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Autologous versus Implant-Based Breast Reconstruction: Quality of Life Outcomes — A Narrative Review

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ABSTRACT

Introduction. Breast reconstruction after mastectomy represents an important component of breast cancer treatment, modifying not only aesthetic outcomes as well as quality of life, body image, and psychosocial functioning. The most commonly used methods include reconstruction with autologous tissue and reconstruction with artificial materials, mainly implants; however, the optimal reconstructive technique remains a matter of debate.

Aim. The aim of this review was to analyze and compare the quality of life and patient satisfaction after autologous and implant-based breast reconstruction, using available clinical studies, cohort studies, and meta-analyses.

Methods. A systematic literature review was performed using publications that used specific types of questionnaires, which can serve as objective scales for assessing quality of life after different types of breast reconstruction. Among these scales, the following can be mentioned: BREAST-Q, BODY-Q, SF-36, and HADS.

Results. Most of the analyzed studies reported higher quality-of-life and satisfaction scores after autologous reconstruction, particularly in the domains of satisfaction with breasts, satisfaction with outcome, psychosocial well-being, and sexual well-being. Results concerning physical well-being were less consistent. Implant-based reconstruction was associated with a shorter and less burdensome treatment course; however, its long-term results may be limited by implant-related complications and the effects of radiotherapy.

Conclusions. Autologous breast reconstruction appears to provide more favorable quality-of-life and satisfaction outcomes than implant-based reconstruction. Nevertheless, the choice of reconstructive

method should be individualized and should consider the patient's clinical status, planned oncological treatment, risk of complications, and personal preferences.

Keywords: autologous reconstruction, implant-based reconstruction, BREAST-Q, reconstructive surgery, breast cancer.

INTRODUCTION

Breast cancer is one of the most common cancers affecting women and remains an important public health issue worldwide, including in Poland. The mentioned disease is one of the most common cancers affecting women. Current epidemiological data show a continued increase in incidence, as well as a key contribution of breast cancer to cancer-related mortality among women [1]. Epidemiological data from Poland show that in 2022, breast cancer was diagnosed in more than 21,000 women, and over 6,000 women died from the disease. These figures highlight the importance of early diagnosis, effective treatment, and well-coordinated patient care [2].

Surgical treatment remains one of the fundamental components of breast cancer therapy. In some cases, breast-conserving surgery combined with radiotherapy is possible. However, mastectomy continues to play an important role when breast-conserving treatment is not indicated or is not the optimal clinical choice. The decision regarding the type of surgery depends, among other factors, on disease stage, tumor location and extent, the feasibility of radiotherapy, comorbidities, and patient preferences [3].

Nowadays, mastectomy is still one of the main parts of breast cancer treatment strategies. Unfortunately, it can cause not only physical discomfort, but also emotional and social difficulties. Loss of the breast may negatively affect quality of life, body image, sense of femininity, self-esteem, sexuality, and psychosocial functioning. Different surgical approaches to breast cancer treatment may lead to different outcomes in terms of patient-reported symptoms, rehabilitation time, satisfaction with appearance, and overall quality of life [3]. An important part of comprehensive post-mastectomy care is breast reconstruction, which not only restores the shape of the breast but may also support the

patient's psychophysical rehabilitation. Reconstruction may improve satisfaction with appearance, body image, and psychological health; therefore, its weight extends beyond aesthetics and represents an important part of oncological treatment and the process of returning to everyday functioning [4-6]. Previous studies also emphasize the effects of mastectomy and reconstruction on quality of life, self-acceptance, and sexuality [5,6].

There are two commonly used types of breast reconstruction: implant-based reconstruction and autologous reconstruction. Autologous breast reconstruction methods use the patient's own tissues, while implant-based methods require the application of synthetic materials. Implant-based reconstruction is often selected for its shorter operative and recovery times. On the other hand, autologous reconstruction may provide a more natural and durable result, but it's important to remember that this method is more technically complex. These methods differ in surgical outcomes, complication profile, influence of radiotherapy, and long-term patient satisfaction [4].

