

CLINICAL PAPER

Introduction of a patient-reported outcome measure in a physiotherapy obstetric anal sphincter injury service: an evaluation of its impact

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Abstract

Obstetric anal sphincter injury (OASI) is a growing concern. Patients with an OASI may present with symptoms of urinary and faecal incontinence, and sexual dysfunction. The Australian Pelvic Floor Questionnaire (APFQ) patient-reported outcome measure (PROM) is a tool for measuring these symptoms. The aim of this study was to evaluate the impact of the introduction of the APFQ on clinical standards, symptom reporting and patient experience in a physiotherapy OASI service (OASIS). The evaluation included an audit and online survey before and after the introduction of the APFQ. The audit standards were based on national guidelines. The survey included open and closed questions on patients' experience of their appointment pre- and post-APFQ. The APFQ increased compliance in five of nine clinical standards, and significantly increased symptom reporting. There was a statistically significant improvement in perceived care post-APFQ, and a higher rating of experience of the physiotherapy OASIS compared to pre-APFQ. Content analysis highlighted the importance of: a confidential and supportive environment; administration; clinical expertise; communication; and patient activation. The suggested key recommendations from this evaluation are as follows. The APFQ should be used in OASIS appointments. Further research should be completed to establish the best PROM for the OASIS. Where appropriate, clinical criteria should be drawn up that enable telephone appointments. Patients should be informed that their appointment may include a physical examination. Leaflets providing information on and signposting for OASI should be revised and updated. An information leaflet on return to sexual activity postpartum should be produced for the OASIS. Finally, the physiotherapy OASIS should be re-audited in 6 months. The APFQ was beneficial in this physiotherapy OASIS.

Keywords: obstetric anal sphincter injury, patient-reported outcome measure, pelvic health physiotherapy.

Introduction

Approximately 90% of women will tear their perineum during childbirth (RCOG 2015). A severe laceration involving the anal sphincter is known as an obstetric anal sphincter injury (OASI) (RCOG 2015). Such tears are a growing cause for concern in the UK: between 2000 and 2011, the rate of OASI among first-time mothers rose from 1.8% to 5.9% (Gürol-Urganç

et al. 2013). This increase is thought to be the result of the greater awareness among clinicians of OASI and how to detect it (NMPA Project Team 2017). One service review in the USA described an incidence of 19% on the basis of the results of a self-report postal questionnaire that was sent to 2941 patients over 3 years (Fenner *et al.* 2003).

Patients with an OASI can suffer from a variety of forms of pelvic floor dysfunction; for example, urinary incontinence (UI) (Scheer *et al.* 2008; Marsh *et al.* 2011), faecal incontinence (FI) (LaCross *et al.* 2015) and sexual dysfunction

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(SD) (Berghmans 2018). The reported incidences of UI, FI and SD up to 3 months after an OASI are >33%, 6–45% and unknown, respectively (Vaccaro & Clemons 2008). Up to 10 years after an OASI, the incidences for these symptoms have been reported as 49%, 75% and 59%, respectively (Visscher *et al.* 2014).

Pelvic physiotherapy is recommended by the Royal College of Obstetricians and Gynaecologists as being beneficial following surgical repair of OASI (RCOG 2015). There is strong evidence for the positive effects of physiotherapy intervention for UI (Dumoulin & Hay-Smith 2008; Radzimińska *et al.* 2018), FI (Boyle *et al.* 2014) and SD (Deffieux *et al.* 2015). There are no specific national physiotherapy recommendations/guidelines for patients with OASI, and consequently, provision varies nationally (Johnson & Rochester 2008).

Patients who have suffered an OASI rarely volunteer information on pelvic floor dysfunction unless directly addressed, perhaps because they are embarrassed (Fitzpatrick *et al.* 2002). Patient-reported outcome measures (PROMs) are an effective diagnostic tool (Black 2013) that can increase patients' willingness to disclose sensitive information (Devlin & Appleby 2010) in comparison with face-to-face or telephone interviews (Bowling 2005). Such measures are often used to assess service benefits for patients, and are also being applied in the context of audits to inform individual care and manage the performance of healthcare providers (Dawson *et al.* 2010).

In the present author's physiotherapy service, PROMs are selected to suit the patient's verbally reported symptoms. For instance, if the patient describes the symptoms of UI, the therapist uses a UI-specific PROM. However, this approach may not give a complete picture of patients' symptoms because it is known that they often do not disclose details about UI, FI or SD (Fitzpatrick *et al.* 2002). This impedes the selection of an appropriate PROM, and may lead to pelvic dysfunctions remaining undiagnosed. This problem could be mitigated by using a PROM that is valid and reliable at detecting all symptoms that are commonly reported after an OASI.

