

**‘Treatment overshadowing’ as a patient reason for Pelvic-floor Muscle
Training nonattendance**

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Abstract

The study explored reasons for patient nonattendance at scheduled Pelvic-floor Muscle Training (PFMT). There has been limited research conducted on this issue in the past three decades; however, it is crucial to comprehend the resource implications for nonattendance, Did Not Attend (DNA), and the significance of the underlying reasons. Forty-four female patients were selected at random from patients with Pelvic Floor Dysfunction (PFD) who had not attended for a scheduled PFMT session within the last 12 months. Semi-structured telephone interviews were used to gain information about the reasons that patients had not attended. Three reasons for DNAs were established by qualitative analysis from these interviews. Interfering life events and comorbidities; as well as administrative issues, like not receiving the appointment letter, were noted as important. However, a new issue of ‘treatment overshadowing’ was established, whereby the manner which one treatment option was introduced by a referring medical practitioner interferes with consideration of other options. The latter has potential for further exploration and action to improve DNA rates at subsequent PFMT sessions.

Keywords: Did not attend; patient reasons; treatment overshadowing; Pelvic Floor Dysfunction; qualitative study.

Introduction

Patients' nonattendance at appointments is a major resource problem for health services across the world (Dantas *et al.*, 2018; Reed *et al.*, 2022). Rates of nonattendance ('Did Not Attend' or DNA) vary between conditions, but are estimated at 10-20% across all medical appointments for the UK, with particularly high DNA rates for some Women's Health issues involving gynaecology (Campbell *et al.*, 2015; Smith & Bateman, 2014), and Pelvic Floor Dysfunction (PFD) (Reed *et al.*, 2020). Despite the clear resource implications, including but not limited to lost staff time, little research work has investigated the patient reasons underlying DNAs. This gap in the knowledge base impedes the development and implementation of effective countermeasures.

Typically, DNA rates are ascribed to various aspects of the healthcare system, such as patients not receiving appointment letters (Vasey, 1990), or long waiting times (Osborne *et al.*, 2017; Reed *et al.*, 2020). Additionally, some patient-focused reasons have been suggested, such as their socio-economic situation (Campbell *et al.*, 2015), or medical comorbidities (Smith *et al.*, 2015; Vasey, 1990). However, investigation of more subtle reasons for nonattendance, especially connected to patient-professional interactions, which are critical in many areas of healthcare (see Rajiah *et al.*, 2021; Timmermans, 2020, for reviews), have received limited investigations for their impact on attendance and/or adherence (but see Pettersson *et al.*, 2018). For example, the manner which treatment options are introduced by a referring medical practitioner can be important in some settings (Mold & Forbes, 2013), but has not been studied extensively in Women's Health. Importantly, this may interfere with consideration of other options – a phenomenon that could be termed 'treatment overshadowing'. The potential influence of the latter reasons could be important to investigate as this feature of healthcare is becoming increasingly recognised as a key aspect of the treatment process (Kulju *et al.*; Schoeb & Bürge, 2012). Moreover,

understanding the impact of such interactions has the potential to lead to actionable knowledge to reduce DNAs.

PFD comprises a range of problems including incontinence, prolapse, and sexual dysfunction (Milsom & Gyhagen, 2019; Rogers *et al.*, 2018). A minimum of 25% of adult females are affected by PFD (Milsom & Gyhagen, 2019), with an estimated yearly incidence rate of 1-2% of the population (Milsom & Gyhagen, 2019; Reed *et al.*, 2020). The risk factors for PFD factors include pregnancy and/or childbirth (Handa *et al.*, 2011; Lipschuetz *et al.*, 2015), being over 60 years (Wu *et al.*, 2014), and obesity (Greer *et al.*, 2008). First-line treatment for PFD is Pelvic-floor Muscle Training (PFMT) (NICE, 2019), with around 50% of patients successfully discharged after such physiotherapy treatment (Hoffman *et al.*, 2017; Osborne *et al.*, 2021). However, PFMT is effective only given patient compliance, and noncompliance may result in later surgical treatment for approximately 60% of cases (Reed *et al.*, 2020; Simpson *et al.*, 2019; Singh *et al.*, 2015). Although there is great variation in surgery costs, the median cost for surgical alternatives to PFMT is about £4,000 per patient (Reed *et al.*, 2022). Estimates suggest that, for every 100 patients invited for PFMT, unsuccessful treatment often involving patient DNA or noncompliance results in a £120,000 cost to the healthcare system (Reed *et al.*, 2022). Thus, the need to understand this issue is pressing, but, as Vasey (1990) noted no papers have discussed this issue in physiotherapy, and the situation remains largely unchanged four decades later (Reed *et al.*, 2020).

