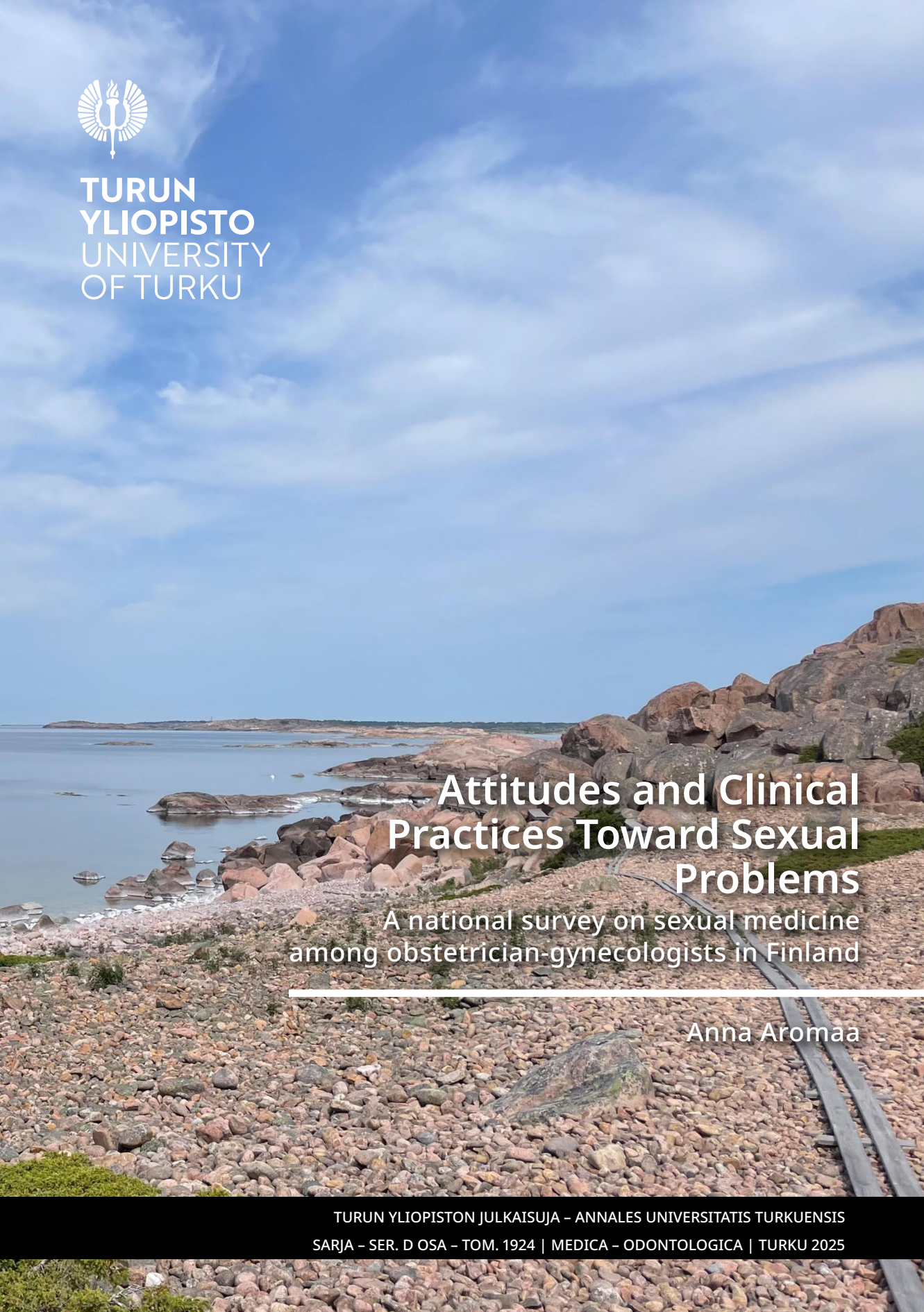

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# Attitudes and Clinical Practices Toward Sexual Problems

## A national survey on sexual medicine among obstetrician-gynecologists in Finland

Anna Aromaa

TURUN YLIOPISTON JULKAISUJA – ANNALES UNIVERSITATIS TURKUENSIS
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*To my family*

UNIVERSITY OF TURKU
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## ABSTRACT

Sexual health is essential to overall well-being but is often deprioritized in health care settings. Physicians do not routinely inquire about sexual problems during general history-taking, despite recognizing their importance. However, patients are often open to discussing sexual issues and expect physicians to initiate these conversations. Obstetrician-gynecologists (OB/GYNs) and general practitioners (GPs) are often the primary physicians consulted by female patients with sexual problems.

This study evaluated self-reported competence, barriers, attitudes, practice patterns, and education in sexual medicine among Finnish OB/GYNs and compared the results with those of Finnish GPs. Data were collected via a web-based questionnaire covering a wide range of questions regarding the management of patients' sexual problems and previous sexual medical education. The questionnaire was distributed to members of the Finnish Society of Obstetrics and Gynecology and a random sample of 1,000 Finnish GPs, with the assistance of the Finnish Medical Association.

The majority of OB/GYNs reported their competence as good in discussing sexual problems with patients, but poor in treating these issues. Almost all OB/GYNs rated treating sexual problems as an important health care issue, but fewer than half routinely inquired about them. Several barriers to bringing up sexual problems with their patients were identified, most frequently 'shortness of the appointment time' and 'lack of knowledge and experience about sexual medicine.' GPs also considered treating sexual problems as important, but compared to OB/GYNs, they inquired about them less often and reported more barriers to doing so. A minority of OB/GYNs and GPs reported that their organizations had instructions on where to refer patients with sexual problems. Most OB/GYNs indicated that the education in sexual medicine given during medical school and residency was insufficient, and the majority expressed a need for continuing medical education in sexual medicine. Physicians' poor self-reported competence was associated with insufficient education in sexual medicine at all educational levels.

The results highlight the importance of improving sexual medicine education to enhance physicians' ability to manage patients' sexual problems.

KEYWORDS: attitude, bringing up, competence, education, general practitioner, obstetrician-gynecologist, practice pattern, sexual medicine, sexual problem

TURUN YLIOPISTO
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Kliininen laitos
Synnytys- ja naistentautioppi
ANNA AROMAA: Asenteet ja kliiniset käytännöt seksuaaliongelmien hoidossa – Valtakunnallinen kyselytutkimus suomalaisille gynekologeille
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## TIIVISTELMÄ

Seksuaaliterveys on olennainen osa yksilön kokonaisvaltaista hyvinvointia, mutta se saa terveydenhuollossa usein vain vähän huomiota. Vaikka lääkärit pitävät seksuaaliongelmien käsittelyä tärkeänä, niiden käsittely ei ole systemaattista. Potilaat puolestaan ovat usein valmiita keskustelemaan seksuaaliasioista ja odottavat lääkärin ottavan aiheen puheeksi. Gynekologit ja yleislääkärit ovat ensimmäisiä lääkäreitä, joiden puoleen naispotilaat kääntyvät seksuaaliongelmissa.

Tässä tutkimuksessa tarkasteltiin suomalaisten gynekologien itsearvioitua seksuaalilääketieteen osaamista, esteitä, asenteita, käytänteitä ja koulutusta. Tuloksia verrattiin suomalaisten yleislääkärien vastauksiin. Aineisto kerättiin verkkopohjaisella kyselylomakkeella, joka sisälsi kattavan valikoiman kysymyksiä liittyen potilaiden seksuaaliongelmien hoitoon sekä lääkäreiden aiempaan seksuaalilääketieteen koulutukseen. Kysely lähetettiin kaikille Suomen Gynekologiyhdistyksen jäsenille sekä satunnaisesti valituille 1000 terveyskeskuslääkärille Lääkäriliiton jäsenrekisteristä.

Valtaosa gynekologeista katsoi omaavansa hyvät valmiudet keskustella potilaiden seksuaaliongelmista, mutta koki puutteita ongelmien hoidossa. Vaikka lähes kaikki vastaajat pitivät seksuaaliongelmien hoitoa tärkeänä osana terveydenhuoltoa, alle puolet ilmoitti kysyvänsä niistä säännöllisesti. Yleisimmiksi esteiksi aiheen puheeksi ottamiselle nousivat ajanpuute sekä riittämätön koulutus ja kokemus seksuaalilääketieteestä. Myös yleislääkärit kokivat aiheen tärkeäksi, mutta kysyivät ongelmista harvemmin ja raportoivat enemmän esteitä kuin gynekologit. Harva vastaaja kummastakaan ryhmästä ilmoitti, että heidän organisaatiossaan olisi selkeät ohjeistukset seksuaaliongelmista kärsivien potilaiden jatkohoitoon lähettämisestä. Gynekologit kokivat seksuaalilääketieteen koulutuksen riittämättömäksi sekä lääketieteen perus- että erikoistumisopinnoissa. Suurin osa vastaajista ilmaisi tarpeen täydennyskoulutukselle. Lääkärien heikko itsearvioitu osaaminen oli yhteydessä riittämättömään koulutukseen kaikilla koulutustasoilla.

Tulokset korostavat tarvetta kehittää seksuaalilääketieteen koulutusta eri tasoilla, jotta lääkäreillä olisi paremmat valmiudet kohdata ja hoitaa potilaiden seksuaaliongelmia.

AVAINSANAT: asenne, gynekologi, hoitokäytäntö, koulutus, osaaminen, puheeksi ottaminen, seksuaalilääketiede, seksuaaliongelma, terveyskeskuslääkäri

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# Abbreviations

| | |
|---|---|
| AAFP | American Academy of Family Physicians |
| ACOG | American College of Obstetricians and Gynecologists |
| AOR | adjusted odds ratio |
| BSSC | Brief Sexual Symptom Checklist |
| BETTER | 'Bring up, Explain, Tell, Time, Educate, Record' model |
| CI | confidence interval |
| CME | continuing medical education |
| CX | cervix |
| DSM | Diagnostic and Statistical Manual of Mental Disorders |
| EBCOG | European Board and College of Obstetrics and Gynecology |
| ECTS | European Credit Transfer and Accumulation System |
| EMAS | European Menopause and Andropause Society |
| ERVA | specific catchment area (*erityisvastuualue)* |
| ESMN | European Sexual Medicine Network |
| FIGO | International Federation of Gynecology and Obstetrics |
| FMA | Finnish Medical Association |
| FSD | female sexual dysfunction |
| FSDS-R | female sexual distress scale-revised |
| FSFI | female sexual function index |
| GP | general practitioner |
| ICD | International Classification of Diseases |
| ICSM | International Consultation in Sexual Medicine |
| ISSWSH | International Society for the Study of Women's Sexual Health |
| MHT | menopausal hormone therapy |
| N | number |
| N.D. | no date |
| NFOG | Nordic Federation of Obstetrics and Gynecology |
| NICE | National Institute for Health and Care Excellence |
| OB/GYN | obstetrician-gynecologist |
| PCP | primary care physician |

| | |
|---|---|
| PLISSIT | 'Permission, Limited Information, Specific Suggestions, and Intensive Therapy' model |
| QOL | quality of life |
| REF | reference |
| SAR | Sexual Attitude Reassessment |
| SD | standard deviation |
| SexMEdu | Sexual Medicine Education study |
| SEXOS | Sexual Observational Study |
| SGY | Finnish Society of Obstetrics and Gynecology (*Suomen Gynekologi-yhdistys*) |
| THL | Finnish Institute for Health and Welfare (*Terveyden ja hyvinvoinnin laitos*) |
| UK | United Kingdom |
| US | United States |
| VS | versus |
| WHO | World Health Organization |

# List of Original Publications

This dissertation is based on the following original publications, which are referred to in the text by their Roman numerals:

I Aromaa Anna, Kero Katja, Grönlund Jarna, Manninen Sanna-Mari, Riskumäki Markus, Vahlberg Tero, Polo-Kantola Päivi. Let's talk about sexuality – A web-based survey of self-reported competence in sexual problems among obstetrician-gynecologists in Finland. *Acta Obstetricia et Gynecologica Scandinavica*, 2023; 102(2): 190–199. https://doi.org/10.1111/aogs.14492.

II Aromaa Anna, Polo-Kantola Päivi, Manninen Sanna-Mari, Grönlund Jarna, Riskumäki Markus, Vahlberg Tero, Kero Katja. Attitudes and practice patterns of Finnish obstetrician-gynecologists regarding patients' sexual problems. *Maturitas*, 2024; 185: 107993. https://doi.org/10.1016/j.maturitas.2024.107993.

III Aromaa Anna, Kero Katja, Manninen Sanna-Mari, Vahlberg Tero, Polo-Kantola Päivi. Engagement with patients' sexual problems: a comparative study among general practitioners and obstetrician-gynecologists. *Menopause*, 2025; 32(8): 677–684. https://doi.org/10.1097/GME.0000000000002551.

IV Aromaa Anna, Manninen Sanna-Mari, Kero Katja, Vahlberg Tero, Polo-Kantola Päivi. Is education in sexual medicine sufficient? A survey of general practitioners and obstetrician-gynecologists. (Manuscript)

V Aromaa Anna, Manninen Sanna-Mari, Kero Katja, Vahlberg Tero, Polo-Kantola Päivi. Is addressing patients' sexual problems inconvenient? A study on barriers to physicians' self-reported competence. (Manuscript)

# 1 Introduction

Attitudes toward sexuality have become increasingly open in recent decades. Some argue that, particularly in Western societies, the media has contributed to an environment that is excessively sexualized. Nevertheless, sexuality is a fundamental aspect of human well-being and plays a significant role in overall health. Good sexual health is closely linked to quality of life (T.-J. Flynn & Gow, 2015).

Despite its importance, sexual health continues to be a neglected topic in health care, even though sexual problems are common (McCabe et al., 2016a). Physicians infrequently initiate discussions about sexuality during consultations, while patients may hesitate to bring up sensitive but distressing concerns. As a result, the underlying reason for the consultation may remain hidden, potentially leading to patients' repeated use of health care services. The literature identifies several barriers to initiating conversations about sexual problems from the perspectives of both physicians and patients. Common obstacles include embarrassment, lack of training, and time constraints (Alarcão et al., 2012; Carvalho et al., 2024; Zannoni et al., 2021). However, most patients consider sexual health important to them (Fairchild et al., 2016; K. E. Flynn et al., 2017) and expect physicians to initiate discussions about these issues (Canzona et al., 2016; Hubbs et al., 2019).

Physicians require sufficient education and skills to provide information about sexual problems and to treat their patients appropriately. However, the sexual medicine education provided in medical schools is fragmented and insufficient, and there is no internationally standardized sexual medicine curriculum (Endler et al., 2022; Prize et al., 2023; Shindel et al., 2016). This is also the case in Finland, where the content of sexual medicine education across medical specialties largely depends on the interests of individual faculty members.

Furthermore, no specific medical specialty is responsible for the treatment of sexual problems. Obstetrician-gynecologists (OB/GYNs) and general practitioners (GPs) are in a key position to address female sexual health (Hinchliff et al., 2020; Velten & Margraf, 2023; Vik & Brekke, 2017). However, only a few studies have assessed physicians' management of sexual problems and sexual medicine education —particularly in Scandinavia.

This study was conducted within the Sexual Medicine Education – Study group (SexMEdu), which was established to assess the state of sexual medicine education among health care professionals in Finland. The studies presented in the present thesis evaluate the competence, barriers, attitudes, practices, and previous sexual medicine education among Finnish OB/GYNs and compare the results with those of Finnish GPs. The findings aim to raise awareness among physicians about the importance of screening for sexual problems and encourage them to take a more active role in clinical approaches. Additionally, the results support the development of more structured care pathways for patients with sexual problems within the health care system and contribute to the improvement of sexual medicine education in undergraduate, specialization, and continuing medical education.

# 2 Review of the Literature

## 2.1 Sexuality and sexual health

The human sexual response is the result of complex interactions between physical, psychosocial, hormonal, and genetic factors. These factors can vary between cultures, individuals, and within the same person, depending on the time, environment, and circumstances. The World Health Organization (WHO) has been involved in sexual health since the 1970s, when an expert committee published the report "Education and Treatment in Human Sexuality" (World Health Organization, 1975). The definitions of sexuality and sexual health have changed over the years. The current definitions were developed in 2002 in Geneva, published in 2006 (World Health Organization, 2002), and updated in 2010 (World Health Organization, 2010, 2017) (**Figure 1**). Sexual rights protect all people's rights to fulfill and express their sexuality and enjoy sexual health.

| Sexuality | Sexual health |
|---|---|
| '**Sexuality** is a central aspect of being human throughout life and encompasses sex, gender identities and roles, sexual orientation, eroticism, pleasure, intimacy and reproduction. Sexuality is experienced and expressed in thoughts, fantasies, desires, beliefs, attitudes, values, behaviours, practices, roles and relationships. While sexuality can include all of these dimensions, not all of them are always experienced or expressed. Sexuality is influenced by the interaction of biological, psychological, social, economic, political, cultural, ethical, legal, historical, religious and spiritual factors.' | '**Sexual health** is a state of physical, emotional, mental and social well-being in relation to sexuality; it is not merely the absence of disease, dysfunction or infirmity. Sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination and violence. For sexual health to be attained and maintained, the sexual rights of all persons must be respected, protected and fulfilled.' |

**Figure 1.** Definitions according to the WHO (World Health Organization, 2017).

### 2.1.1 The significance of sexual health

Good sexual health is essential for the overall health and well-being of individuals, couples, and families, as well as for populations and countries. Sexual health includes sexual and gender identity, sexual expression, relationships, and pleasure. To attain and sustain it, people have the right to comprehensive information and access to sexual health care. Sexual health is closely related to reproductive health and to negative aspects, such as infections, unintended pregnancies and abortions, sexual violence, and harmful practices, such as female genital mutilation (World Health Organization, 2010)

In a study in the United States (US), 43% of women reported the high importance of sexual health to quality of life (QoL), younger women more so than older women (K. E. Flynn et al., 2017). In another US study among gynecological patients, the participants (83%) rated sexual health as important for overall health (Fairchild et al., 2016). In a study in the United Kingdom (UK), sexual behavior and QoL were positively associated (T.-J. Flynn & Gow, 2015).

Reliable and valid studies evaluating the association between QoL and sexual dysfunction are limited, partly because of methodological problems in examining these two multidimensional entities (Lim-Watson et al., 2022; Nappi et al., 2016). Two surveys, one conducted in Denmark and the other in Teheran, found that QoL measures were lower in patients with sexual dysfunction than in the control group (Hisasue et al., 2005; Naeinian et al., 2011). A Spanish study also revealed that sexual dysfunction had a negative impact on QoL, and vice versa (Cea García et al., 2022).

## 2.2 Sexual problems

### 2.2.1 Definitions

Traditionally, the etiology of sexual problems has been divided into psychogenic, organic, and mixed causes (**Figure 2**). The current view of etiology considers that the reasons behind sexual problems are multifactorial, with interactions between various factors (**Figure 3**). Sexual problems can be chronic or may develop after a period of normal functioning. The terms “sexual issue,” “sexual concern,” and “sexual problem” are unspecific and can be interpreted differently in different contexts. It is essential to distinguish a sexual problem as a clinical condition and sexual dysfunction that leads to patients’ distress. Female sexual dysfunction (FSD) refers to problems in the female sexual response cycle that reduce sexual satisfaction, may be associated with pain, and cause personal distress. FSD is an umbrella term that includes disorders related to sexual desire, arousal, orgasm, and pain. The first

model for diagnosing FSD was created in 1998 (Basson et al., 2000), as described in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) (Bell, 1994) and the International Classification of Diseases (ICD-10) (World Health Organization, 2018). In the ICD-10 criteria, sexual disorders are categorized into different sections of classification (F52.1–F52.9 and N94.1–N94.2) (**Figure 4**), including hypoactive sexual desire disorder, sexual aversion disorder, female sexual arousal disorder, lubrication difficulties, female orgasmic disorder, and pain disorder. In the ICD-10, section F52, the following general four criteria must be met:

1. The individual is unable to engage in sexual relations in the desired manner.
2. The disorder occurs frequently but not necessarily always.
3. The disorder has been present for at least six months.
4. The disorder is not solely due to another mental or behavioral disorder, physical illness (such as an endocrine disorder), or medication (Terveysportti, n.d.).

The ICD-11 criteria came into effect in the 2022 edition (World Health Organization, 2019), which includes a comprehensive chapter on the conditions related to sexual health (Kocharyan, 2024; Parish, Cottler-Casanova, et al., 2021) (**Figure 4**). However, the global implementation of ICD-11 is still pending. In addition, a newer version of the DSM, DSM-V, has been available since 2013, and its criteria of FSD state that the distress of dysfunction should be personal, and the symptoms must be present 75–100% of the time, with a minimum of six months duration (American Psychiatric Publishing, 2013). Also, dyspareunia and vaginismus are combined. In practice, in health care appointments with physicians, discussions on this topic encompass all types of conversations around sexuality (**Figure 5**).

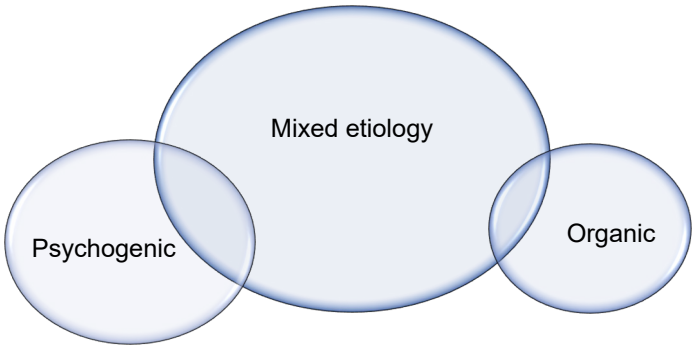


**Figure 2.** Traditional view of sexual problems. Modified from Hatzichristou et al., 2016.

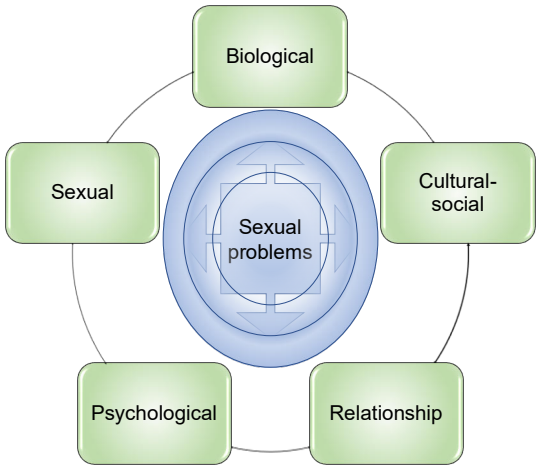


**Figure 3.** Current view of sexual problems as multifactorial. Modified from Hatzichristou et al., 2016.

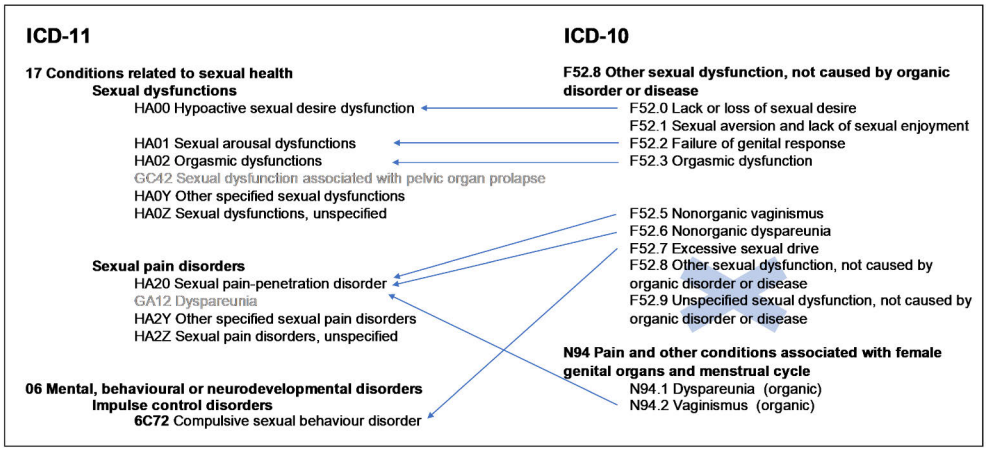


**Figure 4.** Sexual dysfunctions and sexual pain disorders in ICD-11 and ICD-10.

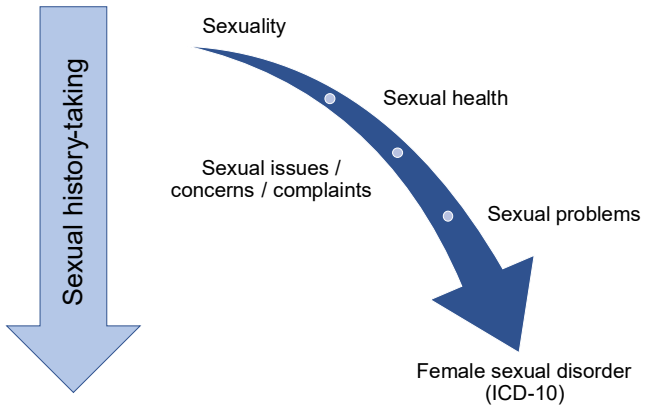


**Figure 5.** Sexual history-taking in clinical practice.

### 2.2.2 Prevalence

In the literature, the prevalence of sexual problems or diagnosed FSD varies greatly depending on methods used, scales, definitions, and severity. In a US study of 964 women seeking routine gynecological care, 99% reported one or more sexual concerns (Nusbaum et al., 2000). In an Indian study, 82% of patients attending an obstetrics and gynecology clinic reported some form of sexual problem (Singh et al., 2020). In addition, a systemic meta-analysis found a 70% prevalence of sexual dysfunction among pregnant women (Ouyaba & Kesim, 2023).

In a US study of 31,581 women, the prevalence of any sexual problem was 43%, while the prevalence of sexually related distress was 22%. Only 12% of the participants reported having both a sexual problem and sexually related personal distress, which was more common in women aged 45–64 years than in younger and older women (Shifren et al., 2008). In a German study of 800 women, 19% reported experiencing at least one distressing sexual problem in the past six months (Velten & Margraf, 2023). In a German study of 4,955 adults, the prevalence of one or more sexual problems among women was 46%, but only 18% were diagnosed with FSD according to the ICD-11 criteria (Briken et al., 2020). In a cross-cultural study (including Norway, Denmark, Belgium, and Portugal), sexual dysfunctions were frequent (24–50%); however, many women experienced only mild or no distress in relation to these difficulties (49–73%) (Graham et al., 2020).

A study conducted in Finland of 3,704 women found a 34% prevalence of FSD in premenopausal women aged 19–49 years, with desire disorders, followed by orgasmic disorders, being the most common (Witting, Santtila, Varjonen, et al., 2008). In other studies conducted in the Nordic countries, including a Swedish study, 53% of women aged 19–40 reported at least one sexual dysfunction, with low sexual interest commonly reported (Ljungman et al., 2020). In a cross-sectional Danish study of 4,415 Danes, 69% of women reported sexual difficulties; however, only 11% reported experiencing frequent difficulty as a problem (Christensen et al., 2011).

Regarding vulvodynia, the prevalence of severe and prolonged dyspareunia in a Swedish study was 9% (Danielsson et al., 2003). Similarly, the prevalence of vulvodynia in a US study was 8%, but only 1.4% of those had been diagnosed (Reed et al., 2012). According to the consensus statement from the Fourth International Consultation on Sexual Medicine (ICSM), and based on previous literature, the lifetime prevalence of vulvodynia in reproductive-aged women in the general population has been estimated to range from 10% to 28% (Pukall et al., 2016).

Sexual activity and function change with age, particularly in relation to menopause. A Greek study found an association between climacteric symptoms and FSD in postmenopausal women (43–75 years) (Armeni et al., 2023). However, previous literature presents ambiguous results regarding the association between age

and the prevalence of FSD. In a recent study of 381 postmenopausal women aged 45–83 years, the prevalence of FSD was 38% (Romano Marquez Reis et al., 2022). A meta-analysis of 135 studies of premenopausal women showed a similar prevalence of 41% (McCool, Zuelke, et al., 2016). In a Japanese study, the prevalence of FSD was found to increase significantly with age, ranging from 13–30% among women in their 30s to 32–58% among women in their 60s (Hisasue et al., 2005). However, in a longitudinal study in Australia, the sexual function scores lowered over the years, but they were stable for women maintaining sexual activity, despite the fact that frequency of sexual activity decreased and partner difficulties increased (Lonnèe-Hoffmann et al., 2014).

When assessing prevalence, it is important to differentiate between a sexual problem itself and sexual dysfunction that causes distress to the patient. Correspondingly, all diagnostic criteria include a requirement for the perceived distress of the patient. The consensus statement from the Fourth ICSM indicates that the prevalence of women who report at least one sexual problem ranges from approximately 40% to 50%, regardless of the method used, irrespective of age. Desire and arousal dysfunctions are the most frequent issues (McCabe et al., 2016a). In summary, while the prevalence of sexual problems is relatively high, the prevalence of clinically significant FSD is considerably lower.

#### 2.2.2.1 Chronic diseases and prevalence of sexual problems

Many diseases and medical conditions can lead to sexual problems. For example, compared to the general population, sexual dysfunctions are more commonly reported among patients with attention-deficit/hyperactivity disorder (Soldati et al., 2020), depressive disorders (Gonçalves et al., 2023), epilepsy (Atif et al., 2016), multiple sclerosis (Salari et al., 2023), cardiovascular diseases (Byrne et al., 2017; Cipriani & Simon, 2022; Van Cauwenberghe et al., 2022), diabetes (Flotynska et al., 2019; Pontiroli et al., 2013), polycystic ovary syndrome (Mojahed et al., 2023), obesity (Ferrández Infante et al., 2023), and inflammatory bowel disease (Nardone et al., 2025).

Whether sexual problems are caused by a disease itself, its treatment, or both is often uncertain and controversial. Medications (Conaglen & Conaglen, 2013; Gueldini de Moraes et al., 2019), especially antidepressants (Baldwin et al., 2015; Peleg et al., 2022; Taylor et al., 2013) and antipsychotic drugs (Korchia et al., 2023; Schmidt et al., 2012), are known to cause sexual dysfunction. Other medications, such as those for cardiovascular diseases, epilepsy, and hormone-related conditions (e.g., antiandrogens), may also have sexual side effects (Carey, 2006; Lou et al., 2023). Therefore, sexual problems should be assessed, and patients should be

informed about potential sexual side effects during check-ups for chronic diseases and when evaluating medications, both on the first visit and during follow-ups.

### 2.2.3 Treatment of female sexual dysfunction

The treatment of FSD is multifactorial. All physicians should be able to provide basic counseling (education, normalization, and advice on the use of lubricants), which is considered the first-line treatment of sexual problems (Nappi et al., 2022). Both pharmacological and non-pharmacological options are available and should be used together when appropriate. Psychosocial aspects are risk factors for sexual dysfunction; therefore, patients can benefit from psychosocial evaluation and treatment in addition to any necessary medications (McCabe et al., 2016b). Furthermore, healthy lifestyles are recommended, as low physical activity, smoking, and alcohol consumption are risk factors for sexual dysfunction, whereas regular physical activity and a healthy diet are associated with a lower risk of FSD (Allen & Walter, 2018; El Hajj et al., 2020).

There is a limited selection of medications for FSD, as well as limited knowledge about available medications. For instance, medications for hypoactive sexual desire disorder, such as flibanserin (Dhanuka & Simon, 2015) or bremelatonin (Dhillon & Keam, 2019; Simon et al., 2019), which are used in some countries, are not available in Finland. Additionally, the International Society for the Study of Women's Sexual Health (ISSWSH) has published a clinical practice guideline about testosterone therapy for the treatment of hypoactive sexual desire disorders in women (Parish, Simon, et al., 2021). However, the use of transdermal testosterone in women is considered off-label in Finland. A Cochrane review (of 35 studies) concluded that estrogen-only therapy probably improved sexual function; however, the effects of combined menopausal hormone therapy (MHT, including both estrogen and progesterone/progestin) remained uncertain for postmenopausal women (Lara et al., 2023). Another systemic review suggested that hormone therapy may slightly improve sexual functioning (Meziou et al., 2023). Nevertheless, MHT and local estrogen therapy can improve several aspects of well-being, particularly by maintaining healthy vaginal mucosa, alleviating atrophy, and improving sleep quality. These improvements may, in turn, enhance sexual function, as poor sleep quality has been associated with FSD (Kling et al., 2021).