BREAST RECONSTRUCTION METHODS

Implant-based breast reconstruction is one of the most commonly used methods for reconstructing the breast after mastectomy. This technique involves the use of artificial material, most commonly a silicone implant or tissue expander, to restore breast volume and shape. Contemporary implant-based reconstruction may vary in terms of surgical timing, number of operative stages, type of implant used, implant position relative to the pectoralis muscle, and the use of additional materials such as acellular dermal matrix (ADM) [7].

The basic classification of reconstruction using artificial materials includes one-stage and two-stage procedures. In one-stage reconstruction, referred to as direct-to-implant reconstruction (DTI), the implant is placed directly during mastectomy. In two-stage reconstruction, a tissue expander is first inserted to gradually stretch the tissues and is then replaced with a definitive silicone implant during a

second procedure. Both methods are used in clinical practice, and the choice is dependent on factors such as the quality of mastectomy skin flaps, patient anatomy, planned radiotherapy, risk factors, and expectations regarding appearance outcomes [8]. About the materials used, implant-based reconstruction may involve silicone, saline, or tissue expanders. In clinical practice, silicone implants are frequently used because of their aesthetic and tactile properties.

Several techniques of implant placement are currently available. The implant may be positioned beneath the pectoralis major muscle (subpectoral) or above it (prepectoral). Historically, subpectoral placement was preferred because it provided better implant coverage and reduced some complications. Recently, however, interest in prepectoral reconstruction has re-emerged owing to advances in mastectomy techniques and the use of meshes, ADM, and fat grafting [9].

The advantages of implant-based reconstruction include a shorter operative time compared with autologous reconstruction, no need to harvest tissue from a donor site, and usually faster recovery. This method is less surgically extensive than autologous reconstruction and may therefore be beneficial for patients who are not candidates for more complex procedures or who prefer a shorter operation. One-stage reconstruction may also reduce the number of required surgeries and limit the period of temporary dissatisfaction with body image, as the patient gets the final implant immediately [8].

However, implant-based reconstruction has important limitations. Possible complications include infection, hematoma, skin flap necrosis, implant loss, implant displacement, breast deformity, and the need for further corrective procedures. A particularly important problem is capsular contracture, which may cause pain, breast firmness, deterioration of esthetic results, and the need for reoperation [10].

Radiotherapy is one of the most important factors impacting outcomes after reconstruction using artificial materials. It may increase the risk of capsular contracture, worsen cosmetic results, cause pain and breast firmness, and increase the risk of implant loss. In an analysis of risk factors, post-mastectomy radiotherapy was shown to significantly increase the risk of capsular contracture, with an incidence of 18.7% in patients who received radiotherapy compared with 7.5% in those who did not [10].

Breast reconstructive surgery is not limited to the use of artificial materials. In recent years, techniques using the patient's own tissues have gained increasing popularity, most commonly involving skin and adipose tissue and, in some techniques, also muscle harvested from another body region. The most frequently used techniques include abdominal flaps such as TRAM and DIEP, the latissimus dorsi flap, and gluteal flaps such as SGAP and IGAP [11].

One of the standard methods of autologous breast reconstruction is the transverse rectus abdominis myocutaneous (TRAM) flap. This technique uses tissue from the lower abdomen, along with part or all of the rectus abdominis muscle, providing adequate volume for breast reconstruction. Partial or complete use of the muscle increases the risk of donor-site complications. As a result, the procedure is associated with greater donor-site morbidity. Such complications include abdominal wall weakness, hernia, and bulge [12].

A more modern form of abdominal tissue reconstruction is the DIEP flap, or deep inferior epigastric perforator flap. In this technique, skin and adipose tissue from the lower abdomen are harvested while preserving the rectus abdominis muscle to a greater extent. As a result, the DIEP flap may reduce donor-site weakness compared with techniques requiring greater muscle sacrifice. DIEP is currently one of the preferred methods of microsurgical autologous reconstruction, particularly in patients with sufficient abdominal tissue [12].

Another option is reconstruction using the latissimus dorsi flap. This technique consists of transferring tissue from the back to the anterior chest wall to recreate the breast. The flap may be used alone in selected patients or in combination with an implant when the volume of the patient's own tissue is insufficient to achieve the desired reconstructive effect [13].