Given the healthcare and financial importance of discovering the reasons for patient noncompliance with PFMT, the current study focused on exploring patient self-reported reasons for their initial non-attendance, which is estimated to be the largest point of financial loss to the system (Reed *et al.*, 2022). A semi-structured interview was conducted with patients who had not attended their scheduled appointment for PFMT. The focus of the interview was to gain information about the reasons why patients had not attended their

appointment. A range of questions were asked to encourage wider discussion of these reasons, including the way in which the appointment was made, with the aim of exploring potential reasons beyond the administrative or purely patient-focused. These questions were developed by the research team, along with the clinical staff in the unit, and patient stakeholders, as result of their experience with the patients and system, as being those likely to capture the reasons for DNAs. In particular, it was hoped to be able to classify any reasons given through content analysis into a smaller set of categories. Such broad categories may later be used to analyse patterns of nonattendance in individual centres, which may be of some practical importance to these centres. Moreover, it was hoped to see whether patient-professional interactions, at the time the appointment was made, were implicated in future DNAs. This latter information may be helpful in thinking about how PFD patients are informed of their treatment options.

Method

Participants

Forty-four female patients were selected at random, using a random number generator, from the list of all patients with PFD who had been invited for a PFMT session within the last 12 months, but had not attended and had not informed the clinic beforehand about their nonattendance. Not all patients who had not attended were sampled as it would have been too time consuming to interview them all, and it would mean collecting data that was not needed (i.e. going beyond saturation), so a random sample seemed an appropriate strategy. These patients had all been referred to the Women's Health physiotherapy unit of Singleton Hospital, Swansea, UK (a metropolitan hospital serving around 240,00 people), by a variety of medical practitioners (GPs, Consultants, Nurse Specialists). In all cases, this was their first referral to the Women's Health Physiotherapy unit, and the patients had not been

seen by the unit previously. The participants had all been referred for PFD issues, including urinary incontinence (both stress and/or urge), and some also had 1st and 2nd degree prolapse. Those patients who had contacted the inviting unit prior to their appointment to say they were not going to attend were excluded, as were those who had already had an appointment with the unit. Of those patients contacted, one declined to participate, leaving 43 participants (aged 33 to 78 years). This number exceeds the usual criteria for saturation in qualitative research, which is placed at between 9 and 17 interviews (Hennink & Kaiser, 2022). Ethical approval was obtained from the Ethics Committee within the University Psychology Department.

Interview Sessions

Each semi-structured telephone interview was conducted by the same interviewer (LAO) who was not part of the treatment team, but was a clinically qualified psychologist, and had many years' experience in conducting interviews with patients. It was hoped that a semi-structured interview format would encourage a freer discussion by the patient of their reasons for nonattendance. A brief introduction regarding the study was provided by the interviewer to help the participants feel comfortable. The focus of the interview was to gain information about the reasons that patients had not attended for the PFMT appointment. Table 1 displays the questions asked during the interview. These questions were developed by the research team, clinical staff in the unit, and patients (not otherwise involved in the research), as result of their experience with the patients and system, as being those likely to capture the reasons for DNAs. Identical questions were asked in every interview, in the same order, although participants were not discouraged, or inhibited, from discussing any issues that they wished in as much detail as they felt appropriate for each question. They could also introduce topics not covered in the questions, and these would be explored as they arose. The

mean time taken for an interview was 30min, with 30/43 interviews lasting between 20-40min. The shortest interview lasted 15min, and the longest was 60min. All interviews were conducted until all the questions which each participant wished to answer had been answered, and each participant felt they had nothing more that they wished to say.

