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**PART III:****UROLOGICAL AND PELVIC FLOOR COMPLAINTS  
AFTER SEXUAL ABUSE**



## **Chapter 5:**

### **Multiple pelvic floor complaints are correlated with sexual abuse history**

Based on:

Beck JJH, Elzevier HW, Pelger RCM, Putter H, Voorham-van der Zalm PJ. *Multiple pelvic floor complaints are correlated with sexual abuse history*. J Sex Med. 2009 Jan;6(1):193-8.

## Abstract

**Introduction:** The relationship between sexual abuse and urinary tract symptoms, sexual abuse and gastrointestinal symptoms, or sexual abuse and sexual dysfunction has been described before. A correlation between all these symptoms and sexual abuse has not yet been reported.

**Aims:** The first aim of this study was to document the prevalence rates of reported sexual abuse in a large sample of female patients with complaints of the pelvic floor. The second aim was to evaluate the frequency of complaints in the different domains of the pelvic floor, such as complaints of micturition, defecation, and sexual function, in female patients reporting sexual abuse, and comparing these data with female patients without a history of sexual abuse.

**Methods:** Female patients with pelvic floor complaints were evaluated in a tertiary referral center. History taking was assessed by a pelvic-floor clinician. The number of domains with complaints of patients with a history of sexual abuse was compared with the number of domains with complaints of patients without sexual abuse.

**Main Outcome Measures:** The number of patients who reported sexual abuse and the frequency of complaints in the different domains of the pelvic floor. The number of domains of patients with a history of sexual abuse was compared with patients without a history of sexual abuse.

**Results:** Twenty-three percent (42/185) of the patients reported a history of sexual abuse. The female patients with a history of sexual abuse had significantly more complaints in three domains of the pelvic floor (35/42) compared with the nonabused (69/143) (83% vs. 48%,  $p < 0.001$ ).

**Conclusions:** Twenty-three percent of the female patients in a pelvic floor center evaluated by a pelvic-floor clinician reported a history of sexual abuse. This is comparable with the percentage of sexual abuse observed in the population at large. In our sample, the patients with multiple pelvic floor complaints (micturition, defecation, and sexual function) related to pelvic floor dysfunction were more likely to have a history of sexual abuse than the patients with isolated complaints.

## Introduction

International estimates of the prevalence of sexual abuse are high. In a review from Kellogg and the Committee on Child Abuse and Neglect in 2005 is suggested that each year approximately 1% of children experience some form of sexual abuse, resulting in the sexual victimization of 12% to 25% of girls and 8% to 10% of boys by 18 years of age<sup>1</sup>. Results of a national telephone survey conducted in 2001-2003 in the U.S.A. indicate that 1 in 59 U.S.A. adults (2.7 million women and 978,000 men) experienced unwanted sexual activity in the 12 months preceding the survey and that 1 in 15 U.S.A. adults (11.7 million women and 2.1 million men) have been forced to have sex during their lifetime<sup>2</sup>. The relationship between sexual abuse and urinary tract symptoms, sexual abuse and gastro-intestinal symptoms or sexual abuse and sexual dysfunction has been described in many articles, but it has not been quantified statistically<sup>3-11</sup>. The pelvic floor controls isolated and integrated functions, sustains proper anatomic relationships between pelvic visceral organs and its outlets, and shares the basic mechanism with various visceral organs that control their function. The pelvic floor, consisting of muscular and fascial components, is the binding element between these organs. It is also considered to be an influential factor in dysfunction and subsequently behavior of the genital system in both men and women<sup>12</sup>. However, literature is scarce on the topic of the diagnostic investigation of pelvic floor and there is a lack of uniformity in the description of the anatomy per se and the nomenclature of the pelvic floor<sup>13-15</sup>. A relationship between the complaints of micturition, defecation and sexual dysfunction related to the pelvic floor dysfunction and a history of sexual abuse has been suspected, but has not been previously examined or reported upon to date. The first aim of this study was to document the prevalence rates of reported sexual abuse in a large sample of female patients with complaints of the pelvic floor. The second aim was to evaluate the frequency of complaints in the different domains of the pelvic floor, such as complaints of micturition, defecation and sexual function in female patients reporting sexual abuse and comparing these data with female patients without a history of sexual abuse. Our hypothesis was that patients referred to a tertiary center with complaints of micturition, defecation and/or sexual dysfunction related to the pelvic floor dysfunction are more likely to have of a history of sexual abuse than women with complaints in fewer domains of the pelvic floor.