## 2.3 Management of sexual problems in health care

Several different health care organizations have developed recommendations for addressing patients' sexual issues. In the 1970s, the WHO recommended that health care systems should address patients' sexual concerns and provide education on

sexual health (World Health Organization, 1975). This approach is reflected in the model "Permission, Limited Information, Specific Suggestions, and Intensive Therapy" (PLISSIT model) developed by Annon in the 1970s (Annon, 1976). The WHO's recommendations on sexual health have been regularly updated (World Health Organization, 2002, 2010, 2017).

In 2019, the ISSWSH developed a process of care for clinicians that outlines recommendations for the assessment and treatment of female sexual problems (Parish et al., 2019). This involves a biopsychosocial approach to managing female sexual problems, recognizing the interaction of biological, psychological, and social factors. The guidelines stress regular follow-ups, outcome monitoring, and a patient-centered approach that respects individual preferences and promotes shared decision-making.

Additionally, the American College of Obstetricians and Gynecologists (ACOG) recommends that OB/GYNs should initiate a clinical discussion of sexual function during routine care visits (ACOG, 2019). The American Academy of Family Physicians (AAFP) states that the assessment and screening of sexual concerns should be part of routine health care (Reno et al., 2024). Likewise, the European Board and College of Obstetrics and Gynecology (EBCOG) recommends that women should have the opportunity to address sexual problems alongside matters related to contraception and general sexual health (EBCOG, 2014). In addition, the European Menopause and Andropause Society (EMAS) has published a guideline regarding sexual health and well-being during menopause (Paschou et al., 2024). The National Institute for Health and Care Excellence (NICE) emphasizes physicians asking their patients about sexual history and focuses on reducing patients' barriers to accessing sexual health services (NICE, 2019).

In Finland, the Ministry of Social Affairs and Health published the first national action program for the promotion of sexual and reproductive health for the years 2007–2011 (Rousku, 2007). The program consisted of 14 thematic entities, including the classification of sexual health counseling into basic services, preventive work, and medical treatment. The program stated that each health care center should have access to an employee who has completed sexual counselor training, and that hospital districts have employees with specialized training in sexual medicine. Hospital districts should be responsible for coordinating sexual and reproductive health promotion. In updating the program, the Finnish Institute of Health and Welfare (Terveyden ja hyvinvoinnin laitos, THL) declared a Sexual and Reproductive Health Action Plan to provide guidance for the integration of sexual and reproductive health into health care services in the years 2014–2020 (Klemetti & Raussi-Lehto, 2013). The action plan presented over 100 goals for the promotion of sexual and reproductive health to be reached by 2020. To achieve these goals, the action plan proposed over 200 measures—for example, that discussions of sexuality

become a routine part of health care services and that service providers integrate counseling related to sexual and reproductive health for individuals with chronic diseases.

The management of sexual problems in health care can be approached from different perspectives (**Figure 6**). In a systemic review examining how health care professionals assess patients' sexuality, the majority of studies focused on nurses, with only 14% involving physicians (McGrath et al., 2021). The analysis revealed that only 14% of health care professionals routinely assess patients' sexuality. In an Indian study, 11% of physicians (OB/GYNs, urologists, GPs, general medical officers, and psychiatrists) reported routinely screening for FSD (Kaundal et al., 2024). OB/GYNs and GPs are often the first physicians with whom female patients consult regarding their sexual problems (Berman et al., 2003; Hinchliff et al., 2020; Shifren et al., 2009; Velten & Margraf, 2023; Vik & Brekke, 2017). OB/GYNs agree on the importance of managing patients' sexual problems in health care provision (Carvalho et al., 2024; Kottmel et al., 2014; Pauls et al., 2005; Roos et al., 2009), as do GPs (Byrne et al., 2010; Gott et al., 2004; Humphery & Nazareth, 2001). Previous studies regarding physicians' perspectives about the management of sexual problems in health care are presented in **Table 1**.

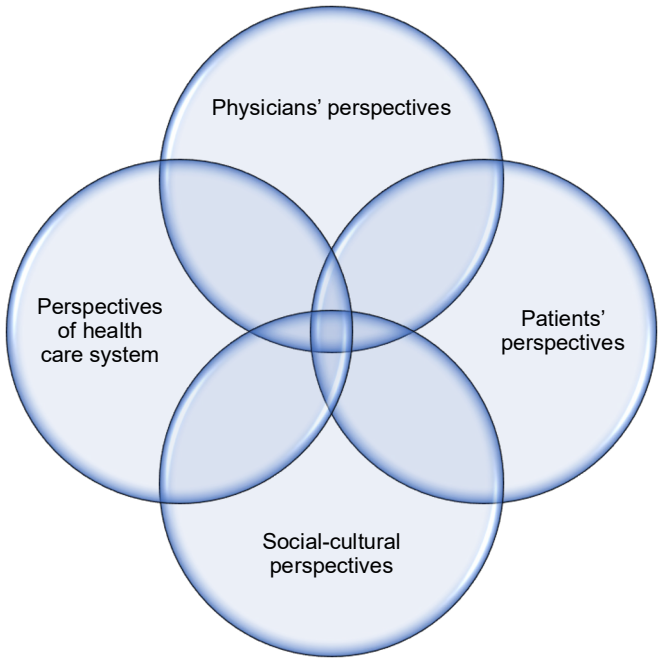


**Figure 6.** Views on sexual problems.

**Table 1.** Previous studies of physicians regarding the management of sexual problems in health care.

| Year(s), country, reference | Population, recruitment | Method(s) | Outcome | Main results |
|---|---|---|---|---|
| 1999; United Kingdom; Humphery & Nazareth, 2001 | *n* = 133 GPs (F55/M78); via the Camden and Islington Health Authority List; RR61% | A cross-sectional study, a paper questionnaire by mail | Management of sexual dysfunction | 87% categorized as medium priority, 25% as high priority, and 18% as low priority; 25% referred to secondary care; main barriers: lack of time and training, patient embarrassment, and different genders |
| 2001–2002; United Kingdom; Gott et al., 2004 | *n* = 22 GPs (F9/M13) and *n* = 35 (F35/M0) practice nurses; via mail within Sheffield; RR46% | A qualitative study, semi-structured face-to-face interviews | Barriers to discussions of sexual issues | Sexual issues are problematic because of their sensitivity and complexity and the constraints of time and expertise; barriers regarding opposite gender, ethnic minority groups, older, and non-heterosexual patients |
| 2003–2004; United States and Canada; Pauls et al., 2005 | *n* = 471 members (F170/M301)(physicians incl. residents) of American Urogynecologic Society, urogynecologists; RR49% | A cross-sectional study, a paper questionnaire by mail | Practice patterns regarding FSD | 13% used questionnaire for screening; 98% saw screening as important; 77% screened regularly; main barrier: lack of time; 49% underestimated the prevalence of FSD; 50% stated the training regarding FSD to be unsatisfactory |
| 2004; United States; Bachmann, 2006 | *n* = 1,946 physicians and other health professionals; attendees at the annual meetings (ACOG, ENDO, NAMS, ASRM); 13% of tot. attendees | A cross-sectional study, a self-reply questionnaire completed during the meeting | Knowledge, attitudes, and practices: prevalence of FSD; sexual function screening; barriers; effectiveness of treatments; referral patterns | 60% estimated 1/3–2/3 of their patients to have FSD; 58% initiated the discussion of FSD with 1/4 or less patients; main barriers: limited time and training, embarrassment, and absence of effective treatment; 60% rated knowledge and comfort with FSD fair or poor |
| 2003–2004; United States; Wimberly et al., 2006 | *n* = 416 physicians (F207/M209) (GP, internist, OB/GYN, pediatrician, other); via the Georgia Board of Medical Examiners; RR25% | A cross-sectional study, a paper questionnaire by mail | Practices of sexual history-taking, training, and comfort | 56% were adequately trained; 79% felt comfortable; 58% routinely asked about sexual activity; 76% asked about sexual history if they felt it relevant; females > males |

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| 2006;<br>United States;<br>Harsh et al., 2008 | *n* = 53 physicians and residents (F20/M33); working in a primary care clinic; via email; RR46% | A cross-sectional study, a web-based questionnaire | Attitudes and practices regarding hypoactive sexual desire disorder | 90% reported little confidence in diagnosing; 90% did not screen; 98% did not prescribe medication; no gender differences |
| 2006;<br>United Kingdom;<br>Roos et al., 2009 | *n* = 95 members (F35/M57) (specialists and residents) of the British Society of Urogynecology, urogynecologists; RR67% | A cross-sectional study, a web-based questionnaire | Practice patterns regarding FSD | 13% used questionnaire for screening; 98% saw screening as important; 47% never screened, 50% screened most of the time; main barriers: lack of time; 75% underestimated the prevalence of FSD; 22% felt their training in FSD was adequate |
| 2008;<br>United States;<br>Abdolrasulnia et al., 2010 | *n* = 248 OB/GYNs (F117/M140), *n* = 257 GPs (F77/M180); via mail and fax from the American Medical Association database; RR9% | A cross-sectional study, a web-based or paper questionnaire | Practice patterns, perceptions, and barriers regarding the management of FSD | 21% of OB/GYNs and 38% of GPs were not all confident; main barriers: lack of time and effective therapies |
| 2008–2009;<br>Ireland;<br>Byrne et al., 2010 | *n* = 61 GPs (F19/M40); a stratified random sample; RR27% | A cross-sectional study, a paper questionnaire by mail | Practice, knowledge, awareness, confidence, barriers, and services | 70% rarely or never discussed sexual problems with coronary patients; 100% the topic is important; main barriers: lack of time and training and feeling the patient was not ready; none followed guidelines in dealing with sexual problems |
| 2008–2009;<br>United States;<br>Sobecki et al., 2012 | *n* = 1,154 OB/GYN specialists (F534/M613); a population-based sample; RR66% | A cross-sectional study, a paper questionnaire by mail | Practices of communication with patients about sexuality | 63% routinely assessed sexual activities, 40% regarding problems, 29% regarding sexual satisfaction; females > males; young > older |
| 2011;<br>Portugal;<br>Alarcão et al., 2012 | *n* = 50 GPs (F30/M20); working in primary health in the Lisbon region; RR74% | A cross-sectional study, a paper questionnaire by mail | Knowledge, perceptions, training, practices, bringing up sexual problems, treatment, and use of guidelines | 16% asked about sexual problems; main barriers: lack of time, experience, and training; 92% expressed a need for training; competence in discussing was rated higher than competence in treating |
| 2010–2011;<br>Switzerland;<br>Kottmel et al., 2014 | *n* = 341 OB/GYN specialists (F137/M201); all German-speaking Swiss OB/GYNs via mail; RR40% | A cross-sectional study, a paper questionnaire by mail | Attitudes and practices regarding sexual health and problems | 8% routinely explored sexual issues; main barriers: a different problem was more important and lack of time; 85% proposed referrals to specialized colleagues |

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| 2011;<br>Portugal;<br>Ribeiro et al., 2014 | *n* = 50 GPs (F30/M20); working in primary health care in the Lisbon region; RR74% | A cross-sectional study, a paper questionnaire by mail | Knowledge, perceptions, training, practices, bringing up sexual problems, treatment, and use of guidelines | 16% asked about sexual problems; main reasons to ask: diabetes, prescription of medication with adverse effects on sexuality, and family planning; 90% open to conversation; diagnose by own criteria; 76% did not consult any guideline |
| 2014–2015;<br>Germany;<br>McCool et al., 2016 | *n* = 235 OB/GYN specialists (F143/M90); all Bavarian OB/GYNs working in outpatient care; RR18% | A cross-sectional study' a paper questionnaire by mail and a web-based survey option | Perspectives about diagnosing and treating FSD | Main barriers: long waiting times for referrals and lack of time and training; 21% addressed sexual function routinely; 15% made referrals to specialists in sexual medicine; 89% rated their training as less than satisfactory or poor; 26% reported good competence in handling sexual dysfunctions |
| N/A;<br>United States (10% in 10 countries);<br>Bedell et al., 2017 | *n* = 124 professionals treating cx cancer (81% gynecologists) (N/A); members of the Society of Gynecologic Oncology; RR7% | A cross-sectional study, an electronic questionnaire | Opinions and practices | 23% received training about sexual dysfunction; 72% were interested in receiving education; providers with over 10 years' experience were more likely to agree that 'sex is private' |
| 2017;<br>Norway;<br>Vik & Brekke, 2017 | *n*= 22 GPs (F13/M9); working in the southwestern part of Norway, via email; RR73% | A cross-sectional explorative study; GPs completed a questionnaire after each working day | Percentage of consultations dealing with sexual concerns during three working days | 4% of consultations regarded sexuality, with no associations between GP characteristics; in 75% of the consultations, the patient brought up the problem; in 34%, the sexual problem was the only topic brought up |
| 2015;<br>Germany;<br>Schloegl et al., 2017 | *n* = 955 specialists and residents in urology (F203/M753); members of the German Society of Urology/Andrology; RR16% | A cross-sectional study, a paper questionnaire by mail and partly by email | Education, barriers, and confidence | 89% felt confident, male > female; main barriers: lack of time, inadequate financial compensation, and lack of necessity; female > male |
| N/A;<br>Germany;<br>Zannoni et al., 2021 | *n* = 16 GPs (F7/M9); via letters to GPs involved in medical education; RR59% | A qualitative study, semi-structured face-to-face interviews | Management of sexual problems | Most GPs did not routinely ask about sexual problems; almost all tended to diagnose individually without following a standardized approach; medication was offered as the main treatment; most reported a lack of knowledge and requested training |

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| 2017–2018<br>Spain;<br>Leyva-Moral et al., 2021 | *n* = 93 physicians and *n* = 85 nurses working in primary care centers (F141/M37); via email to staff; predefined sample size design | A cross-sectional, multi-center study, an electronic questionnaire | Attitudes and beliefs | Half believed they should manage sexual health in primary care, while a third disagreed; nurses more often reported receiving sexual health questions and believed they had enough knowledge; main barriers: lack of time and patients are not comfortable, 83% felt they required more training |
| 2020;<br>China;<br>Li et al., 2021 | *n* = 1,205 OB/GYNs specialists (F1091/M114) who provided direct patient care; a quota sampling of hospitals; RR40% | A cross-sectional study, an electronic questionnaire | Knowledge, attitudes, and practice patterns regarding female sexual health | 20% routinely assessed sexual activities often or almost every time; 30% had often or almost every time confidence in managing patients' sexual issues; main barriers were lack of knowledge, experience, and effective treatment |
| 2022;<br>China;<br>Tang et al., 2023 | *n* = 759 urology specialists (F10/M749); a quota sampling of hospitals; RR45% | A cross-sectional study, an electronic questionnaire | Knowledge, attitudes, and practice patterns regarding male and female sexual dysfunctions | 69% had positive attitudes toward managing male and female sexual dysfunctions; 36% were confident regarding female sexual issues; main barriers: lack of knowledge and experience |
| N/A;<br>India;<br>Kaundal et al., 2024 | *n* = 513 physicians (F428/M85) (urologist, GP, medical officer, OB/GYN, psychiatrist); a snowball sampling method via social media | A cross-sectional study, a web-based questionnaire | Knowledge, perceptions, practices, and barriers regarding FSD | 79% were comfortable in starting a conversation, 53% in making a diagnosis, 51% in providing counseling; 11% routinely screened; main barriers: lack of time, training, and effective treatment, and patient discomfort; 94% had not received training to manage FSD |
| 2021–2022;<br>Brazil;<br>Carvalho et al., 2024 | *n* = 70 OB/GYN specialists (F56/M14); recruitment through gynecology associations and social networks; non-probabilistic sampling | A cross-sectional study, an electronic questionnaire | Knowledge, practices, and barriers regarding patients' sexual issues | Knowledge reported as at a high level; 49% addressed sexuality often, 41% frequently, female > male, knowledge ↑, frequent addressing ↑; main barriers: time limitation, discomfort of the patient and lack of training; 26% used questionnaires, etc. |

| | | | | |
|---|---|---|---|---|
| 2020–2021;<br>United States;<br>Lee et al., 2024 | *n* = 189 gynecologic care providers (F162/M25)(physicians, incl. residents); via email nationwide | A cross-sectional study, a web-based questionnaire | Providers' sexual health, experience, and discomfort and their influence on their management of patients' sexual health | 91% had never been asked about sexual health; 44% frequently brought up sexual problems with patients; 51% were comfortable with managing sexual issues; were comfortable with their own sexuality, had an absence of sexual problems, and their own sexual satisfaction correlated with their comfort in discussing this topic with patients |
| 2024;<br>Israel;<br>Sgayer et al. 2025 | *n* = 504 OB/GYN specialists and residents (F285/M215); via social media platforms, websites, and web forums | Across-sectional study, a web-based questionnaire | Practices, attitudes, and barriers in relation to female sexual health | 19% routinely initiated discussions about sexual health; main barriers were limited clinic time, insufficient knowledge of treatment options, a lack of strategies for initiating discussions, and discomfort; 43% rated their training as poor regarding discussing sexual dysfunctions, and 60% rated it poor regarding treating sexual dysfunction |

cx, cervix; N/A, not available; F, female; FSD, female sexual dysfunction; GP, general practitioner; M, male; *n*, number; OB/GYN, obstetrician-gynecologist; RR, response rate; tot, total

### 2.3.1 Perspectives of obstetrician-gynecologists on the management of patients' sexual problems

Studies on OB/GYNs' management of patients' sexual problems are sparse. In previous studies, 49% of American OB/GYNs (Pauls et al., 2005) and 75% of British OB/GYNs (Roos et al., 2009) estimated the prevalence of FSD in their patient populations to be less than 30%. The frequency with which OB/GYNs address sexual issues varies significantly due to differences in study methodologies and terminologies, ranging from general discussions of sexuality to specific screenings of FSD (Kottmel et al., 2014; Li et al., 2021; McCool, Apfelbacher, et al., 2016; Pauls et al., 2005; Roos et al., 2009; Sgayer et al., 2025; Sobecki et al., 2012; Wimberly et al., 2006). Only 8% of Swiss gynecologists (Kottmel et al., 2014), 19% of Israeli OB/GYNs (Sgayer et al., 2025), 20% of Chinese OB/GYNs (Li et al., 2021), and 21% of German OB/GYNs (McCool, Apfelbacher, et al., 2016) routinely brought up sexual function, whereas 63% of US OB/GYNs assessed patients' sexual activities, and 40% routinely asked about sexual problems (Sobecki et al., 2012). Furthermore, 50% of British urogynecologists (Roos et al., 2009) and 77% of US urogynecologists (Pauls et al., 2005) regularly screened for FSD. In a Brazilian study of OB/GYNs, 49% reported addressing patients' sexuality very often and 41% frequently (Carvalho et al., 2024). Furthermore, a high level of knowledge about sexual health was positively correlated with a higher frequency of addressing sexual health in clinical practice.

Mixed results have been reported in studies focusing on the association between OB/GYNs' gender and age with regard to bringing up sexual issues as part of their routine clinical work. In some studies, female OB/GYNs (Carvalho et al., 2024; McCool, Apfelbacher, et al., 2016; Sobecki et al., 2012; Wimberly et al., 2006) were found to be more likely to ask about sexual issues than males. In a US study, younger OB/GYNs, compared to those aged 60 years and older, reported more routinely asking about patients' sexual orientation or identity (Sobecki et al., 2012). However, other studies have found no differences in the frequency of addressing sexual issues based on OB/GYNs' gender (Pauls et al., 2005; Roos et al., 2009) or age (Pauls et al., 2005; Roos et al., 2009; Wimberly et al., 2006).

### 2.3.2 Perspectives of general practitioners on the management of patients' sexual problems

In the literature, two terms are used to refer to primary care physicians: primary care physicians (PCPs) and GPs. The term PCP is commonly used in the US, whereas GP is more widely used in Europe. For consistency, this thesis will use the term GP to refer to both groups of physicians.

Most UK GPs were happy to address sexual issues when patients brought them up, but they admitted to not routinely initiating discussions (Gott et al., 2004). Similarly, in a German study and an Irish study, GPs reported not asking patients regularly about sexual problems, which were instead raised by patients (Byrne et al., 2010; Zannoni et al., 2021). In a study of Portuguese GPs, only 16% of participants reported actively asking patients about sexual problems, with younger GPs doing this more often than older GPs (Alarcão et al., 2012; Ribeiro et al., 2014). A majority of American GPs (90%) reported not screening for FSDs, with no differences among the genders (Harsh et al., 2008). Furthermore, Norwegian GPs reported that less than 5% of all consultations concerned sexual health. Of these, 75% of the patients brought up the concern (Vik & Brekke, 2017). There were no associations between the characteristics of the GPs (age, gender, specialization) or their number of consultations and how frequently they dealt with sexual concerns. Similarly, in an Irish study, there was no association with GPs' gender in terms of how frequently sexual issues were addressed during appointments (Byrne et al., 2010).

Studies comparing the management of sexual problems with regard to physician specialty are limited. In a US study of 416 physicians (family practice, internal medicine, OB/GYN, pediatrics, and others), GPs reported a lower frequency of taking a sexual history compared to OB/GYNs (Wimberly et al., 2006). Further, in a US study of 257 GPs and 248 OB/GYNs, GPs reported more barriers to initiating dialogues about sexual health than OB/GYNs (Abdolrasulnia et al., 2010).

### 2.3.3 Physicians' confidence and barriers in managing patients' sexual problems

Depending on their cultural or professional backgrounds, physicians' confidence and comfort in managing patients' sexual problems vary. In a Chinese study, only 30% of OB/GYNs reported having confidence in managing patients' sexual issues (Li et al., 2021). In addition, most Spanish GPs felt uncomfortable discussing sexual health topics with patients (Leyva-Moral et al., 2021), and 90% of US GPs reported having only a little confidence in making FSD diagnoses, with no gender differences (Harsh et al., 2008). According to a Portuguese study, GPs reported feeling more competent in discussing sexual problems than in treating them (Alarcão et al., 2012). In addition, in a US study, 21% of OB/GYNs and 38% of GPs reported that they were not at all confident in treating female sexual problems (Abdolrasulnia et al., 2010). A review of 14 studies worldwide stated that health care professionals feel unconfident and incompetent in providing sexual health care to patients with disabilities (Craig et al., 2022). In an Indian study, physicians (OB/GYNs, urologists, GPs, general medical officers, and psychiatrists) reported good confidence regarding the management of FSD (51–79%) (Kaundal et al., 2024). Also, in a Brazilian study,

OB/GYNs self-reported a high level of general knowledge about sexual health (Carvalho et al., 2024).

Confidence in treating sexual issues has also been assessed among medical students and residents. Only half of the Malaysian medical students assessed felt comfortable taking sexual histories from their patients, with males reporting that they found this easier and more frequently rating themselves as having adequate skills compared to females (Ariffin et al., 2015). In addition, in a study among European residents (psychiatry, endocrinology, obstetrics and gynecology, and urology), males felt more confident than females in dealing with patients with sexual dysfunction (Kristufkova et al., 2018). In a US study, OB/GYN residents reported mostly feeling comfortable taking sexual histories and providing counseling, with no differences regarding residents' basic characteristics (Worly et al., 2021). Similarly, in another US study, OB/GYN and urology residents reported confidence in managing patients' sexual issues, whereas residents in other specialties did not (Beebe et al., 2021).

Several barriers hinder physicians from bringing up sexual problems with their patients. The identified barriers reported by OB/GYNs include a lack of time and education (Carvalho et al., 2024; Kaundal et al., 2024; Li et al., 2021; McCool, Apfelbacher, et al., 2016; Pauls et al., 2005; Roos et al., 2009; Sgayer et al., 2025). In the studies of GPs, personal attitudes and beliefs, as well as a lack of time, education, and experience, were reported as barriers to raising sexual problems with patients (Alarcão et al., 2012; Byrne et al., 2010; Gott et al., 2004; Humphery & Nazareth, 2001; Kingsberg et al., 2019; Zannoni et al., 2021). Additionally, physicians' embarrassment (Bachmann, 2006), patients' discomfort (Bachmann, 2006; Carvalho et al., 2024; Kaundal et al., 2024), and the absence of effective treatment options (Bachmann, 2006; Kaundal et al., 2024; Li et al., 2021; Pauls et al., 2005) have been found to be obstacles to discussing sexual issues. Furthermore, physicians' personal sexual histories or attitudes may pose an obstacle to bringing up sexual problems with patients (Lee et al., 2024). Regarding the predictors of barriers, a Portuguese study found no association with GPs' gender. Instead, years of practice and experience treating patients with sexual problems lowered the barriers (Alarcão et al., 2012). The variety of barriers identified in the literature that hinder physicians from addressing sexual problems with patients are presented in **Figure 7**.

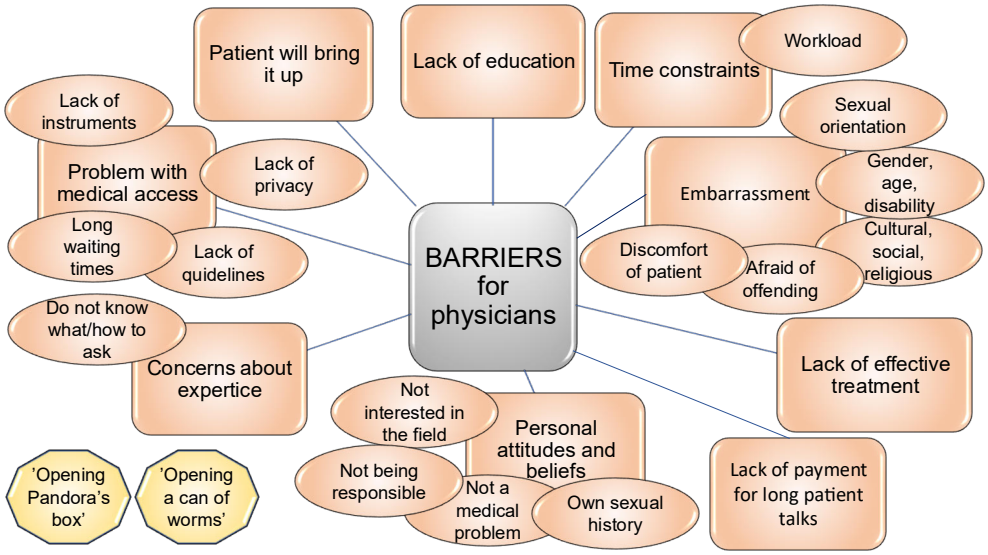



**Figure 7.** Physicians' barriers to bringing up sexual problems with patients.

### 2.3.4 Physicians' practice patterns in health care

To ease the assessment and management of patients' sexual problems, many models have been developed over the past few decades. The models Permission, Limited Information, Specific Suggestions, and Intensive Therapy (PLISSIT) (Annon, 1976), **Figure 8**, and Bring up, Explain, Tell, Time, Educate, Record (BETTER) (Mick et al., 2004), **Figure 9**, are earlier well-known models. It is recommended that all health care professionals utilize the first two steps of the PLISSIT model. This counseling model was found to be effective, useful, simple, and cost-effective in a systemic review study that included 14 original studies with different patient groups (Tuncer & Oskay, 2022). In addition, the PLISSIT model has been shown to be easy to use as part of medical sexual education (Ross et al., 2021). The BETTER model was introduced as a structured approach to addressing sexual issues with patients in an oncology setting, but its use has expanded (Quinn & Happell, 2012). In two comparative randomized trials with patients after childbirth (Karimi et al., 2021) and patients with breast cancer (Shalamzari et al., 2024), the BETTER model was considered more effective than the PLISSIT model.

The ICSM has developed a practical algorithm for the management of sexual dysfunctions for health care providers (**Figure 10**) (Hatzichristou et al., 2004, 2016). In addition, in 2019, the ISSWSH created a process of care for clinicians that outlines recommendations for the identification and management of female sexual problems (Parish et al., 2019). These recommendations apply to clinicians at any level of competence in sexual medicine.

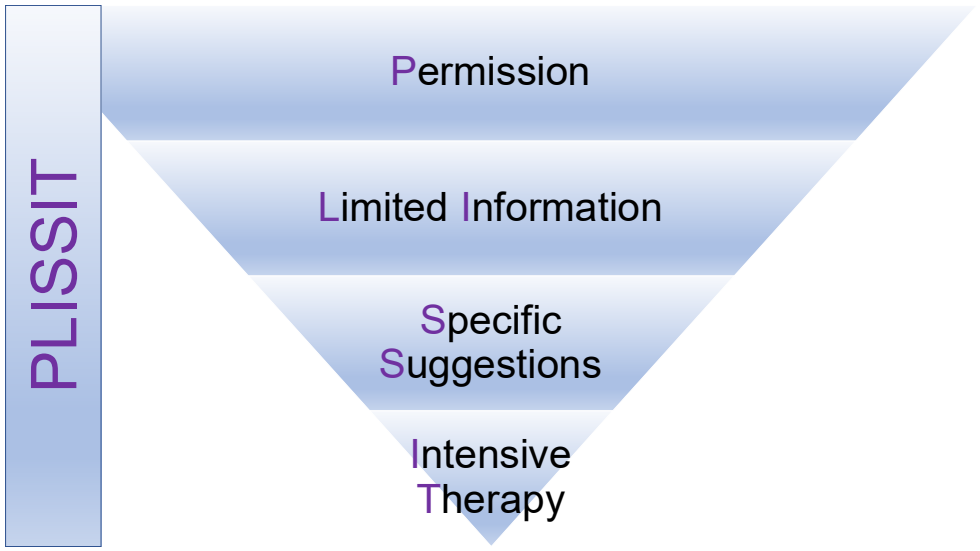



**Figure 8.** PLISSIT model. Modified from the original model (Annon, 1976).

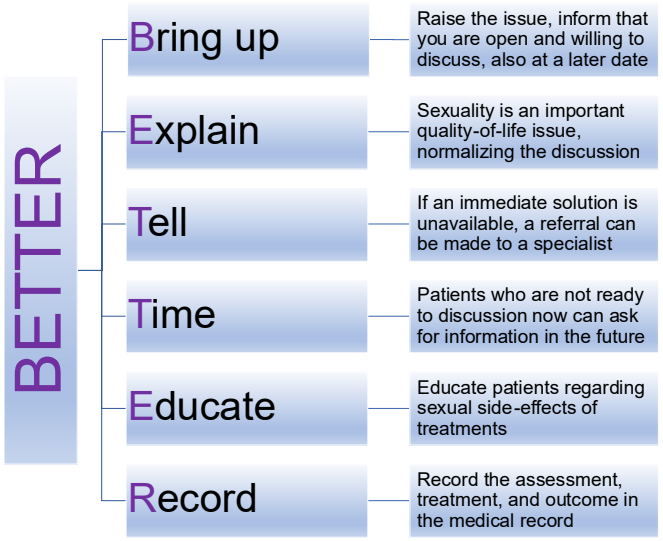



**Figure 9.** BETTER model. Modified from the original model (Mick et al., 2004).

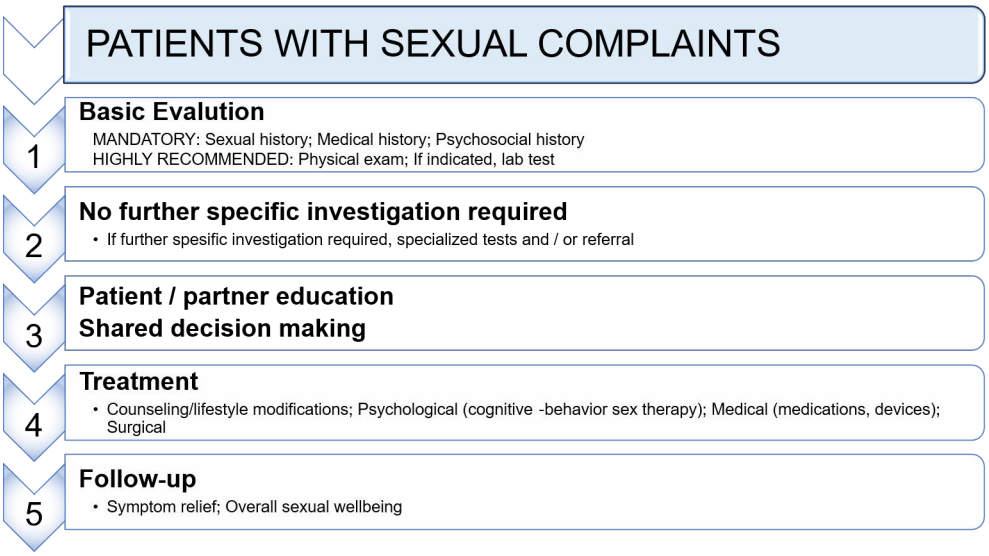



**Figure 10.** Algorithm for the management of sexual dysfunctions. Modified from the recommendations of the ICSM (Hatzichristou et al., 2016).

