

CLINICAL PAPER

A retrospective postal survey of women's experiences of physiotherapy management following a third- or fourth-degree perineal tear

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Abstract

Physiotherapy involvement with women who experience third- or fourth-degree tears has developed in response to local needs, often without consideration of the evidence base. A validated Manchester Health Questionnaire and a locally developed questionnaire specific to physiotherapy were used to investigate whether physiotherapy affected the incidence of anal and urinary incontinence. The study also sought to establish whether women found physiotherapy to be of benefit. An initial invitation to participate in the study was sent to 154 women, generating a response rate of 42% ($n=65$). Fifty-eight out of the 65 individuals who had agreed to take part returned the anonymous retrospective postal questionnaires (response rate=89%). The results were inconclusive and further work is recommended. The project was carried out as part of a Master's degree in Rehabilitation Studies at the University of Bradford, Bradford, UK.

Keywords: perineal tears, physiotherapy, questionnaires.

Introduction

Perineal tears in childbirth are classified by the Royal College of Obstetricians and Gynaecologists (RCOG) according to the level of damage that occurs. A third- or fourth-degree tear is one in which there is injury to the perineum involving the anal sphincter. The authors of the RCOG guideline entitled *Management of Third- and Fourth-Degree Perineal Tears Following Vaginal Delivery* (RCOG 2001) reported a wide variation in the classification of tears. They highlighted a need for a standard definition to ensure accurate reporting in the future. The details of their proposal can be found in Table 1. The consultant obstetricians in the unit where the first author (A.J.) works have adopted the use of these definitions.

The reported incidence of such tears from different units within the UK varies widely

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between 0.6% and 9.0% (RCOG 2001). The RCOG suggested that there is a high prevalence of anal incontinence in women who experience such tears (RCOG 2001). The type of incontinence can be flatus (30%), leakage of liquid stool (8%), leakage of solid stool (4%) and faecal urgency (26%). One literature review has suggested an even higher prevalence, with up to 50% of women having either faecal urgency or incontinence following a third-degree tear (Madoff *et al.* 2004). One study of over 100 women demonstrated an incidence of 67% of women experiencing one or more anal incontinence

Table 1. Classification of perineal tears (RCOG 2001)

Classification	Damage to external anal sphincter	Damage to internal anal sphincter	Rectal mucosa
3a	<50%	Nil	Nil
3b	>50%	Nil	Nil
3c	>50%	Torn	Nil
4	>50%	Torn	Torn

symptoms at a 5-month follow-up after third- or fourth-degree tears (Nazir *et al.* 2002). For this reason, the RCOG recommended in its guideline for the management of women with third- and fourth-degree tears that all women with such tears are followed up at 6–12 months by either a gynaecologist or colorectal surgeon (2001).

However, there are no national recommendations for physiotherapists working in women’s health, and the present authors were unable to identify any published work relating specifically to the physiotherapy follow-up of such women.

Therefore, in recent years, the physiotherapy management of women who experience third- and fourth-degree tears following the birth of their baby appears to have developed on an *ad hoc* basis. Currently, there is a wide variation in national practice. In the first author’s (A.J.) workplace, the service has developed without additional funding and without consideration of the evidence to support practice.

Incidences of anal incontinence, which is the most common complication following third- and fourth-degree perineal tears, occur nationally, as noted above. A retrospective postal survey was undertaken to establish both the incidence of symptoms, and also the level of physiotherapy service and women’s views on it. This was following Department of Health guidelines that ‘high quality care requires an evidence-based culture which relies on well-designed clinical research’ (DH 2004, p. 41).

Literature review

Details of the search strategy can be found in Table 2. The search produced 199 papers, of which 146 were discarded on the grounds of relevance to the project. Fifty-three papers remained that were critically appraised.

