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CLINICAL PAPER

Pelvic floor muscle training services across the UK: a benchmarking survey of POGP members

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Abstract

This study describes pelvic floor muscle training (PFMT) services in the UK. An online survey was sent to all 700 members of Pelvic, Obstetric, and Gynaecological Physiotherapy (POGP) during 2018, and 162 (23%) completed the questionnaire. The respondents reported a mean of 610 referrals a year per service [749 for those working in the National Health Service (NHS)], with each physiotherapist seeing a mean of 260 patients a year. The mean waiting time for NHS treatment was 8 weeks, and 90% of services saw patients before the recommended maximum waiting time of 18 weeks. The form of PFMT offered varied across services: 95% and 70% offered physical examinations at intake and follow-up, respectively; and 90% of services delivered PFMT through individual sessions (mean number of sessions = 4), with 35% offering additional group sessions (mean number of sessions = 4). The mean overall did-not-attend (DNA) rate (including NHS and private patients) was 12%, and the mean treatment non-completion rate was 20%. These rates were 15% and 27%, respectively, for NHS patients, meaning that only around 60% completed their treatment. Total attrition rates (DNA and non-completions) increased as time spent waiting for an initial appointment increased, but were reduced by 15% within the 50% of services that had access to psychological support of some kind (although very few services had their own psychologist). This latter finding suggests that this patient cohort has a different make-up and needs to those attending musculoskeletal services, and attention should be paid to this disparity when considering DNA and completion rates associated with women's health physiotherapy.

Keywords: did-not-attend rates and compliance, pelvic floor muscle training, psychological and counselling support, referrals, waiting list time.

Introduction

The figures reported for the prevalence of female pelvic floor dysfunction (PFD) vary across the literature, depending on which country is the setting, the method of sampling and the definitions adopted (Irwin *et al.* 2011). However, most studies agree that the conditions associated with PFD are very widespread, with most estimates suggesting that approximately 25–40% of adult females are affected by one or more pelvic floor conditions (Milsom & Gyhagen 2019). However, this number can rise to 50–60% in both women who have experienced childbirth (Handa *et al.* 2011; Lipschuetz *et al.* 2015), and those who are over 60 years of age (Wu *et al.* 2014). If lower urinary tract symptoms (LUTS) are assessed instead of urinary incontinence, then the prevalence figures are higher still; the EPIC study put the rate of LUTS at 46% worldwide (Irwin *et al.* 2011).

Pelvic floor muscle training (PFMT) is recommended by the National Institute for Health and

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Care Excellence (NICE) as the first-line treatment for PFD (NICE 2019), and there is strong evidence for its effectiveness (Dumoulin *et al.* 2018). With regard to PFMT, the NICE guideline (NICE 2019, p. 61) also states that:

> "The recommendation is current practice in some services but not all, and the committee suspects that the recommendation may result in the need for some increase in resources."

The prevalence figures for PFD and LUTS cited above suggest that such a strain on resources may be very substantial indeed. Although there are currently no clear figures on referrals across the UK, Milsom & Gyhagen (2019) suggested a yearly incidence rate of 1–2% of the population.

Waiting times for outpatient PFMT represent one area that may be significantly affected by such a high incidence of PFD. At the moment, National Health Service (NHS) guidance recommends a waiting time of no longer than 18 weeks (NHS 2019), but how this translates into practice is also currently unknown. One of the drivers for suggesting PFMT as a first-line treatment is its greater cost-effectiveness relative to dearer surgical treatment (Imamura *et al.* 2010). However, if an increase in referrals does occur, this may have an adverse effect on waiting list times, and consequently, on the number of patients failing to attend for scheduled sessions (i.e. did not attend, DNA), which has been noted to vary with waiting times (Osborne *et al.* 2017). This scenario would see more patients returning through the system, possibly coming back later, when surgery is the only option for treatment. This would effectively undermine one of the key rationales for PFMT as a first-line treatment. However, once again, there are no clear figures across the country on waiting times and DNA rates.

