

Örebro Studies in Psychology 47



Elin Ekholm

## **Painful Sex in Context**

**Understanding Vulvodynia from a Relational Perspective**

**Författare:** Elin Ekholm

**Titel:** Painful Sex in Context, Understanding Vulvodynia from a Relational Perspective

**Utgivare:** Örebro universitet, 2024  
[www.oru.se/publikationer](http://www.oru.se/publikationer)

**Tryck:** Örebro University, Repro 01/2024

**ISSN:** 1651-1328

**ISBN:** 978-91-7529-535-0 (print)

**ISBN:** 978-91-7529-536-7 (pdf)

Till Ture, Märta och Nils. Mitt norr.

## Abstract

Vulvodynia is a multifactorial persistent pain condition, characterized by pain in the vulva upon touch or pressure. It negatively impacts sexual function, satisfaction, and relational wellbeing. Relational factors have been indicated as integral to the understanding and outcomes of vulvodynia. The overall aim of this dissertation was to further the understanding of women's pain-related behaviors in relation to the dyadic and normative contexts of vulvodynia.

Using a person-oriented approach, study I explored links between coping behaviors, i.e., avoidance and endurance on the one hand, and on the other, relational and pain catastrophizing, perceived partner responses, and motivational goals, in a sample of 128 women with vulvodynia. Study II explored the significance of normative context for the experience of vulvodynia by qualitatively investigating subjective experiences of five women living with dyspareunia in a queer relationship. Using behavioral observation and self-report, study III investigated patterns of sexual communication quality in heterosexual vulvodynia couples ( $n = 25$ ) as compared to couples without pain ( $n = 37$ ), and assessed potential associations with pain, self-disclosure, and sexual assertiveness.

The findings from the three studies together highlight the significance of the normative context and relational factors such as the emotional quality of sexual communication and women's relational cognitions, for women's pain-related experiences and coping behaviors. A new theoretical model, the Interpersonal Pain Coping Model of Vulvodynia, is proposed as a way of integrating contextual factors such as partner behaviors and sexual scripts into the understanding of women's behavioral response to vulvodynia.

**Keywords:** Vulvodynia, PVD, Couples, Sexual Communication, Dyadic Emotion Regulation, Empathy, Responsiveness, Coping, Sexual Scripts

## Acknowledgements

Becoming a researcher is a process impossible to navigate in isolation – it takes a village to raise children and researchers alike. I would like to express my gratitude to my villagers.

First, my supervisors. Ida Flink, my sincerest and greatest thank you for everything. No list will be exhaustive. This dissertation would not have existed had you not made yourself available and encouraged me from day one. I am truly grateful for your knowledgeable and dedicated mentoring and enthusiasm, and not least, for your unbelievable text editing skills. Thank you for letting me be part of the research mission for women's health and freedom. My genuine gratitude and appreciation to Steven Linton. Thank you for sticking with me with coffee and kindness, for inspiring me to write better and think clearer, and most of all for your somewhat amazing ability to ask just the right question at just the right time. Tove Lundberg, you have my deepest gratitude for teaching me about academic courage and how to balance principle and pragmatism, and for providing me with a methodological and epistemological resonance board. I am thankful for your support and the opportunity to rest in a shared outlook on the world. Martien Schrooten, a sincere thank you for giving me a chance and for your engagement and efforts.

I would also like to extend my gratitude to the reviewers and collaborators who helped shape this dissertation. Gerhard Andersson for the final review. The kind and impressive Natalie Rosen and Sammyh Khan for excellent and helpful reviewing half-way. Thanks also to the inspiring Marieke Dewitte and Moniek ter Kuile for good collaborations.

Like any community, my academic village depends on the dedication of its' citizens. I would like to thank each and every villager at the unit of psychology and especially those in CHAMP. Together, you created a place where I was supported in mastering the skills of a researcher. Not least, you made it a pleasure to come to work.

A special thanks to all my fellow PhD students at Örebro University, past or present, for community and shared confusion. Among you, I also found friends that I intend to keep well after defending this dissertation. Linnéa, I have enjoyed working with you immensely and I am truly grateful for your brains, dedication, and friendship. And for your great skills in hotel booking. CJ, thank you for your ceaseless support

and inspiring courage, and for thoughtful conversations, play dates, and midwinter spa visits. Thank you also for language editing when I ask for proof reading. Darun, I feel truly fortunate to have experienced your humble genius, kindness and integrity. Thank you for your continued engagement and support. And for the all too rare drinks.

Some people were crucial in enabling my pursuit of a research career in the first place. Mamma, I owe you all the way from the heavy library bags of my childhood, through your intellect and loyalty, to the meatballs and loving support you continually provide for me and my kids. Thank you from the bottom of my heart. Pappa – thank you for sharing and instilling in me your endless curiosity and insistence upon clarity of thought. For loving and challenging me. I would have loved to discuss my dissertation with you. Martin, dear brother, thank you for your unwavering faith and support, for being so unreasonably proud of me, and for calling me out when needed. Johan, thank you for jumping on the bed with me when I first got this position, for endless days of “vab”, and for the pretty, yellow keyboard. Jan, thank you for paving the way, and for guidance in a crucial moment. Ann-Sofie, clinical anchor, provider of beer, spa-weekends and everlasting emotional support and confidence in me. I would be lost without you. Jessica, thank you for “stugan”, an oasis for writing and deep breaths, and for showing up when needed. Ali, thank you for that decisive moment years ago in Hultsfred, where I learned about imposter syndrome, and about support, and for all the encouragement and good wine since. Also, thank you to Ida, Tora, Ann, and Lina for shared ambitions, confidences and frustrations over the years – we are doing it!

I would be remiss if I did not acknowledge the contribution of the research participants in this dissertation. Thank you for giving so bravely and generously of your time and efforts, and for hoping for change. And thank you to the taxpayers of Sweden for the absolute privilege this time has been. To the staff at Fullriggarens förskola and Solens fritids, and to Emma at Kvarnbergsskolan, my sincerest thank you for caring so excellently for my children while I have been off learning to do research.

Och till sist: Ture, Märta och Nils. Mitt norrr. Ni är för evigt mina största läromästare. Jag älskar er.

# Table of Contents

<b>List of papers .....</b>	<b>9</b>
<b>List of abbreviations .....</b>	<b>10</b>
<b>Introduction .....</b>	<b>11</b>
<b>Epistemological positions.....</b>	<b>12</b>
<b>Definitions and terminology.....</b>	<b>13</b>
<b>Prevalence .....</b>	<b>16</b>
<b>Etiology.....</b>	<b>17</b>
<b>Psychosexual correlates of vulvodynia .....</b>	<b>18</b>
<b>Associated factors and theoretical frameworks .....</b>	<b>19</b>
Associated factors on the individual level.....	19
Theoretical framework on the individual level: The Fear Avoidance Endurance Model of Vulvodynia.....	21
Associated factors on the normative level .....	23
Theoretical framework on the normative level: Sexual scripts.....	25
Associated factors on the dyadic level .....	26
Theoretical framework on the dyadic level: The Interpersonal Emotion Regulation Model.....	29
<b>Aims .....</b>	<b>30</b>
<b>Brief description of studies .....</b>	<b>32</b>
<b>Study I .....</b>	<b>32</b>
Background and aim .....	32
Methods.....	32
Results.....	33
Conclusions.....	34
<b>Study II .....</b>	<b>34</b>
Background and aim .....	34
Methods.....	35
Results.....	35
Conclusions.....	36
<b>Study III .....</b>	<b>36</b>

Background and aim.....	36
Methods.....	37
Results.....	38
Conclusions.....	39
<b>Discussion .....</b>	<b>41</b>
<b>Main findings.....</b>	<b>41</b>
<b>Theoretical discussion.....</b>	<b>43</b>
<b>The Interpersonal Pain Coping Model of Vulvodynia .....</b>	<b>44</b>
<b>Methodological discussion and limitations .....</b>	<b>50</b>
<b>Ethical considerations.....</b>	<b>52</b>
<b>Clinical implications.....</b>	<b>53</b>
<b>Conclusions .....</b>	<b>54</b>
<b>Future directions .....</b>	<b>55</b>
<b>References.....</b>	<b>58</b>



## List of papers

This thesis is based on the following studies, referred to in the text by their Roman numerals.

- I. Ekholm, E., Engman, L., ter Kuile, M., & Flink, I. K. (2023). Coping with provoked vestibulodynia in a relational context – A person-oriented exploration of coping patterns. Submitted.
- II. Ekholm, E., Lundberg, T., Carlsson, J., Norberg, J., Linton, S. J., & Flink, I. K. (2022). "A lot to fall back on": experiences of dyspareunia among queer women. *Psychology & Sexuality*, 13(5), 1242-1255.  
<https://doi.org/10.1080/19419899.2021.2007988>
- III. Ekholm, E., Blaker, H., Gottlander, L., Zhao, X., Linton, S. J., Dewitte, M., & Flink, I. K. (2023). Sexual communication patterns in couples with vulvodynia – a case-control behavioral observation study. *Journal of Sexual Medicine* 20(8), 1103-1114.  
<https://doi.org/10.1093/jsxmed/qdad085>

Published articles and figures were reprinted with the kind permission of publishers and authors.

## List of abbreviations

APA	American Psychiatric Association
APIM	Actor-Partner Interdependence Model
DSM	Diagnostic and Statistical Manual
ER	Emotion Regulation
FAEM	Fear Avoidance Endurance Model
FSFI	Female Sexual Function Index
GPPPD	Genito-Pelvic Pain/Penetration Disorder
ICD	International Classification of Diseases
IERM	Interpersonal Emotion Regulation Model
IPCM	Interpersonal Pain Coping Model of Vulvodynia
IPMI	Interpersonal Process Modell of Intimacy
MANOVA	Multivariate Analysis of Variance
PVD	Provoked Vestibulodynia

## Introduction

Vulvodynia is a persistent pain condition characterized by sharp or burning pain in the vulva upon touch or pressure (Bornstein et al., 2016). It has far-reaching negative effects on the sexual function and satisfaction, relationship satisfaction, intimacy, and mood of the women affected (for overviews see e.g., Bergeron et al., 2011 and Rosen & Bergeron, 2019). Vulvodynia has a multidimensional etiology (Rosen et al., 2020b). It is conceptualized within a biopsychosocial framework, and in recent decades, psychological factors have received increased interest, both in terms of research and treatment development (Bergeron et al., 2016; Brotto et al., 2019; Corsini-Munt et al., 2014; Rosen et al., 2019).

Many women experience vulvodynia as most problematic in the context of sexual relationships, and women cope differently with pain-interference in the sexual relationship. Some women exhibit high levels of pain catastrophizing and avoid sexual contact altogether, while others continually endure sex that is painful (Elmerstig et al., 2013; Engman et al., 2018). This raises the question which lies at the heart of this dissertation: why do many, but not all women with vulvodynia, continue to engage in painful sex? To understand this behavior, and facilitate other responses to pain, vulvodynia needs to be considered both from the individual, the dyadic and the societal perspective.

Over the past two decades research has increasingly recognized that partner factors and dyadic interactions in themselves affect the pain and psychosexual wellbeing of women with vulvodynia. Thus, a dyadic perspective should be applied to the assessment of vulvodynia and the understanding of women's and partners' psychosexual outcomes (Rosen & Bergeron, 2019). Dyadic factors affecting the outcomes and experience of vulvodynia include sexual communication (Pazmany et al., 2014; Rancourt et al., 2016, 2022), intimacy (Bois et al., 2016), emotion regulation (Awada et al., 2014; Bergeron et al., 2021), and partner responses (Rosen et al., 2012; Rosen, Muise, Bergeron, Delisle et al., 2015). Moreover, the experience of vulvodynia is shaped by prevailing norms and expectations around heterosexual relationships (Jackson, 1999), such that affected women report feeling

damaged, inadequate as sexual partners, or insufficiently feminine for being unable or unwilling to engage in the sexual intercourse defining “normal sex” (Ayling & Ussher, 2008; Marriott & Thompson, 2008; Shallcross et al., 2018).

While the psychology of vulvodynia and sexual relationships has gained in research interest over the last 20 years, many unknowns remain. This is especially true in regard to the interactions between individual factors, such as women’s cognitions and coping behaviors, and interpersonal factors, such as couple’s communication, partner’s responses to pain and the normative context.

The overall aim of this dissertation is to further the understanding of women’s pain-related behaviors in relation to the dyadic and normative contexts of vulvodynia.

## **Epistemological positions**

This dissertation spans several methods and methodologies, which necessitates an account of its philosophical underpinnings. Ontologically and epistemologically, this dissertation rests on the foundation of a critical realist perspective. However, it adopts a pragmatic approach, drawing on not only critical realism but also social constructionist and transformative perspectives on knowledge production and the role and span of research (Mertens, 2009).

Critical realism is an epistemological stance that acknowledges the materiality of reality; there is indeed a reality that pre-dates and exists beyond language and discourse (Burr, 1998; Willig, 2013), and language (in itself real) is only one of many ways in which we engage with the material reality (Cromby & Nightingale, 1999). The work in this dissertation is fundamentally concerned with the corporeality of pain and the sexual body (and as such recognizes the materiality of the body and of embodied experiences) while acknowledging the constructive and mediating role of language and culture (Sims-Schouten et al., 2007; Ussher, 2008).

Furthermore, and in addition to this fundamental assumption, the world at large, and the specific phenomena that are the focus of this

dissertation, are only perceivable using human senses. These perceptions are simultaneously framed by, and intrinsically entangled with, linguistically defined and ever evolving cultural concepts (Yardley, 2013) such as pain, communication, intimate relationships, and sex. While it is certainly possible to experience pain without having a language, the association of that sensory experience to constructs such as “disability” or “non-normalcy” is, however, predicated on linguistic concepts determining the frameworks within which we experience and understand pain. In this sense, bodies of knowledge of the world are always conditional upon discursive constructions. The women who participated in the studies included in this dissertation have sensory experiences of pain which in turn shapes the bodily experience of sexual touch of their genitals. This affects their embodied and gendered sexual practices, which are in turn the subject of discursive constructions mediating an understanding of these practices as, for instance, “normal” or “un-feminine”. Alongside discursively constructed norms of sex and (hetero)sexual relationships, vulvodynia is also subject to changing discourses and classifications of women’s sexual difficulties (see e.g., Farrell & Cacchioni, 2012, for an example), discussed below under *Definitions and terminology*.

Drawing on a transformative approach to research (Mertens, 2009), the work in this dissertation is aimed at producing knowledge which can be used not only to understand experiences of pain but also to inform interventions, at multiple levels, to support and empower women and couples coping with vulvodynia.

## **Definitions and terminology**

Vulvovaginal pain comes in different shapes, has different causes and has been known under a multitude of names over time, and in different diagnostic systems and terminologies. One of the hallmark symptoms over all definitions and classifications is, however, painful penetrative sex. In the absence of a clear etiology of vulvovaginal pain, the problem has been conceptualized differently across disciplines, with emphasizes either on pain and biopsychosocial causes on the one hand, and on relationally or psychologically determined sexual difficulties on the other.

Vulvodynia denotes a type of persistent idiopathic vulvovaginal pain often characterized as sharp or burning, it is defined by a duration of at least 3 months and appears without a clear identifiable cause (Bornstein et al., 2016). The pain can be generalized throughout the vulva or localized to a specific region (e.g., vestibulodynia, when the pain is localized to the vulvar vestibule). The pain may also be provoked, spontaneous, or mixed. The most common type is Provoked Vestibulodynia (PVD; Wesselmann et al., 2014) where pain is localized to the vulvar vestibule, i.e., the entry of the vagina, and elicited by touch or pressure, such as attempted sexual penetration or tampon insertion. Vulvodynia can be further specified as primary or secondary in onset, and with reference to the temporal pattern of the pain (Bornstein et al., 2016).

The definition presented above is the result of the 2015 agreement by three scientific societies dedicated to the study and treatment of vulvovaginal pain, on a consensus statement for classification and terminology in the field (Bornstein et al., 2016). The aim of the consensus statement (henceforth the “2015 terminology”) was to update the terminology to incorporate current knowledge about etiology and treatment, and to align the classification with that used for other pain conditions. Further, it is largely aligned with the diagnosis Vulvodynia, included in the International Classification of Diseases, 11th edition (ICD-11; World Health Organization, 2019). Diagnoses for persistent vulvovaginal pain are, however, also found elsewhere, mainly in the Diagnostic and Statistical Manual (DSM) of the American Psychiatric Association (APA), where it is listed under Sexual Dysfunctions (APA, 1980, 2000, 2013).

Vulvovaginal pain appeared in the third and fourth edition of the DSM under the name Dyspareunia (APA, 1980, 2000), denoting pain upon attempted or completed vaginal intercourse. While it can refer to pain further into the vaginal tract, Dyspareunia is most commonly used to describe superficial pain, i.e., at the vaginal entry, so also in this dissertation. In the fifth edition of the DSM, Dyspareunia was collapsed into the diagnosis Genito-Pelvic Pain/Penetration Disorder (GPPPD; APA, 2013) together with the previous diagnosis of

Vaginismus (inability to complete sexual penetration). GPPPD is thus a broader diagnostic category.

In comparison with the ICD- and the 2015-terminology (Bornstein et al., 2016) which bases the diagnosis of Vulvodynia on pain itself, the DSM classification of vulvovaginal pain represents an alternative perspective where pain is considered and diagnosed on the basis of symptoms' interference with sexual activities, mainly intercourse.

To summarize, GPPPD, Dyspareunia and Vulvodynia are overlapping diagnoses describing women's vulvovaginal pain from different perspectives. While Vulvodynia is a "pure" pain diagnosis, devoid of descriptions of the pain's consequences, GPPPD and Dyspareunia use the hallmark consequence of vulvodynia – pain upon sexual penetration or touch – as the center point for diagnosis.

The role of pain etiology in psychological presentations and outcomes of vulvovaginal pain is unclear. Evidence would suggest that there are psychological similarities over different pain diagnoses, e.g., in psychological wellbeing (Brauer et al., 2008) and benefits of psychological treatment (Flanagan et al., 2015).

In this dissertation, the sample in study I included women with formally diagnosed PVD, while the pain group in study III, consisted of women with self-identified or formally diagnosed vulvodynia defined in accordance with the 2015 terminology. The sample in study II was selected based on self-identified dyspareunia, but with such a presentation that it was likely to overlap with vulvodynia as described in the 2015 terminology (Bornstein et al., 2016), i.e., persistent, superficial, provoked by touch or pressure, occurring in the absence of known injury or disease and with a duration of no less than six months. In sum, the women included in all three studies suffered from persistent vulvar pain of unknown cause, provoked by touch or pressure, and with a duration of at least three months.

Applying a conceptualization of vulvovaginal pain consistent with that of other types of persistent pain facilitates the understanding of the multifaceted etiology and presentation of vulvodynia (Meana & Binik, 2022). Thus, for clarity and consistency, the 2015 terminology

will be applied throughout this dissertation. Consequently, the term vulvodynia will be used in the introductory and the summary chapters as an umbrella term covering all the above-mentioned terms, and dyspareunia/vulvodynia/PVD will be used in reference to the samples in the respective studies. With this conceptualization, the pain of women with vulvodynia is considered the basis for diagnosis, and dyspareunia one of the consequences of the pain condition.

