *Scandinavian Journal of Plastic and Reconstructive Surgery and Hand Surgery* **36(1)**: 16-23.

³⁵ Broughton G, Horton B, Lipschitz A *et al.* (2006) Lifestyle outcomes, satisfaction, and attitudes of patients after liposuction: a Dallas experience *Plastic and Reconstructive Surgery* **117(6)**: 1738-49.

³⁶ Tremp M, Delko T, Kraljević M *et al.* (2015) Outcome in body-contouring surgery after massive weight loss: a prospective matched single-blind study *Journal of Plastic, Reconstructive & Aesthetic Surgery* **68(10)**: 1410-6.

³⁷ Rusciani Scorza A, Rusciani Scorza L, Troccola A *et al.* (2012) Autologous fat transfer for face rejuvenation with tumescent technique fat harvesting and saline washing: a report of 215 cases *Dermatology* **224(3)**: 244-50.

³⁸ See [section below](#) on further exploration as to whether satisfaction with the results of cosmetic procedure lasts over time.

³⁹ Bragg TWH, Jose RM, and Srivastava S (2007) Patient satisfaction following abdominoplasty: an NHS experience *Journal of Plastic, Reconstructive & Aesthetic Surgery* **60(1)**: 75-8.

⁴⁰ van der Beek EJ, te Riele W, Specken T, Boerma D, and van Ramshorst B (2010) The impact of reconstructive procedures following bariatric surgery on patient well-being and quality of life *Obesity Surgery* **20(1)**: 36-41.

respondents was 9.2 (although clearly this does not account for the views of the 241 women who chose not to respond to the questionnaire).⁴¹ Similarly high rates of satisfaction were observed in a study of 124 women who had undergone various types of FGCS: 118 (95%) were happy, and four (3.2%) were very happy, with their postoperative appearance (two women were unhappy with their postoperative appearance).⁴² A US study of 258 women who had undergone 341 FGCS procedures also found that, for those who had received either labiaplasty or clitoral hood reduction, 97 per cent reported “overall satisfaction”. This figure dropped slightly to 83 per cent for those who had vaginoplasty or perineoplasty.⁴³ A Chilean study investigating the results of using lasers for labiaplasty also examined recipient satisfaction in 55 cases: 91 per cent of participants were very satisfied with aesthetic outcomes (9% were satisfied); and 100 per cent were very satisfied with functional outcomes.⁴⁴

The contrasting issue of regret was explored by a UK study of 49 recipients of labiaplasty. This study found very low levels of regret: only one participant regretted her decision to have the procedure.⁴⁵

⁴¹ Alter GJ (2008) Aesthetic labia minora and clitoral hood reduction using extended central wedge resection *Plastic and Reconstructive Surgery* **122(6)**: 1780-9.

⁴² Cihantimur B, and Herold C (2013) Genital beautification: a concept that offers more than reduction of the labia minora *Aesthetic Plastic Surgery* **37(6)**: 1128-33.

⁴³ Goodman MP, Placik OJ, Benson III RH *et al.* (2010) A large multicenter outcome study of female genital plastic surgery *The Journal of Sexual Medicine* **7(4)**: 1565-77.

⁴⁴ Pardo J, Solà V, Ricci P, and Guilloff E (2006) Laser labioplasty of labia minora *International Journal of Gynecology & Obstetrics* **93(1)**: 38-43.

⁴⁵ Veale D, Naismith I, Eshkevari E *et al.* (2014) Psychosexual outcome after labiaplasty: a prospective case-comparison study *International Urogynecology Journal* **25(6)**: 831-9.

Psychological and social explanations of satisfaction

Section summary

Several sub-categories of psychological and social explanations of satisfaction with cosmetic procedures are identified.

Improvements to self-confidence / self-esteem are noted frequently. Although sample sizes for many of these studies are small, and also address self-esteem in response to different 'types' of cosmetic procedure, most conclude similarly that these improvements indicate satisfaction with the outcome. Other studies conclude that a significant number of research participants feel more attractive and have improved body image as a result of their procedure, and that high levels of satisfaction are recorded for research participants who indicate pleasing aesthetic outcomes or positive changes to their appearance.

More broadly, although the literature overall concludes that recipients who take part in research indicate "improvements to mental health", measures of such improvements vary, which necessitates conclusions to be drawn conservatively. Improvements to quality of life (including health-related QOL) are noted for participants who have received a variety of procedures, but particularly strong indications are observed for recipients of breast procedures (particularly breast reduction).

Changes in others' perceptions are also indicated as a contributor to positive responses. These perceptions include receiving positive comments from people, and feeling less self-conscious / embarrassed in front of others (noted, for example, by studies which include breast reduction recipients). Limited qualitative evidence is also identified, which suggests that research participants may be satisfied with their procedure because it has enabled them to regain a 'past self' or to feel like a different person.

Improved self-confidence / self-esteem

"My self-esteem raised, I got to be a lot more comfortable with my body... I had big ones, they were too cumbersome, I, you know, got little ones, and now I'm perfectly fine."⁴⁶

"Being inside a body that is a gelatinous prison kills a tiny piece of you every moment of your life... When I woke up after the surgery and looked down, I felt strong and confident as a man should. I could never, ever in my life, speak to anyone about how much

⁴⁶ Adams J (2010) Motivational narratives and assessments of the body after cosmetic surgery *Qualitative Health Research* **20(6)**: 755-67.

*being heavy hurt me emotionally, and now I don't have to...
Surgery is the best psychotherapy offered on the market.*⁴⁷

*"It's [surgery] done wonders with my sort of general confidence in
myself, my self-esteem, it's this self-esteem bit, this self-image
thing, it's actually done a lot for that."*⁴⁸

*"At work, the collateral effect of self-confidence from surgery was
tremendous. Got a great job soon thereafter."*⁴⁹

A relatively large number of studies identify improvements to self-esteem or self-confidence as contributors to high levels of satisfaction among individuals who have received cosmetic procedures. Again, the literature can be sub-divided according to the cosmetic procedure each study focuses on. Although each of these sub-categories contain relatively few studies on self-esteem, its role in eliciting positive responses from study participants on the outcomes of their procedures arises frequently and strongly across the literature.

Unspecified / various cosmetic procedures

A small number of studies which do not specify the *type* of procedure their (small-sized) samples have undergone highlight the role of self-esteem as an indicator of satisfaction with results.

Of studies identified, small increases in self-esteem were observed: for example, in a Norwegian study of 130 women who had undergone various cosmetic procedures mean self-esteem scores increased by a small amount five years after surgery, compared to their pre-surgery level.⁵⁰ In addition, a very small qualitative study which included five men who had undergone cosmetic procedures (three non-invasive; two invasive) which concluded that all five reported that the procedure had improved their confidence, and that "the surgery affected how they were perceived and treated by others" (see sections below for further discussion on others' reactions to results of cosmetic procedures as a contributing factor to [satisfaction levels](#), and [dissatisfaction levels](#)).⁵¹

Among young people, confidence levels of those who have received a cosmetic procedure have also been shown to rise for some recipients: for example, a Turkish

⁴⁷ Atkinson M (2008) Exploring male femininity in the 'crisis': men and cosmetic surgery *Body & Society* **14(1)**: 67-87.

⁴⁸ Thorpe SJ, Ahmed B, and Steer K (2004) Reasons for undergoing cosmetic surgery: a retrospective study *Sexualities, Evolution & Gender* **6(2-3)**: 75-96.

⁴⁹ Borelli F, and Casotti LM (2012) The before and after: a study of plastic surgery consumption with young women in Brazil *Advances in Consumer Research* **40**: 379-85.

⁵⁰ von Soest T, Kvaalem IL, Skolleborg KC, and Roald HE (2011) Psychosocial changes after cosmetic surgery: a 5-year follow-up study *Plastic and Reconstructive Surgery* **128(3)**: 765-72.

⁵¹ Ricciardelli R, and White P (2011) Modifying the body: Canadian men's perspectives on appearance and cosmetic surgery *The Qualitative Report* **16(4)**: 949-70.

study of 86 young people who had undergone a cosmetic procedure showed that 47/61 young females, and 17/25 young males indicated an increase in self-confidence.⁵²

However, a community based sample study – a type of study rarely identified by this review – examined whether having cosmetic surgery would act as a protective factor in age-related experiences related to body image, self-esteem, and ageing attitudes. The length since surgery had been undertaken in this study ranged from one to 45 years. The researcher found that cosmetic procedure recipients indicated less body satisfaction with age, and that those who had not received cosmetic surgery showed *increases* in self-esteem with age. Further, the study also suggested that “non-recipients [of cosmetic surgeries] reported a greater level of age discrepancy than did recipients – they reported feeling even younger than their actual chronological age compared to cosmetic surgery recipients. Thus, despite having undertaken action to improve their appearance through surgical means at some point in their adult lives, cosmetic surgery recipients do not inevitably feel younger than their years compared to those who, for whatever reason, have not pursued surgery.”⁵³

Breast procedures

Reduction

“My life has changed: I became more confident; I was no longer embarrassed about getting close to men. I got a boyfriend right away. I became more popular among my friends. I think people saw how I was prettier, more secure. I was no longer embarrassed about going out... people would ask me out more, and I began socializing more, too. I started feeling more sociable than before.”⁵⁴

“I’m not so embarrassed or trying to hide all the time.”⁵⁵

Qualitative small-scale studies identified by this review suggest that self-esteem is a contributing factor for satisfaction following BR. For example, a US study involving a small sample of 13 patients who had undergone a cosmetic procedure examined how participants understood and measured the success of their cosmetic procedure. The authors found that success was measured by broad changes to their lives, rather than about a certain physical trait being ‘improved’ or ‘looking better’. They highlight, for example, the observations of one woman who had undergone a BR procedure: “It changed my life. Increased my confidence, self-esteem”. The same participant suggests

⁵² Kamburoğlu HO, and Özgür F (2007) Postoperative satisfaction and the patient’s body image, life satisfaction, and self-esteem: a retrospective study comparing adolescent girls and boys after cosmetic surgery *Aesthetic Plastic Surgery* **31(6)**: 739-45.

⁵³ Eriksen SJ (2012) To cut or not to cut: cosmetic surgery usage and women's age-related experiences *The International Journal of Aging and Human Development* **74(1)**: 1-24.

⁵⁴ 31-year-old recipient of BR in Borelli F, and Casotti LM (2012) The before and after: a study of plastic surgery consumption with young women in Brazil *Advances in Consumer Research* **40**: 379-85.

⁵⁵ Klassen A, Pusic A, Scott A, Klok J, and Cano S (2009) Satisfaction and quality of life in women who undergo breast surgery: a qualitative study *BMC Women’s Health* **9(1)**: 11.

“maybe I was just freed. After the surgery I just felt beautiful.”⁵⁶ Similarly, a qualitative study also from Canada observes that “changes in self-confidence appeared most dramatic among BR patients, who literally described walking taller post-surgery: “You don’t have this extra weight hanging there, so you hold your head up higher. You don’t feel like you’re all, all bosom. There is more to you than that now.”⁵⁷ A further Canadian study involving 55 BR recipients also found that self-esteem had improved six-months following the procedure and remained stable at the 21.5-month assessment point.⁵⁸

Augmentation

Some BA recipients have also been found to undergo significant improvement in self-esteem and body satisfaction, as indicated by a Finnish study of 65 recipients of the procedure. Specifically, at the baseline, 14 women (22%) demonstrated signs of anxiety and seven (11%) demonstrated signs of depression. At follow up, seven months later, those figures dropped to nine (14%) and five (8%), respectively.⁵⁹ Similarly, levels of “breast self-consciousness” decreased from 86 per cent to 12 per cent for participants in a surgeon-initiated study of 225 women who had received BA,⁶⁰ and, in addition, improvements in levels of self-esteem are also indicated by a US study of 84 women assessed pre- and post-operatively.⁶¹ An ethnographic / interview-based study of nine British women who had undergone BA also observes that “they talk about their new boobs enhancing their confidence and self-esteem because they enable them to look good in a bikini, to go without a bra and so wear backless tops and dresses, and to follow new high street fashions. But boobs are also appraised and evaluated as fashion objects in themselves. Natural and surgically altered boobs are looked at, inspected, compared and desired or derided as objects by friends in this network.”⁶² More generally, psychosocial well-being was also indicated in 88 per cent of women who underwent BA in a small-scale Canadian study.⁶³

⁵⁶ Adams J (2010) Motivational narratives and assessments of the body after cosmetic surgery *Qualitative Health Research* **20(6)**: 755-67.

⁵⁷ Rubin LR, Klassen A, Cano SJ, Hurley K, and Pusic AL (2009) Motivations for breast surgery: a qualitative comparison study of breast reconstruction, augmentation, and reduction patients *The Breast Journal* **15(6)**: 666-7.

⁵⁸ O’Blenes CAE, Delbridge CL, Miller BJ, Pantelis A, and Morris SF (2006) Prospective study of outcomes after reduction mammoplasty: long-term follow-up *Plastic and Reconstructive Surgery* **117(2)**: 351.

⁵⁹ Saariniemi K, Helle M, Salmi A *et al.* (2012) The effects of aesthetic breast augmentation on quality of life, psychological distress, and eating disorder symptoms: a prospective study *Aesthetic Plastic Surgery* **36(5)**: 1090-5.

⁶⁰ Swanson EMD (2013) Prospective outcome study of 225 cases of breast augmentation *Plastic & Reconstructive Surgery* **131(5)**: 1158-66.

⁶¹ Figueroa-Haas CL (2007) Effect of breast augmentation mammoplasty on self-esteem and sexuality: a quantitative analysis *Plastic Surgical Nursing* **27(1)**: 16-36.

⁶² Sanchez Taylor J (2012) Fake breasts and power: gender, class and cosmetic surgery *Women’s Studies International Forum* **35(6)**: 458-66.

⁶³ McCarthy CM, Cano SJ, Klassen AF *et al.* (2012) The magnitude of effect of cosmetic breast augmentation on patient satisfaction and health-related quality of life *Plastic and Reconstructive Surgery* **130(1)**: 218-23.

Cosmetic facial procedures

“I look better so I feel better. I think that I’m more positive in my approach to other people... which gets me better results... in all areas of my life.”⁶⁴

“... it [liposuction, chin lift, Botox, collagen, dermabrasion] made me feel younger, because I kind of associate it with, I don’t know, makes me think of older women when they get so round. It just made me feel better about myself.”⁶⁵

Improvements to self-esteem are noted by recipients of a range of facial cosmetic procedures across a small number of studies (most of which have low sample sizes). For example, a Brazilian study of 50 blepharoplasty recipients found that 62 per cent of participants’ self-esteem improved after the procedure; 24 per cent had unchanged self-esteem; and 14 per cent had worse self-esteem.⁶⁶ In a later study, the same researchers explored further the explanations of those 14 per cent whose self-esteem had lowered. Among these patients, some “special situations” were identified: “three patients were divorced, three had problems with their children and one had become a widow after the operation.”⁶⁷ Statistically significant improvements for self-esteem have also been shown for recipients of Botox⁶⁸ and a French study of depression, anxiety and quality of life (QOL) after cosmetic facial surgery indicated that a “lack of self-confidence, associated with a desire for social interaction, and a request focused on a specific physical feature were the best indications for successful facial cosmetic surgery.”⁶⁹

Dental procedures

Few studies have highlighted the role of improved self-esteem in levels of satisfaction with dental procedures. However, one small Swedish study of 32 orthognathic surgery recipients indicates that confidence in interactions with others improved for 72 per cent of participants.⁷⁰ However, a study of 152 Danish participants who had undergone orthognathic surgery found that they “have a lower self-concept and are more critical of their facial features than are non-patient controls, even ten years after undergoing

⁶⁴ Male recipient of hair transplantation, reported in: Holliday R, and Cairnie A (2007) Man made plastic: investigating men’s consumption of aesthetic surgery *Journal of Consumer Culture* **7(1)**: 57-78.