Table 2. Literature search

Databases searched	Exclusion criteria	Keywords
AMED CINAHL Medline Cochrane library National Institute for Health and Clinical Excellence Bandolier PsycINFO SportDiscus Web of Knowledge	Non-English Prior to 1995	Postnatal care Perineal trauma Anal incontinence Dyspareunia

Fernando *et al.* (2002) conducted a large postal survey of obstetricians and coloproctologists in which 910 participants completed the questionnaire, giving a low response rate of only 50%. This highlighted that the majority of obstetricians follow up patients after a third- or fourth-degree tear for only 6 weeks, whereas coloproctologists follow up for at least 12 months, which may indicate that, the longer the follow-up period, the greater the incidence of symptoms. One of the recommendations made by Fernando *et al.* (2002) was that work should be carried out to identify the ideal follow-up, including the involvement of the multidisciplinary team, although physiotherapy is not mentioned.

In a qualitative study using focus groups comprised of women who had experienced third- or fourth-degree tears, it was reported that the subjects experienced significant emotional and psychological distress (Williams *et al.* 2005). The authors of this paper felt that a lack of information and poor communication did not help to alleviate these issues. This was a small study involving only 10 women, but the recommendations of Williams *et al.* (2005) were that the minimum standard should be a dedicated team who would be involved from an early stage in the counselling and follow-up of such women.

Several studies have highlighted the increased incidence of faecal symptoms (urgency and incontinence) following third- and fourth-degree tears (Poen *et al.* 1998; Eason *et al.* 2002; Zetterström *et al.* 2003). In a Swedish study of 349 primiparous women, who were followed up by questionnaire for 5 years, 44% of those who experienced third- or fourth-degree tears complained of anal incontinence (Pollack *et al.* 2004). There was a very good response rate of 69%, and the authors demonstrated the difference between women with third- and fourth-degree tears, and those without. It is unclear how Pollack *et al.* (2004) achieved such a good response rate.

In a prospective study of 218 primiparous women by Pregazzi *et al.* (2002), a perineal examination at 8 weeks was found not to be useful in predicting urinary incontinence, but did highlight those at risk of anal incontinence. However, although there were 218 women in the study, only eight were in the group of women who had third- or fourth-degree tears. Three out of the eight women in the subgroup experienced anal incontinence, again demonstrating a high incidence. Pregazzi *et al.* (2002) recommended

that an early examination (i.e. one at 6 weeks) should not be used as the basis for perineal rehabilitation.

In a longer-term cohort study involving both transanal ultrasound and a questionnaire, Damon *et al.* (2005) demonstrated that women who have experienced third- or fourth-degree tears are at a statistically significant risk of anal incontinence at 6 years after giving birth ($P=0.002$). This is in agreement with the commonly held view that an anal sphincter defect following childbirth is the main risk factor for anal incontinence several years later.

In a prospective cohort study by Macarthur & Macarthur (2004), which included 46 women with third- or fourth-degree tears followed up for 6 weeks postnatally, the above authors expressed concern that many women did not take medication for pain relief once discharged from hospital. This was despite the fact that over 90% complained of perineal pain at 7 days postnatally. Macarthur & Macarthur (2004) attributed this to a lack of education about perineal care.

Women are advised about avoiding constipation and one study by Mahony *et al.* (2004) has shown the benefit of avoidance. This randomized clinical trial compared the use of laxatives to the use of codeine phosphate to promote constipation amongst 105 women with third-degree tears. The group taking the laxatives had a less-painful first bowel movement and were discharged from hospital earlier than the other group of women. There was no difference in outcomes between the groups at 3 months, but the reduction in pain was seen as a significant benefit.