Women's pelvic health physiotherapy services are often run within a general physiotherapy department, and waiting times and DNA rates are regularly compared with those of musculoskeletal (MSK) patients. However, it is increasingly clear from the literature that women with PFD also have a substantially higher prevalence of psychological comorbidities (Meltzer-Brody & Leserman 2011). For example, rates of depression and anxiety for this cohort are estimated at 20% and 30%, respectively (Vrijens *et al.* 2017). These psychological comorbidities are approximately 50% higher than those seen in patient cohorts attending for MSK physiotherapy (Wilson *et al.* 2015). It is also known that such psychological comorbidities adversely impact attendance at physiotherapy by women with PFD (Osborne *et al.* 2016, 2017), and negatively affect outcomes, even when the level of symptom severity is matched with those without comorbid psychological problems (Khan *et al.* 2013). These considerations may mean that attendance and compliance at PFMT need to be considered in a different light to that applied to MSK patients. It is also unclear whether access to psychological services is available for PFMT services, and whether such access might make the suggested difference to attendance, compliance and outcomes (Osborne *et al.* 2016; Vrijens *et al.* 2017).

As indicated in the NICE (2019) guideline, current PFMT practice can vary across different services. Anecdotally, some use individual sessions for patients, some use group approaches, and some use a mixture of individual and group sessions. Some individual physiotherapists favour particular treatment options, like biofeedback (Dannecker *et al.* 2005; Nunes *et al.* 2019) and electrotherapy (Correia *et al.* 2014), and some do not (Fuentes-Márquez *et al.* (2019). While the degree to which such approaches are adopted, and the effect that these have on outcomes, are currently under investigation (Grant *et al.* 2019), the full scale of this impact is currently unknown.

In summary, recommendations regarding the treatment for PFD mean that it is important to be able to provide some form of benchmark for the demand on PFMT services, and to know how services are structured and operate across the UK. In order to obtain this information, a national survey of the members of Pelvic, Obstetric and Gynaecological Physiotherapy (POGP) was organized, and data were collected to address these gaps in our current knowledge. Such information may help to form a benchmark from which individual services can judge their own situation against the national averages, and fill some of the above-mentioned gaps in our knowledge.

Participants and methods

Recruitment

An online survey was sent to all 700 members of POGP by e-mail. The message contained information about the survey, and a link to the survey itself. This link opened further information about the survey, and if the recipients consented, took them to the questions.

Of the 700 members contacted, 162 (23%) choose to complete the survey. Of those who participated, 114 (70%) identified themselves as answering questions about their work in the

NHS, 35 (22%) about their private work, and 13 (8%) were responding concerning both NHS and private work. Geographically, 20 (12%) were based in Scotland, 10 (6%) in Wales, seven (4%) in Northern Ireland, 13 (8%) in North West England, 11 (7%), in North East England, 13 (8%) in Yorkshire, five (3%) in the West Midlands, 10 (6%) in the East Midlands, 21 (13%) in South West England, 27 (17%) in South East England and 15 (9%) in London. The participants identified the type of area that they served as follows: rural [$n = 30$ (19%)]; urban [$n = 53$ (33%)]; and mixed rural and urban [$n = 73$ (45%)].

Materials

The questions in the survey were developed after consultation between the present authors, and discussion with opportunistic samples of women's health physiotherapists. The key issues discussed were the types of information that it was felt important to collect, and the time the questionnaire would take to complete. The survey was written as a WebQuest application (an online survey delivery platform; webquest.org), and was developed in consultation with members of POGP in order to address key issues in the working practices of women's health physiotherapists. It contained 21 questions (see Box 1), covering four broad areas of practice relating to the service in which the respondents worked:

(1) background information (e.g. "Are you answering this survey regarding your NHS or private patients?");
(2) the nature of the workload (e.g. "How many patient referrals do you get a year?");
(3) the nature of the programme (e.g. "How many one-to-one individual appointments on average do your patients receive?"); and
(4) additional information about equipment/support for the programme (e.g. "Do you use equipment, such as biofeedback, to monitor progression?").

Procedure

All members of POGP received an invitation to take part in the survey via e-mails sent out by

Box 1. Survey questions: (NHS) National Health Service; (DNA) did not attend; (POP-Q) Pelvic Organ Prolapse Quantification system; (U/S) ultrasound; and (EMG) electromyography