⁶⁵ Adams J (2010) Motivational narratives and assessments of the body after cosmetic surgery *Qualitative Health Research* **20(6)**: 755-67.

⁶⁶ Viana GAP, Osaki MH, and Nishi M (2010) Effect of lower blepharoplasty on self-esteem *Dermatologic Surgery* **36(8)**: 1266-72.

⁶⁷ Viana GAP, Osaki MH, and Nishi M (2011) Clinical outcomes, patients’ satisfaction and aesthetic results after lower eyelid blepharoplasty *Revista do Colégio Brasileiro de Cirurgiões* **38(5)**: 317-22.

⁶⁸ Dayan SH, Arkins JP, Patel AB, and Gal TJ (2010) A double-blind, randomized, placebo-controlled health-outcomes survey of the effect of botulinum toxin type A injections on quality of life and self-esteem *Dermatologic Surgery* **36(s4)**: 2088-97.

⁶⁹ Meningaud J-P, Benadiba L, Servant J-M *et al.* (2003) Depression, anxiety and quality of life: outcome 9 months after facial cosmetic surgery *Journal of Cranio-Maxillofacial Surgery* **31(1)**: 46-50.

⁷⁰ Modig M, Andersson L, and Wårdh I (2006) Patients’ perception of improvement after orthognathic surgery: pilot study *British Journal of Oral and Maxillofacial Surgery* **44(1)**: 24-7.

surgery. Thus, despite reporting few problems with their appearance and interpersonal relationships in another questionnaire, these people have not achieved the high level of self-confidence about their facial and body appearance or about their psychosocial well-being that is found in a population that has not sought treatment.”⁷¹

Abdominal surgery, fat transfer, and liposuction

High levels of improvements to self-esteem have been identified by studies which have examined post-procedure accounts of individuals who have undergone these types of procedure. For example, a French study of 21 female participants who had lost a massive amount of weight following bariatric surgery and subsequently underwent medial thighplasty found that self-esteem improved in 90 per cent of participants.⁷² A cohort of Brazilian women who had undergone abdominoplasty after bariatric surgery similarly found that 87.5 per cent had “adequate” self-esteem when assessed 1-2 years after the procedure was undertaken.⁷³

A small sample of 30 US women undertaken two months after the procedures suggests that participants experienced reduced body image distress often, particularly “when looking at one’s self in the mirror” or “trying on new clothes at the store.”⁷⁴ The same study, however, also observed that the positive effects of surgery on body image were not matched in participants’ indication of general satisfaction with life. Improved self-esteem was also observed in a German study of 63 abdominoplasty recipients,⁷⁵ and in a US study (initiated by the surgeon who had undertaken the procedure) of 360 liposuction or abdominoplasty recipients, 85 per cent reported improved self-esteem.⁷⁶ A study involving 28 recipients of ‘correction’ to pectus carinatum also concludes that levels of self-esteem were found to increase by ten per cent.⁷⁷

Genital procedures

⁷¹ Lazaridou-Terzoudi T, Kiyak HA, Moore R, Athanasiou AE, and Melsen B (2003) Long-term assessment of psychologic outcomes of orthognathic surgery *Journal of Oral and Maxillofacial Surgery* **61(5)**: 545-52.

⁷² Bertheuil N, Thienot S, Chaput B, Varin A, and Watier E (2015) Quality-of-life assessment after medial thighplasty in patients following massive weight loss *Plastic and Reconstructive Surgery* **135(1)**: 67e-73e.

⁷³ Cintra W, Jr., Modolin MA, Gemperli R *et al.* (2008) Quality of life after abdominoplasty in women after bariatric surgery *Obesity Surgery* **18(6)**: 728-32.

⁷⁴ Bolton MA, Pruzinsky T, Cash TF, and Persing JA (2003) Measuring outcomes in plastic surgery: body image and quality of life in abdominoplasty patients *Plastic and Reconstructive Surgery* **112(2)**: 619-25.

⁷⁵ Papadopoulos NA, Staffler V, Mirceva V *et al.* (2012) Does abdominoplasty have a positive influence on quality of life, self-esteem, and emotional stability? *Plastic and Reconstructive Surgery* **129(6)**: 957e-62e.

⁷⁶ Swanson E (2012) Prospective outcome study of 360 patients treated with liposuction, lipoabdominoplasty, and abdominoplasty *Plastic and Reconstructive Surgery* **129(4)**: 965-78.

⁷⁷ Knudsen MV, Grosen K, Pilegaard HK, and Laustsen S (2015) Surgical correction of pectus carinatum improves perceived body image, mental health and self-esteem *Journal of Pediatric Surgery* **50(9)**: 1472-6.

This review only identified one study which addressed whether self-esteem improved following genital procedures. This study found that improvements to self-esteem were indicated by 93 per cent of women who answered a follow-up questionnaire following labia reduction or clitoral hood reduction procedures (although this represents only a 30 per cent response rate from the original sample).⁷⁸

Improved body image / attractiveness

"I dress a whole lot nicer now than I used to, because I feel pretty good about myself."⁷⁹

"It used to be like, I had to make sure everything was perfect... my hair, my make-up, my clothes... I guess I was trying to make up for my nose really. Now... like if I'm going to the gym or wherever, I may think, 'I'm not gonna wear any make-up'.⁸⁰

"... she did the Botox on the brow and then she put the Restylane in the lip, you know the Perlane and stuff like that... and oh! It just— I just, "Wow, this is great!"... I felt so young... I said, "I look so much softer. I look friendlier." And I just really liked the way it looked... For me, it was very uplifting."⁸¹

Some studies suggest that people who have had cosmetic procedures feel that they are more attractive and have improved body image. For example, improvements to body image was also observed in responses to a questionnaire which 72 recipients of cosmetic procedures completed. These improvements were observed to remain for two years following the original procedure.⁸²

In addition, in terms of self-ratings of attractiveness, participants in a US study were asked to rate, on a scale from one ("extremely unattractive") to ten ("extremely attractive") both the appearance of the feature altered by the surgery as well as their overall physical appearance. In response, participants reported significant improvements in the self-rated attractiveness of the feature that had been operated on. However, the study also found that its participants did not report significant changes in their overall body image.⁸³

⁷⁸ Alter GJ (2008) Aesthetic labia minora and clitoral hood reduction using extended central wedge resection *Plastic and Reconstructive Surgery* **122(6)**: 1780-9.

⁷⁹ Gagne P, and McGaughey D (2002) Designing women: cultural hegemony and the exercise of power among women who have undergone elective mammoplasty *Gender and Society* **16(6)**: 814-38.

⁸⁰ Gimlin D (2006) The absent body project: cosmetic surgery as a response to bodily dys-appearance *Sociology* **40(4)**: 699-716.

⁸¹ Hurd Clarke L, Repta R, and Griffin M (2007) Non-surgical cosmetic procedures: older women's perceptions and experiences *Journal of Women & Aging* **19(3-4)**: 69-87.

⁸² Sarwer DB, Infield AL, Baker JL *et al.* (2008) Two-year results of a prospective, multi-site investigation of patient satisfaction and psychosocial status following cosmetic surgery *Aesthetic Surgery Journal* **28(3)**: 245-50.

⁸³ Sarwer DB, Wadden TA, and Whitaker LA (2002) An investigation of changes in body image following cosmetic surgery *Plastic and Reconstructive Surgery* **109(1)**: 363-9.

Procedure-specific research also suggests that improved body image may be experienced by some recipients. For example, a small scale study of 16 Brazilian women who had undergone abdominoplasty after losing weight from bariatric surgery found that 93 per cent were happy with their new body figure and silhouette.⁸⁴ Recipients of the same procedure also reported consistent post-operative improvement in body image at three months, and also one year, after the procedure in an Austrian study of 30 female and four male abdominoplasty recipients. In contrast to a control group who had not received abdominoplasty, the recipients were also found to feel more attractive and self-confidence.⁸⁵ Similarly, a small scale Brazilian study of 24 women who had undergone abdominoplasty found that the procedure had reduced the level of concern and dissatisfaction with body image.⁸⁶

Breast procedures and subsequent assessments of body image have also been subject to review. For example, BA patients who answered a survey given to them by their surgeon (one of the senior authors of the study) found that 79 per cent of respondents were satisfied with the size of their breasts post-operatively, compared with 0 per cent beforehand. The same study also found that 97 per cent of patients felt attractive after the procedure, compared to 51 per cent beforehand.⁸⁷ In addition, a Norwegian study of 155 recipients of BR, augmentation, or abdominoplasty (comparing to a sample of 838 women who had no experience of cosmetic surgery) revealed - six months after surgery, when compared to pre-surgery levels - that there was improvement of satisfaction with appearance and body image. The study concludes that there are “no significant differences between the comparison sample [a representative sample of 838 Norwegian women with no experience of cosmetic surgery] and patients after surgery in body image evaluation, self-esteem, or psychological problems; in contrast, postoperative patients had significantly higher scores on body image orientation than the women in the comparison sample.”⁸⁸ Body image was also found to be enhanced for 96 per cent of women who had undergone BA or mastopexy. The same study also found that 91 per cent of recipients of facial surgery and 60 per cent of recipients of body surgery (abdominoplasty; body contouring) also reported enhanced body image. It also suggests that over half of recipients of breast and body procedures changed their attire after the procedures to dress more provocatively.⁸⁹ How one clothes oneself may indeed also be associated closely with improved body image. A study of 73 BA recipients found, for example, that 84 per cent of participants “agreed that they changed

⁸⁴ Cintra W, Jr., Modolin MA, Gemperli R *et al.* (2008) Quality of life after abdominoplasty in women after bariatric surgery *Obesity Surgery* **18(6)**: 728-32.

⁸⁵ Stuerz K, Piza H, Niermann K, and Kinzl J (2008) Psychosocial impact of abdominoplasty *Obesity Surgery* **18(1)**: 34-8.

⁸⁶ de Brito MJA, Nahas FX, Barbosa MVJ *et al.* (2010) Abdominoplasty and its effect on body image, self-esteem, and mental health *Annals of Plastic Surgery* **65(1)**: 5-10.

⁸⁷ Coriddi M, Angelos T, Nadeau M, Bennett M, and Taylor A (2013) Analysis of satisfaction and well-being in the short follow-up from breast augmentation using the BREAST-Q, a validated survey instrument *Aesthetic Surgery Journal* **33(2)**: 245-51.

⁸⁸ von Soest T, Kvalem I, Roald H, and Skolleborg K (2009) The effects of cosmetic surgery on body image, self-esteem, and psychological problems *Journal of Plastic, Reconstructive & Aesthetic Surgery* **62(10)**: 1238-44.

⁸⁹ Stofman GM, Neavin TS, Ramineni PM, and Alford A (2006) Better sex from the knife? An intimate look at the effects of cosmetic surgery on sexual practices *Aesthetic Surgery Journal* **26(1)**: 12-7.

their dressing code, preferring a décolleté neckline, stretchy clothes, and leaving behind clothes with turtle neck collar or loose clothes to hide their small breasts.” The same paper also found that 92 per cent of participants stated that “I feel better with my body”, and “I feel more attractive”.⁹⁰

Procedures that focus on the face / head may also lead to improvements in body image. For example, some recipients of Botox have also reported to feel more attractive following the procedure: one Germany study, for example, found that 55 per cent of 30 Botox recipients who participated in the study said that they felt completely or mostly attractive. In the same study, 76 per cent reported that they felt more comfortable with their body.⁹¹ In addition, 30 female recipients of orthognathic surgery also indicated high levels of satisfaction with their body image following the procedure: 90 per cent stated that they liked their postoperative body image very much; 10 per cent did not.⁹²

Satisfaction with appearance / aesthetic outcomes

“I was excited in my new breasts... I didn't feel like I was lacking something anymore when I got dressed.”⁹³

Some studies look at the perception of aesthetic outcomes across a range of cosmetic procedures. Among a group of adolescent participants, one study found that 56/61 females and 20/25 males reported ‘better appearance’ after undergoing various cosmetic procedures.⁹⁴ In addition, a Norwegian study of 130 women who had undergone various cosmetic procedures found that 92 per cent of participants reported that changes in appearance after cosmetic surgery were as expected or better; 81 per cent stated that they were now more satisfied with the appearance of their body; and specifically with the appearance of the body part operated on (89%).⁹⁵

The results of breast procedures have also led to participants reporting that they are more satisfied with their appearance. For example, a US questionnaire-based study of 225 BA recipients (initiated by the women’s surgeon) found that “expectations were met

⁹⁰ Papadopoulos N, Totis A, Kiriakidis D *et al.* (2014) Quality of life, personality changes, self esteem, and emotional stability after breast augmentation *European Journal of Plastic Surgery* **37(9)**: 479-88.

⁹¹ Sommer B, Zschocke I, Bergfeld D, Sattler G, and Augustin M (2003) Satisfaction of patients after treatment with botulinum toxin for dynamic facial lines *Dermatologic Surgery* **29(5)**: 456-60.

⁹² Türker N, Varol A, Ögel K, and Basa S (2008) Perceptions of preoperative expectations and postoperative outcomes from orthognathic surgery: Part I: Turkish female patients *International Journal of Oral and Maxillofacial Surgery* **37(8)**: 710-5.

⁹³ Wu W-R, Chung U-L, and Chang SCN (2007) A journey of restoring self-confidence: the life experiences of women recipients of augmentation mammoplasty *Journal of Nursing Research* **15(2)**: 107-16.

⁹⁴ Kamburoğlu HO, and Özgür F (2007) Postoperative satisfaction and the patient’s body image, life satisfaction, and self-esteem: a retrospective study comparing adolescent girls and boys after cosmetic surgery *Aesthetic Plastic Surgery* **31(6)**: 739-45.

