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ORIGINAL RESEARCH

Women's experiences of obstetric anal sphincter injury and physical therapy interventions - A qualitative study

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Abstract
Background: During childbirth, women may suffer perineal injuries that can lead to persistent disorders. No interview study has investigated women's experience of obstetric anal sphincter injuries (OASIS) and physical therapy rehabilitation process after the injury.
Objective: To describe women's experiences of OASIS and the physical therapy rehabilitation process.
Methods: A qualitative study with an inductive approach based on semi-structured interviews was performed with 14 primi- and multi-parous women affected by OASIS. They had been sutured within 24 h and were recruited from a university hospital in Sweden. The interviews lasted between 35 and 66 min. Data were processed and analyzed using qualitative content analysis.
Results: Three main categories emerged from the analysis: The categories described experiences of a difficult time after the injury and physical therapy rehabilitation but also experiences of a safe follow-up. Moreover, experiences of that it wasn't that bad after all when looking back.
Conclusion: Regardless of the extent of the injury, some women experienced a long and troublesome recovery with intense physical therapy rehabilitation, while other women felt that they fortunately got away lightly. Factors that can influence a woman's confidence in safely beginning pelvic floor muscle training at an early stage include individualizing when and how information about OASIS is provided. Meeting each woman's needs and wishes is emphasized by this study.

Introduction

During a vaginal delivery, the pelvic floor is exposed to pressure and strains that can damage the muscular system and

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its innervation.[1,2] Perineal tears during vaginal delivery are classified as grade I-IV.[3] Grade III-IV tears involve the anal sphincter and are called obstetric anal sphincter injuries (OASIS). In 2016, 2.9% of vaginal deliveries, in Sweden, resulted in such tears.[4] Internationally, there is a reported increase in the incidence of OASIS of up to 5.9%.[1]

These tears are the only etiological factors associated with fecal incontinence after childbirth.[5] Fecal incontinence is defined as involuntary leakage of stool or gas.[6] Women who sustain these tears during their first delivery are at much higher risk of having fecal incontinence 10 years after delivery.[7] These women also tend to experience sexual dysfunction, urinary incontinence, and pain to a greater extent.[1,8] These symptoms are usually associated with decreased quality of life due to the impact on daily activities.[9,10]

The OASIS should be identified and repaired within 12 h by a trained obstetrician.[3] National guidelines for childbirth care[11] recommend that aftercare includes information about the injury, pain relief, wound care, avoiding constipation, and pelvic floor muscle training (PFMT). A follow-up by a physician, midwife, or physical therapist should be completed 2–3 months after delivery.[3,12]

Although OASIS affects many women worldwide, the scientific focus on after-care, and in particular physical therapy rehabilitation has been limited. There are differences in management regarding follow-up, both internationally and regionally in Sweden, and not everyone affected is offered a follow-up appointment.[13] Several studies have evaluated physical therapy interventions to prevent or treat fecal incontinence and although the studies were of moderate to high quality, the level of evidence was low concerning PFMT.[14-19] This is due to the lack of control groups, differences in training, and contradicting results.[13]

Knowledge concerning the experiences of women with OASIS is scarce. From seven studies with a qualitative approach, common themes emerged; psychological consequences such as anxiety, shame and fear, implications for future pregnancies, and the role of health care professionals.[1,20] Women reported the need for access to appropriate service and follow-up care from healthcare professionals.[1] In few studies individual interviews have been used as data collection.[21,22] To obtain a deeper understanding of the experiences of these injuries, and to further develop physical therapy care, individual interviews based on *open ended* questions exploring what women with OASIS expect as well as their needs and wishes, are necessary. The purpose of the study was to investigate women's experiences of OASIS and the subsequent physical therapy rehabilitation process.