Both open-ended questions and specific questionnaires can be used to screen for sexual problems. The most common instrument for evaluating sexual function in women is the Female Sexual Function Index (FSFI), developed in 2000 (Rosen et al., 2000). This is a 19-item multidimensional self-report questionnaire consisting of six categories (desire, arousal, lubrication, orgasm, satisfaction, and pain), with questions based on the diagnostic criteria in the DMS-IV (Bell, 1994) and ICD-10 (World Health Organization, 2018). The FSFI questionnaire evaluates symptoms during the last four weeks, and each of the six domains is scored on a scale of 0–5, with the supplementary option "no sexual activity," with higher scores indicating better sexual function. The optimal and widely used cut-off point score is 26.55 out of a maximum 36 score (Wiegel et al., 2005). The FSFI questionnaire has been translated into many languages and validated in several countries, including Finland (Witting, Santtila, Jern, et al., 2008). In 2010, shorter questionnaires for screening FSD were developed, including a 6-item version of the FSFI (FSFI-6) (Isidori et al., 2010) and the Brief Sexual Symptom Checklist (BSSC), consisting of four questions (Hatzichristou et al., 2010). These tools may offer more practical applications for clinical work.

A systemic review that included 83 studies (FSFI-19 75 studies, FSFI-6 five studies, and modified FSFI three studies) concluded that both FSFI instruments are effective for screening FSD; however, more research is needed to determine validity, reliability, and responsiveness (Neijenhuijs et al., 2019). Another frequently used questionnaire is the Female Sexual Distress Scale-Revised (FSDS-R), which

measures distress regarding sexual experience (Derogatis et al., 2002, 2008). Since the diagnosis of FSD requires measuring not only problems or dysfunctions in terms of physical outcomes but also the subjective distress of patients, many studies have used the FSFI and FSDS questionnaires together to evaluate the prevalence of FSD.

In studies regarding physicians' practice patterns, GPs (Byrne et al., 2010; Ribeiro et al., 2014; Zannoni et al., 2021) and OB/GYNs (Carvalho et al., 2024; Pauls et al., 2005; Roos et al., 2009) tend to diagnose sexual problems based on their subjective assessment rather than following a standardized approach or questionnaire. Most previous studies of OB/GYNs have focused on the frequency of their raising sexual problems for discussion, while studies of other practice patterns are sparse. Studies evaluating the frequencies of referrals to continued care have shown considerable variation (15–85%) (Kottmel et al., 2014; McCool, Apfelbacher, et al., 2016), presumably because health care systems differ substantially across countries and continents. In a German study, half of the OB/GYNs personally treated 50% or more of their patients who presented with sexual problems. The most common approaches included psychosocial counseling, medical treatments, education, and recommendations (McCool, Apfelbacher, et al., 2016).

In a US study involving 369,647 female patients and 321,782 male patients in primary care, only 4% of female patients had ever been diagnosed with FSD. Among these patients, 22% of the FSD diagnoses were made by a GP and 38% by an OB/GYN (40% by another specialty). GPs diagnosed FSD (48%) less frequently than erectile disorder (77%) and managed patients with FSD less frequently (33%) than erectile disorder patients (41%). Of patients with FSD, 32% were prescribed a medication (27% vaginal estrogen, followed by flibanserin and bremelanotide), and 2% received a referral. Patients diagnosed by GPs were less likely to receive care (medication or referral) for FSD than those diagnosed by OB/GYNs (Stanley et al., 2025).

### 2.3.5 Patients' perspectives on the management of sexual problems

A review of 33 studies conducted between 2000 and 2020 identified a significant gap between the perspectives of health care professionals and patients regarding sexual health communication. The findings indicated that current discussions on sexual health were insufficient to address the needs of patients. Additionally, patients and health care providers had different views on the significance of these discussions, who should initiate them, and the level of comfort during the conversations (Zhang et al., 2020).

Previous studies regarding patients' perspectives on the management of sexual problems in health care are presented in **Table 2**. Patients reported that physicians

assessed sexual problems infrequently (Briedite et al., 2013; Wendt et al., 2007) or never (Gore-Gorszewska, 2020). However, some studies have suggested that OB/GYNs are more likely than GPs to address these issues (Fairchild et al., 2016). Nevertheless, patients are often open to these conversations and would like physicians to initiate them (Briedite et al., 2013; Canzona et al., 2016; Fairchild et al., 2016; Lonnée-Hoffmann et al., 2022; Wendt et al., 2007). Some studies have indicated that younger patients are more open to having these conversations than older patients (Fairchild et al., 2016; Hill et al., 2011; Lonnée-Hoffmann et al., 2022). However, opposite results have been published regarding patients' willingness to discuss the topic. In a US study of gynecologic cancer survivors, only a minority—25% of the patients—wanted the health care provider to start sexual health discussions (Hubbs et al., 2019). In a Greek study of hospital patients, only 26% expressed a desire to talk about sexual problems with their physicians (Ferenidou et al., 2008).

Patients' help-seeking patterns vary widely, with reports ranging from 7% to 60% of women who have sought help for sexual problems from physicians (Berman et al., 2003; Briedite et al., 2013; Danielsson et al., 2003; Hill et al., 2011; Hinchliff et al., 2020; Nicolosi et al., 2006; Velten & Margraf, 2023; Wendt et al., 2007). However, among those who did not seek help, a significant proportion, between 42% and 54%, expressed a desire to do so (Berman et al., 2003; Hill et al., 2011). In an Indian study, none of the female respondents had consulted any medical personnel regarding their sexual problems (Singh et al., 2020). OB/GYNs (Berman et al., 2003; Briedite et al., 2013; Velten & Margraf, 2023) and GPs (Berman et al., 2003; Gott et al., 2004; Hinchliff et al., 2020; Vik & Brekke, 2017) are often the first physicians that patients contact regarding sexual concerns. Other health care professionals, such as midwives, nurses, couple counselors, sexual counselors, therapists, psychologists, and psychiatrists, also play a crucial role in providing comprehensive care. In addition, online interventions, assistive devices, and over-the-counter medications offer accessible solutions. Furthermore, patients may seek help from non-medical sources, such as the internet, social media, books and journals, as well as from friends and family.

**Table 2**. Previous studies of patients regarding the management of sexual problems in health care.

| Year(s), country, reference | Population, recruitment | Method(s) | Outcome | Main results |
|---|---|---|---|---|
| N/A; United States; Berman et al., 2003 | *n* = 3,807 women (17–75 years), visits to a women's sexual health website | A cross-sectional study, an online questionnaire | Patients' experiences in seeking help | OB/GYN were the most likely to consult; 40% reported not seeking help from physicians, but 54% of those would like to; TOP barriers: embarrassment and believing the physician cannot help |
| 1998–1999; Sweden; Danielsson et al., 2003 | *n* = 3,017 women (20–60 years), visits for routine gynecological screening | A cross-sectional study, self-reported paper questionnaire | Prevalence of dyspareunia; help-seeking patterns | Prevalence of dyspareunia 9% (younger ↑); 28% of women had dyspareunia and had consulted a physician |
| 2001–2002; US, Canada, UK, Australia, New Zealand; Nicolosi et al., 2006 | *n* = 5,998 adults (40–80 years); female *n* = 3,006, male *n* = 2992; a random-digit dialing sampling | A cross-sectional study, a telephone survey and a structured questionnaire | Prevalence of sexual dysfunction; help-seeking patterns | Prevalence of sexual dysfunction in women 32% in the US, 28% in Canada, 43% in the UK, 41% in Australia, 57% in New Zealand; 3/4 had not sought help from a physician |
| 2006; Sweden; Wendt et al., 2007 | *n* = 488 women (23–29 years); visits for routine gynecological screening | A cross-sectional study, self-reported questionnaire | Patients' views in dialogues about sexual health, including a gynecological examination | 92% considered it appropriate to be asked about sexuality; 76–99% had never been asked |
| N/A; Greece; Ferenidou et al., 2008 | *n* = 164 women (18–72 years); visits to a hospital because of symptoms not related to sexual function | A cross-sectional study, self-reported questionnaire | Whether the presence of a sexual problem affects women's satisfaction with sexual function; help-seeking patterns | 49% had a sexual dysfunction (FSFI); 81% reported being satisfied with their sexual function; 26% would like to talk about sexual problems with a physician; no association between any dysfunction and satisfaction |
| 2008–2009; United States; Hill et al., 2011 | *n* = 261 gynecologic and breast cancer survivors (21–88 years); visits to a clinic | A cross-sectional study, self-reported questionnaire completed at the clinic | Identify patients' interests in receiving care regarding sexual concerns | 7% had sought help for sexual issues; 42% were interested in receiving care (younger ↑) |

| | | | | |
|---|---|---|---|---|
| N/A; United States; Donaldson & Meana, 2011 | *n* = 14 young women (mean 19 years); university students, having dyspareunia (FSFI) | A qualitative study, semi-structured interviews | Experiences of dyspareunia; help-seeking barriers | Attempts to self-manage the pain provided little relief; many consequences for sexual function, well-being ,and relationships; number of barriers to help-seeking |
| 2008–2010; United Kingdom; Roos et al., 2012 | *n* = 1,194 women (mean 47 years); visits to gynecological or urogynecological clinics | A cross-sectional study, self-reported paper questionnaire | Prevalence of sexual problems | 37% had a sexual complaint, 17% of whom volunteered this information, (younger and lower parity ↑) |
| N/A; Latvia; Briedite et al., 2013 | *n* = 300 women (18–50 years); visits to gynecological clinics | A cross-sectional study, self-reported questionnaire completed at the clinic | Prevalence of sexual disorders; patients' attitudes; barriers to bringing up sexual problems | 36% had ever been asked about sexual life by OB/GYN; 80% would like to be asked; 62% had never had sought help; OB/GYNs were the most likely to be consulted; psychoemotional barriers were the most important barrier; prevalence of FSD 6–46% |
| N/A; United States; Fairchild et al., 2016 | *n* = 383 women (17–82 years); visits to gynecological or urogynecological clinics | A cross-sectional study, self-reported paper questionnaire | Patients' experiences and preferences regarding sexual history-taking | Sexual health is important (83%) and should be asked regularly (67%) (younger ↑); infrequency of asking GP (73%) > OB/GYN (37%) |
| N/A; United States; Canzona et al., 2016 | *n* = 40 breast cancer survivors; recruitment via multiple channels | A qualitative study, semi-structured telephone interviews | Identify facilitators to communication about sexual health | Discussion about sexual health issues is difficult; health care providers should rehearse and initiate the discussions |
| 2013; United States; K. E. Flynn et al., 2017 | *n* = 3,515 English-speaking adults (female *n* = 1,738; mean 43.7 years); address-based sampling | A cross-sectional study, self-reported questionnaire, mail survey | Importance of sexual health for quality of life; people's satisfaction with their sex lives | 43% of women reported high importance of sexual health for QoL; participants in excellent health had higher satisfaction than those in fair or poor health |
| N/A; United States; Hubbs et al., 2019 | *n* = 85 gynecological cancer survivors (mean 52 years), follow-up visits | A cross-sectional study, self-reported paper questionnaire completed at the clinic | Evaluate changes in sexual function; describe patients' preferences regarding health care provider roles in addressing sexual dysfunction | Sexual enjoyment decreased after treatments; 25% wanted health care providers to initiate sexual health discussions; commonly cited barrier was the feeling that there are more important issues to discuss |

| | | | | |
|---|---|---|---|---|
| 2019;<br>Poland;<br>Gore-Gorszewska, 2020 | *n* = 30 older adults (65–82 years); female *n* = 16, male *n* = 14; recruitment through posters | A qualitative study, semi-structured face-to-face interviews | Barriers to seeking help for sexual problems | Most important barriers: not recognizing sexual problems, fear of doctor's disapproval, lack of knowledge about services; none were ever asked by a physician about sexual health or problems |
| N/A;<br>Norway, Denmark, Belgium, Portugal;<br>Hinchliff et al., 2020 | *n* = 3,820 older adults (60–75 years; female *n* = 2,054); randomized telephone recruitment | A cross-sectional probability study, a telephone interview and a structured questionnaire | Patients' experiences with seeking help | 7% of women had sought help; the main source was the primary care physician; reasons not to seek help included not being distressed by the symptom and waiting for it to clear up on its own |
| 2018;<br>India;<br>Singh et al., 2020 | *n* = 520 women (20–45 years); visits at obstetrics and gynecology outpatient clinics | A cross-sectional study, a questionnaire completed by an OB/GYN based on patient interview | Prevalence of sexual dysfunction in women and patients' perceptions about sex | 82% prevalence of sexual problems; none of the women had consulted any medical personnel |
| 2015–2016;<br>Norway;<br>Lonnée-Hoffmann et al., 2022 | *n* = 494 women; visits at gynecological or obstetric clinics | A cross-sectional study, self-reported paper questionnaire | Women's attitudes toward addressing and documenting sexual function | 87% would be open to questions about sexual function during appointments (younger ↑); over half preferred information to be documented in medical records with restricted access |
| N/A;<br>Germany;<br>Velten & Margraf, 2023 | *n* = 800 women (18–73 years); recruitment via multiple channels | A cross-sectional study, self-reported questionnaire, online survey | Barriers and facilitators to seeking treatment for sexual problems | 19% had a distressing problem (past 6 months); OB/GYN the most likely first point of contact; 48% had sought help; top barriers: handle the problem on my own and get better by itself |
| 2019–2020;<br>Iran;<br>Maasoumi et al., 2023 | *n* = 18 women (21–39 years); visits at gynecological or psychology clinics | A qualitative study, semi-structured interviews | Barriers to seeking help for sexual concerns | Many barriers identified; insufficient sexual health services and knowledge about sexual health |
| 2023;<br>Australia;<br>Davenport et al., 2025 | *n* = 141 with self-reported diagnosis of endometriosis (18–52 years); recruitment through Endometriosis Australia and social media | A cross-sectional study, an online quantitative questionnaire and qualitative free-text prompts | Experiences of sexual health communication with GPs; barriers and facilitators | 74% prevalence of FSD (FSFI); 82% reported distress (FSDS-R); 58% had 1 GP, 32% had 2 or 3 GPs; 70% had spoken about sex life with GP; 46% reported difficulties with the discussion; many barriers identified |

N/A, not available; FSD, female sexual dysfunction; FSFD-R, female sexual distress scale-revised; FSFI, female sexual function index; GP, general practitioner; n, number; OB/GYN, obstetrician-gynecologist

#### 2.3.5.1 Patients' barriers to seeking help

A British survey revealed that 37% of the women in (uro)gynecology clinics had a sexual complaint, but only 17% of them brought up the issue, and the rest only admitted it when questioned (Roos et al., 2012). There are many barriers that patients cite in explaining why they do not seek help for their sexual problems, as shown in **Figure 11**, such as lack of knowledge about sexual problems and medical services and fear of disapproval from physicians (Gore-Gorszewska, 2020) (Maasoumi et al., 2023). In a US study of 14 young women with diagnosed dyspareunia, several barriers to seeking help from health care providers were identified. These included faith in spontaneous remission, lack of confidence in medical solutions, fear of severity, and fear of stigma associated with sexual problems (Donaldson & Meana, 2011). Shame and other psychoemotional barriers have also been identified as obstacles preventing patients from initiating these conversations (Briedite et al., 2013). Additionally, the lack of bothersomeness from their problem and the perception that they did not have a medical problem were significant factors (Nicolosi et al., 2006). In an Australian study of patients with endometriosis, the majority (70%) reported that they had discussed with their GP the effect of endometriosis on their sexual lives. However, 46% of the patients considered the discussion somewhat difficult, and 28% found it extremely difficult (Davenport et al., 2025).

In addition to evaluating patients' and physicians' perspectives on managing sexual problems in health care, it is important to evaluate how this topic is raised by using different methods. A study based on data from the medical records of 1,017 primary care visits in the Bronx, US, showed that physicians obtained the patient's sexual history in only 34% of the visits (Palaiodimos et al., 2020). There were no differences in sexual history-taking between male and female physicians. However, as physicians progressed in their careers, the likelihood of their taking a complete sexual history decreased (Palaiodimos et al., 2020). Furthermore, in this context, a mismatch between the perspectives of the patients and those of the physicians is plausible. In a US study of 134 patients with breast cancer, a discrepancy between the audio-recorded material from the clinical visits and patients' self-reported questionnaires completed immediately after the visit was found: 19 women omitted communication about sexual problems (overall sexual health was discussed in 46% of the visits, of which 83% was initiated by physician) (Reese et al., 2020).

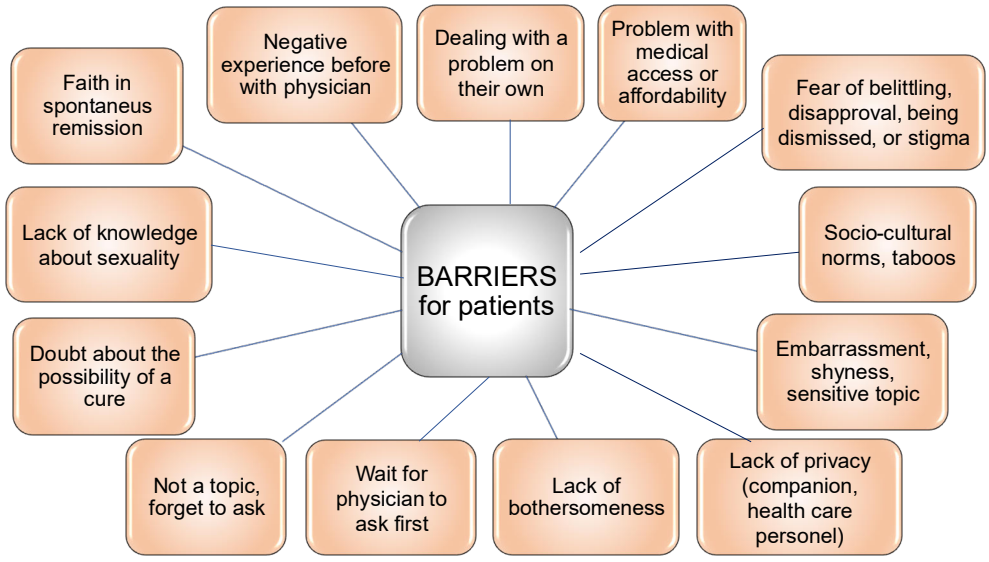



**Figure 11.** Patients' barriers to bringing up sexual problems with physicians.

## 2.4 Sexual medicine education

Sexual medicine focuses on the evolution, diagnosis, and treatment of sexual problems. It is not recognized as its own specialty, but it closely collaborates with other fields, such as gynecology, urology, endocrinology, psychiatry, and primary care.

Previous literature suggests that medical students often consider sexual medicine education in medical schools insufficient (Ariffin et al., 2015; Junior et al., 2024; Manninen et al., 2022; Saab et al., 2023; Zamboni & Bezek, 2017). The same perspective has been reported regarding OB/GYN residency training (McCool, Apfelbacher, et al., 2016; Millman et al., 2021; Pancholy et al., 2011). As a result, many medical students feel uncomfortable, report a lack of confidence when taking sexual histories, and are unprepared to address sexual problems (Ariffin et al., 2015; Beebe et al., 2021; Komlenac et al., 2019; Manninen et al., 2022; Saab et al., 2023).

However, previous literature has demonstrated that improved training in sexual medicine can enhance physicians' confidence and provide a strong foundation for effectively managing patients' sexual health concerns (Abdolrasulnia et al., 2010; Komlenac et al., 2019; Kristufkova et al., 2018; Pancholy et al., 2011; Shroff et al., 2018). In several studies, the majority of medical students and residents regarded sexual health as an important health care issue (Ariffin et al., 2015; Komlenac et al., 2019; Kristufkova et al., 2018; Turner et al., 2016) and wanted more education in this area (Komlenac et al., 2019; Manninen et al., 2022; Millman et al., 2021). A majority (62%) of German medical students stated that sexual medicine education

should be mandatory, and their most preferred types of education were lectures and seminars (Turner et al., 2016). One study showed that Austrian students preferred lectures and seminars, but only 35% of them wanted sexual medical education to be mandatory (Komlenac et al., 2019). In addition, practicing physicians recognize the need for training in sexual medicine (Alarcão et al., 2012; Bedell et al., 2017; Byrne et al., 2010; Leyva-Moral et al., 2021; Ribeiro et al., 2014; Zannoni et al., 2021). In an Indian study, 94% of physicians (OB/GYNs, urologists, GPs, general medical officers, and psychiatrists) reported not receiving training to manage FSD (Kaundal et al., 2024). Similarly, 77% of gynecologic oncologists (Bedell et al., 2017) and 80% of Chinese OB/GYNs (Li et al., 2021) reported the same.

In Finland, five universities offer medical education (Helsinki, Kuopio, Oulu, Tampere, and Turku). The licentiate of medicine degree requires approximately six years to complete, and the content varies only slightly across these universities. As an example, **Figure 12** presents the content of the licentiate of medicine degree at the University of Turku for the years 2018–2020 (University of Turku, n.d.). In a Finnish study, medical students reported that they received sexual medicine education primarily within the obstetrics and gynecology courses, but also in psychiatry, dermatology and venerology, surgery, and general medicine, as shown in **Figure 13** (Kevo et al., 2022).

Generally, there is no standardized sexual medicine curriculum in medical schools internationally, which restrains physicians' proficiency in addressing sexual problems (Endler et al., 2022; Prize et al., 2023; Shindel et al., 2016). Teachers recognize the need for sexual health education in medical schools but report barriers, such as complexity, cultural taboos, limited space in the medical curriculum, and perceived controversy among decision-makers (Endler et al., 2022). Likewise, residency programs lack a standardized sexual medicine curriculum. In a study among European residents (psychiatry, endocrinology, obstetrics and gynecology, and urology), only 26% reported that sexual health training was available during their residency (Kristufkova et al., 2018). In Europe, steps have been taken to enhance and standardize sexual education during residency in obstetrics and gynecology. In 2018, the EBCOG established a pan-European standardized training curriculum in obstetrics and gynecology, which includes a comprehensive textbook and an exam (EBCOG, n.d.). Additionally, the Nordic Federation of Societies of Obstetrics and Gynecology (NFOG) published an open source online textbook for medical students in 2020, in which the chapters "Sexology" and "Violence Against Women" focus on sexual medicine (NFOG, 2020). Furthermore, the European Sexual Medicine Network (ESMN) is planning to develop sexual medicine curricula for university education across Europe (ESMN, n.d.). In the US, the consensus from the 2012, 2014, and 2016 Summits on Medical Education in Sexual Health regarding best practices in medical education for sexual history-taking suggest a spiral

curriculum utilizing multiple educational modalities (Rubin et al., 2018). In addition, the International Federation of Gynecology and Obstetrics (FIGO) recommends that sexual and reproductive health and rights are essential to incorporate into the core structures of all medical school curricula (FIGO, n.d.).

| 1st Academic Year | 45-46 ECTS |
|---|---|
| Orientation to University Studies and Medicine | 1 |
| Medical English I (in English) | 1 |
| Cell and Tissue Biology | 9 |
| Developmental Biology | 2 |
| The Structure and Function of the Musculosceletal System | 9 |
| The Doctor's Work, Trainee Period | 1 |
| Medical Biochemistry and Molecular Medicine | 10 |
| Nutrition and Gastrointestinal Structure and Function | 5 |
| Circulation, Respiration and Fluid Balance | 5 |
| Endocrinology | 2 |
| Finnish Databases | 0-1 |

| 2nd Academic Year | 47-51 ECTS |
|---|---|
| The Structure and Function of the Nervous System | 6-9 |
| Human Life | 3 |
| Anatomic Autopsy | 5 |
| International Databases | 0-1 |
| From Observations to Conclusions | 4 |
| Pathology | 13 |
| Medical History | 1 |
| Philosophy and Methodology of Science | 1 |
| Mentoring | 1 |
| Prevention and treatment of diseases | 13 |

| 3rd Academic Year | 47-48 ECTS |
|---|---|
| Clinical Medicine | 8 |
| Laboratory Medicine | 4 |
| The Microbes and Human Being | 11 |
| Medical Swedish | 3 |
| Writing Skills for Doctors | 1 |
| Search Clinic | 0-1 |
| Medical Ethics, Practise and Theory | 1 |
| Internal Medicine | 18 |
| Emergency Duty (Internal Medicine) | 1 |

| 4th Academic Year | 55 ECTS |
|---|---|
| Surgery | 10 |
| Emergency Duty (Surgery) | 2 |
| Orthopaedics and Traumatology I | 3 |
| Anaesthesiology and Intensive Care | 4 |
| Diagnostic Radiology I | 3 |
| Radiation Protection | 2 |
| Otorhinolaryngology | 7 |
| Psychiatry 2 | 11 |
| Neurology | 8 |
| Practice of Medical Profession and Social Security Associated with it | 2 |
| Team Communication and Leadership | 1 |
| General Medicine, Clinical Studies | 1 |
| General Practioner´s Work, Trainee Period II | 1 |

| 5th Academic Year | 53 ECTS |
|---|---|
| Obstetrics and Gynaecology and Clinical Genetics | 14 |
| Dermatology and Venereology, Pulmonary Diseases, Allergology | 10 |
| Pediatry | 15 |
| Ophthalmology | 5 |
| General Practice, Clinical Studies, Trainee Period I | 5 |
| Medical Ethics, Problem Solving, Seminar | 2 |
| Advanced Studies, Project Plan | 2 |

| 6th Academic Year | 49 ECTS |
|---|---|
| Diagnostics and Treatment | 21 |
| Aged Patient | 2 |
| Surgery | 7 |
| Orthopaedics and Traumatology II | 4 |
| Physiatrics | 1 |
| Rehabilitation | 1 |
| Oncology,Radiotherpy and Palliative Medicine | 4 |
| Diagnostic Radiology II | 2 |
| Qualifying as a Doctor | 1 |
| Physical Activity and Nutrition | 1 |
| Military Medicine, the Basics of Field and Catastrophy Medicine | 1 |
| Final Exam in General Practice | 1 |
| Medical Scientific Writing | 1 |
| Introduction to Doctor´s Work, Mentoring | 1 |
| Emergency Medicine and Clinical Toxicology | 1 |

| | |
|---|---|
| **Clinical Services** | **21** |
| **Advanced Studies, Thesis** | **20-40** |
| **Optional Studies** | **0-21** |
| **TOTAL** | **360 ECTS** |

**Figure 12.** Degree program in licentiate of medicine in Turku (2018–2020) (University of Turku).

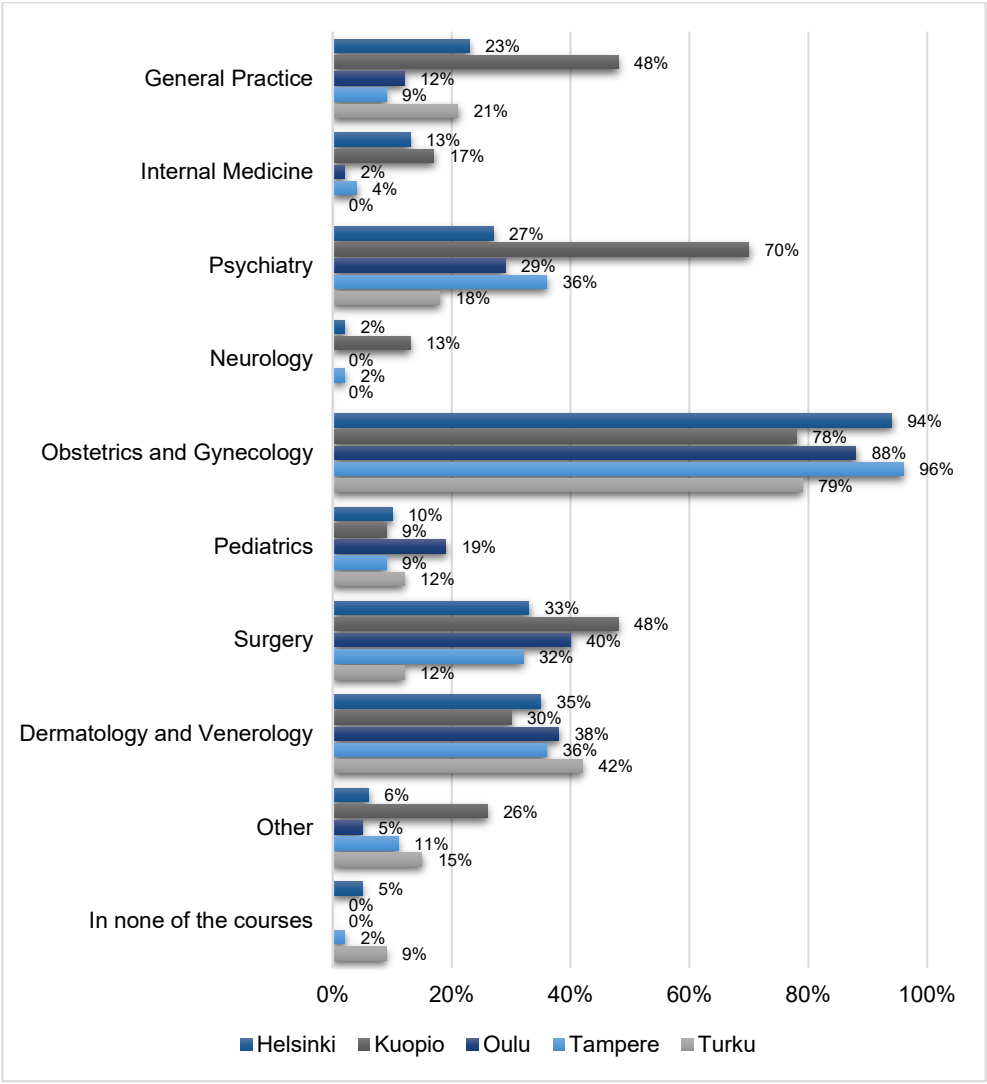



**Figure 13.** Courses in which medical students received education related to sexual medicine, as reported by final-year medical students. Reproduced, modified, and translated with permission of the Finnish Medical Journal from Kevo et al., 2022.

# 3 Aims

The overall aim of this thesis was to study the self-reported competence, barriers, attitudes, practice patterns, and education in sexual medicine among Finnish OB/GYNs. The results from OB/GYNs were compared with those of Finnish GPs. Additionally, the aim was to assess the variables, with special reference to the gender and age of the physicians.

The specific objectives were as follows:

1. To investigate OB/GYNs' competence in addressing the sexual problems of their patients and the barriers that hinder them from discussing these problems with patients.
2. To investigate OB/GYNs' attitudes and practice patterns in treating sexual problems.
3. To investigate OB/GYNs' previous education in sexual medicine and interest in continuing medical education.
4. To assess variables, with special reference to the gender and age of physicians.
5. To compare the competence, barriers, attitudes, practice patterns, and education of OB/GYNs with those of GPs.
6. To investigate the associations between OB/GYNs' and GPs' perceived barriers of discussing sexual problems with their patients, their perceptions of the sufficiency of their previous education in sexual medicine, and their competence in addressing patients' sexual problems.

# 4 Materials and Methods

This thesis includes five publications (I–V) based on two samples of physicians: OB/GYNs and GPs (**Figure 14**, flowchart of the study). **Studies I–II** focus on OB/GYNs and **Studies III–IV** are comparative studies between OB/GYNs and GPs. In **Study V**, both samples are combined.

## 4.1 Recruitment

### 4.1.1 Obstetrician-gynecologists

The recruitment of the participants was conducted via the Finnish Society of Obstetrics and Gynecology (Suomen Gynekologiyhdistys, SGY), to which the vast majority of Finnish OB/GYNs specialists and residents belong. The SGY forwarded the request to its members using its contact information registry. A link to a web-based questionnaire (Webropol) and two reminders were sent between January 2019 and February 2020. Furthermore, to improve the response rate, an additional email was sent to chief physicians of OB/GYN in hospitals, and an advertisement of the questionnaire was presented at a SGY congress, in the official journal of SGY (Sykli), and in social media directed at OB/GYNs. In 2019, the SGY had 1,212 members, including both working and retired OB/GYNs, with members consisting mainly of OB/GYN specialists and residents. In the study preface, it was stated that the questionnaire was directed only at OB/GYN specialists and residents.

