Facilitating shared decision making with breast augmentation patients: Acceptability of the PEGASUS intervention.

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Abstract

Background: PEGASUS is an intervention to facilitate shared decision making by helping prospective patients consider their expectations of surgery, so that surgeons have a clear understanding of their individual goals. To date, shared decision making interventions within aesthetic surgery are lacking. This mixed methods study therefore explored the acceptability of implementing PEGASUS into routine private practice with breast augmentation patients and aesthetic providers. **Method:** Seventeen women presenting for breast augmentation from three practices received the PEGASUS intervention pre-operatively and completed a process evaluation post-operatively. Semi-structured interviews exploring 3 aesthetic providers' experiences of using PEGASUS were subjected to a thematic analysis, whilst a content analysis was conducted on the 77 goals identified by patients. **Results:** The majority of patients reported that the PEGASUS intervention was relevant, helpful, useful, and they felt comfortable during it. Qualitatively, patients and aesthetic providers found that PEGASUS enabled them to reflect on and discuss their expectations for surgery. Aesthetic providers discussed some of the issues and barriers associated with implementing PEGASUS in routine private practice, factors that must be considered prior to further evaluation. **Conclusion:** This study provides preliminary support for the acceptability of PEGASUS to breast augmentation patients and to aesthetic providers working in the private sector.

Breast augmentation, shared decision making, expectations, PEGASUS, intervention, acceptability

Introduction

Women undergo breast augmentation for various reasons, including those related to appearance (e.g. appearance dissatisfaction, restrictions in clothing choices) and psychological well-being (e.g. self-esteem)[1]. A successful outcome is one where the patient's personal goals and expectations of surgery have been met[2, 3]. A failure to achieve anticipated psychosocial outcomes can lead to disappointment, distress and litigation; even when the surgical result is technically sound[3]. Patients across a broad range of surgical procedures have reported dissatisfaction and regret with their decision to undergo surgery because it did not meet their expectations[3-5]. In studies examining outcomes following aesthetic surgery, unrealistic expectations are associated with post-operative dissatisfaction and distress[2,6]. Consequently, patients who are dissatisfied with the outcome of surgery are more likely to seek invasive revision surgery with implications for their psychological and physical wellbeing. Aesthetic providers report that the management of such patients can become difficult and time consuming. Promoting realistic expectations about the outcome of surgery could therefore reduce the possibility of post-operative regret and dissatisfaction[7].

Interventions that encourage patients to set goals about what they hope surgery will achieve and to engage in the consultation can improve satisfaction and health outcomes[8, 9]. Moreover, engaging patients in their care is in line with shared decision making, a fundamental part of healthcare. Shared decision making "involves [the] proactive engagement of patients and professionals working in partnership to share information" (p.8)[9]. A growing body of evidence shows that this can improve patient satisfaction[10], and help them feel involved in their care[11,12]. Whilst health professionals typically support shared decision making, research shows a discrepancy between their reports of shared decision making and the extent to which it occurs in practice[13,14], that it is often minimal during consultations and that patients are not always included to the degree they would like[15]. To address this discrepancy and to reduce the gap between recommendations and practice, effective interventions are required to embed shared decision making into routine practice[9].

The PEGASUS intervention

PEGASUS (**P**atients' **E**xpectations and **G**oals: **A**ssisting **S**hared **U**nderstanding of **S**urgery) is an intervention intended to facilitate shared decision making[16]. It helps patients to consider what they anticipate surgery will achieve, in order to promote a discussion with health professionals about these expectations. A health professional (trained to deliver PEGASUS), encourages patients to articulate clear, specific surgical and psychosocial goals. The patient lists their goals on a PEGASUS sheet and rates the importance of each (from 0-10). The completed sheet is then used as a 'tool' in their surgical consultation to facilitate a discussion focused around their individual goals. The surgeon rates (from 0 - 10) the probability of achieving each surgical goal and is able to reflect with the patient on the extent to which psychosocial goals are likely to follow. Health professionals can use this information to identify if a patient has realistic expectations and, if necessary, take steps to manage them, for example, through enhanced education. The discussions that occurs alongside the completion of PEGASUS are essential in facilitating shared decision making[16]. In a pilot study with health professionals and breast cancer patients undergoing breast reconstruction within the National Health Service[16], PEGASUS helped facilitate communication and shared decision making[16].