⁹⁵ von Soest T, Kvaem IL, Skolleborg KC, and Roald HE (2011) Psychosocial changes after cosmetic surgery: a 5-year follow-up study *Plastic and Reconstructive Surgery* **128(3)**: 765-72.

or exceeded in 98.1 per cent of patients. Satisfactory size was achieved in 85.5 per cent of patients and satisfactory firmness was achieved in 75.7 per cent.”⁹⁶

This review identified little evidence in connection with appearance satisfaction among recipients of procedures which focus on the head. However, one Turkish study of 30 female recipients of orthognathic surgery found that 90 per cent of participants expressed the view that there was “complete correction and improvement” to their postoperative image; ten per cent stated that they had very little or no change.⁹⁷ Similarly, orthognathic surgery has also been shown to significantly improve recipients’ perception of their facial aesthetic by a small-scale Irish study, where 93 per cent of participants indicated an improvement in their facial appearance.⁹⁸ In addition, otoplasty recipients have also indicated satisfaction with appearance following the procedure. For example, in one study, 50 adolescent otoplasty recipients have reported high levels of satisfaction: 88 per cent reports being more satisfied with the appearance of their ears after the procedure.⁹⁹ Similarly, an interview-based study of 42 children with prominent ears also indicated that they were “very satisfied” with the result of otoplasty. Specifically, they were “happy to be able to wear hats and hairstyles that did not depend on their prominent ears.”¹⁰⁰ More specifically, 89 out of 93 (96%) recipients of a facelift who took part in a survey with their surgeon reported a more youthful appearance after surgery.¹⁰¹

Procedures such as abdominoplasty, fat transfer, and liposuction have also highlighted satisfaction with appearance outcomes. For example, a German study involving 63 abdominoplasty patients found that 84 per cent of participants were satisfied with the aesthetic results of the procedure (70% were satisfied; 14% were very satisfied).¹⁰² In addition, in a US study of 209 liposuction recipients, 53 per cent thought that their appearance was either excellent or very good following the procedure.¹⁰³

⁹⁶ Swanson EMD (2013) Prospective outcome study of 225 cases of breast augmentation *Plastic & Reconstructive Surgery* **131(5)**: 1158-66.

⁹⁷ Türker N, Varol A, Ögel K, and Basa S (2008) Perceptions of preoperative expectations and postoperative outcomes from orthognathic surgery: Part I: Turkish female patients *International Journal of Oral and Maxillofacial Surgery* **37(8)**: 710-5.

⁹⁸ Murphy C, Kearns G, Sleeman D, Cronin M, and Allen PF (2011) The clinical relevance of orthognathic surgery on quality of life *International Journal of Oral and Maxillofacial Surgery* **40(9)**: 926-30.

⁹⁹ Hao W, Chorney JM, Bezuhly M, Wilson K, and Hong P (2013) Analysis of health-related quality-of-life outcomes and their predictive factors in pediatric patients who undergo otoplasty *Plastic and Reconstructive Surgery* **132(5)**: 811e-7e.

¹⁰⁰ Niemelä BJ, Hedlund A, Andersson G, and Wahlsten VS (2008) Prominent ears: the effect of reconstructive surgery on self-esteem and social interaction in children with a minor defect compared to children with a major orthopedic defect *Plastic and Reconstructive Surgery* **122(5)**: 1390-8.

¹⁰¹ Swanson E (2011) Outcome analysis in 93 facial rejuvenation patients treated with a deep-plane face lift *Plastic and Reconstructive Surgery* **127(2)**: 823-34.

¹⁰² Papadopoulos NA, Staffler V, Mirceva V *et al.* (2012) Does abdominoplasty have a positive influence on quality of life, self-esteem, and emotional stability? *Plastic and Reconstructive Surgery* **129(6)**: 957e-62e.

¹⁰³ Broughton G, Horton B, Lipschitz A *et al.* (2006) Lifestyle outcomes, satisfaction, and attitudes of patients after liposuction: a Dallas experience *Plastic and Reconstructive Surgery* **117(6)**: 1738-49.

A small number of studies on genital procedures also indicate high satisfaction levels among recipients. For example, a French questionnaire-based study of 98 labia minora reduction patients (age range of 12 to 67) found that the aesthetic result was the one expected by 86 patients (88%). However, the size of the labia minora was still too large for four recipients, and too small for eight recipients. Among the 85 patients who were displeased with the *original* aesthetic appearance of the vulva, 77 (91%) were satisfied with the aesthetic result of the procedure.¹⁰⁴ Labiaplasty recipients have also been found to score higher on the Genital Appearance Satisfaction (GAS) scale in a UK study of 49 recipients. The authors of this study found that “96% of women showed reliable and clinically significant change in our primary outcome measure (GAS) at 3-month follow-up, and 91% fell into this group at long-term follow-up [11-42 months following the procedure].”¹⁰⁵ In addition, all but one of 18 survey respondents who had undergone labiaplasty in a French clinic also considered the outcome of the procedure to be aesthetically satisfactory.¹⁰⁶

Mental health

Improvements to mental health following cosmetic procedures are addressed by a number of studies. However, it should be noted that there is inconsistency among the criteria that studies use as indicators of ‘improvements to mental health’.

Studies which did not examine a specific cosmetic procedure, but looked at mental health generally following a range of procedures, found some improvements. For example, a UK-based study suggests that those who had received a cosmetic surgery demonstrated “clear improvements in emotional and behavioural difficulties related to appearance concerns”.¹⁰⁷ In addition, appearance-related burdens generally were found to decrease for 184 adolescents who had undergone various types of cosmetic procedures when compared to a control group of 83 adolescents who had *not* undergone a procedure. The authors note that recipients of cosmetic procedures “reported a significant decrease in burdens after surgery compared with the comparison group, indicating a much more prominent improvement in the patient sample compared with the developmental changes that may be expected to occur in adolescence.”¹⁰⁸

For procedures which focus on the head / face, some improvements to mental health have been observed. For example, a Brazilian study of 32 women who underwent rhytidoplasty (wrinkle treatment) found that, at two and six months after the procedure,

¹⁰⁴ Rouzier R, Louis-Sylvestre C, Paniel B-J, and Haddad B (2000) Hypertrophy of labia minora: experience with 163 reductions *American Journal of Obstetrics and Gynecology* **182(1)**: 35-40.

¹⁰⁵ Veale D, Naismith I, Eshkevari E *et al.* (2014) Psychosexual outcome after labiaplasty: a prospective case-comparison study *International Urogynecology Journal* **25(6)**: 831-9.

¹⁰⁶ Trichot C, Thubert T, Faivre E, Fernandez H, and Deffieux X (2011) Surgical reduction of hypertrophy of the labia minora *International Journal of Gynecology and Obstetrics* **115(1)**: 40-3.

¹⁰⁷ Moss TP, and Harris DL (2009) Psychological change after aesthetic plastic surgery: a prospective controlled outcome study *Psychology, Health & Medicine* **14(5)**: 567-72.

¹⁰⁸ Simis KJ, Hovius SER, de Beaufort ID *et al.* (2002) After plastic surgery: adolescent-reported appearance ratings and appearance-related burdens in patient and general population groups *Plastic and Reconstructive Surgery* **109(1)**: 9-17.

the women's mental health improved significantly.¹⁰⁹ A further Brazilian study of 30 young people who underwent otoplasty for prominent ears compared their state of anxiety before and after the procedure, and found that the level of anxiety in the post-operative phase decreased for 20 children, remained the same in two children, and increased in eight children.¹¹⁰ Lower levels of improvements to emotional wellbeing were identified in a study of 30 Botox recipients, where 30 per cent said that their emotional wellbeing was completely or mostly better.¹¹¹

The mental health of recipients of BA has also been assessed by a small number of studies. For example, a Finnish study of 375 BA recipients examined mental health-related issues following the procedure and found that 64 per cent of participants did not report any feelings of depression or distress, 30 per cent had some, and a small percentage had moderate feelings of depression or distress.¹¹² A further study asked 73 BA recipients to complete a questionnaire before and after BA and concluded that, prior to their operation, 100 per cent expected "an improvement to their 'personal well-being'", an expectation which was realised by 99 per cent post-operatively.¹¹³ However, for BA recipients, an epidemiological review concludes that it is necessary to further examine "whether history of psychiatric illness or other factors prior to breast augmentation surgery may place some women with implants at high risk of suicide."¹¹⁴

Mental health has been found to improve by Brazilian researchers who assessed 39 female recipients of abdominoplasty.¹¹⁵ However, no other studies were identified which explored the views of other recipients of abdominoplasty.

Quality of life

Young people

*"Classmates do not mock him anymore."*¹¹⁶

¹⁰⁹ de Arruda Alves MC, Felipe Abla LE, Santos RdA, and Ferreira LM (2005) Quality of life and self-esteem outcomes following rhytidoplasty *Annals of Plastic Surgery* **54(5)**: 511-4.

¹¹⁰ Gasques JÁL, Pereira de Godoy JM, and Cruz EMTN (2008) Psychosocial effects of otoplasty in children with prominent ears *Aesthetic Plastic Surgery* **32(6)**: 910-4.

¹¹¹ Sommer B, Zschocke I, Bergfeld D, Sattler G, and Augustin M (2003) Satisfaction of patients after treatment with botulinum toxin for dynamic facial lines *Dermatologic Surgery* **29(5)**: 456-60.

¹¹² We may assume that this is six per cent, although this is not confirmed by the paper. See: Lamberg S, Manninen M, Kulmala I *et al.* (2008) Health-related quality of life issues after cosmetic breast implant surgery in Finland *Annals of Plastic Surgery* **61(5)**: 485-8.

¹¹³ Papadopoulos N, Totis A, Kiriakidis D *et al.* (2014) Quality of life, personality changes, self esteem, and emotional stability after breast augmentation *European Journal of Plastic Surgery* **37(9)**: 479-88.

¹¹⁴ McLaughlin JK, Lipworth L, and Tarone RE (2003) Suicide among women with cosmetic breast implants: a review of the epidemiologic evidence *Journal of long-term effects of medical implants* **13(6)**: 445-50.

¹¹⁵ de Brito MJA, Nahas FX, Barbosa MVJ *et al.* (2010) Abdominoplasty and its effect on body image, self-esteem, and mental health *Annals of Plastic Surgery* **65(1)**: 5-10.

¹¹⁶ Parent of a child who had received otoplasty, in: Gasques JÁL, Pereira de Godoy JM, and Cruz EMTN (2008) Psychosocial effects of otoplasty in children with prominent ears *Aesthetic Plastic Surgery* **32(6)**: 910-4.

Some studies focus specifically on young people's QOL following cosmetic procedures. For example, in a Canadian study of 50 young people who had received otoplasty, their parents "reported a significant improvement in their children's health-related quality of life... the children themselves also reported having a generally high health-related quality of life after surgery."¹¹⁷ A further Canadian study of 30 adolescents who had undergone rhinoplasty also concluded, generally, that QOL was enhanced as a result of the procedure. The authors note: "aesthetic rhinoplasty is an undeniably effective tool for correcting psychologically impairing features that adolescents perceive as undesirable. Postoperatively, these patients demonstrate positive changes in behavior and interpersonal relations."¹¹⁸

Adults

Among adult recipients of cosmetic procedures, the literature has examined how QOL might be affected following a range of different procedures.

Breast procedures

Most studies identified by this review focus on QOL measures following breast procedures.

"... putting things into the dishwasher and taking them out has become a totally different experience of me."¹¹⁹

According to the literature, QOL particularly improves for recipients of BR. For example, in a study involving a group of 57 Swedish women who underwent BR, 89 per cent of participants had "satisfactory results and increased quality of life, especially in comparison with the pre-operative assessment of quality of life."¹²⁰ A study of 30 women who had BR surveyed participants' QOL before the procedure, then 30 and 120 days after the surgery, made similarly positive conclusions: the researchers concluded that there was "significant improvement in all domains of quality of life and in self-esteem when scores before and after surgery were compared." This improvement was maintained at both post-procedure time points.¹²¹ In addition, a Canadian study of 56 women who answered a questionnaire before BR, then six months afterwards, found that, at six months, there was a "significant improvement" of the women's health-related QOL, noting that, prior to the procedure, the women's health-related QOL was

¹¹⁷ Hao W, Chorney JM, Bezuhly M, Wilson K, and Hong P (2013) Analysis of health-related quality-of-life outcomes and their predictive factors in pediatric patients who undergo otoplasty *Plastic and Reconstructive Surgery* **132(5)**: 811e-7e.

¹¹⁸ Chauhan N, Warner J, and Adamson P (2010) Adolescent rhinoplasty: challenges and psychosocial and clinical outcomes *Aesthetic Plastic Surgery* **34(4)**: 510-6.

¹¹⁹ Klassen A, Pusic A, Scott A, Klok J, and Cano S (2009) Satisfaction and quality of life in women who undergo breast surgery: a qualitative study *BMC Women's Health* **9(1)**: 11.

¹²⁰ Eggert E, Schuss R, and Edsander-Nord Å (2009) Clinical outcome, quality of life, patients' satisfaction, and aesthetic results, after reduction mammoplasty *Scandinavian Journal of Plastic and Reconstructive Surgery and Hand Surgery* **43(4)**: 201-6.

¹²¹ Mello A, Domingos N, and Miyazaki M (2010) Improvement in quality of life and self-esteem after breast reduction surgery *Aesthetic Plastic Surgery* **34(1)**: 59-64.

significantly worse than the general population and the post-operative assessment normalised their score, when compared to the population measure. The authors therefore conclude that the procedure had a 'normalising' effect regarding the women's health-related QOL. Health-related QOL was also found to improve for all 52 participants in a Canadian study of BR recipients. The study further found that the improvement is "most noticeable between one day before surgery and one month after surgery, after which it stabilises for up to one year."¹²² An Italian study of 116 BR recipients also found that "women who underwent BR have shown a significant improvement in both physical and psychological symptoms associated with macromastia and in their overall QOL at 12 months' post-operation."¹²³ Similarly, a Finnish study of 62 BR recipients found that prior to the procedure, participants had significantly inferior QOL when compared with an age standardised population, which was subsequently removed after the reductions had taken place. In addition, this questionnaire-based study concluded that "at follow up, patients had significantly better QOL, less breast-associated symptoms, less depression and anxiety and better self-esteem when compared with the preoperative situation."¹²⁴

Fewer studies were identified which addressed whether QOL improves following BA. However, one study suggests that QOL improved for 64 per cent of participants in a surgeon-initiated questionnaire for 225 recipients of BA.¹²⁵ Health-related QOL was also assessed in a group of 375 BA recipients. This research found that the average total score for this measure was 0.937 among women who had undergone BA, and 0.933 among an age-matched control group, indicating similar levels of health QOL between the two groups.¹²⁶

Cosmetic facial procedures

A small number of studies were identified which explore the outcome of QOL across a diverse range of cosmetic facial procedures. These include the indication of improvements to QOL among 121 rhinoplasty recipients (106 of whom were male) in a Turkish study,¹²⁷ 75 rhinoplasty patients in an Iranian study,¹²⁸ and 56 rhinoplasty

¹²² Thoma A, Sprague S, Veltri K, Duku E, and Furlong W (2007) A prospective study of patients undergoing breast reduction surgery: health-related quality of life and clinical outcomes *Plastic and Reconstructive Surgery* **120(1)**: 13-26.

¹²³ Rogliani M, Gentile P, Labardi L, Donfrancesco A, and Cervelli V (2009) Improvement of physical and psychological symptoms after breast reduction *Journal of Plastic, Reconstructive & Aesthetic Surgery* **62(12)**: 1647-9.

¹²⁴ Saariniemi KMM, Kuokkanen HOM, and Tukiainen EJ (2011) The outcome of reduction mammoplasty remains stable at 2–5 years' follow-up: a prospective study *Journal of Plastic, Reconstructive & Aesthetic Surgery* **64(5)**: 573-6.

¹²⁵ Swanson EMD (2013) Prospective outcome study of 225 cases of breast augmentation *Plastic & Reconstructive Surgery* **131(5)**: 1158-66.

¹²⁶ Lamberg S, Manninen M, Kulmala I *et al.* (2008) Health-related quality of life issues after cosmetic breast implant surgery in Finland *Annals of Plastic Surgery* **61(5)**: 485-8.