Although there is no specific PROM for patients with an OASI, the Australian Pelvic Floor Questionnaire (APFQ) is one that has been validated for the assessment of pelvic floor function (Baessler *et al.* 2010). Initially ratified as an interview-administered outcome measure (Baessler *et al.* 2009), the APFQ explores bladder, bowel and sexual function. It was validated

in a typical urogynaecology clinic with 106 patients. The responsiveness and comprehensiveness of the APFQ mean that it can be used for routine clinical assessment, and outcome research into and audit of pelvic floor dysfunction (Baessler *et al.* 2010).

The present author's department selected the APFQ PROM for use in the OASI service (OASIS) because of its validity and reliability, and also because it explores pelvic floor symptoms that a patient with OASI may have (Pennycuff *et al.* 2019). The APFQ may need modifications for use with patients with OASI, but this was outside the scope of the present project.

Over the past 4 years, a maternity hospital in the Southwest of England (St Michael's Hospital, Bristol, UK), hereafter referred to as "the hospital", has recorded an OASI in approximately 20 deliveries per month (~5%). All patients with OASI are offered a 30-min, face-to-face physiotherapy appointment that includes digital examination of the pelvic floor at 6 weeks, and a consultant review at 3 months post-injury to assess symptoms of UI, FI and SD. The clinical OASIS team had suspected that patients' symptoms were under-reported because those with an untreated history of OASI self-referred for pelvic health physiotherapy treatment at the hospital. Therefore, it was decided to use the APFQ to record symptoms of UI, FI and SD during the initial physiotherapy appointment. Prior to this, PROMs had not been used routinely. However, with increasing pressure to justify services in the UK National Health Service, valid and reliable outcome measures are essential to assessing the effectiveness of these provisions (Devlin & Appleby 2010).

Aim

The aim of the present study was to evaluate the impact of introducing the APFQ on clinical standards, symptom reporting and patients' experiences in the physiotherapy OASIS in the hospital.

Objectives

The objectives of the present study were to evaluate:

- (1) the impact of the APFQ on clinical care, as measured by clinical standards developed from the NICE guidelines for UI, FI and SD;
- (2) if introducing the APFQ increases patients' rates of reporting commonly described symptoms following an OASI; and

- (3) the impact of the APFQ on patients' experiences of the physiotherapy OASIS.

Participants and methods

Study design and ethics approval

The project was deemed to be a service evaluation and audit, and given ethical approval by the University of Hertfordshire, Hatfield, UK (protocol number: HSK/PGR/UH/03629). The evaluation consisted of an online survey, and a retrospective and prospective audit of current practice to assess the impact of implementing the APFQ in the physiotherapy OASIS at the hospital.

The APFQ was given to patients with OASI by the receptionist on arrival at the service. They were asked to complete it before their initial physiotherapy appointment, and present it to the therapist.

Audit and symptom reporting rates. The audit assessed physiotherapists' compliance with standards for the management of UI (NICE 2015a), FI (NICE 2007) and SD (Berghmans 2018). Undertaking a retrospective and prospective audit measured the impact of the APFQ on nine clinical standards. Standards 1–7 were derived from existing guidelines (NICE 2007, 2015a, b; RCOG 2015). Standards 8 and 9 are local standards corroborated by Berghmans (2018). Reporting of UI, FI and SD symptoms was recorded before and after administration of the APFQ.

Survey. An online survey (Jisc, Bristol, UK) was created ("Appendix 1") using a Web-based tool (www.onlinesurveys.ac.uk). This was chosen because it is low-cost and quick to administer, has minimal interviewer bias (Bowling 2005), and engages difficult-to-target groups such as new mothers (Madge & O'Connor 2002). Most women of childbearing age are technologically literate and have access to the Internet (Madge & O'Connor 2002). It was acknowledged that there might be a low response rate to the survey (Bowling 2005), and consequent bias in the results (Ryan *et al.* 2012). To mitigate this, the present author contacted patients with OASI by telephone to explain the study (Nulty 2008). Assumed consent was given when patients gave their e-mail addresses for the survey, and study information to be sent to them. Participants could drop out at any point. The survey was anonymous, and comprised open and closed questions that produced quantitative and qualitative data for analysis.