Current study

It is necessary to embed and assess shared decision making tools within the field of aesthetic surgery, a sector in which such interventions are lacking[17]. Given that breast augmentation isthe most frequently performed aesthetic surgical procedure in the UK, PEGASUS was trialled with this patient group. Feasibility and acceptability studies are crucial when developing, evaluating and implementing new interventions (Medical Research Council)[18] and determining whether an intervention is practical for routine use[19]. Similarly, prospective studies using small samples to examine and modify process factors are a core tenet of the IDEAL standards for surgical innovation research[20]. This mixed methods study therefore aimed to examine a) the acceptability of PEGASUS for both patients undergoing breast augmentation and aesthetic providers and; b) its feasibility in routine private practice.

Method

Participants and procedure

Institutional ethical approval was obtained. Aesthetic providers working in the private sector were recruited via the British Association of Aesthetic Plastic Surgeons throughout 2014 and 2015. A 40 minute training session was delivered to 5 consultant aesthetic surgeons. One later withdrew from the study due to time constraints and another was unable to recruit any patients within the study time frame..

Seventeen eligible women were identified at the participating practices, and gave active consent. This sample size is typical of feasibility and acceptability studies[21,22]. Women were eligible to participate if they were over 18 years old, considering breast augmentation and able to participate in an intervention delivered in English (see Table 1 for participant details).

[INSERT TABLE 1]

Design and Measures

Acceptability to patients: Participants completed a questionnaire at their follow up consultation, approximately 4 -12 weeks post-operatively, to explore their experiences of PEGASUS. The questionnaire contained five open-ended questions (see Table 2), each with a free-text response box,

[INSERT TABLE 2]

and 9 closed questions. Seven statements assessed how relevant, comfortable, helpful and useful women found PEGASUS, and whether they felt that their expectations of surgery had been achieved. These were measured with a five point Likert scale (0-5, with higher scores indicating higher acceptability). Questions also examined participants' views on the timing of the PEGASUS conversation and whether any changes to PEGASUS were needed.

Acceptability to providers: A surgeon from each participating practice took part in a semi-structured interview (n = 3) about their experiences of using PEGASUS, their views on its usefulness and issues related to embedding it in routine practice. Interviews were conducted by the first author, audio recorded and transcribed verbatim.

Data Analysis

A content analysis[23] was used to analyse women's goals for breast augmentation (as recorded on the PEGASUS sheet). Interview data from aesthetic providers and patients' responses to the open ended questions were subjected to thematic analysis (see Braun and Clarke's (2006) six step guide for a review)[24].

Results

Participants' expectations elicited through PEGASUS

The intervention encouraged each participant to identify a list of surgical (S) and psychosocial (P) goals for undergoing breast augmentation. A total of 77 goals were listed (mean = 4.53 per participant; range 3-6) (see Table 3). Participants' pre-surgical ratings of the importance of each goal ranged from 5 to 10.

[INSERT TABLE 3]

Participants' and aesthetic providers' experiences of PEGASUS

Sixteen out of the seventeen participants rated the PEGASUS intervention using a set of questions on a 5 point Likert scale, with higher scores indicating greater acceptability. Participants rated PEGASUS as highly relevant (M = 4.69, SD = 0.60), helpful (M = 4.63, SD = 0.61), and useful in the consultation (M = 4.31, SD = 0.79). It was also useful to be reminded of their pre-surgical expectations after surgery (M = 4.06, SD = 0.68). They reported feeling comfortable during the

intervention (*M* = 4.81, *SD* = 0.54) and that their goals for surgery had been achieved (*M* = 4.81, *SD* = 0.40).