¹²⁷ Cingi C, Toros SZ, Cakli H, and Gürbüz MK (2013) Patient-reported outcomes after endonasal rhinoplasty for the long nose *Journal of Craniofacial Surgery* **24(3)**: 1002-6.

¹²⁸ Fatemi M, Rajabi F, Moosavi S, and Soltani M (2012) Quality of life among Iranian adults before and after rhinoplasty *Aesthetic Plastic Surgery* **36(2)**: 448-52.

recipients in a US study.¹²⁹ However, one study from Iran which assessed QOL scores in 110 rhinoplasty recipients before and after surgery found that QOL declines in the short-term, although increases again in the long-term.¹³⁰ Health-related QOL has also been found to improve following otoplasty in a group of 40 Austrian adults,¹³¹ and facial cosmetic surgery in general was shown to enhance QOL three months after the initial procedure in a group of 93 recipients, especially for participants over the age of 50.¹³²

Dental procedures

One questionnaire study compared QOL between 68 participants who had undergone surgery for cleft palates, and a control group of 66. It suggests that the former group reported significantly more dissatisfaction with their facial appearance than the group without clefts, but had high levels of satisfaction with body parts other than facial features.¹³³

Recipients of orthognathic procedures have also been observed to undergo improvements to QOL. However, those improvements take some time to develop: a study of 36 recipients of orthognathic surgery found that, six weeks following surgery, there was evidence of “a marked deterioration in QOL in many aspects related to general well-being. However, by six months, despite the presence of subjects undergoing postsurgical orthodontics, improvement in QOL after orthognathic surgery were evidence compared with before surgery.”¹³⁴ Slightly later time points were recorded by a US study of 93 recipients of orthognathic surgery, at two and five years after the procedure. Health-related QOL and oral health-related QOL showed significant improvement from pre-surgery to two years post-surgery, then remained stable between two and five years after surgery.¹³⁵ Improvements to QOL were also observed in a

¹²⁹ Schwitzer JA, Sher SR, Fan KL *et al.* (2015) Assessing patient-reported satisfaction with appearance and quality of life following rhinoplasty using the FACE-Q appraisal scales *Plastic and Reconstructive Surgery* **135(5)**: 830e-7e.

¹³⁰ Mohammadshahi M, Pourreza A, Orojlo P, Mahmoodi M, and Akbari F (2014) Rhinoplasty as a medicalized phenomenon: a 25-center survey on quality of life before and after cosmetic rhinoplasty *Aesthetic Plastic Surgery* **38(4)**: 615-9.

¹³¹ Schwentner I, Schmutzhard J, Deibl M, and Sprinzl GM (2006) Health-related quality of life outcome of adult patients after otoplasty *Journal of Craniofacial Surgery* **17(4)**: 629-35.

¹³² Litner JA, Rotenberg BW, Dennis M, and Adamson PA (2008) Impact of cosmetic facial surgery on satisfaction with appearance and quality of life *Archives of Facial Plastic Surgery* **10(2)**: 79-83.

¹³³ Marcusson A, Paulin G, and Östrup L (2002) Facial appearance in adults who had cleft lip and palate treated in childhood *Scandinavian Journal of Plastic and Reconstructive Surgery and Hand Surgery* **36(1)**: 16-23.

¹³⁴ Lee S, McGrath C, and Samman N (2008) Impact of orthognathic surgery on quality of life *Journal of Oral and Maxillofacial Surgery* **66(6)**: 1194-9.

¹³⁵ Motegi E, Hatch JP, Rugh JD, and Yamaguchi H (2003) Health-related quality of life and psychosocial function 5 years after orthognathic surgery *American Journal of Orthodontics and Dentofacial Orthopedics* **124(2)**: 138-43.

Saudi Arabian study of 17 recipients of orthognathic surgery,¹³⁶ and for a small group of participants who had undergone orthognathic surgery in Brazil.¹³⁷

Orthodontic treatment in adults may also lead to improvements in QOL: an Israeli study of 69 recipients of orthodontic treatment / “dental aesthetic improvement” suggests that the treatment “generated a significant improvement in adult patients’ quality of life for the period examined (up to 6 months post-treatment).”¹³⁸ A further study suggests that, for adult recipients of front teeth implants, the treatment “significantly improved adverse psychological and quality-of-life effects precipitated by missing anterior teeth.”¹³⁹

Abdominal surgery, fat transfer, and liposuction

A small number of studies focused on QOL measures following this group of procedures. For example, research with recipients of abdominoplasty indicates an ‘influence’ of the procedure on participants’ QOL,¹⁴⁰ supported by a US study of 360 abdominoplasty or liposuction recipients, where 69 per cent reported an improved QOL (more commonly after liposuction and abdominoplasty rather than just liposuction alone).¹⁴¹ Similarly, overall QOL improved for a small group of 16 Brazilian women who underwent abdominoplasty following bariatric surgery (and consequent weight loss).¹⁴² A Danish study of 28 participants who underwent an operation to ‘correct’ pectus carinatum also found that disease-specific health-related QOL improved by 33 per cent when measured six months after the procedure.¹⁴³ In addition, 67 per cent of abdominoplasty recipients who took part in an Austrian study also reported improvements to their participation in leisure activities (e.g. through playing sports, or going swimming).¹⁴⁴

Genital procedures

¹³⁶ Abdullah WA (2015) Changes in quality of life after orthognathic surgery in Saudi patients *The Saudi Dental Journal* **27(3)**: 161-4.

¹³⁷ Nicodemo D, Pereira MD, and Ferreira LM (2008) Effect of orthognathic surgery for class III correction on quality of life as measured by SF-36 *International Journal of Oral and Maxillofacial Surgery* **37(2)**: 131-4.

¹³⁸ Gazit-Rappaport T, Haisraeli-Shalish M, and Gazit E (2010) Psychosocial reward of orthodontic treatment in adult patients *The European Journal of Orthodontics* **32(4)**: 441-6.

¹³⁹ Chen P, Yu S, and Zhu G (2012) The psychosocial impacts of implantation on the dental aesthetics of missing anterior teeth patients *British Dental Journal* **213(11)**: E20.

¹⁴⁰ Papadopoulos NA, Staffler V, Mirceva V *et al.* (2012) Does abdominoplasty have a positive influence on quality of life, self-esteem, and emotional stability? *Plastic and Reconstructive Surgery* **129(6)**: 957e-62e.

¹⁴¹ Swanson E (2012) Prospective outcome study of 360 patients treated with liposuction, lipoabdominoplasty, and abdominoplasty *Plastic and Reconstructive Surgery* **129(4)**: 965-78.

¹⁴² Cintra W, Jr., Modolin MA, Gemperli R *et al.* (2008) Quality of life after abdominoplasty in women after bariatric surgery *Obesity Surgery* **18(6)**: 728-32.

¹⁴³ Knudsen MV, Grosen K, Pilegaard HK, and Laustsen S (2015) Surgical correction of pectus carinatum improves perceived body image, mental health and self-esteem *Journal of Pediatric Surgery* **50(9)**: 1472-6.

¹⁴⁴ Stuerz K, Piza H, Niermann K, and Kinzl J (2008) Psychosocial impact of abdominoplasty *Obesity Surgery* **18(1)**: 34-8.

Only one study was identified on QOL impacts of genital procedures: a French study concluded that “labiaplasty was found to be associated with good improvements in patient quality of life”.¹⁴⁵

Changes in others’ perceptions

“I think that now, people don’t make assumptions about me... People don’t think they already know me just by looking at my breasts.”¹⁴⁶

“I used to think that it was impolite to expose breasts in public. Every time my girlfriends bent down to tie their shoelaces, I pulled their shirts downward quickly from the back to avoid their breasts being exposed. I also did that for myself...But now I feel that exposed breasts are beautiful. Men’s looks are a kind of praise regarding their beauty.”¹⁴⁷

“in terms of my confidence, it definitely shot up. There was definitely a different response from people around me.”¹⁴⁸

Studies also explore BR recipients’ experiences of others’ prior perceptions of their large breasts. One Dutch study, for example, observed that “women with large breasts are insecure about their breasts and they feel ashamed, inferior, and unattractive. Socially, there is a distress because of people making remarks or offensive comments. Going to the beach is avoided as well as communal changing.” The authors compared two groups of women: those who were waiting for a BR procedure; and those who had undergone the procedure two years previously. Their study indicated that the insecurity and shame observed in the group were less significantly mentioned by the latter group.¹⁴⁹ Similarly, 75 per cent of BR recipients in a UK study also indicated that they experienced an improvement in their personal relationships following the procedure (in addition, 92 per cent agreed that the surgery overall positively impacted their life).¹⁵⁰

In other contexts, a very small interview-based study with a group of five men who had undergone various cosmetic procedures also identified how others’ perceptions can

¹⁴⁵ Trichot C, Thubert T, Faivre E, Fernandez H, and Deffieux X (2011) Surgical reduction of hypertrophy of the labia minora *International Journal of Gynecology and Obstetrics* **115(1)**: 40-3.

¹⁴⁶ Gimlin D (2006) The absent body project: cosmetic surgery as a response to bodily dys-appearance *Sociology* **40(4)**: 699-716.

¹⁴⁷ Wu W-R, Chung U-L, and Chang SCN (2007) A journey of restoring self-confidence: the life experiences of women recipients of augmentation mammoplasty *Journal of Nursing Research* **15(2)**: 107-16.

¹⁴⁸ Ricciardelli R, and White P (2011) Modifying the body: Canadian men’s perspectives on appearance and cosmetic surgery *The Qualitative Report* **16(4)**: 949-70.

¹⁴⁹ Hermans BJE, Boeckx WD, De Lorenzi F, and van Der Hulst RRWJ (2005) Quality of life after breast reduction *Annals of Plastic Surgery* **55(3)**: 227-31.

¹⁵⁰ Sharma K, Lim P, Baines R, and Brotherston TM (2014) Reduction mammoplasty in adolescents: a review of the indications, timing, and outcomes in a regional plastic surgery unit *European Journal of Plastic Surgery* **37(12)**: 661-6.

influence assessments of the success of procedures. The following reaction was observed in one man who underwent otoplasty and facial liposuction:

“Forest’s surgery has not just altered his individual outlook, but also the way he feels others see him. He perceives an increased rapport with women as a direct effect of his surgery, entering his first serious relationship post-operation. Ironically, aesthetic surgery has enhanced Forest’s masculinity through increased sexual activity. His identity and behaviour have shifted away from ‘subordinate’ masculinity, based on bodily insecurity, to a new masculinity where exhibiting ‘body work’ is actually desirable.”¹⁵¹

Popularity was also found to increase following cosmetic procedures within a sample of 86 young people who took part in a Turkish study: 24/61 girls and 12/25 boys noted increases to their popularity (36 girls and 13 boys stated that their popularity did not change, and one girl stated that her popularity decreased).¹⁵²

A US study of 63 people who had undergone cosmetic surgery also found – over three assessment points during one year – that over 90 per cent of participants reported that other individuals had commented on their appearance; 93 per cent of these comments were positive.¹⁵³

Embarrassment around a feature altered by surgery has also been observed to decrease following a procedure. The authors of an American study of 45 women who had undergone various cosmetic procedures report that “they also reported significantly less embarrassment when attention was drawn to that feature by others. Furthermore, patients reported significant reductions in the amount of time they were upset about the feature... Thus cosmetic surgery appears to reduce the occurrence of both negative emotional and behavioral body images experiences.”¹⁵⁴

For example, in terms of self-ratings of attractiveness, participants in a US study were asked to rate, on a scale from one (“extremely unattractive”) to ten (“extremely attractive”) both the appearance of the feature altered by the surgery as well as their overall physical appearance. In response, participants reported significant improvements in the self-rated attractiveness of the feature that had been operated on: 38 women (84%) reported that others had commented on their appearance postoperatively, and 35 women (78%) reported that these comments were positive.

¹⁵¹ Holliday R, and Cairnie A (2007) Man made plastic: investigating men’s consumption of aesthetic surgery *Journal of Consumer Culture* **7(1)**: 57-78.

¹⁵² Kamburoğlu HO, and Özgür F (2007) Postoperative satisfaction and the patient’s body image, life satisfaction, and self-esteem: a retrospective study comparing adolescent girls and boys after cosmetic surgery *Aesthetic Plastic Surgery* **31(6)**: 739-45.

¹⁵³ Sarwer DB, Gibbons LM, Magee L *et al.* (2005) A prospective, multi-site investigation of patient satisfaction and psychosocial status following cosmetic surgery *Aesthetic Surgery Journal* **25(3)**: 263-9.

¹⁵⁴ Sarwer DB, Wadden TA, and Whitaker LA (2002) An investigation of changes in body image following cosmetic surgery *Plastic and Reconstructive Surgery* **109(1)**: 363-9.

‘Regaining a past self’ / becoming a different person

“I just feel better about myself... I just feel like I’m catching those years that I didn’t have before.”¹⁵⁵

A small number of studies elicited comments from participants that undergoing cosmetic procedures have led them to ‘regain a past self’, or to ‘become a different person’.

For example, an ethnography focusing on American patients who travelled to Costa Rica for cosmetic procedures cites the observations of one 48-year-old woman that “I feel like my old lady tummy was not conducive to who I felt on the inside, so now I match on the outside.” The author of this paper classifies this as a “realignment of disjointed inner- and outer-selves.” Further, another participant in the same study noted that, following the cosmetic procedure, “now I look like me again.”¹⁵⁶ Other comments around similar themes in the literature include:

“Now I’m not the office fat guy everyone pokes fun at and ignores. People listen to me and consider my opinions on practically everything. No one looks at a fat guy and says, ‘there’s a real go-getter... they say the opposite, he’s lazy, unmotivated and someone worth firing.’”¹⁵⁷

“It used to be like, there’s me and there’s my breasts... Now, it’s just me.”¹⁵⁸

“My confidence level, my self esteem, my self respect, my self worth, everything...it has affected everything. I am just so much more solid, grounded. I feel like I am a whole woman now.”¹⁵⁹

Little evidence was identified which explored the question of whether recipients of cosmetic procedures may be satisfied with the results of their procedure because they feel ‘normal’ compared with their pre-procedure self-perceptions. Comments made during the course of two qualitative studies address this issue. One breast reconstruction recipient observes as part of an interview-based study: “if I didn’t have it done I wouldn’t have felt normal at all, it would always remind me of what had happened.”¹⁶⁰ A recipient of BR also states: “I feel like a normal person instead of like a

¹⁵⁵ Hurd Clarke L, Repta R, and Griffin M (2007) Non-surgical cosmetic procedures: older women's perceptions and experiences *Journal of Women & Aging* **19(3-4)**: 69-87.

¹⁵⁶ Ackerman SL (2010) Plastic paradise: transforming bodies and selves in Costa Rica's cosmetic surgery tourism industry *Medical Anthropology* **29(4)**: 403-23.

¹⁵⁷ Atkinson M (2008) Exploring male femininity in the ‘crisis’: men and cosmetic surgery *Body & Society* **14(1)**: 67-87.

¹⁵⁸ Gimlin D (2006) The absent body project: cosmetic surgery as a response to bodily dys-appearance *Sociology* **40(4)**: 699-716.