-----Table 1-----

The Content Analysis

The interviews were digitally recorded using a digital recorder attached to the telephone. These recordings were then downloaded to OneDrive, and transcribed so that they were anonymised. Following transcription and analysis the recordings were destroyed. The transcripts were subject to content analysis following the suggestions made by Vaughn *et al.* (1996) to generate themes characterising the statements made about non-attendance. This procedure has been used previously in Women's Health and Physiotherapy contexts (Osborne *et al.*, 2022).

----Table 2----

After transcription, a sample of the interview transcripts (9; 20%) was selected, and were read a number of times by the interviewer, and separately by another investigator. These scripts were selected at random, using a random number generator, and 20% were selected as this number has previous been suggested and used as given enough material from which to understand the remaining scripts (Osborne *et al.*, 20022; Vaughn *et al.*, 1999). From these readings, both investigators produced a set of initial themes covering the responses across the questions to help understand the nature of those responses. These themes were compared and discussed between the two investigators until a consensus was reached about the number and meaning of themes that could be extracted.

Once this process was completed, all of the transcripts were analysed, and on each transcript each participant's statements were broken down into the smallest units of information that would bear interpretation, and which could stand on their own to provide a meaningful and informative utterance. Those statements containing more than one unit of information (e.g., long sentences making a number of points), were divided into several separate units. The full list of 'units of information' were then re-read by the interviewer, and the initial category headings were revised during and after this process, so that all the units of information could be categorised. Any revisions were discussed with the second investigator. The relevant units of information produced in each interview were then categorised into the finalised list headings by one investigator (the interviewer; LAO).

Once the units had been categorised by the investigator, the category headings and their meanings, along with a sample of the unitised interview transcripts (17/40% – not necessarily including the same transcripts as initially employed to develop the themes, see above) were given to a further investigator. These scripts were chosen at random by a random number generator, and this number was selected as such a sample size has previously been used to allow a reasonable assessment of the inter-rater reliability (Osborne *et al.*, 2002; Vaughn *et al.*, 1999). This second investigator (PR) read all of these scripts; they had not been involved in the development of the themes, and were blind to the categorisations made of the 'units of information' by the initial investigator (LAO). This investigator independently coded the units of information into the given category headings. To verify the reliability of the coding of the responses, a Cohen's Kappa analysis was used to establish the inter-rater reliability. A high level of reliability (0.85) was identified between their separate judgements.

Results

Three overarching themes emerged from the qualitative analyses. '**Treatment Overshadowing**', which refers to the mention of one treatment option given during the initial consultation with a GP or Consultant interfering with consideration of other options. This theme accounted for 35% of all comments made by the participants, and at least one comment on this theme was made by 34/43 (79%) of the participants. '**Administrative Issues**' was a theme that involved a patient saying that they had not received an appointment letter, or that they had experienced long waiting times for an appointment. This theme accounted for 25% of the comments and at least one comment on this theme was made by 21/43 (49%) of the participants.. Finally, '**Life Events and Comorbidities**' concerned interference with PFMT attendance from other events in the patients' lives, or their decision to prioritise other health issues. This theme accounted for 40% of the statements given by the participants, and at least one comment on this theme was made by 36/43 (83%) of the participants. A schematic representation of these themes (and their subthemes) is shown in Figure 1, which are discussed below.

---- Figure 1 ----

Treatment Overshadowing

Mention of surgery before or during the referral for PFMT was noted as an issue that deterred attendance at PFMT (e.g., "*He said I needed surgery, and I didn't want it.*"; "*I got put off by the doctor thinking I'd need surgery.*"; "*I just wanted the surgery.*"). These comments fell into three sub-themes. Patients either fixated on the possibility of an operation, and then failed to consider any alternatives like PFMT (e.g., "*He spent a lot of time discussing surgery so I thought it would be better.*"; "*There didn't seem much point to the physio after surgery was mentioned.*"; "*...thought the surgery would be easier.*").