The survey was developed in order to explore patient experience of the physiotherapy OASIS. In particular, the patient–therapist relationship and provision of information were addressed, since these are thought to be the most important health service factors affecting this experience (Crow *et al.* 2003). The questions were developed from the outpatient core questionnaire (NHS Surveys 2011), and adapted to be specific to the physiotherapy OASIS. The questions use simple, non-leading language, mitigating administrator bias (Andrews *et al.* 2003). To improve response, questions increased in sensitivity throughout the survey, which started with general questions about the type of appointment that were followed by specific questions exploring the patient's knowledge, views and expectation of the OASIS (Tourangeau & Yan 2007). Final development and approval of the survey were made in collaboration with the hospital's Patient Experience Team (PET 2020). Because of the sensitivity of the subject, participants were also asked about their preference on telephone or face-to-face appointments.

Participants and data collection

In 2018, there were 5055 vaginal deliveries at the hospital, and of these, 129 (2.55%) resulted in an OASI. This figure represents an average of 10.75 patients per month, all of whom were sent an opt-in letter inviting them to attend physiotherapy. The APFQ was introduced in October 2018. Because of a lower-than-expected number of OASIs in 2018 and project time constraints, a purposeful quota of all 60 patients from July to December 2018 was considered for inclusion in the evaluation.

Inclusion criteria. Women who had suffered an OASI during childbirth and attended the physiotherapy OASIS were included in the present study.

Exclusion criteria. The following groups of patients were excluded since they would have needed specialist consent procedures, or the study might have caused an increase in their level of psychological harm: women under the age of 18 years; women who had lost their baby; women who had suffered an OASI, but did not attend the physiotherapy OASIS; women with severe psychological distress (as evidenced by the medical notes); and women who were deemed vulnerable by the OASIS team.

The audit and survey timeline is shown in Figure 1.

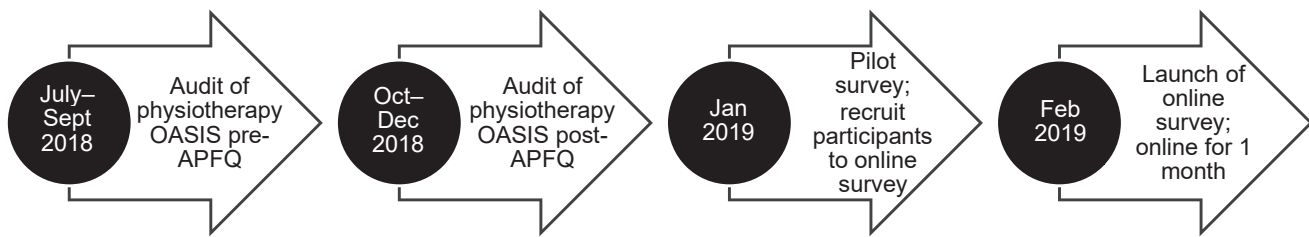


Figure 1. Timeline of the audit and survey: (OASIS) obstetric anal sphincter injury service; and (APFQ) Australian Pelvic Floor Questionnaire.

Audit and symptom reporting rates. Medical records were accessed in order to complete the audit and record symptom reporting rates. Sixty patients were identified who had suffered an OASI: 30 before the administration of the APFQ and 30 afterwards. The sample was deemed large enough by the audit conveyor at the hospital. Two pre-APFQ patients did not attend their appointment, and their data were not used.

Survey. The survey included 40 patients from the audit. The present author systematically telephoned physiotherapy OASIS patients before and after administration of the APFQ until 20 were recruited in each group. One patient declined to take part in the survey because of language difficulties. Forty patients in total were sent e-mail invitations to participate in the survey, and a compliance rate of 50% was expected (Nulty 2008).

Data analysis

No statistical analysis was completed on demographics because the participants were: from a similar population group; of childbearing age; from the same geographical location; and not suffering from co-morbidities. The target sample size and data collection timeframe yielded data suitable for a basic descriptive analysis that was integrated with the findings of the audit.

The audit was analysed by measuring percentage change in compliance with clinical standards before and after administration of the APFQ. A hybrid qualitative and quantitative approach was used to analyse the survey results. Quantitative data from the survey and symptom reporting rates were analysed using descriptive statistics on the Statistical Package for the SPSS Statistics software package (IBM, Armonk, NY, USA). The qualitative methods employed involved summative content analysis of open-question survey responses (Elo & Kyngäs 2008) to explore patients' experiences of the service after the administration of the APFQ (Ritchie & Spencer 2002). This process involved examining the written data, coding key points and drawing conclusions

by recognizing key point frequency (Pope *et al.* 2000; Hsieh & Shannon 2005). After the initial analysis, the data were checked by an independent researcher in order to enhance rigour.