¹⁵⁹ Klassen A, Pusic A, Scott A, Klok J, and Cano S (2009) Satisfaction and quality of life in women who undergo breast surgery: a qualitative study *BMC Women's Health* **9(1)**: 11.

¹⁶⁰ Beesley H, Ullmer H, Holcombe C, and Salmon P (2012) How patients evaluate breast reconstruction after mastectomy, and why their evaluation often differs from that of their clinicians *Journal of Plastic, Reconstructive & Aesthetic Surgery* **65(8)**: 1064-71.

freak” and a further participant in the same study notes: “I have really nice voluptuous rounded normal-sized perky breasts and I am sooo happy with them. Sooo happy.”¹⁶¹

¹⁶¹ Klassen A, Pusic A, Scott A, Klok J, and Cano S (2009) Satisfaction and quality of life in women who undergo breast surgery: a qualitative study *BMC Women's Health* **9(1)**: 11.

Physical explanations of satisfaction

Section summary

Levels of satisfaction post-procedure among research participants are shown to be dependent on physical factors. In particular, a significant number of participants who have undergone procedures which focus on the jaw and teeth note functional improvements.

Improvements to pre-procedure experience of discomfort and pain are noted particularly as indicators of satisfaction by recipients of breast reduction. Recipients of breast procedures, abdominoplasty, and FGCS also indicate satisfaction post-procedure due to improvements to their sex lives.

Several studies highlight that recipients' feelings of satisfaction are grounded in physical factors, from which sub-categories might be identified.

Functional improvements

Functional improvements are noted particularly in studies which address orthognathic (jaw) procedures. For example, a small study of 32 participants found that 91 per cent thought that they chewed better after the operation; and 19 per cent felt that they could speak better.¹⁶² A further study of 62 orthognathic surgery recipients found that 64 per cent reported improvements to chewing function, 60 per cent noted improvements to comfort, and 32 per cent felt that their speech improved.¹⁶³ Chewing ability also improved for 71 per cent of participants in a Chinese study.¹⁶⁴ Further, a Finnish study which involved 82 patients (53 females, 29 males) with temporomandibular disorder (TMD) who received orthodontic surgery, found that TMD symptoms were significantly reduced after treatment. Improvements were also reported in facial appearance for 82 per cent of participants, chewing ability for 61 per cent, and facial (56%) and temporomandibular joint pain (40%). However, the study also found that 12 per cent of participants were worse after the treatment. Generally, the study also found that 73 per cent were very satisfied with the outcomes, and no participant expressed dissatisfaction.¹⁶⁵

¹⁶² Modig M, Andersson L, and Wårdh I (2006) Patients' perception of improvement after orthognathic surgery: pilot study *British Journal of Oral and Maxillofacial Surgery* **44(1)**: 24-7.

¹⁶³ Murphy C, Kearns G, Sleeman D, Cronin M, and Allen PF (2011) The clinical relevance of orthognathic surgery on quality of life *International Journal of Oral and Maxillofacial Surgery* **40(9)**: 926-30.

¹⁶⁴ Zhou Y, Hägg U, and Rabie A (2000) Patient satisfaction following orthognathic surgical correction of skeletal Class III malocclusion *The International Journal of Adult Orthodontics and Orthognathic Surgery* **16(2)**: 99-107.

¹⁶⁵ Pahkala RH, and Kellokoski JK (2007) Surgical-orthodontic treatment and patients' functional and psychosocial well-being *American Journal of Orthodontics and Dentofacial Orthopedics* **132(2)**: 158-64.

Specific reference was also identified in relation to functional improvements as a result of revisionary rhinoplasties. One study notes that 88 per cent of participants “experienced a significant improvement in nasal performance by revision rhinoplasty, and 79 per cent would choose to undergo the revision procedure again.”¹⁶⁶

Improvements to discomfort and pain

“I frequently change positions trying to reach a more comfortable position for my back.”¹⁶⁷

“I used to have to tuck my skin into my jeans or trousers on my belly to try to hold that and get that out of the way.”¹⁶⁸

BR studies, in particular, highlight significant improvement to pre-operation levels of discomfort and pain experienced by recipients. For example, a Brazilian study of 40 BR recipients found that, following the procedure, the women described “a significant improvement after six months in symptoms in the shoulder, back and neck”.¹⁶⁹ A further study of 75 BR recipients found a high rate of reduction to preoperative physical symptoms. Rates of reduction of physical symptoms are as follows: 91 per cent for neck pain; 86 per cent for back and breast pain; 83 per cent for shoulder grooving from bra straps; 82 per cent for rashes; 82 per cent for lumbar pain; 71 per cent for shoulder pain; and 58 per cent for headache.¹⁷⁰ Similarly, a Finnish study of 93 BR recipients found that 83 per cent felt that the operation had alleviated their neck, shoulder and back pain: seven per cent stated that there had been no change; two per cent stated that the pain had become worse; ten per cent were unable to say whether there had been any change.¹⁷¹ In addition, a UK study of 66 BR recipients found that 94 per cent were overall satisfied with the procedure, and all participants “expressed marked improvement regarding neck pain, back pain, submammary rash, breast pain and shoulder grooving.”¹⁷² Similarly, of 17 patients out of an original sample of 44 who had undergone BR and indicated a shortness of breath prior to the procedure, all noted

¹⁶⁶ Hellings PW, and Trenité GJN (2007) Long-term patient satisfaction after revision rhinoplasty *The Laryngoscope* **117(6)**: 985-9.

¹⁶⁷ Neto MS, Demattê MF, Freire M *et al.* (2008) Self-esteem and functional capacity outcomes following reduction mammoplasty *Aesthetic Surgery Journal* **28(4)**: 417-20.

¹⁶⁸ Ogden J, Birch A, and Wood K (2014) ‘The wrong journey’: patients’ experience of plastic surgery post weight loss surgery *Qualitative Research in Sport, Exercise and Health* **7(2)**: 294-308.

¹⁶⁹ Freire M, Neto MS, Garcia ÉB, Quaresma MR, and Ferreira LM (2004) Quality of life after reduction mammoplasty *Scandinavian Journal of Plastic and Reconstructive Surgery and Hand Surgery* **38(6)**: 335-9.

¹⁷⁰ Menderes A, Mola F, Vayvada H, and Barutcu A (2005) Evaluation of results from reduction mammoplasty: relief of symptoms and patient satisfaction *Official Journal of the International Society of Plastic Surgery* **29(2)**: 83-7.

¹⁷¹ Tykkä SA-SHHE (2001) Patients’ satisfaction with breast reconstruction and reduction mammoplasty *Scandinavian Journal of Plastic and Reconstructive Surgery and Hand Surgery* **35(4)**: 399-405.

¹⁷² Brown A, Hill C, and Khan K (2000) Outcome of reduction mammoplasty — a patients’ perspective *British Journal of Plastic Surgery* **53(7)**: 584-7.

significant improvement following the procedure.¹⁷³ A Swedish study of 49 participants who had BR also found that they experienced reduced or eliminated pain, with a corollary that their health-related quality of life scores similarly improved.¹⁷⁴ A small French study of 20 women who had BR concluded that participants reported improvements to several dimensions of their subjective life quality, including pain (and also improvements to their ability to sleep well).¹⁷⁵ Similarly, a US study of 179 BR patients concluded that pain and overall health status of the women involved in the study were “markedly improved” by the procedure,¹⁷⁶ which echoes the finding of a further study from Brazil.¹⁷⁷

Breast reconstruction patients have also been found to indicate improvements to discomfort. For example a Finnish study of 115 reconstruction recipients found that 24 per cent felt that the operation had alleviated their neck, shoulder and back pain; 45 per cent reported no change; and 12 per cent stated that the pain had become worse since the operation.¹⁷⁸

In addition, 96 per cent of labiaplasty recipients who had complained of discomfort prior to surgery reported a correction to this discomfort.¹⁷⁹ Similarly, a French study of 18 labiaplasty recipients – five of whom were under the age of 18 – observed that 100 per cent of participants “reported an improvement in comfort with respect to any form of original functional discomfort.”¹⁸⁰

Improved sex life / sexual functioning

“Sex is great, I mean it’s actually better than it’s ever been because we’re not limited by mobility and my self-esteem has, like, skyrocketed so you know, that aspect of, “Do you think I’m pretty, do you think I’m sexy? – that’s gone, I know it.”¹⁸¹

¹⁷³ Sood R, Mount DL, Coleman JJI *et al.* (2003) Effects of reduction mammoplasty on pulmonary function and symptoms of macromastia *Plastic and Reconstructive Surgery* **111(2)**: 688-94.

¹⁷⁴ Blomqvist L, Eriksson A, and Brandberg Y (2000) Reduction mammoplasty provides long-term improvement in health status and quality of life *Plastic and Reconstructive Surgery* **106(5)**: 991-7.

¹⁷⁵ Chahraoui K, Danino A, Bénony H *et al.* (2006) Anxiety and subjective quality of life preoperatively and 4 months after reduction mammoplasty *Journal of Psychosomatic Research* **61(6)**: 801-6.

¹⁷⁶ Collins DE, Kerrigan CL, Kim M *et al.* (2002) The effectiveness of surgical and nonsurgical interventions in relieving the symptoms of macromastia *Plastic and Reconstructive Surgery* **109(5)**: 1556-66.

¹⁷⁷ Neto MS, Demattê MF, Freire M *et al.* (2008) Self-esteem and functional capacity outcomes following reduction mammoplasty *Aesthetic Surgery Journal* **28(4)**: 417-20.

¹⁷⁸ Tykkä SA-SHHE (2001) Patients' satisfaction with breast reconstruction and reduction mammoplasty *Scandinavian Journal of Plastic and Reconstructive Surgery and Hand Surgery* **35(4)**: 399-405.

¹⁷⁹ Rouzier R, Louis-Sylvestre C, Paniel B-J, and Haddad B (2000) Hypertrophy of labia minora: experience with 163 reductions *American Journal of Obstetrics and Gynecology* **182(1)**: 35-40.

¹⁸⁰ Trichot C, Thubert T, Faivre E, Fernandez H, and Deffieux X (2011) Surgical reduction of hypertrophy of the labia minora *International Journal of Gynecology and Obstetrics* **115(1)**: 40-3.

¹⁸¹ Adams J (2010) Motivational narratives and assessments of the body after cosmetic surgery *Qualitative Health Research* **20(6)**: 755-67.

“I became much more comfortable sexually.”¹⁸²

“Things like sex became very, very difficult because it was just in the way.”¹⁸³

The role of changes to sex life / sexual functioning following cosmetic procedures is explored by a significant number of papers. As with preceding sections of this review, studies’ findings will be divided according to the procedure(s) they focus on.

Unspecified / various procedures

A US study of women who had undergone various cosmetic procedures also found that 80 per cent of those who had received breast procedures (BA and mastopexy), and 50 per cent of those who had received abdominoplasty or body contouring declared an improvement in their sex life following surgery. In addition, 30 per cent of breast, and 50 per cent of body, participants reported enhanced ability to achieve orgasm after their procedures.¹⁸⁴

Breast procedures

“even the caliber of men I was dating changed. I used to date the “average Joe” – quiet, sort of reserved kind of guys. And then [after the surgery] I was picking the one in the room that I wanted, and that made a huge difference to me.”¹⁸⁵

‘I find that [sex] is better... the reason... it has gotten better is that it’s not an insecurity that I have anymore.’¹⁸⁶

“yes it’s better because when they were larger I didn’t feel sexy.”¹⁸⁷

Several studies highlight the effects of breast procedures on the sex lives of the individuals who have received them. Authors of a small-scale US study of 15 women who had undergone a range of breast procedures note, for example, that “many said

¹⁸² Borelli F, and Casotti LM (2012) The before and after: a study of plastic surgery consumption with young women in Brazil *Advances in Consumer Research* **40**: 379-85.

¹⁸³ Recipient of surgery in response to massive weight loss: Ogden J, Birch A, and Wood K (2014) ‘The wrong journey’: patients’ experience of plastic surgery post weight loss surgery *Qualitative Research in Sport, Exercise and Health* **7(2)**: 294-308.

¹⁸⁴ Stofman GM, Neavin TS, Ramineni PM, and Alford A (2006) Better sex from the knife? An intimate look at the effects of cosmetic surgery on sexual practices *Aesthetic Surgery Journal* **26(1)**: 12-7.

¹⁸⁵ Boulton TN, and Malacrida C (2012) Women and cosmetic breast surgery: weighing the medical, social, and lifestyle risks *Qualitative Health Research* **22(4)**: 511-23.

¹⁸⁶ Rubin LR, Klassen A, Cano SJ, Hurley K, and Pusic AL (2009) Motivations for breast surgery: a qualitative comparison study of breast reconstruction, augmentation, and reduction patients *The Breast Journal* **15(6)**: 666-7.

¹⁸⁷ Klassen A, Pusic A, Scott A, Klok J, and Cano S (2009) Satisfaction and quality of life in women who undergo breast surgery: a qualitative study *BMC Women’s Health* **9(1)**: 11.

that they tried to keep their breasts covered during sexual encounters and that since having surgery, they felt sexually freer.”¹⁸⁸

Among other breast procedure studies, a Brazilian study of 43 BA recipients also found that their sexual satisfaction scores increased significantly when measured at four- and 18-months after the procedure.¹⁸⁹ Similar findings were also observed in a Canadian study of 41 women who had undergone BA: 81 per cent of participants indicated improvements in sexual functioning after the procedure.¹⁹⁰ A further study of 84 US BA recipients also found a positive correlation between the procedure and sexual factors. It found, for example, an 81 per cent increase in arousal scores following the procedure, a 63 per cent increase in the orgasm subscale score; a 57 per cent increase in the satisfaction subscale score; and a 50 per cent increase in the lubrication subscale score.¹⁹¹ A German study involving 73 recipients of BA similarly indicated improved reports in relation to sex: 71 per cent of recipients reported “improved sexuality” (11% of recipients anticipated this outcome in the section of the questionnaire which was put to them ahead of the procedure taking place).¹⁹²

Studies which focus on outcomes of BR have also explored potential changes to sex life post-procedure. For example, in a US study of 41 BR recipients, 63 per cent stated that the procedure was a stimulus for future weight loss; of that 63 per cent, 85 per cent reported improvement in sexual activity (compared to 40% of the remaining 37% of participants who stated that the procedure had *not* provided stimulus for future weight loss).¹⁹³ However, a UK-based study of 80 women who had BR found a slightly lower percentage of satisfaction in its assessment of post-operative sexual satisfaction. Among 75 women who were sexually active after the procedure, 28 per cent stated that their sexual satisfaction improved; 19 per cent stated that it was worse than before the procedure; and 53 per cent indicated that it was unchanged. This study also identified 37 women out of the original 75 who, prior to the BR procedure, felt uncomfortable with partners in intimate situations. After surgery, 70 per cent of this group claimed improved confidence in those same situations; 11 per cent reported that their confidence levels

¹⁸⁸ Gagne P, and McGaughey D (2002) Designing women: cultural hegemony and the exercise of power among women who have undergone elective mammoplasty *Gender and Society* **16(6)**: 814-38.