The term sexual function, and conversely dysfunction, is used in this dissertation to denote the overall functioning of women in the domains sexual desire, arousal, lubrication, orgasm, and pain in the sexual context. In critique of this terminology, Tiefer et al. (2002) argued that it implies a biomedical understanding of women's sexuality as separate from its' relational and political context. While it is used in this dissertation as a way of capturing some aspects of women's sexual experience, it should not be taken to represent a full account of women's complete sexual experiences, as it does not necessarily comprise all aspects of either sexual difficulties and complaints, or pleasures.

The use of woman/women in this dissertation denote cis women, unless otherwise specified. Opposite to "trans", the term cis, (Latin for "on the same side"), represents a person whose biological sex aligns with their legal, social and self-identified gender. It must be noted that most research referred to in the present body of work has not reported on participants' gender identity. Thus, the label "women" is to be considered a generalization, based on the majority of individuals suffering from vulvodynia.

Finally, the term queer is used in this dissertation not as an identity label (although some participants in Study II have chosen to adopt it as such). Instead, queer is used to frame identities, social positions, experiences, behaviors and sexual practices as non-conforming to heteronormative ideals.

## **Prevalence**

The multitude of definitions of vulvodynia described above is mirrored in the difficulty to establish precise prevalence rates. Some



North American population-based studies estimate prevalence to 7-8% (Harlow et al., 2014; Reed, Harlow, Sen, Legocki et al., 2012), while life-time prevalence range as high as 16% (Harlow & Stewart, 2003). Swedish studies have reported prevalence rates of 9%, with rates as high as 13% in the younger age group (Danielsson et al., 2003). Notably, available prevalence rates are primarily based on women from high- and middle-income countries. Though vulvodynia is considered a persistent pain condition, it is currently unclear to what extent it is chronic, and evidence suggest common trajectories of both persistent and recurrent pain, as well as spontaneous remission (Cetera et al., 2023; Nguyen, Mathur et al., 2015; Pâquet et al., 2019; Reed et al., 2016).

## **Etiology**

The cause of vulvodynia is yet largely unknown, although the last decades have seen an increase in studies of associated factors (Bornstein et al., 2016). The consensus in the field is that it is most likely to be a multifactorial condition. A biopsychosocial model (Engel, 1977) is therefore often employed in understanding both development and maintenance of the condition. Further, it remains unknown whether the pain currently classified under the term vulvodynia represents one condition or encompasses multiple distinct conditions with differing etiologies and trajectories.

A variety of causal or contributing factors have been suggested in the past two decades, and research is ongoing. For an overview of risk factors see e.g., De Andres et al. (2016), Meana & Binik (2022) or Pukall et al. (2016). Among the more well-documented biomedical risk-factors for developing vulvodynia are; recurrent yeast infections associated with an inflammatory response and/or hyperinnervation (Falsetta et al., 2015; Farmer et al., 2011; Harlow et al., 2017), pelvic-floor hypertonicity (Morin et al., 2014; Reissing et al., 2005), and other chronic pain conditions, where the latter have been taken to indicate that central sensitization may be a relevant process in vulvodynia (Reed et al., 2012). Furthermore, hormonal factors have been indicated, and some studies have found an association between vulvodynia and the use of combined oral contraceptives (Pukall et al.,

2016; Reed et al., 2013). Psychosocial predicaments such as depression and anxiety have been found to predate and carry an increased risk of vulvodynia (Khandker et al., 2011), so also childhood experiences of maltreatment (Harlow & Stewart, 2005; Khandker et al., 2014). Other social factors possibly contributing to the maintenance or exacerbation of pain are current norms around, particularly heterosexual, sex (Shallcross et al., 2018) and insufficient access to health care in early, as well as later, stages of pain development (National Board of Health and Welfare, 2022).

To conclude, current evidence supports comorbidity and the association of vulvodynia with a variety of psychological and biomedical factors. In addition to causal factors, several psychological, psychosexual, and relational factors are implicated in the maintenance of vulvodynia, and as consequences of the condition. These are discussed further below under *Psychosexual correlates of vulvodynia* and *Associated factors*.

## **Psychosexual correlates of vulvodynia**

Vulvodynia has a profound effect on the psychosexual well-being of women who suffer from it. Pain and associated fear interfere with the sexual response, inhibiting arousal and lubrication, and in parallel with muscle tension in the pelvic floor, it is theorized to produce further pain in a vicious circle (Basson, 2012; Spano & Lamont, 1975). Accordingly, overall sexual function and satisfaction has been shown to be lower among women with vulvodynia compared to women without pain (Arnold et al., 2006; Brauer et al., 2008). Women with vulvodynia report lower function in most aspects of sexual function compared to women without pain, including intercourse frequency, orgasm achievement (Cherner & Reissing, 2013; Meana et al., 1997), masturbation (Cherner & Reissing, 2013). They also report more negative affect in regard to sex (Brauer et al., 2008; Cherner & Reissing, 2013; Meana et al., 1997). Sexual desire and arousal seem particularly negatively affected in women with vulvodynia and have been shown to be comparable to that of women coping with sexual arousal disorder (Aerts et al., 2016; Masheb et al., 2004).

Notably, women's vulvodynia is also associated with sexual dysfunction in their male partners, who have been found to experience lower

erectile function and sexual satisfaction compared to partners of women without pain (Pazmany et al., 2014; Smith & Pukall, 2014). Thus, both partners in a relationship are affected by vulvodynia.

## **Associated factors and theoretical frameworks**

When attention is given to the psychosocial aspects of the biopsychosocial model (Bergeron et al., 2015; Meana & Binik, 2022), vulvodynia can be considered a multilevel phenomenon. The pain and related sexual impairment of vulvodynia can be affected, maintained, exacerbated, or mitigated by states and traits within the individual, as well as by factors in the intimate relationship and normative context of sexual relationships. In this dissertation, the experiences, and pain-related behaviors of women with vulvodynia, will be conceptualized using three different theoretical frameworks relating to different levels of the phenomenon – the individual, the dyadic, and the normative. Respectively, these frameworks are the Fear Avoidance Endurance Model (Engman, 2021), the Interpersonal Emotion Regulation Model (Rosen & Bergeron, 2019), and dominating discourses of heterosexual relationships as they relate to vulvodynia, including the coital imperative and the male sexual drive (Shallcross et al., 2018).

## **Associated factors on the individual level**

**Emotional Factors.** Women with vulvodynia have been found to exhibit higher levels of anxiety and depressive symptoms compared to healthy women (Gates & Galask, 2001; Meana et al., 1997). Symptoms have been shown to both precede and follow pain onset (Khandker et al., 2011), and are also implicated in daily variations in pain intensity and sexual function (Pâquet et al., 2018). Relatedly, vulvodynia is associated with high levels of sexual distress, both measured quantitatively (Pâquet et al., 2018), and qualitatively described in accounts of the lived experience of vulvodynia (Ayling & Ussher, 2008; Myrtveit-Stensrud et al., 2023; Shallcross et al., 2018).

Fear is an emotional response to perceived threat of pain and/or injury and plays a significant role in the development of persistent pain conditions. In vulvodynia, fear is presumed to drive avoidance and interfere with the sexual response in an interplay with physiological

factors such as pelvic floor muscle tightening and decreased vaginal lubrication (Dewitte & Meulders, 2023). While development of fear and pain chronicity in vulvodynia is assumed to follow the same processes as those implicated in other persistent pain conditions (i.e., classical and operant conditioning, and generalization), research on these processes in vulvodynia is limited. However, there are indications of deficiencies in safety learning among women with vulvodynia suggested by a decreased tendency to discriminative responses to erotic stimuli paired with pain and those without any link to pain (Both et al., 2017).

**Cognitive Factors.** Pain catastrophizing is defined as an exaggeratedly negative set of cognitions and emotions applied to actual or anticipated pain (Quartana et al., 2009), and is closely intertwined with fear and pain related beliefs. Further, pain catastrophizing has been conceptualized as a way of communicating pain distress in an effort to elicit support or assistance from others (Sullivan, 2012). Similar to other pain conditions, high levels of pain catastrophizing have been consistently found to predict higher pain intensity in women with vulvodynia (Chisari et al., 2021). Moreover, associations with lower sexual function and satisfaction (Anderson et al., 2016) have also been demonstrated. Pain catastrophizing is a common target in psychological treatments of vulvodynia and reductions in pain catastrophizing following treatment have been shown to mediate improvements in pain intensity, as well as in sexual function and distress (Santerre-Bailargeon et al., 2023).

Beyond pain catastrophizing, “other catastrophizing” has been suggested as a term to aid understanding of vulvodynia sufferers’ negative cognitions characterized by fear related to their relationships and partners (Engman, 2021; Flink et al., 2017). The objects of “other catastrophizing” (henceforth called relational catastrophizing) are losing, disappointing, or inciting conflict with an intimate partner. While such fear has been put forth as a likely explanation for persistent engagement in pain-provoking sexual activities (Elmerstig et al., 2008; Engman, 2021), research has yet to demonstrate a negative cognitive set or process parallel to that of pain catastrophizing.

Cognitive motivational processes have also been suggested as a factor of importance for the pain and sexual response of women with vulvodynia (Dewitte et al., 2011). Motivational goals refer to reasons for engaging in sex with a partner and can be either avoidance oriented, i.e., geared towards avoiding negative consequences, or approach oriented, i.e., focused on attaining a positive and desired outcome. Avoidance goals have been found to be more frequent in women with vulvodynia compared to their partners and pain-free controls (Dubé et al., 2017), and are linked to lower sexual and relationship satisfaction, and greater depressive symptoms (Rosen, Muise, Bergeron, Impett et al., 2015).

### **Theoretical framework on the individual level: The Fear Avoidance Endurance Model of Vulvodynia**

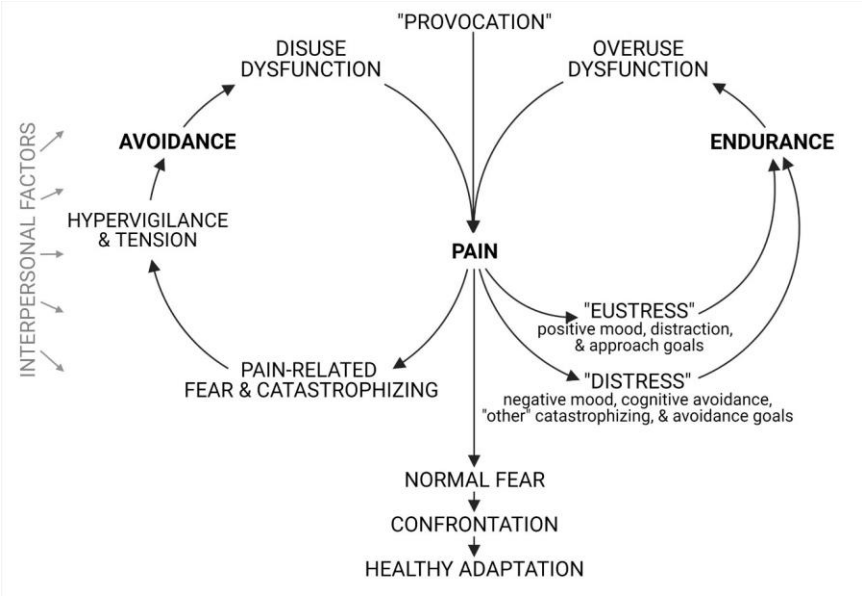
Drawing on research on pain behavior in other persistent pain conditions, the Fear-Avoidance model (Vlaeyen & Linton, 2000, 2012) has been suggested as a framework for understanding women's behavioral responses to vulvodynia (Thomtén & Linton, 2013). The model posits that avoidance of situations or behaviors associated with pain is a common coping strategy in response to pain, and while it may serve to protect against pain in the short term, it can have detrimental effects in the long run. The avoidant coping strategy is proposed to be driven by fear and catastrophizing and in turn drive pain chronicity (Leeuw et al., 2007; Vlaeyen & Linton, 2012). In women with vulvodynia, avoidance has been empirically shown to mediate the association between both catastrophizing and pain (Flink et al., 2017), and self-efficacy and pain (Davis et al., 2015), over time.

In an extension of the fear-avoidance model, endurance has been proposed as an alternate, albeit also maladaptive, coping strategy. Endurance propels pain chronicity through the overuse of pain-affected muscles (Hasenbring et al., 2014; Hasenbring & Verbunt, 2010). Conceptually, endurance denotes cognitive suppression and distraction efforts in combination with task persistent behaviors in the presence of pain (Hasenbring & Verbunt, 2010). In the case of vulvodynia, this corresponds to the tendency of some women to continually engage in painful sexual activities (Brauer et al., 2014; Elmerstig et al., 2013). In

the Avoidance-Endurance model suggested by Hasenbring and Verbunt (2010), two different forms of pain endurance are presented: distress endurance, characterized by cognitive avoidance and a negative mood, and eustress endurance, characterized by cognitive distraction and positive mood. In a prospective empirical investigation of this Fear-Avoidance-Endurance Model all three maladaptive coping strategies were associated with elevated pain levels compared to those of individuals employing a flexible and adaptive coping style (Hasenbrin et al., 2012). However, avoidance coping, and distress endurance emerged as the coping patterns associated with the highest level of disability (Hasenbring et al., 2012).

Integrating the fear-avoidance and the avoidance-endurance models, and adapting and applying them to vulvodynia, Engman (2021) presented the Fear-Avoidance-Endurance Model of vulvodynia (FAEM, Figure 1), in which both avoidance and the two forms of endurance are included.

Figure 1. The Fear Avoidance Endurance Model



The avoidance loop describes how fear and pain catastrophizing, via hypervigilance and tension, leads to avoidance, causing the previously described decrease in sexual function, desire and arousal, and pelvic floor muscle hypertonicity. On the other side of the model, the two proposed endurance loops (distress and eustress) depict how on the one hand, negative mood, cognitive avoidance, avoidance goals, and relational catastrophizing, and on the other, positive mood, approach goals, and distraction, both drive endurance of painful sex, followed by sexual dysfunction and pain sensitization caused by overuse.

### **Associated factors on the normative level**

Intertwined with the inner workings of the individual, the experience and outcomes of vulvodynia take place in the wider social context. Sexuality, sexual relationships, and practices are enmeshed in discourses privileging some understandings and social positions over others. According to Foucault (1972), discourses are sets of statements representing particular assumptions about the world and thereby producing the objects they are describing.

In an investigative systematic review of qualitative findings about women's experiences of vulvodynia, Shallcross et al. (2018) highlighted four aspects of prevailing discourse around women and (hetero)sex that were all found to be unhelpful and constituted sources of suffering for women coping with vulvodynia: the coital imperative, the notion of men's inherent need for sex, loss of femininity, and media portrayals of women and sex.

The coital imperative (Jackson 1984; McPhillips et al., 2001) refers to the positioning of penile-vaginal intercourse as the act defining heterosexual sex, the centerpiece around which all other sexual activities are placed as optional. The coital imperative has been shown to be an important cultural and normative ideal to which women with vulvodynia relate their pain and subsequent sexual difficulties. Several studies of vulvodynia have reported women's views of intercourse as a prerequisite for considering sex as "real" or "normal" (Ayling & Ussher, 2008; Kaler, 2006; Marriott & Thompson, 2008; Myrvtveit-Stensrud et al., 2023). This restricted view of sexual intimacy and inability to achieve "normal sex" is further tied to feelings of being an abnormal

person or partner (Ayling & Ussher, 2008; Elmerstig et al., 2008), and to an experience of lost femininity (Ayling & Ussher, 2008; Buchan et al., 2007; Hintz, 2019; Johnson et al., 2015; Kaler, 2006; Marriott & Thompson, 2008).

Related to the coital imperative is the discourse of men as driven by an inherent need for intercourse, a need which women are duty-bound to fulfill (Nicolson & Burr, 2003). This is a description of sexual relationship dynamics frequently reported by women with vulvodynia (Ayling & Ussher, 2008; Buchan et al., 2007; Carter et al., 2019; Hintz, 2019; Kaler, 2006; Marriott & Thompson, 2008) and has also been found among male partners of women with vulvodynia (Myrteit-Stensrud et al., 2023). One study further found that women with vulvodynia were more likely to perceive intercourse as an obligation after pain onset compared to before, and as many as 77% of the included women reported a fear of pain ending their relationship (Gordon et al., 2003). It is also worth noting that women frequently describe themselves as fortunate if they have a male partner who do not insist upon painful intercourse, and the said men as exceptions to the rule (Hintz, 2019; Shallcross et al., 2018).

Media representations of “normal” sex as “natural and easy” was perceived by women with vulvodynia as perpetuating the societal norms with which they find themselves at odds (Shallcross et al., 2018). This discrepancy between sexual norms and the lived experience of women with vulvodynia has been further demonstrated both in relation to traditional normative constructions of femininity and heterosexual sex, and in relation to post-feminist discourses emphasizing women’s sexual freedom and agency (Braksmajer et al., 2022).

To summarize, women in heterosexual relationships who are subject to prevailing discourses around femininity, the male need for sex, and the coital imperative, frequently find themselves at odds with these discourses, which invokes feelings of guilt, shame, inadequacy, frustration, and other negative emotions. Importantly, as noted by Shallcross et al. (2018), and equally true for the absolute majority of the empirical studies included in this dissertation, these are the experiences of predominantly white, well-educated, heterosexual women, residing in “Western” countries. These experiences should thus be



considered as situated in time and space, and not necessarily generalizable to women living under different circumstances.

### **Theoretical framework on the normative level: Sexual scripts**

Constituted upon the discourses described above, the normativity of heterosexual sex can be conceptualized in sexual script theory. In the mid to late 20th century, Simon and Gagnon (1973) sought to formulate a conceptualization of sexual conduct as socially learnt rather than the result of natural predispositions or “drives”. The result was the sexual script theory (Simon & Gagnon, 1984, 1986, 2003). Sexual scripts are a metaphor for theorizing individual and interpersonal behavior within a wider social context. They highlight the culturally constructed and gendered manuscripts for what is defined as sex, for who should initiate sex with whom and how, and for the embodied interactions of sexual relationships. The overarching cultural scripts are described as interacting with interpersonal and individual scripts (Simon & Gagnon, 1986), which can be viewed as mental representations constructed by individuals to organize and understand their own and others’ behaviors (Wiederman, 2015). Individual sexual scripts thus refer to cognitive structures (Gauvin & Pukall, 2018) organizing beliefs and values which serve to guide behavior towards the culturally expected and normative. Scripts operating on different levels may differ such that intrapsychic or interpersonal scripts differ from the cultural level, and there is a variation in how individuals and couples relate to the traditional heterosexual script (Masters et al., 2013), however, conforming is especially common among young or sexually inexperienced individuals and couples (Rittenhour & Sauder, 2023).