Subjects and methods

Sample

The first author (A.J.) identified a convenience sample of 154 women who had experienced either a third- or fourth-degree tear in 2004 and 2005 at a large teaching hospital in the North of England. The delivery suite records were hand-searched since the ward manager had advised that this was more accurate than reviewing the computerized records. Following discussion with a National Health Service (NHS) Trust statistician, it was felt this number would be of sufficient size to demonstrate significant effects of physiotherapy on patient's symptoms if a response rate of 50–65% was achieved. A power calculation was used based upon an incidence of

30% of women with third-degree tears experiencing anal incontinence. With a 95% confidence interval, this would require 81 responses to the questionnaire to demonstrate a 10% level of significance. The response rate was predicted anticipating a second mailing to any initial non-responders to improve returns. However, this was not allowed by the ethics committee.

The exclusion criteria were stillbirth or neonatal death, and women who had experienced these events were excluded. Because there were no funds for translation services, women who could not read or write English were also excluded. However, in the first author's (A.J.) clinical experience, the numbers of non-English speaking women in the hospital being evaluated are low, and therefore, it was thought unlikely that the results would have been significantly affected by this.

Procedure

An anonymous retrospective postal questionnaire was used to collect the data. The first author (A.J.) was unable to identify any available validated questionnaire suitable for the purpose of the present study since no prior research on the physiotherapeutic management of women with third- and fourth-degree tears had been published. Therefore, she developed a questionnaire specific to the requirements of the study. This collected simple demographic data, and then asked women whether they had seen a physiotherapist whilst on the postnatal ward or as an outpatient. Further questions were designed to elicit what women remembered about the physiotherapy treatment they had received, what bladder or bowel symptoms they were experiencing, and whether they performed pelvic floor exercises regularly. A final section allowed for any other comments to add qualitative data. This was to enable the collection of information about women's feelings or beliefs about the service in addition to the facts about their bladder and bowel control (Hicks 2004). The questionnaire was first piloted at a different hospital by sending it to 10 women, and minor amendments were made accordingly.

Because the most commonly reported complication associated with third- and fourth-degree tears is anal incontinence, an additional measure, the Manchester Health Questionnaire (MHQ), was used. This questionnaire has been previously validated (Bugg *et al.* 2001; Kwon *et al.* 2005). The MHQ was developed by adapting the King's Health Questionnaire, which is

used for the assessment of urinary incontinence (Kelleher *et al.* 1997). Following a rigorous process of piloting by Bugg *et al.* (2001), the questionnaire was posted to 236 women who were known to have anal incontinence. There was a 72% response rate, with 98% of the questions being completed. Test–retest reliability was good and validity was established by comparing the MHQ to the UK Short Form 36 Health Survey (Ware & Sherbourne 1992). The MHQ uses a five-point Likert scale to ascertain responses to questions regarding bowel function and its impact on daily life. The higher scores indicate a more significant problem, but the information is ordinal and, therefore, a score twice that is as high does not necessarily mean that the problem is twice as severe.

Data collection

Ethical approval was granted by the Leeds West Research and Ethics committee. The study was also approved by the Leeds Teaching Hospitals NHS Trust research and development department.

All women identified as having experienced either a third- or fourth-degree tear were sent a patient information sheet and consent form to sign and return in a stamped addressed envelope. Both questionnaires were then sent out to those returning the consent form with a further stamped addressed envelope. They were sent via second-class post in order to reduce costs.

Funding for the present study was given by the Association of Chartered Physiotherapists in Women's Health and the Chartered Society of Physiotherapists.

Data analysis

The data collected from the specifically designed questionnaire were entered by into a database using the Statistical Package for the Social Sciences, Version 13 for Windows (SPSS[®], Chicago, IL, USA) software.

Data were initially analysed using descriptive statistics running frequencies before non-parametric testing of nominal data was carried out using the Mann–Whitney *U*-test. The subjects were also given the opportunity to comment generally on the service, and these qualitative data were analysed manually by grouping comments into broad themes.

Advice on the appropriate statistical tests to be used was sought from staff at the University of Bradford, Bradford, UK.