Results

The results of the audit, symptom reporting rates, and quantitative and open-response survey data are presented below.

Clinical standards

Not all the clinical standards were applicable to each patient. The percentage criterion was set at 99% for all standards, which have been truncated to suit each topic (Table 1).

The audit results showed an increase in the reporting of five clinical standards after the introduction of the APFQ. Standard 8 showed a decrease, but it is worth noting that pre-APFQ numbers were markedly lower than those post-APFQ.

Symptom reporting rates

Alongside the gathering of audit data, information was collected in order to provide an insight into symptom reporting rates pre- and post-APFQ (Table 2).

The reporting of UI, FI and SD dramatically increased with introduction of the APFQ.

Survey results

A total of 23/40 (57.5%) patients responded to the survey, 11 before and 12 after the introduction of the APFQ. Quantitative data from the survey identified areas for, and of, improvement by measuring aspects of clinical care pre- and post-APFQ (Fig. 2).

For this result, the sample size was too small for meaningful statistical differences to be detected.

Table 3 shows an improvement in all patients' reported experiences of the physiotherapy OASIS after the administration of the APFQ. Three aspects of their experience showed a statistically significant improvement where $P \leq 0.05$.

Table 1. Audit results showing adherence to clinical standards before and after the introduction of the Australian Pelvic Floor Questionnaire (APFQ) patient-reported outcome measure: (UI) urinary incontinence; (FI) faecal incontinence; and (SD) sexual dysfunction

Clinical standard	Adherence						Percentage change§
	Pre-APFQ (n = 28)			Post-APFQ (n = 30)			
	Applicable patients*	Number†	Percentage‡	Applicable patients*	Number†	Percentage‡	
(1) Patient asked if suffering from UI	28	28	100%	30	30	100%	0%
(2) Taught pelvic floor muscle exercises	8	7	87.5%	24	24	100%	+12.5%
(3) If suffering from UI, offered advice about managing urinary symptoms, and told who to contact for further advice in future	16	12	75%	6	6	100%	+25%
(4) Patient asked if suffering from FI	28	28	100%	30	30	100%	0%
(5) If suffering from FI, offered appropriate physiotherapy treatment (including bowel advice)	12	10	83.3%	24	24	100%	+16.7%
(6) Patient asked if suffering from SD	28	25	89.29%	30	30	100%	+10.71%
(7) If suffering from SD, offered assessment of the perineum	1	1	100%	24	24	100%	0%
(8) If suffering from SD, offered appropriate physiotherapy treatment	1	1	100%	24	22	91.7%	-8.3%
(9) Informed who to contact in future if experiencing SD	11	8	72.7%	6	6	100%	+27.3%

*All patients to whom the clinical standard applied.

†The number of patients for whom the standard was adhered to reliably.

‡The number of patients for whom the standard was adhered to shown as a percentage of all the patients to whom the standard applied.

§The change in percentage before and after the introduction of the APFQ.

Table 2. Reporting rates for symptoms of urinary incontinence (UI), faecal incontinence (FI) and sexual dysfunction (SD) following the introduction of the Australian Pelvic Floor Questionnaire (APFQ), and level of significance

Symptom	Number of patients reporting a symptom (%)*		Percentage change in reporting	P-value
	Pre-APFQ (n = 28)	Post-APFQ (n = 30)		
Urinary incontinence	8 (28.5%)	24 (80%)	+51.50%	< 0.001
Faecal incontinence	12 (42.86%)	24 (80%)	+37.14%	0.004
Sexual dysfunction	1 (4%)	24 (80%)	+76.00%	< 0.001

*The reporting of UI, FI and SD dramatically increased after the introduction of the APFQ.

