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**Re-evaluating vaginismus: An empirical investigation of diagnostic reliability, vaginal
spasm, pain, and associated etiological correlates**

Elke D. Reissing

Department of Psychology

McGill University

January, 2002

**A Thesis submitted to the Faculty of Graduate Studies and Research in partial
fulfillment of the requirements of the degree of Doctor of Philosophy.**

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Abstract

Vaginismus is a sexual dysfunction that has received insufficient empirical attention. The first chapter of this thesis consists of a critical review of the literature and demonstrates the overall paucity of research studies and their poor methodological quality. The second and third chapter are based on the results of an experimental study comparing 87 women, matched on age, relationship status, and parity and assigned to 3 groups, vaginismus, dyspareunia/vulvar vestibulitis syndrome (VVS), and no pain. A structured interview evaluating pain with intercourse and history of gynecological problems as well as psychometric measures, evaluating sexual and physical abuse, sexual knowledge and schema, sexual functioning, relationship adjustment and psychological distress were administered. The reliability of vaginal muscle spasm as the main diagnostic criterion, differential diagnosis, and the role of pain were assessed via by 2 separate gynecological and, 2 separate physical therapist examination, 2 EMG evaluations, and a review of the interview data by 2 separate psychologists. Findings suggest that the spasm-based definition and resulting diagnostic reliability of vaginismus are not adequate. Both, women in the vaginismus and VVS groups exhibited higher levels of pelvic floor hypertonicity compared to women with no pain; however, women in the vaginismus group demonstrated the highest levels. Measures of pain did not distinguish between women with vaginismus and VVS. The only dependent measure clearly differentiating women with vaginismus was defensive and avoidant reactions during the physical exams. A re-conceptualization based on a multidimensional diagnostic framework including pelvic floor hypertonicity, avoidance and defensive reactions to vaginal penetration, and genital pain was suggested. The

third paper was based on the results of questionnaires investigating etiological correlates of vaginismus, sexual and physical abuse, sexual self-schema, sexual knowledge and functioning, relationship adjustment, and psychological distress. Support was found for 2 of the traditionally associated etiological correlates, a history of childhood sexual interference and less positive sexual self-schema. The additional finding of lower sexual functioning in women with vaginismus stands in contrast to reports in the classification and clinical literature. Similarities of women with vaginismus and VVS were discussed and the data of the entire investigation lends significant support to the suggestion that both disorders are not diagnostically and clinically independent constructs.

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Résumé

Le vaginisme est une dysfonction sexuelle dont l'attention empirique a été insuffisante. Le premier chapitre de cette thèse est composée d'une critique de la littérature et démontre le manque d'études de recherches et leur faible qualité méthodologique. Le deuxième et troisième chapitre de la thèse sont basés sur les résultats d'une étude expérimentale comparant 87 femmes sont divisées en trois groupes, le vaginisme, dyspareunia/le syndrome de la vestibulite vulvaire (SVV), et pas de douleur. Une entrevue structurée mettant en évidence la douleur lors d'un rapport sexuel et l'histoire des problèmes gynécologiques ainsi que des mesures psychométriques, évaluant l'abus sexuel et physique, la connaissance sur la sexualité, le schéma sexuel de la femme, le fonctionnement sexuel, l'entente des partenaires et la détresse psychologique ont été administré. La fiabilité du spasme du muscle vaginal comme étant le principal critère diagnostique, le diagnostique différentiel, et le rôle de la douleur ont été évalué par 2 gynécologues, 2 physiothérapeutes, 2 évaluations EMG, et une revue des données de l'entrevue par 2 différents psychologues. Les résultats suggèrent que la définition basée sur le spasme et la fiabilité du diagnostique du vaginisme résultant ne correspondent pas. Les femmes dans le groupe vaginisme et SVV montrent les plus hauts niveaux d'hypertension du plancher pelvien comparés aux femmes sans douleurs; cependant les femmes dans le groupe du vaginisme manifestent les taux les plus élevés. Les mesures de douleurs n'ont pas distingué les femmes avec vaginisme et des femmes avec VVS. La seule mesure dépendante séparant clairement les femmes avec le vaginisme était des réactions de défenses et d'évitement durant les examens physiques. Une reconception basée sur un diagnostique multidimensionnel