¹⁸⁹ Guimarães PAMP, Lage FC, Abla LEF *et al.* (2013) Female sexual quotient in patients after breast augmentation *Plastic and Reconstructive Surgery* **132(4S-1)**: 160-1. See also: Guimarães P, Resende V, Sabino Neto M *et al.* (2015) Sexuality in aesthetic breast surgery *Aesthetic Plastic Surgery*: 1-7.

¹⁹⁰ McCarthy CM, Cano SJ, Klassen AF *et al.* (2012) The magnitude of effect of cosmetic breast augmentation on patient satisfaction and health-related quality of life *Plastic and Reconstructive Surgery* **130(1)**: 218-23.

¹⁹¹ Figueroa-Haas CL (2007) Effect of breast augmentation mammoplasty on self-esteem and sexuality: a quantitative analysis *Plastic Surgical Nursing* **27(1)**: 16-36.

¹⁹² Papadopulos N, Totis A, Kiriakidis D *et al.* (2014) Quality of life, personality changes, self esteem, and emotional stability after breast augmentation *European Journal of Plastic Surgery* **37(9)**: 479-88.

¹⁹³ Singh KA, Pinell XA, and Losken A (2010) Is reduction mammoplasty a stimulus for weight loss and improved quality of life? *Annals of Plastic Surgery* **64(5)**: 585-7.

were unchanged; and 19 per cent stated that their levels of confidence had worsened.¹⁹⁴

Abdominal surgery, fat transfer, and liposuction

A small number of studies have addressed this group of procedures, including a study of 16 Brazilian women who underwent abdominoplasty following bariatric surgery (and consequent weight loss) which found that 69 per cent noticed that they had a better sex life after the procedure.¹⁹⁵ Additionally, 87 per cent of abdominoplasty recipients in a small sample of Austrian recipients reported an improvement in their sexual relationship.¹⁹⁶ Reduced inhibitions to showing partners their bodies were also indicated by 64 per cent of abdominoplasty recipients in a small-scale Austrian study. The same study also found that 87 per cent of participants reported an improvement in their sexual relationship.¹⁹⁷ A Brazilian study of 19 women (treated by the study's authors) who had undergone abdominoplasty also sought to "evaluate the effects of the elevation of the mons pubis and consequent exposure of the clitoris in the vulvar commissure" on the women's sexual functioning and satisfaction. All of the women involved in the study reported significant improvement in sexual functioning, sexual satisfaction, and concerns about body shape when compared with the baseline measures.¹⁹⁸ However, 66 per cent of participants in a study of 21 women who had undergone medial thighplasty following massive weight loss indicated that their sexual activity did *not* improve.¹⁹⁹

Genital procedures

"when you feel better about what you look like down there if you feel happier with the cosmetic aspect of yourself of your genitalia then you are more relaxed in the bedroom and a lot of patients report back to me that they do feel better and therefore have better sex because they're less embarrassed."²⁰⁰

The literature suggests that recipients of genital procedures experience improvements to their sex life following the operation. For example, among a group of US women who had undergone labia reduction or clitoral hood reduction procedures, 71 per cent of

¹⁹⁴ Cerovac S, Ali FS, Blizard R, Lloyd G, and Butler PEM (2005) Psychosexual function in women who have undergone reduction mammoplasty *Plastic and Reconstructive Surgery* **116(5)**: 1306-13.

¹⁹⁵ Cintra W, Jr., Modolin MA, Gemperli R *et al.* (2008) Quality of life after abdominoplasty in women after bariatric surgery *Obesity Surgery* **18(6)**: 728-32.

¹⁹⁶ Stuerz K, Piza H, Niermann K, and Kinzl J (2008) Psychosocial impact of abdominoplasty *Obesity Surgery* **18(1)**: 34-8.

¹⁹⁷ *ibid.*

¹⁹⁸ de Brito MJA, Nahas FX, Bussolaro RA *et al.* (2012) Effects of abdominoplasty on female sexuality: a pilot study *The Journal of Sexual Medicine* **9(3)**: 918-26.

¹⁹⁹ Bertheuil N, Thienot S, Chaput B, Varin A, and Watier E (2015) Quality-of-life assessment after medial thighplasty in patients following massive weight loss *Plastic and Reconstructive Surgery* **135(1)**: 67e-73e.

²⁰⁰ Braun V (2005) In search of (better) sexual pleasure: female genital 'cosmetic' surgery *Sexualities* **8(4)**: 407-24.

respondents noted improvements to their sex life; 22 per cent of respondents reported a positive increase in sexual sensation; and five per cent claimed a negative change in sexual sensation.²⁰¹ A further US study of 258 women found that 64 per cent of women who had labiaplasty and / or clitoral hood reduction; 86 per cent of women who had vaginoplasty or perineoplasty; and 92 per cent of women who had a combination of procedures reported either a mild-moderate, or significant enhancement in sexual function. Moreover, 82 per cent of patients who had received vaginoplasty, perineoplasty, clitoral hood reduction, or labiaplasty estimated that their partners' sexual satisfaction had a mild/moderate to significant enhancement.²⁰² Similarly, a French survey undertaken via a telephone interview 17 months (median) after labiaplasty found that "concerning sexuality, 95% of the sexually active patients had originally described some form of physical or psychologic discomfort, and all of them reported total disappearance of this symptomatology."²⁰³ At three months, significant effects of labiaplasty on sexual functioning have also been observed.²⁰⁴ A Chilean study of 53 women undergoing colpoperineoplasty – a procedure which aims to counteract vaginal laxity – also found that, six months after surgery, 94 per cent reported having a tighter vagina, and were able to achieve orgasm. In this study, 74 per cent of women had their expectations of the procedure fulfilled, 21 per cent had expectations partially fulfilled, and five per cent unfulfilled. Two recipients regretted having the surgery.²⁰⁵

²⁰¹ Alter GJ (2008) Aesthetic labia minora and clitoral hood reduction using extended central wedge resection *Plastic and Reconstructive Surgery* **122(6)**: 1780-9, although note that 70% of the original sample of women in this study chose not to respond to the questionnaire, thus their views cannot be accounted for.

²⁰² Goodman MP, Placik OJ, Benson III RH *et al.* (2010) A large multicenter outcome study of female genital plastic surgery *The Journal of Sexual Medicine* **7(4)**: 1565-77.

²⁰³ Trichot C, Thubert T, Faivre E, Fernandez H, and Deffieux X (2011) Surgical reduction of hypertrophy of the labia minora *International Journal of Gynecology and Obstetrics* **115(1)**: 40-3.

²⁰⁴ Veale D, Naismith I, Eshkevari E *et al.* (2014) Psychosexual outcome after labiaplasty: a prospective case-comparison study *International Urogynecology Journal* **25(6)**: 831-9.

²⁰⁵ Pardo J, Solà V, and Ricci P (2008) Colpoperineoplasty in women with sensation of wide vagina and associate gynecological surgeries in 130 cases *Journal of Minimally Invasive Gynecology* **15(6)**: 140S-1S.

Explanations of dissatisfaction

Section summary

Fewer research studies highlight points of dissatisfaction with cosmetic procedures when compared to those which focus on explanations of satisfaction. Those which do address dissatisfaction highlight research participants' negative perceptions of the aesthetic outcome of their procedure, and pain or discomfort following the procedure although very few studies note the latter explicitly. Very broadly, the role of psychological factors in dissatisfied responses are also identified by a disparate selection of studies which suggests that pre-existing psychological conditions may affect whether the recipient is satisfied with the procedure (for example, for those with BDD or anxiety). Finally, the response of others to the procedure has also been shown to affect research participants' levels of dissatisfaction in a small number of studies.

A small number of studies have examined characteristics of recipients which may increase the likelihood of a dissatisfied response to their cosmetic procedure. In particular, the question of the recipient's gender has been explored: a US study of 100 secondary rhinoplasty patients observed that dissatisfied patients were more likely to be women.²⁰⁶ Contrary findings, however, were observed by an earlier Australian study which compared the psychosocial experiences of male and female cosmetic surgery recipients. This study found that male patients were more likely to report postoperative dissatisfaction than their female counterparts.²⁰⁷

More generally, compared with studies on explanations of a satisfied response to the outcomes of a particular cosmetic procedure, the number of papers identified by this review which highlight dissatisfaction or displeasure is low. Of those identified, however, several reasons emerge for recipients' dissatisfaction.

Aesthetic results

"I'm making a mountain out of a molehill so it's obviously so much better than they were before but still I am not happy... with the bumpy bit at the top of my arms and they all said oh my god your arms look great but if I'm not happy then well I'm not happy I suppose is the bottom line."²⁰⁸

²⁰⁶ Constantian MB, and Lin CP (2014) Why some patients are unhappy: part 2 - relationship of nasal shape and trauma history to surgical success *Plastic and Reconstructive Surgery* **134(4)**: 836-51.

²⁰⁷ Dowling NA, Honigman RJ, and Jackson AC (2010) The male cosmetic surgery patient: a matched sample gender analysis of elective cosmetic surgery and cosmetic dentistry patients *Annals of Plastic Surgery* **64(6)**: 726.

²⁰⁸ Ogden J, Birch A, and Wood K (2014) 'The wrong journey': patients' experience of plastic surgery post weight loss surgery *Qualitative Research in Sport, Exercise and Health* **7(2)**: 294-308.

"It's still not quite right there, there's still some excess tissue that side that doesn't look quite right... there's still no perfect symmetry."²⁰⁹

"I don't like the look of it [reconstruction] and how misshaped, not misshaped but how stupid it looks that one is hanging there... so I'm thinking if I hate the look of it then [husband] is going to hate the look of it."²¹⁰

Size of augmented breasts was a source of dissatisfaction for 16 per cent of participants in a Swedish study of 74 BA recipients: this section of the sample found their new breast size to be too small, but were "nevertheless... pleased with the increased breast volume." Two patients, however (3%) complained that their new breast size was too large.²¹¹ One study also draws attention to one view that unhappiness with aesthetic outcomes was due to the results looking 'too natural':

Participant: "I was out at this gay club last weekend and this guy came up to me and [looking at my breasts] said, 'Girl, honey, you can't buy those.' He thought they were natural! And I said, 'Excuse me, yes I can. And I did.' I was so pissed off."

Researcher: "Why did that piss you off?"

Participant: "Well, because I'm going after the perfect body image, and the perfect body image in my mind... is seeing the nice voluptuous boobs and all that, and if you're telling me I look natural then you don't think my boobs are looking voluptuous."²¹²

In addition, in a study involving 13 recipients of BA, seven (54%) indicated that they wanted revisions to the original surgery (mainly for more breast lift).²¹³ A US review of 2,326 posts by people who had undergone rhinoplasty to the website realself.com also found that, among dissatisfied recipients, significantly more females than males complained that they now looked like a different person (19.4% vs 7%).²¹⁴ Similarly, although no overt dissatisfaction is reported, recipients of orthognathic procedures have indicated that they had difficulty, or partial difficulty, getting used to their postoperative

²⁰⁹ Bramwell R, Morland C, and Garden AS (2007) Expectations and experience of labial reduction: a qualitative study *BJOG: An International Journal of Obstetrics & Gynaecology* **114(12)**: 1493-9.

²¹⁰ Beesley H, Ullmer H, Holcombe C, and Salmon P (2012) How patients evaluate breast reconstruction after mastectomy, and why their evaluation often differs from that of their clinicians *Journal of Plastic, Reconstructive & Aesthetic Surgery* **65(8)**: 1064-71.

²¹¹ Niechajev I, Jurell G, and Lohjelm L (2007) Prospective study comparing two brands of cohesive gel breast implants with anatomic shape: 5-year follow-up evaluation *Aesthetic Plastic Surgery* **31(6)**: 697-710.

²¹² Gimlin D (2010) Imagining the other in cosmetic surgery *Body & Society* **16(4)**: 57-76.

²¹³ Spear S, Pelletiere C, and Menon N (2004) One-stage augmentation combined with mastopexy: aesthetic results and patient satisfaction *Aesthetic Plastic Surgery* **28(5)**: 259-67.

²¹⁴ Khansa I, Khansa L, and Pearson GD (2015) Patient satisfaction after rhinoplasty: a social media analysis *Aesthetic Surgery Journal* **35(5)**.

appearance: a Turkish study of 30 recipients of this procedure found that 30 per cent felt this way; the remaining 70 per cent got used to their new profiles easily.²¹⁵

Pain or discomfort

“I didn’t anticipate the problems faced in the recovery phase... I was so shocked about how hard and swollen my breasts were after the surgery. It was totally different from my image. I thought it was very simple, the doctor put something inside to me, and I woke up and went home. That’s it.”²¹⁶

Pain or discomfort is addressed in the literature particularly in relation to recipients of BA. For example, a questionnaire-based study of 265 BA recipients has indicated that 25 per cent recipients experienced chronic pain, noting particularly that recipients of BA with chronic pain “were younger and smaller”, and concluding that chronic pain is a “common complaint after breast augmentation. Predictive factors for chronic pain are young age and smaller body height. Cosmetic satisfaction and QOL are lower in patients with chronic pain after breast augmentation compared to patients without chronic pain.”²¹⁷

Other side effects were also noted by 327 recipients of orthognathic surgery where, “despite the finding that most participants had benefited from their treatment, more than half (n = 180; 56%) of the 324 subjects had residual side-effects from their operation.”²¹⁸

Psychological factors

“Everything’s always gone on everybody else so I do still feel guilty about the money... When I look around and think I could have bought this or that, not for me though. That’s what I felt guilty about, spending it on me.”²¹⁹

The literature also suggests that the psychological status of recipients of CPs may also impact on dissatisfaction levels. For example, a UK study of 80 reduction mammoplasty recipients found that, compared with women not identified as having a mental illness, patients identified postoperatively as anxious (28%) were three times more likely, and

²¹⁵ Türker N, Varol A, Ögel K, and Basa S (2008) Perceptions of preoperative expectations and postoperative outcomes from orthognathic surgery: Part I: Turkish female patients *International Journal of Oral and Maxillofacial Surgery* **37(8)**: 710-5.

²¹⁶ Wu W-R, Chung U-L, and Chang SCN (2007) A journey of restoring self-confidence: the life experiences of women recipients of augmentation mammoplasty *Journal of Nursing Research* **15(2)**: 107-16.

²¹⁷ van Elk N, Steegers MA, van der Weij L-P *et al.* (2009) Chronic pain in women after breast augmentation: prevalence, predictive factors and quality of life *European Journal of Pain* **13(6)**: 660-1.

²¹⁸ Williams RW, Travess HC, and Williams AC (2004) Patients’ experiences after undergoing orthognathic surgery at NHS hospitals in the south west of England *British Journal of Oral and Maxillofacial Surgery* **42(5)**: 419-31.