(1) Are you answering this survey regarding your NHS or private patients?
(2) What region is your area?
(3) How would you classify your area, in general?
(4) Do you work on your own or in a multidisciplinary team? If in a team, how many and what disciplines?
(5) How many patient referrals do you get a year?
(6) What is the average waiting time in weeks from referral to a first appointment with you?
(7) What is your DNA rate (percentage) for an initial appointment? (If not known, please say so.)
(8) Of those patients who attend their first appointment with you, how many (percentage) complete their course of treatment (if known)?
(9) Theoretically, what do you think is the optimal waiting time (in weeks) between referral and a first appointment? Please give your reason.
(10) How many one-to-one individual appointments on average do your patients receive?
(11) Do you offer a physical examination to your patients?
(12) Do you offer a review (follow-up) physical examination to your patients?
(13) What form of measure of pelvic floor function do you use (e.g. the Oxford scale, the POP-Q, U/S measurements or EMG recording)?
(14) Do you offer a group-based approach for your patients?
(15) If you offer a group-based approach, how many group appointments do you offer your patients?
(16) If you offer a group-based approach, what do you teach in the class situation?
(17) Do you monitor patients' completion of pelvic floor exercises between classes? If so, how?
(18) Do you use equipment, such as biofeedback, to monitor progression?
(19) Do you offer any other form of electrotherapy for pelvic floor muscle dysfunction? Do you advise the use of home units for biofeedback or electrotherapy? If so, supplied by?
(20) Do you offer any form of psychological/counselling support to your patients while undergoing treatment? If so, what?

the organization. All information collected was treated in accordance with data protection laws. A reminder about the survey was also sent to all members of POGP approximately 1 month after the original invitation. All members who chose to participate responded to links embedded in the e-mails sent to them by the organization. These links provided participants with a brief overview of the study, which told them that the research concerned their employment, workload and practice of women's health physiotherapy. If they wished to participate, they were instructed to follow another link to the online questionnaire. This took the participants to a webpage containing further information about the study, which again emphasized that the purpose of the study was to gain a national picture of their employment, workload and practice of women's health physiotherapy. The webpage also gave details of the participant's right to withdraw from the study at any time, and the steps that were being taken to ensure their privacy. The information was followed by a statement of consent, and participants were told that they should only click to begin the questionnaire if they were willing to provide consent. They were then presented with the questions.

No time limit was given for the responses to be made, and if necessary, participants were offered the option to save their survey and return to it on a later occasion. The survey could be submitted without completing all of the questions. Once all of the questionnaires had been completed, which took participants approximately 10 min, participants were directed to a debriefing page, which thanked them for their contribution, and went into further detail about the aims and purpose of the study.

Results

The mean number of patients referred annually to each participating physiotherapist's service was 610, but there was a very large range [standard deviation (SD) = 651; range = 0–3500]. There was a large difference between those answering this question solely in terms of their NHS patients (number of service referrals: mean ± SD = 759 ± 698; range = 5–3500), or solely in terms of their private patients (number of service referrals: mean ± SD = 73 ± 57; range = 5–183) [$t_{(103)} = 4.79$, $P < 0.001$, $d = 1.82$]. Of the participants answering with regard to their NHS service, 62% responded that they worked as part of a team with other physiotherapists. The mean number of professionals in the team, including the respondents, was 3.23 (SD = 1.91; range = 1–13). There was a mean of 262.16 patient referrals per physiotherapist (SD = 218.77; range = 5–1250) across all NHS services.

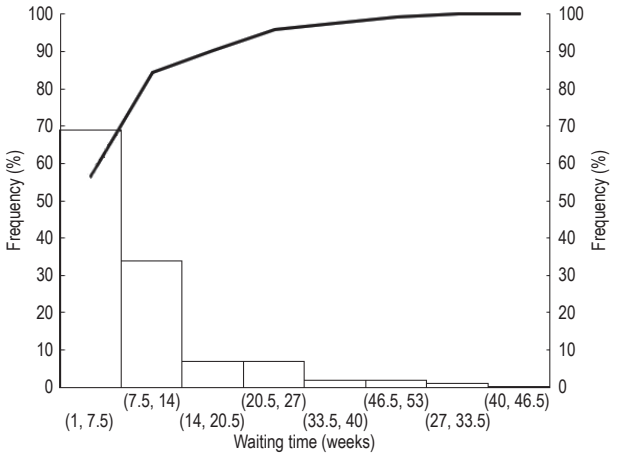

Figure 1. Percentage of respondents identifying successive 7.5-week waiting-list duration periods (left-hand scale), and the cumulative percentage of patients attending (right-hand scale).

In terms of patients referred by another healthcare professional, the mean number a year was 584 (SD = 661; range = 5–3500). In terms of self-referrals a year, there was a mean of 26 (SD = 64; range = 0–400) per year, and a difference between the number of self-referrals for the NHS (mean ± SD = 10 ± 43; range = 0–400) and private practice (mean ± SD = 86 ± 92; range = 0–4000) that was statistically significant [$t_{(103)} = 6.76$, $P < 0.001$, $d = 1.14$].