## Methods

All female patients referred between January 2004 and November 2007 by urologists, gynaecologists, surgeons or gastroenterologists to our out patient pelvic floor center for pelvic floor evaluation due to complaints of micturition, defecation and /or sexual dysfunction possibly related to pelvic floor dysfunction were included. The pelvic floor clinician assessed the medical history of the patient. This consisted of a pelvic floor questionnaire in which different domains of the pelvic floor (micturition, defecation and sexual function) were structurally evaluated. The Pelvic Floor Inventories Leiden (PelFIs), a validated questionnaire, was used<sup>16</sup>. At the start of the development

of the PelFIs, the type of sexual abuse was not specified, only a history of sexual abuse was recorded. Later on the PelFIs was improved addressing the nature of sexual abuse: incest, sexual intimidation, rape, marital rape, sexual harassment, including forcible fondling, or not (otherwise) specified. The PelFIs is validated in Dutch and English<sup>17</sup>. A retrospective search was performed to evaluate if the referring physician has documented the type of sexual abuse in the patient's medical record. For the analysis patients were divided in two groups: patients with a history of sexual abuse (Group I) and patients without a history of sexual abuse (Group II). If a patient had at least one of the following complaints related to the different domains of the pelvic floor we defined her as positive for that domain. The domains are the urological domain, gastro-intestinal domain and sexual domain (Table 1). The data were analysed using SPSS version 14. Differences in frequencies were evaluated using Pearson's chi-square test or Fisher's exact test when cells with less than 5 expected subjects were present. A two-sided p-value <0.05 was considered statistically significant.

## Results

A total of 185 female patients were retrospectively included and evaluated by a pelvic floor physiotherapist. No patients were excluded. The mean age of the population was 47.1 yr (SD 15.5 yr). Twenty-three percent of the patients (42/185) reported a history of sexual abuse. In the total group of patients the mean age of the sexually abused patients (Group I) was not significantly different from the not sexually abused patients (Group II) (43.7 vs 48.1 ;  $p = 0.106$ ). The type and frequency of sexual abuse are listed in Table 2. The type of abuse could not be determined in 23.8% of the abused patients (10/42). Questions regarding sexual abuse were added in a follow up version of the PelFIs. In an earlier version sexual abuse was not specified by the patient, pelvic floor clinician or documented in the patients' medical record by the referring physician. In the sexually abused group 7.2% (3/42) of the patients had complaints in one domain of the pelvic floor versus 17.5% (25/143) in the non-abused group. Differences in two and three domains are 9.5% (4/42) in the abused group versus 34.2% (49/143) in the non-abused-group and 83.3% versus 48.3% (69/143) respectively. ( $p < 0.001$ ) (Table 3).

## Discussion

A sexual abuse prevalence of 23% at our outpatient academic pelvic floor center is comparable to earlier published data, in which a prevalence of 4%-38% has been described<sup>3,18-24</sup>. Kellogg reported a sexual abuse prevalence of 12%-25%<sup>1</sup>. In a prevalence study in a gynecologic outpatient clinic of a large urban teaching hospital Peschers reported that one fifth of the patients (20.1%) had been forced to engage in sexual activities<sup>21</sup>. Many studies have shown that sexual abuse might lead to a variety of symptoms in one domain of the pelvic floor<sup>3-6,9-11;17,21,22;24-29</sup>. To our knowledge, this is the first publication about the relationship of complaints of micturition, defecation and sexual dysfunction related to the pelvic floor dysfunction and a history of sexual abuse. Our study