In patients in whom abdominal tissue cannot be used, gluteal flaps such as SGAP and IGAP, namely the superior gluteal artery perforator flap and inferior gluteal artery perforator flap, respectively, represent alternative options. These techniques use tissue from the upper or lower buttocks and are among the more advanced microsurgical procedures. They may be particularly useful in patients with a low body mass index, those with prior abdominal surgery, or those who do not wish to use abdominal tissue as a donor site [12].

The main advantage of reconstruction using the patient's own tissue is the potential to achieve a more natural breast appearance and consistency. The result may be longer-lasting than with implants, and the reconstructed breast may change more naturally with weight changes and aging. Another benefit is the absence of a foreign body, which reduces the risk of implant-related complications such as rupture, capsular contracture, and the need for prosthesis replacement [12]. The limits of autologous reconstruction include longer operative time and greater technical complexity. These methods require greater experience from the surgical team, particularly in microsurgical reconstruction. In addition, they involve a donor site, which results in an additional scar and a risk of donor-site complications such as pain, abdominal wall weakness, hernia, fat necrosis, wound-healing problems, or donor-site asymmetry [11].

METHODS

This study was performed as a narrative review designed to discuss and compare quality-of-life outcomes in patients undergoing implant-based breast reconstruction and reconstruction using autologous tissue. A literature search was performed in the PubMed, Scopus, and Google Scholar

databases, including publications from 2010 to 2025. This systematic review followed the PRISMA guidelines [15]. PubMed, Scopus, and Google Scholar were searched for relevant studies published between January 1, 2010, and December 30, 2025. The following search terms and their combinations were used: autologous reconstruction, implant-based reconstruction, patient-reported outcomes, BREAST-Q [14], reconstructive surgery, breast cancer, appearance outcomes, psychosocial outcomes, body image, and patient satisfaction.

A total of 125 records were identified through database searching: PubMed (n = 56), Scopus (n = 48), and Google Scholar (n = 21). Before screening, 5 duplicate records and 9 records were removed for other reasons. 111 records were screened, of which 25 were excluded. 86 full-text reports were then assessed for eligibility. After full-text assessment, 73 reports were excluded, and 13 studies were ultimately included in the review.

Studies involving patients after breast reconstruction were included if they assessed quality of life, satisfaction with treatment outcomes, or other patient-reported outcomes. Studies not related to post-mastectomy breast reconstruction, studies without quality-of-life assessment or patient-reported outcomes, single case reports, articles without full-text access, and publications in languages other than English or Polish were excluded.

Ultimately, 13 studies met all criteria and were included in this narrative review. The complete selection process is presented in the PRISMA flow diagram (Fig.1).

The following information was extracted from the original studies:

1. General study information: title, article type, and country of origin
2. Patient characteristics: number of patients and patient description
3. Surgery: type of operation performed, classified as autologous or implant-based breast reconstruction

4. Results: measurement or data collection method, scale used, follow-up duration, results, and conclusion

This article is based on previously conducted studies and does not contain any new studies involving human participants or animals performed by any of the authors.