### 4.1.2 General practitioners

The recruitment of the participants was conducted via the Finnish Medical Association (FMA, Suomen Lääkäriliitto), to which 90–95% of Finnish physicians belong. A link to a web-based questionnaire (Webropol) and several reminders were sent to physicians during 2018. The GP participants were a random sample who were current members of the FMA and who indicated that a municipal health center was their primary workplace. In accordance with the FMA's policy, contact information was restricted to 1,000 Finnish GPs. In 2018, there were approximately 4,400

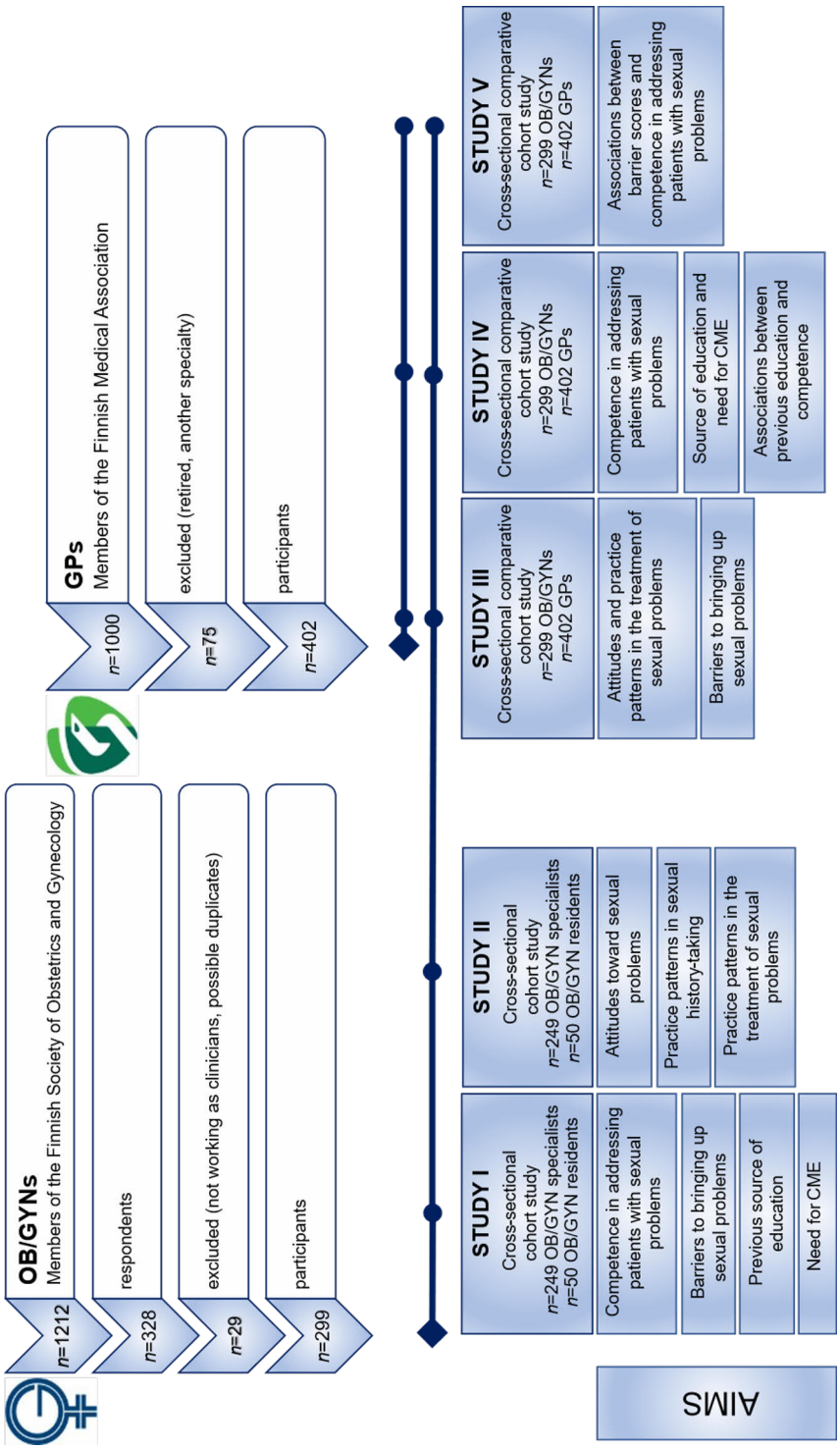



**Figure 14.** Flowchart of the study. Use of logos with permission from the SGY and the FMA.

physicians working in municipal health centers (The Finnish Medical Association, 2016; Finnish Institute for Health and Welfare, n.d.). In the study preface, it was stated that the questionnaire was directed only at health center physicians.

## 4.2 Participants

### 4.2.1 Obstetrician-gynecologists

Questions regarding participants' basic characteristics included age, gender, university, and year of graduation as a licentiate of medicine and a specialist in obstetrics and gynecology, current working hospital district, occupational status, daily number of patients treated, and daily number of patients dealing with sexual issues (**Appendix**, Study questionnaire). The basic characteristics of the OB/GYN participants are presented in **Table 3**. The survey was completed by 328 respondents, resulting in a response rate of 27%. In 2019, at the time of the survey, there were 680 OB/GYN specialists under 65 years of age (The Finnish Medical Association, 2019). In the present study, there were 231 OB/GYN specialists under 65 years of age; accordingly, the participants in the survey represented one-third (34%) of the OB/GYN specialists in Finland in 2019. Of all the participants, 275 were OB/GYN specialists and 53 were residents. Eight OB/GYNs reported treating 0 patients per day, indicating that they had no clinical practice, and they were therefore excluded from all analyses (five retired female and two male OB/GYN specialists, aged 65–74, and one researcher). In addition, 21 potential duplicates (matching gender, age, university, and year of graduation for both medical degree and OB/GYN specialization) were identified and omitted. Thus, 299 questionnaires were eligible for analysis.

The mean age of the participants was 47.1 years (range 28–74 years). The mean age of the female participants was 46.5 years (SD 10.5, range 28–74 years) and that of the male participants was 55 years (SD 14.0, range 30–74 years). In total, 93% of the participants were female. The gender distributions in this study across age groups are presented in **Figure 15**.

Of all, 72% ($n$ = 214) of OB/GYNs reported working in a hospital, and of these, 44% ($n$ = 94) reported working in the private sector, 19% ($n$ = 40) as researchers, 7% ($n$ = 14) as clinical teachers, and 3% ($n$ = 7) in primary health care. Among all OB/GYNs, 56% ($n$ = 166) reported working in the private sector, including 56% ($n$ = 156) of female OB/GYNs and 48% ($n$ = 10) of male OB/GYNs. Moreover, 23% ($n$ = 68) of OB/GYNs (91%, $n$ = 62 female; 9%, $n$ = 6 male) reported working in the private sector only (12 retired OB/GYNs included).

**Table 3.** Basic characteristics of participants.

| | OB/GYNs (*n* = 299) | | GPs (*n* = 402) | |
|---|---|---|---|---|
| **Age (years): mean (SD)** | 47.1 (11.0) | | 45.0 (10.7) | |
| **Age (years): range** | 28–74 | | 27–65 | |
| | *n* | % | *n* | % |
| **Age (years)** | | | | |
| young (< 40) | 82 | **27** | 147 | **36** |
| middle-aged (40–49) | 107 | **36** | 111 | **28** |
| late middle-aged (≥ 50) | 110 | **37** | 144 | **36** |
| **Gender** | | | | |
| Female | 278 | **93** | 302 | **75** |
| Male | 21 | **7** | 100 | **25** |
| Other | 0 | **0** | | |
| **The university of graduation as a licentiate of medicine** | | | | |
| Helsinki | 65 | **22** | 72 | **18** |
| Kuopio | 56 | **19** | 71 | **18** |
| Oulu | 55 | **18** | 86 | **21** |
| Tampere | 41 | **14** | 61 | **15** |
| Turku | 58 | **19** | 76 | **19** |
| Abroad | 24 | **8** | 36 | **9** |
| **Education** | | | | |
| Specialist | 249 | **83** | | N/A |
| Resident | 50 | **17** | | |
| **The university of graduation as a specialist** | | | | |
| Helsinki | 88 | **29** | | N/A |
| Kuopio | 28 | **9** | | |
| Oulu | 53 | **18** | | |
| Tampere | 66 | **22** | | |
| Turku | 56 | **19** | | |
| Abroad | 8 | **3** | | |
| **Occupational status*** | | | | |
| Hospital | 214 | **72** | | N/A |
| Private sector | 166 | **56** | | |
| Researcher | 41 | **14** | | |
| Clinical teacher | 16 | **5** | | |
| Primary health care | 14 | **5** | | |
| Retired | 12 | **4** | | |
| Maternal leave/Nursing leave/Leave of absence/Sick leave/Not currently working | 10 | **3** | | |
| **Patients treated per day** | | | | |
| 1–10 | 116 | **39** | | N/A |
| ≥ 11 | 183 | **61** | | |
| **Patients with sexual issues dealt with per day** | | | | |
| 0 | 41 | **14** | | N/A |
| 1–5 | 221 | **74** | | |
| ≥ 6 | 37 | **12** | | |

* More than one occupational option could be chosen.

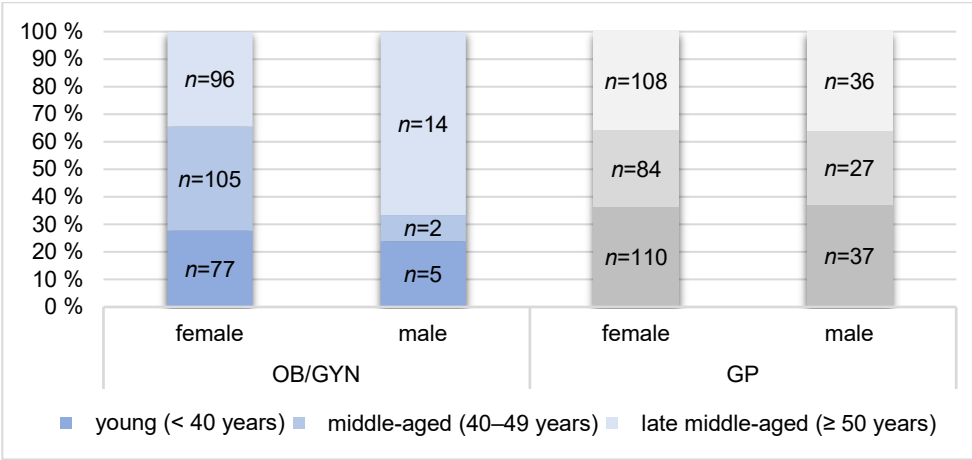



**Figure 15.** Gender distributions by age groups in the present study.

All hospital districts in Finland were covered except Åland. The distribution of primary workplaces by collaborative areas is presented in **Figure 16** and by hospital districts in **Figure 17**. At the time of the survey, the collaborative areas had not been established, but the specific catchment areas (erityisvastuualue, ERVA) of the university hospitals were the same, as shown in **Figure 16**.

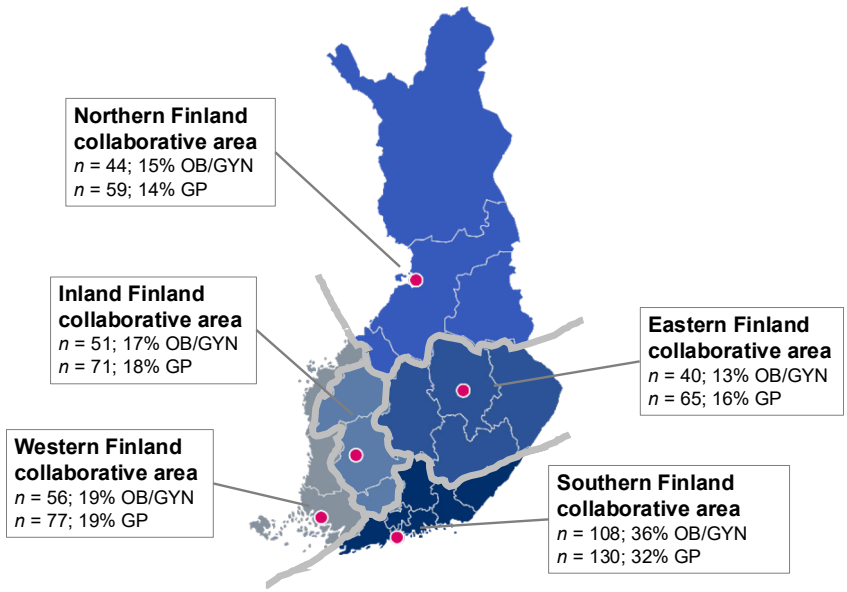



**Figure 16.** Distribution of primary workplaces by collaborative areas for OB/GYNs. Image from https://stm.fi/en/collaborative-areas, with permission from the Ministry of Social Affairs and Health. Modified by the author.

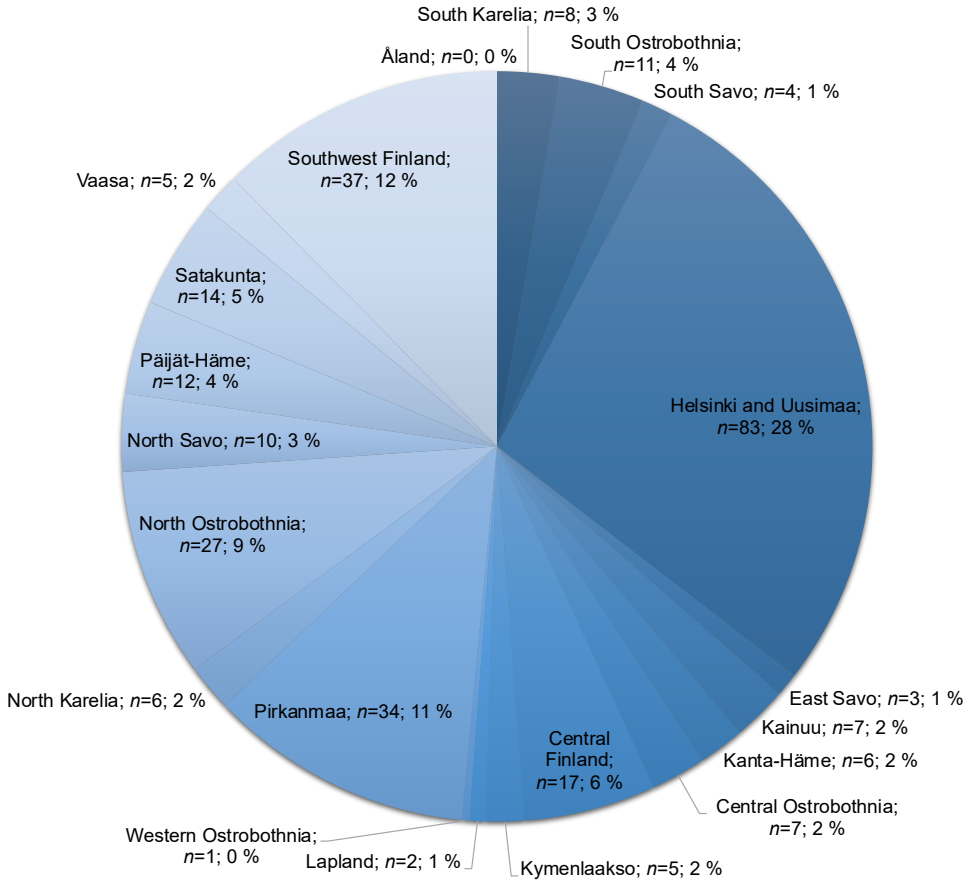



**Figure 17.** Distribution of OB/GYNs' primary workplaces by hospital district.

### 4.2.2 General practitioners

Of the sample of GPs, 75 physicians were excluded because they reported not being among the target group (retired or in another specialty). The survey was completed by 402 respondents, resulting in a response rate of 43%, and all 402 questionnaires were eligible for analysis.

Questions regarding the basic characteristics used in this thesis included age, gender, university of graduation as a licentiate of medicine, and current working hospital district (**Appendix**, Study questionnaire). The basic characteristics of the GP participants are presented in **Table 3**. The mean age of the participants was 45.0 years (range 27–65 years). The mean age of the female participants was 45.1 years (SD 10.3, range 28–65 years) and that of the male participants was 44.8 years (SD 11.9, range 27–65 years). In total, 75% of the participants were female. The gender distributions across the age groups are presented in **Figure 15**.

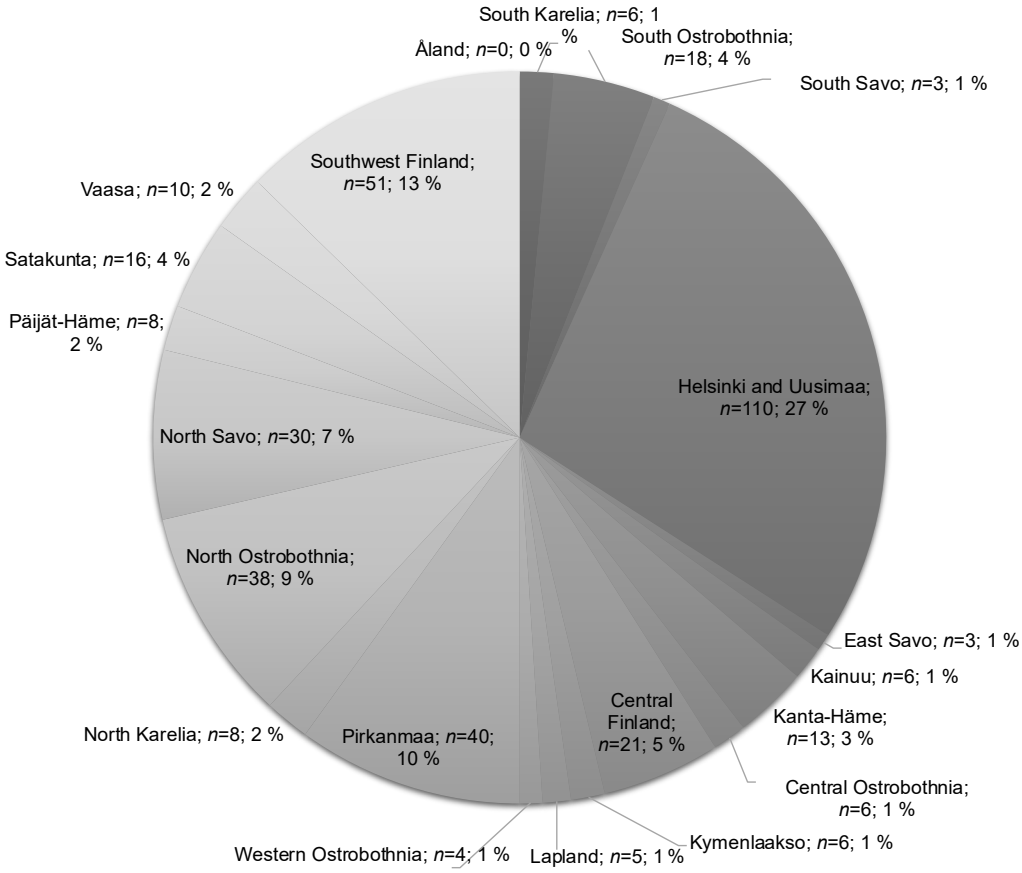



**Figure 18.** Distribution of GPs' primary workplaces by hospital district.

All hospital districts in Finland were covered except Åland. The distribution of primary workplaces by collaborative areas is presented in **Figure 16** and by hospital districts in **Figure 18**.

## 4.3 Questionnaire

The questionnaire (**Appendix**) was a modification of the Portuguese SEXOS study questionnaire, which was directed at GPs and consisted of a wide range of questions regarding the management of sexual problems (Alarcão et al., 2012; Ribeiro et al., 2014). The modifications made were mainly changes to the scales and response options. Permission to use the questionnaire was received from the Portuguese researchers. The English version of the SEXOS questionnaire was translated into Finnish.

The modified questionnaire was piloted with 11 Finnish physicians (both OB/GYNs and GPs), and their feedback was used to revise and shorten the

questionnaire. The questionnaire was used with a sample of Finnish GPs and slightly modified to be suitable for OB/GYNs. The modifications involved adjustments to the questions and response options.

In addition to the basic characteristics, the questionnaire (**Appendix**) included specific questions in seven fields about the management of sexual medicine:

A) Self-reported competence in discussing and treating patients with sexual problems (three questions)

B) Barriers to bringing up sexual problems with patients (nine items)

C) Attitudes toward sexual problems (five items)

D) Practice patterns in sexual history-taking (two questions)

E) Practice patterns in the treatment of sexual problems (eight items)

F) The source of education in sexual medicine (two questions, one of which included three items)

G) The need for education in sexual medicine (two questions)

## 4.4 Ethics

The SexMEdu study followed the Declaration of Helsinki in terms of ensuring the participants' anonymity and obtaining their informed consent. The study protocol was reviewed and approved by the ethics committee of the University of Turku (44/2017). Replying to the questionnaire implied consent, which was made clear to the respondents in the preface of the questionnaire.

## 4.5 Statistical analyses

### 4.5.1 Cross-sectional cohort studies (Studies I–II)

All results were self-reported by the participants. Data were presented with frequencies (percentages). In each field, each question and item was examined separately in the analyses.

In the analyses, each question and item in fields A–F was dichotomized:
Field A:
questions 1 and 2:
'poor' or 'quite poor' *versus* 'good' or 'quite good'
question 3:

‘a major problem’ or ‘a moderate problem’ *versus* ‘not a problem’ or ‘a minor problem’

Field B:

question 4:

in every item, ‘very much’ or ‘much’ *versus* ‘not at all’ or ‘some’

Fields C and E:

question 5 and question 8, in every item:

‘totally agree’ or ‘agree’ *versus* ‘totally disagree’ or ‘disagree’

Field D:

question 6:

‘always’ or ‘usually’ *versus* ‘never’ or ‘seldom’

Field F:

question 10, in every item:

‘sufficient’ or ‘quite sufficient’ *versus* ‘insufficient’ or ‘quite insufficient’

The ‘cannot say’ responses in field A, question 3, and in fields B, C, and E in every item were omitted from the analyses. The ‘not taken’ responses in field F, question 10, in every item were omitted from the analyses. In field F, question 9, and in field G, question 12, were multiple-choice questions with several predefined options, and both also included an open response option.

The participants were divided into subgroups based on four basic characteristics (gender, age, daily number of patients treated, and daily number of patients dealing with sexual issues). The participants were divided into two gender groups (female and male) and into three age groups: young, < 40 years; middle-aged, 40–49 years; and late middle-aged, ≥ 50 years. Regarding the average patient frequency, the participants were divided into two groups: 1–10 patients and ≥ 11 patients treated per day. Regard the average daily number of patients dealing with sexual issues, the participants were divided into three groups: 0 patients, 1–10 patients, and ≥ 11 patients.

The multivariable binary logistic regression was carried out with an adjustment for the OB/GYNs’ gender (female/male), age (young/middle-aged/late middle-aged), daily number of patients treated (1–10/≥ 11) and daily number of patients dealing with sexual issues (0/1–5/≥ 6).

The results were presented using adjusted odds ratios (aORs) with 95% confidence intervals (CIs). *P*-values of less than 0.05 were considered statistically significant, and no adjustments for multiple testing were used. Statistical analyses

were performed using the SAS System for Windows, version 9.4 (SAS Institute Inc., Cary, NC, USA).

### 4.5.2 Cross-sectional comparative cohort studies (Studies III–V)

The data were described using frequencies (percentages). In the analyses, each question and item in fields A–F was dichotomized, as prescribed in Section 4.5.1. Questions 1 and 2 in field A were specific to female patients in the questionnaire for the GPs.

First, the OB/GYNs and the GPs were compared as entire groups. The multivariable binary logistic regression was carried out with an adjustment for gender (female/male) and age (young/middle-aged/late middle-aged). For every field, each question and item were examined separately. Second, an interaction analysis was carried out to investigate whether the associations of specialty (GPs versus OB/GYNs) on the outcomes were different between the gender and age groups. Third, in case of significance in interaction, the GPs were compared to the OB/GYNs in the sub-groups by gender and age groups. Associations between the sufficiency of previous education and competences were analyzed with multivariable binary logistic regression after adjustments for gender, age, and specialty.

To evaluate the associations between barriers and competences (**Study V**), a total score and four sub-scores ('Time'/'Personality'/'Professionalism'/'Treatment') were formed from eight items in field B in question 4 ('Time' included 'shortness of the appointment time' and 'sexual problem not being a priority in the appointment'; 'Personality' included 'personal attitudes and beliefs' and 'personal discomfort when addressing sexual problems'; 'Professionalism' included 'lack of knowledge about sexual medicine' and 'lack of experience with sexual medicine'; 'Treatment' included 'lack of effective treatment for sexual problems' and 'fear of failing to respond to patients' sexual problems.' The barrier total score was calculated as the mean score of all barrier scores, where six out of eight replies had to be answered in order to calculate the total score. In each of the four barrier sub-scores, at least one of the two answers was required. Associations between the barrier scores and competences were analyzed with multivariable binary logistic regression after adjusting for gender, age, and specialty. The barrier scores were analyzed as continuous variables and described with means and standard deviations (SDs). First, the associations between the barriers total score and sub-scores and competence in discussing and treating patients with sexual problems were analyzed with multivariable binary logistic regression, with adjustments for gender, age, and specialty. Second, an interaction analysis was conducted to investigate whether the barrier scores by specialty interactions were significant. Third, in case of significant interaction, the associations between barriers total score and sub-scores and competences were analyzed by speciality groups.

The results were presented as adjusted odds ratios (aORs) with 95% confidence intervals (CIs). *P*-values of < 0.05 were considered statistically significant. Statistical analyses were performed using the SAS System for Windows, version 9.4 (SAS Institute Inc., Cary, NC).

# 5 Results

## 5.1 Competence in addressing sexual problems of patients among obstetrician-gynecologists

The results of OB/GYNs' self-reported competence in discussing and treating patients' sexual problems are presented in **Figure 19**. Most of the OB/GYNs (72%, *n* = 215/299) reported that their general competence in discussing sexual problems with their patients was good or quite good. However, an identical percentage (72%, *n* = 216/299) reported that their competence in treating patients' sexual problems was poor or quite poor. If the patients brought up the sexual issues themselves, almost all (98%, *n* = 294/299) of the OB/GYNs reported having no or only minor problems discussing the topic.

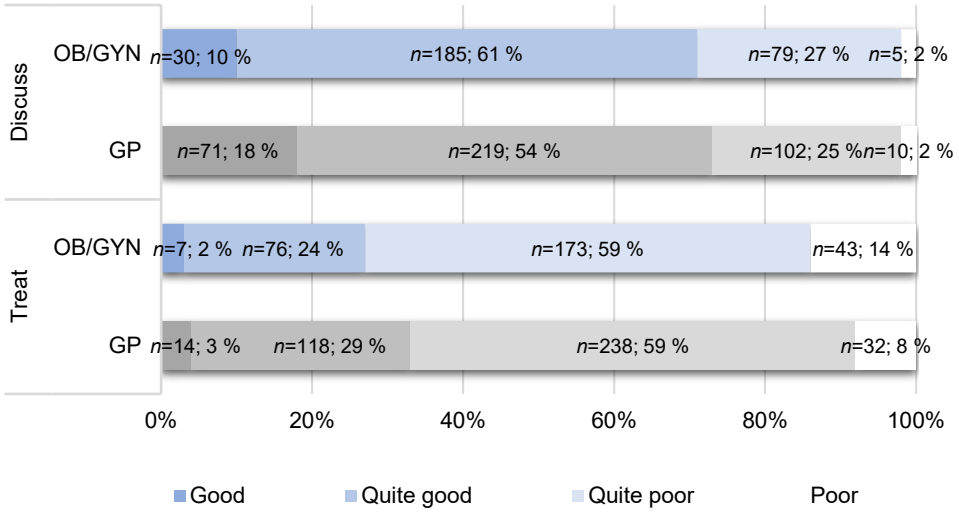



**Figure 19.** OB/GYNs' and GPs' competence in discussing and treating patients' sexual problems.

### 5.1.1 Association with gender and age

The results of the subgroup analysis on competence, with special reference to gender and age, are presented in **Table 4**. Compared to male OB/GYNs, female OB/GYNs were more likely to report poor or quite poor competence in treating patients' sexual problems (female 75%, *n* = 209/278 vs. male 33%, *n* = 7/21). Additionally, there was a tendency for female OB/GYNs to more likely report a poor or quite poor competence in discussing sexual problems with their patients (female 29%, *n* = 82/278 vs. male 10%, *n* = 2/21). As for age groups, the late middle-aged OB/GYNs were less likely to report poor or quite poor competence in discussing sexual problems compared to the young OB/GYNs (late middle-aged 18%, *n* = 20/110 vs. young 39%, *n* = 32/82). If the patients brought up the sexual issues themselves, there were no differences related to gender or age in perceiving problems with discussing the subject.

### 5.1.2 Association with patient frequency

The results of the subgroup analysis on competence, with special reference to the daily patient frequency, are presented in **Table 4**. No differences were found regarding the number of patients treated daily in general. However, the OB/GYNs who more frequently dealt with patients' sexual issues were less likely to report poor or quite poor competence in discussing (0 patients per day dealing with sexual issues 43%, *n* = 18/41 vs. 1–5 patients per day 27%, *n* = 61/221 vs. ≥ 6 patients per day 14%, *n* = 5/37) and treating (0 patients per day dealing with sexual issues 89%, *n* = 36/41 vs. 1–5 patients per day 76%, *n* = 183/221 vs. ≥ 6 patients per day 32%, *n* = 12/37) patients' sexual problems. If the patients brought up the sexual issues themselves, there were no differences related to either the frequency of daily patients treated or the number of patients with sexual issues they dealt with daily regarding perceived problems discussing the subject.

**Table 4.** OB/GYNs' competence in discussing and treating patients' sexual problems: Sub-group analysis.

| | Discussing with patients | | Treating patients | |
|---|---|---|---|---|
| | Poor or quite poor | | Poor or quite poor | |
| | **aOR** | **95% CI** | **aOR** | **95% CI** |
| **Gender** | *p = 0.058* | | *p < 0.0001* | |
| female vs. male | 4.41 | 0.95–20.36 | 11.01 | 3.76–32.73 |
| **Age (years)*** | *p = 0.034* | | *p = 0.403* | |
| 40–49 vs. < 40 | 0.72 | 0.39–1.35 | 0.62 | 0.29–1.33 |
| ≥ 50 vs. < 40 | 0.41 | 0.21–0.81 | 0.63 | 0.30–1.34 |
| ≥ 50 vs. 40–49 | 0.57 | 0.30–1.09 | 1.02 | 0.53–1.96 |
| **Patients treated per day** | *p = 0.454* | | *p = 0.631* | |
| 1–10 vs. ≥ 11 | 0.81 | 0.47–1.40 | 0.86 | 0.48–1.57 |
| **Patients with sexual issues dealt with per day** | *p = 0.014* | | *p < 0.0001* | |
| 0 vs. 1–5 | 2.17 | 1.04–4.50 | 3.50 | 1.11–11.01 |
| 0 vs. ≥ 6 | 5.55 | 1.70–18.08 | 27.76 | 7.28–105.82 |
| 1–5 vs. ≥ 6 | 2.56 | 0.94–7.01 | 7.93 | 3.61–17.42 |

aOR, adjusted odds ratio; CI, confidence interval; vs., versus
*P*-values are over the group values.
The multivariable binary logistic regression was carried out with adjustments for OB/GYNs' gender (female/male), age (< 40/40–49/≥ 50 years), the number of patients treated per day (1–10/≥ 11) and the number of patients with sexual issues dealt with per day (0/1–5/≥ 6).
An aOR higher than 1 indicates worse self-reported competence compared to the reference group (two categories: poor or quite poor vs. good or quite good) in discussing or treating patients.
An aOR of less than 1 indicates better self-reported competence compared to the reference group (two categories: poor or quite poor vs. good or quite good) in discussing or treating patients.
*Erratum in original publication, Study I

### 5.1.3 Comparison with general practitioners

The results of the GPs' self-reported competence are shown in **Figure 19**, and the comparative subgroup analysis between the OB/GYNs and the GPs is shown in **Table 5**. There were no differences between the OB/GYNs and the GPs in self-reported competence in general: An equal portion of the OB/GYNs (28%, *n* = 84/299) and GPs (28%, *n* = 112/402) reported poor or quite poor competence in discussing sexual problems with patients. A similar but larger portion of both OB/GYNs (72%, *n* = 216/299) and GPs (67%, *n* = 270/402) reported poor or quite poor competence in treating patients with sexual problems.