Methods

A qualitative design was used, aiming to gather empirical data reflecting the experiences of the participating women. It is a suitable method for exploring and gaining a deeper understanding of experiences of health issues, personal expectations, and needs for improving health care. Individual interviews were chosen, because the topic of research is a sensitive subject. The study was reported according to standards for qualitative research.[23]

Current clinical practice at the Sahlgrenska University Hospital in Gothenburg, Sweden, is that the OASIS injury is sutured by an obstetrician surgeon. The women are thereafter offered a follow-up, including a visit to a specialist physical therapist 6–8 weeks post-partum. During this follow-up the physical therapist examine the pelvic floor muscles by digital vaginal and anal palpation concerning e.g., function and strength, and possible symptoms related to the injury.[12] The patient is given individualized advice and help with rehabilitation, such as PFMT with or without biofeedback and neuromuscular electrical stimulation.

A purposive sampling of primi- and multi-parous women was performed from the patient files among the women who had sustained an OASIS. The inclusion criterion was an OASIS (Grade III-IV injury) during labor which had been sutured, within 24 h. Women were excluded if they were not able to speak Swedish and/or if the recruiter made the assessment that inclusion could harm the participant, due to psychological problems or any other serious illnesses. Participants were recruited by the treating physical therapist who was not involved in the interviews, data analysis, or manuscript writing.

Semi structured interviews with open ended questions were used where the women were encouraged to share their experiences with the least possible impact from the interviewers' pre-understanding. The interviewers (EJ, NS, ÅLS) were female physical therapists with varying levels of experience from newly qualified to 10 years of clinical experiences with patients with OASIS. They were not involved in any care of the participants. The other authors (AG, MFO), also physical therapists, have experience treating pelvic floor disorders, are registered specialists, and have experience in both qualitative and quantitative research. The interviews were based on questions in an interview guide (Appendix 1), developed by clinicians and specialists. The recruitment of new participants was terminated after three consecutive interviews where no new information emerged.

The interviews were conducted either at the participant's home or in the hospital, based on the participant's choice; lasted between 35 and 66 min and were recorded on two electronic devices. Field notes were taken during the interviews. The interviews were transcribed verbatim by the interviewers before the next interview took place. The interviews were de-identified so that only the interviewers could recognize the participants.

The interviews were analyzed based on Graneheim and Lundman's[24] qualitative content analysis,[24] focusing on the manifest content related to the aim of the study. The methodological approach was inductive as the author was looking for patterns in the collected material through an unconditional interpretation of data, based on the women's stories. To enhance trustworthiness and credibility of data, analysis was performed using triangulation. The three interviewers analyzed and coded the data, and another author analyzed a sample of the analysis. Meaning units were conducted and condensed and thereafter abstracted with codes and sorted into subcategories and main categories.[24]

The study was conducted in accordance with the Declaration of Helsinki and was approved by the Regional Ethics Committee for the region of Västra Götaland, Sweden, registration number: 438–16. Oral and written information about

Table 1 Characteristics of the included women.

Patient	Age, years	Time since delivery, months	Vaginal delivery, n	Vaginal tear, grade	Physical therapist visits, n
1	22	2	1	III	1
2	41	2	3	III	1
3	29	4	1	III	3
4	35	10	1	III	3
5	28	6	1	III	4
6	28	10	1	III	2
7	39	11	1	III	4
8	36	2	1	III	5
9	32	8	1	III	2
10	29	5	1	III	3
11	32	5	1	III	1
12	29	5	2	III	2
13	35	5	1	III	4
14	35	10	1	IV	2
Mean ± SD	32.1 ± 4.9	5.9 ± 3.7			2.9 ± 1.4

the study were provided and the participants gave their written consent.

Results

The 14 interviews were conducted 2–11 months after delivery, data collection occurred in 2016–2017. The women were between 22 and 41 years old and had undergone 1–3 vaginal deliveries (Table 1). One of the participants had a prior grade III OASIS. The women had visited the physical therapist 1–5 times. None of them were, at the time of the interview, under any specific treatment because of the injury.

The analysis led to three main categories with several subcategories (Table 2). The categories described experiences of a difficult recovery and physical therapy interventions, but also other participants' experiences of a safe follow-up after the injury. Moreover, some women expressed, when looking back, it wasn't that bad after all.