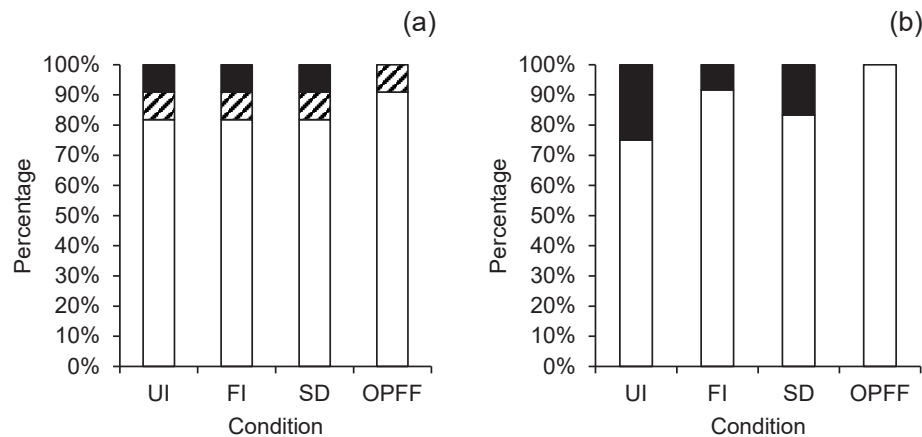


Figure 2. Patient experience of advice received about urinary incontinence (UI), faecal incontinence (FI), sexual dysfunction (SD) and overall pelvic floor function (OPFF) at their initial obstetric anal sphincter injury physiotherapy appointment (a) before and (b) after the introduction of the Australian Pelvic Floor Questionnaire (APFQ): (■) did not need advice, (▨) would like more advice and (□) got all the advice needed.

Table 3. Patient response to statements about their experience at the initial physiotherapy appointment before and after the introduction of the Australian Pelvic Floor Questionnaire (APFQ)

Statement*	Median (interquartile range)		P-value
	Pre-APFQ (n = 11)	Post-APFQ (n = 12)	
The physiotherapist listened to what I had to say	1 (1–2)	2 (2–2)	0.089
If I asked questions, I got answers I could understand	2 (1–2)	2 (2–2)	0.193
I felt well supported by the physiotherapist	1 (1–2)	2 (2–2)	0.024
I got all of the information I needed from the appointment	2 (1–2)	2 (2–2)	0.131
I had enough time with the physiotherapist	2 (1–2)	2 (2–2)	0.261
I found the appointment helpful	1 (1–2)	2 (2–2)	0.021
I was clear about what would happen next in my care	1 (1–2)	2 (2–2)	0.024

*Response options: (2) strongly agree; (1) agree; (0) neither agree/disagree; (–1) disagree; and (–2) strongly disagree.

Extra questions results

Little or no difference was seen between the pre- and post-APFQ groups with regard to their appointment preference or ability to ask questions relating to their injury. A combined result of 21/23 (91%) of patients would prefer a face-to-face appointment rather than a telephone consultation. A combined result of 22/23 (96%) of patients reported that they were able to ask questions related to their injury during their physiotherapy appointment.

The Mann–Whitney *U*-test was used for analysis (Fig. 3). It can be concluded from these data that there was a statistically significant

improvement in reported care received following the introduction of the APFQ ($U=0$, $P<0.01$).

The Mann–Whitney *U*-test was used for analysis (Fig. 4). Post-APFQ patients had a statistically significantly higher rating of their experience of the physiotherapy OASIS compared to the pre-APFQ group ($U=33$, $P=0.04$).

Content analysis

Open responses were analysed to understand the participants' experience of using the APFQ. Six questions had the option to leave comments in a free-text field. The length of the responses varied from a few words to 200-word paragraphs.

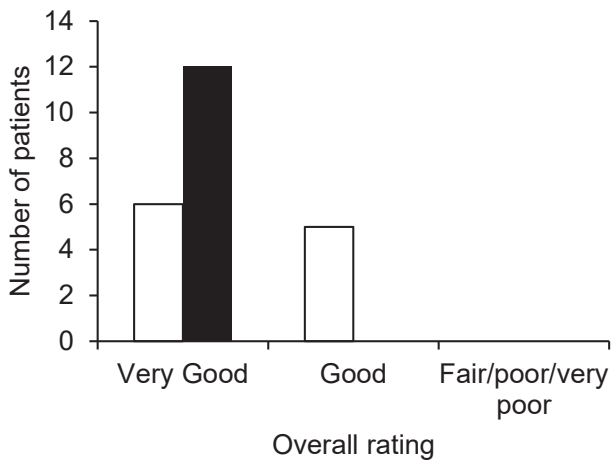


Figure 3. Overall rating of care before (□) and after (■) the introduction of the Australian Pelvic Floor Questionnaire.

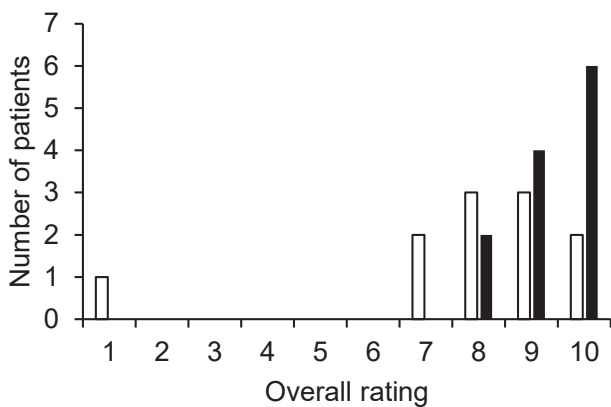


Figure 4. Overall rating of the experience of the physiotherapy obstetric anal sphincter injury service (OASIS) before (□) and after (■) the introduction of the Australian Pelvic Floor Questionnaire.