There were interactions between gender and specialty in self-reported competence in discussing ($p$ = 0.007) and treating ($p$ = 0.0002) patients' sexual problems. Compared to the male OB/GYNs, the male GPs were more likely to report poor or quite poor competence in both discussing (GPs 43%, $n$ = 43/100 vs. OB/GYNs 10%, $n$ = 2/21) and treating (GPs 72%, $n$ = 72/100 vs. OB/GYNs 33%, $n$ = 7/21) the sexual problems of patients. On the contrary, compared to the female OB/GYNs, the female GPs were less likely to report poor or quite poor competence in treating patients with sexual problems (GPs 66%, $n$ = 198/302 vs. OB/GYNs 75%, $n$ = 209/278).

Moreover, differences between age groups and specialty in terms of discussing sexual problems emerged ($p$ = 0.002). Compared to the young OB/GYNs, the young GPs were less likely to report poor or quite poor competence in discussing sexual problems (GPs 22%, $n$ = 33/147 vs. OB/GYNs 32%, $n$ = 32/82). On the contrary, compared to late middle-aged OB/GYNs, late middle-aged GPs were more likely to report poor or quite poor competence in discussing these issues (GPs 32%, $n$ = 46/144 vs. OB/GYNs 18%, $n$ = 20/110).

Neither OB/GYNs nor GPs reported 'cannot say' or having a major problem discussing sexual issues with patients when the patient brought up the subject. There was no difference between the OB/GYNs (2%, $n$ = 5/299) and the GPs (4%, $n$ = 17/402) regarding having moderate problems discussing sexual issues when the patient raised them (aOR 2.70, 95% CI 0.97–7.51, $p$ = 0.056). There were no interactions between gender and specialty or between age groups and specialty.

**Table 5.** Comparison between OB/GYNs' and GPs' self-reported competence in discussing and treating patients' sexual problems: Sub-group analysis.

| | Discussing with patients | | Treating patients | |
|---|---|---|---|---|
| | Poor or quite poor | | Poor or quite poor | |
| | **aOR** | **95% CI** | **aOR** | **95% CI** |
| **Entire group*** | *p = 0.508* | | *p = 0.157* | |
| OB/GYN | ref | | ref | |
| GP | 0.89 | 0.63–1.26 | 0.78 | 0.56–1.10 |
| OB/GYN; GP *n*/total | 84/299; 112/402 | | 216/299; 270/402 | |
| **Subgroups** | | | | |
| **Female**** | *p = 0.077* | | *p = 0.006* | |
| OB/GYN | ref | | ref | |
| GP | 0.71 | 0.49–1.04 | 0.60 | 0.42–0.87 |
| OB/GYN; GP *n*/total | 82/278; 69/302 | | 209/278; 198/302 | |
| **Male**** | *p = 0.008* | | *p = 0.001* | |
| OB/GYN | ref | | ref | |
| GP | 8.08 | 1.73–37.65 | 5.64 | 1.97–16.15 |
| OB/GYN; GP *n*/total | 2/21; 43/100 | | 7/21; 72/100 | |
| **Age < 40 years***** | *p = 0.003* | | *p = 0.135* | |
| OB/GYN | ref | | ref | |
| GP | 0.38 | 0.20–0.72 | 0.60 | 0.31–1.17 |
| OB/GYN; GP *n*/total | 32/82; 33/147 | | 66/82; 103/147 | |
| **Age 40–49 years***** | *p = 0.694* | | *p = 0.118* | |
| OB/GYN | ref | | ref | |
| GP | 0.88 | 0.47–1.65 | 0.62 | 0.34–1.13 |
| OB/GYN; GP *n*/total | 32/107; 33/111 | | 77/107; 69/111 | |
| **Age ≥ 50 years***** | *p = 0.029* | | *p = 0.707* | |
| OB/GYN | ref | | ref | |
| GP | 1.97 | 1.07–3.60 | 1.11 | 0.65–1.89 |
| OB/GYN; GP *n*/total | 20/110; 46/144 | | 73/110; 98/144 | |

aOR, adjusted odds ratio; CI, confidence interval; GP, general practitioner; *n*, number; OB/GYN, obstetrician-gynecologist; ref, reference

*The multivariable binary logistic regression was carried out with adjustments for gender (female/male) and age (< 40/40–49/≥ 50 years).

**The multivariable binary logistic regression was carried out with an adjustment for age (< 40/40–49/≥ 50 years).

***The multivariable binary logistic regression was carried out with an adjustment for gender (female/male).

An aOR higher than 1 indicates worse self-reported competence in the comparison group compared to the reference group (two categories: poor or quite poor vs. good or quite good) in discussing or treating patients' sexual problems.

An aOR of less than 1 indicates better self-reported competence in the comparison group compared to the reference group (two categories: poor or quite poor vs. good or quite good) in discussing or treating patients' sexual problems.

## 5.2 Barriers in bringing up sexual problems with patients among obstetrician-gynecologists

The frequencies of the various barriers to bringing up sexual problems with patients among OB/GYNs are presented in **Figure 20**. The four most important barriers were 'shortness of the appointment time,' 'lack of knowledge about sexual medicine,' 'lack of experience with sexual medicine,' and 'sexual problem not being a priority at the appointment.'

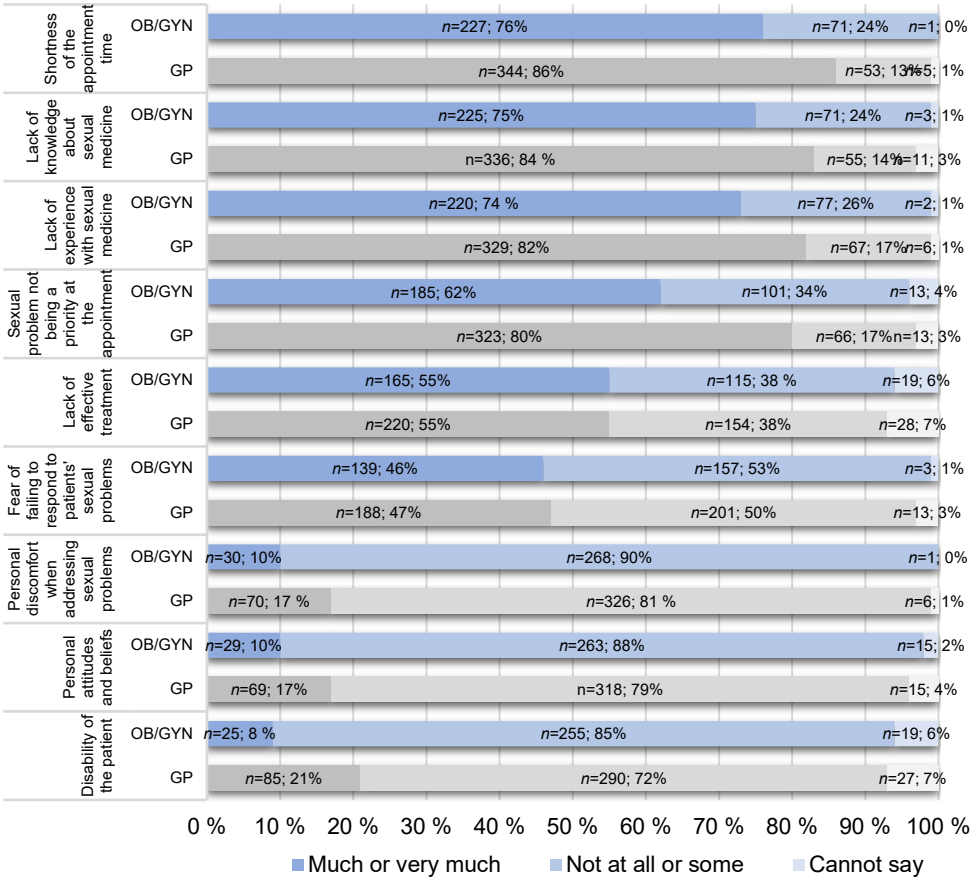



**Figure 20.** OB/GYNs' and GPs' barriers to bringing up sexual problems with patients.

### 5.2.1 Association with gender and age

The results of the subgroup analysis on the barriers to bringing up sexual problems in relation to the gender and age of the OB/GYNs are presented in **Table 6**. More female OB/GYNs than male OB/GYNs reported that 'shortness of the appointment

time,' 'lack of knowledge about sexual medicine,' 'lack of experience,' and 'lack of effective treatment' were barriers to bringing up sexual problems. Compared to the OB/GYNs in the youngest age group, fewer OB/GYNs in both of the older age groups reported barriers concerning 'shortness of the appointment time,' 'lack of knowledge about sexual medicine,' 'lack of experience with sexual medicine,' and 'fear of failing to respond to patients' sexual problems.'

### 5.2.2 Association with patient frequency

The results of the subgroup analysis of barriers to bringing up sexual problems in relation to the daily patient frequency of the OB/GYNs are presented in **Table 6**. No differences emerged regarding the number of patients treated daily. Furthermore, the OB/GYNs who dealt with sexual issues of patients less frequently were more likely to report that 'shortness of the appointment time' (0 patients 80%, $n$ = 32/40 vs. 1–5 patients 80%, $n$ = 177/221 vs. ≥ 6 patients 49%, $n$ = 18/37), 'sexual problem not being a priority at the appointment,' (0 patients 75%, $n$ = 35/40 vs. 1–5 patients 68%, $n$ = 143/209 vs. ≥ 6 patients 32%, $n$ = 12/37), 'lack of knowledge,' (0 patients 88%, $n$ = 36/41 vs. 1–5 patients 78%, $n$ = 171/218 vs. ≥ 6 patients 49%, $n$ = 18/37), 'lack of experience,' (0 patients 85%, $n$ = 35/41 vs. 1–5 patients 77%, $n$ = 169/220 vs. ≥ 6 patients 44%, $n$ =16/36), and 'fear of failing to respond to patients' problems' (0 patients 63%, $n$ = 25/40 vs. 1–5 patients 47%, $n$ = 104/219 vs. ≥ 6 patients 27%, $n$ = 10/37) were barriers.

### 5.2.3 Comparison with general practitioners

The frequencies of the various barriers to bringing up sexual problems among GPs are shown in **Figure 20**, and the comparative subgroup analysis between OB/GYNs and GPs is shown in **Table 7**. Compared to the OB/GYNs, the GPs were more likely to report having barriers in seven of the nine categories ('shortness of the appointment time,' 'sexual problem not being a priority at the appointment,' 'personal attitudes and beliefs,' 'personal discomfort when addressing sexual problems,' 'lack of knowledge about sexual medicine,' 'lack of experience with sexual medicine,' and 'disability of the patient').

**Table 6.** OB/GYNs' barriers to bringing up sexual problems with patients: Sub-group analysis.

| | Shortness of the appointment time | | Lack of knowledge about sexual medicine | | Lack of experience with sexual medicine | | Sexual problem not being a priority at the appointment | | Lack of effective treatment | | Fear of failing to respond to patients' sexual problems | | Personal discomfort when addressing sexual problems | | Personal attitudes and beliefs | | Disability of the patient | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Much or very much | | Much or very much | | Much or very much | | Much or very much | | Much or very much | | Much or very much | | Much or very much | | Much or very much | | Much or very much | |
| | aOR | 95% CI | aOR | 95% CI | aOR | 95% CI | aOR | 95% CI | aOR | 95% CI | aOR | 95% CI | aOR | 95% CI | aOR | 95% CI | aOR | 95% CI |
| **Gender** | *p = 0.0004* | | *p = 0.003* | | *p = 0.012* | | *p = 0.328* | | *p = 0.002* | | *p = 0.077* | | *p = 0.329* | | *p = 0.173* | | *p = 0.537* | |
| female vs. male | 7.76 | 2.50–24.10 | 4.72 | 1.70–13.12 | 3.77 | 1.35–10.56 | 1.63 | 0.61–4.36 | 5.55 | 1.91–16.15 | 2.58 | 0.90–7.35 | 2.83 | 0.35–22.79 | 0.42 | 0.12–1.47 | 1.94 | 0.24–15.95 |
| **Age (years)*** | *p < 0.0001* | | *p = 0.011* | | *p = 0.001* | | *p = 0.104* | | *p = 0.663* | | *p = 0.0004* | | *p = 0.863* | | *p = 0.213* | | *p = 0.159* | |
| 40–49 vs. < 40 | 0.18 | 0.06–0.56 | 0.28 | 0.12–0.67 | 0.22 | 0.09–0.54 | 0.48 | 0.25–0.94 | 1.34 | 0.71–2.51 | 0.43 | 0.23–0.79 | 1.31 | 0.49–3.46 | 2.22 | 0.79–6.25 | 0.51 | 0.19–1.36 |
| ≥ 50 vs. < 40 | 0.08 | 0.03–0.23 | 0.30 | 0.13–0.72 | 0.19 | 0.08–0.48 | 0.64 | 0.33–1.26 | 1.14 | 0.61–2.13 | 0.29 | 0.15–0.54 | 1.15 | 0.42–3.14 | 1.16 | 0.38–3.52 | 0.38 | 0.13–1.09 |
| ≥ 50 vs. 40–49 | 0.43 | 0.23–0.83 | 1.09 | 0.58–2.05 | 0.89 | 0.48–1.65 | 1.33 | 0.73–2.40 | 0.85 | 0.48–1.52 | 0.67 | 0.38–1.19 | 0.88 | 0.36–2.17 | 0.52 | 0.21–1.32 | 0.74 | 0.24-2.22 |
| **Patients treated per day** | *p = 0.468* | | *p = 0.290* | | *p = 0.213* | | *p = 0.590* | | *p = 0.759* | | *p = 0.687* | | *p = 0.369* | | *p = 0.431* | | *p = 0.312* | |
| 1–10 vs. ≥ 11 | 0.79 | 0.42–1.50 | 0.72 | 0.40–1.32 | 0.69 | 0.38–1.24 | 1.16 | 0.68–1.98 | 1.08 | 0.65–1.82 | 0.90 | 0.55–1.49 | 1.43 | 0.66–3.08 | 0.72 | 0.31–1.65 | 0.62 | 0.25–1.56 |
| **Patients with sexual issues dealt with per day** | *p = 0.0002* | | *p = 0.0001* | | *p < 0.0001* | | *p = 0.0004* | | *p = 0.196* | | *p = 0.016* | | *p = 0.140* | | *p = 0.231* | | *p = 0.545* | |
| 0 vs. 1–5 | 1.09 | 0.40–2.97 | 2.27 | 0.77–6.65 | 1.88 | 0.68–5.14 | 1.32 | 0.60–2.93 | 1.24 | 0.57–2.70 | 1.81 | 0.86–3.82 | 1.99 | 0.76–5.18 | 2.32 | 0.86–6.24 | 1.86 | 0.62–5.64 |
| 0 vs. ≥ 6 | 5.95 | 1.76–20.10 | 10.30 | 2.92–36.32 | 9.34 | 2.78–31.40 | 5.80 | 2.06–16.35 | 2.30 | 0.84–6.30 | 4.52 | 1.60–12.73 | 7.55 | 0.85–67.24 | 2.60 | 0.57–11.75 | 1.76 | 0.36–8.85 |
| 1–5 vs. ≥ 6 | 5.48 | 2.41–12.44 | 4.55 | 2.10–9.84 | 4.97 | 2.26–10.94 | 4.39 | 2.04–9.44 | 1.85 | 0.89–3.85 | 2.49 | 1.12–5.57 | 3.80 | 0.49–29.47 | 1.12 | 0.31–4.10 | 0.95 | 0.26–3.56 |

aOR, adjusted odds ratio; CI, confidence interval; vs., versus

The 'cannot say' responses were omitted from the analyses. In each question, the number of analyzed responses/total number of questionnaires is shown in the upper column.

*P*-values are over the group values.

The multivariable binary logistic regression was carried out with adjustments for OB/GYNs' gender (female/male), age (< 40/40–49/≥ 50 years), the number of patients treated per day (1–10/≥ 11), and the number of patients with sexual issues dealt with per day (0/1–5/≥ 6).

An aOR higher than 1 indicates that the specific barrier is more likely to be reported as 'much or very much' a barrier by the comparison group compared to the reference group.

An aOR lower than 1 indicates that the specific barrier is less likely to be reported as 'much or very much' a barrier by the comparison group compared to the reference group.

*Erratum in original publication, Study I

There were interactions between gender and specialty for the barriers of 'personal attitudes and beliefs' ($p = 0.015$) and 'shortness of the appointment time' ($p = 0.043$). Compared to the OB/GYNs, the female (but not the male) GPs were more likely to report the barrier of 'personal attitudes and beliefs.' Compared to the OB/GYNs, the GPs of both genders were more likely to report the barrier of 'shortness of the appointment time.'

Furthermore, there were interactions between age groups and specialty regarding the barriers of 'shortness of the appointment time' ($p = 0.014$), 'lack of knowledge about sexual medicine' ($p = 0.032$), 'fear of failing to respond to patients' sexual problems' ($p = 0.001$), and 'disability of the patient' ($p = 0.026$). Compared to the late middle-aged OB/GYNs, the late middle-aged GPs were more likely to report the barrier of 'shortness of the appointment time' and 'lack of knowledge about sexual medicine.' However, in the two younger age groups, no such differences were found. Furthermore, compared to the late middle-aged OB/GYNs, the late middle-aged GPs were more likely to report the barrier of 'fear of failing to respond to patients' sexual problems.' In contrast, compared to the young OB/GYNs, the young GPs were less likely to report 'fear of failing to respond to patients' sexual problems' as a barrier. Compared to the OB/GYNs in the same age groups, respectively, the middle-aged and the late-middle-aged GPs were more likely to report the barrier of 'disability of the patient.'

**Table 7.** Comparison between OB/GYNs' and GPs' barriers to bringing up sexual problems with patients: Sub-group analysis.

| | Shortness of the appointment time | | Lack of knowledge about sexual medicine | | Lack of experience with sexual medicine | | Sexual problem not being a priority at the appointment | | Lack of effective treatment | | Fear of failing to respond to patients' sexual problems | | Personal discomfort when addressing sexual problems | | Personal attitudes and beliefs | | Disability of the patient | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Much or very much | | Much or very much | | Much or very much | | Much or very much | | Much or very much | | Much or very much | | Much or very much | | Much or very much | | Much or very much | |
| | aOR | 95% CI | aOR | 95% CI | aOR | 95% CI | aOR | 95% CI | aOR | 95% CI | aOR | 95% CI | aOR | 95% CI | aOR | 95% CI | aOR | 95% CI |
| **Entire group*** | *p < 0.0001* | | *p = 0.001* | | *p = 0.003* | | *p < 0.0001* | | *p = 0.232* | | *p = 0.337* | | *p = 0.002* | | *p = 0.001* | | *p < 0.0001* | |
| OB/GYN | ref | | ref | | ref | | ref | | ref | | ref | | ref | | ref | | ref | |
| GP | 2.36 | 1.53–3.63 | 2.05 | 1.36–3.10 | 1.80 | 1.22–2.67 | 2.76 | 1.89–4.03 | 1.23 | 0.88–1.71 | 1.17 | 0.85–1.60 | 2.07 | 1.30–3.32 | 2.27 | 1.41–3.67 | 3.23 | 1.98–5.25 |
| OB/GYN; GP *n*/total | 227/298; 344/397 | | 225/296; 336/391 | | 220/297; 329/396 | | 185/286; 323/389 | | 165/280; 220/374 | | 139/296; 188/389 | | 30/298; 70/396 | | 29/292; 69/387 | | 25/280; 85/375 | |
| **Subgroups** | | | | | | | | | | | | | | | | | | |
| **Female**** | *p = 0.006* | | *p = 0.018* | | *p = 0.026* | | *p < 0.0001* | | *p = 0.502* | | *p = 0.389* | | *p = 0.005* | | *p = 0.0001* | | *p < 0.0001* | |
| OB/GYN | ref | | ref | | ref | | ref | | ref | | ref | | ref | | ref | | ref | |
| GP | 1.93 | 1.21–3.08 | 1.72 | 1.10–2.69 | 1.63 | 1.06–2.49 | 2.86 | 1.89–4.31 | 1.13 | 0.79–1.61 | 1.16 | 0.83–1.62 | 1.99 | 1.23–3.24 | 2.69 | 1.61–4.48 | 3.17 | 1.92–5.25 |
| OB/GYN; GP *n*/total | 219/277; 263/298 | | 214/275; 254/293 | | 209/276; 250/296 | | 173/266; 248/293 | | 160/259; 179/280 | | 133/275; 155/293 | | 29/277; 56/297 | | 25/271; 58/290 | | 24/261; 69/281 | |
| **Male**** | *p = 0.0004* | | *p = 0.005* | | *p = 0.033* | | *p = 0.067* | | *p = 0.102* | | *p = 0.593* | | *p = 0.272* | | *p = 0.359* | | *p = 0.279* | |
| OB/GYN | ref | | ref | | ref | | ref | | ref | | ref | | ref | | ref | | ref | |
| GP | 7.11 | 2.40–21.04 | 4.65 | 1.60–13.54 | 3.05 | 1.10–8.46 | 2.71 | 0.93–7.88 | 2.54 | 0.83–7.74 | 1.34 | 0.46–3.89 | 3.29 | 0.39–27.38 | 0.54 | 0.14–2.03 | 3.20 | 0.39–26.34 |
| OB/GYN; GP *n*/total | 8/21; 81/99 | | 11/21; 82/98 | | 11/21; 79/100 | | 12/20; 75/96 | | 5/21; 41/94 | | 6/21; 33/96 | | 1/21; 14/99 | | 4/21; 11/97 | | 1/19; 16/94 | |
| **Age < 40***** | *p = 0.404* | | *p = 0.866* | | *p = 0.823* | | *p = 0.003* | | *p = 0.580* | | *p = 0.031* | | *p = 0.084* | | *p = 0.250* | | *p = 0.448* | |
| OB/GYN | ref | | ref | | ref | | ref | | ref | | ref | | ref | | ref | | ref | |
| GP | 0.60 | 0.18–1.98 | 0.92 | 0.37–2.32 | 0.90 | 0.34–2.37 | 3.24 | 1.48–7.11 | 1.18 | 0.65–2.14 | 0.53 | 0.29–0.94 | 2.14 | 0.90–5.06 | 1.79 | 0.66–4.82 | 1.36 | 0.62–2.99 |
| OB/GYN; GP *n*/total | 77/81; 134/147 | | 73/81; 124/144 | | 75/82; 130/146 | | 60/80; 127/144 | | 42/74; 78/139 | | 54/81; 68/143 | | 8/82; 25/147 | | 6/79; 17/145 | | 11/75; 25/135 | |
| **Age 40–49***** | *p = 0.123* | | *p = 0.090* | | *p = 0.102* | | *p = 0.0003* | | *p = 0.474* | | *p = 0.485* | | *p = 0.144* | | *p = 0.039* | | *p = 0.041* | |
| OB/GYN | ref | | ref | | ref | | ref | | ref | | ref | | ref | | ref | | ref | |
| GP | 1.86 | 0.85–4.10 | 1.83 | 0.91–3.69 | 1.76 | 0.89–3.46 | 3.62 | 1.81–7.25 | 1.26 | 0.67–2.35 | 1.23 | 0.69–2.17 | 1.83 | 0.81–4.12 | 2.20 | 1.04–4.66 | 2.60 | 1.04–6.47 |
| OB/GYN; GP *n*/total | 85/107; 92/109 | | 77/107; 91/108 | | 74/105; 87/109 | | 59/101; 86/106 | | 64/100; 65/102 | | 48/106; 50/108 | | 12/107; 20/107 | | 14/106; 25/106 | | 8/101; 20/105 | |

| | Shortness of the appointment time | | Lack of knowledge about sexual medicine | | Lack of experience with sexual medicine | | Sexual problem not being a priority at the appointment | | Lack of effective treatment | | Fear of failing to respond to patients' sexual problems | | Personal discomfort when addressing sexual problems | | Personal attitudes and beliefs | | Disability of the patient | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Much or very much | | Much or very much | | Much or very much | | Much or very much | | Much or very much | | Much or very much | | Much or very much | | Much or very much | | Much or very much | |
| | **aOR** | **95% CI** | **aOR** | **95% CI** | **aOR** | **95% CI** | **aOR** | **95% CI** | **aOR** | **95% CI** | **aOR** | **95% CI** | **aOR** | **95% CI** | **aOR** | **95% CI** | **aOR** | **95% CI** |
| **Age ≥ 50*** ** | *p < 0.0001* | | *p = 0.001* | | *p = 0.004* | | *p = 0.007* | | *p = 0.434* | | *p = 0.004* | | *p = 0.049* | | *p = 0.014* | | *p < 0.0001* | |
| OB/GYN | ref | | ref | | ref | | ref | | ref | | ref | | ref | | ref | | ref | |
| GP | 4.19 | 2.26–7.79 | 3.21 | 1.66–6.20 | 2.33 | 1.30–4.17 | 2.21 | 1.24–3.92 | 1.24 | 0.73–2.10 | 2.19 | 1.29–3.72 | 2.21 | 1.00–4.86 | 2.76 | 1.23-6.20 | 8.13 | 3.25–20.30 |
| OB/GYN; GP *n*/total | 65/110; 118/141 | | 75/108; 121/139 | | 71/110; 112/141 | | 66/105; 110/139 | | 59/106; 77/133 | | 37/109; 70/138 | | 10/109; 25/142 | | 9/107; 27/136 | | 6/104; 40/135 | |

aOR, adjusted odds ratio; CI, confidence interval; GP, general practitioner; *n*, number; OB/GYN, obstetrician-gynecologist; ref, reference

The 'cannot say' responses were omitted from the analyses. In each question, the responses 'much' or 'very much'/the number of analyzed responses are shown in the lower column.

*The multivariable binary logistic regression was carried out with adjustments for gender (female/male) and age (< 40/40–49/ ≥ 50 years).

**The multivariable binary logistic regression was carried out with an adjustment for age (< 40/40–49/≥ 50 years).

***The multivariable binary logistic regression was carried out with an adjustment for gender (female/male).

An aOR higher than 1 indicates that the specific barrier is more likely to be reported as a barrier by the comparison group compared to the reference group.

An aOR lower than 1 indicates that the specific barrier is less likely to be reported as a barrier by the comparison group compared to the reference group.

### 5.2.4 Associations between competence and barriers

The distributions of the barrier scores according to competences are shown in **Table 8**, and the associations between the barrier scores and competences are shown in **Table 9**. Higher total barrier scores and all barrier sub-scores (higher barriers) were associated with poorer competence in both discussing and treating patients' sexual problems. A one-point increase in the total barrier score indicated that physicians were 10.82 times more likely to report poor competence in discussing sexual problems and 11.44 times more likely to report poor competence in treating them.

Of the barrier sub-scores, 'professionalism' was the most important barrier for competence in discussing and treating sexual problems. Additionally, 'personality' was important in discussing, and 'treatment' was important in both discussing and treating. There were significant interactions between the barrier sub-scores and specialty in discussing, in the sub-score of 'time' ($p = 0.015$) and 'professionalism' ($p = 0.043$). Regarding an increase in 'time,' both GPs (for a one-point increase aOR 1.46, 95% CI 1.02–2.11, $p = 0.041$) and OB/GYNs (aOR 2.26, 95% CI 1.50–3.42, $p = 0.0001$) were more likely to report poor competence; however, this was more so for OB/GYNs. Similarly, for an increase in 'professionalism,' both GPs (aOR 2.56, 95% CI 1.75–3.75, $p < 0.0001$) and OB/GYNs (aOR 3.88, 95% CI 2.46–6.11, $p < 0.0001$) were more likely to report poor competence, again with a stronger effect for OB/GYNs. Furthermore, there were significant interactions between the barrier scores and specialty in treating sexual problems in the total score ($p = 0.004$) (GPs aOR 7.27, 95% CI 4.09–12.92, $p < 0.0001$; OB/GYNs aOR 27.22, 95% CI 11.39–65.04, $p < 0.0001$), as well as in the sub-score of 'personality' ($p = 0.018$) (GPs 1.65, 95% CI 1.20–2.27, $p = 0.002$; OB/GYNs aOR 3.69, 95% CI 2.00–6.80, $p < 0.0001$) and 'professionalism' ($p = 0.012$) (GPs aOR 3.31, 95% CI 2.33–4.70, $p < 0.0001$; OB/GYNs aOR 9.48, 95% CI 5.43–16.53, $p < 0.0001$), with a stronger effect overall for OB/GYNs.

**Table 8.** Barrier scores in competence in addressing sexual problems of female patients (*n* = 701).

| | | Discussing with patients | | | | | | Treating patients | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Good | | | Poor | | | Good | | | Poor | | |
| | | ***n*** | **Mean** | **SD** | ***n*** | **Mean** | **SD** | ***n*** | **Mean** | **SD** | ***n*** | **Mean** | **SD** |
| **GP** | | *n* = 290 | | | *n* = 112 | | | *n* = 132 | | | *n* = 270 | | |
| **Total*** | | 283 | 2.62 | 0.46 | 111 | 2.95 | 0.41 | 130 | 2.48 | 0.48 | 264 | 2.83 | 0.42 |
| **Time**** | Time constraints and low priority | 287 | 3.26 | 0.69 | 112 | 3.35 | 0.57 | 131 | 3.12 | 0.74 | 268 | 3.36 | 0.60 |
| **Personality**** | Personal attitudes, beliefs and discomfort | 287 | 1.66 | 0.62 | 112 | 2.14 | 0.78 | 132 | 1.66 | 0.61 | 267 | 1.86 | 0.74 |
| **Professionalism**** | Lack of knowledge and experience | 284 | 3.10 | 0.75 | 112 | 3.46 | 0.57 | 130 | 2.83 | 0.78 | 266 | 3.38 | 0.61 |
| **Treatment**** | Lack of treatment and fear of failing to respond to patients' problems | 285 | 2.45 | 0.69 | 111 | 2.82 | 0.65 | 132 | 2.27 | 0.65 | 264 | 2.70 | 0.68 |
| **OB/GYN** | | *n* = 215 | | | *n* = 84 | | | *n* = 83 | | | *n* = 216 | | |
| **Total*** | | 214 | 2.34 | 0.55 | 82 | 2.91 | 0.40 | 83 | 1.98 | 0.46 | 213 | 2.70 | 0.48 |
| **Time**** | Time constraints and low priority | 215 | 2.83 | 0.80 | 84 | 3.30 | 0.62 | 83 | 2.58 | 0.78 | 216 | 3.11 | 0.73 |
| **Personality**** | Personal attitudes, beliefs and discomfort | 215 | 1.35 | 0.52 | 84 | 1.80 | 0.73 | 83 | 1.22 | 0.39 | 216 | 1.57 | 0.66 |
| **Professionalism**** | Lack of knowledge and experience | 215 | 2.85 | 0.85 | 84 | 3.58 | 0.54 | 83 | 2.24 | 0.72 | 216 | 3.37 | 0.65 |
| **Treatment**** | Lack of treatment and fear of failing to respond to patients' problems | 214 | 2.32 | 0.80 | 82 | 2.95 | 0.64 | 83 | 1.90 | 0.65 | 213 | 2.73 | 0.75 |
| **ALL** | | *n* = 505 | | | *n* = 196 | | | *n* = 215 | | | *n* = 486 | | |
| **Total*** | | 497 | 2.50 | 0.52 | 193 | 2.93 | 0.41 | 213 | 2.29 | 0.53 | 477 | 2.77 | 0.45 |
| **Time**** | Time constraints and low priority | 502 | 3.08 | 0.77 | 196 | 3.33 | 0.59 | 214 | 2.91 | 0.80 | 484 | 3.23 | 0.67 |
| **Personality**** | Personal attitudes, beliefs and discomfort | 502 | 1.53 | 0.60 | 196 | 2.00 | 0.78 | 215 | 1.49 | 0.58 | 483 | 1.73 | 0.72 |
| **Professionalism**** | Lack of knowledge and experience | 499 | 2.99 | 0.80 | 196 | 3.52 | 0.56 | 213 | 2.60 | 0.81 | 482 | 3.38 | 0.63 |
| **Treatment**** | Lack of treatment and fear of failing to respond to patients' problems | 499 | 2.40 | 0.74 | 82 | 2.88 | 0.65 | 215 | 2.13 | 0.67 | 477 | 2.71 | 0.71 |

*n*, number; SD, standard deviation
The 'cannot say' responses were omitted from the analyses. 'Poor' includes the responses 'poor' and 'quite poor.'
The higher the score, the more barriers.
*6 out of 8 had to be answered to get into the analysis.
**1 out of 2 had to be answered to get into the analysis.