Results

One hundred and fifty-four women were identified as having experienced third- or fourth-degree tears in 2004 and 2005. One envelope was returned as not known at the address, and therefore, 153 subjects were initially recruited to the study. Sixty-five of those women returned signed consent forms, giving an initial response rate of 42%. Of these, 58 returned both the MHQ and the physiotherapy-specific questionnaire. The response rate from those who consented to take part was 89%. Many of the questionnaires had some missing data, making it difficult to analyse responses to all the questions.

General characteristics

The mean age of the women who returned the questionnaires was 32.1 years and the range was 17–39 years. The average birth weight of their children was 3.60 kg and the range was 2.59–4.78 kg. The majority of the subjects were primiparous (81%) and the remainder had had two children.

Fifty-two women (89.7%) had experienced a third-degree tear and five (8.6%) had suffered a fourth-degree tear; one woman was unsure of the type of tear that she had had. Twenty-five per cent of the subjects gave birth with the aid of forceps and 12% with Ventouse.

Thirty-five women (60%) remembered being seen by a physiotherapist on the postnatal ward. Of the remaining 23 subjects, 19 (83%) remembered receiving a letter from the physiotherapist asking them to book an appointment. However, eight of those had previously stated that they had seen a physiotherapist on the ward.

Response to the physiotherapy-specific questionnaire

The data were subdivided into those women seen by a physiotherapist on the ward (group 1) and those who could not remember being seen (group 2). The main responses to the questionnaire are detailed in Table 3.

The Mann–Whitney *U*-test was used to determine levels of statistical significance, but failed to do so at the $P < 0.05$ level. This is an issue with retrospective questionnaires, and therefore, caution is needed in interpreting the present results. The women who had seen a physiotherapist and been advised of possible symptoms may have been more likely to report them than the group who had no recollection of seeing a physiotherapist.

Table 3. Summary of the results of the physiotherapy-specific questionnaire regarding symptoms and pelvic floor exercises (PFEs) for groups 1 (seen by a physiotherapist) and 2 (unable to remember being seen by a physiotherapist)

Symptom/response to questions	Number		Mann–Whitney <i>U</i> -test levels of significance
	Group 1 (total <i>n</i> =35)	Group 2 (total <i>n</i> =23)	
Stress urinary incontinence	19 (54.3%)	11 (47.8%)	<i>P</i> =0.18
Urinary urgency	14 (40.0%)	8 (34.8%)	<i>P</i> =0.29
Urinary urge incontinence	15 (42.9%)	8 (34.8%)	<i>P</i> =0.96
Faecal urgency	15 (42.9%)	8 (34.8%)	<i>P</i> =0.92
Faecal incontinence	7 (20.0%)	7 (30.4%)	<i>P</i> =0.92
Constipation	10 (28.6%)	10 (43.5%)	<i>P</i> =0.74
Performing PFEs twice per day	21 (60%)	14 (60.9%)	<i>P</i> =0.37
Confident are doing PFEs correctly	22 (62.9%)	16 (69.6%)	<i>P</i> =0.16

Table 4. Summary of additional comments made by respondents to ‘Any other comments’ on the physiotherapy questionnaire: (GP) general practitioner; and (N/A) not applicable

Theme of comments	Number (total <i>n</i> =58)	Specific examples
Physiotherapy	8	‘[P]hysio was very helpful’ ‘[H]ad phone conversation which was sufficient to cover progress/queries’
No input received	6	‘I was never offered physio – just given tablets and sent home’
Sexual difficulties	5	‘I still have a lot of pain although it does ease – it has made me very nervous about sex’
Stitches	2	‘[W]ent to GP to get stitches removed’
Symptoms resolved	7	‘[A]t present have no problems – was given plenty of useful info which I believe helped my recovery’
Other	9	‘[M]ade me very scared about another baby’ ‘[K]ept waiting too long at consultant appt’
No comment	21	N/A

Useful data were revealed by one question that asked when women had resumed sexual intercourse. The mean time was 13.62 weeks and the range 2–43 weeks. There was no correlation between the women’s age and the time at which sexual intercourse was resumed ($r=0.10$, $P=0.46$). This is very useful data for clinical practice because it addresses a question often asked by women.