They described a process from sustaining their injury and gaining insight into the consequences and subsequent needs that follow at various stages during healing. Some experienced receiving too much information, while others too little. Some women reported having received information and support as needed, while others expressed experiences of feeling lost and forgotten. The stage in the healing process when women are receptive to information may vary.

Table 2 Results of the analysis.

Main categories	Subcategories
The difficult time after the surgery	Having a torn body and soul
	Feeling lost because of incongruent information
	Feeling vulnerable
	Feeling inadequate
The safe follow up	The information was supportive
	The feeling of being in good hands
	The empowering support by the physical therapist
It wasn't that bad after all	I got away lightly
	Life became manageable after all

The difficult time after the injury

The women suffered a lot from the injury due to the long and difficult recovery process. The physical and emotional burden as well as the experience of inadequate support during hospital care were mentioned. This main category included four subcategories, as follows: *Having a torn body and soul*, *Feeling lost because of incongruent information*, *Feeling vulnerable*, and *Feeling inadequate*.

Having a torn body and soul

The participants described a feeling of both physical and social limitations due to perineal pain, incontinence, inadequate pelvic floor function, and prolapse. The changes to their genital area affected their sexual intimacy, partner relationship, and their self-image. Consequently, the women felt that they would have needed a specialist to whom to ask questions, both during the rehabilitation process as well as afterwards.

> "I am not comfortable with my body. I don't like my genital area anymore."

> "I could probably have needed to talk to someone. I actually felt the need, but it was too big a hurdle to overcome. I didn't have the energy to ask someone for the right contact details... It was just too much effort. Because I thought 'oh, I'm not that bad really'. But I would have actually felt better for it, because I was actually not that well."

Feeling lost because of incongruent information

At the maternity ward, the information given by different healthcare providers about the injury was perceived as

inexplicit, inadequate, and contradictory. Consequently, this led to a feeling of being lost and not knowing how to relate to the injury nor to rehabilitation after discharge from the hospital. These women also described that before they visited the physical therapist they didn't know where, or who to turn to when questions arose.

> "And then, it was a little difficult to know how, or not, to activate [the pelvic floor] and what else to do. I was supposed to wait for four weeks before doing strong contractions, so I didn't do anything at all during those weeks. Maybe I should have done some gentle contractions, but I didn't really know. It was a little confusing and I would've needed someone to take me through it."

Feeling vulnerable

Two levels of vulnerability emerged. Partly because the women experienced concrete physical vulnerability but also based on an abstract meaning that they felt lonely and excluded due to their situation. The participants described a sudden feeling of being unprotected and embarrassed related to a loss of control regarding defecation and involuntary gas leakage.

The follow-up appointment with the physical therapist was perceived as difficult, as it reminded the women of how the OASIS had affected them. The women felt vulnerable and exposed during the pelvic floor examination. The PFMT also acted as a constant reminder of the injury.

The abstract experience of vulnerability was expressed when they felt left alone with written information at the hospital, about the injury and its rehabilitation, without proper verbal explanations by a caregiver who could answer their questions. They also felt that the information given was overwhelming, and even unwanted at times. Specifically, the physical therapy treatment was perceived as incomplete and the information about the rehabilitation was not always sufficient.

> "I thought it was tough to do the pelvic floor exercises in the beginning because to me it was a constant reminder that 'you've injured your privates during labor'. And you're supposed to do the exercises pretty often, preferably a couple of times a day, and every time it was like 'oh well, now you're doing this because that happened.'"

Feeling inadequate

Experiences of shortcomings and the feeling of not being enough, were expressed. The women felt that they were not able to care for their newborn independently, and were dependent on their partner, which made them feel incomplete as women.

The inadequacy was also expressed related to the follow-up appointment with the physical therapist, where they felt as if they had not completed the task of the PFMT as they should have. A lack of motivation was necessary because the exercises were perceived as time-consuming and boring.

The participants described their shortcomings with not having time for the exercises, and forgetting about them, because the role as a new mother required their full attention. They also expressed their shortcomings as not being able to activate the pelvic floor muscles correctly.