Scripts are gendered and the traditional heterosexual script depicts men as driving sexual encounters in pursuit of sexual gratification through the defining act of intercourse, while women are assumed to engage, motivated by a desire for an emotional connection (Sakaluk et al., 2014; Wiederman, 2005). And while heterosexual couples have sex in a variety of ways (Hite, 1981, 2000; Kinsey et al., 1953), the traditional heterosexual script and the defining act of vaginal

penetration remains a reference point for what “real sex” is (Kaler, 2006; Sörensdotter, 2012).

For many women with vulvodynia, the materiality of their bodies is at odds with expectations of how “sex is done”, which makes the need for renegotiation of those expectations pertinent. Like other expressions of normativity, sexual scripts are malleable structures (Butler, 2004) and in the field of vulvodynia, sexual communication has been suggested as the vehicle for couples to adjust their sexual scripts to accommodate pain, thereby limiting the impact of pain on sexual satisfaction (Rancourt et al., 2016).

### **Associated factors on the dyadic level**

Couples coping with vulvodynia are inevitably influenced by and required to accommodate both the respective member’s individual states and traits, and the normative context, in their adjustment to pain. During the past decade focus on the relational context of vulvodynia has amplified, and recommendations of further research on dyadic and partner factors of significance for pain and psychosexual outcomes have been put forth (Rosen et al., 2020a).

**Partner Responses.** Partner responses is one of the more well-researched factors pertaining to relational interaction in couples coping with persistent pain. Originating in research on pain communication in chronic musculoskeletal pain, partner responses denote the ways in which partners of individuals suffering from chronic pain respond to expressions of pain. Three categories of partner responses have been described: solicitous and negative (Fordyce, 1976), and facilitative (Schwartz et al., 2005). Solicitous responses refer to the excessive expression of concern or caretaking, while punishing responses refer to expressions of frustration or hostility towards the individual in reaction to their pain. Empirically, associations have been demonstrated between these two types of partner responses and poorer outcomes in chronic musculoskeletal pain. Among women suffering from vulvodynia, they have been linked to higher pain intensity and lower sexual function and satisfaction (Desrosiers et al., 2008; Rosen, Bergeron et al., 2014; Rosen, Bergeron, Sadikaj, & Deslile, 2015; Rosen et al., 2012; Rosen, Muise, Bergeron, Delisle et al., 2015). Additionally,

sollicitous responses have been found to be associated with greater pain-related disability (Maunder et al., 2022). The third category, facilitative partner responses, refers to a partner's expressions of encouragement of adaptive pain coping behaviors on the part of the person with pain (Schwartz et al., 2005). This is generally regarded as a more constructive partner response since it emphasizes active and approach-oriented coping. In empirical studies of vulvodynia, facilitative responses have been associated with women's greater sexual- and relationship satisfaction (Rosen et al., 2012; Rosen, Muise, Bergeron, Delisle et al., 2015), and lower pain intensity (Rosen, Bergeron et al., 2015). Lastly, partners' catastrophizing about women's pain has been found to be associated with negative, as well as solicitous, partner responses, and subsequently higher pain and depression ratings in the women (Davis et al., 2015).

**Sexual Pain Communication.** Related to facilitative partner responses is the concept of partner responsiveness, which aims to describe the emotional qualities of communication between intimate partners. Originating in the Interpersonal Process Model of Intimacy (IPMI; Reis & Shaver, 1988) partner responsiveness has been empirically studied and theorized in relation to the study of chronic pain under various names, including validation and empathic response. The IPMI posits that intimacy is created in a process comprising two components: emotional disclosure and perceived partner responsiveness. Applying the IPMI to interactions in couples dealing with chronic pain and using the concept validation, Edmond and Keefe (2015) proposed that when disclosures of pain related thoughts and feelings are met with validating responses by a partner, the partner is perceived as responsive. This is proposed to lead to an increase in intimacy, positive affect, and relationship satisfaction in the person with pain which in turn explains the empirically demonstrated decreases in reported pain intensity and pain behaviors. Moreover, validation has been theorized as a means to down-regulate arousal following emotional disclosure and thus, in a transactional manner, facilitate further self-disclosure (Fruzzetti & Worrall, 2010).

In the vulvodynia field, there is empirical evidence for a link between greater observed empathic responses and higher relationship

satisfaction (Gauvin et al., 2019). In the same vein, a daily diary study of perceived partner responsiveness in vulvodynia couples has demonstrated an association between greater perceived responsiveness and higher self-ratings of sexual function and satisfaction (Bergeron et al., 2021). Relatedly, other studies have demonstrated links between greater intimacy and better sexual function and satisfaction (Bois et al., 2013), and lower levels of sexual distress (Bois et al., 2016).

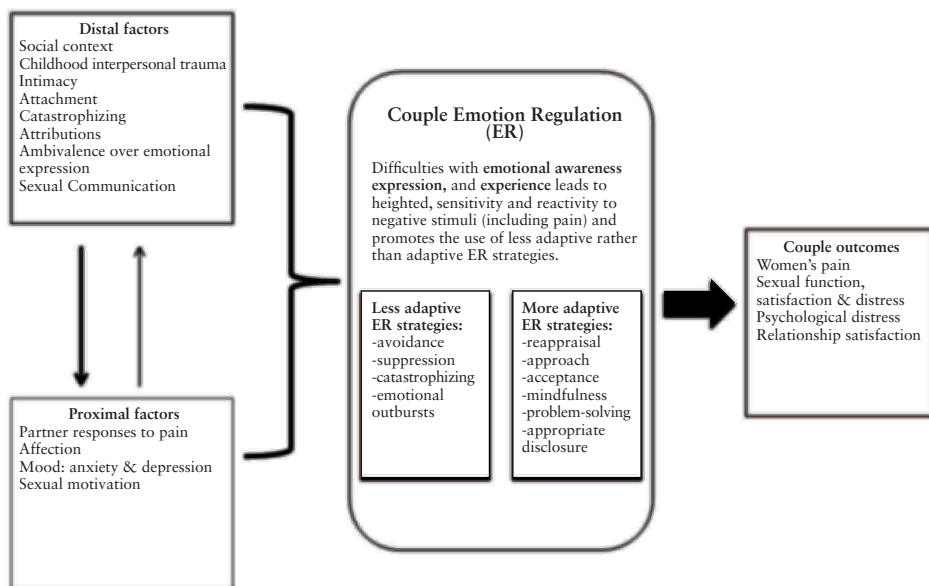
Regarding the general concept of sexual communication, a meta-analysis found that greater sexual communication was associated with better sexual function across a range of dimensions, among them pain (Mallory et al., 2019). Sexual communication is demonstrably poorer in vulvodynia samples compared to couples without pain (Pazmany et al., 2014; Smith & Pukall, 2014) and associated with a range of sexual and pain related outcomes, including women's lower sexual functioning and higher sexual distress (Pazmany et al., 2014), higher pain intensity (Rancourt et al., 2016), and poorer relationship adjustment (Rancourt et al., 2017).

Although previous research has indicated, first, that sexual communication is highly relevant to couples' outcomes, and second, that it is of poorer quality in vulvodynia couples compared to non-pain couples, there is limited knowledge about patterns of sexual communication in vulvodynia couples. There is also a lack of knowledge about possible links between sexual communication and pain-related behaviors. Two exceptions are provided by Rancourt and colleagues (2017), who showed that collaborative sexual communication patterns were linked to higher relationship and sexual satisfaction compared to negative communication patterns. Further, collaborative patterns mediated the positive effects of cognitive-behavioral couple therapy on sexual function, distress and satisfaction (Rancourt et al., 2022). While these findings indicate the salience of sexual communication patterns, the link between emotional qualities of sexual communication and women's pain and psychosexual outcomes still constitutes a gap in vulvodynia research.

## Theoretical framework on the dyadic level: The Interpersonal Emotion Regulation Model

The theoretical framework used in this dissertation to conceptualize the dyadic dimension of vulvodynia is the Interpersonal Emotion Regulation Model (IERM) proposed by Rosen and Bergeron (2019).

Figure 2. The Interpersonal Emotion Regulation Model



Emotion regulation (ER) refers to the process by which we influence our emotional experiencing and expression (Gross, 1998) and it includes aspects such as emotional awareness, experience, and expression (Lumley et al., 2011). Reviewing the empirical evidence for role of emotion regulation in the broader chronic pain population, Koechlin et al. (2018) demonstrated associations between maladaptive response-focused ER and pain.

ER is, however, not only a within-person process, but rather co-regulation of emotion, or social emotion regulation, is a vital part of intimate relationships (Levenson et al., 2014; Meier et al., 2022; Reeck et al., 2016). Partners in intimate relationships are continuously engaged in an exchange by which their emotional experiences and expressions

shape both their own and their partner's outcomes (Levenson et al., 2014).

The IERM places vulvodynia in a dyadic context and theorizes the influence of couples' co-regulation of pain-related emotions for their outcomes in terms of women's pain and couples' sexual, relationship and psychological distress (Rosen & Bergeron, 2019). Building on the Process Model of Emotion Regulation (Gross, 1998), the IERM includes emotional awareness, experience, and expression (Lumley et al., 2011), and how these factors promote use of adaptive (e.g., reappraisal or acceptance) or maladaptive (e.g., avoidance or suppression) ER strategies. Further, the IERM highlights the significance of both "distal factors", such as social context and sexual communication, and "proximal factors", such as partner responses to pain, for couple's co-regulation of emotion and subsequent outcomes in terms of pain, sexual distress, and sexual function. As such the IERM posits that couple's difficulties regulating negative emotions have a negative effect on couple's functioning and women's pain (Rosen & Bergeron, 2019).

The IERM provides a useful framework for considering the significance and processes of dyadic emotion regulation in vulvodynia. However, much work remains to map out the relationships between the included constructs. In this dissertation the focus of the dyadic dimension is placed on the sexual pain communication aspects of the IERM, including partner responses to pain and sexual communication.

## **Aims**

Vulvodynia is seen to be a multifaceted condition that requires consideration over multiple dimensions, yet research has often applied a narrow, biomedical or intraindividual stance, and stopped short of investigating pain-related experiences and behaviors in their social and interpersonal context. However, in recent years a welcome widening of the scope of vulvodynia research has been seen, and research now also encompasses dyadic processes and their impact on women's pain and psychosexual well-being. Nevertheless, a knowledge gap remains regarding the effects of the wider normative and the dyadic contexts on the pain-related experiences and behaviors of women with

vulvodynia. The overall aim of this dissertation was to address that gap, furthering understanding of women's pain-related behaviors in relation to the dyadic and normative contexts of vulvodynia.

The three studies comprising this dissertation explore these questions on three levels (i.e., the individual, the normative and the dyadic) and correspond to the three specific aims of the dissertation:

- I. **Individual Level.** To explore the relationship between women's pain-related behaviors and their relational cognitions and goals, and perception of their partners' responses to pain.
- II. **Normative Level.** To extend knowledge on the heterosexual normative context of vulvodynia, by exploring the significance of a queer normative context for experience and pain-related behaviors.
- III. **Dyadic Level.** To explore emotional qualities of couples' sexual communication and their associations with pain, self-disclosure and sexual assertiveness.

# Brief description of studies

## Study I

### Background and aim

The coping patterns (i.e., avoidance, endurance, or combinations of the two) of women with PVD are associated with psychosexual outcomes such as sexual function and satisfaction (Engman et al., 2018), however, studies investigating the relational aspects of coping are lacking.

Different coping patterns may, hypothetically, be linked to distinct relational cognitions, perceptions, and goals. Avoidance coping has been tied to pain catastrophizing (Flink et al., 2017), and relational catastrophizing may similarly be linked to endurance coping. The choice of coping strategy may also be influenced by sexual goals (Rosen, Muise, Bergeron, Impett et al., 2015), and perceptions of partners' responses to pain (Bois et al., 2013; Brauer et al., 2014; Desrosiers et al., 2008). The present study thus aimed to explore pain coping behaviors in women with PVD, and potential links to relational cognitions, perceptions, and goals. The research questions were:

- 1) Which sexual pain coping patterns (avoidance/endurance/combined) can be found in women with PVD?
- 2) Do women with different coping patterns differ on:
  - a. Pain and relational catastrophizing?
  - b. Relational sexual goals?
  - c. Perceived partner responses?

### Methods

Data was collected at baseline from women in 60 Swedish and 68 Dutch mixed sex couples included in a randomized controlled trial of a group Cognitive Behavior Therapy (CBT) with partner involvement. Participants were 18-45 years old with PVD > 5 months and pain during at least 80% of intercourse attempts.



Coping behaviors were measured using the CHAMP Sexual Pain Coping Scale (Flink et al., 2015). Pain intensity was measured with a visual analogue scale ranging from 0 (no pain at all) to 10 (worst imaginable pain). Sexual function was measured with the Female Sexual Function Index (Rosen et al., 2000), sexual satisfaction with the Global Measure of Sexual Satisfaction (Lawrence et al., 2020), and sexual distress with the Female Sexual Distress Scale (Derogatis et al., 2002). Pain- and relational catastrophizing were measured using two subscales of the Vaginal Penetration Cognition Questionnaire (Klaassen & ter Kuile, 2009), sexual goals with the Approach and Avoidance Sexual Goals (Rosen, Muise, Bergeron, Impett et al., 2015) respectively. Perceived partner responses were measured with the MPI-SR (Schwartz et al., 2005).

A person-centered approach to data analysis was adopted (Bergman et al., 2003). Cluster analyses of avoidance- and endurance coping was performed in two steps (hierarchical agglomerative analysis and K-means analysis) and clusters were validated on measures of pain intensity, sexual function, satisfaction, and distress in a one-way Multivariate Analysis of Variance (MANOVA). Three further MANOVAs were performed to address the second research question/s.

## **Results**

The cluster analysis yielded a four-cluster solution explaining 68.93% of the variance: Endurance; Combined High; Avoidance; Combined Low. Validation of clusters revealed significant differences in pain, sexual function, satisfaction, and distress, with the avoidance and combined high clusters reporting the greatest difficulties.

The multivariate analysis of pain- and relational catastrophizing, sexual goals, and partner responses, respectively, all showed significant overall differences between clusters. Post hoc-testing revealed that the combined high cluster endorsed significantly more relational catastrophizing and both approach- and avoidance goals, than all other clusters, and reported significantly more negative partner responses compared to the combined low cluster.

## Conclusions

Confirming the hypotheses, the four different coping patterns found in this study of women with clinical PVD were very similar to those previously found in a community sample (Engman et al., 2018). Moreover, each pattern differed significantly on pain and psychosexual functioning.

A combined pattern with relatively high levels of avoidance and endurance is associated with high distress, poor psychosexual outcomes, and high levels of both pain- and relational catastrophizing, as well as approach and avoidance goals. Considering the relational context of this coping pattern, the results from this study indicate that perceived partner hostility may play a role in PVD sufferer's alternation between avoidance and endurance coping. Negative partner responses may be perceived as a risk for rejection, fueling relational catastrophizing and endurance, but they may also be a reason to avoid sex with the partner altogether, thus driving avoidance coping.

Results indicate that the combined high coping pattern needs to be identified and addressed in the treatment of PVD, and that women exhibiting this pattern may benefit from treatment targeting couple interactions.

## Study II

### Background and aim

While evidence suggests that dyspareunia is highly prevalent among women in same-sex relationships (Armstrong & Reissing, 2012; Blair et al., 2015; Breyer et al., 2010; Burri et al., 2012), research has almost exclusively focused on women in heterosexual relationships. While women in heterosexual relationships have described a tendency to continue engaging in painful sex to satisfy their partner and preserve their sense of femininity (Ayling & Ussher, 2008; Kaler, 2006; Marriott & Thompson, 2008), the impact of dyspareunia on queer women's identity and pain-related behaviors is largely unknown.

The present study used queer theory and sexual scripts theory as theoretical frameworks. Queer theory focuses on social positions, sexual

experiences, and practices that challenge the norms of heterosexuality and gender (Sullivan, 2003). Sexual scripts (Simon & Gagnon, 1984, 1986, 2003) can be described as cognitive structures existing at the individual, interpersonal and societal level, guiding sexual behavior towards the interpersonally and culturally expected. While the traditional heterosexual script equates sex with penile-vaginal intercourse (McPhillips et al., 2001; Ussher et al., 2013), queer women have a wider definition of sex (Horowitz & Spicer, 2013), which may produce a different context for the experience of dyspareunia.

The aim of this study was to investigate how queer women experience and deal with dyspareunia.

## **Methods**

Five women currently in queer same-sex relationships and experiencing dyspareunia for >6 months were included after telephone screening of inclusion criteria. Semi-structured, in-depth interviews were conducted twice with every participant, with interviews lasting a total of 2-3 hours per participant. Interviews were transcribed verbatim and analyzed using thematic analysis (Braun & Clarke, 2006).

## **Results**

The participants described that dyspareunia affected their sexual activities, intimate relationships, and important identity constructs. Reported struggles involved feelings of sadness, guilt, frustration, and fear of pain. However, the participants also described several constructive strategies to cope with pain. The three main themes illustrate experiences filtered through, and in part shaped by, queer sexuality and relationships.

The first theme ('I don't really live up to that') addresses pain challenges to queer identity and includes subthemes reflecting how pain makes the sexual relationship imbalanced and undermines queer and feminist identity. The second theme ('We have a lot to fall back on') highlights that queer women might have advantages in sexual communication, partly due to anatomic similarity facilitating the partners' understanding of pain, and partly because experiences of

breaking norms can be beneficial in pain management. The third theme ('It has to be on my terms') illustrates the relationship between pain and sexual desire, highlighting the efforts made by participants to safeguard sexual desire from pain interference.

One participant's perspective differed from the others in that she reported having little to no affiliation with any queer community and reported an experience largely consistent with that described by women in heterosexual relationships.

## **Conclusions**

Queer women experience pain-related challenges that are partly different from those described by women in heterosexual relationships. The findings demonstrated that the experience of identity threat is shaped by sexual scripts and understandings of sexuality. Thus, normativity itself may underlie a perceived discrepancy between the ideal and the actual self in women with dyspareunia.

Queer women with dyspareunia may have specific advantages in pain coping. The findings indicated sexual communication advantages related to the participants' queer backgrounds and communities, providing them with access to alternative discourses around sex and facilitating reflection and sexual communication. Finally, the findings highlight that the experiences and advantages reported by most participants are related to discourse and context rather than to partner gender per se, meaning that it may be possible for a broader group of women with dyspareunia to benefit.

## **Study III**

### **Background and aim**

Couples coping with vulvodynia have been shown to report poorer sexual communication compared to healthy couples (Pazmany et al., 2014; Smith & Pukall, 2014). As sexual communication is associated with pain intensity (Rancourt et al., 2016) it is also a common treatment target in psychological interventions for vulvodynia. There is, however, a lack of empirical studies examining patterns and quality of

vulvodynia couples' sexual communication. One important aspect of communication in intimate relationships is validation, i.e., the communication of acceptance and understanding, which has previously been shown to correspond to better relationship adjustment and satisfaction (Gauvin et al., 2019; Rosen et al., 2016), and lower sexual distress in women with vulvodynia (Bois et al., 2016). The opposite of validation, invalidation, i.e., trivializing, ignoring, or punishing others for their experiences, has not been studied in vulvodynia samples but has been found to correspond to higher pain intensity in other chronic pain samples (Leong et al., 2011).