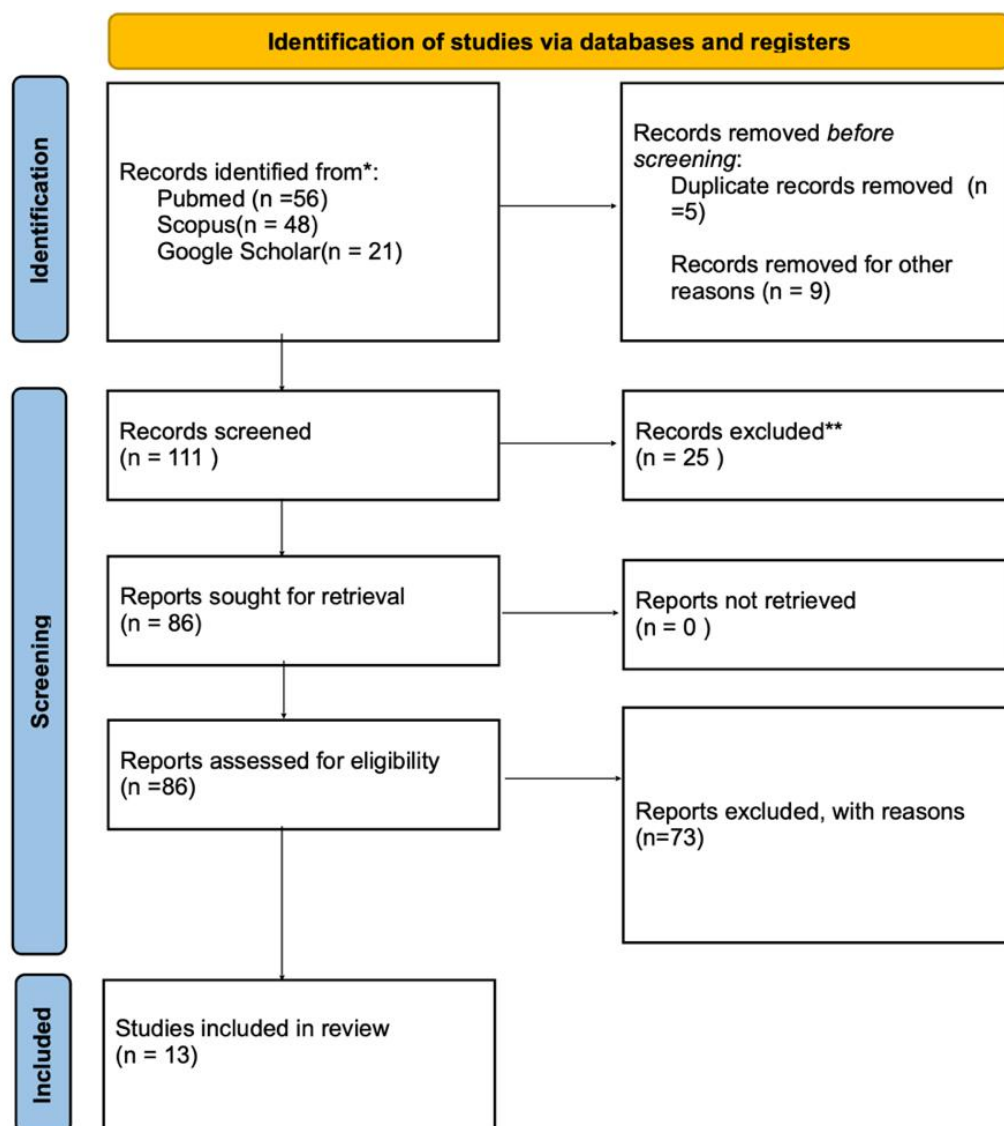


Fig. 1. PRISMA flowchart

Table 1: Overview of selected publications on quality of life in autologous and implant-based outcomes in breast reconstruction

Title	Number of Patients	Description of patients	Type of operations performed: Autologous/ Implant-Based Breast Reconstruction	Measurements / Data Collection - SCALE used	Follow-up Duration	Results	Conclusion	Database	Country	Article type
Implants versus autologous tissue flaps for breast reconstruction following mastectomy [16]	35 studies, 57,555 women	Women undergoing breast reconstruction after mastectomy for breast cancer treatment or risk reduction	Implant-based BR / autologous tissue flap BR	Mainly BREAST-Q for patient-reported outcomes	Varied by outcome; BREAST-Q follow-up mostly 24-72 months; long-term complications up to 96 months	Autologous reconstruction generally showed better patient-reported outcomes. Compared with autologous flaps, implants were associated with lower psychosocial well-being, lower sexual well-being, lower satisfaction with breast, and lower satisfaction with reconstruction.	Autologous tissue reconstruction may improve psychosocial well-being, sexual well-being, and satisfaction compared with implant-based reconstruction.	PubMed	Italy	Systematic review and meta-analysis
Quality of Life to 13 Years after Autologous or Alloplastic Breast Reconstruction: Which Remains Best? [17]	Initial cohort 92 women; follow-up responders 55 women	Women >18 years after successful autologous or alloplastic breast reconstruction between 2006–2010	Autologous BR; alloplastic / implant-based BR	BREAST-Q, Hospital Anxiety and Depression Scale, SF-36	9–13 years after reconstruction	Autologous reconstruction patients remained more satisfied with their breasts than alloplastic reconstruction patients	Long-term satisfaction with breasts, outcome, and nipples slightly decreased after both autologous and alloplastic reconstruction. Autologous reconstruction appeared to maintain higher breast satisfaction than alloplastic reconstruction, but conclusions should be cautious due to small sample size.	PubMed	the Netherlands	Long-term follow-up cohort study