incluant l'hypertension du plancher pelvien, des réactions de défenses et d'évitement à la pénétration vaginale et la douleur génitale a été suggéré. Le 3ieme manuscrit rapporte sur les résultats de questionnaires sur l'étiologie du vaginisme, l'abus sexuel et physique, le schéma sexuel de la femme, la connaissance sur la sexualité et son fonctionnement, l'entente des partenaires et la détresse psychologique. L'évidence trouvée montre que seulement 2 des facteurs étiologiques traditionnels sont présents, soit les antécédents d'interférence sexuelle dans l'enfance et les schémas sexuels de la femme sont moins positifs. D'autres résultats sur le fonctionnement sexuel moins satisfaisants chez les femmes avec vaginisme sont en contraste avec les rapports de la littérature clinique et de la classification. Les similarités entre femmes avec vaginisme et VVS ont été discutées et les données de toute l'enquête tendent vers des évidences significatives suggérant que les 2 problématiques ne soient pas des concepts diagnostiquement et cliniquement indépendants.

Manuscripts and Authorship*

Candidates have the option of including, as part of the thesis, the text of one or more papers submitted or to be submitted for publication, or the clearly duplicated text of one or more published papers. These texts must be bound as an integral part of the thesis.

If this option is chosen, connecting texts that provide logical bridges between the different papers are mandatory. The thesis must be written in such a way that it is more than a mere collection of manuscripts; in other words, results of a series of papers must be integrated.

The thesis must still conform to all other requirements of the “Guidelines for Thesis Preparation.” The thesis must include: A table of contents, an abstract in English and French, an introduction which clearly states the rationale and objectives of the study, a review of the literature, a final conclusion and summary, and a thorough bibliography or reference list.

Additional material must be provided where appropriate (e.g., in appendices) and in sufficient detail to allow a clear and precise judgment to be made of the importance and originality of the research reported in the thesis.

In case of manuscripts co-authored by the candidate and others, the candidate is required to make an explicit statement in the thesis as to who contributed to such work and to what extent. Supervisors must attest to the accuracy of such statements at the doctoral oral defense. Since the task of the examiners is made more difficult in these cases, it is the candidate’s interest to make perfectly clear the responsibilities of all the authors of the co-authored papers.

*** Reprinted from the Guidelines Concerning Thesis Preparation, Faculty of Graduate Studies and Research, McGill University.**

Contributions of Authors

This thesis consists of three papers; the first paper is co-authored by the candidate, and Dr. Yitzchak Binik, and Dr. Samir Khalifé. The second and third papers are co-authored by the candidate, Dr. Yitzchak Binik, Dr. Samir Khalifé, Dr. Deborah Cohen, and Rhonda Amsel. The following statement is regarding the contributions of the various authors to the three papers.

The review of the literature was researched, written, and revised by the candidate. Drs. Binik and Khalifé served in an editorial capacity. The second and third paper resulted from a research study, which was elaborated, conducted, and analyzed by the candidate. The candidate wrote the resulting manuscripts. Dr. Binik served in an advisory capacity during the formulation of the research questions, development of the research protocol, and composition of the two papers.

Drs. Khalifé and Cohen contributed with their expertise in gynecology and assisted in the development of, and conducted the standardized gynecological examination of the research project. Rhonda Amsel assisted in the development of the methodology of the study, the development of the standardized examination forms for gynecologists and physical therapists, and served as a statistical consultant.

Statement of Original Contribution

The papers included in this doctoral thesis contribute to the advancement of knowledge in three domains of research: sexuality, pain, and gynecology. The review of the literature is the only comprehensive and critical review of studies pertaining to vaginismus and raises important questions about the diagnostic criteria for vaginismus and its differential diagnosis from other sexual pain problems. A re-conceptualization of vaginismus as a genital pain disorder and/or a phobia-like reaction to vaginal penetration was recommended.

Following the findings of the literature review, the resulting research study was the first attempt at empirically evaluating the diagnostic reliability of vaginismus. Vaginal spasms are the main diagnostic criterion for vaginismus, yet no empirical study on the validity and reliability of this taxon was available. In addition, investigating the role of pain in vaginismus was of particular importance since this sexual dysfunction is listed as a sexual pain disorder in the DSM IV (APA, 1994), yet no studies have addressed pain associated with vaginismus. Furthermore, the second part of the research study is a first attempt at investigating some of the traditionally held beliefs about the development of vaginismus with a non-patient population; this moves the investigation of etiology from clinical and anecdotal reports towards an empirical basis from which to proceed.