The mean time waiting between referral and the first appointment was 8.6 weeks (SD = 9.2; range = 1–52), but there was a very large range of waiting times. Figure 1 presents the frequencies of waiting times as percentages of respondents who identified particular lengths of time. Inspection of these data shows that nearly 70% of respondents had a waiting list of up to 8 weeks (Fig. 1a), and around 30% had a waiting period of between 8 and 15 weeks (Fig. 1b). For the NHS patients, the mean waiting time was 8.7 weeks (SD = 5.6; range = 2–26), and for private patients, this was 1.7 weeks (SD = 1.2; range = 1–4) [$t_{(103)} = 4.37$, $P < 0.001$, $d = 2.00$].

Figure 2 shows the frequency distributions for the DNA rates (Fig. 2a) and the completion rates (i.e. those finishing the specified programme; Fig. 2b), as identified by the sample for their services. The mean DNA rate was 12.5% of patients referred (SD = 11.1; range = 0–50), with a significant difference between the NHS patients (mean ± SD = 14.6 ± 13.9; range = 1–50) and the private ones (mean ± SD = 3.1 ± 2.4; range = 1–7)

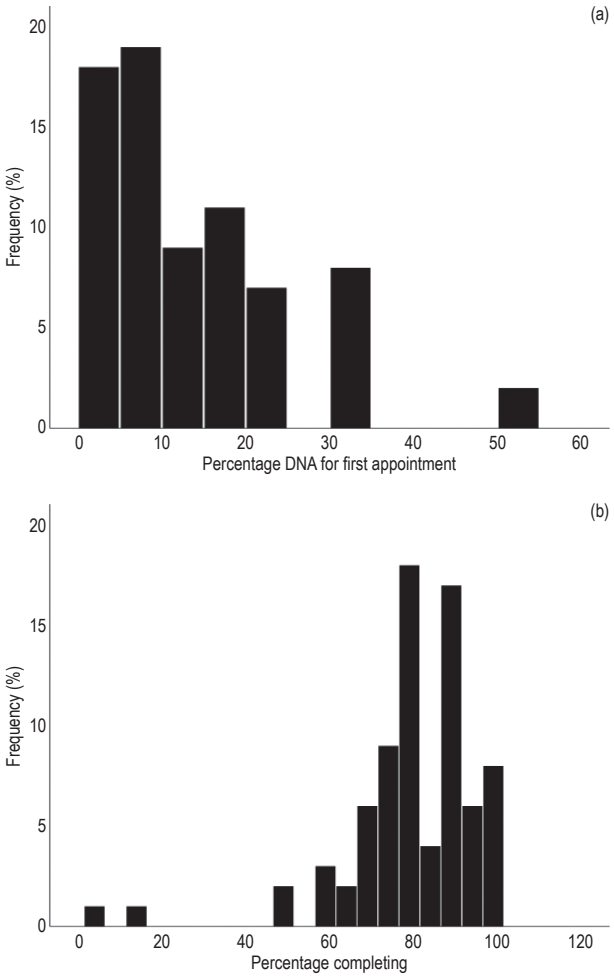

Figure 2. Histograms showing the frequencies of respondents identifying different (a) did-not-attend (DNA) [$n = 74$; mean ± standard deviation (SD) = 12.52 ± 11.125] and (b) completion rates for their patients ($n = 77$; mean ± SD = 80.35 ± 16.39).

[$t_{(64)} = 3.49$, $P < 0.001$, $d = 1.69$]. There was a marginally significant negative relationship between waiting list times and DNA rates ($r = –0.214$, $P = 0.06$; see Fig. 2a).

The mean percentage of patients completing their treatment (Fig. 2b) was 80% (SD = 16; range = 4–100), with little difference between the NHS mean (mean ± SD = 73.5 ± 18.2; range = 12–97) and the private one (mean ± SD = 83 ± 11.1; range = 70–98) ($t < 1$, $d = 0.13$). There was no relationship between waiting times and percentage treatment completion ($r = –0.161$, $P = 0.199$). The mean optimal waiting time suggested by the participants was 3 weeks (SD = 1.7; range = 0–8).