The ‘Any other comments’ section gave useful qualitative data to add to the depth of the study. Some comments related to issues unrelated to the physiotherapy service such as waiting times in consultant follow-up clinics. However, the comments were grouped into similar themes (Table 4).

Response to the Manchester Health Questionnaire

The results from the 58 completed MHQs could not be cross-matched to the physiotherapy questionnaire. However, the results showed a differ-

ence in the levels of anal incontinence, and highlighted the discrepancies between symptoms and the impact on quality of life (Table 5). The total number of responses was 58. However, many women had experienced a variety of symptoms, and therefore, some fitted into all four groups. The interesting feature is that very few subjects experienced significant symptoms. Although only six women reported no bowel symptoms, 31 stated that their symptoms had no impact on their quality of life. This suggests that mild symptoms may not have an impact on quality of life. It also appeared that some subjects may have misunderstood the wording of the questions since one woman reported experiencing solid and sometimes loose leakage of stool most of the time, but did not report any impact on her quality of life. It could be concluded that she was describing the nature of normal bowel movements and not incontinent episodes.

The MHQ has 31 questions and uses five-point Likert scale, with 1 being asymptomatic

Table 5. Summary of specific symptom results from Manchester Health Questionnaire (not scored)

Level of impact of incontinence	Faecal urgency	Flatal incontinence	Difficulty cleaning self after defecation	Other incontinence issues
Not at all	18	20	8	1
A little bit	15	15	9	2
Moderate	3	4	3	1
Quite a bit	2	1	2	0
Extreme	1	1	1	0
Total number in subgroup	39	41	23	4

and 5 the highest score of symptoms. The first two questions ask about general health and the impact of any bowel problem on quality of life. The following 10 questions ask about severity of symptoms, but the authors of the questionnaire specify these are for guidance only and not to be scored (Bugg *et al.* 2001). A summary of the present subjects' MHQ results is shown in Table 5. The questions are divided into role limitations, social limitations, impact on personal relationships, emotions, sleep/energy and how women manage their problems.

Discussion

Questionnaire design and response rate

Anonymous questionnaires were used in the present study in an attempt to encourage women to be honest in their answers and in order to make it easier for them to divulge potentially difficult subjects (Robson 2002). This follows previous work by Bugg *et al.* (2001) that has highlighted how few women consult their doctors about anal incontinence after childbirth. However, the response to some questions could not be analysed because of the amount of missing data.

The response rate to the invitation to participate (i.e. just under than 40%) was lower than initially anticipated. This could have been a result of the restrictions placed on the present study by the ethics committee, which did not allow for inclusion of a free pen or a second mailing, both of which have been shown to improve response rates (Wensing & Schattenberg 2005; White *et al.* 2005). However, the present study is comparable to other similar postnatal research. In one study investigating the effects of childbirth on sexual function in 150 women, only 47 participants completed all the questionnaires posted to them, giving a response rate of only 31% (Connolly *et al.* 2005).

A low response rate may reduce the validity and reliability of results since women who do not respond may represent an asymptomatic group and this will influence the findings (Kenyon *et al.* 2005). However, Hicks (2004) suggested that a response rate of 40% for questionnaires can be deemed acceptable, although the present authors' power calculations had anticipated a response rate of 60%. This estimate was made prior to the decision by the ethics committee, when a second mailing was still scheduled. Initially, it was planned to code the questionnaires to allow a second mailing to those who did not respond within 3 weeks. However, this was not done after the ethics committee limited the research design. This meant that, when the two questionnaires were returned, they could not be matched when analysing the results, and therefore, much valuable information was potentially lost.