Five categories emerged during inductive content analysis, as shown by the comments quoted below.

Appointment specifics (18 comments). Participants made references to the appointment length being appropriate. However, some patients believed that not enough information had been provided before the consultation:

“The length of time was good.”

“...[T]he invite letter could inform the patient [that] there would be an examination!”

Expertise reducing concerns (22 comments). The participants valued the expertise of the clinician, and were reassured by the information provided. The physical examination was found to be a useful aspect of the appointment:

“Explanation of the pelvic floor muscles was useful.”

“...[R]eassurances given after looking at the injury [were] crucial parts of the appointment.”

Means of communication (13 comments). Both positive and negative comments were made with respect to this theme. Some participants believed that a telephone call would be sufficient, while others greatly valued the face-to-face appointment:

“...I felt I’d made a long trip when the questions could [have] been asked via telephone.”

“It’s easier to ask questions and understand the conversation face-to-face.”

Confidentiality and support (22 comments). Participants needed a confidential, safe space to discuss sensitive issues:

“...[P]roblems sexually were a sore subject, but I was given good advice, which made me more confident.”

“Very friendly staff [who] provided helpful advice and support.”

Patient activation (five comments). The participants were given a tool so that they could prepare and consider what really matters:

“The [APFQ] questionnaire, which asked what things hurt and what I had problems with, was useful as it made me think about everything carefully, and consider if I did need to talk about it.”

Discussion

The present audit and survey assessed the impact of using the APFQ in one physiotherapy OASIS and on patient experience. The main implications for practice are discussed below, and recommendations are made.

Standardization of service

The APFQ maintained or increased compliance to all clinical standards except standard 8. One reason for this decreased compliance could be the increased potential for error: there was only one applicable patient before the introduction of the APFQ compared to 24 afterwards.

The standards were useful in the assessment of care. A re-audit of the physiotherapy OASIS in 6 months will monitor whether the service continues to improve as a result of using the APFQ, and if any further changes need to be made.

Communication

When asked, 84% and 88% of participants received all the advice that they needed before and after the introduction of the APFQ, respectively. The introduction of the questionnaire did not appear to have any impact on the advice received.

Unexpectedly, pre-APFQ symptom reporting rates were in line with the national average (Vaccaro & Clemons 2008). Post-APFQ symptom reporting rates significantly increased, matching those found by Visscher *et al.*'s (2014) 5-year follow-up study. Combined with therapists' earlier suspicions of under-reporting, this raises the possibility that the national average is suppressed. Visscher *et al.* (2014) suggested that symptoms deteriorate over time. However, these authors did not use a PROM in the acute period following OASIS, and some symptoms that could have been missed might only have been detected at the 5-year follow-up. The national average could also be affected by variations in OASIS provision, and the lack of a standardized symptom reporting system (Johnson & Rochester 2008).

According to the results of the present survey, the APFQ had no bearing on patients asking questions related to their injury. Standard 6 compliance increased following the introduction of the APFQ, and this could be because questions about SD are included in the questionnaire. The 43-question APFQ enables the therapist to cover a broader range of symptoms, and do so in greater detail, than they would otherwise have time for during the 30-min appointment. Furthermore, a completed APFQ could function as a checklist or *aide-mémoire*, ensuring that all areas are covered. Checklists have increased the quality of treatment in a variety of healthcare settings (Gawande 2010).

Guidance and structure for physiotherapists

The results showed that compliance to offering treatment for UI and FI increased following the introduction of the APFQ. Research suggests that UI, FI and SD carry social stigma (RCOG 2015). The APFQ may serve to normalize these conditions, and reassure patients that these symptoms are to be expected after OASIS. Women may previously have dismissed these symptoms because they did not feel safe and/or confident discussing them face-to-face (Fitzpatrick *et al.* 2002), and therefore, under-reporting of some patients' symptoms may have left these untreated. The structure a PROM offers the patient-therapist

interview may guide physiotherapists towards providing tailored advice and treatment.