Quality of Life in Breast Reconstruction Patients after Irradiation to Tissue Expander: A Propensity-Matched Preliminary Analysis [18]	106 matched patients: 53 ABR and 53 IBR	Patients after mastectomy, immediate tissue expander placement, PMRT to tissue expander, then definitive reconstruction	Autologous BR vs implant-based BR after TE-PMRT	BREAST-Q	BREAST-Q assessed at 1, 2, and 3 years postoperatively	ABR patients had significantly higher satisfaction with Breasts scores than IBR patients at all postoperative time points, with differences exceeding the minimal clinically important difference. At 3 years, Satisfaction with Breasts remained higher in ABR	After irradiation to a tissue expander, autologous reconstruction may provide better long-term breast satisfaction than implant-based reconstruction, without significantly higher complication rates. Larger studies are needed to confirm these preliminary findings.	PubMed	USA	Original article; propensity score-matched preliminary cohort analysis
Breast-related and body-related quality of life following autologous breast reconstruction is superior to implant-based breast reconstruction - A long-term follow-up study [19]	336 patients: 112 IBR and 224 ABR	Women ≥ 18 years after postmastectomy breast reconstruction performed between 2015–2018	Autologous BR: mainly DIEP, also LTP/SHAEP; vs implant-based BR: two-stage IBR	BREAST-Q and BODY-Q	Mean 46.7 months; range 23–76 months	ABR patients had significantly higher BREAST-Q scores in all domains after adjustment. BODY-Q showed that IBR patients scored better for scars, but ABR patients scored better for abdomen and other body-related domains. Donor-site aesthetics did not negatively affect overall body image. LTP flap patients had lower satisfaction with hips/outer thighs, but this did not reduce overall body image.	Long-term breast-related and body-related QoL was better after autologous reconstruction than implant-based reconstruction. Donor-site appearance did not appear to harm body image after free-flap reconstruction.	PubMed	The Netherlands	Multicenter cross-sectional survey study

Autologous versus implant-based breast reconstruction: A systematic review and meta-analysis of Breast-Q patient-reported outcomes [20]	9 studies; 2129 implant-based and 825 autologous reconstructions	Patients after mastectomy undergoing breast reconstruction; included studies directly compared autologous and implant-based BR	Autologous BR vs implant-based BR	BREAST-Q	Varied: 0.5 to 11 years across studies	Autologous reconstruction had significantly better BREAST-Q outcomes for satisfaction with breast, satisfaction with outcome, psychosocial well-being, and sexual well-being. The largest differences favored autologous reconstruction for satisfaction with breast and overall outcome	Autologous breast reconstruction showed better patient-reported satisfaction and QoL than implant-based reconstruction	PubMed	Denmark	Systematic review and meta-analysis
Implant vs. autologous tissue-based breast reconstruction: A systematic review and meta-analysis of the studies comparing surgical approaches in 55,455 patients [21]	32 studies, 55,455 patients	Adult patients undergoing implant-based or autologous breast reconstruction	IBR: implant/expander reconstruction; ABR: autologous flap reconstruction	BREAST-Q; complications, LOS, and costs were analyzed	Varied between included studies; reported ranges included 1 month to 180 months	ABR showed significantly better BREAST-Q satisfaction with breast and overall outcome	ABR provided better patient satisfaction and aesthetic outcomes than IBR, while both methods appeared comparable in safety. The main disadvantage of ABR was higher cost.	PubMed	Poland	Systematic review and meta-analysis
PATIENT SATISFACTION AFTER BREAST RECONSTRUCTION: IMPLANTS VS. AUTOLOGOUS TISSUES [22]	109 women: 50 autologous and 59 implant-based	Women after successful breast reconstruction following mastectomy between 2007–2016	Autologous BR: mainly DIEAP, also LICAP/SIEA; implant-based BR: implants ± LD flap	BREAST-Q	Divided into: 0–6 months, 6–12 months, 1–3 years, and >3 years after reconstruction	Autologous reconstruction had significantly higher satisfaction with breasts, psychosocial well-being, and sexual well-being. Satisfaction with outcome and physical well-being of the chest did not differ significantly between groups. Satisfaction after autologous reconstruction tended	Autologous breast reconstruction led to higher patient satisfaction than implant-based reconstruction. The authors considered this a pilot study and recommended larger prospective studies.	PubMed	Italy	Cross-sectional pilot study