²¹⁹ Gimlin D (2007) Accounting for cosmetic surgery in the USA and Great Britain: a cross-cultural analysis of women’s narratives *Body & Society* **13(1)**: 41-60.

women with signs of depression (16%) were five times more likely to be dissatisfied with results of the surgery.²²⁰

A US study also highlights, in the context of people with BDD, that those “who receive non-psychiatric treatment tend to respond poorly.” Of 165 study participants who underwent non-psychiatric treatment for perceived appearance flaws, 72 per cent were observed to have no change in outcome regarding the overall severity of their BDD; 68 per cent of these treatments led to no improvement or worsening in overall BDD severity “generally because participants worried more about another body area, developed a new appearance concern, became more concerned about more minor imperfections in the treated area, or worries that an improved body part would become ugly again.”²²¹ Similarly, a French study with 24 recipients of cosmetic surgery (10 with BDD; 14 without) undertook a re-evaluation of participants’ surgery five years later and found that although patient satisfaction is high, six of the BDD participants still had a BDD diagnosis and “exhibited higher levels of handicap and psychiatric comorbidity compared to their non-BDD counterparts. Moreover, three non-BDD patients had developed a BDD at follow-up.” This study therefore concludes that, despite the declaration of participants that they were satisfied with the surgery, cosmetic surgery is not an efficient way of approaching BDD.²²²

A study of 136 orthognathic surgery recipients also suggests that those who are psychologically distressed before surgery tend to report a higher recovery burden overall and, on average, experience more difficulty with symptoms, social / self concerns, and general health in the first few weeks after surgery.²²³ A US study of 200 recipients of BA also suggests that, where women indicate concerns around adverse events (e.g. rupture, scarring, implant-induced cancer) *before* the procedure, this “consistently predicted postoperative concerns”. The authors suggest this “indicates that this variable might reflect, in part, dispositional differences in women’s propensity for anxiety and worry rather than reactions to specific events related to their surgery or implants.”²²⁴

Others’ reactions

“I was peeking others [breasts] while going to take a hot spring bath, and found out that the natural ones would be droop a bit more and were not as round as mine... my sister usually said that

²²⁰ Cerovac S, Ali FS, Blizard R, Lloyd G, and Butler PEM (2005) Psychosexual function in women who have undergone reduction mammoplasty *Plastic and Reconstructive Surgery* **116(5)**: 1306-13.

²²¹ Phillips KA, Grant J, Siniscalchi J, and Albertini RS (2001) Surgical and nonpsychiatric medical treatment of patients with body dysmorphic disorder *Psychosomatics* **42(6)**: 504-10.

²²² Tignol J, Biraben-Gotzamanis L, Martin-Guehl C, Grabot D, and Aouizerate B (2007) Body dysmorphic disorder and cosmetic surgery: evolution of 24 subjects with a minimal defect in appearance 5 years after their request for cosmetic surgery *European Psychiatry* **22(8)**: 520-4.

²²³ Phillips C, Kiyak HA, Bloomquist D, and Turvey TA (2004) Perceptions of recovery and satisfaction in the short term after orthognathic surgery *Journal of Oral and Maxillofacial Surgery* **62(5)**: 535-44.

²²⁴ Cash TF, Duel LA, and Perkins LL (2002) Women’s psychosocial outcomes of breast augmentation with silicone gel-filled implants: a 2-year prospective study *Plastic and Reconstructive Surgery* **109(6)**: 2112-21.

*mine look too firm, not look so natural. Therefore, sometimes my boyfriend praised me; I had the feeling of guilt in my mind since they were not real.*²²⁵

*“I feel embarrassed about my artificial breasts. I think people won’t appreciate false ones and I don’t want people tease me about it.”*²²⁶

*“my colleagues have commented that my breasts seem bigger, but I told them I used a breast enlargement herb.”*²²⁷

These quotes represent the very small number of studies identified by this review which noted that others’ reactions to procedures may elicit dissatisfaction among recipients. One other study set in Venezuela and involving 499 women who had undergone rhinoplasty also highlights how cosmetic surgery might be used to change others’ perceptions, particularly in the context of racial marginalisation.

*“Despite attempts to use cosmetic surgery as a way to ameliorate racial marginalization, rhinoplasty did not alleviate a system of discrimination based on the women’s physical attributes. Over time, feelings of inadequacy and worthlessness resurfaced. Because improvements in self-esteem were interpreted as benefits associated with cosmetic surgery, and initially experienced after surgery, many women remained hopeful that future rhinoplasties would help them.”*²²⁸

²²⁵ Wu W-R, Chung U-L, and Chang SCN (2007) A journey of restoring self-confidence: the life experiences of women recipients of augmentation mammoplasty *Journal of Nursing Research* **15(2)**: 107-16.

²²⁶ *ibid.*

²²⁷ *ibid.*

²²⁸ Gulbas LE (2013) Embodying racism: race, rhinoplasty, and self-esteem in Venezuela *Qualitative Health Research* **23(3)**: 326-35.

Does the satisfaction or dissatisfaction last?

Section summary

Overarching conclusions on whether satisfaction or dissatisfaction ‘lasts’ are difficult to draw due to the diversity of follow-up periods (ranging from one month to ten years) across research studies; study samples; and measures of satisfaction / dissatisfaction. However, despite this lack of universal parameters, specific, tentative points can be drawn from a small number of studies: the duration of satisfaction with body image is shown to last across a range of follow-up periods; stable satisfaction with health-related QOL is noted, particularly for research participants who have undergone breast reduction; and lasting improvements to sexual function are also observed.

Studies which address the question as to whether satisfaction or dissatisfaction ‘lasts’ generally have relatively short follow-up periods (the longest follow up period identified was ten years), and address different indicators of satisfaction or dissatisfaction (e.g. body image scores, sexual functioning, or QOL). The variation of studies’ approach to follow-up thus makes concrete conclusions difficult to draw; however, some narrow study-specific and satisfaction ‘type’-specific points might be observed.

General satisfaction / dissatisfaction

Some of the literature identified does not focus on a ‘type’ of satisfaction, but rather asks participants to indicate their general satisfaction with the procedure they have received. For example, satisfaction was found to *improve* with time for recipients of orthognathic surgery: 87 per cent at six months and 92 per cent at 24 months.²²⁹ In addition, a systematic review of patients’ satisfaction with implant overdentures suggests that improvements reached one year after the procedure remain stable when subsequently measured five, then ten, years after the initial operation.²³⁰ However, a UK study of 118 abdominoplasty patients suggested that *dissatisfaction* with the results of the procedure increased over time, observing that peak dissatisfaction occurred between 4-6 years after the operation.²³¹

Body / body image satisfaction

²²⁹ Zhou Y, Hägg U, and Rabie A (2000) Patient satisfaction following orthognathic surgical correction of skeletal Class III malocclusion *The International Journal of Adult Orthodontics and Orthognathic Surgery* **16(2)**: 99-107.

²³⁰ Boven GC, Raghoebar GM, Vissink A, and Meijer HJA (2015) Improving masticatory performance, bite force, nutritional state and patient's satisfaction with implant overdentures: a systematic review of the literature *Journal of Oral Rehabilitation* **42(3)**: 220-33.

²³¹ Bragg TWH, Jose RM, and Srivastava S (2007) Patient satisfaction following abdominoplasty: an NHS experience *Journal of Plastic, Reconstructive & Aesthetic Surgery* **60(1)**: 75-8.

A number of studies have examined whether recipients' satisfaction 'lasts' with the area of the body that has been modified by the cosmetic procedure, or with their body image more generally. These studies suggest predominantly that satisfaction within these measures do last; however, as noted in the introductory paragraph of this section, the time periods for follow-up are limited.

A US paper (with authors affiliated with cosmetic company Allergan) reported on a survey of 781 BA and 170 BR recipients and concluded that overall breast satisfaction for participants who had received BA increased from a baseline of 3.8 per cent to 91.9 per cent three years after the procedure. Ten years after the initial procedure, the researchers noted that 87.5 per cent of recipients reported being satisfied with their implants.²³² A Norwegian study of 130 women who had undergone various cosmetic procedures also found, overall, that the procedures have positive long-term effects on appearance-related variables.²³³ In addition, a further US study examined perceptions of body image of 47 BA recipients at three months and six months after the initial procedure. The authors observed that participants' three-month and six-month mean appearance evaluation scores and mean body-areas satisfaction scores improved significantly when these two time points were compared with scores taken prior to the procedure. However, they note that there is no certainty that these early positive changes in body image will be maintained, thus further follow-up would be needed to assess this.²³⁴

Health-related satisfaction, QOL, and well-being

Whether health-related satisfaction and well-being lasts following cosmetic procedures is also addressed by a small number of studies. For example, a study of 69 US women with macromastia carried out assessments before BR procedures, and then nine months afterwards. Prior to BR, participants reported that their physical health was poorer than an age-matched control group. Nine months later, participants reported similar physical health to the control group.²³⁵ A Swedish study of 49 BR recipients also noted the positive effect on pain and health-related QOL scores in results measured at one and three years after the BR. The authors concluded "the improvements noted directly after the reduction mammoplasty remain stable and are, as judged by patient questionnaires and quality of life scores, of long-standing clinical importance."²³⁶

²³² Walker PS, Walls B, and Murphy DK (2009) Natrele saline-filled breast implants: a prospective 10-year study *Aesthetic Surgery Journal* **29(1)**: 19-25.

²³³ von Soest T, Kvalem IL, Skolleborg KC, and Roald HE (2011) Psychosocial changes after cosmetic surgery: a 5-year follow-up study *Plastic and Reconstructive Surgery* **128(3)**: 765-72.

²³⁴ Banbury J, Yetman R, Lucas A *et al.* (2004) Prospective analysis of the outcome of subpectoral breast augmentation: sensory changes, muscle function, and body image *Plastic and Reconstructive Surgery* **113(2)**: 701-7.

²³⁵ Behmand RA, Tang D-H, and Smith DJJ (2000) Outcomes in breast reduction surgery *Annals of Plastic Surgery* **45(6)**: 575-80.

²³⁶ Blomqvist L, and Brandberg Y (2004) Three-year follow-up on clinical symptoms and health-related quality of life after reduction mammoplasty *Plastic and Reconstructive Surgery* **114(1)**: 49.

A Turkish study of 30 participants who had undergone a ‘repair’ of pectus carinatum examined questionnaires issued before the operation and then six months later. The researchers noted statistically significant improvement in participants’ psychosocial and physical well-being at six months after the operation, compared with measures taken before it had been undertaken.²³⁷ A Brazilian study of 24 women who had abdominoplasty also found that “a significant positive impact on body image, self-esteem, and mental health was found one- and six-months postoperatively.”²³⁸ In addition, 79 rhinoplasty recipients were assessed in a Turkish study which concludes “the majority of patients had the greatest postoperative psychosocial distress at the early postoperative visit”, after which the “mean level of distress normalized at assessments beyond four weeks”.²³⁹ For rhytidoplasty patients, a small scale Brazilian looked at QOL and self-esteem at two- and six-months after the procedure. The authors found that health perception, energy, and social function did not show significant improvement at two months after the operation, but did at six months.²⁴⁰

Sexual function

Improvements to sexual function and reductions in depression were observed in a Brazilian study of 29 participants with macromastia who had undergone BR when compared with a group of 27 participants in a control group. At the baseline, the authors observed no difference between the groups, but after assessing at three and six months after the procedure, the BR group exhibited better sexual function as well as lower depression levels at the six-month assessment point.²⁴¹ In addition, an Italian study of BR recipients also found that “the longer the follow-up, the better the acceptance of the new body image and satisfaction in sexual life.”²⁴² Although labiaplasty recipients have been found to maintain improvements in some areas for up to 42 months following the initial procedure (including in genital body image), they no longer experience improved sexual functioning at that follow-up point.²⁴³

²³⁷ Bostanci K, Ozalper MH, Eldem B *et al.* (2013) Quality of life of patients who have undergone the minimally invasive repair of pectus carinatum *European Journal of Cardio-Thoracic Surgery* **43(1)**: 122-6.

²³⁸ de Brito MJA, Nahas FX, Barbosa MVJ *et al.* (2010) Abdominoplasty and its effect on body image, self-esteem, and mental health *Annals of Plastic Surgery* **65(1)**: 5-10.

²³⁹ Günel C, and Omurlu I (2015) The effect of rhinoplasty on psychosocial distress level and quality of life *European Archives of Oto-Rhino-Laryngology* **272(8)**: 1931-5.

²⁴⁰ de Arruda Alves MC, Felipe Abla LE, Santos RdA, and Ferreira LM (2005) Quality of life and self-esteem outcomes following rhytidoplasty *Annals of Plastic Surgery* **54(5)**: 511-4.

²⁴¹ Beraldo FNM, Veiga DF, Veiga-Filho J *et al.* (2014) Sexual function and depression outcomes among breast hypertrophy patients undergoing reduction mammoplasty: a randomized controlled trial *Annals of Plastic Surgery* **Published ahead of print**.

²⁴² Romeo M, Cuccia G, Zirilli A, Weiler-Mithoff E, and Stagno d'Alcontres F (2010) Reduction mammoplasty and related impact on psychosexual function *Journal of Plastic, Reconstructive & Aesthetic Surgery* **63(12)**: 2112-6.

²⁴³ Veale D, Naismith I, Eshkevari E *et al.* (2014) Psychosexual outcome after labiaplasty: a prospective case-comparison study *International Urogynecology Journal* **25(6)**: 831-9.

Attitudes to future cosmetic procedures

Section summary

This section focuses on two questions: whether recipients of cosmetic procedures would or would not have a further *different* procedure in the future; and whether they would, hypothetically, repeat the procedure they had *already* had.

Literature around the first question is too limited to enable overarching conclusions to be drawn, although useful insights are provided by the qualitative literature. Only one study is identified where reticence around undertaking a different procedure in the future is expressed.

Evidence around the second question is more readily available and suggests that, generally, a very high percentage (in one case, 100%) of recipients of cosmetic procedures who take part in research would choose to undergo the same procedure again.

Indications that participants would have another 'different' cosmetic procedure

"If I had it to do over again I would do the same thing. Just because I can't imagine my life differently than it is now and looking the way I do now. I just can't, it's just me now, so I can't imagine a difference so I would have to do it again."²⁴⁴

"I haven't had it again since and I'm really feeling the need to go back again... There's always new things coming up all the time so it might be better for me to wait and see what else they come up with."²⁴⁵

"If I'm still unhappy with my appearance and I'm not in a long-term relationship then I probably will have future surgery. Probably a facelift or Botox to make me stay looking younger... I would like to have my chin reshaped, have further surgery on my nose, possibly my ears, and pectoral, tricep and bicep implants. I would... consider myself a cosmetic surgery enthusiast."²⁴⁶

²⁴⁴ Adams J (2010) Motivational narratives and assessments of the body after cosmetic surgery *Qualitative Health Research* **20(6)**: 755-67.

²⁴⁵ 59-year-old recipient of Botox and collagen injections in Hurd Clarke L, Repta R, and Griffin M (2007) Non-surgical cosmetic procedures: older women's perceptions and experiences *Journal of Women & Aging* **19(3-4)**: 69-87.

²⁴⁶ Interview with 22-year-old male in Holliday R, and Cairnie A (2007) Man made plastic: investigating men's consumption of aesthetic surgery *Journal of Consumer Culture* **7(1)**: 57-78.

Very few studies which explore whether recipients of one procedure would have another different procedure in the future were identified. However, one study - published by researchers in Austria - involved 34 participants who had undergone abdominoplasty. It concluded that 25 per cent of the sample had undergone secondary cosmetic surgery; 87 per cent of participants in the same study stated that their abdominoplasty had intensified their desire or decision to have another cosmetic surgery operation.²⁴⁷ Moreover, where dissatisfaction with the results of a cosmetic procedure were noted by research participants in a further study (that is, where their expectations of the procedure were not met), one observes that they “still did not rule out the potential for having additional surgeries.”²⁴⁸

Indications that participants would *not* have another, different, cosmetic procedure

This review only identified one qualitative study where this view was taken by one participant: “I’m... concerned about the slippery slope. If you have one thing done, then all of a sudden I’m focusing on another area of my face that I’m not happy with and then you end up looking like some movie stars who’ve had way too much work done and it’s obvious. So it’s like, where do you start and stop?”²⁴⁹ According to the author of the study, although this woman was pleased with outcome of the procedure, she was not interested in having any others.