**Table 9.** Associations between barrier scores and self-reported competence in addressing sexual problems of female patients ($n$ = 701).

| | | Discussing with patients | | Treating patients | |
|---|---|---|---|---|---|
| | | Poor | | Poor | |
| **Barrier scores** | | **aOR** | **95% CI** | **aOR** | **95% CI** |
| **Total*** | | $p < 0.0001$ 10.82 | 6.76–17.32 | $p < 0.0001$ 11.44 | 7.20–18.18 |
| **Time**** | Time constraints and low priority | $p < 0.0001$ 1.86 | 1.42–2.43 | $p < 0.0001$ 2.00 | 1.57–2.54 |
| **Personality**** | Personal attitudes, beliefs and discomfort | $p < 0.0001$ 3.07 | 2.34–4.02 | $p < 0.0001$ 1.82 | 1.45–2.28 |
| **Professionalism**** | Lack of knowledge and experience | $p < 0.0001$ 3.23 | 2.43–4.31 | $p < 0.0001$ 4.78 | 3.60–6.36 |
| **Treatment**** | Lack of treatment and fear of failing to respond to patients' problems | $p < 0.0001$ 3.10 | 2.35–4.10 | $p < 0.0001$ 3.41 | 2.61–4.45 |

aOR, adjusted odds ratio; multivariable logistic regression; CI, confidence interval
The 'cannot say' responses were omitted from the analyses. 'Poor' includes the responses 'poor' and 'quite poor.'
An aOR higher than 1 indicates that addressing sexual problems is more likely poor when the barrier score increases by one point.
The multivariable binary logistic regression was carried out with adjustments for gender (female/male), age (< 40/40–49/≥ 50 years) and specialty (GP/OB-GYN).
*6 out of 8 had to be answered to get into the analysis.
**1 out of 2 had to be answered to get into the analysis.

## 5.3 Attitudes and practice patterns in the treatment of sexual problems among obstetrician-gynecologists

The results for attitudes toward sexual problems among OB/GYNs are presented in **Figure 21**. Most OB/GYNs (95%, $n$ = 285/299) agreed that treating sexual problems is an important health care practice; however, half of them (52%, $n$ = 155/299) reported that diagnosing female sexual problems is difficult. More than one-third of the OB/GYNs (38%, $n$ = 115/299) considered sexual problems to be side effects of medications for other pathologies, but nearly half disagreed with this perspective (48%, $n$ =145/299). A third (29%, $n$ = 86/299) responded that the treatments they used for sexual problems were effective. Most OB/GYNs (88%, $n$ = 262/299) reported that sexual problems can be treated with lifestyle changes.

When taking a patient's sexual history, half (53%, $n$ = 58/299) of the OB/GYNs reported always or usually asking about sexual life satisfaction. As a sexual history-

taking method, open conversation was used by 86% ($n$ = 258/299) of the OB/GYNs, questionnaires by 6% ($n$ = 19/299), and structured interviews by 3% ($n$ = 10/299). Of all the OB/GYNs, 12% ($n$ = 37/299) did not perform sexual history-taking.

The results on the practice patterns in the treatment of sexual problems are presented in **Figure 22**. Almost half of the OB/GYNs (45%, $n$ = 136/299) often asked about sexual problems during general medical history-taking. When diagnosing sexual problems, a minority (13%, $n$ = 40/299) reported ordering further examinations. Several OB/GYNs (16%, $n$ = 46/299) prescribed medications for sexual problems, but more than half (58%, $n$ =172/299) prescribed treatments other than medications. When the OB/GYNs considered sexual problems to be side effects of the medications for other pathologies, a quarter (26%, $n$ = 78/299) reported changing the medication themselves, while most (81%, $n$ = 242/299) asked the patient to consult a specialist for the underlying medical condition. More than half of the OB/GYNs (59%, $n$ = 177/299) reported often referring patients with sexual problems to a sexual medicine specialist. A third (34%, $n$ = 102/299) reported that their organization had specific instructions concerning patient referrals to continued care.

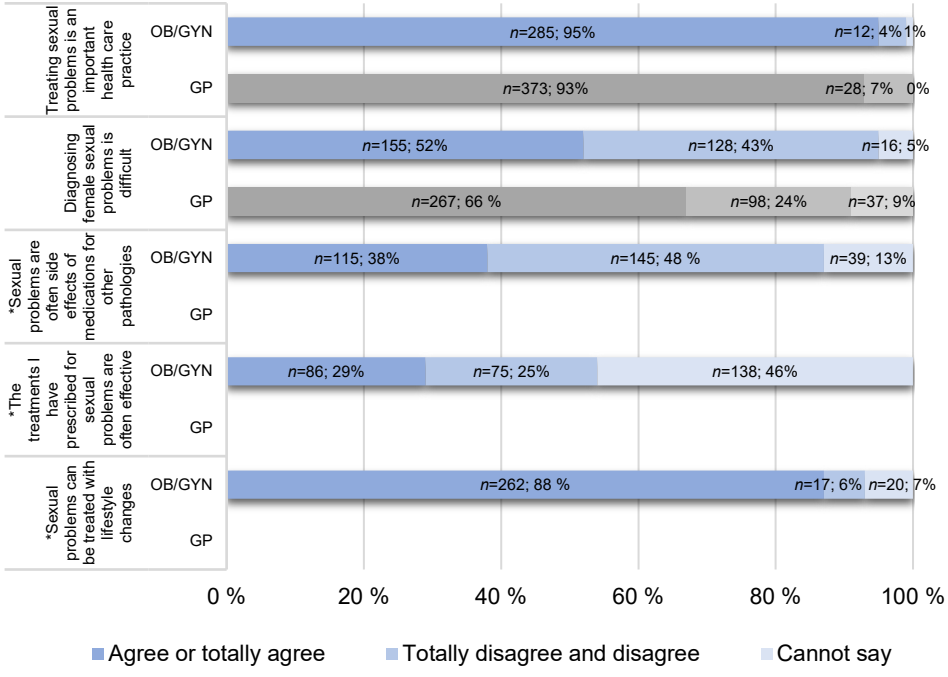



**Figure 21.** OB/GYNs' and GPs' attitudes toward sexual problems. *Not taken in the comparison with GPs.

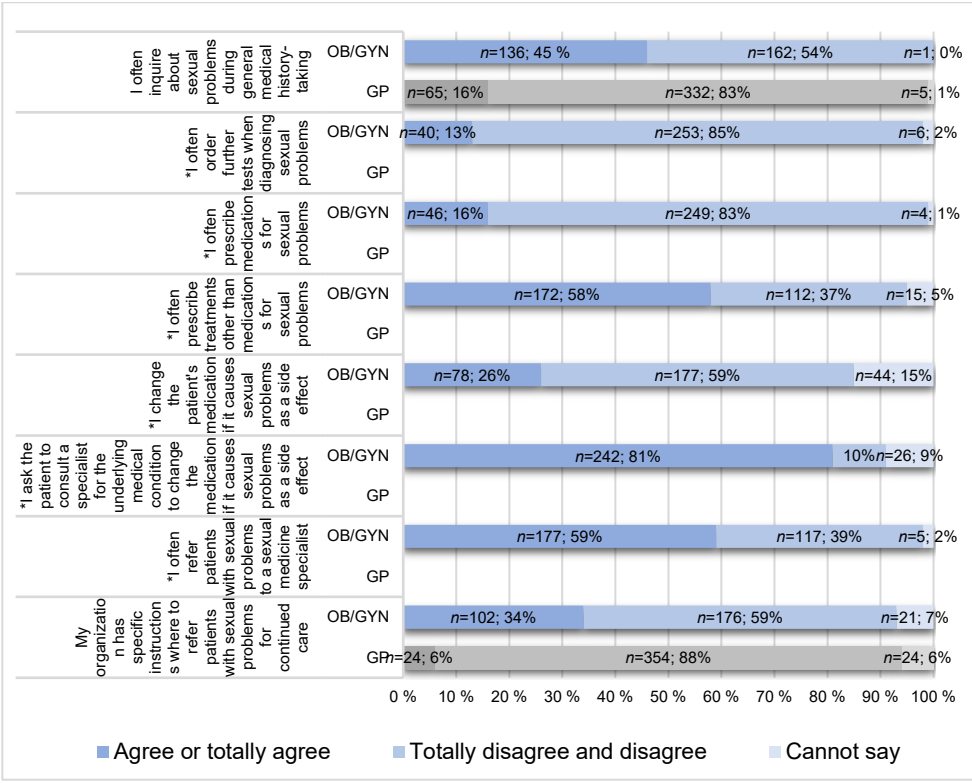



**Figure 22.** OB/GYNs' and GPs' practice patterns in the treatment of sexual problems. *Not taken in the comparison with GPs.

### 5.3.1 Association with gender and age

The results of the subgroup analysis on attitudes, with special reference to the gender and age of the OB/GYNs, are presented in **Table 10** and on the practice patterns in **Table 11**. Compared with the male OB/GYNs (29%, *n* = 6/21), the female OB/GYNs (54%, *n* = 149/278) were more likely to report difficulty diagnosing sexual problems. Compared with the male OB/GYNs (29%, *n* = 6/21), the female OB/GYNs (12%, *n* = 34/278) were less likely to order further examinations and to report changing the medication themselves (female 24%, *n* = 68/278 vs. male 48%, *n* = 10/21).

Compared with the young OB/GYNs (61%, *n* = 50/82), the late middle-aged OB/GYNs (43%, *n* = 47/110) were less likely to report difficulty in diagnosing sexual problems. Compared with the middle-aged OB/GYNs (92%, *n* = 98/107), the late middle-aged OB/GYNs (82%, *n* = 90/110) were less likely to report that lifestyle changes could be a treatment.

When taking a patient's sexual history, no differences between the genders were found in asking about sexual life satisfaction. However, compared with the younger

OB/GYNs (young 43%, *n* = 35/82; middle-aged 44%, *n* = 47/107), the late middle-aged OB/GYNs (69%, *n* = 76/110) were more likely to ask about sexual life satisfaction (late middle-aged vs. young: aOR 2.87, 95% CI 1.53–5.41, $p = 0.001$; late middle-aged vs. middle-aged: aOR 3.15; 95% CI 1.74–5.75, $p < 0.001$). In terms of the sexual history-taking method (open conversation, questionnaires, structured interviews, or no sexual history-taking), no differences between gender or age were found.

### 5.3.2 Association with patient frequency

The results of the subgroup analysis on attitudes, with special reference to the daily patient frequency of the OB/GYNs, are presented in **Table 10** and on the practice patterns in **Table 11**. Compared with the OB/GYNs who dealt with 1–5 patients with sexual issues per day, those who dealt less frequently with such patients (group 0 patients per day) were less likely to report that treating sexual problems was important (97%, *n* = 214/221 vs. 88%, *n* = 36/41). Compared with the OB/GYNs who attended to ≥ 6 patients with sexual issues per day (54%, *n* = 20/37), those who attended to 1–5 patients per day (26%, *n* = 58/221) were less likely to consider that their treatments were effective. The OB/GYNs who dealt with patients with sexual issues less frequently per day were less likely to order further examinations (0 patients per day, 7%, *n* = 3/41; 1–5 patients, 12%, *n* = 26/221; ≥ 6 patients, 30%, *n* = 11/37) and to prescribe treatments other than medications (0 patients per day, 44%, *n* = 18/41; 1–5 patients, 56%, *n* = 124/221; ≥ 6 patients, 81%, *n* = 30/37).

The OB/GYNs seeing fewer patients with sexual issues per day were less likely to ask about sexual life satisfaction (0 patients per day 39%, n = 16/41 vs. ≥ 6 patients 92%, *n* = 34/37: aOR 0.06, 95% CI 0.01–0.23, $p < 0.0001$; 1–5 patients 49%, *n* = 108/221 vs. ≥ 6 patients 92%, *n* = 34/37: aOR 0.08, 95% CI 0.02–0.28, $p < 0.0001$). In the sexual history-taking method, no differences were found between the daily number of patients.

**Table 10.** OB/GYNs' attitudes toward sexual problems: Sub-group analysis.

| | Treating sexual problems is an important health care practice | | Diagnosing female sexual problems is difficult | | Sexual problems are often side effects of medications for other pathologies | | The treatments I have prescribed for sexual problems are often effective | | Sexual problems can be treated with lifestyle changes | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Totally agree or agree | | Totally agree or agree | | Totally agree or agree | | Totally agree or agree | | Totally agree or agree | |
| | **aOR** | **95% CI** | **aOR** | **95% CI** | **aOR** | **95% CI** | **aOR** | **95% CI** | **aOR** | **95% CI** |
| **Gender** | *p = 0.874* | | *p = 0.034* | | *p = 0.350* | | *p = 0.947* | | *p = 0.417* | |
| female vs. male | 0.83 | 0.09–7.79 | 2.99 | 1.09–8.22 | 0.63 | 0.24–1.67 | 0.96 | 0.26–3.56 | 1.81 | 0.43–7.63 |
| **Age (years)** | *p = 0.553* | | *p = 0.030* | | *p = 0.626* | | *p = 0.831* | | *p = 0.014* | |
| 40–49 vs. < 40 | 0.39 | 0.07–2.27 | 0.69 | 0.37–1.30 | 0.83 | 0.43–1.58 | 1.30 | 0.56–3.02 | 1.46 | 0.20–10.81 |
| ≥ 50 vs. < 40 | 0.42 | 0.07–2.44 | 0.44 | 0.24–0.82 | 1.10 | 0.58–2.08 | 1.16 | 0.49–2.75 | 0.21 | 0.04–0.99 |
| ≥ 50 vs. 40–49 | 1.07 | 0.28–4.02 | 0.63 | 0.36–1.11 | 1.33 | 0.74–2.38 | 0.90 | 0.43–1.86 | 0.14 | 0.03–0.67 |
| **Patients treated per day** | *p = 0.072* | | *p = 0.735* | | *p = 0.412* | | *p = 0.723* | | *p = 0.120* | |
| 1–10 vs. ≥ 11 | 0.30 | 0.08–1.11 | 1.09 | 0.66–1.81 | 0.80 | 0.48–1.35 | 0.89 | 0.46–1.72 | 0.42 | 0.14–1.25 |
| **Patients with sexual issues dealt with per day** | *p = 0.024* | | *p = 0.601* | | *p = 0.620* | | *p = 0.071* | | *p = 0.255* | |
| 0 vs. 1–5 | 0.16 | 0.04–0.61 | 0.92 | 0.44–1.94 | 1.42 | 0.64–3.14 | 1.48 | 0.45–4.84 | 0.93 | 0.18–4.71 |
| 0 vs. ≥ 6 | 0.52 | 0.08–3.34 | 1.35 | 0.51–3.63 | 1.14 | 0.41–3.16 | 0.50 | 0.12–2.14 | 2.80 | 0.40–19.58 |
| 1–5 vs. ≥ 6 | 3.30 | 0.57–19.05 | 1.46 | 0.70–3.08 | 0.81 | 0.39–1.68 | 0.34 | 0.13–0.87 | 3.03 | 0.81–11.34 |

aOR, adjusted odds ratio; CI, confidence interval; vs., versus
The 'cannot say' responses were omitted from the analyses.
*P*-values are over the group values.
An aOR higher than 1 indicates that the respondents in the comparison group were more likely to report 'agree' with the question compared to the reference group.
The multivariable binary logistic regression was carried out with adjustments for OB/GYNs' gender (female/male), age (< 40/40–49/≥ 50 years), the number of patients treated per day (1–10/ ≥ 11), and the number of patients with sexual issues dealt with per day (0/1–5/≥ 6).
Modified from original publication II.

**Table 11.** OB/GYNs' practice patterns in the treatment of sexual problems: Sub-group analysis.

| | I often inquire about sexual problems during general medical history-taking | | I often order further tests when diagnosing sexual problems | | I often prescribe medications for sexual problems | | I often prescribe treatments other than medications for sexual problems | | I change the patient's medication if it causes sexual problems as a side effect | | I ask the patient to consult a specialist for the underlying medical condition to change the medication if it causes sexual problems as a side effect | | I often refer patients with sexual problems to a sexual medicine specialist | | My organization has specific instructions where to refer patients with sexual problems for continued care | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Totally agree or agree | | Totally agree or agree | | Totally agree or agree | | Totally agree or agree | | Totally agree or agree | | Totally agree or agree | | Totally agree or agree | | Totally agree or agree | |
| | **aOR** | **95% CI** | **aOR** | **95% CI** | **aOR** | **95% CI** | **aOR** | **95% CI** | **aOR** | **95% CI** | **aOR** | **95% CI** | **aOR** | **95% CI** | **aOR** | **95% CI** |
| **Gender** | *p = 0.134* | | *p = 0.006* | | *p = 0.142* | | *p = 0.852* | | *p = 0.024* | | *p = 0.264* | | *p = 0.345* | | *p = 0.722* | |
| female vs. male | 0.48 | 0.18–1.26 | 0.20 | 0.07–0.63 | 0.45 | 0.15–1.31 | 1.09 | 0.43–2.77 | 0.32 | 0.12–0.86 | 1.99 | 0.59–6.70 | 1.57 | 0.62–4.00 | 0.84 | 0.32–2.20 |
| **Age (years)** | *p = 0.385* | | *p = 0.056* | | *p = 0.131* | | *p = 0.213* | | *p = 0.259* | | *p = 0.949* | | *p = 0.217* | | *p = 0.074* | |
| 40–49 vs. < 40 | 1.16 | 0.62–2.17 | 3.00 | 1.10–8.17 | 1.36 | 0.53–3.47 | 1.66 | 0.88–3.13 | 1.04 | 0.52–2.09 | 1.15 | 0.42–3.13 | 1.62 | 0.89–2.94 | 2.11 | 1.10–4.04 |
| ≥ 50 vs. < 40 | 1.52 | 0.82–2.83 | 1.45 | 0.51–4.11 | 2.29 | 0.96–5.48 | 1.06 | 0.57–1.96 | 0.62 | 0.31–1.28 | 1.01 | 0.39–2.65 | 1.58 | 0.87–2.89 | 1.80 | 0.93–3.47 |
| ≥ 50 vs. 40–49 | 1.32 | 0.74–2.34 | 0.48 | 0.21–1.09 | 1.68 | 0.80–3.55 | 0.64 | 0.35–1.15 | 0.60 | 0.31–1.16 | 0.88 | 0.36–2.16 | 0.98 | 0.56–1.73 | 0.85 | 0.48–1.51 |
| **Patients treated per day** | *p = 0.926* | | *p = 0.844* | | *p = 0.628* | | *p = 0.220* | | *p = 0.827* | | *p = 0.209* | | *p = 0.518* | | *p = 0.378* | |
| 1–10 vs. ≥ 11 | 1.02 | 0.62–1.69 | 0.93 | 0.44–1.95 | 1.18 | 0.61–2.29 | 1.38 | 0.83–2.30 | 1.07 | 0.60–1.88 | 0.61 | 0.28–1.32 | 0.85 | 0.52–1.39 | 0.79 | 0.47–1.33 |
| **Patients with sexual issues dealt with per day** | *p < 0.0001* | | *p = 0.007* | | *p = 0.608* | | *p = 0.004* | | *p = 0.279* | | *p = 0.611* | | *p = 0.552* | | *p = 0.887* | |
| 0 versus 1–5 | 0.41 | 0.19–0.89 | 0.50 | 0.13–1.89 | 0.57 | 0.18–1.75 | 0.60 | 0.30–1.21 | 1.91 | 0.86–4.22 | 0.76 | 0.26–2.22 | 0.76 | 0.38–1.53 | 1.20 | 0.57–2.53 |
| 0 vs. ≥ 6 | 0.06 | 0.02–0.19 | 0.14 | 0.03–0.64 | 0.56 | 0.14–2.30 | 0.14 | 0.04–0.44 | 1.84 | 0.63–5.44 | 1.26 | 0.31–5.16 | 1.05 | 0.41–2.68 | 1.15 | 0.42–3.17 |
| 1–5 vs. ≥ 6 | 0.14 | 0.06–0.36 | 0.29 | 0.12–0.68 | 0.99 | 0.37–2.62 | 0.23 | 0.08–0.61 | 0.41 | 0.41–2.27 | 1.66 | 0.56–4.90 | 1.38 | 0.67–2.84 | 0.96 | 0.44–2.09 |

aOR, adjusted odds ratio; CI, confidence interval; vs., versus
The 'cannot say' responses were omitted from the analyses.
*P*-values are over the group values.
An AOR higher than 1 indicates that the respondents in the comparison group were more likely to report 'agree' with the question compared to the reference group.
The multivariable binary logistic regression was carried out with adjustments for OB/GYNs' gender (female/male), age (< 40/40–49/≥ 50 years), the number of patients treated per day (1–10/≥ 11), and the number of patients with sexual issues dealt with per day (0/1–5/≥ 6).
Modified from original publication II.

### 5.3.3 Comparison with general practitioners

The results of the GPs' attitudes and practice patterns in the treatment of sexual problems are presented in **Figures 21** and **22**, and the comparative subgroup analysis between the OB/GYNs and the GPs is presented in **Table 12**. Both the OB/GYNs and the GPs considered treating sexual problems to be an important health care practice, with no differences according to gender or age. However, compared to the OB/GYNs, the GPs were less likely to inquire about sexual problems during general medical history-taking. In diagnosing sexual problems, the GPs were more likely to consider that diagnosing was difficult. Furthermore, the GPs were less likely to report that their organization had specific instructions concerning patient referrals to continued care. There were no interactions between gender and specialty or between age groups and specialty. The same differences between OB/GYNs and GPs were found in all sub-analyses, except in one age group: No difference was found between the young OB/GYNs and the young GPs in the difficulty of diagnosing sexual problems.

As for asking about patients' satisfaction with their sexual life, compared to the OB/GYNs, the GPs were less likely to report asking about it (GP 37%, $n$ = 255/402 vs. OB/GYN 53%, $n$ =158/299; aOR 0.53, 95% CI 0.38–0.92, $p < 0.0001$). There were no interactions between gender and specialty. However, an interaction between specialty and age group was found ($p = 0.006$). Compared to the late middle-aged OB/GYNs, the late middle-aged GPs were less likely to ask about sexual life satisfaction (GP 38%, $n$ = 55/144 vs. OB/GYN 69%, $n$ = 76/110; aOR 0.29, 95% CI 0.17–0.49, $p < 0.0001$). No difference was found between the OB/GYNs and GPs in terms of the method of sexual history-taking, nor were there any differences in the sub-analyses by gender or age groups or interactions.

**Table 12.** OB/GYNs' and GPs' attitudes and practice patterns in the treatment of sexual problems: Sub-group analysis.

| | Treating sexual problems is an important health care practice | | Diagnosing female sexual problems is difficult | | I often inquire about sexual problems during general medical history-taking | | My organization has specific instructions where to refer patients with sexual problems for continued care | |
|---|---|---|---|---|---|---|---|---|
| | Totally agree or agree | | Totally agree or agree | | Totally agree or agree | | Totally agree or agree | |
| | **aOR** | **95% CI** | **aOR** | **95% CI** | **aOR** | **95% CI** | **aOR** | **95% CI** |
| **Entire group*** | *p = 0.186* | | *p < 0.0001* | | *p < 0.0001* | | *p < 0.0001* | |
| OB/GYN | ref | | ref | | ref | | ref | |
| GP | 0.62 | 0.30–1.26 | 2.44 | 1.73–3.44 | 0.23 | 0.16–0.33 | 0.12 | 0.07–0.20 |
| OB/GYN; GP *n*/total | 285/297; 373/401 | | 155/283; 267/365 | | 136/298; 65/397 | | 102/278; 24/378 | |
| **Subgroups** | | | | | | | | |
| **Female**** | *p = 0.227* | | *p < 0.0001* | | *p < 0.0001* | | *p < 0.0001* | |
| OB/GYN | ref | | ref | | ref | | ref | |
| GP | 0.62 | 0.29–1.35 | 2.25 | 1.56–3.26 | 0.24 | 0.16–0.35 | 0.12 | 0.07–0.21 |
| OB/GYN; GP *n*/total | 276/278; 301/302 | | 262/278; 278/302 | | 277/278; 299/302 | | 258/278; 286/302 | |
| **Male**** | *p = 0.468* | | *p = 0.001* | | *p = 0.001* | | *p = 0.0003* | |
| OB/GYN | ref | | ref | | ref | | ref | |
| GP | 0.45 | 0.05–3.87 | 6.10 | 2.04–18.28 | 0.17 | 0.06–0.48 | 0.07 | 0.02–0.29 |
| OB/GYN; GP *n*/total | 21/21; 100/100 | | 21/21; 87/100 | | 21/21; 98/100 | | 20/21; 92/100 | |
| **Age < 40 years***** | *p = 0.241* | | *p = 0.185* | | *p < 0.0001* | | *p < 0.0001* | |
| OB/GYN | ref | | ref | | ref | | ref | |
| GP | 0.39 | 0.08–1.88 | 1.54 | 0.81–2.90 | 0.16 | 0.08–0.34 | 0.10 | 0.04–0.30 |
| OB/GYN; GP *n*/total | 80/82; 147/147 | | 76/82; 130/147 | | 82/82; 146/147 | | 76/82; 137/147 | |
| **Age 40–49 years***** | *p = 0.295* | | *p = 0.001* | | *p < 0.0001* | | *p < 0.0001* | |
| OB/GYN | ref | | ref | | ref | | ref | |
| GP | 0.53 | 0.17–1.73 | 3.06 | 1.54–6.06 | 0.26 | 0.13–0.51 | 0.11 | 0.05–0.27 |
| OB/GYN; GP *n*/total | 107/107; 111/111 | | 100/107; 100/111 | | 106/107; 108/111 | | 102/107; 107/111 | |
| **Age ≥ 50 years***** | *p = 0.825* | | *p < 0.0001* | | *p < 0.0001* | | *p < 0.0001* | |
| OB/GYN | ref | | ref | | ref | | ref | |
| GP | 0.88 | 0.27–2.81 | 3.15 | 1.84–5.41 | 0.25 | 0.15–0.44 | 0.12 | 0.05–0.26 |
| OB/GYN; GP *n*/total | 110/110; 143/144 | | 107/110; 135/144 | | 110/110; 143/144 | | 100/110; 134/144 | |

aOR, adjusted odds ratio; CI, confidence interval; GP, general practitioner; *n*, number; OB/GYN, obstetrician-gynecologist; ref; reference

The 'cannot say' responses were omitted from the analyses. In each question, the number of analyzed responses/total number of questionnaires are shown in the lower column.

*The multivariable binary logistic regression was carried out with adjustments for gender (female/male) and age (< 40/40–49/≥ 50 years).

**The multivariable binary logistic regression was carried out with an adjustment for age (< 40/40–49/≥ 50 years).

***The multivariable binary logistic regression was carried out with an adjustment for gender (female/male).

An aOR higher than 1 indicates higher agreement with the statement.

An aOR of less than 1 indicates lower agreement with the statement.

## 5.4 Education in sexual medicine among obstetrician-gynecologists

### 5.4.1 Sources of sexual medicine education and the sufficiency of previous education

The sources of previous sexual medicine education among the OB/GYNs are presented in **Figure 23**. The most important source was medical journals (68%, *n* = 202/299), followed by consultations with colleagues (56%, *n* = 168/299), continuing medical education (CME, 50%, *n* = 149/299), and medical books (45%, *n* = 134/299). A minority of the OB/GYNs, 10% (*n* = 29), had additional education in sexual medicine (sexuality educator/counselor/therapist or clinical sexologist training [authorized]) and 2% (*n* = 7) had other therapy training. Open responses (*n* = 21) included scientific research, education abroad, life and work experiences, non-medical books and journals, and consultations with colleagues through social media.

The results of the sufficiency of previous education are presented in **Figure 24** and **Table 13**. Most of the OB/GYNs (95%, *n* = 283/299) reported that the education they received during medical school was insufficient, and 83% (*n* = 248/299) considered that the education they received during their residency was insufficient. CME was rated better, yet 43% (*n* = 129/299) still considered it insufficient. Nearly one-third of the OB/GYNs (27%, *n* = 81/299) reported not participating in CME related to sexual medicine at all. Compared to the male OB/GYNs (33%, *n* = 7/21), the female OB/GYNs (12%, *n* = 32/266) were less likely to report education during their residency to be sufficient. There were no differences between the age groups. The OB/GYNs with 0 patients with sexual issues per day (15%, *n* = 6/41) were more likely to rate education in medical school sufficient or quite sufficient compared to the OB/GYNs with 1–5 patients (4% *n* = 8/220). The OB/GYNs with 1–5 patients with sexual issues per day (36%, *n* = 58/161) were less likely to rate CME as sufficient or quite sufficient compared to the OB/GYNs with ≥ 6 patients (63% *n* = 20/32).

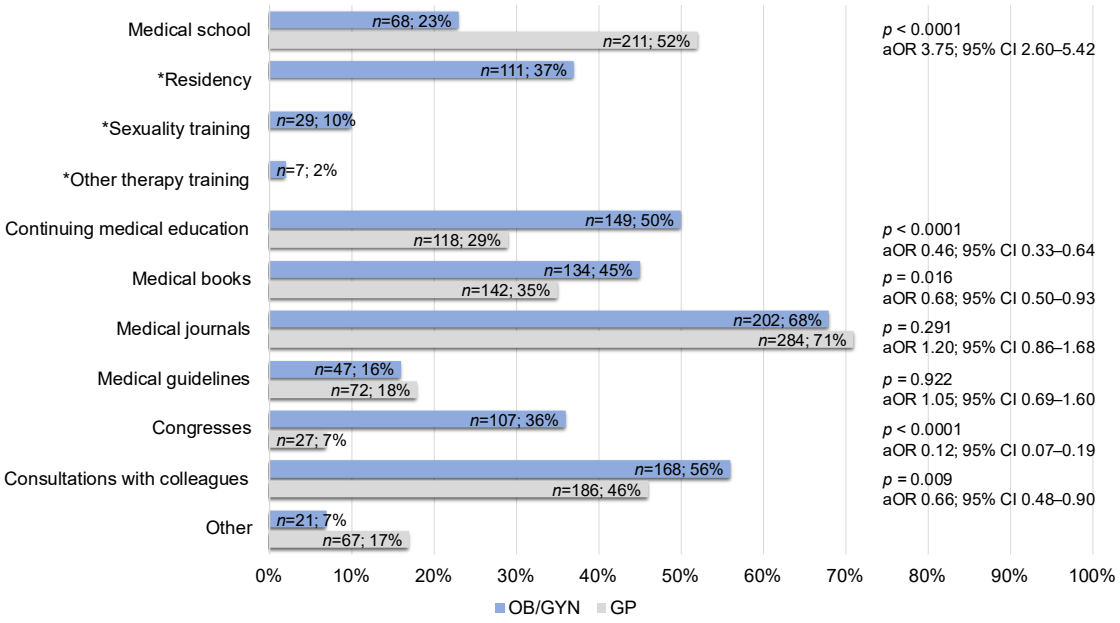



**Figure 23.** Sources of education in sexual medicine among OB/GYNs and GPs. *Option only for the OB/GYNs. GPs vs. OB/GYNs. aOR, adjusted odds ratio; CI, confidence interval.