						to improve over time, while implant satisfaction decreased after longer follow-up, possibly due to implant-related issues such as capsular contracture.				
Short-Term Quality of Life after Autologous Compared with Alloplastic Breast Reconstruction: A Prospective Study [23]	138 reconstruction: 75 alloplastic and 63 autologous	Women ≥18 years undergoing breast reconstruction in three Dutch hospitals between 2012–2019	Autologous BR: DIEP flap; Alloplastic BR: one-stage implant, two-stage expander/implant, or expander/implant + LD flap	BREAST-Q, SF-36, HADS; complications graded by Clavien-Dindo	Preoperative, 6 weeks, and 6 months postoperative	Autologous BR had higher BREAST-Q scores at 6 weeks and 6 months for Satisfaction with Breasts, Psychosocial Well-Being, and Sexual Well-Being. Physical well-being of the chest was similar between groups. Severe complications were more common after autologous BR (27% vs 12%), but complications were not associated with worse BREAST-Q scores.	Autologous BR showed better short-term breast satisfaction and psychosocial/sexual well-being than alloplastic BR.	Scopus	The Netherlands	Prospective multicenter cohort study
Impact on Patient's Appearance Perception of Autologous and Implant Based Breast Reconstruction Following Mastectomy Using BREAST-Q [24]	325 patients: 133 DIEP and 192 implant-based	Patients after mastectomy for cancer or prophylactic indication, with ≥2 years follow-up after reconstruction	Autologous BR: DIEP flap; implant-based BR: prosthetic reconstruction	BREAST-Q	At least 2 years; mean follow-up about 4.7–4.8 years	DIEP patients had significantly higher scores in all BREAST-Q domains: satisfaction with breasts, satisfaction with outcome, psychosocial well-being, sexual well-being, and physical	DIEP reconstruction provided higher patient satisfaction and QoL than implant-based reconstruction across all BREAST-Q domains	Scopus	Italy	Retrospective cohort study