Analysis of qualitative data from clinicians and patients identified three themes, described below:

Theme 1: PEGASUS helped to think about, reflect on and discuss expectations for surgery

Completing PEGASUS was described as providing aesthetic providers and patients with the opportunity to explain and discuss their expectations for surgery. Women thought it was important to summarise and clarify their particular aims and expectations, and to convey these to the surgeon. For example, patient 4 stated that it was *"valuable to get my thoughts across to the [surgeon] regarding aims of the procedure"*. Furthermore, PEGASUS *"helped me to explain my needs"* (patient 15) and "*Allowed me to explain my expectations to (the surgeon)*" (patient 14).

As a result, PEGASUS enabled patients to reflect on and consider their reasons for wanting breast augmentation, and to decide if it was the right choice for them. Patient 2 reported that PEGASUS *"made me think carefully about why I really want breast implants and how much it affects my life"* and "*made me realise how much I wanted to have surgery and confirmed it was right for me"*. PEGASUS also *"highlighted the things I wanted to achieve in the surgery"* (patient 9), *"made my expectations clear to me"* (patient 4) and *"allowed me to focus on what I really wanted and why I was doing it"* (patient 11).

Surgeons also noted the usefulness of PEGASUS in facilitating reflection on patients' goals, for example: *"It's useful to make us all reflect on what's trying to be achieved, what's being done and I think that is a good thing"* (clinician 1). It also helped them identify if patients had unreasonable goals or unrealistic expectations:

> "*there's certainly merit in asking them to write it down and asking them 'well, what are the actual goals'…it's useful for me to see that, if only so that I can pick up something where they say something that just doesn't match or I guess the goals they put down suddenly start ringing alarm bells*" (clinician 2)

Similarly, patients acknowledged that PEGASUS helped them to manage and "*balance their own expectations*" (patient 5). For example, one noted that PEGASUS made sure her "*expectations were realistic"* (patient 7). Indeed, the vast majority of patients reported post-operatively that their expectations and goals for surgery had been completely (76.5%) or mostly (17.6%) achieved.

Theme 2: Using PEGASUS in private practice

Overall, aesthetic providers reported that PEGASUS was a "*good idea*" and that their patients had been positive about it, which mirrored participants' quantitative responses in that 88.3% of women rated PEGASUS as relevant to them and reported feeling comfortable during the intervention. Furthermore, women provided a total of 77 goals, demonstrating their willingness to complete PEGASUS and ability to identify a range of goals.

PEGASUS was administered either during or prior to the initial consultation, depending on the system that fitted the set-up of each aesthetic provider. One clinician suggested that patients could benefit from thinking about their goals and expectations for surgery some time before completing PEGASUS in the practice. However, the majority of women (58.8%) thought the PEGASUS conversation should take place at the initial consultation, whilst 29.4% preferred it to take place at a second appointment.

> "*I think first consultation is not a bad time. Almost before the consultation if they could because I think even their answers to things are probably clouded by the consultation*" (clinician 2)

Variations in how practices were configured and run highlighted that some flexibility is needed when using PEGASUS in private practice. For example, the number of routine pre-surgical consultations varies between practices and some had a dedicated nurse to help facilitate PEGASUS, whilst others did not. Completing PEGASUS took between 5 and 15 minutes.

Whilst the majority of women reported that no changes were needed to make PEGASUS more useful or to its format or layout (82.4% and 88.2% respectively), one participant suggested including stars

(in addition to the numbers) to rate their goals. One clinician suggested that patients specify the nature of their surgical goals in more detail.

Whilst providers stated that they already addressed patients' expectations and priorities amongst the many things discussed in the consultation (e.g., medical history), a number of subtle changes and important insights were reported. One clinician suggested that patients liked "*isolating the expectation element*" and "*formalising the process*" (clinician 3) and reported that the "*reflective element is quite a useful thing"*. Since using PEGASUS, this clinician had started to review patients' expectations *"the one thing I suppose I don't do is having written down a list of expectations and hoped for outcomes from surgery I don't necessarily go back and formally reflect on them in the last consultation and I think the one thing I will do having spent time doing PEGASUS is I will go back…"* (clinician 3). Another clinician reported making subtle changes to their consultations to ensure that all aspects of the patients' surgical goals are addressed: *"What happened as a result of using PEGASUS now, is that I have kind of altered my consultations slightly and my consultation now takes into account putting lots of emphasis on a few other things which I did before but which I now really emphasise"* (clinician 1).