Alternatively, patients reported that they had become scared at the mention of surgery, and

then they did not respond to any further communication (e.g., *“I hate the idea of surgery.”*; *“I’ve always been scared of surgery.”*). Finally, other patients mentioned that they did not like the idea of surgery, and this made them commit to PFMT in order to avoid surgery (e.g., *“There’s no way I’m being cut open, so I’m having the physiotherapy.”*). However, these patients could still DNA, as they went elsewhere for PFMT, or did it on their own initiative (e.g., *“After he mentioned surgery, which I didn’t want, I didn’t think you offered PFMT, so I asked elsewhere”*; *“I looked up physio on the net and did it myself.”*).

Administrative Issues

Most comments falling into this theme involved patient reports that appointment letters had not reached them (e.g., *“I never knew about the appointment.”*; *“This is the first I’ve heard about it.”*), or that messages that they had left at the treatment centre regarding their non-attendance had not been received (e.g., *“I rang up and left a message beforehand.”*). These comments about failed communication accounted for 80% of the units in this theme. Patients who made these comments indicated that, as a result of the failed communication, they had waited and let time go by before contacting their care team (e.g., *“It was about 6 months ago I had the consultation, as I didn’t hear, I just waited.”*). Sometimes this made the PFD problem get worse, and then the patients were re-referred (e.g., *“I went back to my GP, as it got worse.”*; *“I wish I had heard, as it’s worse now.”*). The other 20% of comments concerning Administrative Issues involved the waiting list (e.g., *“I gave up, as I’d waited too long.”*; *“To be honest with you, it was so long, I forgot about it.”*). A small minority of these comments indicated that patients had reconsidered their treatment options after a long waiting time (e.g., *“I rethought it, and decided I’d rather have surgery.”*).

Life Events and Comorbidities

The final theme to emerge concerned the impact of other events occurring in the patients' lives on their ability to attend PFMT. For example, major life events were sometimes reported as interfering with plans for treatment, such as illness or death of a family member (e.g., *"My bother died, and I couldn't go."*; *"We had to leave the house and move."*). Some patients reported that they had other health conditions/issues, and they did not always prioritise PFMT treatment (e.g., *"I couldn't cope with another set of appointments."*; *"It seemed more important to have the heart op."*). Sometimes, patients had many other health issues, and they did not prioritise their PFD (e.g., *"It was the least of my worries."*; *"I have so many things wrong, this didn't seem that important."*)

Discussion

The current study explored reasons for patient non-attendance at scheduled PFMT sessions, in order to investigate any reasons beyond the administrative or purely patient-focused. There has been little work conducted on this issue over the last three decades, and the large resource implications for DNAs (Reed *et al.*, 2022) made understanding these reasons of some practical importance. Three main sets of reasons for DNAs were established from the semi-structured interviews. These reasons did include some patient factors, such as the presence of other illnesses and/or major life-events; as well as administrative issues connected to receiving appointment letters and waiting times. However, a major and novel theme that emerged from the patients' comments involved patient-professional communication, and how the treatment options were communicated to the patients at the consultation that lead to the PFMT referral. This category of DNA reasons was called 'Treatment Overshadowing', and refers to the mention of one treatment option by the Consultant or GP, such as surgery, interfering with patient consideration of other treatment options, such as PFMT.