demonstrated a significantly higher rate of sexually abused women with complaints in the three domains of the pelvic floor compared to women with complaints in fewer domains. One of the limitations of this study is that we only included dyspareunia as a sexual dysfunction issue. In 2005 the Pelvic Floor Clinical Assessment Group of the International Continence Society described the domains of the pelvic floor including also pelvic pain and pelvic organ prolaps<sup>30</sup>. Our study was started in 2004, so we did not include pelvic pain and a more specific definition of sexual dysfunction. Nor did we specify the type of sexual behavior that occurred during the abuse in genital penetration versus touch or forced oral sex. Another limitation of our study is that our sample is self selected. Therefore more patients with complaints of micturition, defecation and/or sexual dysfunction related to the pelvic floor dysfunction can be found in our research population. We believe that if this study would be performed in a urological, gynaecological, gastroenterological or surgical outpatient office, the difference may be even more significant, because the probability of selection is much lower. The fact that only 28 out of 185 of the women had only a single complaint could indicate that having only a single complaint is rare. We believe that this is the result of a selection bias, because referrers think of a pelvic floor dysfunction sooner in patients with multiple pelvic floor complaints. Another limitation is that instead of studying two large cohorts, one of sexual abused women and non abused controls, and then looking at pelvic floor domains, we used two groups which are already a pathological sample; women who went to a pelvic floor clinic with at least one pelvic floor problem. There is no real control group since both groups have already pathology. Women forced to engage in oral sex with a perpetrator may have very different sexual problems compared to women who had forced intercourse. Additionally, a sexual abuse experience that includes fondling is very different from a sexual abuse that includes intercourse and can have a different impact for the functioning of the pelvic floor. So, analyzing sexual abuse as a homogenous experience, can influence the outcome of the study. The importance of discussing abuse before performing a gynaecological examination is clear. Survivors of sexual abuse rated the gynaecological care experience more negatively than the controls, experienced more intensely negative feelings, and reported being more uncomfortable during almost every stage of the gynaecological examination than the controls. Survivors also reported more trauma-like responses during the gynaecological examination, including overwhelming emotions, intrusive or unwanted thoughts, memories, body memories, and feelings of detachment from their bodies<sup>31-35</sup>. Physicians should also consider that any kind of gynaecological examination in these women may trigger a flashback of the primary situation and retraumatize the concerned women<sup>36</sup>. Farley demonstrated a decreased probability of screening for cervical cancer at women who have been sexually abused, indicating that women who have been sexually abused tend to avoid routine gynaecological care<sup>37</sup>. The clinical significance of the findings in this study suggests that a holistic view is needed in the treatment of pelvic floor dysfunction treatment and all domains need to be assessed in a questionnaire as early as possible during history taking, as was already described by Devroede<sup>38</sup>. A hypothesis for



complaints in more domains in the abused group could be that they are related to a general pelvic floor disorder. This disorder is probably related to a overactive rest tone of the pelvic floor<sup>15</sup>. For example, Leroi reported that patients with a history of sexual abuse have a significantly more disturbed anorectal motility and a increased resting pressure at the lower part of the anal canal compared to non-abused patients with anismus<sup>7</sup>. The pelvic floor comprises several layers: from superficial to deep, the supportive connective tissue of the endopelvic fascia, the pelvic diaphragm (levator ani and coccygeus muscle), the perineal membrane (urogenital diaphragm) and the superficial layer (bulbospongiosus, ischiocavernosus and superficial transverse perineal muscles)<sup>12; 39</sup>. The iliococcygeus, pubococcygeus and puborectal muscles make up the levator ani muscle and play an important role in prevention of pelvic organ prolapse and incontinence. The perineal membrane is a fibrous muscular layer directly below the pelvic diaphragm. The current concept is that the muscular contents of this layer are formed by the distal part of the external urethral sphincter muscle (compressor urethra and urethrovaginalis part of the external urethral sphincter). The bulbospongiosus and ischiocavernosus muscles of the superficial layer also have a role in sexual function while the superficial transverse perineal muscle has a supportive role. Pelvic floor muscle contraction presumably involves contraction of these muscles groups<sup>40-42</sup>. We conclude that sexual abuse survivors may have a dysfunction of the above mentioned muscles, giving rise to urological complaints, gastro-intestinal complaints and/ or sexual dysfunction.

## Conclusions

Twenty-three percent of the female patients in a pelvic floor center reported a history of sexual abuse. In our sample, patients with multiple pelvic floor complaints related to pelvic floor dysfunction are more likely to have a history of sexual abuse than patients with isolated complaints. Further research is needed to assess the impact of pelvic floor dysfunction and sexual abuse in relation to complaints of micturition, defecation and/or sexual dysfunction.

**Table 1: Specifications of complaints in the three domains of the questionnaire**

Urological Domain	Gastro-intestinal Domain	Sexual Domain
Urgency / frequency	Frequency	Dyspareunia
Hesitation	Blood loss	
Weak urinary stream	Inappropriate emptying	
Intermittent urinary stream	Defecation in tempi	
Straining when urinating	Straining	
Residual awareness	Peri-anal skin complaints	
Urinary tract infections	Soiling	
Painful voiding	Incontinence of stool or flatus	
	Peri-anal pruritus	
	Painful emptying	

**Table 2: Frequency and percentage of reported sexual abuse**

Type of abuse	n	%
Incest	11	26.2
Sexual intimidation	4	9.5
Rape	3	7.2
Marital rape	9	21.4
Sexual harassment	5	11.9
Unknown	10	23.8
<b>Total</b>	<b>42</b>	<b>100</b>