The aim of this study of vulvodynia couples and healthy controls was to explore sexual communication patterns in terms of observed communication quality (operationalized as validation and invalidation), and self-reported sexual assertiveness, self-disclosure, and pain intensity. Hypotheses were that:

- The pain groups would show less validating and more invalidating communication compared to controls.
- An individual's validating communication would be associated with their partner's higher levels of self-disclosure and sexual assertiveness.
- An individual's invalidating communication would be associated with their partner's lower levels of self-disclosure and sexual assertiveness.

## Methods

The study included two groups of couples: one coping with vulvodynia (pain group,  $n = 25$ ) and one without pain (control group,  $n = 37$ ) and collected both self-report data, and behavioral observation data in the form of couples' video-recorded conversations about their sexual relationship.

Couples in the pain group had to include a woman aged 18-45 with self-identified or formally diagnosed vulvodynia of  $\geq 6$  months duration. Observational data on validation and invalidation was collected through Zoom (Zoom Video Communications Inc., 2020) and the

protocol was developed from previous research in the field using a similar design. The recordings were independently coded by four trained coders for validating and invalidating communication using the Validating and Invalidating Behavior Scale (Fruzzetti, 2001) in which both constructs are assessed separately on a scale from 1-7.

Self-disclosure was measured using the self-disclosure subscale from the adapted version (Manne et al., 2004) of the Rochester Interaction Record (Laurenceau et al., 1998). Sexual assertiveness was measured by the positive and negative sexual messages subscales of the Sexual Communication Self-Efficacy Scale (Quinn-Nilas et al., 2016), in which the participants were asked to rate the difficulty of expressing their wishes to their partners, such as suggesting a new sexual activity or not wanting to have sex. Average pain intensity during sexual penetration during the past six months was measured using a numeric rating scale ranging from 0 (= no pain at all), to 10 (= worst imaginable pain) (Pukall et al., 2017).

Group differences in validation and invalidation were analyzed using independent samples t-tests or Mann-Whitney U tests. The association between women's pain intensity and partner's validation and invalidation was tested in a multiple regression model. Intra- and interpersonal effects of validation and invalidation on self-disclosure and sexual assertiveness, respectively, were assessed using the Actor-Partner Interdependence Model (APIM; Kashy & Kenny, 2000). Multigroup analysis using the Wald chi-square test was conducted to estimate group differences.

## Results

The groups differed significantly on partners' invalidation with partners in the pain group expressing more invalidation than partners in the control group (95% CI, 1.14-2.42;  $t[32.35] = 5.64$ ,  $p < .001$ ). No other significant group differences in validation or invalidation were found.

Women's pain intensity was significantly predicted from partners' validation and invalidation in a regression model ( $F[2, 21] = 6.471$ ,  $p =$

.006, adjusted  $R^2 = .32$ ), with validation proving the only significant predictor ( $p = .013$ ).

Dyadic analyses of validation and sexual assertiveness revealed a positive association in the overall sample between partner's validation and their own sexual assertiveness ( $B = .23$ ,  $p = .043$ ), a pattern that was also found in the pain group ( $B = .33$ ,  $p = .009$ ), where partner's greater validation also predicted women's greater sexual assertiveness ( $B = .35$ ,  $p = .039$ ). The latter path was furthermore identified as differing significantly between groups ( $\chi^2 = 8.24$ ,  $p = .004$ ), with the pain group displaying a stronger association between partner's validation and women's sexual assertiveness.

Dyadic analyses of invalidation and sexual assertiveness showed that partner's invalidation was negatively associated with women's sexual assertiveness in both the pain ( $B = -.53$ ,  $p < .001$ ) and the control ( $B = -.34$ ,  $p = .03$ ) groups, but with a larger effect size ( $R^2 = .28$ ) in the pain group. Furthermore, a significant negative association between women's invalidation and partners' sexual assertiveness was found in the pain group ( $B = -.51$ ,  $p = .01$ ) but not in the control group. This group difference proved significant ( $\chi^2 = 5.72$ ,  $p = .02$ ).

Dyadic analyses of associations between validation and invalidation and self-disclosure revealed a positive association between women's validation and their own self-disclosure in the pain group ( $B = .55$ ,  $p = .001$ ) and a negative association between their invalidation and own self-disclosure ( $B = -.39$ ,  $p = .046$ ).

## Conclusions

The quality of sexual communication differs between couples with and without pain and is furthermore differentially associated with sexual assertiveness.

These findings indicate that the invalidating communication inherent in negative partner responses (Rosen, Bergeron et al., 2014; Rosen, Muise, Bergeron, Delisle et al., 2015), extends beyond pain communication to the broader sexual communication and negatively impacts women's sexual assertiveness.

Partners' validation had a significant positive association with women's lower pain intensity, possibly owing to facilitation of women's and/or couples' pain related emotion regulation (Rosen & Bergeron, 2019). Furthermore, pain group partners' greater validation predicted women's greater sexual assertiveness. As this relationship was significantly stronger in the pain group than the control group, this indicates that women with vulvodynia are more dependent on their partners' validation to assert their own sexual needs, both in terms of refusing unwanted sexual activities and initiating or shaping sexual encounters.

To summarize, this study demonstrated sexual communication patterns specific to couples with vulvodynia and provided a deeper insight into the details of the previously reported poorer communication in couples coping with vulvodynia (Pazmany et al., 2014; Smith & Pukall, 2014). It further establishes a link between communication qualities, and pain intensity and sexual assertiveness, and confirms validation and invalidation as relevant targets for couple interventions.



## Discussion

### Main findings

Returning to the question of why some, but not all women with vulvodynia, continue to engage in painful sex, the overall aim of this dissertation was to further the understanding of women's pain-related behaviors in relation to the dyadic and normative contexts of vulvodynia. The three included studies have different foci and contribute insights into overlapping but distinct aspects of the topic.

Study I investigated the coping patterns of women with clinical PVD. In line with previous research (Engman et al., 2018), results demonstrated four coping patterns (endurance; combined high avoidance/endurance; avoidance; combined low avoidance/endurance) which were differentially associated with psychosexual outcomes and pain catastrophizing. Extending previous research, study I showed that these patterns were differentially associated with relational catastrophizing, sexual goals, and perceived partner responses to pain. Women in the combined high cluster reported the highest level of sexual distress together with high levels of catastrophizing about both pain and relational outcomes, and about perceived negative partner responses to pain. This coping pattern has been associated with adverse psychosexual outcomes over time (Engman et al., 2018), which study I confirms while also suggesting that coping is linked to women's thoughts about and perceptions of their relationships and partners. Thus, women who perceive sexual penetration as essential to their value as a partner and a woman, and who experience frequent negative responses to pain from their partner, also report high levels of distress and engage in both avoidance and endurance coping. This result aligns well with findings in qualitative studies of women's reasons for enduring painful sex (Elmerstig et al., 2008; Marriott & Thompson, 2008). It further confirms previous results indicating that partner responses and relational cognitions predict women's pain related behavior (Brauer et al., 2014). Thus, study I highlights the importance of the dyadic and normative context for women's choice of coping behaviors.

Exploring the significance of normative context further, study II provided a deeper understanding of how dyspareunia is experienced by sexual minority women and highlighted the contextual nature of pain related challenges and strategies. A main finding of study II was that access and adherence to different discourses on sex seem to shape women's experiences of dyspareunia, as well as the distress associated with pain. This finding extends previous research with heterosexual women demonstrating a link between experiences of vulvodynia and the normative context of sexual relationships (Shallcross et al., 2018). Aligned with the assumption that access to competing discourses can further reflection and challenging of norms (Burr, 1995), participants reporting an affiliation with queer communities described relatively little pain-related distress in relation to traditional sexual scripts. Study II further underscored the role of sexual communication in managing pain-related challenges in the dyadic context (Leclerc et al., 2015; Pazmany et al., 2014; Rancourt et al., 2017).

Increasing focus on the dyad, study III applied a dyadic perspective to sexual communication patterns, comparing heterosexual vulvodynia couples to control couples. A main finding was that sexual communication differed between couples with and without vulvodynia. Partners of women with pain were more invalidating compared to partners in the control group. This confirms earlier findings of poorer sexual communication in couples with vulvodynia (Pazmany et al., 2014; Smith & Pukall, 2014). Furthermore, validating communication predicted greater sexual assertiveness in women with pain, while the inverse association was found for invalidation, and both associations were stronger in the pain group compared to the control group. These findings indicate that the emotional qualities of couple's sexual communication, i.e., validating or invalidating climate, can facilitate or hamper the expression of sexual needs and wants in couples coping with vulvodynia more than in couples without pain. The association seen between validation and sexual assertiveness aligns with previous results by McNicoll et al. (2017), highlighting a connection between facilitative partner responses and women's sexual assertiveness. That women with vulvodynia are more dependent than women without pain on their partners' empathy to assert their own sexual needs is understandable considering the normative context which places women

with vulvodynia at a disadvantage in their sexual relationships (Shallcross et al., 2018). Finally, study III demonstrated a promising association between partners' greater validation and women's lower pain intensity. This finding is at odds with previous results showing no similar associations. Previous studies have, however, investigated validation in other chronic pain populations (Edlund et al., 2015; Leong et al., 2011; Linton et al., 2012), and the one study of the related concept of empathy in a vulvodynia population did not focus specifically on sexual communication (Rosen et al., 2016).

## **Theoretical discussion**

Understanding why many women with vulvodynia continually engage in painful sex, and how to facilitate alternative coping strategies, requires a multilevel perspective. A multilevel perspective needs to consider intraindividual cognitions, emotions, and previous experiences, as well as dyadic factors such as sexual communication, emotion co-regulation, and partners' responses, and the normative context. While many of these factors have been studied in women and couples coping with vulvodynia, to date, most psychological models are concerned with either individual (Engman, 2021) or dyadic perspectives (Rosen & Bergeron, 2019), and the interplay between factors are rarely modelled or theoretically conceptualized in detail.

The FAEM (Figure 1) describes paths from pain to avoidance, endurance, or adaptive coping, with focus on the individual in pain, her emotional and cognitive reactions, and how maladaptive coping reinforces the pain (Engman, 2021). The FAEM is well-supported by empirical findings substantiating the link between catastrophizing, avoidance, and pain, in vulvodynia (Engman et al., 2018; Flink et al., 2015) as well as in other persistent pain conditions (Vlaeyen & Linton, 2012). The two endurance cycles in the FAEM are, however, less well researched, as is the role of the interpersonal factors proposed to influence all steps of the model, including the choice between avoidance/endurance and more adaptive coping.

The IERM (Figure 2) on the other hand, puts dyadic processes front and center (Rosen & Bergeron, 2019). The IERM brings together several factors (e.g., catastrophizing, sexual communication, and partner

responses to pain) that have been shown to influence psychosexual outcomes in previous empirical studies and organizes them in an emotion regulation framework. It thus proposes couples' emotion regulation as a central process for pain, sexual and relational outcomes. The model is, however, general, and does not specify temporal relationships between the included factors, or how they play into women's specific coping behaviors. While the IERM acknowledges the influence of the social context such as stigma or cultural ideals about submissiveness, neither the IERM nor the FAEM outline or conceptualize the influence of normative context on women's and partners' pain related behaviors.

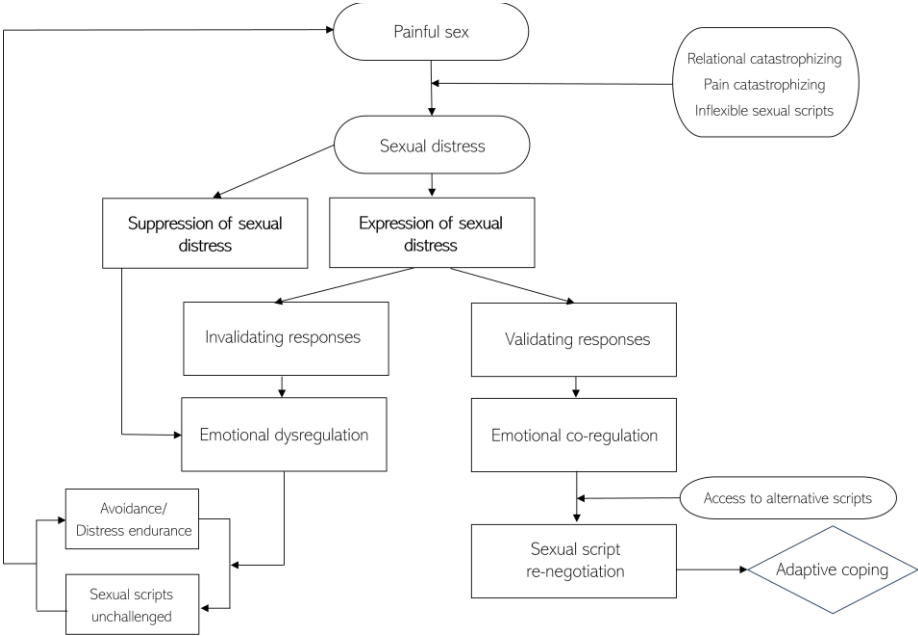
As evidenced by accounts of distress in relation to the normative context of heterosexual relationships (Ayling & Ussher, 2008; Hendrickx et al., 2019; Marriott & Thompson, 2008; Myrtveit-Stensrud et al., 2023), couples coping with vulvodynia need to address the fact that pain can obstruct adherence to predefined sexual scripts. Consequently, broadening of the sexual repertoire as a means of coping with pain interference is a common goal in psychological treatments of vulvodynia. However, neither couples' sexual repertoire, nor the process of broadening it, has yet been incorporated into models of vulvodynia.

### **The Interpersonal Pain Coping Model of Vulvodynia**

Drawing on the theoretical frameworks presented in the introductory chapter, the findings of this dissertation, and related previous research, I suggest the Interpersonal Pain Coping Model of Vulvodynia (IPCM; Figure 3) to theoretically integrate models of intraindividual, dyadic, and normative factors into the understanding of women's pain coping. The model hypothesizes two paths from women's expression of sexual distress to different coping behaviors and suggests that a re-negotiation of couples' sexual scripts is an essential and integrated part of adaptive coping with vulvodynia in a sexual context. The IPCM aims to theorize how catastrophizing, sexual scripts, partners' behaviors, and emotion co-regulation interact to inform women's choice of pain coping behaviors. Importantly, pain does not prompt sexual distress for all women (Hendrickx et al., 2019;

Stephenson & Meston, 2010). Thus, the scope of the proposed theoretical model is restricted to women in couples where the woman’s pain does prompt sexual distress. While the model incorporates factors at the dyadic and normative level, the individual woman with vulvodynia is at the center of the model. Consequently, it is not a dyadic model, and it does not incorporate the cognitions, emotions, or attitudes of partners.

Figure 3. The Interpersonal Pain Coping of Vulvodynia



**Sexual Scripts and Re-Negotiation.** As described in the FAEM (Figure 1; Engman, 2021) painful sex can elicit distress brought on by pain- or “other” catastrophizing, such as the relational catastrophizing evident in study I, and described in several previous qualitative studies as relating to traditional sexual scripts or prevailing discourse on heterosexual relationships (Ayling & Ussher, 2008; Elmerstig et al., 2008; Hinchcliff et al., 2012; Marriott & Thompson, 2008; Myrvtveit-Stensrud et al., 2023). Supporting the link between relational

catastrophizing and distress, study I revealed that those reporting the highest levels of relational catastrophizing, (i.e., the women combining avoidance and endurance coping), also reported significantly greater sexual distress compared to women in the other clusters. These women's pain catastrophizing was however comparable to that of women in the other clusters, indicating that their high levels of relational catastrophizing does not reflect a general propensity for catastrophizing, but rather a perception of their sexual relationship.

A fundamental assumption of the IPCM is that prevailing discourses on heterosexual relationships, such as the coital imperative (Jackson, 1984; McPhillips et al., 2001) and the male sexual drive (Nicolson & Burr, 2003), represented in the traditional heterosexual script, are intertwined with the individual and dyadic understandings and expressions of sex. On the dyadic level, these scripts can translate into a sexual repertoire heavily dependent on penile-vaginal intercourse as the standard and defining sexual activity (Kaler, 2006; Myrtveit-Stensrud et al., 2023), and by extension an essential building block of the relationship (Myrtveit-Stensrud et al., 2023). In parallel, the individual sexual scripts of women with vulvodynia may include obligated responsiveness to their male partners' sexual request, and high value placed on intercourse as a necessity for preserving both their own feminine identity, and the relationship (Ayling & Ussher, 2008; Elmerstig et al., 2013; Marriott & Thompson, 2008). In the face of vulvodynia, these sexual scripts come into conflict with the woman's need for pleasurable ways to have sex without painful penetration, making a re-negotiation within the couple pertinent for adaptive coping. While there is little research on adaptive coping behaviors in couples with vulvodynia, they may include behaviors such as explicitly agreeing on who can take what initiatives before commencing sexual activities, which non-painful sexual activities to explore, an increased reliance on verbal over non-verbal cues, or how to signal pain in an easy and non-disruptive way.

Theorizing beyond the empirical findings in this dissertation, the model proposed here hypothesizes that validating communication and effective co-regulation of emotion within the couple can set the stage for re-negotiation of dyadic and individual sexual scripts. While

there is, to my knowledge, currently no research on transformation of sexual scripts in couples coping with vulvodynia, recent research in couples without pain indicates that such changes require exposure to alternative sexual scripts, e.g., through sex education or sexual minority communities (Rittenhour & Sauder, 2023). Access to a multitude of discourses have been suggested to foster reflection and challenging of what is perceived as normative (Burr, 1995; Sörensdotter, 2012). This is exemplified by the findings in study II, where participants described experiences of alternative discourses as beneficial in their coping with dyspareunia.

Importantly, my hypothesis is not that a script re-negotiation is a natural consequence of effective communication and emotion regulation or contact with alternative scripts. Rather, these factors create a supporting context for negotiation in the couple, in contrast to a relational climate characterized by invalidation and dysregulated emotion.

**Partners' Responses to Distress.** Women's expressions of distress, an adaptive emotion regulation strategy according to the IERM (Rosen & Bergeron, 2019), can elicit different responses from their partners. In the IPCM validation and facilitative partner responses are considered as one set of reactions, facilitating effective emotion regulation, while invalidation, solicitous and negative partner responses are considered a separate set of reactions driving further emotional dysregulation and distress in women with vulvodynia. An important caveat is that the ways in which women with vulvodynia perceive their partners' responses are likely impacted by additional factors not modelled here, such as mood and previous relational experiences (Bosisio et al., 2020).