Care pathways

Some comments indicated that the 30-min duration of the appointment is appropriate. Multiple positive comments regarding the physical examination suggest that the physiotherapy OASIS should continue to include this consultation. However, patients should be notified of the physical examination before their appointment.

Ninety-one per cent of the participants preferred face-to-face consultations, but for the few who struggled to attend the appointment, a telephone service could be considered. Although not covered in the present study, the APFQ is validated for interview administration, and could be completed over the telephone.

With increased symptom reporting, the new-to-follow-up ratio could have increased. Service data show the ratio as 1:0.43 and 1:0.22 pre and post-APFQ, respectively. Since staffing and available slots remained consistent throughout the data collection period, this suggests that the APFQ actually decreased the ratio. Completion of the questionnaire at the consultant review would be beneficial in order to monitor whether patients' symptoms change because physiotherapy follow-up rates are low.

Patient experience

The participant-reported experiences described in the present study map onto NICE's (2020) flowchart of areas that contribute to patients' attitudes to care. When rating their experience of the initial physiotherapy appointment on a five-point Likert scale, the participants unanimously gave their post-APFQ experience a higher score. In particular, responses for the level of support, helpfulness of the appointment and clarity about the next steps in care showed significant improvement. This is in direct correlation with the improvement in audit standard 9. By completing a PROM specific to commonly experienced symptoms, a patient will actively think about the desired outcomes of their appointment, allowing for mental preparation (Devlin & Appleby 2010). This may account for the improved experience after the introduction of the APFQ.

Education and information

The APFQ identifies patients who are not sexually active as having SD, and such women have a score of 18/21. This would account for the 27.3% increase in standard 9. However, many

patients with OASI have not returned to sexual activity by the 6-week physiotherapy appointment, and this automatic SD label could be misleading. This raises the question of whether the APFQ is oversensitive in the early postpartum period. However, because the APFQ highlights SD, a return to sexual activity needs to be addressed. A leaflet on the return to sexual activity that provides routine advice and self-referral details if SD occurs in the future would save time during the appointment.

Some open-response comments suggested that patients wanted to combat the feelings of anxiety, nervousness and helplessness that are associated with OASI and its physical symptoms. This could be better addressed by providing education for all new mothers that covers commonly experienced postpartum symptoms (i.e. UI, FI and SD). This would, in turn, reduce the social stigma associated with UI, FI and SD in this group (RCOG 2015).

Limitations

A 57.5% response to a survey is considered to be a reasonable rate (Nulty 2008). This raises the question of how the other 42.5% of patients would have responded. Because of the below-average numbers of OASIs during the data collection period, and also the short timeframes within which to collect data, this caused low levels of participation. The survey was only available in English, which prevented one patient's involvement.

A further limitation is that all pre-APFQ patients were a further 3 months after OASI than those post-APFQ, and therefore, their memories could be distorted (Bowling 2005). There is evidence that symptoms of FI and SD worsen over time (Visscher *et al.* 2014), which may skew the patient's remembered experience.

Capturing views from this busy patient group is difficult (Madge & O'Connor 2002). A focus group would have been useful to further evaluate comments from the survey. However, this was not feasible because of ethical dilemmas and time restraints.

The significant changes seen in the present evaluation could be a result of Hawthorne effect bias (Bryman 2012) since the author works as a clinician in the OASIS. The APFQ is patient-reported, which negates change in clinician behaviour affecting results during the prospective audit. However, clinician behaviour could have inadvertently affected patient experience. If

improvements are seen on a second audit cycle in 6 months, this will negate Hawthorne effect bias and imply that an improvement in the service has occurred.

Recommendations for practice

The results of the present evaluation suggest the following recommendations:

- (1) The APFQ should be used for every outpatient OASIS, including consultant and physiotherapy appointments.
- (2) Further research should be completed to establish the best PROM for the OASIS.
- (3) Clinical criteria should be drawn up that enable patients to have their appointment by telephone, where this is appropriate.
- (4) Patients should be informed that their appointment may include a physical examination.
- (5) Information and signposting leaflets for patients with OASI should be revised and updated.
- (6) An information leaflet on a postpartum return to sexual activity should be produced for the OASIS.
- (7) Following changes, the physiotherapy OASIS should be re-audited in 6 months.

Conclusion

Compliance to clinical standards increased following the implementation of the APFQ. The detection rates of UI, FI and SD also increased, and the survey showed that overall patient experience improved with the introduction of the APFQ. The new-to-follow-up ratio reduced while using the APFQ. Patients reported difficulties discussing OASI because of the personal and sensitive nature of the symptoms. The structured nature of the APFQ decreases human error in the therapist–patient interview, ensuring that all aspects of pelvic floor health are addressed. It can be concluded that the APFQ assists with therapist–patient consultations about symptoms that can be embarrassing to discuss. Patients subsequently received a tailored appointment, which may have improved their experience. Focus groups, and interviews with patients and clinicians could help to clarify this further.