This research study was a major step forward in improving the methodology of the study of vaginismus and important first step in generating a body of knowledge that is based on empirical evidence. The results of this investigation pointed towards serious problems in the current diagnostic formulation of penetration difficulties. Findings on

vaginal spasm, pain, and pain behaviour provided the first empirical data to work towards a re-conceptualization of vaginismus as genital pain and/or specific phobia. Findings on etiology confirmed the paucity of solid empirical support for traditionally associated factors and generated useful information to further investigate the causes of vaginismus.

Acknowledgements

This thesis was an important part of my life in the last few years, but many others were involved in the researching and writing of this thesis. Foremost, the most patient person with a wicked sense of humor, my supervisor Dr. Binik, was there to guide me and reign in my straying thought patterns from the very beginning to a very concise end. He has provided me with guidance and an inspiring environment and I feel that my years in graduate school were filled with experiences of intellectual and personal growth.

Dr. Binik is a great team builder and gives his students the opportunity to work with multidisciplinary teams consisting of health professionals who are committed to their patients as well as scientific curiosity. It was a unique learning experience and a great pleasure to work with Drs. Khalifé and Cohen, Claudia Brown, Marie Josée Lord, and Drs. Ochs and Paré. I thank them for having contributed to the development of the structured examinations, having conducted the exams, and having been consistently and reliably committed to the study.

I was exceptionally fortunate to have had a group of research assistants that worked many hours on sometimes quite tedious tasks with total commitment. Most had contact with the participants of this study and conducted themselves in the most sensitive and professional manner. This study was a very invasive experience for the most part of the participants, and it was the sensitivity of the research assistants that made the experience less aversive if not positive. I thank Asma Fahkry, Caroline O'Sullivan, Marianne Bauer, Michelle To, Monica Oala, Georgia Kerr, Rosie Yesovich with all my heart.

I would like to thank the participants of this study for their candor and courage. I feel a great responsibility to make the best use of what I have learned through this study and hope I can do them justice.

I would like to extend my gratitude to Sophie Bergeron and Marta Meana for their support, inspiration, and editorial help. I would also like to express my thank you to Mark Schwartz and Thought Technology for having generously provided us with technical support and advice during the initial stages of the EMG testing. To the Social Sciences and Humanities Council of Canada I extend my gratitude for their financial support.

It is time to say thank you to two people whose words of gratitude lose their meaning. Always there for me during any crisis and statistical debacle, always calming, always loving, my dear friends, colleagues, and life buoys, Ken Mah and Caroline Pukall. I love you and treasure your personal and professional wealth.

My precious friends outside McGill also merit a big thank you –Marianne, Mary, Melanie, Johanne, Josée, Sylvia and Ximena, for keeping me grounded and reminding me that vaginismus is in fact not the most important issue in the world.

A special thank you to Pascal, whose love, support, and petites bouchées - especially during the last few weeks of preparing this thesis were invaluable, habibi inta, bahebak!

My family has always been a beacon of strength, unrelenting support, love and encouragement. I dedicate this thesis to my grandfather, whose intellectual endeavors were cut short by war and whose life was cut short by illness, fuer Dich mein liebster Opi!

Introduction

The relevant parts of the introduction to this thesis are covered by the first paper, entitled “Does vaginismus exist?: A critical review of the literature” which covers literature published on the subject of vaginismus in English, French, and German until the fall of 1998. A literature update will discuss papers published since the review.

Following the review of the literature, the initial question that needed to be addressed centred on the reliability of a diagnosis of vaginismus based on vaginal spasm, the only specific diagnostic criterion in the DSM IV (APA, 1994). Furthermore, while classified under the sexual pain disorders, no qualitative or quantitative information was available clarifying the importance of pain in vaginismus. Finally, many etiological speculations exist with regard to the development of penetration difficulties, but none, including the associated features suggested by the DSM IV, have been empirically evaluated.

To present the research findings, the second paper of this thesis, entitled “Vaginal spasm, pain and behaviour: An empirical investigation of the reliability of the diagnosis of vaginismus” will summarize findings related to the reliability of diagnosing vaginismus and the presence of vaginal spasm. It will also present findings with regard to the role of pain. The third paper of this thesis, entitled “Etiology of vaginismus: An empirical evaluation” will present findings summarizing the relationship between vaginismus and sexual/physical abuse, sexual functioning, sexual knowledge and self-view, relationship adjustment, and psychological distress.

Does Vaginismus Exist?