**Invalidating Responses and Emotional Dysregulation.** Previous research has demonstrated that when women's expressions of pain and distress are met with exaggerated caretaking, frustration, or hostility, this is associated with higher pain intensity and anxiety (Desrosiers et al., 2008; Rosen, Bergeron et al., 2015; Rosen et al., 2012), as well as lower sexual function and satisfaction (Rosen, Bergeron et al., 2014; Rosen et al., 2010). In line with the IERM (Rosen & Bergeron, 2019) partners' negative reactions can be considered to simultaneously

create further emotional distress for the woman in pain and block effective co-regulation of emotion. Thus, the sexual communication required to manage relational catastrophizing and re-negotiate scripts is obstructed. As partners' responses are important to the transformation of sexual scripts (Masters et al., 2013), this process could leave inflexible sexual scripts unchallenged. Moreover, in the case of partner hostility, inflexible sexual scripts may even be reinforced.

The findings from study III support the link between partners' responses and open sexual communication by demonstrating an association between partners' invalidation and women's greater self-reported difficulties of expressing their sexual needs, a key component in finding adaptive ways of coping with pain. In support of the link between open communication and women's pain-related behaviors, participants in study II highlighted the crucial role of communication in their adaptive coping behaviors, such as avoiding pain while still engaging in sex and agreeing with their partners on how to communicate about pain to preserve their sexual desire despite pain.

In the IPCM I propose that lack of adaptive emotional co-regulation and exploration of alternative sexual scripts, can drive the avoidance and/or distress endurance coping described in the FAEM (Engman, 2021). I.e., when women with vulvodynia are invalidated in their experience of distress, this prevents open communication about how to remodel the sexual relationship to meet their needs. In turn, this leaves them with the choice to avoid penetrative sex altogether or continue to engage in painful penetration. Study I showed that a pattern of combined avoidance- and endurance coping is associated with high levels of sexual distress and relational- and pain catastrophizing. The same group also reported the highest level of perceived negative partner responses. This pattern can be indicative of emotional dysregulation and a path consistent with the invalidation arm of the proposed model. While there are substantial differences between avoidance and distress endurance, both study I and other previous research (Engman et al., 2018) have demonstrated that combined patterns are common. It is further unknown if avoidance and endurance have different or similar relationships to ER skills.



**Validating Responses and Emotional Co-Regulation.** In the other arm of the IPCM, validating and facilitative partner responses are proposed to further couples' joint ER. Validating communication has been theorized to facilitate the ER of the recipient (Fruzzetti & Iversen, 2006; Linton et al., 2012) and has been shown to have beneficial effects in other chronic pain populations (Edlund et al., 2015; Leong et al., 2011; Linton et al., 2012). Applied to women with vulvodynia, perceived empathy and responsiveness by the partner have not only been associated with lower sexual distress (Bois et al., 2016) but also with greater sexual function and satisfaction (Bergeron et al., 2021).

The association between partners' validation/invalidation and women's sexual assertiveness, demonstrated in study III, could indicate support for the link between validation/invalidation and emotion regulation/dysregulation, as well as the path from emotion regulation/dysregulation to the re-negotiation of sexual scripts. Strengthening this interpretation, McNicoll et al. (2017) found that sexual assertiveness mediates the association between facilitative partner responses and women's sexual function and satisfaction. Furthermore, study III demonstrated an association between partners' greater validation and women's lower pain intensity. Understanding this finding will require considerable further research, however, one hypothesis is that the association is attributable to better co-regulation of emotion and subsequent adaptive coping.

Relating back to the sexual distress at the heart of the IPCM, a validating response to expressions of sexual distress may lessen the threat value of pain, and counteract the associated relational catastrophizing proposed to drive distress endurance (Engman, 2021) and evident in study I.

**The Case of Non-Disclosure.** Importantly, some women with vulvodynia do not disclose their distress, or even the pain itself, to their partners (Carter et al., 2019; Merwin et al., 2017; Ruan et al., 2020). In the IERM (Rosen & Bergeron, 2019), this suppression, i.e., masking or inhibiting, of distressing emotion is modelled in as a maladaptive ER strategy as it may disrupt communication (Butler et al., 2003) and exacerbate pain and distress (Dubé et al., 2019; Gross, 2002; Tutino et al., 2017), leaving the woman dysregulated and vulnerable to

continued catastrophizing about the pain and its' relational consequences. While other individual ER strategies may be employed at this stage, the failure to express pain-related emotions could still undermine the possibilities for co-regulation of emotion which may be a more potent ER strategy considering the relational nature of the problem. This scenario of suppression is included in the IPCM as an alternative route to that of expressing distress and is assumed to result in continued emotional dysregulation and the subsequent avoidance-/endurance behaviors and unchallenged scripts.

## **Methodological discussion and limitations**

One of the overall strengths of this dissertation is that all three studies have demonstrated cogent results over different samples and using different methods. This strengthens the internal validity of the findings. The included studies do have some limitations which restrict the strength and/or generalizability/transferability of the conclusions drawn from them. Firstly, all studies employed a cross-sectional design, which restricts the possibilities of making inferences about causality, temporal patterns, or processes of development. In the case of study III this means that, while theoretically supported, the direction of the associations between communication quality and sexual assertiveness is unknown. Inferences, e.g., that validation facilitates sexual assertiveness, are thus theoretical and the need for testing in longitudinal or experimental designs remains. Likewise, these restrictions mean that the directionality of relationships between coping pattern and perceived partner responses observed in study I is unclear. Regarding study II, the aim – to explore the experiences of a particular group of women – differed qualitatively from the other two studies. While the experiences explored may certainly be subject to cause and effect-relationships, such associations were not within the scope of the study.

Secondly, the samples in all studies were self-selected, which constitutes a risk of bias. For example, study III required participants to engage in videotaped discussions about their sexual relationship. Thus, there is a considerable risk that the included couples were relatively comfortable with discussing a topic which is otherwise known to be

sensitive and distressing (Rehman et al., 2019). The design, however, contributed rich data on observable communication behaviors, meaning the study provides an important addition to studies based on self-reports despite risk of bias.

Thirdly, all studies rely to a varying extent on participants' self-reports, which are known to be sensitive to recall bias and social desirability (Kazdin, 2017). Similarly, this can also be an issue with participants' reports of their partners behaviors or characteristics (Vésteinsdóttir et al., 2019).

Fourthly, there are limitations related to some of the measures used in study I and III. The FSFI, used in both studies, has received justified criticism for allowing the response option "no sexual activity" on several of the included items (Meyer-Bahlburg & Dolezal, 2007). This makes it difficult to discern if low scores are representative of the respondent's low sexual frequency, or their sexual function when having sex. Nevertheless, the FSFI is a well-studied measure recommended for use in this field (Rosen et al., 2020a). The CSPCS, measuring avoidance- and endurance coping with vulvodynia, is a new measure in need of more research to ensure stable and good psychometric properties, it is however the only available measure capturing these coping strategies in relation to painful sex (Engman, 2021).

Fifthly, all studies rest on data gathered mainly from white, cisgender women from a Swedish or a similar European culture. This is an important caveat in the transference of results and conclusions to other groups of women (Henrich et al., 2016), as there are demonstrated cultural differences in both prevalence (Nguyen, Reese et al., 2015) and experience (Dogan et al., 2023) of vulvodynia. Furthermore, studies I and III almost exclusively included women in mixed-sex relationships. While that is the group most frequently encountered in clinical settings, it is nonetheless a significant shortcoming which may limit the relevance of findings to sexual minority women and couples (Blair et al., 2015; Lick et al., 2013). Study II, however, contributed an important addition to the field in focusing on the understudied group women in same-sex relationships.

## Ethical considerations

All included studies received ethical approval by the Ethical Review Authority or its' predecessor, the Regional Ethics Board in Uppsala (reference numbers in study order: Dnr 2017/298/1; Dnr 2020-05920; Dnr 2017/298) and all participants in all studies received written and oral information before providing their written informed consent. In addition to the formal ethical approval, there are ethical considerations pertinent throughout the whole research process. One such issue integral to the field is that questions about phenomena which are generally perceived as private, such as genital pain, intimate relationships, or sexual activities, can be experienced as intrusive or distressing. This issue was managed in two ways throughout all three studies: the voluntary nature of the participation was repeatedly emphasized, and all participants (women and partners alike) were provided with contact information to a clinical psychologist independent from the project, whom they could consult in case of distress brought on by their participation. In study II, this issue was also factored into the decision to allow participants to choose the format for the interviews, i.e., face-to-face or by telephone. In addition, methods, and instruments for data collection were chosen based on their safe and acceptable use in previous research.

A second ethical consideration regarding study I and III is the unequal position of participants in relation to the overall goal of the research. Though sometimes difficult to recruit, women with vulvodynia who do participate in research often express a great willingness to offer their time and insight to research. Often with reference to both their search for interventions that work for them, and to their dedication to helping others with the same problem. While the impact of vulvodynia on the overall sexual relationship and of partners of women in pain (Nylanderlundqvist & Bergdahl, 2003; Smith & Pukall, 2014) may imply that this stance also extends to many partners, this is unknown. Although this dissertation utilizes equally sensitive data from both women and their partners, the focus of the knowledge produced is the women's experiences and needs, rather than the partners. Furthermore, it cannot be ruled out that the desire to participate in the included studies differed between members of

the couples, or that one member experienced pressure from the other to take part in the study. To prevent this and safeguard the personal integrity of each individual, all participants were individually screened, and signed consent forms and completed questionnaires individually.

## **Clinical implications**

There are several important implications for clinical assessment and treatment development. First, all three studies underscore the importance for partnered women with vulvodynia of including the partner, or factors relating to the partner, in both assessment and treatment. Study II demonstrated the significance of open sexual communication for successfully reducing pain interference to the sexual relationship. Study III further clarified this by demonstrating an association between validating sexual communication and women's greater sexual assertiveness and lower pain intensity. This highlights the need to assess couples' sexual communication early in treatment, and to offer treatment interventions to facilitate and develop communication if needed. Specifically, study III elucidates possible benefits of enhancing validation in couples coping with vulvodynia, a skill that has previously been shown to develop following training (Linton et al., 2017). Moreover, the results of study III emphasize the need for further specification and development of treatment interventions targeting couples' sexual communication, and that these interventions should address not only content or frequency, but also emotional qualities of the communication. The findings of study I, linking women's pain coping behaviors to relational catastrophizing and perceived partner responses, indicate an association between women's perceptions of their partners' attitudes and their coping behaviors. This highlights the need for explicitly addressing partners' behaviors in the treatment of this highly distressed group.

Second, Study I and II variously indicate the need to attend to the sexual scripts of couples affected by vulvodynia. The participants in study II disclosed how attitudes and expectations around sex impacted them in their coping with vulvodynia, indicating that access to, and experience with discourses challenging the traditional heterosexual script,

had been beneficial in their pain coping. Relatedly, the results in study I highlighted the relationship between relational catastrophizing and rigid alternation between avoidance and distress endurance. This indicates that women who are highly fearful of disappointing their partner by the lack of intercourse or not being “good enough” women (i.e., endorse the traditional heterosexual script), are also at high risk for engaging in an unhelpful coping pattern. Taken together this implies that it is important to explicitly address couples’ beliefs and attitudes about sex in assessment and offer support in challenging unhelpful scripts in treatment.

## **Conclusions**

According to the results from the studies included in this dissertation:

- The experience of vulvodynia is context dependent and influenced by sexual scripts as well as interactions in the couple.
- There are indications that queer women’s experiences of vulvodynia may differ from that previously described by women in heterosexual relationships and that they are shaped by the normative context and previous experiences.
- Behavioral observation indicates that partners of women with vulvodynia are more invalidating in their sexual communication than partners of women without pain, which is further associated with women’s lower sexual assertiveness.
- Validating sexual communication is implicated in greater sexual assertiveness and lower pain intensity of women with vulvodynia.
- Women’s pain coping behaviors appear in distinct patterns differentially associated with psychosexual outcomes, sexual goals, relational and pain catastrophizing, and perceived partner responses.
- Women using a combined pattern of avoidance and endurance report the overall most negative psychosexual functioning.
- A combined high coping pattern is associated with relatively high levels of relational catastrophizing and perceived negative partner responses.

Finally, drawing on previous research and incorporating the finding from the studies in this dissertation, a new theoretical model was proposed to aid understanding of the role of interpersonal interactions in women's pain coping behaviors: The Interpersonal Pain Coping Model of Vulvodynia. The model can be used to form testable hypotheses about dyadic communication, emotion regulation, and renegotiation of sexual scripts in relation to women's coping behaviors.

## **Future directions**

This dissertation has aligned with efforts seen over the past decade to incorporate contextual factors, including dyadic mechanisms, into vulvodynia research. This body of research (i.e., Bergeron et al., 2021; Carter et al., 2019; Davis et al., 2015; McNicoll et al., 2017; Rancourt et al., 2022; Rosen, Rancourt, et al., 2014; Rosen & Bergeron, 2019; Smith & Pukall, 2014) has repeatedly demonstrated associations between partner factors and dyadic interactions on the one hand, and women's pain and psychosexual outcomes on the other. However, some challenges remain. While the interpersonal context is studied increasingly often, it is rarely included in theoretical models that can be tested. Thus, there is a need for guiding theoretical models describing how interpersonal factors affect outcomes of women and couples coping with vulvodynia.

The hypothetical Interpersonal Pain Coping Model of Vulvodynia suggested above offers a starting point for careful testing of the relationships between the included variables in future research. While the model clearly has several limitations, the links between factors such as validation/invalidation and emotion regulation/dysregulation can be tested both longitudinally (i.e., in daily diary studies or prospective designs) and experimentally. Another gap in the current knowledge is how women's coping behavior relates to their individual emotion regulation skills, as well as to the couple's co-regulation of emotion. This gap could be addressed using the model proposed in prospective, and dyadic cross-sectional studies.

The influence of discourses around sex and sexual scripts has been well-described in several qualitative studies of women with vulvodynia (Ayling & Ussher, 2008; Elmerstig et al., 2008; Hinchcliff et al.,

2012; Kaler, 2006; Marriott & Thompson, 2008; Shallcross et al., 2018; Sutherland, 2012), and some with couples (Myrtveit-Stensrud et al., 2023). It has, however, rarely been conceptualized in relation to the standard psychological constructs used to describe individual responses to, or outcomes of, vulvodynia. Future research needs to address this gap, by modelling and testing the influence of normative factors as they affect couples and individuals of all sexual orientations, dealing with vulvodynia. Related to this, the process of re-negotiating sexual scripts or broadening the sexual repertoire within couples with vulvodynia remains to be investigated and future research should explore this theoretically as well as in relation to treatment interventions.

A significant shortcoming of the current research on vulvodynia is the heavy reliance on cross-sectional studies. This restricts the possibility of thoroughly investigating dyadic working mechanisms and drawing conclusions about potential causal links, as well as how interactions develop over time. Two such links are those between partner's responses to pain and distress, and women's psychosexual outcomes on the one hand, and coping behaviors on the other. Returning to the question about why women continually endure painful sex, elucidating answers beyond those already reported in qualitative studies (Carter et al., 2019; Elmerstig et al., 2013; Marriott & Thompson, 2008) would necessitate studies designed to accommodate the interplay between women's coping strategies, partner's behavior and dyadic communication, and the temporal connections between them.

Finally, the studies included in this dissertation each highlight the need for future research aimed at informing treatment. For example, a current gap in knowledge concerns coping. While unhelpful coping strategies, e.g., avoidance or endurance, are relatively well defined, what constitutes adaptive coping and how adaptive coping can be measured and supported is less well studied. Another gap concerns treatment interventions to support the development of sexual communication skills and facilitate validating sexual communication in couples coping with vulvodynia. Finally, the character of women's relational catastrophizing is largely unknown, and the concept remains underdefined. Future research should investigate whether these



cognitions relate primarily to the interpersonal climate, or if they mirror the pattern of pain catastrophizing and could thus be treated similarly.

## References

- Aerts, L., Bergeron, S., Pukall, C. F., & Khalifé, S. (2016). Provoked vestibulodynia: Does pain intensity correlate with sexual dysfunction and dissatisfaction? *The Journal of Sexual Medicine*, 13(6), 955–962. <https://doi.org/10.1016/j.jsxm.2016.03.368>
- American Psychiatric Association. (1980). *Diagnostic and Statistical Manual of Mental Disorders, DSM-III* (3rd ed.). American Psychiatric Association.
- American Psychiatric Association. (2000). *Diagnostic and Statistical Manual of Mental Disorders, DSM-IV-TR* (4th ed. text revision). American Psychiatric Association.
- American Psychiatric Association. (2013). *Diagnostic and Statistical Manual of Mental Disorders, DSM-5* (5. ed.). American Psychiatric Association.
- Anderson, A. B., Rosen, N. O., Price, L., & Bergeron, S. (2016). Associations between penetration cognitions, genital pain, and sexual well-being in women with provoked vestibulodynia. *The Journal of Sexual Medicine*, 13(3), 444–452. <https://doi.org/10.1016/j.jsxm.2015.12.024>
- Armstrong, H. L., & Reissing, E. D. (2012). Chronic vulvo-vaginal pain in lesbian, bisexual and other sexual minority women. *The Journal of Sexual Medicine*, 9(Supplement 3), 166–167. <https://doi.org/10.1111/j.1743-6109.2012.02758.x>
- Arnold, L. D., Bachmann, G. A., Rosen, R., Kelly, S., & Rhoads, G. G. (2006). Vulvodynia: Characteristics and associations with comorbidities and quality of life. *Obstetrics & Gynecology*, 107(3), 617. <https://doi.org/10.1097/01.AOG.0000199951.26822.27>
- Awada, N., Bergeron, S., Steben, M., Hainault, V., & McDuff, P. (2014). To say or not to say: Dyadic ambivalence over emotional expression and its associations with pain, sexuality, and distress in couples coping with provoked vestibulodynia. *The Journal of Sexual Medicine*, 11(5), 1271–1282. <https://doi.org/10.1111/jsm.12463>

- Ayling, K., & Ussher, J. M. (2008). "If sex hurts, am I still a woman?" The subjective experience of vulvodynia in hetero-sexual women. *Archives of Sexual Behavior*, 37(2), 294–304. <https://doi.org/10.1007/s10508-007-9204-1>
- Basson, R. (2012). The recurrent pain and sexual sequelae of provoked vestibulodynia: A perpetuating cycle. *The Journal of Sexual Medicine*, 9(8), 2077–2092. <https://doi.org/10.1111/j.1743-6109.2012.02803.x>
- Bergeron, S., Corsini-Munt, S., Aerts, L., Rancourt, K., & Rosen, N. O. (2015). Female sexual pain disorders: A review of the literature on etiology and treatment. *Current Sexual Health Reports*, 7(3), 159–169. <https://doi.org/10.1007/s11930-015-0053-y>
- Bergeron, S., Khalifé, S., Dupuis, M-J., & McDuff, P. (2016). A randomized clinical trial comparing group cognitive-behavioral therapy and a topical steroid for women with dyspareunia. *Journal of Consulting and Clinical Psychology*, 84(3), 259–268. <https://doi.org/10.1037/ccp0000072>
- Bergeron, S., Pâquet, M., Steben, M., & Rosen, N. O. (2021). Perceived partner responsiveness is associated with sexual well-being in couples with genito-pelvic pain. *Journal of Family Psychology*, 35(5), 628–638. <https://doi.org/10.1037/fam0000829>
- Bergeron, S., Rosen, N. O., & Morin, M. (2011). Genital pain in women: Beyond interference with intercourse. *Pain*, 152(6), 1223–1225. <https://doi.org/10.1016/j.pain.2011.01.035>
- Bergman, L. R., Magnusson, D., & El-Khoury, B., M. (2003). *Studying Individual Development in an Interindividual Context: A Person-Oriented Approach*. Lawrence Erlbaum Associates, Inc.
- Binik, Y. M. (2010). The DSM diagnostic criteria for dyspareunia. *Archives of Sexual Behavior*, 39(2), 292–303. <https://doi.org/10.1007/s10508-009-9563-x>
- Blair, K. L., Pukall, C. F., Smith, K. B., & Cappell, J. (2015). Differential associations of communication and love in heterosexual, lesbian, and bisexual women's perceptions and experiences of