**Tabel 3: Number of domains with complaints for patients with or without sexual abuse.**

Domains	Group I: Abused +	Group II: Abused -	n	p-value
1	3 (7.2%)	25 (17.5%)	28 (15.1%)	
2	4 (9.5%)	49 (34.2%)	53 (28.7%)	
3	35 (83.3%)	69 (48.3%)	104 (56.2%)	
<b>Total</b>	<b>42</b> <b>(100%)</b>	<b>143</b> <b>(100%)</b>	<b>185</b> <b>(100%)</b>	<b>&lt;0.001</b>

Domains: number of domains of the pelvic floor with complaints

Abused +: number of patients with a history of sexual abuse

Abused -: number of patients without a history of sexual abuse

## References

- 1 Kellogg N. The evaluation of sexual abuse in children. *Pediatrics*. 2005;**116**:506-12.
- 2 Basile KC, Chen J, Black MC, Saltzman LE. Prevalence and characteristics of sexual violence victimization among U.S. adults, 2001-2003. *Violence Vict*. 2007;**22**:437-48.
- 3 Baccini F, Pallotta N, Calabrese E, Pezzotti P, Corazziari E. Prevalence of sexual and physical abuse and its relationship with symptom manifestations in patients with chronic organic and functional gastrointestinal disorders. *DigLiver Dis*. 2003;**35**:256-61.
- 4 Davila GW, Bernier F, Franco J, Kopka SL. Bladder dysfunction in sexual abuse survivors. *The Journal of urology*. 2003;**170**:476-9.
- 5 Jundt K, Scheer I, Schiessl B, Pohl K, Haertl K, Peschers UM. Physical and sexual abuse in patients with overactive bladder: is there an association? *International urogynecology journal and pelvic floor dysfunction*. 2007;**18**:449-53.
- 6 Klevan JL, De Jong AR. Urinary tract symptoms and urinary tract infection following sexual abuse. *Am J Dis Child*. 1990;**144**:242-4.
- 7 Leroi AM, Berkelmans I, Denis P, Hemond M, Devroede G. Anismus as a marker of sexual abuse. Consequences of abuse on anorectal motility. *Digestive diseases and sciences*. 1995;**40**:1411-6.
- 8 Leroi AM, Bernier C, Watier A, et al. Prevalence of sexual abuse among patients with functional disorders of the lower gastrointestinal tract. *Int J Colorectal Dis*. 1995;**10**:200-6.
- 9 Link CL, Lutfey KE, Steers WD, McKinlay JB. Is abuse causally related to urologic symptoms?

Results from the Boston Area Community Health (BACH) Survey. *European urology*. 2007;**52**:397-406.

**10** Sweeting JG. Sexual abuse and gastrointestinal disease. *Gastroenterology*. 1995;**108**:1945-6.

**11** Weijmar Schultz W, Basson R, Binik Y, Eschenbach D, Wessellmann U, Van Lankveld J. Women's sexual pain and its management. *The journal of sexual medicine*. 2005;**2**:301-16.

**12** Bourcier A, McGuire E, Abrams P. *Pelvic Floor Disorders*. Philadelphia:: Hartcourt Publishers Ltd; 2007.

**13** Janda S, van der Helm FC, de Blok SB. Measuring morphological parameters of the pelvic floor for finite element modelling purposes. *Journal of biomechanics*. 2003;**36**:749-57.

**14** Marani E. The pelvis, another view. Enschede: Twene; 2002.

**15** Shafik A, Mostafa RM, El-Sibai O, Shafik IA. Electromotor activity of the cecum and ascending colon: the concept of 'individual pacemakers'. *European surgical research Europäische chirurgische Forschung*. 2004;**36**:308-12.

**16** Voorham-van der Zalm PJ, Stiggelbout AM, Aardoom I, et al. Development and validation of the pelvic floor inventories Leiden (PelFIs). *Neurourology and urodynamics*. 2008;**27**:301-5.

**17** Voorham-van der Zalm PJ, Berzuk K, Shelly B, et al. Validation of the Pelvic Floor Inventories Leiden (PelFIs) in English. *Neurourology and urodynamics*. 2011;**30**:536-40.

**18** Bachmann GA, Moeller TP, Benett J. Childhood sexual abuse and the consequences in adult women. *Obstetrics and gynecology*. 1988;**71**:631-42.

**19** Cloutier S, Martin SL, Poole C. Sexual assault among North Carolina women: prevalence and health risk factors. *Journal of epidemiology and community health*. 2002;**56**:265-71.

**20** Kovac SH, Klapow JC, Kroenke K, Spitzer RL, Williams JB. Differing symptoms of abused versus nonabused women in obstetric-gynecology settings. *American journal of obstetrics and gynecology*. 2003;**188**:707-13.