Would recipients make the same decision / have the same procedure again?

Some studies also explore with participants the question of whether they would make the same decision in regarding to undergoing their cosmetic procedure again.

For unspecified / various cosmetic procedures, a Norwegian study of 155 recipients found that 91 per cent reported that they would still choose to have surgery if they had to make the choice again, while nine patients (5.8%) were unsure, and five (3.2%) reported that they would decide against an operation.²⁵⁰ A later Norwegian study which shared some of the same authors found that, of 130 recipients of cosmetic procedures, 89 per cent indicated that they would choose surgery again if faced with the same situation.²⁵¹ A US study of 72 recipients of various cosmetic procedures also found that, two years after the procedure, 93 per cent of recipients reported that they would have surgery again, a slight gain on the level of response to this question one year after the

²⁴⁷ Stuerz K, Piza H, Niermann K, and Kinzl J (2008) Psychosocial impact of abdominoplasty *Obesity Surgery* **18(1)**: 34-8.

²⁴⁸ Adams J (2010) Motivational narratives and assessments of the body after cosmetic surgery *Qualitative Health Research* **20(6)**: 755-67.

²⁴⁹ *ibid.*

²⁵⁰ von Soest T, Kvalem I, Roald H, and Skolleborg K (2009) The effects of cosmetic surgery on body image, self-esteem, and psychological problems *Journal of Plastic, Reconstructive & Aesthetic Surgery* **62(10)**: 1238-44.

²⁵¹ von Soest T, Kvalem IL, Skolleborg KC, and Roald HE (2011) Psychosocial changes after cosmetic surgery: a 5-year follow-up study *Plastic and Reconstructive Surgery* **128(3)**: 765-72.

procedure (91%).²⁵² In a further US study of 45 women who had received various forms of cosmetic procedure, 96 per cent reported that they would have the surgery again.²⁵³ In addition, another US study notes that, a year following surgery, 93 per cent indicated that they would have the surgery again. The same study also took two other measures at three months and six months following the original surgery: in these cases, 93 per cent and 96 per cent, respectively, stated that they would have the surgery again.²⁵⁴

Among recipients of facial cosmetic procedures, studies also suggest that recipients would make the same decision again. For example, in a study of 93 recipients of facelift, 83 per cent stated that they would have the same procedure again.²⁵⁵ Similarly, when 32 Swedish recipients of orthognathic surgery were asked if they would have the same operation again if they needed it, most stated that they would definitely do so.²⁵⁶ In addition, 63 per cent of a sample of 30 female recipients of orthognathic surgery stated that they would consider reoperation; 17 per cent were ambivalent; and 20 per cent indicated that they would not consider any reoperation.²⁵⁷ A German study which included 41 child otoplasty patients also found that 92 per cent of those children “would decide again in favor of the operation”.²⁵⁸

For breast procedures, a Turkish study of 75 BR participants concluded that 93.3 per cent would undergo the same procedure again if the same symptoms were present.²⁵⁹ Similarly, a Finnish study of 115 BR recipients and 93 BR recipients found, respectively, that 97 per cent and 96 per cent of recipients felt satisfied with their decision to have the procedure; three per cent and four per cent, respectively, regretted their decision.²⁶⁰ In addition, a further study of 178 BR recipients found that over 95 per cent stated that that

²⁵² Sarwer DB, Infield AL, Baker JL *et al.* (2008) Two-year results of a prospective, multi-site investigation of patient satisfaction and psychosocial status following cosmetic surgery *Aesthetic Surgery Journal* **28(3)**: 245-50.

²⁵³ Sarwer DB, Wadden TA, and Whitaker LA (2002) An investigation of changes in body image following cosmetic surgery *Plastic and Reconstructive Surgery* **109(1)**: 363-9.

²⁵⁴ Sarwer DB, Gibbons LM, Magee L *et al.* (2005) A prospective, multi-site investigation of patient satisfaction and psychosocial status following cosmetic surgery *Aesthetic Surgery Journal* **25(3)**: 263-9.

²⁵⁵ Swanson E (2011) Outcome analysis in 93 facial rejuvenation patients treated with a deep-plane face lift *Plastic and Reconstructive Surgery* **127(2)**: 823-34.

²⁵⁶ Modig M, Andersson L, and Wårdh I (2006) Patients' perception of improvement after orthognathic surgery: pilot study *British Journal of Oral and Maxillofacial Surgery* **44(1)**: 24-7.

²⁵⁷ Türker N, Varol A, Ögel K, and Basa S (2008) Perceptions of preoperative expectations and postoperative outcomes from orthognathic surgery: Part I: Turkish female patients *International Journal of Oral and Maxillofacial Surgery* **37(8)**: 710-5.

²⁵⁸ Braun T, Hainzinger T, Stelter K *et al.* (2010) Health-related quality of life, patient benefit, and clinical outcome after otoplasty using suture techniques in 62 children and adults *Plastic and Reconstructive Surgery* **126(6)**: 2115-24.

²⁵⁹ Menderes A, Mola F, Vayvada H, and Barutcu A (2005) Evaluation of results from reduction mammoplasty: relief of symptoms and patient satisfaction *Official Journal of the International Society of Plastic Surgery* **29(2)**: 83-7.

²⁶⁰ Tykkä SA-SHHE (2001) Patients' satisfaction with breast reconstruction and reduction mammoplasty *Scandinavian Journal of Plastic and Reconstructive Surgery and Hand Surgery* **35(4)**: 399-405.

they would have the procedure again.²⁶¹ In addition, a UK study of 66 BR recipients found that 92 per cent would have the procedure again,²⁶² and a further UK study of 34 adolescent recipients of BR also found that 96 per cent would have the procedure again, at the same age (between 14 and 19).²⁶³

Recipients of cosmetic genital surgery have also been shown to indicate that they would have the surgery again. For example, a French study of 18 labiaplasty recipients found that 100 per cent of participants would be prepared to undergo the same procedure again,²⁶⁴ and a US study also found that 98 per cent (163/166 participants) of women who had undergone labia reduction or clitoral hood reduction procedures indicated that they would undergo the surgery again.²⁶⁵ Similarly, a separate study found that 96 per cent of labiaplasty recipients stated that they would repeat the procedure.²⁶⁶

Recipients of abdominoplasty have also indicated that they would repeat the procedure: 62 per cent of 118 abdominoplasty patients who took part in a UK-based study indicated that they would agree to repeat surgery; 88 per cent stated that they would be happy to consent to the procedure “if they could have their time again”.²⁶⁷ A German study of 63 abdominoplasty recipients also concluded that 93 per cent would undergo the procedure again.²⁶⁸ Similarly, liposuction recipients have also indicated that they would have the procedure again. A US study of 209 recipients notes that “despite postoperative pain, fat return, and weight gain, patients were willing to have the procedure again and recommend it to other”: 79.7 per cent indicated that they would have the procedure again.²⁶⁹ Moreover, all but three of 27 recipients of a procedure to address pectus ‘deformities’ - with an average follow-up period of 5.3 years - would agree to undergo the same surgery again.²⁷⁰

²⁶¹ Gonzalez MA, Glickman LT, Aladegbami B, and Simpson RL (2012) Quality of life after breast reduction surgery: a 10-year retrospective analysis using the Breast Q questionnaire: does breast size matter? *Annals of Plastic Surgery* **69(4)**: 361.

²⁶² Brown A, Hill C, and Khan K (2000) Outcome of reduction mammoplasty — a patients’ perspective *British Journal of Plastic Surgery* **53(7)**: 584-7.

²⁶³ Sharma K, Lim P, Baines R, and Brotherton TM (2014) Reduction mammoplasty in adolescents: a review of the indications, timing, and outcomes in a regional plastic surgery unit *European Journal of Plastic Surgery* **37(12)**: 661-6.

²⁶⁴ Trichot C, Thubert T, Faivre E, Fernandez H, and Deffieux X (2011) Surgical reduction of hypertrophy of the labia minora *International Journal of Gynecology and Obstetrics* **115(1)**: 40-3.

²⁶⁵ Alter GJ (2008) Aesthetic labia minora and clitoral hood reduction using extended central wedge resection *Plastic and Reconstructive Surgery* **122(6)**: 1780-9.

²⁶⁶ Rouzier R, Louis-Sylvestre C, Paniel B-J, and Haddad B (2000) Hypertrophy of labia minora: experience with 163 reductions *American Journal of Obstetrics and Gynecology* **182(1)**: 35-40.

²⁶⁷ Bragg TWH, Jose RM, and Srivastava S (2007) Patient satisfaction following abdominoplasty: an NHS experience *Journal of Plastic, Reconstructive & Aesthetic Surgery* **60(1)**: 75-8.

²⁶⁸ Papadopoulos NA, Staffler V, Mirceva V *et al.* (2012) Does abdominoplasty have a positive influence on quality of life, self-esteem, and emotional stability? *Plastic and Reconstructive Surgery* **129(6)**: 957e-62e.

²⁶⁹ Broughton G, Horton B, Lipschitz A *et al.* (2006) Lifestyle outcomes, satisfaction, and attitudes of patients after liposuction: a Dallas experience *Plastic and Reconstructive Surgery* **117(6)**: 1738-49.

²⁷⁰ Funk J, Gross C, and Placzek R (2011) Patient satisfaction and clinical results 10 years after modified open thoracoplasty for pectus deformities *Langenbeck's Archives of Surgery* **396(8)**: 1213-20.

Would cosmetic procedure recipients recommend it to others?

Section summary

Most evidence identified as part of this review suggests that most people who have received a cosmetic procedure, and who take part in research, would recommend to others the prospect of undergoing a cosmetic procedure.

For example, a US study of 45 women who had received various forms of cosmetic procedure found that 96 per cent reported that they would recommend the surgery to others.²⁷¹ Similarly, in a US study of 63 recipients of cosmetic surgery, participants were asked at three different time points whether they would recommend the procedure(s) they had undergone to others. At three months, 92 per cent of participants reported that they would; at six months, 96 per cent indicated the same answer, which rose to 97 per cent after a full year.²⁷² Lower levels of positive response to this question are observed by a German study of individuals who had undergone various cosmetic procedures which found that 78 per cent would recommend the procedure they had undergone.²⁷³

Procedure-specific studies also indicate that very high levels of cosmetic procedure recipients would recommend the procedure to a friend. For example, one French study of 18 labiaplasty recipients found that 100 per cent indicated that they would recommend it to a friend “with the same problem.”²⁷⁴ A further US study – initiated by a surgeon with 93 of his patients who had received facelifts, and carried out by one of his nurses – also found that 93 per cent would recommend the surgery to someone else.²⁷⁵ A US study of 72 recipients of various cosmetic procedures also found that, two years postoperatively, 95 per cent of recipients reported that they would recommend the procedure they had received to others; the same percentage indicated this response one year following the initial procedure.²⁷⁶ In addition, 91 per cent of BR or breast reconstruction recipients stated that they would recommend the procedure they had received to a friend under similar circumstances.²⁷⁷ A study of children who had

²⁷¹ Sarwer DB, Wadden TA, and Whitaker LA (2002) An investigation of changes in body image following cosmetic surgery *Plastic and Reconstructive Surgery* **109(1)**: 363-9.

²⁷² Sarwer DB, Gibbons LM, Magee L *et al.* (2005) A prospective, multi-site investigation of patient satisfaction and psychosocial status following cosmetic surgery *Aesthetic Surgery Journal* **25(3)**: 263-9.

²⁷³ Papadopoulos NA, Kovacs L, Krammer S *et al.* (2007) Quality of life following aesthetic plastic surgery: a prospective study *Journal of Plastic, Reconstructive & Aesthetic Surgery* **60(8)**: 915-21.

²⁷⁴ Trichot C, Thubert T, Faivre E, Fernandez H, and Deffieux X (2011) Surgical reduction of hypertrophy of the labia minora *International Journal of Gynecology and Obstetrics* **115(1)**: 40-3.

²⁷⁵ Swanson E (2011) Outcome analysis in 93 facial rejuvenation patients treated with a deep-plane face lift *Plastic and Reconstructive Surgery* **127(2)**: 823-34.

²⁷⁶ Sarwer DB, Infield AL, Baker JL *et al.* (2008) Two-year results of a prospective, multi-site investigation of patient satisfaction and psychosocial status following cosmetic surgery *Aesthetic Surgery Journal* **28(3)**: 245-50.

²⁷⁷ Tykkä SA-SHHE (2001) Patients' satisfaction with breast reconstruction and reduction mammoplasty *Scandinavian Journal of Plastic and Reconstructive Surgery and Hand Surgery* **35(4)**: 399-405.

otoplasty procedures also found that, despite the fact that patients reported some pain, itching, and bandage discomfort one week or more after the procedure, “almost every child recommended the surgery to children in the same situation.”²⁷⁸

Slightly lower levels of positive response to the question of recommending a procedure to others was observed by a Dutch study including 94 women who had undergone BRs two years' previously found that 89 per cent would choose to have the operation again, and that they would recommend it to a friend.²⁷⁹ Similarly, a US study of 209 liposuction recipients also found that 86 per cent would recommend the procedure to their family or friends.²⁸⁰ A small-scale German study of 30 recipients of Botox found that 83 per cent stated that they would recommend the treatment completely; 16 per cent stated that they would “mostly” recommend the treatment.²⁸¹ Finally, 30 female recipients of orthognathic surgery were also asked to regard whether they would recommend the surgery to others: 70 per cent considered advising surgery; 13 per cent were ambivalent; and 13 per cent rejected the suggestion.²⁸²

²⁷⁸ Niemelä BJ, Hedlund A, Andersson G, and Wahlsten VS (2008) Prominent ears: the effect of reconstructive surgery on self-esteem and social interaction in children with a minor defect compared to children with a major orthopedic defect *Plastic and Reconstructive Surgery* **122(5)**: 1390-8.

²⁷⁹ Hermans BJE, Boeckx WD, De Lorenzi F, and van Der Hulst RRWJ (2005) Quality of life after breast reduction *Annals of Plastic Surgery* **55(3)**: 227-31.

²⁸⁰ Broughton G, Horton B, Lipschitz A *et al.* (2006) Lifestyle outcomes, satisfaction, and attitudes of patients after liposuction: a Dallas experience *Plastic and Reconstructive Surgery* **117(6)**: 1738-49.

²⁸¹ Sommer B, Zschocke I, Bergfeld D, Sattler G, and Augustin M (2003) Satisfaction of patients after treatment with botulinum toxin for dynamic facial lines *Dermatologic Surgery* **29(5)**: 456-60.

²⁸² Türker N, Varol A, Ögel K, and Basa S (2008) Perceptions of preoperative expectations and postoperative outcomes from orthognathic surgery: Part I: Turkish female patients *International Journal of Oral and Maxillofacial Surgery* **37(8)**: 710-5.