Bugg *et al.* (2005) used the MHQ for women with anal incontinence and the King's Health Questionnaire for women with urinary symptoms. The above authors achieved a response rate of 65%, but they had sent out a second mail shot and gave no details of the initial response rate. Once again, their study group was different to the present one since only three out of the 275 women returning questionnaires had experienced third-degree tears. Bugg *et al.* (2005) concluded that a postal questionnaire was an acceptable method for screening new mothers for bladder and bowel symptoms. Of the women who had identified themselves as having difficulty with either bladder or bowel control, none attended the hospital appointments to discuss their problems that were offered to them. This also suggests that questionnaires are a superior way of gaining potentially embarrassing information.

Cockell *et al.* (2003) decided against using questionnaires and employed one-to-one interviews to investigate postnatal flatal and faecal

incontinence. The above authors found it very difficult to recruit women to their study, as a result of which only 10 women took part.

Findings compared to other similar studies

As can be seen in Table 3, many of the results were similar between the two groups. However, the group who received physiotherapy appeared to have a higher incidence of faecal urgency (42.9% versus 34.8%). It is possible that, since the women who had contact with a physiotherapist had been told that they might experience urgency, they were more likely to report it than the non-physiotherapy group. The two symptoms that had a lower incidence in the physiotherapy group were anal incontinence (20% versus 30.4%) and constipation (28.6% versus 43.5%). However, neither of these results reached statistical significance. Since the physiotherapy-specific questionnaire did not differentiate between flatal and faecal incontinence, it is not possible to compare these results with the RCOG incidences. The incidence of faecal urgency was higher in both groups than the incidence of 26% reported by the RCOG.

A specific question asked whether the physiotherapist had advised women on the avoidance of constipation. This was included because it is part of the treatment protocol in the first author's (A.J.) workplace and there is evidence that constipation can have a significant effect on outcomes. Chiarelli *et al.* (2003) carried out telephone follow-ups at 12 months with 568 women who were considered to be at risk of anal incontinence. They were not specifically participants who had experienced third- and fourth-degree tears, although such women were included. One of the significant risk factors identified was constipation in the postpartum period. This is in contrast to a study by Mahony *et al.* (2004) that showed no difference in outcomes for women with constipation in the early postnatal period. However, this was only a 3-month follow-up period compared to Chiarelli *et al.*'s (2003) 12 months.

The 14% of subjects who had no physiotherapy contact either on the ward or by letter is of clinical significance since, in theory, all women who experience third- or fourth-degree tears are referred to physiotherapy. This suggests a possible failing in the referral system from doctors and/or midwives. However, it would be interesting to note whether the women who were seen by the physiotherapist on the ward had a longer length of stay, either because of pain or

difficulty in opening their bowels for the first time. If this were the case, then it could be anticipated that outcomes between the two groups could differ in the longer term.

The present study was designed to assist in gathering evidence about the usefulness of the current physiotherapy practice of advising women on the postnatal ward who have had a third- or fourth-degree tear, and also following up by telephone at 6–8 weeks. When following up 144 women postnatally, Mørkved & Bø (1999) concluded that there should be a strategy to prevent urinary incontinence both during pregnancy and postnatally, and this could be amended to apply to anal incontinence as well.

Several studies have investigated the compliance with pelvic floor exercises (PFEs) postnatally to see whether there is an ideal programme, and whether it has an impact on urinary or faecal symptoms (Sampselle *et al.* 1998; Mason *et al.* 2001; Chiarelli *et al.* 2004; Dumoulin *et al.* 2004; Ewings *et al.* 2005).