Figure 3 shows the estimated attrition rates for the sample (i.e. the number of patients who initially DNA, or did not complete the PFMT once they had attended). These show the numbers of patients left in the system at a number of points (i.e. "invited", "attended initial session" and "completed treatment") expressed as a function of every 100 patients invited. The curves are plotted for the median DNA and treatment completion rates for this sample, as well as for the top and lower quartiles for those figures. Inspection of these data shows that, on average, for every 100 patients invited, 75 will complete treatment, with an interquartile range of approximately 60–85.

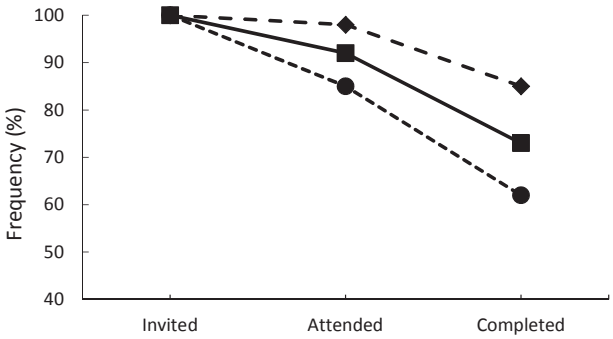

Figure 3. Median (■), and upper (◆) and lower quartile (●) patient attrition curves expressed as a function of every 100 patients invited.

Physical examinations were offered to all patients by 95% of respondents, with the other 5% offering a physical examination to some of their clients. A review (follow-up) physical examination was offered by 69% of respondents to all patients, and by 31% of respondents to some. The mean number of one-to-one pelvic floor exercise sessions given was 4.4 (SD = 1.4; range = 0–10; NHS: mean ± SD = 4.4 ± 1.3; range = 1–6; private: mean ± SD = 4.5 ± 2.4; range = 3–8). Group sessions were offered to all patients by 2% of respondents and 35% offered group sessions to some, but 63% did not offer such sessions. Of those who offered group sessions, the mean number of group sessions was 1.9 (± 2.2; range = 1–12). This variable did affect the mean treatment completion rates, as shown in Fig. 4c, with completion rates being lowest for those offering group sessions to all patients. However, this difference, although numerically pronounced, was statistically non-significant [$F_{(2,74)} = 1.68$, $P = 0.193$, $\eta^2_P = 0.043$].

The mean number of respondents monitoring patient performance of PFMT was 38%, either through paper diaries, forms or use of the Squeezy app (Propagator Ltd, London, UK). Whether this was monitored or not made no difference to the percentage of patients completing the treatment, with mean (± SD) treatment completion rates being: 83 ± 11% (monitoring) versus 81 ± 13% (no monitoring) ($t < 1$, $d = 0.08$). In terms of the use of biofeedback equipment, 4% of respondents

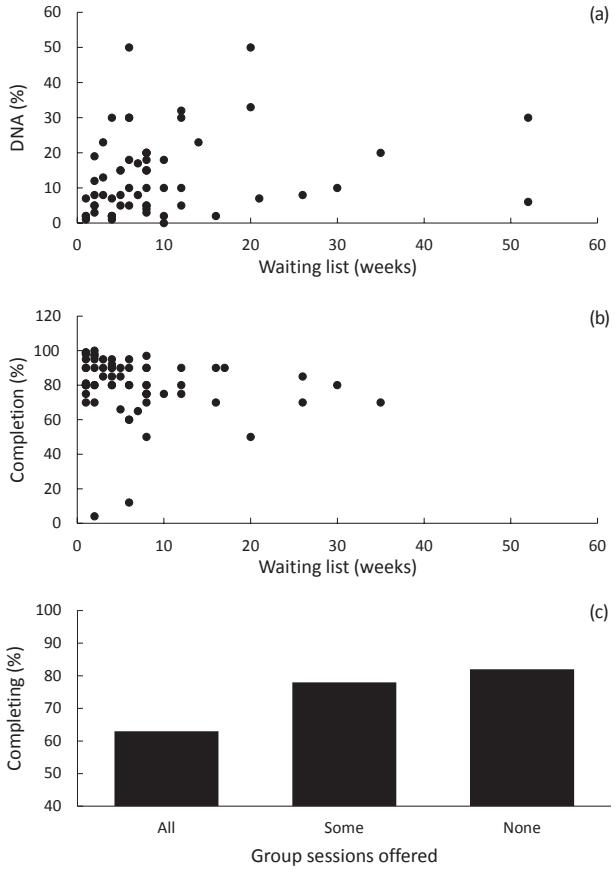

Figure 4. (a) Percentage of patients who did not attend (DNA) as a function of waiting lists, (b) percentage completion as a function of waiting-list time, and (c) percentage of patients completing as a function of the offer of group sessions.