- chronic vulvar and pelvic pain. *Journal of Sex & Marital Therapy*, 41(5), 498–524. <https://doi.org/10.1080/0092623X.2014.931315>
- Bois, K., Bergeron, S., Rosen, N., Mayrand, M.-H., Brassard, A., & Sadikaj, G. (2016). Intimacy, sexual satisfaction, and sexual distress in vulvodynia couples: An observational study. *Health Psychology*, 35(6), 531–540. <https://doi.org/10.1037/hea0000289>
- Bois, K., Bergeron, S., Rosen, N. O., McDuff, P., & Grégoire, C. (2013). Sexual and relationship intimacy among women with provoked vestibulodynia and their partners: associations with sexual satisfaction, sexual function, and pain self-efficacy. *The Journal of Sexual Medicine*, 10(8), 2024–2035. <https://doi.org/10.1111/jsm.12210>
- Bornstein, J., Goldstein, A. T., Stockdale, C. K., Bergeron, S., Pukall, C., Zolnoun, D., Coady, D., & International Society for the Study of Vulvovaginal Disease (ISSVD). (2016). 2015 ISSVD, ISSWSH, and IPPS consensus terminology and classification of persistent vulvar pain and vulvodynia. *The Journal of Sexual Medicine*, 13(4), 607–612. <https://doi.org/10.1016/j.jsxm.2016.02.167>
- Bosisio, M., Pâquet, M., Bois, K., Rosen, N. O., & Bergeron, S. (2020). Are depressive symptoms and attachment styles associated with observed and perceived partner responsiveness in couples coping with genito-pelvic pain? *The Journal of Sex Research*, 57(4), 534–544. <https://doi.org/10.1080/00224499.2019.1610691>
- Both, S., Brauer, M., Weijenborg, P., & Laan, E. (2017). Effects of aversive classical conditioning on sexual response in women with dyspareunia and sexually functional controls. *The Journal of Sexual Medicine*, 14(5), 687–701. <https://doi.org/10.1016/j.jsxm.2017.03.244>
- Braksmajer, A., Kalish, R., & Katz, J. (2022). The scarlet V: How women with dyspareunia negotiate postfeminist discourses of sexual agency. *Culture, Health & Sexuality*, 1–16. <https://doi.org/10.1080/13691058.2022.2083238>
- Brauer, M., Lakeman, M., van Lunsen, R., & Laan, E. (2014). Predictors of task-persistent and fear-avoiding behaviors in women with

- sexual pain disorders. *The Journal of Sexual Medicine*, 11(12), 3051–3063. <https://doi.org/10.1111/jsm.12697>
- Brauer, M., ter Kuile, M. M., Laan, E., & Trimbos, B. (2008). Cognitive-Affective correlates and predictors of superficial dyspareunia. *Journal of Sex & Marital Therapy*, 35(1), 1–24. <https://doi.org/10.1080/00926230802525604>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Breyer, B. N., Smith, J. F., Eisenberg, M. L., Ando, K. A., Rowen, T. S., & Shindel, A. W. (2010). The impact of sexual orientation on sexuality and sexual practices in North American medical students. *The Journal of Sexual Medicine*, 7(7), 2391–2400. <https://doi.org/10.1111/j.1743-6109.2010.01794.x>
- Brotto, L. A., Bergeron, S., Zdaniuk, B., Driscoll, M., Grabovac, A., Sadownik, L. A., Smith, K. B., & Basson, R. (2019). A comparison of mindfulness-based cognitive therapy vs cognitive behavioral therapy for the treatment of provoked vestibulodynia in a hospital clinic setting. *The Journal of Sexual Medicine*, 16(6), 909–923. <https://doi.org/10.1016/j.jsxm.2019.04.002>
- Buchan, A., Munday, P., Ravenhill, G., Wiggs, A., & Brooks, F. (2007). A qualitative study of women with vulvodynia: I. The journey into treatment. *The Journal of Reproductive Medicine*, 52(1), 15–18.
- Burr, V. (1995). *An Introduction to Social Constructionism*. Taylor & Frances/Routledge.
- Burr, V. (1998). Overview: Realism, relativism, social constructionism and discourse. In I. Parker (Ed.), *Social Constructionism, Discourse and Realism* (pp. 13–25).
- Burri, A., Rahman, Q., Santtila, P., Jern, P., Spector, T., & Sandnabba, K. (2012). The relationship between same-sex sexual experience, sexual distress, and female sexual dysfunction. *The Journal of Sexual Medicine*, 9(1), 198–206. <https://doi.org/10.1111/j.1743-6109.2011.02538.x>

- Butler, E. A., Egloff, B., Wilhelm, F. H., Smith, N. C., Erickson, E. A., & Gross, J. J. (2003). The social consequences of expressive suppression. *Emotion*, 3(1), 48–67. <https://doi.org/10.1037/1528-3542.3.1.48>
- Butler, J. (2004). *Undoing Gender*. Taylor & Francis Group.
- Carter, A., Ford, J. V., Luetke, M., Fu, T. (Jane), Townes, A., Hensel, D. J., Dodge, B., & Herbenick, D. (2019). “Fulfilling his needs, not mine”: Reasons for not talking about painful sex and associations with lack of pleasure in a nationally representative sample of women in the United States. *The Journal of Sexual Medicine*, 16(12), 1953–1965. <https://doi.org/10.1016/j.jsxm.2019.08.016>
- Cetera, G. E., Merli, C. E. M., Facchin, F., Barbara, G., Caia, C., Libutti, G., & Boero, V. (2023). “Time is on my side”. Disease trajectory of vulvodynia: A systematic review with a narrative synthesis. *Archives of Gynecology and Obstetrics*. <https://doi.org/10.1007/s00404-023-06984-z>
- Cherner, R. A., & Reissing, E. D. (2013). A comparative study of sexual function, behavior, and cognitions of women with lifelong vaginismus. *Archives of Sexual Behavior*, 42(8), 1605–1614. <https://doi.org/10.1007/s10508-013-0111-3>
- Chisari, C., Monajemi, M. B., Scott, W., Moss-Morris, R., & McCracken, L. M. (2021). Psychosocial factors associated with pain and sexual function in women with Vulvodynia: A systematic review. *European Journal of Pain*, 25(1), 39–50. <https://doi.org/10.1002/ejp.1668>
- Corsini-Munt, S., Bergeron, S., Rosen, N. O., Mayrand, M., & Delisle, I. (2014). Feasibility and preliminary effectiveness of a novel cognitive-behavioral couple therapy for provoked vestibulodynia: A pilot study. *The Journal of Sexual Medicine*, 11(10), 2515–2527. <https://doi.org/10.1111/jsm.12646>
- Cromby, J., & Nightingale, D. J. (1999). What’s wrong with social constructionism? In J. Cromby & D. J. Nightingale (Eds.), *Social Constructionist Psychology: A Critical Analysis of Theory and Practice* (pp. 1–21). Open University Press.

- Danielsson, I., Sjöberg, I., Stenlund, H., & Wikman, M. (2003). Prevalence and incidence of prolonged and severe dyspareunia in women: Results from a population study. *Scandinavian Journal of Public Health*, 31(2), 113–118.  
<https://doi.org/10.1080/14034940210134040>
- Davis, S. N., Bergeron, S., Sadikaj, G., Corsini-Munt, S., & Steben, M. (2015). Partner behavioral responses to pain mediate the relationship between partner pain cognitions and pain outcomes in women with provoked vestibulodynia. *The Journal of Pain*, 16(6), 549–557. <https://doi.org/10.1016/j.jpain.2015.03.002>
- Davis, S. N. P., Bergeron, S., Bois, K., Sadikaj, G., Binik, Y. M., & Steben, M. (2015). A prospective 2-year examination of cognitive and behavioral correlates of provoked vestibulodynia outcomes. *Clinical Journal of Pain*, 31(4), 333–341.  
<https://doi.org/10.1097/AJP.0000000000000128>
- De Andres, J., Sanchis-Lopez, N., Asensio-Samper, J. M., Fabregat-Cid, G., Villanueva-Perez, V. L., Monsalve Dolz, V., & Minguez, A. (2016). Vulvodynia – An evidence-based literature review and proposed treatment algorithm. *Pain Practice*, 16(2), 204–236.  
<https://doi.org/10.1111/papr.12274>
- Derogatis, L. R., Rosen, R., Leiblum, S., Burnett, A., & Heiman, J. (2002). The Female Sexual Distress Scale (FSDS): Initial validation of a standardized scale for assessment of sexually related personal distress in women. *Journal of Sex & Marital Therapy*, 28(4), 317–330. <https://doi.org/10.1080/00926230290001448>
- Desrosiers, M., Bergeron, S., Meana, M., Leclerc, B., Binik, Y. M., & Khalifé, S. (2008). Psychosexual characteristics of vestibulodynia couples: Partner solicitousness and hostility are associated with pain. *The Journal of Sexual Medicine*, 5(2), 418–427.  
<https://doi.org/10.1111/j.1743-6109.2007.00705.x>
- Dewitte, M., & Meulders, A. (2023). Fear learning in genital pain: Toward a biopsychosocial, ecologically valid research and treatment model. *The Journal of Sex Research*, 60(6), 768–785.  
<https://doi.org/10.1080/00224499.2022.2164242>

- Dewitte, M., Van Lankveld, J., & Crombez, G. (2011). Understanding sexual pain: A cognitive-motivational account. *Pain*, 152(2), 251–253. <https://doi.org/10.1016/j.pain.2010.10.051>
- Dogan, J. N., Thorpe, S. Y., Malone, N., Jester, J., Stevens-Watkins, D., & Hargons, C. (2023). ‘My partner will think I’m weak or overthinking my pain’: How being superwoman inhibits Black women’s sexual pain disclosure to their partners. *Culture, Health & Sexuality*, 25(5), 567–581. <https://doi.org/10.1080/13691058.2022.2072956>
- Dubé, J. P., Bergeron, S., Muise, A., Impett, E. A., & Rosen, N. O. (2017). A comparison of approach and avoidance sexual goals in couples with vulvodynia and community controls. *The Journal of Sexual Medicine*, 14(11), 1412–1420. <https://doi.org/10.1016/j.jsxm.2017.09.002>
- Dubé, J. P., Corsini-Munt, S., Muise, A., & Rosen, N. O. (2019). Emotion regulation in couples affected by female sexual interest/arousal disorder. *Archives of Sexual Behavior*, 48(8), 2491–2506. <https://doi.org/10.1007/s10508-019-01465-4>
- Edlund, S. M., Carlsson, M. L., Linton, S. J., Fruzzetti, A. E., & Tillfors, M. (2015). I see you’re in pain – The effects of partner validation on emotions in people with chronic pain. *Scandinavian Journal of Pain*, 6(1), 16–21. <https://doi.org/10.1016/j.sjpain.2014.07.003>
- Edmond, S. N., & Keefe, F. J. (2015). Validating pain communication: Current state of the science. *Pain*, 156(2), 215. <https://doi.org/10.1097/01.j.pain.0000460301.18207.c2>
- Elmerstig, E., Wijma, B., & Berterö, C. (2008). Why do young women continue to have sexual intercourse despite pain? *The Journal of Adolescent Health*, 43(4), 357–363. <https://doi.org/10.1016/j.jadohealth.2008.02.011>
- Elmerstig, E., Wijma, B., & Swahnberg, K. (2013). Prioritizing the partner’s enjoyment: A population-based study on young Swedish women with experience of pain during vaginal intercourse. *Journal*



of *Psychosomatic Obstetrics and Gynaecology*, 34(2), 82–89.  
<https://doi.org/10.3109/0167482X.2013.793665>

Engel, G. L. (1977). The need for a new medical model: A challenge for biomedicine. *Science*, 196(4286), 129–136.  
<https://doi.org/10.1126/science.847460>

Engman, L. (2021). *Vulvodynia: Understanding the Role of Pain-related Behavior*. Örebro University.

Engman, L., Flink, I. K., Ekdahl, J., Boersma, K., & Linton, S. J. (2018). Avoiding or enduring painful sex? A prospective study of coping and psychosexual function in vulvovaginal pain. *European Journal of Pain*, 22(8), 1388–1398. <https://doi.org/10.1002/ejp.1227>

Falsetta, M. L., Foster, D. C., Woeller, C. F., Pollock, S. J., Bonham, A. D., Haidaris, C. G., Stodgell, C. J., & Phipps, R. P. (2015). Identification of novel mechanisms involved in generating localized vulvodynia pain. *American Journal of Obstetrics and Gynecology*, 213(1), 38.e1–38.e12. <https://doi.org/10.1016/j.ajog.2015.02.002>

Farmer, M. A., Taylor, A. M., Bailey, A. L., Tuttle, A. H., MacIntyre, L. C., Milagrosa, Z. E., Crissman, H. P., Bennett, G. J., Ribeiro-da-Silva, A., Binik, Y. M., & Mogil, J. S. (2011). Repeated vulvovaginal fungal infections cause persistent pain in a mouse model of vulvodynia. *Science Translational Medicine*, 3(101), 101ra91–101ra91. <https://doi.org/10.1126/scitranslmed.3002613>

Farrell, J., & Cacchioni, T. (2012). The medicalization of women's sexual pain. *The Journal of Sex Research*, 49(4), 328–336.  
<https://doi.org/10.1080/00224499.2012.688227>

Flanagan, E., Herron, K. A., O'Driscoll, C., & Williams, A. C. de C. (2015). Psychological treatment for vaginal pain: Does etiology matter? A systematic review and meta-analysis. *The Journal of Sexual Medicine*, 12(1), 3–16. <https://doi.org/10.1111/jsm.12717>

Flink, I. K., Engman, L., Kuile, M. M. T., Thomtén, J., & Linton, S. J. (2017). Coping with pain in intimate situations: Applying the avoidance-endurance model to women with vulvovaginal pain. *Scandinavian Journal of Pain*, 17(1), 302–308.  
<https://doi.org/10.1016/j.sjpain.2017.08.007>

- Flink, I. K., Thomtén, J., Engman, L., Hedström, S., & Linton, S. J. (2015). Coping with painful sex: Development and initial validation of the CHAMP Sexual Pain Coping Scale. *Scandinavian Journal of Pain*, 9(1), 74–80.  
<https://doi.org/10.1016/j.sjpain.2015.05.002>
- Fordyce, W. E. (1976). *Behavioral Methods for Chronic Pain and Illness*. Mosby.
- Foucault, M. (1972). *The Archaeology of Knowledge*. Routledge.
- Fruzzetti, A. E. (2001). *Validating and Invalidating Behavior Coding Scale*. University of Nevada.
- Fruzzetti, A. E., & Iverson, K. M. (2006). Intervening with couples and families to treat emotion dysregulation and psychopathology. In D. K. Snyder & J. N. Hughes (Eds.), *Emotion Regulation in Couples and Families: Pathways to Dysfunction and Health* (pp. 248–267). American Psychological Association.
- Fruzzetti, A. E., & Worrall, J. M. (2010). Accurate expression and validating responses: A transactional model for understanding individual and relationship distress. In K. Sullivan & J. Davila (Eds.), *Support Processes in Intimate Relationships*. Oxford University Press.
- Gagnon, J. H., & Simon, W. (1973). *Sexual Conduct: The Social Sources of Human Sexuality*. Transaction Publishers.
- Gates, E. A., & Galask, R. P. (2001). Psychological and sexual functioning in women with vulvar vestibulitis. *Journal of Psychosomatic Obstetrics & Gynecology*, 22(4), 221–228.  
<https://doi.org/10.3109/01674820109049977>
- Gauvin, S., & Pukall, C. F. (2018). Sexual problems and sexual scripts: Overview and future directions for bisexual-identified individuals. *Sexual and Relationship Therapy*, 33(1–2), 34–44.  
<https://doi.org/10.1080/14681994.2018.1426851>
- Gauvin, S., Smith, K. B., Chamberlain, S., & Pukall, C. (2019). Communication patterns in women with provoked vestibulodynia and their partners. *Psychology & Sexuality*, 10(4), 369–382.  
<https://doi.org/10.1080/19419899.2019.1655661>

- Gordon, A. S., Panahian-Jand, M., McComb, F., Melegari, C., & Sharp, S. (2003). Characteristics of women with vulvar pain disorders: Responses to a web-based survey. *Journal of Sex & Marital Therapy*, 29(sup1), 45–58. <https://doi.org/10.1080/713847126>
- Gross, J. J. (1998). The emerging field of emotion regulation: An integrative review. *Review of General Psychology*, 2(3), 271–299. <https://doi.org/10.1037/1089-2680.2.3.271>
- Gross, J. J. (2002). Emotion regulation: Affective, cognitive, and social consequences. *Psychophysiology*, 39(3), 281–291. <https://doi.org/10.1017/S0048577201393198>
- Harlow, B. L., Caron, R. E., Parker, S. E., Chatterjea, D., Fox, M. P., & Nguyen, R. H. N. (2017). Recurrent yeast infections and vulvodynia: Can we believe associations based on self-reported data? *Journal of Women's Health*, 26(10), 1069–1076. <https://doi.org/10.1089/jwh.2016.5777>
- Harlow, B. L., Kunitz, C. G., Nguyen, R. H. N., Rydell, S. A., Turner, R. M., & MacLehose, R. F. (2014). Prevalence of symptoms consistent with a diagnosis of vulvodynia: Population-based estimates from 2 geographic regions. *American Journal of Obstetrics and Gynecology*, 210(1), 40.e1–40.e8. <https://doi.org/10.1016/j.ajog.2013.09.033>
- Harlow, B. L., & Stewart, E. G. (2003). A population-based assessment of chronic unexplained vulvar pain: Have we underestimated the prevalence of vulvodynia? *Journal of the American Medical Women's Association*, 58(2), 82–88. PMID: 12744420.
- Harlow, B. L., & Stewart, E. G. (2005). Adult-Onset vulvodynia in relation to childhood violence victimization. *American Journal of Epidemiology*, 161(9), 871–880. <https://doi.org/10.1093/aje/kwi108>
- Hasenbring, M. I., Chehadi, O., Titze, C., & Kreddig, N. (2014). Fear and anxiety in the transition from acute to chronic pain: There is evidence for endurance besides avoidance. *Pain Management*, 4(5), 363–374. <https://doi.org/10.2217/pmt.14.36>
- Hasenbring, M. I., Hallner, D., Klasen, B., Streitlein-Böhme, I., Willburger, R., & Rusche, H. (2012). Pain-related avoidance versus