> "I actually felt, during the whole time I went to the physical therapist that I was weak and that I could have influenced my situation, yet I wasn't doing enough."

The safe follow-up

In this main category the women expressed that they were satisfied with the care during their time on the maternity ward, which was valuable for their forthcoming rehabilitation process. This category had three subcategories: *The information was supportive*, *The feeling of being in good hands*, and *The empowering support from the physical therapist*.

The information was supportive

The women described a positive experience with the verbal and written information given about the injury and the rehabilitation during their stay at the maternity ward. This contributed to a feeling of being confident with starting their rehabilitation before the follow-up visit with the physical therapist. The information received at the follow-up appointment was thorough, based on facts and answered their questions. They felt well informed with new knowledge, and confident in the continued rehabilitation process.

> "The physical therapist explained comprehensively with pictures and a [pelvic floor] model, with the different muscles, and showed me where I was weak and how the muscles worked. So, I felt very well informed when I left."

The feeling of being in good hands

The women experienced a professional approach and care, which made them trust the physical therapist and the care given. They felt that they had been taken seriously and that they had received the help they needed.

> "It felt good that there was someone who just deals with these kinds of injuries. That they were experts. Because that feels good. And that I would get help with it."

The empowering support from the physical therapist

The visit to the physical therapist was beneficial and an important part of their recovery, supporting the women to continue with the PFMT. The follow-up was considered safe, reliable and empowering.

> "It felt like... well, the physical therapist encouraged me, that with training things will get better and I'm not always going to be broken."

It wasnt that bad after all

This category contained experiences of strategies, perceived as helpful to the women in their everyday life that facilitated the management of the physical and psychological changes after the injury. The subcategories found in this main category were: *I got away lightly*, and *Life became manageable after all*.

I got away lightly

The women perceived the recovery after the OASIS as expected after childbirth. Both the pain and discomfort were defined as tolerable and did not interfere excessively with their daily activities.

> "I still feel fortunate to have suffered the injury that I did, if I had to choose. I feel like I actually got off easy."

Life became manageable after all

It was easier, for the women, to handle uncomfortable situations with the knowledge of the cause of their incontinence. They felt they could influence their symptoms by exercising their pelvic floor as instructed and learned to listen to their body's physical limitations. They concluded that it was not so bad after all because the symptoms were temporary, and their bodies would recover.

> "You shake that off too (being forced to defecate in the woods). It almost feels like you are way more able to tolerate stuff after giving birth. It feels like it's like this because....-you can explain it. That it feels okay that it ended up like that."

DISCUSSION

Three main categories emerged that described experiences of a *difficult time after the injury and physical therapy interventions,* but also experiences of a *safe follow-up*, and that *it wasn't that bad after all*.

The women described the time after the injury as difficult due to the impact being both physical and psychological. As reported in previous research,[1,20] the women in this study also suffered from pain, incontinence, psychological and emotional stress, and depressive thoughts. However, our study was not limited to the inclusion of only women who had experienced a difficult recovery the first months after delivery, but also women with a positive experience. This study enabled a wider timeframe, including the physical therapy interventions, which have not previously been explored.

The women expressed difficulties regarding the information received at the maternity ward, which had impaired the women's comprehension of how to start their rehabilitation. Regarding current clinical practice in physical therapy after OASIS, PFMT is advocated at an early stage after the injury.[25] This is based on physiological principles of soft tissue healing. Consequently, it is of great importance that adequate information about rehabilitation is given, enabling the women to feel safe and empowered at the start of the treatment. The women experienced differences in the information given by different care professionals. They also expressed their shortcomings of pelvic floor muscle activation. This underlines their needs of professional guidance. Preferably, the women should be offered information about rehabilitation by a caregiver competent and knowledgeable in PFMT such as a physical therapist, during their stay at the maternity ward and at follow ups. Importantly, the women who had experienced adequate information concerning the injury and the rehabilitation process, expressed confidence with their rehabilitation based on being taken seriously and receiving answers to their questions. In brief, they received the help they needed, which is similar to previous results.[20] However, some participants in this study experienced a complete lack of information before leaving the hospital, possibly because it was given at a time when they were not receptive to it.[26] Similar results were reported in a review where a recurring theme was dissatisfaction with healthcare professionals and subsequent follow-up care after an OASIS including the feeling of being dismissed when reporting postpartum concerns.[1,20] The lack of information led to the participants doubting where to turn to with questions. The differences experienced regarding care may be interpreted as a need for personalized care to accommodate the individual's needs.