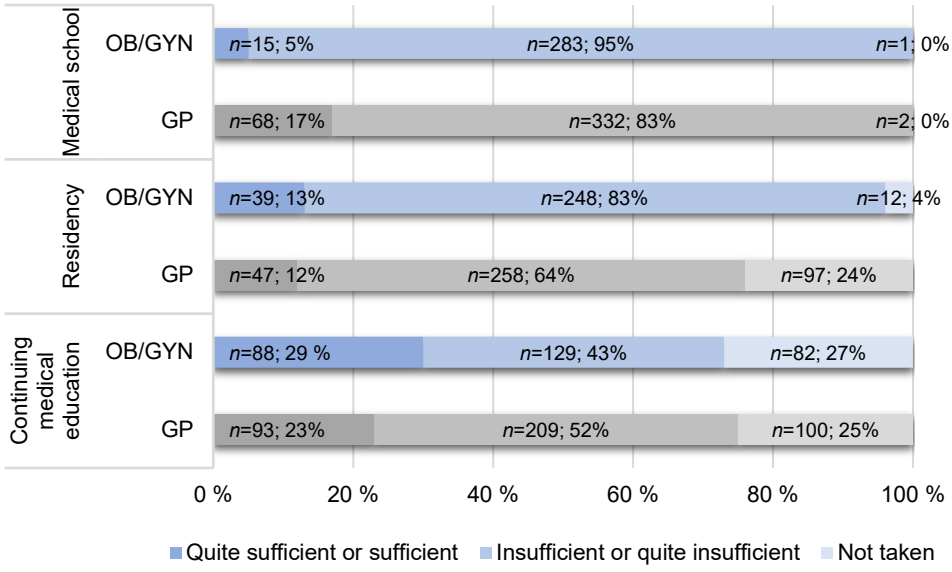



**Figure 24.** Sufficiency of previous education among OB/GYNs and GPs.

**Table 13.** Sufficiency of previous education among OB/GYNs: Sub-group analysis.

| | Medical school | | Residency | | Continuing medical education | |
|---|---|---|---|---|---|---|
| | Sufficient or quite sufficient | | Sufficient or quite sufficient | | Sufficient or quite sufficient | |
| | **aOR** | **95% CI** | **aOR** | **95% CI** | **aOR** | **95% CI** |
| **Gender** | *p = 0.504* | | *p = 0.019* | | *p = 0.758* | |
| female vs. male | 0.57 | 0.11–3.01 | 0.29 | 0.10–0.82 | 0.86 | 0.32–2.28 |
| **Age (years)** | *p = 0.959* | | *p = 0.369* | | *p = 0.203* | |
| 40–49 vs. < 40 | 0.92 | 0.25–3.47 | 0.52 | 0.21–1.30 | 1.12 | 0.47–2.66 |
| ≥ 50 vs. < 40 | 0.82 | 0.21–3.18 | 0.80 | 0.34–1.86 | 1.80 | 0.78–4.16 |
| ≥ 50 vs. 40–49 | 0.89 | 0.24–3.34 | 1.54 | 0.64–3.66 | 1.61 | 0.87–3.00 |
| **Patients treated per day** | *p = 0.151* | | *p = 0.369* | | *p = 0.511* | |
| 1–10 vs. ≥ 11 | 2.24 | 0.75–6.70 | 1.76 | 0.87–3.59 | 1.21 | 0.68–2.17 |
| **Patients with sexual issues dealt with per day** | *p = 0.056* | | *p = 0.474* | | *p = 0.020* | |
| 0 vs. 1–5 | 3.99 | 1.26–12.61 | 1.08 | 0.40–2.95 | 1.25 | 0.51–3.10 |
| 0 vs. ≥ 6 | 4.18 | 0.44–39.47 | 0.58 | 0.15–2.17 | 0.40 | 0.13–1.24 |
| 1–5 vs. ≥ 6 | 1.05 | 0.12–8.96 | 0.53 | 0.19–1.46 | 0.32 | 0.14–0.71 |

aOR, adjusted odds ratio; CI, confidence interval; vs., versus
*P*-values are over the group values.
The multivariable binary logistic regression was carried out with adjustments for OB/GYNs' gender (female/male), age (< 40/40–49/≥ 50 years), the number of patients treated per day (1–10/≥ 11), and the number of patients with sexual issues dealt with per day (0/1–5/≥ 6).
An aOR higher than 1 indicates more sufficient education in the comparison group compared to the reference group (two categories: sufficient or quite sufficient vs. insufficient or quite insufficient).
An aOR of less than 1 indicates less sufficient education in the comparison group compared to the reference group (two categories: sufficient or quite sufficient vs. insufficient or quite insufficient) education.

### 5.4.2 Need for education in sexual medicine and preferred continuing medical education methods

A vast majority of the OB/GYNs (92%, *n* = 276/299), reported a need for CME in sexual medicine. Compared to the young OB/GYNs, the late middle-aged OB/GYNs were less likely to report a need for CME (late middle-aged 85%, *n* = 94/110 vs. young 99%, *n* = 81/82; aOR 0.07, 95% CI 0.01–0.52, *p* = 0.010). Compared to the OB/GYNs who dealt with sexual health issues with 1–5 patients daily, the OB/GYNs who dealt with 0 patients daily were less likely to report a need for CME (0 patients 85%, *n* = 35/41 vs. 1–5 patients 94% *n* = 208/221; aOR 0.30, 95% CI 0.10–0.92, *p* = 0.036). No other differences emerged related to gender, age, or daily number of patients. The OB/GYNs preferred to receive this education mostly through lectures, followed by online learning platforms, workshops, and simulations, as shown in

**Figure 25**. Open responses ($n$ = 6) included literature recommendations, collaborative meetings with various specialists, regularly held dedicated training days in sexual medicine, and sexual therapy studies.

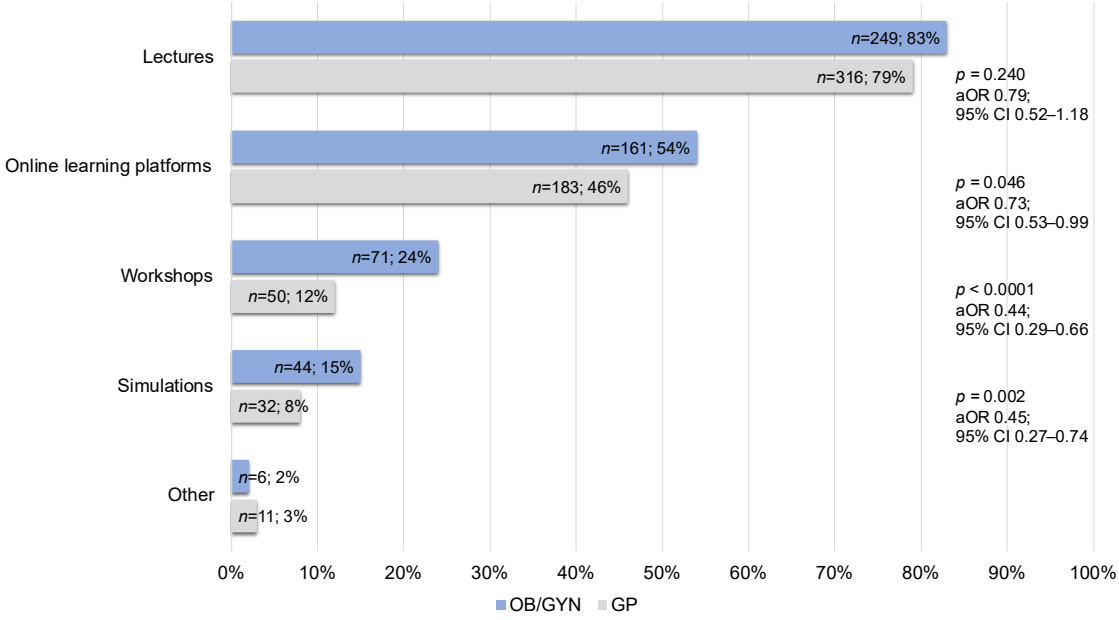



**Figure 25.** Preferred forms of continuing medical education. More than one option could be chosen. GPs vs. OB/GYNs. aOR, adjusted odds ratio; CI, confidence interval.

### 5.4.3 Comparison with general practitioners

The sources of previous sexual medicine education among the GPs are presented in **Figure 23**. Compared to the OB/GYNs, the GPs were more likely to report that they had received their knowledge of sexual medicine during medical school. In contrast, the GPs were less likely to report CME, medical books, congresses, or consultations with colleagues as sources of their knowledge. There was an interaction between age groups and specialty in terms of medical journals being a source of knowledge ($p$ = 0.006). Compared to the late middle-aged OB/GYNs, the late middle-aged GPs more likely reported medical journals as a source of sexual medicine knowledge. The GPs' open responses ($n$ = 67) included online medical guidelines (Terveysportti), life and work experiences, non-medical books and journals, media (internet, TV, radio), and consultations with colleagues through social media. Four GPs reported having sexuality counselor/therapist training and two reported having another therapy training.

The results of the sufficiency of previous education among the GPs are presented in **Figure 24**. Like the OB/GYNs (5%, $n$ = 15/298), only a minority of the GPs (17%, $n$ = 68/400) considered their previous education in sexual medicine during medical school

to be sufficient; however, the GPs were more likely to report it as sufficient (aOR 3.10; 95% CI 1.70–5.63; $p = 0.0002$). On the contrary, compared to the OB/GYNs (41%, $n$ = 88/217), the GPs (31%, $n$ = 93/302) were less likely to report that their education in CME was sufficient (aOR 0.64; 95% CI 0.44–0.94; $p = 0.023$). There were no differences in the perception of sufficiency in education regarding residency (GP 15%, $n$ = 47/305 vs. OB/GYN 14%, $n$ = 39/287; aOR 0.94; 95% CI 0.58–1.53; $p = 0.815$). There were no interactions between gender and specialty or between age groups and specialty.

Like the OB/GYNs (92%, $n$ = 276/299), the majority of the GPs (88%, $n$ = 353/402) reported a need for CME in sexual medicine. There were no interactions between gender and specialty or between age groups and specialty. The preferred forms of CME in sexual medicine are shown in **Figure 25**. Additionally, the GPs mostly preferred lectures as a method of CME, followed by online learning platforms, workshops, and simulations, respectively. Compared to the OB/GYNs, the GPs were less likely to prefer online learning platforms, workshops, and simulations. Open responses ($n$ =11) included medical guidelines, medical literature, workplace training, congresses, and sexual counseling studies.

### 5.4.4 Associations between the sufficiency of previous education and competence

The associations between education and competence in discussing and treating patients' sexual problems are presented in **Table 14**. Insufficient education at all levels—medical school, residency, and CME—was associated with poor or quite poor self-reported competence, with no differences between specialties.

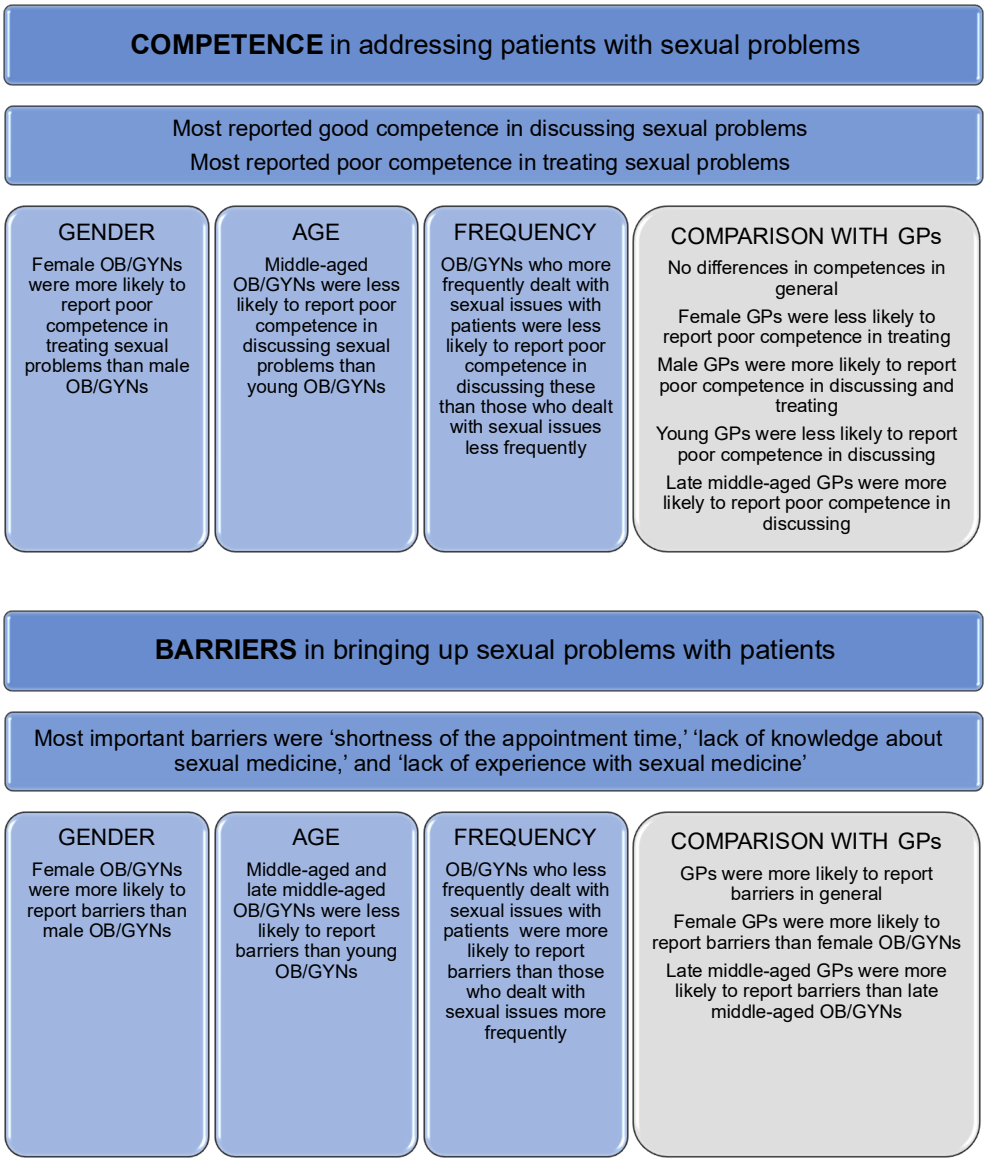
**Table 14.** Associations between sufficiency of previous education and self-reported competences.

| | Discussing with patients | | | Treating patients | | |
|---|---|---|---|---|---|---|
| | Poor or quite poor | | | Poor or quite poor | | |
| | ***n*** | **aOR** | **95% CI** | ***n*** | **aOR** | **95% CI** |
| **Medical school** | | $p = 0.043$ | | | $p = 0.0002$ | |
| sufficient ($n$ = 83) | 17 | ref | | 42 | ref | |
| insufficient ($n$ = 615) | 178 | 1.83 | 1.02–3.28 | 441 | 2.49 | 1.54–4.04 |
| **Residency** | | $p = 0.002$ | | | $p = 0.002$ | |
| sufficient ($n$ = 86) | 13 | ref | | 46 | ref | |
| insufficient ($n$ = 506) | 154 | 2.69 | 1.43–5.06 | 363 | 2.15 | 1.34–3.45 |
| **Continuing medical education** | | $p = 0.002$ | | | $p < 0.0001$ | |
| sufficient ($n$ = 181) | 34 | ref | | 86 | ref | |
| insufficient ($n$ = 338) | 105 | 2.06 | 1.32–3.22 | 245 | 2.45 | 1.67–3.61 |

aOR, adjusted odds ratio; multivariable logistic regression; CI, confidence interval; $n$, number; ref, reference
The 'not taken' responses in education were omitted from the analyses. An aOR higher than 1 indicates worse self-reported competence in the comparison group compared to the reference group in discussing or treating patients' sexual problems. The multivariable binary logistic regression was carried out with adjustments for gender (female/male), age (< 40/40–49/≥ 50years), and specialty (OB-GYN/GP).

## 5.5 Summary of the results

A summary of the main findings is presented in **Figure 26**.



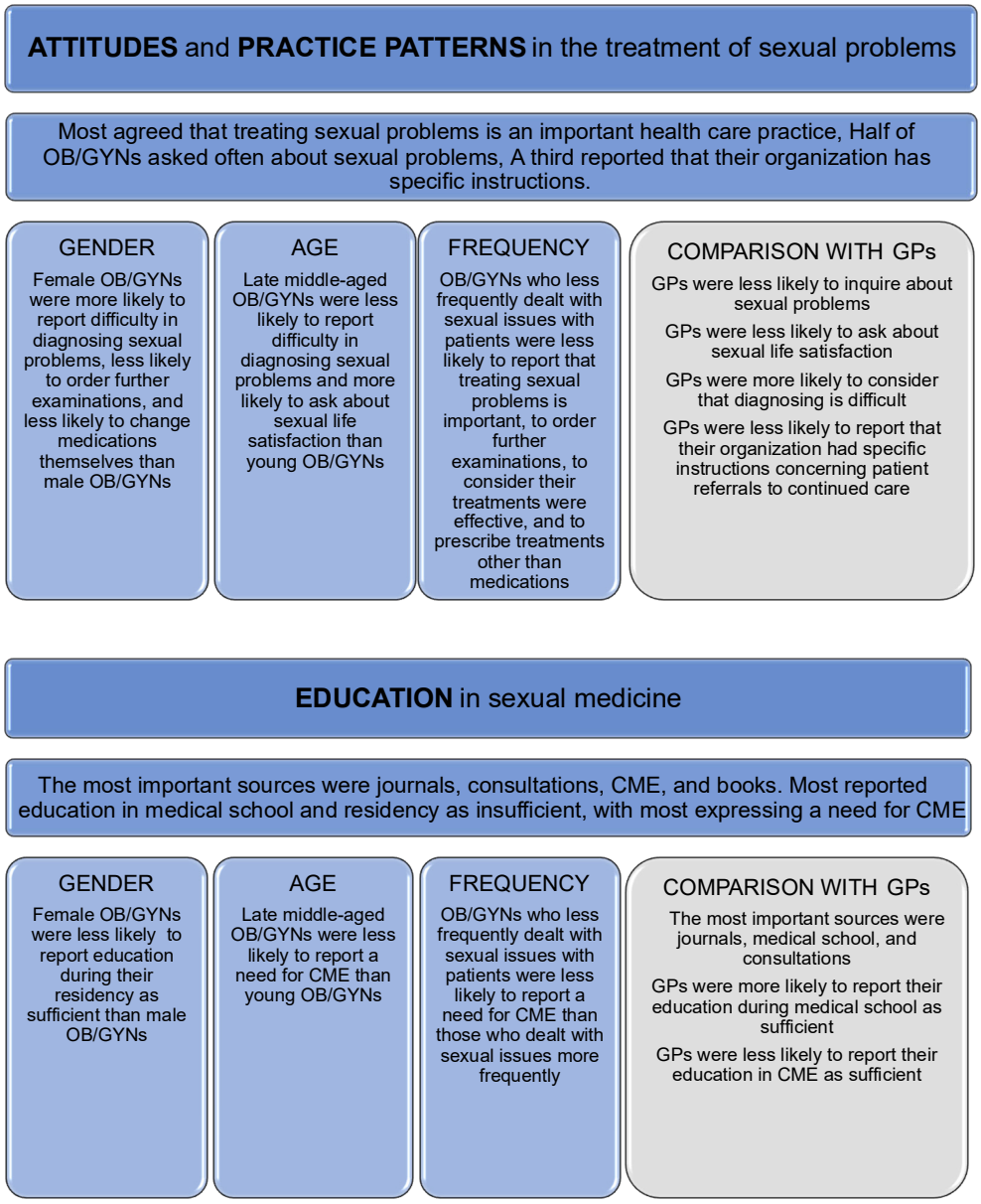



**Figure 26.** Summary of the main results.

# 6 Discussion

This study is the first to survey self-reported competence, barriers to bringing up sexual problems with patients, attitudes, and practice patterns in sexual medicine among OB/GYNs in Finland. It is also the first study to evaluate education in sexual medicine among Finnish OB/GYNs. Furthermore, it is among the few studies that compare the attitudes and practices between OB/GYNs and GPs regarding patients' sexual problems.

## 6.1 Methodological considerations

The strengths and limitations of this study are discussed in subsequent chapters and summarized in **Figure 28**.

### 6.1.1 Study design and data management

Participation in this study was voluntary, and no financial or other compensation was provided to participants. In the study preface, the respondents were instructed to express their opinions exactly as they felt at the time of answering. The inclusion and exclusion criteria of the study participants are presented in **Figure 14** (flowchart of the study). No statistics about non-respondents were available for comparison, as there was no access to the SGY or FMA registries.

The data were based on the self-reporting of the OB/GYNs and GPs, and the management of patients' sexual problems, previous education, and physicians' competence were not measured, which might have created a mismatch with reality and thus caused bias. Additionally, the perception of insufficient education was based on retrospective self-reports, in some cases based on memories from several years or even decades earlier. It is also possible that the most self-critical physicians might have assessed both their education and competence more negatively than they actually were.

The reliability and repeatability of questionnaire surveys present a challenge, as they capture participants' opinions at the time of response, which may fluctuate over time. In addition, various external factors, such as fatigue, time pressure, and emotional state, may influence participants' responses.

As online surveys have become an increasingly prevalent method of data collection, there is evidence to suggest that the general public's willingness to participate in them has declined overall (Tourangeau, 2004). The proliferation of online questionnaires from numerous civil and professional sources has made it increasingly difficult for individual surveys to distinguish themselves and capture participants' attention. According to a meta-analysis of 1,071 online surveys conducted between 2007 and 2014 in educational-related fields, the average response rate was 44.1%, with no difference regarding the participants' gender (Wu et al., 2022). Further, increasing the rate of online survey receivers did not increase the response rate. Two smaller meta-analyses, including 110 and 114 online surveys, respectively, reported an average response rate of 36% (Daikeler et al., 2020, 2022). In these meta-analyses, the average response rate was 11 and 12 percentage points lower in online surveys compared to other survey methods (48%). However, younger participants tend to respond to online surveys at higher rates than older participants, whereas the opposite trend is observed with other survey methods.

The data for this thesis were stored in the Webropol system licenced by the University of Turku and were accessible only to members of the SexMEdu research group. The OB/GYN data were completely anonymous in Webropol, whereas the GP data included the participants' email addresses. The GP data were anonymized when the raw data were transformed to Excel and SAS, where the statistical analyses were performed. An anonymous Webpropol questionnaire enabled OB/GYNs to respond several times to the survey. To ensure the accuracy of the data, any possible duplicate responses were excluded based on similar basic characteristics.

### 6.1.2 Recruitment and participants

The participants in this study were Finnish OB/GYNs and GPs. The vast majority of OB/GYN specialists and residents belong to the SGY, as it offers annual national educational meetings and serves as a platform for networking. OB/GYN residents often join the SGY at the beginning of their residency training. Despite the relatively low response rate in the OB/GYN sample (27%), when calculated from the total SGY membership, it remained within the range reported in previous studies in the field (7–67%) (Bedell et al., 2017; Li et al., 2021; McCool, Apfelbacher, et al., 2016; Pauls et al., 2005; Roos et al., 2009; Sobecki et al., 2012). In addition to practicing OB/GYNs and OB/GYN residents, members of the SGY include over 200 retired OB/GYNs. There were 885 OB/GYN specialists under 75 years old in Finland in 2029 (Finnish Institute for Health and Welfare, n.d.), which is in concordance with the number of retired OB/GYNs in the SGY. Although the exact number of OB/GYN residents in Finland is not known, it is presumed to be lower than the gap between the total number of SGY members and the number of certified OB/GYN specialists

in Finland. Members of the SGY can also include other physicians or individuals, but their number is estimated to be low. Since the preface of the questionnaire stated that it was directed only toward OB/GYN specialists and residents, and the workplace was assessed in the questionnaire, retired and other non-target members of the SGY were excluded. As a result, calculating the response rate based on the total number of SGY members likely underestimates the actual participation rate. In addition, the contact details provided by both associations may not have been accurate for all physicians, which could have contributed to a lower response rate and excluded some willing participants from the survey. Furthermore, not all OB/GYNs are members of the SGY, so the invitation link to the survey might not have reached all OB/GYNs.

According to the FMA's rules, the sample size for GPs was restricted to 1,000 physicians. The GP questionnaire was sent to physicians who had indicated a municipal health center as their working place. In the present study, all such physicians were considered GPs, despite the fact that these centers also employ physicians from other specialties. However, these physicians are only a minority.

In 2019, at the time of the survey conducted for this thesis, there were 680 specialists in OB/GYN in Finland under 65 years old (The Finnish Medical Association, 2019). In the present study, there were 231 specialists in OB/GYN under 65 years old; accordingly, the participants in this survey represented one-third (34%) of the OB/GYN specialists in Finland in 2019. A majority of the participants (72%) reported working in a hospital, which was a somewhat higher percentage than the estimated (50%) in the report conducted by the FMA (The Finnish Medical Association, n.d.). The fact that an additional email was sent to OB/GYN chief physicians in hospitals in order to improve the response rate likely resulted in a higher proportion of hospital-based OB/GYNs responding to the survey. Nevertheless, 44% of the respondents also reported practicing in the private sector on the side, which is in concordance with the estimation provided by the FMA (45%) (The Finnish Medical Association, n.d.). In the present study, 23% OB/GYNs reported working in the private sector only, which is a smaller proportion than the estimation of the FMA (35%). In any case, a higher response rate would have enhanced the reliability of the results and facilitated their interpretation and generalization to the broader population of OB/GYNs in general.

Notably, the response rate in the GP sample was higher (43%). One reason for this could have been the availability of the email addresses in the GP sample, which allowed for sending multiple reminders successfully targeted at the GPs who had not yet responded. The same approach was not possible with the OB/GYN sample as the invitation was coordinated by the SGY, which both distributed the initial invitation and limited the invitation and the reminder emails to two.

The proportion of male OB/GYNs was small; therefore, the results regarding gender differences should be interpreted with caution and confirmed in larger samples. Gender proportions were slightly different among the groups, but they corresponded to the gender proportions of OB/GYNs and GPs in Finland (the Finnish Medical Association, 2016, 2019). In this study, 93% of the OB/GYN participants were female, which corresponds to the gender distribution among Finnish OB/GYN specialists (as in 2019, 87% of OB/GYN specialists under 65 years old were female) (the Finnish Medical Association, 2019). The distributions of OB/GYNs in Finland between 2000 and 2024 by gender are presented in **Figure 27**. In this study, 75% of the GP participants were female, which also corresponds to the gender distribution among Finnish GPs, as 65% of GPs in municipal health centers were female (the Finnish Medical Association, 2016). Both OB/GYN and GP datasets were comparable, as the age distributions were alike. The only exception was that the majority of the male OB/GYN participants were late middle-aged (**Figure 15**), which reflects the general age and gender distribution of OB/GYNs in Finland (**Figure 27**).

Although similar studies have been published, the present study was the first conducted in the Nordic countries. However, the study included only Finnish OB/GYNs and GPs; therefore, the results might not be directly applicable to physicians in other countries, especially as medical education and health care systems differ. In the present study, the respondents formed moderately consistent study groups, as Finland is a relatively racially and culturally homogenous country.

The results could be distorted by the fact that physicians who were more interested in and aware of sexual medicine were keener to complete the survey. However, by assessing the information related to the daily number of patients with sexual issues and by sorting the data in the analyses accordingly, this effect could be evaluated. Additionally, the small proportion of the male OB/GYNs likely introduced a bias, as those with a particular interest in sexual medicine may have been more likely to participate in this study and to rate their competence more favorably.

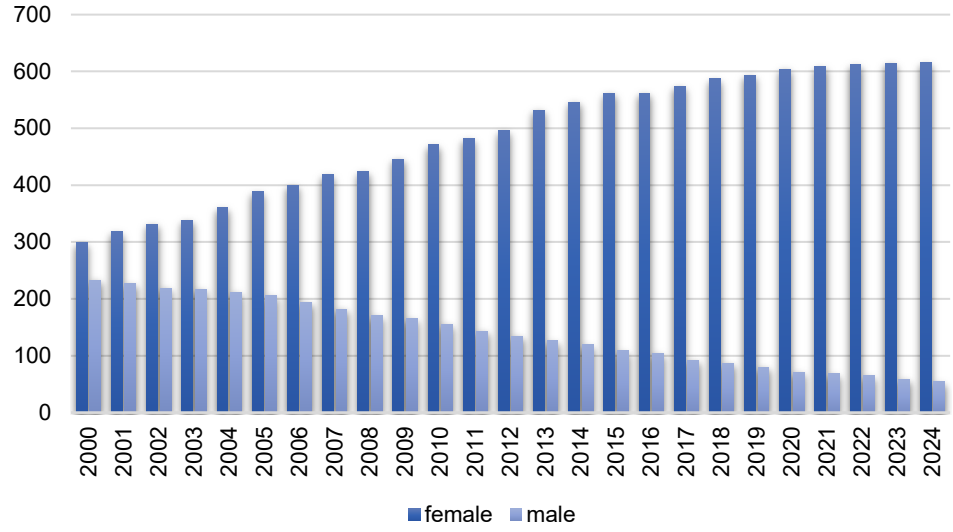



**Figure 27.** Number of OB/GYNs under 65 years of age in Finland between 2000 and 2024 by gender. Data from THL.

### 6.1.3 Questionnaire

The questionnaire used in this study was previously applied in the Portuguese SEXOS-study (Alarcão et al., 2012; Ribeiro et al., 2014). It contained a broad range of questions and proved to be a valuable tool for assessing physicians' opinions regarding sexual medicine. The questionnaire was online, which permitted anonymous replies; thus, it was plausible that the answers were more honest than those obtained in personal interviews. The web-based questionnaire was also a practical tool, allowing the gathering of a large amount of information. Furthermore, the respondents could choose the place and time that was most convenient for them to complete the survey.

There were no missing data because it was not possible to return partially answered questionnaires. However, among some respondents, this could have resulted in hasty replies or a lower response rate, since some potential participants could have considered answering all the questions too time-consuming. In the study preface, the estimated response time was stated as 10 minutes. However, it was noticed that more physicians started to answer the survey than finished it (OB/GYN $n = 413$, final $n = 328$; GP $n = 429$, final $n = 402$).

The original questionnaire used in the Portuguese SEXOS-study (Alarcão et al., 2012; Ribeiro et al., 2014) was designed for GPs. In this study, a modified, shorter version of the questionnaire was used to better suit OB/GYNs, considering their different job descriptions. Nevertheless, for the OB/GYN respondents, the

questionnaire may have been too general due to the more specific nature of their clinical work.

In the questionnaire for GPs, the question about the gender of the participants was limited to female/male answer options. The questionnaire was adapted from the Portuguese SEXOS study performed in 2011, which contained only these two gender options. The OB/GYN questionnaire included three gender options (female/male/other); however, none of the respondents selected the 'other' category. Thus, the two study samples were comparable. Specialization was asked about in the OB/GYN questionnaire but not in the GP questionnaire. The information about the specialization could have given more accurate information regarding the basic characteristics of GPs. In the GP questionnaire, only the questions related to competences and the difficulty of diagnosing FSD were specified for female patients. This may have caused bias in the results for the rest of the questions. The management of male sexual problems differs, at least in part, because of the wider availability of medications for erectile dysfunction.

The questionnaire was administered exclusively in Finnish. In Finland, there are two official languages, with Swedish the minority language. In 2019, 5% of the Finnish population spoke Swedish as their mother tongue (Statistics Finland – Tilastokeskus, n.d.). The use of a Finnish-language questionnaire may have reduced the willingness and ability of Swedish-speaking physicians to respond, which could particularly explain the absence of responses from Åland. A similar effect might have been present among physicians with some other language as their mother tongue.

The questions in the questionnaire could have been interpreted in various ways. It is possible that not all participants understood the question in the same manner. In addition, the terms "sexual issues" and "sexual problems" lack unanimous, specific definitions. For some participants, the topic might have been unfamiliar. It has been found that physicians' own sexual attitudes and experiences can influence their approach to patient care (Lee et al., 2024), which may, in turn, have influenced their responses or their willingness to respond to the survey.

### 6.1.4 Statistical considerations

The statistical methods were chosen in cooperation with the professional biostatisticians who took part in the analysis. The basic characteristics of the physicians (gender, age), which have been shown to be associated with the outcomes of the management of sexual problems in previous literature, were used as adjusted factors. However, work experience in years could have been used as an adjusted factor instead of the age of the physician. In the present study, work experience was

not assessed in years, and therefore, the age of the physician was estimated to reflect their experience, which correlates with the majority of physicians in general.

Because a large number of patients per day can lead a physician to rush and overlook sexual problems, the number of patients the OB/GYNs treated per day was assessed and used in the adjustments. If OB/GYNs are accustomed to managing sexual problems, this probably echoes their attitudes and practice patterns. For this reason, the number of patients with sexual issues that they dealt with each day was also included in the adjustment.

To evaluate the associations between barriers and competences (**Study V**), a total score and four sub-scores were formed from eight items assessing physicians' barriers to bringing up sexual problems with patients. This method was not validated; however, this procedure used in this study might have helped strengthen the findings, particularly since the related barriers were grouped together.