- endurance in primary care patients with subacute back pain: Psychological characteristics and outcome at a 6-month follow-up. *Pain*, 153(1), 211–217. <https://doi.org/10.1016/j.pain.2011.10.019>
- Hasenbring, M. I., & Verbunt, J. A. (2010). Fear-avoidance and endurance-related responses to pain: New models of behavior and their consequences for clinical practice. *The Clinical Journal of Pain*, 26(9), 747–753. <https://doi.org/10.1097/AJP.0b013e3181e104f2>
- Hendrickx, L., Gijs, L., & Enzlin, P. (2019). Who's distressed by sexual difficulties? Exploring associations between personal, perceived partner, and relational distress and sexual difficulties in heterosexual men and women. *Journal of Sex Research*, 56(3), 300–313. <https://doi.org/10.1080/00224499.2018.1493570>
- Henrich, J., Heine, S. J., & Norenzayan, A. (2016). Most people are not WEIRD. In A. E. Kazdin (Ed.), *Methodological Issues & Strategies in Clinical Research* (4th ed.). American Psychological Association.
- Hinchliff, S., Gott, M., & Wylie, K. (2012). A qualitative study of heterosexual women's attempts to renegotiate sexual relationships in the context of severe sexual problems. *Archives of Sexual Behavior*, 41(5), 1253–1261. <https://doi.org/10.1007/s10508-012-9903-0>
- Hintz, E. A. (2019). Disrupting sexual norms: An application of the Critical Interpersonal and Family Communication (CIFC) framework in the context of vulvodynia. *Journal of Family Communication*, 19(2), 110–125. <https://doi.org/10.1080/15267431.2019.1580196>
- Hite, S. (1981). *The Hite Report: A Nationwide Study of Female Sexuality*. Seven Stories Press.
- Hite, S. (2000). *The New Hite Report*. Hamlyn.
- Horowitz, A. D., & Spicer, L. (2013). "Having sex" as a graded and hierarchical construct: A comparison of sexual definitions among heterosexual and lesbian emerging adults in the U.K. *The Journal of Sex Research*, 50(2), 139–150. <https://doi.org/10.1080/00224499.2011.635322>

- Jackson, M. (1984). Sex research and the construction of sexuality: A tool of male supremacy? *Women's Studies International Forum*, 7(1), 43–51. [https://doi.org/10.1016/0277-5395\(84\)90083-9](https://doi.org/10.1016/0277-5395(84)90083-9)
- Jackson, S. (1999). *Heterosexuality in Question*. 1–224.
- Johnson, N. S., Harwood, E. M., & Nguyen, R. H. N. (2015). “You have to go through it and have your children”: Reproductive experiences among women with vulvodynia. *BMC Pregnancy & Childbirth*, 15(1), 114. <https://doi.org/10.1186/s12884-015-0544-x>
- Kaler, A. (2006). Unreal women: Sex, gender, identity and the lived experience of vulvar pain. *Feminist Review*, 82(1), 50–75. <https://doi.org/10.1057/palgrave.fr.9400262>
- Kashy, D. A., & Kenny, D. A. (2000). The analysis of data from dyads and groups. In H. T. Reis & C. M. Judd (Eds.), *Handbook of Research Methods in Social and Personality Psychology* (pp. 451–477). Cambridge University Press.
- Kazdin, A. E. (2017). *Research Design in Clinical Psychology* (Fifth ed.). Pearson.
- Kerns, R. D., Turk, D. C., & Rudy, T. E. (1985). The West Haven-Yale Multidimensional Pain Inventory (WHYMPI). *Pain*, 23(4), 345–356. [https://doi.org/10.1016/0304-3959\(85\)90004-1](https://doi.org/10.1016/0304-3959(85)90004-1)
- Khandker, M., Brady, S. S., Stewart, E. G., & Harlow, B. L. (2014). Is chronic stress during childhood associated with adult-onset vulvodynia? *Journal of Women's Health*, 23(8), 649–656. <https://doi.org/10.1089/jwh.2013.4484>
- Khandker, M., Brady, S. S., Vitonis, A. F., MacLehose, R. F., Stewart, E. G., & Harlow, B. L. (2011). The influence of depression and anxiety on risk of adult onset vulvodynia. *Journal of Women's Health*, 20(10), 1445–1451. <https://doi.org/10.1089/jwh.2010.2661>
- Kinsey, A. C., Pomeroy, W. B., Martin, C. E., & Gebhard, P. H. (1953). *Sexual Behavior in the Human Female*. Saunders.
- Klaassen, M., & Ter Kuile, M. M. (2009). Development and initial validation of the Vaginal Penetration Cognition Questionnaire (VPCQ) in a sample of women with vaginismus and dyspareunia.

*The Journal of Sexual Medicine*, 6(6), 1617–1627.  
<https://doi.org/10.1111/j.1743-6109.2009.01217.x>

- Laurenceau, J.-P., Barrett, L. F., & Pietromonaco, P. R. (1998). Intimacy as an interpersonal process: The importance of self-disclosure, partner disclosure, and perceived partner responsiveness in interpersonal exchanges. *Journal of Personality and Social Psychology*, 74(5), 1238–1251. <https://doi.org/10.1037/0022-3514.74.5.1238>
- Lawrence, K.-A., Byers, S. E., & Cohen, J. N. (2020). Interpersonal exchange model of sexual satisfaction questionnaire. In R. R. Mithausen, J. K. Sakaluk, T. D. Fisher, C. M. Davis, & W. L. Yarber (Eds.), *Handbook of Sexuality-Related Measures* (4th ed., pp. 497–503). Routledge.
- Leclerc, B., Bergeron, S., Brassard, A., Bélanger, C., Steben, M., & Lambert, B. (2015). Attachment, sexual assertiveness, and sexual outcomes in women with provoked vestibulodynia and their partners: A mediation model. *Archives of Sexual Behavior*, 44(6), 1561–1572. <https://doi.org/10.1007/s10508-014-0295-1>
- Leeuw, M., Goossens, M. E. J. B., Linton, S. J., Crombez, G., Boersma, K., & Vlaeyen, J. W. S. (2007). The fear-avoidance model of musculoskeletal pain: Current state of scientific evidence. *Journal of Behavioral Medicine*, 30(1), 77–94. <https://doi.org/10.1007/s10865-006-9085-0>
- Leong, L. E. M., Cano, A., & Johansen, A. B. (2011). Sequential and base rate analysis of emotional validation and invalidation in chronic pain couples: Patient gender matters. *The Journal of Pain*, 12(11), 1140–1148. <https://doi.org/10.1016/j.jpain.2011.04.004>
- Levenson, R. W., Haase, C. M., Bloch, L., Holley, S. R., & Seider, B. H. (2014). Emotion regulation in couples. In J. J. Gross (Ed.), *Handbook of Emotion Regulation*, 2nd ed (pp. 267–283). The Guilford Press.
- Lick, D. J., Durso, L. E., & Johnson, K. L. (2013). Minority stress and physical health among sexual minorities. *Perspectives on Psychological Science*, 8(5), 521–548.  
<https://doi.org/10.1177/1745691613497965>

- Linton, S. J., Boersma, K., Vangronsveld, K., & Fruzzetti, A. (2012). Painfully reassuring? The effects of validation on emotions and adherence in a pain test. *European Journal of Pain*, 16(4), 592–599. <https://doi.org/10.1016/j.ejpain.2011.07.011>
- Linton, S. J., Flink, I. K., Nilsson, E., & Edlund, S. (2017). Can training in empathetic validation improve medical students' communication with patients suffering pain? A test of concept. *Pain Reports*, 2(3), e600. <https://doi.org/10.1097/PR9.0000000000000600>
- Lumley, M. A., Cohen, J. L., Borszcz, G. S., Cano, A., Radcliffe, A. M., Porter, L. S., Schubiner, H., & Keefe, F. J. (2011). Pain and emotion: A biopsychosocial review of recent research. *Journal of Clinical Psychology*, 67(9), 942–968. <https://doi.org/10.1002/jclp.20816>
- Mallory, A. B., Stanton, A. M., & Handy, A. B. (2019). Couples' sexual communication and dimensions of sexual function: A meta-analysis. *The Journal of Sex Research*, 56(7), 882–898. <https://doi.org/10.1080/00224499.2019.1568375>
- Manne, S., Ostroff, J., Rini, C., Fox, K., Goldstein, L., & Grana, G. (2004). The interpersonal process model of intimacy: The role of self-disclosure, partner disclosure, and partner responsiveness in interactions between breast cancer patients and their partners. *Journal of Family Psychology*, 18(4), 589–599. <https://doi.org/10.1037/0893-3200.18.4.589>
- Marriott, C., & Thompson, A. R. (2008). Managing threats to femininity: Personal and interpersonal experience of living with vulval pain. *Psychology & Health*, 23(2), 243–258. <https://doi.org/10.1080/14768320601168185>
- Masheb, R. M., Lozano-Blanco, C., Kohorn, E. I., Minkin, M. J., & Kerns, R. D. (2004). Assessing sexual function and dyspareunia with the Female Sexual Function Index (FSFI) in women with vulvodynia. *Journal of Sex & Marital Therapy*, 30(5), 315–324. <https://doi.org/10.1080/00926230490463264>
- Masters, N. T., Casey, E., Wells, E. A., & Morrison, D. M. (2013). Sexual scripts among young heterosexually active men and women:

- Continuity and change. *The Journal of Sex Research*, 50(5), 409–420. <https://doi.org/10.1080/00224499.2012.661102>
- Maunder, L., Dargie, E., & Pukall, C. F. (2022). Moderators of the relationship between pain and pain-related sexual disability in women with provoked vestibulodynia symptoms. *The Journal of Sexual Medicine*, 19(5), 809–822. <https://doi.org/10.1016/j.jsxm.2022.02.016>
- McNicoll, G., Corsini-Munt, S., O. Rosen, N., McDuff, P., & Bergeron, S. (2017). Sexual assertiveness mediates the associations between partner facilitative responses and sexual outcomes in women with provoked vestibulodynia. *Journal of Sex & Marital Therapy*, 43(7), 663–677. <https://doi.org/10.1080/0092623X.2016.1230806>
- McPhillips, K., Braun, V., & Gavey, N. (2001). Defining (hetero)sex: How imperative is the “coital imperative”? *Women’s Studies International Forum*, 24(2), 229–240. [https://doi.org/10.1016/S0277-5395\(01\)00160-1](https://doi.org/10.1016/S0277-5395(01)00160-1)
- Meana, M., & Binik, Y. M. (2022). The biopsychosocial puzzle of painful sex. *Annual Review of Clinical Psychology*, 18, 471–495. <https://doi.org/10.1146/annurev-clinpsy-072720-014549>
- Meana, M., Binik, Y. M., Khalife, S., & Cohen, D. R. (1997). Biopsychosocial profile of women with dyspareunia. *Obstetrics & Gynecology*, 90(4, Part 1), 583–589. [https://doi.org/10.1016/S0029-7844\(98\)80136-1](https://doi.org/10.1016/S0029-7844(98)80136-1)
- Meier, T., Stephens, J. E., & Haase, C. M. (2022). Emotion regulation in romantic relationships. In B. Q. Ford & J. J. Gross (Eds.), *Handbook of Emotion Regulation* (3rd ed.). Guilford Press.
- Mertens, D. M. (2009). *Transformative Research and Evaluation*. The Guilford Press.
- Merwin, K. E., O’Sullivan, L. F., & Rosen, N. O. (2017). We need to talk: Disclosure of sexual problems is associated with depression, sexual functioning, and relationship satisfaction in women. *Journal of Sex & Marital Therapy*, 43(8), 786–800. <https://doi.org/10.1080/0092623X.2017.1283378>



- Meyer-Bahlburg, H. F. L., & Dolezal, C. (2007). The Female Sexual Function Index: A methodological critique and suggestions for improvement. *Journal of Sex & Marital Therapy*, 33(3), 217–224. <https://doi.org/10.1080/00926230701267852>
- Morin, M., Bergeron, S., Khalifé, S., Mayrand, M., & Binik, Y. M. (2014). Morphometry of the pelvic floor muscles in women with and without provoked vestibulodynia using 4D ultrasound. *The Journal of Sexual Medicine*, 11(3), 776–785. <https://doi.org/10.1111/jsm.12367>
- Myrtveit-Stensrud, L., Haugstad, G. K., Rème, S. E., Schaller, S. L., & Groven, K. S. (2023). “It’s all my fault”: A qualitative study of how heterosexual couples experience living with vulvodynia. *Acta Obstetrica et Gynecologica Scandinavica*. <https://doi.org/10.1111/aogs.14537>
- National Board of Health and Welfare. (2022). *Nationella Riktlinjer för Vård vid Provocerad Vulvodyni. Prioriteringsstöd till Beslutsfattare och Chefer samt Stöd till Personal*.
- Nguyen, R. H. N., Mathur, C., Wynings, E. M., Williams, D. A., & Harlow, B. L. (2015). Remission of vulvar pain among women with primary vulvodynia. *Journal of Lower Genital Tract Disease*, 19(1), 62–67. <https://doi.org/10.1097/LGT.0000000000000041>
- Nguyen, R. H. N., Reese, R. L., & Harlow, B. L. (2015). Differences in pain subtypes between hispanic and non-hispanic white women with chronic vulvar pain. *Journal of Women’s Health*, 24(2), 144–150. <https://doi.org/10.1089/jwh.2014.4892>
- Nicolson, P., & Burr, J. (2003). What is ‘normal’ about women’s (hetero)sexual desire and orgasm?: A report of an in-depth interview study. *Social Science & Medicine*, 57(9), 1735–1745. [https://doi.org/10.1016/S0277-9536\(03\)00012-1](https://doi.org/10.1016/S0277-9536(03)00012-1)
- Nylanderlundqvist, E., & Bergdahl, J. (2003). Vulvar vestibulitis: Evidence of depression and state anxiety in patients and partners. *Acta Dermato-Venereologica*, 83(5), Article 5. <https://doi.org/10.1080/00015550310003764>

- Pâquet, M., Rosen, N. O., Steben, M., Mayrand, M.-H., Santerre-Bailargeon, M., & Bergeron, S. (2018). Daily anxiety and depressive symptoms in couples coping with vulvodynia: Associations with women's pain, women's sexual function, and both partners' sexual distress. *The Journal of Pain*, 19(5), 552–561.  
<https://doi.org/10.1016/j.jpain.2017.12.264>
- Pâquet, M., Vaillancourt-Morel, M.-P., Jodouin, J.-F., Steben, M., & Bergeron, S. (2019). Pain trajectories and predictors: A 7-year longitudinal study of women with vulvodynia. *The Journal of Sexual Medicine*, 16(10), 1606–1614.  
<https://doi.org/10.1016/j.jsxm.2019.07.018>
- Pazmany, E., Bergeron, S., Verhaeghe, J., Van Oudenhove, L., & Enzlin, P. (2014). Sexual communication, dyadic adjustment, and psychosexual well-being in premenopausal women with self-reported dyspareunia and their partners: A controlled study. *The Journal of Sexual Medicine*, 11(7), 1786–1797.  
<https://doi.org/10.1111/jsm.12518>
- Pukall, C. F., Bergeron, S., Brown, C., Bachmann, G., & Wesselmann, U. (2017). Recommendations for self-report outcome measures in vulvodynia clinical trials. *The Clinical Journal of Pain*, 33(8), 756.  
<https://doi.org/10.1097/AJP.0000000000000453>
- Pukall, C. F., Goldstein, A. T., Bergeron, S., Foster, D., Stein, A., Kellogg-Spadt, S., & Bachmann, G. (2016). Vulvodynia: Definition, prevalence, impact, and pathophysiological factors. *The Journal of Sexual Medicine*, 13(3), 291–304.  
<https://doi.org/10.1016/j.jsxm.2015.12.021>
- Quinn-Nilas, C., Milhausen, R. R., Breuer, R., Bailey, J., Pavlou, M., DiClemente, R. J., & Wingood, G. M. (2016). Validation of the Sexual Communication Self-Efficacy Scale. *Health Education & Behavior*, 43(2), 165–171. <https://doi.org/10.1177/1090198115598986>
- Rancourt, K. M., Bergeron, S., Vaillancourt-Morel, M.-P., Lee-Bagley, D., Delisle, I., & Rosen, N. O. (2022). Sexual communication mediates cognitive-behavioral couple therapy outcomes: A randomized clinical trial for provoked vestibulodynia. *Journal of*

*Family Psychology*, 36(7), 1073–1083.  
<https://doi.org/10.1037/fam0000968>

- Rancourt, K. M., Flynn, M., Bergeron, S., & Rosen, N. O. (2017). It takes two: Sexual communication patterns and the sexual and relational adjustment of couples coping with provoked vestibulodynia. *The Journal of Sexual Medicine*, 14(3), 434–443.  
<https://doi.org/10.1016/j.jsxm.2017.01.009>
- Rancourt, K. M., Rosen, N. O., Bergeron, S., & Nealis, L. J. (2016). Talking about sex when sex is painful: Dyadic sexual communication is associated with women's pain, and couples' sexual and psychological outcomes in provoked vestibulodynia. *Archives of Sexual Behavior*, 45(8), 1933–1944. <https://doi.org/10.1007/s10508-015-0670-6>
- Reeck, C., Ames, D. R., & Ochsner, K. N. (2016). The social regulation of emotion: An integrative, cross-disciplinary model. *Trends in Cognitive Sciences*, 20(1), 47–63.  
<https://doi.org/10.1016/j.tics.2015.09.003>
- Reed, B. D., Harlow, S. D., Plegue, M. A., & Sen, A. (2016). Remission, relapse, and persistence of vulvodynia: A longitudinal population-based study. *Journal of Women's Health*, 25(3), 276–283.  
<https://doi.org/10.1089/jwh.2015.5397>
- Reed, B. D., Harlow, S. D., Sen, A., Edwards, R. M., Chen, D., & Haefner, H. K. (2012). Relationship between vulvodynia and chronic comorbid pain conditions. *Obstetrics and Gynecology*, 120(1), 145–151. <https://doi.org/10.1097/AOG.0b013e31825957cf>
- Reed, B. D., Harlow, S. D., Sen, A., Legocki, L. J., Edwards, R. M., Arato, N., & Haefner, H. K. (2012). Prevalence and demographic characteristics of vulvodynia in a population-based sample. *American Journal of Obstetrics and Gynecology*, 206(2), 170.e1–170.e9.  
<https://doi.org/10.1016/j.ajog.2011.08.012>
- Reed, B., Harlow, S., Legocki, L., Helmuth, M., Haefner, H., Gillespie, B., & Sen, A. (2013). Oral contraceptive use and risk of vulvodynia: A population-based longitudinal study. *BJOG: An*