Sander *et al.* (1999) followed up a group of 48 women who had experienced either third- or fourth-degree tears for one year postnatally. All their subjects were taught PFEs by a physiotherapist at 5 days postnatally and seen again at one month. Of these, 10 women complained of anal incontinence, and therefore, nine were offered intensive physiotherapy (the tenth woman had repeat surgery for her symptoms), albeit that the attendance rate was poor. At one year postnatally, 34 women were evaluated objectively and 11 subjectively by telephone only. Three were lost to follow-up. Three of the women had flatal incontinence, two had stress urinary incontinence and four had dyspareunia. There was no control group, as is often the case in such studies, making it difficult to know whether improvement was a result of the PFEs or would have occurred spontaneously. However, denying treatment to a control group of women who had anal incontinence at one month could be considered unethical. With results indicating that anal incontinence occurred in only 7% of patients at one-year follow-up, Sander *et al.* (1999) concluded that PFEs were successful in reducing the incidence of symptoms, which was particularly low in their study.

In a randomized controlled trial of 720 women considered to be at increased risk of urinary symptoms postnatally, participants were allocated to either a group who were seen by a physiotherapist on the postnatal ward and again at 8 weeks, or a 'usual care' group who had no

physiotherapy intervention (Chiarelli *et al.* 2004). All the women were then followed up by a telephone call at 12 months. Unfortunately, 27% of the participants dropped out of the study, but the results did demonstrate that those women who had physiotherapy intervention were more likely to be performing PFEs regularly. This is in contrast to the present authors' findings, where the two groups had no difference in frequency of performing PFEs. Chiarelli *et al.* (2004) also indicated that women who performed PFEs more regularly had a lower incidence of urinary incontinence. The only difficulty in comparing this earlier study to the present work is that the former was not specific to women with third- or fourth-degree tears. Chiarelli *et al.*'s (2004) results are similar to those a randomized controlled study involving 62 women that demonstrated the value of PFEs in the treatment of postnatal urinary incontinence (Dumoulin *et al.* 2004), although again the findings are cannot be specifically related to the present authors' subject group.

In a small study of 30 patients that was not specific to third- and fourth-degree tears, PFEs with anal biofeedback were used to treat faecal incontinence (Rieger *et al.* 1997). Sixty-seven per cent of patients had improved at 12-month follow-up. This suggests that there is a role for physiotherapy in the management and treatment of postnatal women with anal incontinence. However, this treatment can only be offered if such women are identified proactively since it appears from the research that many women are unlikely to seek help themselves because of the embarrassing nature of the problem.

The range of times when women resumed sexual intercourse is useful data since women often ask what the 'normal' time to resume is. In a small qualitative study by Salmon (1999) involving six women using unstructured interviews, the participants highlighted their concerns about returning to sexual intercourse. They were unsure whether their experiences of healing were appropriate, and felt that any advice given made it unclear how long problems might continue for and when to ask for help.

A retrospective cohort study involving a subgroup of 68 women who had experienced either third- or fourth-degree tears investigated both the percentage of participants experiencing dyspareunia and how long women waited before resuming sexual intercourse (Signorello *et al.* 2001). The group described in this research allowed a mean time of 9.3 weeks, which is

sooner than the 13.62 weeks found in the present study. The information was elicited from a questionnaire completed at 6 months postnatally.

In a randomized controlled trial examining the effects of laxatives following third-degree tears, 32% of the 98 women involved had not resumed intercourse at 3 months (Mahony *et al.* 2004). The reasons why some women are slow return to sexual intercourse are not clear since there could be a variety of explanations, such as loss of desire or fear of dyspareunia (Hicks 2004). However, Connolly *et al.* (2005) reported that the majority of women experience pain-free intercourse by 3 months postpartum.

The incidence of anal incontinence following third- and fourth-degree tears varies between studies. Mackenzie *et al.* (2004) reported a rate of 25% in a follow-up study of 44 women attending a colorectal clinic and were confident that they had not missed a group of symptomatic women. These authors felt that the women appreciated the routine follow-up offered to all women with third- or fourth-degree tears, including the 75% who were asymptomatic, and decided to continue their practice for this reason.