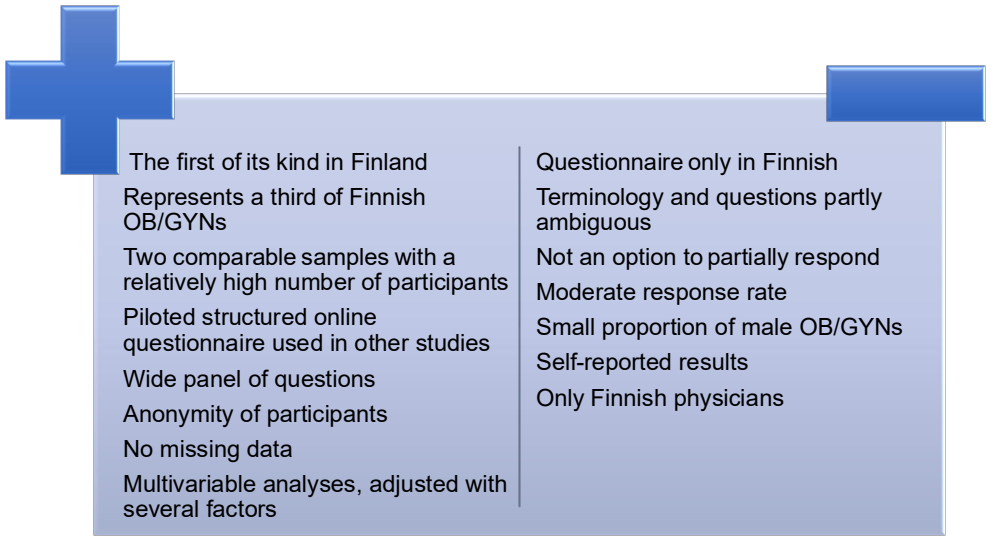



**Figure 28.** Strengths and limitations of the studies.

## 6.2 Implications of the results

### 6.2.1 Competence in addressing patients' sexual problems and barriers to bringing up sexual problems

In the present study, the OB/GYNs reported a good level of competence in discussing sexual problems with their patients. Moreover, if the patients brought up the sexual issues themselves, almost all of the OB/GYNs reported having no or only

minor problems discussing the topic. These findings concur with the findings of a Brazilian study in which OB/GYNs self-reported a high level of general knowledge about sexual issues (Carvalho et al., 2024). Although the OB/GYNs in the present study reported a good level of competence in discussing sexual problems, they considered their competence in treating these problems to be poor. However, discussing sexual problems, providing education, and normalization are the initial steps in the recommended management of sexual problems, as outlined in the PLISSIT model (Annon, 1976), the BETTER model (Mick et al., 2004), and the algorithm used by the ICSM (Hatzichristou et al., 2016).

The barriers hindering discussions between physicians and patients about sexual problems can be categorized into different groups, identified in an Australian study as follows: systemic factors, practitioner-related factors, patient-related factors, and interpersonal factors (Davenport et al., 2025). The facilitators to addressing these barriers vary across the different categories, but there are similarities. The present study assessed barriers from the perspectives of physicians, addressing not only physician-related factors but also organizational factors.

The results of the present study showed that the OB/GYNs experienced several barriers to bringing up sexual problems with patients, with 'shortness of the appointment time' being the most prominent. This confirms the results of previous studies of OB/GYNs and urogynecologists in different countries (Bachmann, 2006; Carvalho et al., 2024; Kottmel et al., 2014; McCool, Apfelbacher, et al., 2016; Pauls et al., 2005; Roos et al., 2009; Sgayer et al., 2025). Similar barriers related to time have also been described in a study conducted of urologists (Schloegl et al., 2017). Sexual problems are often complex, with multifactorial etiology, and thus addressing and managing them is undoubtedly time-consuming. Therefore, methods facilitating sexual history-taking, such as screening tools, are useful (ACOG, 2019; Hatzichristou et al., 2010, 2016; Isidori et al., 2010; Parish et al., 2019; Rosen et al., 2000). Within this framework, the involvement of other health care professionals, particularly nurses, is also important, given their frequent and close contact with patients, which facilitates open communication.

Moreover, 'lack of knowledge about sexual medicine' and 'lack of experience with sexual medicine' were highlighted as important barriers. Both these barriers have been recognized in previous studies among OB/GYNs (Bachmann, 2006; Carvalho et al., 2024; Li et al., 2021; McCool, Apfelbacher, et al., 2016; Sgayer et al., 2025) as well as among other physicians (Alarcão et al., 2012; Kaundal et al., 2024; Leyva-Moral et al., 2021; Tang et al., 2023; Zannoni et al., 2021), highlighting the need for sufficient education in sexual medicine. Furthermore, physicians' personal sexual histories have been shown to affect their eagerness to bring up sexual problems with patients (Lee et al., 2024). Interestingly, however, in the present study, only a minority reported facing barriers related to their 'personal attitudes and

beliefs' or 'personal discomfort.' This contrasts with a US study in which embarrassment was highlighted as a main barrier (Bachmann, 2006). In addition, in the present study, over half of the OB/GYNs reported a 'lack of effective treatment' as a barrier, consistent with previous studies (Bachmann, 2006; Li et al., 2021; Pauls et al., 2005). Indeed, the range of available treatments for FSD is limited, which presumably was one reason why some of the OB/GYNs reported a poor level of competence in treating sexual problems. As for patients with disabilities, according to a review, health care professionals feel unconfident and incompetent in providing sexual health care to this population (Craig et al., 2022). However, the findings of the present study did not support those results, as only a minority of the respondents rated 'disability of the patient' as a barrier.

In a previous comparative study, GPs reported being more unconfident in treating female sexual problems than OB/GYNs (Abdolrasulnia et al., 2010). The present study did not confirm these findings, although no differences in self-reported competence in the management of patients' sexual problems were found between GPs and OB/GYNs in general. However, the GPs identified more barriers that hindered their bringing up patients' sexual problems than OB/GYNs, as reported in previous literature (Abdolrasulnia et al., 2010).

The findings of the present study indicated that higher barrier scores were associated with lower self-reported competence in managing patients' sexual health problems. The barrier sub-score 'professionalism' was the most important in explaining physicians' poor competence in treating patients. Indeed, education is an element that can be influenced more effectively than physicians' personal characteristics or sexual histories. In previous studies among various specialties, 'lack of time' was shown to be one of the most significant barriers in diagnosing and treating sexual problems (McCool, Apfelbacher, et al., 2016; Pauls et al., 2005; Zannoni et al., 2021). In the present study, 'time' was also a significant barrier, albeit not as important as 'professionalism.' Time constraints in health care are often beyond physicians' control. However, allowing time for the initial patient consultation would certainly be cost-effective by preventing, or at least decreasing, the need for follow-up appointments.

### 6.2.2 Attitudes and practice patterns in the treatment of sexual problems

In managing patients with sexual problems, three steps are crucial: first, bringing up the issue; second, making a reliable diagnosis; and third, taking action. Sexual problems are typically intimate, and embarrassment can hinder patients from initiating discussions themselves (Nicolosi et al., 2006). Therefore, patients often

want physicians to initiate the discussion (Briedite et al., 2013; Canzona et al., 2016; Fairchild et al., 2016; Lonnée-Hoffmann et al., 2022; Wendt et al., 2007).

In the present study, despite the fact that nearly all the OB/GYNs recognized the treatment of sexual problems as an important aspect of health care, fewer than half reported inquiring about them during general medical history-taking. This finding aligns with previous studies, in which the percentage of OB/GYNs who addressed patients' sexual function ranged widely, from 8% to 77% (Carvalho et al., 2024; Kottmel et al., 2014; Li et al., 2021; McCool, Apfelbacher, et al., 2016; Pauls et al., 2005; Roos et al., 2009; Sgayer et al., 2025). Moreover, in the present study, only half of the OB/GYNs reported assessing sexual life satisfaction, but this number was higher than that reported previously (29%) (Sobecki et al., 2012). These findings are not surprising, as for some OB/GYNs, questions about sexual problems or sexual life satisfaction can be seen as metaphors for 'opening Pandora's box' or 'opening a can of worms.' Sexual life satisfaction encompasses a wide range of issues that may extend beyond the OB/GYN's expertise and comfort zone. Additionally, only a minority of OB/GYNs reported ordering examinations or prescribing medications for sexual problems.

To assess and diagnose sexual problems, the use of structured questionnaires has been recommended (Hatzichristou et al., 2016; Isidori et al., 2010; Rosen et al., 2000), and many algorithms have been introduced for screening for sexual function (ACOG, 2019; Parish et al., 2019). However, according to the present study, only a few OB/GYNs (6%) used questionnaires during sexual history-taking, compared with those reported in British (13%) (Roos et al., 2009), US (13%) (Pauls et al., 2005), and Brazilian (26%) (Carvalho et al., 2024) studies.

Regarding guidelines for referring patients to continued care, only a third of OB/GYNs reported receiving specific instructions from their organization. Nevertheless, more than half referred patients to a sexual medicine specialist. According to previous studies, referral practices vary widely internationally. For instance, a Swiss study (Kottmel et al., 2014) found that 85% of OB/GYNs proposed referrals to specialized colleagues, whereas a German study (McCool, Apfelbacher, et al., 2016) reported a generally low referral rate of 15%. These discrepancies in referral rates can be partially attributed to differences in health care systems between countries.

The findings of the present study showed that the OB/GYNs preferred nonpharmacological treatments for sexual problems, consistent with a Swiss study (Kottmel et al., 2014). This preference may reflect the limited availability and knowledge of medications for treating FSD in Finland; therefore, non-pharmacological treatments might have been underlined in the replies. Psychosocial factors and their treatments are crucial for managing sexual dysfunction, and thus, patients should receive psychosocial evaluation and treatment alongside any possible

medication (McCabe et al., 2016b). Furthermore, low physical activity, smoking, and alcohol consumption are risk factors for sexual dysfunction, while physical activity and a healthy diet are associated with a lower risk of FSD (Allen & Walter, 2018). Indeed, the majority of OB/GYNs in the present study stated that sexual problems can be treated with lifestyle changes.

The use of medications can cause sexual side effects (Baldwin et al., 2015; Carey, 2006; Conaglen & Conaglen, 2013; Gueldini de Moraes et al., 2019; Korchia et al., 2023; Lou et al., 2023; Peleg et al., 2022; Schmidt et al., 2012; Taylor et al., 2013). However, in the present study, fewer than half of the OB/GYNs considered sexual problems to be side effects of other medications. Nonetheless, those who did often hesitated to change the medication by themselves but instead asked the patient to consult with another specialist about medication adjustment. This finding indicates the necessity of good cooperation between the different specialties and highlights the importance of sexual medicine education across all specialties.

The GPs reported that treating sexual problems is an important health care practice. However, they reported inquiring about patients' sexual problems less often than OB/GYNs. This finding reaffirmed a study in which reports were given by patients (Fairchild et al., 2016) and was in line with a previous comparison study among physicians (Wimberly et al., 2006). One explanation for this finding could be the different work descriptions of these two specialties. The OB/GYN field manages diseases of the female reproductive system and pregnancy, areas in which sexuality is typically highly related. In contrast, GPs manage a wide range of health issues across various medical specialties, which can be time-consuming and may limit the opportunity to address sexual health during consultations. In Finland, GPs also perform basic gynecological examinations, although gynecological problems represent only a fraction of their work. A Norwegian study found that patients brought up an average of 3.3 problems per GP appointment (Bjørland & Brekke, 2015). In another Norwegian study, it was found that sexual concerns were addressed in 4.2% of GPs' consultations; however, in only 34% of these instances was the sexual issue the primary or sole reason for the visit. (Vik & Brekke, 2017). In the present study, a remarkable finding was that only a small minority of GPs (6%) reported that their organizations had instructions about where to refer patients with sexual problems for continued care.

The findings regarding practice patterns indicate that despite being aware of the significance of this issue, OB/GYNs' and GPs' routine practice patterns in assessing sexual problems are insufficient. This inadequacy may contribute to the underdiagnosis and undertreatment of FSD. The treatment of sexual problems is covered by public health care in Finland. However, the practice patterns are scattered, the queues for sexual counseling can be long, and availability varies widely between the well-being areas. Lack of time and lack of availability of sexual

health-related care and instructions in the organization belong to the category of organizational barriers hindering the assessment of sexual problems. The Ministry of Social Affairs and Health has published an action program for the promotion of sexual and reproductive health for the years 2007–2011 (Rousku, 2007), and the Finnish Institute of Health and Welfare launched a Sexual and Reproductive Health Action Plan providing guidance for the integration of sexual and reproductive health into health care services in 2014–2020 (Klemetti & Raussi-Lehto, 2013). However, implementation has been incomplete partly due to financial constraints, and, therefore, more detailed mandatory instructions and uniform health care service structures are still lacking in Finland (Koukkula et al., 2021). Promoting physicians' engagement with sexual health issues is essential to ensure that at least minor concerns can be effectively addressed within the scope of standard consultations, particularly given the financial limitations facing contemporary health care systems. The recommendations are made for clinicians at any level of competence in sexual medicine. The continuity of care should be ensured, as inconsistency in care may hinder open communication about sexual problems between patients and physicians. Consistent care helps build trust, which can diminish both patients' and physicians' barriers to discussing sexual problems. Previous literature indicates that continuity of care with the same physician improves the quality of care, reduces morbidity and mortality, lowers health care utilization and costs, and enhances patient satisfaction (Eskola et al., 2022). Despite its recognized importance, continuity of care in Finland remains insufficient, highlighting the need for systemic improvement. According to an Australian study of endometriosis patients, a majority of the patients reported being treated by the same GP (58%), while 32% had two or three different GPs involved in their treatment (Davenport et al., 2025).

### 6.2.3 Associations with physicians' gender

In the present study, the small number of male OB/GYN participants caused plausible bias, and therefore the results should be interpreted with caution. The male OB/GYNs self-reported better competence in treating patients with sexual problems than the female OB/GYNs. In addition, the female OB/GYNs reported more barriers to bringing up sexual problems, especially those concerning 'lack of knowledge, experience, and effective treatment' and were more likely to report difficulty in diagnosing female sexual problems. These findings concur with previous research. A review of 97 studies, including those from both the North and South Americas, as well as Europe, found that male OB/GYNs rated themselves higher than female OB/GYNs in areas such as training, knowledge, performance, confidence, and ability (Farrow et al., 2013). In general, males have also self-rated higher in other fields, such as computer skills, grammar, and mathematics (Farrow et al., 2013).

Similar results have been found among medical students, as males found taking sexual histories easier and rated having adequate skills more frequently than female students (Ariffin et al., 2015). In a study of European residents, men felt more confident than women in dealing with patients with sexual dysfunction (Kristufkova et al., 2018). In a German study of urologists, females reported more barriers when addressing sexual issues, and males reported more confidence in caring for patients with sexual dysfunction (Schloegl et al., 2017). Furthermore, female physicians across various specialties working in hospitals reported feeling less comfortable asking their patients about sexual health than male physicians (Komlenac & Hochleitner, 2020). In a large-scale systemic cross-cultural social psychology study conducted across 48 nations, males consistently reported higher self-esteem than females (Bleidorn et al., 2016). These results may reflect societal norms—hopefully outdated ones—that physicians have possibly adopted unconsciously. Notably, both the current and prior studies have evaluated self-perceived rather than objectively measured competence. Consequently, particular attention should be given to support female physicians' self-confidence and self-esteem. Additionally, the growing number of young female OB/GYNs in Finland, compared to the fewer young male OB/GYNs, might explain these findings. The male OB/GYNs in this study were older and likely more experienced, which could have influenced the results. In a comparison of OB/GYNs and GPs, male GPs reported that their competence was poorer in addressing female patients' sexual problems than male OB/GYNs. This was probably because OB/GYNs are specialized in gynecology and are more familiar with female health issues.

Previous studies are contradictory regarding gender-related differences in practice patterns in sexual medicine. Some studies have shown female OB/GYNs to be more active in sexual history-taking (Carvalho et al., 2024; McCool, Apfelbacher, et al., 2016; Sobecki et al., 2012; Wimberly et al., 2006). More female physicians than male physicians discussed sexual dysfunction in their daily clinical hospital practice across various specialties (Komlenac & Hochleitner, 2020). However, similar to the present study, some studies (Pauls et al., 2005; Roos et al., 2009) showed no differences in FSD screening activity between genders. In a review of 97 studies, male OB/GYNs prescribed medications more often (5/7 studies), and female OB/GYNs more often made referrals (5/7 studies) (Farrow et al., 2013). This was not the case in the present study since the female OB/GYNs showed less active practice patterns in treating sexual problems; they referred patients to a sexual medicine specialist and changed the patient's medication for the underlying medical condition less often.

### 6.2.4 Associations with physicians' age

In the present study, older OB/GYNs were less likely to report barriers to bringing up sexual issues compared to younger OB/GYNs. In addition, they were less likely to indicate a lack of training as a barrier. Comparable results have been observed among hospital physicians in that older clinicians were less likely than younger ones to cite time limitations and insufficient training as impediments to initiating conversations about sexual health with their patients (Komlenac & Hochleitner, 2020). Likewise, in the present study, the late middle-aged OB/GYNs were less likely to report difficulty in diagnosing female sexual problems. Comparing OB/GYNs and GPs, GPs in the oldest age groups were more likely to report difficulty in diagnosing female sexual problems and indicated frequent barriers to bringing up sexual problems than older OB/GYNs. However, only a few differences were found between the youngest age groups.

Previous German (McCool, Apfelbacher, et al., 2016) and US (Sobecki et al., 2012) studies found that younger OB/GYNs were more active in sexual history-taking. In the present study, OB/GYNs' ages were not notably associated with practice patterns, parallel to some previous studies (Pauls et al., 2005; Roos et al., 2009; Wimberly et al., 2006). However, in the present study, older OB/GYNs were more likely to ask about sexual life satisfaction than younger OB/GYNs.

In recent decades, the atmosphere around sexuality has become more open, suggesting that younger generations might have more practical skills for dealing with sexual issues. Age-related differences have also been found among studies of patients, as younger patients are more likely to rate the importance of sexual health in general well-being (Fairchild et al., 2016; K. E. Flynn et al., 2017) and to believe that health care providers should frequently ask about sexual health (Fairchild et al., 2016). In this study, the findings differ and may be explained by the possibility that as OB/GYNs progress in their careers, their clinical experience and self-confidence potentially make it easier for them to address sexual issues with their patients. The life experience of senior OB/GYNs may also enhance their ability to address sensitive topics, indicating that diagnostic proficiency in all areas of medicine develops through age and clinical experience.

### 6.2.5 Education in sexual medicine

The adequacy of medical education in preparing health care professionals with the necessary knowledge and skills in sexual medicine for clinical practice has been discussed in the literature. The majority of the OB/GYNs in the present study regarded their education in sexual medicine as insufficient. Previously, the insufficiency of sexual medicine education has been reported among OB/GYN residents (Pancholy et al., 2011; Vieira et al., 2015), residents across various

specialties (Komlenac & Hochleitner, 2020), and medical students (Ariffin et al., 2015; Junior et al., 2024; Manninen et al., 2022; Zamboni & Bezek, 2017).

In comparison, the GPs rated sexual medicine education in medical school more favorably than the OB/GYNs, but found CME to be less sufficient. Additionally, concerning prior sources of education in sexual medicine, the GPs primarily acquired their knowledge through medical school, while the OB/GYNs developed their expertise through conferences and medical books. Differences in opinions about the sufficiency of education may be explained by differences in job descriptions. The clinical tasks and demands faced by OB/GYNs may require more in-depth education in sexual medicine beyond what is typically covered in medical school. It is therefore plausible that sexual medicine education is more accessible to OB/GYNs through CME than to GPs. In a previous comparative study conducted in the US, no differences were found between GPs and OB/GYNs regarding the adequacy of sexual medicine education during medical school and residency. However, GPs more frequently reported inadequate training in sexual history-taking during CME compared to OB/GYNs (Abdolrasulnia et al., 2010). These kinds of differences in results probably stem from different educational systems and programs.

Poor self-reported competence was associated with insufficient education in sexual medicine at all educational levels. This aligns with previous studies, indicating that better training in sexual medicine can enhance physicians' confidence in managing patients' sexual issues. (Abdolrasulnia et al., 2010; Komlenac et al., 2019; Kristufkova et al., 2018; Pancholy et al., 2011; Shroff et al., 2018). Sexual Attitude Reassessment (SAR) is an important process for health care professionals who manage patients with sexual problems. It facilitates the exploration of individuals' attitudes and beliefs regarding sexuality and increases their understanding of how these factors influence their professional interactions (Kristina & Lindroth, 2022).

An essential issue is that education in sexual medicine is fragmented, non-standardized, and varies from country to country. A review of 36 globally representative articles on sexual health education among health professionals highlighted this lack of standardization, raising concerns about students' proficiency in this area (Prize et al., 2023). In Europe, efforts have been made to improve and standardize education in medical schools and residency programs in obstetrics and gynecology (EBCOG, n.d.; NFOG, 2020; ESMN, n.d.).

Importantly, the present study showed a significant need for education in sexual medicine. This education should be well-organized, structured, and comprehensive, starting at the beginning of medical school. Teaching communication skills is also necessary for ensuring effective and empathetic interactions with patients, helping to ensure that patients feel understood and supported, which can help relieve their symptoms. There should be a standardized curriculum in sexual medicine in medical

schools, at least nationally, but also in Europe or even worldwide. In addition, implementing sexual medicine as one of the learning objectives in the curriculum of the OB/GYN specialist degree could diminish the identified barriers among specialists. CME for all physicians is a necessity, and the vast majority of the OB/GYNs and GPs in the present study expressed the need for CME. One challenge is that sexual medicine lacks recognition as a distinct medical specialty, at least in Finland, leading to a lack of clearly defined responsibility for its educational provision. The Sexual and Reproductive Health Action Plan, which provides guidance for the implementation of sexual and reproductive health in health care services, recommended that universities in Finland should expand their curricula on sexual medicine in medical schools and specialization programs, particularly in general medicine, gynecology, urology, psychiatry, pediatrics, and oncology (Klemetti & Raussi-Lehto, 2013). Furthermore, more consistent practice patterns in health care organizations should be achieved.

## 6.3 Considerations for future research

After the data collection of the present study, a medical textbook, *Sexual Medicine* (*Seksuaalilääketiede*), was published in 2020 by Duodecim in Finland (Brusila et al., 2020), followed by a second edition in 2025. In addition, CME in sexual medicine has been organized in many congresses for OB/GYNs and GPs. A new web-based optional course in sexual medicine has been provided at two medical faculties in Finland (Tampere and Turku) since 2024. This course will be available in the remaining three faculties of medicine in Finland during the 2025–2026 academic year. Given this context, a follow-up of the present study among OB/GYNs and GPs is planned to evaluate in particular the state and possible improvement of education in sexual medicine in Finland. Furthermore, it would be beneficial to extend the study to include occupational health physicians, as they play a central role in the health care of the working-age population.

The data of the present study were self-reported. Accordingly, an evaluation of clinical practice patterns in the management of sexual health issues using data derived from patient records would provide valuable insights. In addition, studying the prevalence of FSD through both medical records and patient-reported questionnaires would be relevant for clinical practice and research.

This study assessed physicians' points of view; however, the voices of patients are missing. Thus, it would be compelling to investigate Finnish patients' willingness to discuss sexual health concerns with physicians during consultations, as well as to explore their previous experiences related to the assessment of such issues in health care settings.

# 7 Conclusions

The main conclusions of this thesis regarding the competence, barriers, attitudes, practice patterns, and education in sexual medicine among Finnish OB/GYNs were as follows:

1. Finnish OB/GYNs self-reported good competence in discussing sexual problems with their patients, whereas their competence in treating these problems was reported as poor. Several barriers to bringing up sexual problems with patients emerged, including a lack of time, education, and experience.

2. Sexual problems were considered important health issues, but routine assessment of these problems by OB/GYNs was yet to be implemented. The practice patterns were disorganized, which presumably led to the underdiagnoses and undertreatment of FSD.

3. Most OB/GYNs considered their education insufficient and expressed a need for additional education in sexual medicine. Through education, both the attitudes toward and knowledge of sexual medicine can be strengthened.

4. Female OB/GYNs reported poorer competence and expressed more barriers to discussing sexual problems and difficulty in diagnosing FSD compared to male OB/GYNs, although these results should be interpreted with caution. Younger OB/GYNs reported poorer competence and expressed more barriers and difficulty in diagnosing FSD compared to older colleagues. Younger OB/GYNs were more likely to express a need for CME.

5. Compared to OB/GYNs, GPs reported similar competence in discussing and treating patients' sexual problems. Like OB/GYNs, GPs also considered the treatment of sexual problems to be an important health care practice. Although several barriers were identified by both specialties, GPs were more likely to report these barriers. They also inquired less frequently about patients' sexual problems than OB/GYNs. GPs rated their education in medical schools better compared to OB/GYNs, but they similarly expressed the need for CME.

6. Poor self-reported competence in addressing patients' sexual problems was associated with physicians' perceptions of insufficient education in sexual medicine at all educational levels. All identified barriers were linked to lower levels of perceived competence. Of all the barriers, 'lack of knowledge and experience' was the most common barrier related to a self-rating of poor competence. The need for sexual medicine education is warranted despite the specialty (OB/GYN or GP).

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# Appendices

**Appendix 1.** Study questionnaire

## STUDY QUESTIONNAIRE

The questions included in the questionnaire for OB/GYNs (all).
*The questions included in the questionnaire for GPs (italicized).*

### Background information:

1. *Year of birth:*
   _____

2. *Gender:*
   ☐ *Female*
   ☐ *Male*
   ☐ *Other*

3. *From which university did you graduate as a licentiate of medicine?*
   ☐ *Helsinki*
   ☐ *Kuopio*
   ☐ *Oulu*
   ☐ *Tampere*
   ☐ *Turku*
   ☐ *Abroad*

4. Year of graduation as a licentiate of medicine:
   _____

5. From which university did/will you graduate as a specialist in obstetrics and gynecology?
   ☐ Helsinki
   ☐ Kuopio
   ☐ Oulu
   ☐ Tampere
   ☐ Turku
   ☐ Abroad

6. Year of graduation as a specialist in obstetrics and gynecology:
   _____

7. *In which hospital district are you primarily working currently?*
   - ☐ *Central Finland*
   - ☐ *Central Ostrobothnia*
   - ☐ *East Savo*
   - ☐ *Helsinki and Uusimaa*
   - ☐ *Kainuu*
   - ☐ *Kanta-Häme*
   - ☐ *Kymenlaakso*
   - ☐ *Lapland*
   - ☐ *North Karelia*
   - ☐ *North Ostrobothnia*
   - ☐ *North Savo*
   - ☐ *Pirkanmaa*
   - ☐ *Päijät-Häme*
   - ☐ *Satakunta*
   - ☐ *South Karelia*
   - ☐ *South Ostrobothnia*
   - ☐ *South Savo*
   - ☐ *Southwest Finland*
   - ☐ *Vaasa*
   - ☐ *Western Ostrobothnia*
   - ☐ *Åland*

8. I currently work: (you can choose more than one option)
   - ☐ In a hospital
   - ☐ In the private sector
   - ☐ As a researcher
   - ☐ As a clinical teacher
   - ☐ In primary health care
   - ☐ Retired
   - ☐ Maternal leave/Nursing leave/Leave of absence/Sick leave/Not currently working

9. How many patients do you treat, on average, during your clinical workday? (including appointments, phone calls, etc.)
   - ☐ 0
   - ☐ 1–5
   - ☐ 6–10
   - ☐ 11–15
   - ☐ 16–20
   - ☐ 21–25
   - ☐ 26–30
   - ☐ 31–

10. How many patients do you deal with regarding sexual issues, on average, during your clinical work
    - ☐ 0
    - ☐ 1–5
    - ☐ 6–10
    - ☐ 11–15
    - ☐ 16–20
    - ☐ 21–25
    - ☐ 26–30
    - ☐ 31–

## Questions:

**A) Self-reported competence in discussing and treating patients' sexual problems**

1. How do you rate your competence in discussing sexual health problems with your patients?
   *How do you rate your competence in discussing sexual health problems with your female patients*
   ☐ *Good*
   ☐ *Quite good*
   ☐ *Quite poor*
   ☐ *Poor*

2. How do you rate your competence in treating your patients' sexual problems?
   *How do you rate your competence in treating your female patients' sexual problems?*
   ☐ *Good*
   ☐ *Quite good*
   ☐ *Quite poor*
   ☐ *Poor*

3. *How easy is it for you to discuss sexual issues if your patient initiates the subject?*
   ☐ *Not a problem*
   ☐ *A minor problem*
   ☐ *A moderate problem*
   ☐ *A major problem*
   ☐ *Cannot say*

**B) Barriers to bringing up sexual problems with patients**

4. *To what extent do each of the following items hinder bringing up sexual problems with patients? (answer every item)*

| | Not at all | | | Very much | Cannot say |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| *Shortness of the appointment time* | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Sexual problem not being a priority at the appointment* | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Personal attitudes and beliefs* | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Personal discomfort when addressing sexual problems* | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Lack of knowledge about sexual medicine* | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Lack of experience with sexual medicine* | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Lack of effective treatment for sexual problems* | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Fear of failing to respond to patients' sexual problems* | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Disability of the patient* | ☐ | ☐ | ☐ | ☐ | ☐ |

**C) Attitudes toward sexual problems**

| 5. *In my experience: (answer every item)* | Totally disagree 1 | 2 | 3 | Totally agree 4 | Cannot say 5 |
|---|---|---|---|---|---|
| *Treating sexual problems is an important health care practice.* | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Diagnosing female sexual problems is difficult.* | ☐ | ☐ | ☐ | ☐ | ☐ |
| Sexual problems are often side effects of medications for other pathologies. | ☐ | ☐ | ☐ | ☐ | ☐ |
| The treatments I have prescribed for sexual problems are often effective. | ☐ | ☐ | ☐ | ☐ | ☐ |
| Sexual problems can be treated with lifestyle changes. | ☐ | ☐ | ☐ | ☐ | ☐ |

**D) Practice patterns in sexual history-taking**

6. *When taking the patient's sexual history, do you ask how satisfied the patient is with their sexual life?*
   - ☐ *Always*
   - ☐ *Usually*
   - ☐ *Seldom*
   - ☐ *Never*

7. *How do you usually conduct sexual history-taking? (you can choose more than one option)*
   - ☐ *Open conversation*
   - ☐ *Structured interview*
   - ☐ *Questionnaire*
   - ☐ *I do not take a sexual history*

**E) Practice patterns in the treatment of sexual problems**

| 8. *In my experience: (answer every item)* | Totally disagree 1 | 2 | 3 | Totally agree 4 | Cannot say 5 |
|---|---|---|---|---|---|
| *I often inquire about sexual problems during general medical history-taking.* | ☐ | ☐ | ☐ | ☐ | ☐ |
| I often order further tests when diagnosing sexual problems. | ☐ | ☐ | ☐ | ☐ | ☐ |
| I often prescribe medications for sexual problems. | ☐ | ☐ | ☐ | ☐ | ☐ |
| I often prescribe treatments other than medications for sexual problems. | ☐ | ☐ | ☐ | ☐ | ☐ |
| I change the patient's medication if it causes sexual problems as a side effect. | ☐ | ☐ | ☐ | ☐ | ☐ |
| I ask the patient to consult a specialist for the underlying medical condition to change the medication if it causes sexual problems as a side effect. | ☐ | ☐ | ☐ | ☐ | ☐ |
| I often refer patients with sexual problems to a sexual medicine specialist. | ☐ | ☐ | ☐ | ☐ | ☐ |
| *to refer patients with sexual problems for continued care.* | ☐ | ☐ | ☐ | ☐ | ☐ |

**F) Source of education in sexual medicine**

9. *From which sources have you gained your knowledge about sexual medicine that you use in your patient work? (you can choose more than one option)*
   - ☐ *Medical books*
   - ☐ *Medical journals*
   - ☐ *Continuing medical education*
   - ☐ *Congresses*
   - ☐ *Consultation of guidelines*
   - ☐ *Education given in medical school*
   - ☐ *Consultations and discussions with colleagues*
   - ☐ Education given in residency
   - ☐ Sexuality counselor (authorized) training
   - ☐ Sexuality therapist (authorized) training
   - ☐ Clinical sexologist (authorized) training
   - ☐ Other therapy training
   - ☐ Sexuality educator (authorized) training
   - ☐ *Other, what:* _____

10. *How sufficient do you rate the following sources of your prior education when considering your sexual medicine competence?*

| | Insufficient | | | Sufficient | Not taken |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| *Medical school* | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Residency* | ☐ | ☐ | ☐ | ☐ | ☐ |
| *Continuing medical education* | ☐ | ☐ | ☐ | ☐ | ☐ |

**G) The need for education in sexual medicine**

11. *Do you feel a need for continuing education in sexual medicine?*
   - ☐ *Yes*
   - ☐ *No*

12. *If you answered 'yes', in which form would you prefer to receive continuing education? (you can choose more than one option)*
   - ☐ *Lectures*
   - ☐ *Workshops*
   - ☐ *Simulations*
   - ☐ *Online learning platforms*
   - ☐ *Something else, what:* _____

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