- International Journal of Obstetrics & Gynaecology*, 120(13), 1678–1684. <https://doi.org/10.1111/1471-0528.12407>
- Rehman, U. S., Balan, D., Sutherland, S., & McNeil, J. (2019). Understanding barriers to sexual communication. *Journal of Social and Personal Relationships*, 36(9), 2605–2623. <https://doi.org/10.1177/0265407518794900>
- Reis, H. T., & Shaver, P. (1988). Intimacy as an interpersonal process. In S. W. Duck (Ed.), *Handbook of Personal Relationships* (pp. 367–389). Wiley.
- Reissing, E. D., Brown, C., Lord, M. J., Binik, Y. M., & Khalifé, S. (2005). Pelvic floor muscle functioning in women with vulvar vestibulitis syndrome. *Journal of Psychosomatic Obstetrics and Gynaecology*, 26(2), 107–113. <https://doi.org/10.1080/01443610400023106>
- Rittenhour, K., & Sauder, M. (2023). Identifying the impact of sexual scripts on consent negotiations. *The Journal of Sex Research*, 0(0), 1–12. <https://doi.org/10.1080/00224499.2023.2182266>
- Rosen, C. B., J. Heiman, S. Leiblum, C. Meston, R. Shabsigh, D. Ferguson, R. D’Agostino, R. (2000). The Female Sexual Function Index (FSFI): A multidimensional self-report instrument for the assessment of female sexual function. *Journal of Sex & Marital Therapy*, 26(2), 191–208. <https://doi.org/10.1080/009262300278597>
- Rosen, N. O., & Bergeron, S. (2019). Genito-Pelvic pain through a dyadic lens: Moving toward an interpersonal emotion regulation model of women’s sexual dysfunction. *The Journal of Sex Research*, 56(4–5), 440–461. <https://doi.org/10.1080/00224499.2018.1513987>
- Rosen, N. O., Bergeron, S., Glowacka, M., Delisle, I., & Baxter, M. L. (2012). Harmful or helpful: Perceived solicitous and facilitative partner responses are differentially associated with pain and sexual satisfaction in women with provoked vestibulodynia. *The Journal of Sexual Medicine*, 9(9), 2351–2360. <https://doi.org/10.1111/j.1743-6109.2012.02851.x>
- Rosen, N. O., Bergeron, S., Leclerc, B., Lambert, B., & Steben, M. (2010). Woman and partner-perceived partner responses predict pain and sexual satisfaction in Provoked Vestibulodynia (PVD)

- couples. *The Journal of Sexual Medicine*, 7(11), 3715–3724.  
<https://doi.org/10.1111/j.1743-6109.2010.01957.x>
- Rosen, N. O., Bergeron, S., & Pukall, C. F. (2020a). Recommendations for the study of vulvar pain in women, part 1: Review of assessment tools. *The Journal of Sexual Medicine*, 17(2), 180–194.  
<https://doi.org/10.1016/j.jsxm.2019.10.023>
- Rosen, N. O., Bergeron, S., & Pukall, C. F. (2020b). Recommendations for the study of vulvar pain in women, part 2: Methodological challenges. *The Journal of Sexual Medicine*, 17(4), 595–602.  
<https://doi.org/10.1016/j.jsxm.2019.12.018>
- Rosen, N. O., Bergeron, S., Sadikaj, G., & Delisle, I. (2015). Daily associations among male partner responses, pain during intercourse, and anxiety in women with vulvodynia and their partners. *The Journal of Pain*, 16(12), 1312–1320.  
<https://doi.org/10.1016/j.jpain.2015.09.003>
- Rosen, N. O., Bergeron, S., Sadikaj, G., Glowacka, M., Delisle, I., & Baxter, M.-L. (2014). Impact of male partner responses on sexual function in women with vulvodynia and their partners: A dyadic daily experience study. *Health Psychology*, 33(8), 823–831.  
<https://doi.org/10.1037/a0034550>
- Rosen, N. O., Bois, K., Mayrand, M.-H., Vannier, S., & Bergeron, S. (2016). Observed and perceived disclosure and empathy are associated with better relationship adjustment and quality of life in couples coping with vulvodynia. *Archives of Sexual Behavior*, 45(8), 1945–1956. <https://doi.org/10.1007/s10508-016-0739-x>
- Rosen, N. O., Dawson, S. J., Brooks, M., & Kellogg-Spadt, S. (2019). Treatment of vulvodynia: Pharmacological and non-pharmacological approaches. *Drugs*, 79(5), 483–493.  
<https://doi.org/10.1007/s40265-019-01085-1>
- Rosen, N. O., Muise, A., Bergeron, S., Delisle, I., & Baxter, M. L. (2015). Daily associations between partner responses and sexual and relationship satisfaction in couples coping with provoked vestibulodynia. *The Journal of Sexual Medicine*, 12(4), 1028–1039.  
<https://doi.org/10.1111/jsm.12840>

- Rosen, N. O., Muise, A., Bergeron, S., Impett, E. A., & Boudreau, G. K. (2015). Approach and avoidance sexual goals in couples with provoked vestibulodynia: Associations with sexual, relational, and psychological well-being. *The Journal of Sexual Medicine*, 12(8), 1781–1790. <https://doi.org/10.1111/jsm.12948>
- Rosen, N. O., Rancourt, K. M., Corsini-Munt, S., & Bergeron, S. (2014). Beyond a “woman’s problem”: The role of relationship processes in female genital pain. *Current Sexual Health Reports*, 6(1), 1–10. <https://doi.org/10.1007/s11930-013-0006-2>
- Ruan, Y., Reis, H. T., Clark, M. S., Hirsch, J. L., & Bink, B. D. (2020). Can I tell you how I feel? Perceived partner responsiveness encourages emotional expression. *Emotion*, 20(3), 329–342. <https://doi.org/10.1037/emo0000650>
- Sakaluk, J. K., Todd, L. M., Milhausen, R., Lachowsky, N. J., & Undergraduate Research Group in Sexuality (URGiS). (2014). Dominant heterosexual sexual scripts in emerging adulthood: Conceptualization and measurement. *The Journal of Sex Research*, 51(5), 516–531. <https://doi.org/10.1080/00224499.2012.745473>
- Santerre-Baillargeon, M., Rosen, N. O., Vaillancourt-Morel, M.-P., Corsini-Munt, S., Steben, M., Mayrand, M.-H., & Bergeron, S. (2023). Mediators of change in cognitive-behavioral couple therapy for genito-pelvic pain: Results of a randomized clinical trial. *Health Psychology*, 42(3), 161–171. <https://doi.org/10.1037/hea0001274>
- Schwartz, L., Jensen, M. P., & Romano, J. M. (2005). The development and psychometric evaluation of an instrument to assess spouse responses to pain and well behavior in patients with chronic pain: The Spouse Response Inventory. *The Journal of Pain*, 6(4), 243–252. <https://doi.org/10.1016/j.jpain.2004.12.010>
- Shallcross, R., Dickson, J. M., Nunns, D., Mackenzie, C., & Kiemle, G. (2018). Women’s subjective experiences of living with vulvodynia: A systematic review and meta-ethnography. *Archives of Sexual Behavior*, 47(3), 577–595. <https://doi.org/10.1007/s10508-017-1026-1>
- Simon, W., & Gagnon, J. H. (1984). Sexual scripts. *Society*, 22(1), 53–60. <https://doi.org/10.1007/BF02701260>

- Simon, W., & Gagnon, J. H. (1986). Sexual scripts: Permanence and change. *Archives of Sexual Behavior*, 15(2), 97–120.  
<https://doi.org/10.1007/BF01542219>
- Simon, W., & Gagnon, J. H. (2003). Sexual Scripts: Origins, influences and changes. *Qualitative Sociology*, 26(4), 491–497.  
<https://doi.org/10.1023/B:QUAS.0000005053.99846.e5>
- Sims-Schouten, W., Riley, S. C. E., & Willig, C. (2007). Critical realism in discourse analysis: A presentation of a systematic method of analysis using women's talk of motherhood, childcare and female employment as an example. *Theory & Psychology*, 17(1), 101–124.  
<https://doi.org/10.1177/0959354307073153>
- Smith, K. B., & Pukall, C. F. (2014). Sexual function, relationship adjustment, and the relational impact of pain in male partners of women with provoked vulvar pain. *The Journal of Sexual Medicine*, 11(5), 1283–1293. <https://doi.org/10.1111/jsm.12484>
- Sörensdotter, R. (2012). Heteronormativ sexuell dramaturgi med queera sprickor – Hur kvinnor med vulvasmärter hanterar sexuell praktik. *Tidskrift för Genusvetenskap*, 4, Article 4.
- Spano, L., & Lamont, J. A. (1975). Dyspareunia: A symptom of female sexual dysfunction. *The Canadian Nurse*, 71(8), 22–25. PMID: 1139541.
- Stephenson, K. R., & Meston, C. M. (2010). When are sexual difficulties distressing for women? The selective protective value of intimate relationships. *The Journal of Sexual Medicine*, 7(11), 3683–3694. <https://doi.org/10.1111/j.1743-6109.2010.01958.x>
- Sullivan, M. J. L. (2012). The communal coping model of pain catastrophising: Clinical and research implications. *Canadian Psychology / Psychologie Canadienne*, 53(1), 32–41.  
<https://doi.org/10.1037/a0026726>
- Sullivan, N. (2003). *A Critical Introduction to Queer Theory*. NYU Press.
- Sutherland, O. (2012). Qualitative analysis of heterosexual women's experience of sexual pain and discomfort. *Journal of Sex & Marital*

- Therapy*, 38(3), 223–244.  
<https://doi.org/10.1080/0092623X.2011.606880>
- Thomtén, J., & Linton, S. J. (2013). A psychological view of sexual pain among women: Applying the fear-avoidance model. *Women's Health*, 9(3), 251–263. <https://doi.org/10.2217/whe.13.19>
- Tiefer, L., Hall, M., & Tavis, C. (2002). Beyond dysfunction: A new view of women's sexual problems. *Journal of Sex & Marital Therapy*, 28 Suppl 1, 225–232.  
<https://doi.org/10.1080/00926230252851357>
- Tutino, J. S., Ouimet, A. J., & Shaughnessy, K. (2017). How do psychological risk factors predict sexual outcomes? A comparison of four models of young women's sexual outcomes. *The Journal of Sexual Medicine*, 14(10), 1232–1240.  
<https://doi.org/10.1016/j.jsxm.2017.07.011>
- Ussher, J. M. (2008). Reclaiming embodiment within critical psychology: A material-discursive analysis of the menopausal body. *Social and Personality Psychology Compass*, 2(5), 1781–1798.  
<https://doi.org/10.1111/j.1751-9004.2008.00151.x>
- Ussher, J. M., Perz, J., Gilbert, E., Wong, W. K. T., & Hobbs, K. (2013). Renegotiating sex and intimacy after cancer: Resisting the coital imperative. *Cancer Nursing*, 36(6), 454.  
<https://doi.org/10.1097/NCC.0b013e3182759e21>
- Vésteinsdóttir, V., Steingrimsdóttir, E. D., Joinson, A., Reips, U.-D., & Thorsdóttir, F. (2019). Social desirability in spouse ratings. *Psychological Reports*, 122(2), 593–608.  
<https://doi.org/10.1177/0033294118767815>
- Vlaeyen, J. W. S., & Linton, S. J. (2000). Fear-avoidance and its consequences in chronic musculoskeletal pain: A state of the art. *Pain*, 85(3), 317–332. [https://doi.org/10.1016/S0304-3959\(99\)00242-0](https://doi.org/10.1016/S0304-3959(99)00242-0)
- Vlaeyen, J. W. S., & Linton, S. J. (2012). Fear-avoidance model of chronic musculoskeletal pain: 12 years on. *Pain*, 153(6), 1144–1147. <https://doi.org/10.1016/j.pain.2011.12.009>



- Wesselmann, U., Bonham, A., & Foster, D. (2014). Vulvodynia: Current state of the biological science. *Pain*, 155(9). <https://doi.org/10.1016/j.pain.2014.05.010>
- Wiederman, M. W. (2005). The gendered nature of sexual scripts. *The Family Journal*, 13(4), 496–502. <https://doi.org/10.1177/1066480705278729>
- Wiederman, M. W. (2015). Sexual script theory: Past, present, and future. In J. DeLamater & R. F. Plante (Eds.), *Handbook of the Sociology of Sexualities* (pp. 7–22). Springer International Publishing. [https://doi.org/10.1007/978-3-319-17341-2\\_2](https://doi.org/10.1007/978-3-319-17341-2_2)
- Willig, C. (2013). *Introducing Qualitative Research in Psychology* (3rd ed.). Open University Press.
- World Health Organization. (2019). *International Classification of Diseases*, 11th ed. <https://icd.who.int/en>
- Yardley, L. (2013). Introducing material-discursive approaches to health and illness. In L. Yardley (Ed.), *Material Discourses of Health and Illness* (pp. 1–24). Routledge.
- Zoom Video Communications Inc. (2020). *Zoom Cloud Meetings* (5.4.7) [Computer software]. [https://zoom.us/downloads#client\\_4meeting](https://zoom.us/downloads#client_4meeting)



PUBLICATIONS *in the series*  
ÖREBRO STUDIES IN PSYCHOLOGY

- 0.\* ANDERSSON [ANDERSHED], ANNA-KARIN, *The Rhythm of Adolescence – Morningness – Eveningness and Adjustment from a Developmental Perspective*. 2001.
1. ANDERSHED, HENRIK, *Antisocial Behavior in Adolescence – The Role of Individual Characteristics*. 2002.
2. TROST, KARI, *A new look at parenting during adolescence: Reciprocal interactions in everyday life*. 2002.
3. JENSEN, EVA, *(Mis)understanding and Learning of Feedback Relations in a Simple Dynamic System*. 2004.
4. WESTER HERBER, MISSE, *Talking to me? – Risk Communication to a diverse Public*. 2004.
5. BOERSMA, KATJA, *Fear and avoidance in the development of a persistent musculoskeletal pain problem. Implications for secondary prevention*. 2005.
6. JANSSON, MARKUS, *Insomnia: Psychological Mechanisms and Early Intervention. A Cognitive-Behavioral Perspective*. 2005.
7. LINDBLOM, KARIN, *Utbrändhet i normalbefolkningen. Arbets- och individfaktors relation i utvecklingen mot eller återhämtning från utbrändhet*. 2006. (Vetenskaplig uppsats)
8. ALMQVIST, LENA, *Children's Health and Developmental Delay: Positive Functioning in Every-day Life*. 2006.
9. JOHANSSON, PETER, *Understanding psychopathy through the study of long-term violent offenders*. 2006.
10. PERSSON, ANDREAS, *Leisure in Adolescence: Youth's activity choices and why they are linked to problems for some and not others*. 2006.
11. OJALA, MARIA, *Hope and worry: Exploring young people's values, emotions, and behavior regarding global environmental problems*. 2007.
12. LARSSON, MATS, *Human Iris Characteristics as Biomarkers for Personality*. 2007.

\* Finns sedan tidigare utgiven i serien "Örebro Studies".

13. PAKALNISKIENE, VILMANTE, *Harsh or Inept Parenting, Youth Characteristics and Later Adjustment*. 2008.
14. SKOOG, THERÉSE, *On the developmental significance of female pubertal timing*. 2008.
15. BRAV, AGNETA, *Industrial Work Groups. The Impact of Job Design, Leader Support and Group Processes on Initiative and Self-organization*. 2008.
16. BESIC, NEJRA, *At First Blush: The Impact of Shyness on Early Adolescents' Social Worlds*. 2009.
17. PERSSON, STEFAN, *Adolescents' role in democratic "parenting"*. 2009.
18. LILLVIST, ANNE, *The applicability of a functional approach to social competence in preschool children in need of special support*. 2010.
19. KAKIHARA, FUMIKO, *Incorporating Adolescents' Interpretations and Feelings about Parents into Models of Parental Control*. 2010.
20. MACDONALD, SHANE, *Stress, musculoskeletal pain and insomnia. Distinct difficulties or variations of the same problem?* 2011.
21. FLINK, IDA, *Stuck in Mind: The role of Catastrophizing in Pain*. 2011.
22. GLATZ, TERESE, *Parents' reactions to adolescents' problematic behaviors*. 2011.
23. KOUTAKIS, NIKOLAUS, *Preventing Underage Alcohol Drinking through Working with Parents*. 2011.
24. SJÖBERG, MISA, *Leadership and stress – Indirect military leadership and leadership during complex rescue operations*. 2012.
25. SVENSSON, YLVA, *Embedded in a Context: The Adaptation of Immigrant Youth*. 2012.
26. MOUSAVI-NASAB, S-M-HOSSEIN, *Engaged Lifestyle and Episodic and Semantic Memory: Longitudinal Studies from the Betula Project*. 2012.
27. DANIELSSON, NANETTE S., *Disturbed Sleep and Emotion: A Developmental Perspective*. 2013.

28. SALIHOVIĆ, SELMA, *A Developmental Perspective on Psychopathic Traits in Adolescence*. 2013.
29. BERGBOM, SOFIA, *Matchmaking in pain practice. Challenges and possibilities*. 2014.
30. NORELL-CLARKE, ANNIKA, *Cogito, ergo insomnis. I think, therefore I am sleepless*. 2014.
31. TRIFAN, TATIANA ALINA, *Multiple perspectives in harsh parenting*. 2015.
32. ANDERSSON, KIN, *Proactivity at work*. 2015.
33. OLOFSSON, VIVECA, *Child prevention and group based parenting programs: Effectiveness and implementation*. 2015.
34. JALALI-MOGHADAM, NILOUFAR, *Childhood Bilingualism and Reading Difficulties: Insights from Cognition and Pedagogy*. 2015.
35. LATINA, DELIA, *Self-harm: Interpersonal and holistic perspectives*. 2016.
36. FROGNER, LOUISE, *The Development of Conduct Problems in Early Childhood – The Role of Psychopathic Traits and Psychopathic Personality*. 2016.
37. BAUDUCCO, SERENA, *Adolescents' sleep in a 24/7 society. Epidemiology and prevention*. 2017.
38. EDLUND, SARA, *Calm down. Strategies for emotion regulation in clinical practice*. 2017.
39. CARSTENS SÖDERSTRAND, JOHAN, *Communication in the context of acute pain – Persuasion or validation?* 2018.
40. WURM, MATILDA, *Understanding Comorbid Pain and Emotions: A transdiagnostic approach*. 2018.
41. ANNIKO, MALIN, *Stuck on repeat: Adolescent stress and the role of repetitive negative thinking and cognitive avoidance*. 2018.
42. BADINLOU, FARZANEH, *The power of action and knowledge in episodic memory for school-aged children*. 2018.
43. ENGMAN, LINNÉA, *Vulvodynia: Understanding the Role of Pain-Related Behavior*. 2021.

44. JAF DARUN, *Understanding Parents' Role in Adolescents' Involvement in Organized Sports Activities*. 2021.
45. ARNISON, TOR, *Tired of pain or so tired it hurts?* 2022.
46. GOLOVCHANOVA, NADEZHDA, *Older and Feeling Unsafe? Unravelling the Role of Perceived Unsafety in the Well-being of Older Adults Residing in Senior Apartments*. 2023.
47. EKHOLM, ELIN, *Painful Sex in Context, Understanding Vulvodynia from a Relational Per-spective*. 2024.