Theme 3: Barriers to implementation

Some logistical problems had impeded the implementation of PEGASUS including aesthetic providers not having administrative help:

> *"the clinic is quite manic which means logistically it's a bit difficult for me but probably not insurmountable if I was more organised"* (clinician 2)

Interestingly, the gender of the clinician and a lack of a psychologist in their practice were cited as potential barriers to using PEGASUS. Patients were willing to discuss typical goals for breast augmentation (e.g.,to feel confident naked) whilst completing PEGASUS but one male clinician thought that patients may report different goals and ratings to female clinicians. Drawing on their

experience of using PEGASUS with women considering breast reconstruction within the National Health Service, one clinician noted that, unlike the NHS, private cosmetic practices do not typically have a psychologist or specialist nurse available to lead the intervention:

> *"I've seen within the context of the NHS clinic where it's kind of organised and the psychologist is there and they are driving it"* (clinician 2)

However, feedback from providers suggested they were able to conduct the PEGASUS intervention but need to get into the routine of accommodating it into their usual care.

Discussion

Patients' ratings of the PEGASUS intervention demonstrated high acceptability. Collectively, the majority of patients and clinicians found it to be helpful. Specifically, PEGASUS was valuable in helping patients to clarify their own goals and expectations for breast augmentation surgery and to inform the surgeon. Indeed, encouraging patients to identify their personal goals for surgery is an important part of facilitating shared decision making[9].

Furthermore, PEGASUS provided patients with the opportunity to think carefully about their motivations for surgery and to decide if it was the right decision for them. Clinicians found it helpful in regards to reflecting on what the patient wanted to achieve from breast augmentation and assessing whether their goals were reasonable and realistic. Ensuring patients have realistic goals for surgery is crucial given that pre-operative unrealistic expectations are associated with post-operative dissatisfaction[2,6]. Whilst an examination of the efficacy of PEGASUS was beyond the scope of a feasibility and acceptability study[18], further research is needed to assess its ability to facilitate shared decision making and manage patients' expectations for surgery in comparison to usual care.

Most women reported that PEGASUS was relevant, that they felt comfortable during the intervention and were willing to provide their goals for breast augmentation, providing evidence for its acceptability to patients. Furthermore, the majority did not identify any need to change the format and layout of PEGASUS, nor ways to improve it more generally.

One clinician wished patients hadprovided more specific goals that could be rated more easily. Indeed, the identification of specific, measurable goals is crucial to the success of the intervention. In future training sessions, clinicians may benefit from additional guidance on how to encourage patients to provide more specific, detailed goals for surgery, and a 'top up' training session could be advantageous. Another clinician thought more guidance on the PEGASUS sheet would be helpful for patients. These findings demonstrate that the conversation with a trained specialist, rather than leaving patients to complete the tool alone[16], is a crucial component within PEGASUS.

There are some limitations to this study. Despite efforts by the research and aesthetic teams to recruit participants, the sample size is small (although typical of acceptability and feasibility studies)[21, 22]. Clinicians discussed possible reasons for the surprisingly slow recruitment into the study, including the lack of administrative support. In future, identifying a key person (e.g., a nurse) who is available to help the clinician organise and implement PEGASUS into routine practice is crucial. A settling in period may also be required to identify any potential issues that arise during the initial stages of implementation[16]. Furthermore, this study was only conducted with women seeking breast augmentation. Future research could explore the use of PEGASUS with patients (including men) seeking other aesthetic procedures.

To conclude, this study provides preliminary support for the acceptability of the PEGASUS intervention to breast augmentation patients and aesthetic providers. Going forward, the logistical issues associated with implementing it within the private sector need additional consideration to ensure its appropriate use and to encourage effective shared decision making.

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Conflicts of interest

None

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