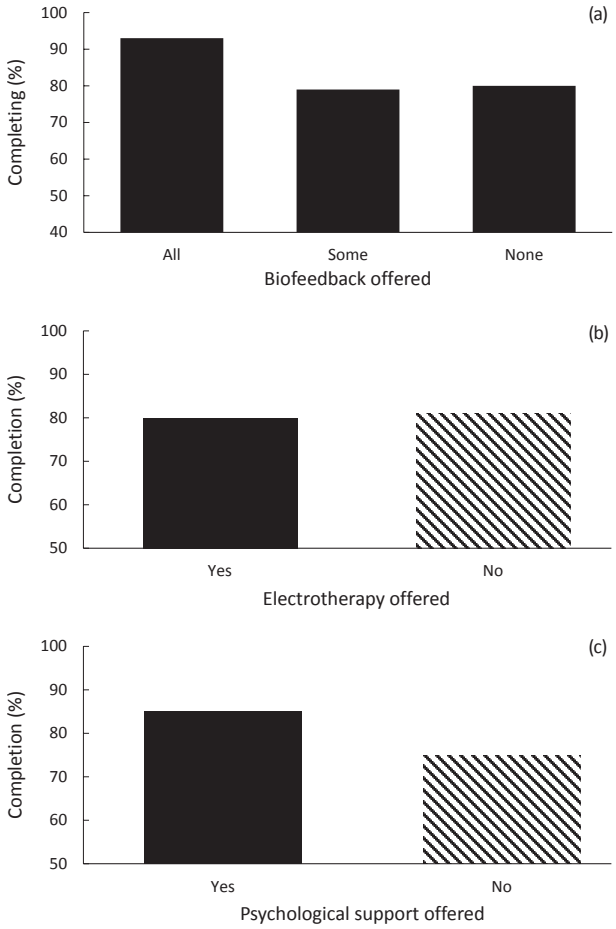

Figure 5. Percentage of patients completing as a function of (a) biofeedback, (b) electrotherapy and (c) the psychological support being offered.

offered this to all patients, 75% offered it to some and 20% to none of their patients. The mean treatment completion rates for these three groups are shown in Fig. 5a. Inspection of these data suggests that, when biofeedback is offered to all patients, the mean completion rate is somewhat higher, but this difference was not statistically significant [$F_{(2,72)} = 1.78$, $P = 0.179$, $\eta^2_P = 0.049$]. When asked about the use of electrotherapy, 87% responded that they did offer this to their patients, while 11% did not. This did not make a difference to the mean (± SD) treatment completion rate (yes = 80 ± 17%; no = 81 ± 13%) ($t < 1$, $d = 0.07$) (see Fig. 3). Fifty per cent of the respondents said that their patients were offered some form of psychological help during their treatment, if they needed it (either by the physiotherapist, or after referral to a psychology service). Of those offering psychological support, the mean (± SD) treatment completion rate was 85 ± 10%, and for those not offering psychological support, this was 75 ± 20%, which was statistically significant [$t_{(74)} = 2.89$, $P = 0.07$, $d = 0.64$] (see Fig. 5c).

Discussion

The results from the present national survey of POGP members about PFMT services throughout the UK show some variation across almost all of the aspects measured. It is particularly striking that the average number of referrals to a physiotherapy service was around 600 a year. Extrapolating this figure to the whole POGP membership of 700, this means that members nationally are seeing 420 000 patients a year. The adult female population of the UK (i.e. women over 18 years) is approximately 18 million (ONS 2011), which means that POGP members are seeing around 2% of the adult female population each year. This is at the higher end of the estimated annual incidence rates for urinary incontinence proposed by Milsom & Gyhagen (2019), and implies that there is a high demand for PFMT services. However, there are enormous variations in these figures, especially between NHS and private practitioners. Nevertheless, these figures indicate a very high demand for PFMT services across the UK. The average time spent on a waiting list was

a little under 9 weeks for the sample, which is well below the suggested waiting time period of 18 weeks for non-urgent treatment (NHS 2019), with nearly 90% of all services reaching this target. However, this mean masks the large variation in these times, ranging from 2 to 26 weeks.