The general comments about physiotherapy made in the course of the present study were all positive, which is reassuring. However, one subject commented that attendance at the hospital was difficult and enquired whether treatment could be arranged more locally. A follow-up letter sent to women who have missed seeing a physiotherapist on the ward may need to be amended because it asks them to contact the department only if they have a problem. As one woman explained, she never made the appointment because she had no concerns.

Flaws identified

One potential flaw of the present study is that women were asked to comment on the physiotherapy service that they received. Since the women may have had no previous experience of physiotherapy, they had no comparison upon which to base their comments, which could have made it difficult for them. Some of the women would have been visited on the postnatal ward or telephoned for follow-up by the first author (A.J.). This could have resulted in 'socially desirable responses', and therefore, biased the results (van Teijlingen *et al.* 2003). However, this would have been difficult to avoid without carrying out the study at an alternative centre, which would have been impractical at this level of study.

Since the questionnaires were all posted at the same time, some of the women were over 30 months postnatally. This was done to ensure an appropriate response rate within the time constraints of the Master's programme. A prospective study would have necessitated 2 years of data collection to obtain the same amount of data. It has been suggested that women may become more negative about their experiences over time and also less likely to remember the information given (van Teijlingen *et al.* 2003).

It is difficult to make accurate comparisons between different study groups because there is a lack of standard definitions of anal incontinence, allowing for variation in the severity and frequency of symptoms, and also the recognized under-reporting of symptoms (Madoff *et al.* 2004). In the physiotherapy-specific questionnaire, no attempt was made to quantify severity when participants were asked about difficulties controlling the bowel. However, in the MHQ, where women were asked about severity, the results did not appear to correlate with the impact on their quality of life. It is difficult to know whether the subjects, who reported that the questionnaire was easy to answer, actually misunderstood some of the questions. One example is a woman who reported experiencing leakage of solids most of the time, but also that her bowel problem had no impact on her quality of life, which seems potentially contradictory.

One significant flaw is the inability to cross-match the two questionnaires, a facility that might have yielded further information.

Recommendations

There is evidence that physiotherapy postnatally can be of benefit, and since women who experience third- and fourth-degree tears are in a high risk group, the first author (A.J.) will continue to offer a service to them. However, some changes will be made. The advice given to women should highlight what symptoms may occur. However, it can be said that they are generally mild and very few women experience significant levels of dysfunction. The present study also highlights the wide variation in timescales for women resuming sexual intercourse. A letter currently used at the first author's (A.J.) workplace, asking women to contact the department to arrange an appointment if symptomatic, will be amended, giving women the option of contacting for a telephone follow-up even if they appear asymptomatic.

Further research is clearly needed to demonstrate the objective benefits of physiotherapy intervention postnatally for this specific client group. Any future work should be in the form of a prospective trial to ensure more accurate results. The results from the present study will be shared with both midwifery and medical colleagues at the first author's (A.J.) workplace via clinical governance meetings and also the local Maternity Service Liaison Committee.

Conclusion

The present study was a small-scale project undertaken as part of a Master of Science degree in Rehabilitation Studies by the first author (A.J.). Unfortunately, there were many design faults in this study and these are acknowledged by the novice researcher (A.J.). However, although the response rate was low, the results generated some interesting information that has not previously been reported. Although the results are inconclusive, when considering all the evidence, there appears to be a role for physiotherapy in the management of women who experience third- or fourth-degree tears. What remains unclear is the ideal way to deliver the service. As a profession, it would be helpful to know whether initial telephone follow-ups are comparable to attendance at a physiotherapy department since many women with young babies find it difficult to physically attend hospital appointments. An alternative is to consider the development of a community follow-up service.

Further work is recommended to investigate the ideal time for physiotherapy intervention following a third- or fourth-degree tear. The present authors recommend a multicentre prospective trial to gain higher numbers of respondents. Nevertheless, in order to ensure accuracy of responses, face-to-face interviews or focus groups should be considered as an alternative to questionnaires.

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