**21** Peschers UM, Du Mont J, Jundt K, Pfurtner M, Dugan E, Kindermann G. Prevalence of sexual abuse among women seeking gynecologic care in Germany. *Obstetrics and gynecology*. 2003;**101**:103-8.

**22** Pikarinen U, Saisto T, Schei B, Swahnberg K, Halmesmaki E. Experiences of physical and sexual abuse and their implications for current health. *Obstetrics and gynecology*. 2007;**109**:1116-22.

**23** Rellini A, Meston C. Sexual function and satisfaction in adults based on the definition of child sexual abuse. *The journal of sexual medicine*. 2007;**4**:1312-21.

**24** Devroede G. Early life abuses in the past history of patients with gastrointestinal tract and pelvic floor dysfunctions. *Progress in brain research*. 2000;**122**:131-55.

**25** Drossman DA, Talley NJ, Leserman J, Olden KW, Barreiro MA. Sexual and physical abuse and gastrointestinal illness. Review and recommendations. *Ann Intern Med*. 1995;**123**:782-94.

**26** Lampe A, Solder E, Ennemoser A, Schubert C, Rumpold G, Sollner W. Chronic pelvic pain and previous sexual abuse. *Obstetrics and gynecology*. 2000;**96**:929-33.

**27** Latthe P, Mignini L, Gray R, Hills R, Khan K. Factors predisposing women to chronic pelvic pain: systematic review. *BMJ (Clinical research ed)*. 2006;**332**:749-55.

**28** Talley NJ, Fett SL, Zinsmeister AR, Melton LJ, 3rd. Gastrointestinal tract symptoms and self-reported abuse: a population-based study. *Gastroenterology*. 1994;**107**:1040-9.

**29** Talley NJ, Fett SL, Zinsmeister AR. Self-reported abuse and gastrointestinal disease in

outpatients: association with irritable bowel-type symptoms. *The American journal of gastroenterology*. 1995;**90**:366-71.

**30** Messelink B, Benson T, Berghmans B, et al. Standardization of terminology of pelvic floor muscle function and dysfunction: report from the pelvic floor clinical assessment group of the International Continence Society. *Neurourology and urodynamics*. 2005;**24**:374-80.

**31** Mayer L. The severely abused woman in obstetric and gynecologic care. Guidelines for recognition and management. *J Reprod Med*. 1995;**40**:13-8.

**32** Robohm JS, Bittenheim M. The gynecological care experience of adult survivors of childhood sexual abuse: a preliminary investigation. *Women Health*. 1996;**24**:59-75.

**33** Smith MS, Smith MT. A stimulus control intervention in the gynecological exam with sexual abuse survivors. *Women Health*. 1999;**30**:39-51.

**34** Ventegodt S, Morad M, Merrick J. Clinical holistic medicine: holistic pelvic examination and holistic treatment of infertility. *ScientificWorldJournal*. 2004;**4**:148-58.

**35** Weijnenborg PT, de Koning BA, van Roosmalen GJ. [Individualized obstetrical care for women with a history of sexual abuse]. *Nederlands tijdschrift voor geneeskunde*. 2001;**145**:393-6.

**36** Menage J. Women's perception of obstetric and gynecological examinations. *BMJ (Clinical research ed)*. 1993;**306**:1127-8.

**37** Farley M, Golding JM, Minkoff JR. Is a history of trauma associated with a reduced likelihood of cervical cancer screening? *J Fam Pract*. 2002;**51**:827-31.

**38** Devroede G. Front and rear: the pelvic floor is an integrated functional structure. *Medical hypotheses*. 1999;**52**:147-53.

**39** Bartram C, Knolmayer G, Delancey J. *Imaging Pelvic Floor Disorders* Springer-Verlag; 2003.

**40** Rosenbaum TY. Pelvic floor involvement in male and female sexual dysfunction and the role of pelvic floor rehabilitation in treatment: a literature review. *The journal of sexual medicine*. 2007;**4**:4-13.

**41** Rosenbaum TY, Owens A. The role of pelvic floor physical therapy in the treatment of pelvic and genital pain-related sexual dysfunction (CME). *The journal of sexual medicine*. 2008;**5**:513-23; quiz 24-5.

**42** Voorham-van der Zalm PJ, Lycklama à Nijeholt AAB, Elzevier HW, Putter H, Pelger RC. Diagnostic investigation of the pelvic floor": a helpful tool in the approach in patients with complaints of micturition, defecation, and/or sexual dysfunction. *The journal of sexual medicine*. 2008;**5**:864-71.