As the NICE (2019) guideline suggests, there is some variation in the ways in which PFMT is delivered across the UK. Nearly all of the participants who responded to the present survey reported that they offered a physical examination to patients at intake, and nearly 70% also stated that they offered a follow-up examination. The mean number of one-to-one sessions offered for PFMT was four, and nearly all services delivered PFMT through this method, although around one-third also used group sessions. High numbers reported that their services offered electrotherapy (nearly 90%), and 75% reported offering biofeedback. However, less than half of the participants said that they monitored the degree to which patients completed PFMT between sessions.

The mean DNA rate was just over 19% for the sample, but for NHS patients, this was closer to 15%. Of the patients who began their treatment, around 80% completed it (70% in the NHS). This means that around 60% of the NHS patients who were invited completed their treatment (which is at the lower end of the total rates of attrition presented in Fig. 3). An attrition rate of around 40% of patients would increase costs for the NHS because they would go through the system a second time, or undergo more-expensive operations, which would reduce the cost-effectiveness of PFMT overall. Of course, some of these patients may have recovered, or sought alternative forms of treatment. If the factors predicting such attrition could be identified and remedied, then these services could be even more effective for the NHS (Dumoulin *et al.* 2018).

With regard to the above, a key area that needs consideration may be associated with the higher incidence of mental health issues experienced by patients with PFD (Khan *et al.* 2013; Vrijens *et al.* 2017). It is also known that such psychological comorbidities adversely impact attendance at physiotherapy by women with PFD (Osborne *et al.* 2016, 2017). This makes it difficult to engage these individuals with therapy (Osborne *et al.* 2016), and suggestions have been made with respect to offering psychological support to enable patients to better engage with PFMT (Osborne *et al.* 2016, 2017). The results of the present survey also suggest that compliance rates are significantly better when access to psychological support is available for the physiotherapy service. However, only 50% of services routinely provided such access, and very few had psychologists within their multidisciplinary team. Finding some way in which psychological support can be delivered within a physiotherapy service, without excessively increasing time or cost requirements, would seem to be essential for enhancing service delivery.

Waiting times were found to adversely affect DNA rates, but did not subsequently have an impact on the treatment completion rate (i.e. completing all the specified sessions of PFMT) once patients had begun to attend the PFMT sessions. Osborne *et al.* (2017) suggested making a brief telephone support call during the waiting period, and this was found to bolster initial attendance at sessions by up to 40%. This type of approach may prove particularly useful for any services experiencing higher initial DNA rates. In terms of treatment completion rates, one key predictor of improving these was access to psychological services. There were few other aspects of the physiotherapy service itself that strongly predicted compliance. Individual sessions seemed to offer a greater likelihood of compliance than group sessions, and if the latter is offered, some form of brief motivational or psychological support may well help with these figures (Osborne *et al.* 2016). Although the offer of electrotherapy did not make a difference to treatment completion, those services offering biofeedback did report numerically higher compliance rates, although these did not reach the level of statistical significance. It may be that further investigation of the extent to which approaches such as biofeedback improve patient satisfaction with PFMT, and hence, compliance rates, would be of benefit (Grant *et al.* 2019).

Any study of this kind has limitations that should be taken into account when drawing conclusions from these data. Although the sample size was moderate, and the return rate was in the range to be expected from surveys of this sort (Barbosa *et al.* 2018), it should be remembered that this represents only approximately 25% of the members of POGP. In addition, it is not mandatory to be a member of POGP in order to practise. This means that the present results should be treated cautiously when being generalized across the UK. However, there is no obvious reason to suppose that the services in which the POGP members who responded work are systematically different from the norm. These

points must also be considered in the light of this survey having a very good geographical spread of respondents from across the UK.

In summary, women's health physiotherapy services are experiencing very high levels of demand. Despite this, typical waiting times remain well within the recommended periods for such treatment. The form that treatment takes varies across services, but nearly all offer physical examinations at intake and follow-up. Most services deliver PFMT through individual sessions, but some offer additional group sessions. However, there are relatively high DNA and non-compliance rates that are partly related to waiting times. However, it appears that these rates can be reduced by providing patients with access to psychological support. This latter finding suggests that the patient cohort for these services is quite different in nature and need to those seen by typical MSK services, and attention has to be paid to this aspect of the service when considering DNA and treatment completion rates.

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