						well-being of the chest.				
Quality of Life after Alloplastic versus Autologous Breast Reconstruction: The Influence of Patient Characteristics on Outcomes [25]	142 reconstructions: 78 alloplastic and 64 autologous; 3-year responders: 37 alloplastic and 38 autologous	Women >18 years undergoing breast reconstruction after therapeutic or prophylactic mastectomy in three Dutch hospitals	Autologous BR vs alloplastic/implant-based BR	BREAST-Q, SF-36, HADS	Preoperative, 6 weeks, 6 months, 1 year, and 3 years postoperative	Autologous BR had 1 higher Satisfaction with Breasts and Physical Well-being over time, even after adjustment for confounders.	Autologous BR remained superior for breast satisfaction and physical well-being, but not necessarily for all QoL domains after adjustment.	Scopus	The Netherlands	Prospective longitudinal multicenter cohort follow-up study
Effect of Total Breast Reconstruction With Autologous Fat Transfer Using an Expansion Device vs Implants on Quality of Life Among Patients With Breast Cancer: A Randomized Clinical Trial [26]	193 patients included; 91 assigned to AFT, 80 to IBR received allocated intervention	Women ≥18 years after mastectomy seeking breast reconstruction	Autologous technique: autologous fat transfer + external expansion device; implant-based BR: two-stage implant reconstruction	BREAST-Q	12 months	At 12 months, AFT had higher BREAST-Q scores in all 5 domains.	AFT with expansion provided better QoL over time than implant-based reconstruction and appeared safe. It may offer a less invasive third option for breast reconstruction after mastectomy.	Scopus	The Netherlands	Multicenter randomized clinical trial
Patients' Satisfaction After Breast Reconstruction Surgery Using Autologous versus Implants: A Meta-Analysis [27]	16 studies; sample size for breast satisfaction analysis 7,284 patients	Breast cancer patients after mastectomy and breast reconstruction included in comparative studies	Autologous BR vs implant-based BR	BREAST-Q	Varied across studies; reported ranges included 4–12, 6–36, 4–52, 12–48, and 60 months	Autologous reconstruction showed higher BREAST-Q satisfaction than implant reconstruction in several domains: satisfaction with breast, satisfaction with outcome, sexual well-being, nipple satisfaction, and satisfaction with plastic surgeon	Autologous reconstruction was associated with higher patient satisfaction and QoL across multiple BREAST-Q domains than implant-based reconstruction	Google Scholar	Indonesia	Systematic review and meta-analysis
Quality of life and patient satisfaction after microsurgical abdominal flap versus staged expander/implant breast reconstruction: a critical study of unilateral immediate breast reconstruction using patient-reported outcomes	119 eligible patients; 74 respondents	Patients after unilateral immediate breast reconstruction, no radiotherapy, non-smokers, eligible for both implant and abdominal	Autologous BR: DIEP, MS-TRAM; implant-based BR: staged expander/implant reconstruction	BREAST-Q	Minimum 12 months; mean follow-up 3.5 years MAFBR and 3.9 years EIBR	MAFBR patients had higher scores for psychosocial well-being, sexual well-being, satisfaction and outcome. No	MAFBR patients had higher scores for psychosocial well-being, sexual well-being, satisfaction with outcome.	Google Scholar	USA	Retrospective cross-sectional clinical study

instrument BREAST-Q [28]		flap reconstructio n				significant difference was found in chest physical well-being. Complicati ons negatively affected satisfaction and physical well-being.				
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RESULTS

The analysis included studies comparing quality-of-life outcomes and patient satisfaction after autologous and implant-based breast reconstruction. The review included both original studies and systematic reviews with meta-analyses. The most commonly used assessment tool was the BREAST-Q questionnaire, and some studies also used BODY-Q, SF-36, and HADS. Follow-up duration varied considerably, ranging from short-term assessments at 6 weeks and 6 months to long-term follow-up extending 9 to 13 years after reconstruction [14,16-28].

Most studies indicated that autologous reconstruction was superior to implant-based reconstruction in terms of satisfaction with breasts and total satisfaction with reconstructive outcome. Higher scores were particularly observed after autologous reconstruction in the domains of Satisfaction with Breasts, Satisfaction with Outcome, Psychosocial Well-being, and Sexual Well-being. This trend was apparent in both cohort studies and meta-analyses involving large patient populations [16-28].

In long-term studies, autologous reconstruction maintained a more favorable satisfaction profile, particularly in the domain of satisfaction with breasts. At the same time, some studies indicated that satisfaction may decrease over time in both groups; however, this decline appears to be more pronounced in patients after reconstruction using artificial materials, probably because of implant-related complications such as capsular contracture, the need for revision surgery, or changes in appearance [17,19,22,25,28].

Studies involving patients who had undergone radiotherapy also demonstrated an advantage of autologous reconstruction in terms of breast satisfaction. In patients after irradiation, autologous reconstruction with a tissue expander was associated with higher BREAST-Q scores than implant-based reconstruction, without a significant increase in complication rates [18].

DISCUSSION

The analyzed studies consistently indicate that autologous reconstruction is associated with higher patient satisfaction and better quality of life compared with implant-based reconstruction. The strongest effect was observed for satisfaction with breast appearance and general satisfaction with the reconstructive outcome. This may be related to the more natural appearance and consistency of the breast after autologous reconstruction, greater durability of the result, and the absence of typical implant-related problems [16,19-21,24,27,28].