During the pelvic floor examination, consisting of both digital vaginal and anal palpation, at the follow-up visit, the women felt exposed. This is also common during examinations at the gynecologist, which is a similar situation.[27,28] These negative feelings can be minimized by giving adequate information before each step of the examination.[28,29] This points out the importance of a well-educated caregiver with knowledge, skills, and a competent approach to meet the women's needs.

The participants expressed not having understood the injury until after visiting the physical therapist. As described by others[20] the participants appreciated that the physical therapist visualized the injury with an anatomical model of the pelvic floor. They expressed that this helped them comprehend the extent of the OASIS and what muscles needed rehabilitation. It is thus of great importance to offer comprehensive, multi-disciplinary care including physical therapy interventions and psychological support until the women feel strong and competent enough to continue, on their own.[1,30]

To describe the variations of experiences, the qualitative content analysis was performed inductively because it was based on women's stories and not with the specific purpose of generating a theory.[24] Regardless of the level of interpretation, the descriptive design made the results simple to use as a foundation for healthcare guidelines.

The recruiter was also the physical therapist responsible for the participants rehabilitation, which is a plausible factor as to why the women accepted participation. However, the women declared wanting to be part of implementing a better care for women with OASIS in the future.

There might have been a slight risk that the interviewers, as physical therapists, have affected the participants to not declare all sensitive details regarding the negative aspects of the physical therapy interventions. This risk may have led to the results being more positive. As previously reported, women with fecal incontinence tend to answer more honestly about their incontinence when closed questions are used.[31] The interviewers, however, did not interpret the participants' answers as dishonest; and none of the participants wished to withdraw their statements afterwards.

The selection of participants was made from only one hospital, and all had visited the same physical therapist. It is possible that the results would be different if the participants were selected from multiple maternity hospital wards. Thus, the authors were confronted with an ethical dilemma, to consider both during the interviews and analysis process, because the study, to some extent, evaluated a single

physical therapist's performance. The use of reflexivity ensured objectivity and authenticity during the research process. Although the selection consisted of a homogeneous group of women, the transparency of the present study is supported by the results of an earlier study.[32]

Conclusion

Women who sustained an OASIS experienced a difficult recovery and rehabilitation process with lasting physical and psychological consequences. Regardless of the extent of the injuries some women experienced a well-functioning care at the maternity ward, and a safe physical therapy process where the recovery was perceived as better than expected. How and when information about the injury and the rehabilitation process is provided by healthcare professionals and specifically how it is received by the woman, are factors that determine whether the woman will feel safe to start PFMT at an early stage after an OASIS. An individualized rehabilitation program to meet each woman's needs and wishes is emphasized by this study.

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Declaration of Competing Interest

None.

Appendix 1. Interview guide

Experiences of the vaginal injury and suffering from it

- Description of the injury
- Experiences of having the injury
- Experiences of symptoms of the injury

Experiences of discomfort related to the tear regarding

- Activities of daily life
- Care of the newborn
- Relationship with the partner
- Social life

Experiences of the care of the injury at the hospital

- Healthcare and nursing in general
- Information
- Examinations
- Treatment given

Experiences of the care of the rehabilitation/physical therapy after the injury

- Information
- Examinations
- The treatment given/the pelvic floor exercises

Did you experience anything of particular importance during your meetings with the physical therapist?

Is there any advice you would like to share with physical therapists who work with women who suffer from perineal tears, to improve care?

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