The APFQ is beneficial because it is validated as a PROM and interview-administered outcome measure, and therefore, services can adapt to patient needs (i.e. telephone appointments). Future research into a PROM specific to OASI could be worth exploring since the APFQ could be

oversensitive, as indicated by reporting rates that are higher than those described in the literature. Larger-scale research across other services could be beneficial in order to investigate symptom-reporting rates following OASI. For example, a 5-year follow-up investigating whether post-APFQ patients' symptoms worsen over time, as suggested by Visscher *et al.* (2014). If these do not, it might support the hypothesis that there is widespread under-reporting of symptoms in the acute phase following OASI.

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Katharine Arnold qualified as a physiotherapist from the University of Southampton in 2007. She has worked as a women's health physiotherapist specializing in pelvic floor rehabilitation at St Michael's Hospital in Bristol since 2015. In 2019, Katharine completed a Master's degree in advanced physiotherapy at the University of Hertfordshire.

Appendix 1

Obstetric anal sphincter injury physiotherapy questionnaire built on the Online Surveys platform

Your first appointment

After having an Obstetric Anal Sphincter Injury (OASI) you would have had either a telephone appointment or a face to face appointment with a physiotherapist to discuss pelvic floor health.

1. Was your **first** physiotherapy appointment for your OASI:

Face to face By telephone

2. If you had a choice would your preference have been to have this appointment:

- Telephone
- 1:1
- Didn't feel I needed an appointment
- Please state the main reason for your answer:

At your first physiotherapy OASIS appointment

3. a. did you get all of the advice you needed from the physiotherapist about:

	Not applicable – I did not need this advice	I would have liked more advice on this	I got all the advice I needed on this
Bladder function	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bowel function	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sexual function	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall pelvic floor function	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. b. Any further comments on the advice you received from the physiotherapist (e.g. advice that was particularly helpful, suggestions of additional advice that we could provide)?

4. a. Thinking about your **first** physiotherapy appointment, to what extent do you agree or disagree with the statements below:

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Not applicable/ can't remember
The physiotherapist listened to what I had to say	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If I asked questions, I got answers I could understand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I felt well supported by the physiotherapist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I got all of the information I needed from the appointment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I had enough time with the physiotherapist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I found the appointment helpful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I was clear what would happen next in my care	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. b. Any further comments on the advice given in the first appointment (e.g. How could the appointment be improved? What information would you have liked to have received? What was missing?)?

During your first appointment

5. Were you able to ask the physiotherapist all of the questions you wanted to about your injury and its treatment?
 Yes – go to Q7 No – go to Q6

6. Why didn't you discuss these questions? (Tick *ALL* that apply)

- I was too embarrassed to ask these questions
- I forgot to ask them
- I didn't have time to ask them
- I didn't know what physiotherapy could do for bladder/bowel/pelvic floor/sexual dysfunction
- Other (please state):

7. Any comments about your first physiotherapy appointment (e.g. things that were good about the appointment/anything that could be improved)?

8. Did the physiotherapist tell you how to access the physiotherapy service in the future if any problem occurred with pelvic floor function?

Follow-up OASIS physiotherapy appointments

9. Following your initial physiotherapy appointment, did you have any follow-up hospital appointments with the physiotherapy service?

- Yes – go to Q10 No – go to Q12

10. What was the main reason that you had follow-up with the physiotherapist?

Example of options:

- Pelvic floor dysfunction
- Bladder function
- Bowel function
- I don't know why I had follow-up
- Other

11. Any comments about your experience at the follow-up OASIS appointments (e.g. things that were good about the service, anything that could be improved)?

Overall experience of the OASIS physiotherapy service

12. a. Overall, how would you rate the care you received from the OASIS physiotherapy service?

Excellent Good Fair Poor Very poor

12. b. Please comment on why you have given these ratings.

13. a. Please rate your experience of the OASIS physiotherapy service on the scale 1–10 (1 = very poor and 10 = excellent)

13. b. Please comment on why you have given these ratings.

Thank you for completing the physiotherapy OASIS survey.

If you would like further information or would like to discuss any details personally, please get in touch with me by email:

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Best wishes,

Katharine Arnold, Pelvic health physiotherapist/researcher