The advantage of autologous reconstruction was particularly clear in psychosocial and sexual domains. Higher scores in these areas suggest that a more natural breast appearance may positively influence body image, self-esteem, and intimate functioning. This is important because breast reconstruction isn't only a restorative procedure but also has substantial psychological and social significance [5,6,16,20,22,24,27,28].

However, the results should be interpreted with caution. Many studies were observational, retrospective, or cross-sectional, which is associated with the risk of selection bias. Patients selected for autologous reconstruction may differ from those who undergo implant-based reconstruction in terms of age, body mass index, comorbidities, radiotherapy exposure, psychological status, or aesthetic expectations. The study by Holt-Kedde et al. showed that after adjustment for controlling confounding factors, the advantage of autologous reconstruction was maintained mainly for satisfaction with breasts and physical well-being, whereas differences in psychosocial and sexual well-being did not always remain significant [25].

The complexity profile is also an important aspect. Autologous reconstruction is often associated with longer operative time, greater surgical extent and a risk of donor site complications. In contrast, implant-based reconstruction may initially be less burdensome, but in the longer term, it is associated with the risk of capsular contracture, infection, implant rupture, the need for implant exchange or revision surgery. Therefore, the choice of reconstructive method should consider not only quality-of-life outcomes and surgical risk, but also patient preferences, planned radiotherapy, and technical feasibility [7,10-13,21].

Radiotherapy is still a major factor affecting reconstruction outcomes. Available data suggest that autologous reconstruction in irradiated patients may provide better breast satisfaction than implant-based reconstruction. This has clinical significance because radiotherapy increases the risk of implant-related complications and deterioration of cosmetic outcomes [10,18].

Autologous reconstruction is well supported by evidence, but the best technique depends on the patient. Implant-based reconstruction remains an important option, especially for women who prefer a shorter procedure, want to avoid scars at a donor site, or are not suitable candidates for autologous reconstruction. The best approach should be chosen through shared decision-making, based on the patient's expectations and an honest discussion of the pros and cons of each method. Post-mastectomy care should also incorporate psychosocial support, rehabilitation counselling, and individualized advice on physical activity [29,30,31].

CONCLUSION

Based on the analyzed studies, autologous reconstruction appears to provide higher patient satisfaction and better quality-of-life outcomes than implant-based reconstruction, particularly in terms of satisfaction with breasts, overall reconstructive outcome, and psychosocial and sexual well-being [16-28].

Results assuming physical well-being are more heterogeneous, and the possible benefits of autologous reconstruction should be weighed against greater procedural complexity, donor-site morbidity, and higher costs. Implant-based reconstruction is still a valuable option; its long-term outcomes may be limited by implant-related complications and the effects of radiotherapy [10-13,18,21].

The final choice of reconstructive method should be individualized and based on the patient's clinical condition, planned oncological treatment, aesthetic expectations, acceptance of risk, and preferences regarding the treatment course. Further prospective, well-controlled studies with long-term follow-up are needed to better determine which patients benefit most from each breast reconstruction method.

DISCLOSURES

Author contributions

Study concept and overall design: Arina Drobashko and Julia Kępska. Methodology and review framework: Arina Drobashko, Julia Kępska, and Aleksandra Iga Pocij. Literature search and preliminary study selection: Nikola Murawska, Kamil Wójcik, Wiktor Kowalczyk, and Weronika Olech. Data extraction, comparison of outcomes, and interpretation of findings: Aneta Synakiewicz, Natalia Lewińska, Aleksandra Iga Pocij, and Nikola Murawska. Preparation of the first manuscript draft: Arina Drobashko and Julia Kępska. Visualization and table preparation: Wiktor Kowalczyk, Weronika Olech, and Nikola Murawska. Critical revision of the manuscript: all authors. All authors read and approved the final version of the manuscript.

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Informed Consent Statement

Not applicable.

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Conflict of Interest Statement

The authors declare that they have no conflicts of interest.

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