These results partly corroborate those reported in the few studies of DNA reasons that have been conducted in related fields. For example, high DNA rates have been associated with failures to receive information about appointments (Vasey, 1990), and with having to wait a long time for an appointment (Osborne et al., 2017; Reed et al., 2020). Similarly, the presence of health comorbidities, and interfering life events, have also been noted as reasons for DNA (Smith et al., 2015; Vasey, 1990). In practice, there is little that can be done about interference from comorbidities, other than attempting to make the patients aware of the impact of pelvic-floor function for their quality of life. However, one possibility is to develop further research about the possibilities of better triaging at the point of referral which takes into account the full range of comorbidities, and signposts to the treatment most likely to be taken up by the patient at that point in time. The administrative issues are also partly out of the control of health care professionals, although every effort should be made to ensure adequate communication, utilising digital means as reminders. Remaining in contact with patients through brief phone calls, while they are on the waiting list, has been shown to improve attendance rates by about 50-60% (Osborne *et al.*, 2017). However, this means that resources need to be in place to manage waiting lists, and help with patient communication, to keep patients on-board and support their decision for physiotherapy treatment during unavoidable waits.

However, treatment overshadowing has rarely, if ever, been documented, and this is clearly something that healthcare professionals have in their ability to address. Issues of patient-professional interactions during consultations are known to impact many aspects of patient behaviour and acceptance of diagnosis and treatment plans (Kulju *et al.*, 2020; Reed *et al.*, 2019; Schoeb & Bürge, 2012). Moreover, the manner in which options are introduced and presented, including the types of words used in presenting the treatment options to patients during initial consultations is becoming a key area of interest in improving healthcare

(Kulju *et al.*, 2020). In the current instance, the types of treatment options placed in front of a patient concerning their PFD may well have a profound impact on their choices. Mentioning or stressing one particular salient alternative, such as surgery, may serve to overshadow other options, like PFMT, and prevent their full consideration by the patient.

This aspect of the initial consultation would seem to be important to investigate further, as it is an actionable aspect of the referral process. It is vital to manage the way in which the available options are given to patients in order to avoid ‘treatment overshadowing’. Ensuring that patients have enough information about the importance of their pelvic-floor condition and physiotherapy, to encourage them to attend, would seem to be an easy way to redress the relative salience of the options. In this regard discussion with referring consultants and GPs about how to introduce the options would seem to be a, theoretically, easy way to address these issues. Making sure patients see their pelvic-floor problems as important is also something that could help treatment decisions during referral.

As with all studies, there are limitations that need to be noted. Although the current sample was a large number for a qualitative study, and exceeded current thinking regarding saturation points, it is still relatively small compared to the number of PFD patients. Despite this, there was good consistency between the perceptions of patients. As the participants were volunteers, their representativeness may be an issue. Although they were randomly selected from all patients who DNAed, there may well be an element of self-selection concerning those who actually chose to attend for interview. Although, in mitigation, the vast majority of those patients who were contacted did agree to participate). Finally, the opinions given by the patients are a measure of their strength of feeling, rather than an indication of their frequency. Further work may be needed in this latter area, and this may well be more helpful at the level of individual centres, to see where the key reasons for their DNAs lie.

In summary, three main reasons for DNAs for PFMT appointments were established from these interviews. Interfering life events and comorbidities, and administrative issues, were noted as important by the patients. However, a new issue that was established was that of treatment overshadowing, where the way in which one treatment option is introduced interferes with consideration of other options. The latter category has potential for further exploration, and for action, to improve DNA rates at subsequent PFMT sessions.

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Table 1: Questions asked during the interview.

Did they know they had been referred?
Did they know for which problem/s they had been referred?
What did they think women's health physiotherapy involves?
What did they hope to gain from treatment?
Did they plan to attend?
Why didn't they attend?
Was there anything that could have helped them attend?
What treatment options were they told about, when, and by whom?

Table 2: Stages of the content analysis (after Vaughn et al., 1996)

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1. Identification of key themes, following reading and re-reading comments.
 2. Identification of 'units of information' (phrases/sentences) relevant to research purposes.
 3. Selection of category headings to sort 'units of information'.
 4. 'Units of information' coded according to category headings, enabling units to be placed within categories.
 5. Negotiation between researchers to agree category headings most economically accommodating 'units of information'.
 6. Categories generated in first phase of data analysis reviewed and revised.
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Figure 1: Schematic representation of the themes and subthemes emerging to describe patient DNBA reasons.