A Critical Review of the Literature

ELKE D. REISSING, B.A.,¹ YITZCHAK M. BINIK, Ph.D.,^{1,2} AND SAMIR KHALIFÉ, M.D.³

The basic strategies and methods for assessing and treating vaginismus were proposed by the early 20th century and have not essentially changed. Etiological theories have changed over time but are not supported by controlled empirical studies. This critical review of the literature disputes the widely held belief that vaginismus is an easily diagnosed and easily treated sexual dysfunction. We propose a reconceptualization of vaginismus as either an aversion/phobia of vaginal penetration or a genital pain disorder.

— *J Nerv Ment Dis* 187:261-274, 1999

Surprisingly little has changed in the conceptualization and treatment of vaginismus since the term was first coined by Sims in 1861. Trotula of Salerno, in her 1547 treatise on "The Diseases of Women," probably provided the first description of what we now call vaginismus: "a tightening of the vulva so that even a woman who has been seduced may appear a virgin" (of Salerno, 1547/1940). In an early review, Faure and Siredey (1923) concluded that vaginismus represented an involuntary, painful, spasmodic contraction of the vulvo-vaginal canal provoked by a hypersensitivity specific to the genital organs. Although the central role of the vaginal spasm was not controversial, the treatment of choice was. Sims (1861) originally suggested surgi-

cal division of the muscles and nerves of the vulval opening with subsequent dilatation using glass dilators. The necessity for surgical intervention, however, became disputed because progressive dilatation without surgery and dilatation under anesthesia proved to be successful and less "bloody" treatments (von Scanzoni, 1867; Thorburn, 1885). Walthard (1909) questioned Sims' notion of hypersensitivity specific to the genital organs and suggested that the vaginal muscle spasm represented a phobic reaction resulting from fear of pain. He stressed the importance of "psychotherapy" and education rather than surgery and dilatation. Based on MEDLINE and PsychINFO searches, we critically review the 20th century literature on the classification, etiology, and treatment of vaginismus. Although we question the utility of the current diagnostic category of vaginismus, we will, by necessity, employ the term as used in the literature reviewed.

¹ Department of Psychology, McGill University, 1205 Dr. Penfield Ave., Montréal, Québec, H3A 1B1, Canada. Send reprint requests to Dr. Binik.

² Sex and Couple Therapy Service, Department of Psychology, Royal Victoria Hospital, Montréal, Québec, Canada.

³ Department of Obstetrics and Gynecology, Jewish General Hospital; Faculty of Medicine, McGill University, Montréal, Québec, Canada.

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This article stands in partial fulfillment of Ms. Reissing's Ph.D. requirements.

We thank Sophie Bergeron, Karen Berkley, Ken Mah, Bill Maurice, Marta Meana, and the reference librarians of the McGill Health Sciences and Osler Libraries for their help.

Incidence and Prevalence

Very limited data on the incidence and prevalence of vaginismus are available. Reports from sexual dysfunction clinics (Lamont, 1994; Hawton and Catalan, 1990; Schmidt and Arentewicz, 1983), medical clinics (Barnes, 1986; Lamont, 1978), and other sources (Kilmann et al., 1986) have suggested referral rates for vaginismus ranging from 5 to 17%. A recent large-scale American epidemiological study found that 10 to 15% of women reported consistent

coital pain (Laumann et al., 1994). Unfortunately, this study did not differentiate between vaginismus, dyspareunia, and other genital pain. The interpretation of reported rates is a matter of disagreement (Beck, 1993; Fertel, 1977). Some reports concluded that vaginismus is rare (*e.g.*, Masters and Johnson, 1970; Schmidt and Arentewicz, 1983), whereas others have suggested that vaginismus is commonly underreported, underdiagnosed, and overlooked (*e.g.*, Crenshaw and Kessler, 1985; Leiblum et al., 1989). At present, there are no epidemiologically sound incidence or prevalence estimates (*cf.*, Spector and Carey, 1990).

Clinical Description and Classification

Sims (1861) suggested the term vaginismus "to designate an involuntary spasmodic closure of the mouth of the vagina, attended with such excessive supersensitiveness as to form a complete barrier to coition" (p. 362). He further proposed that "... (vaginismus) constitutes a *distinct* (italics added) affection . . ." (p. 366). The core element of Sims' description, the involuntary muscle spasm, is still included in most contemporary classifications. Table 1 summarizes five nosologies listing vaginismus: the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV; American Psychiatric Association, 1994), the American College of Obstetricians and Gynecologists recommendations (ACOG Technical Bulletin, 1995), the International Statistical Classification of Diseases and Related Health Problems (ICD-10; 1992), the Classification of Chronic Pain (Merskey and Bogduk, 1994), and an instructive nosology suggested by Lamont (1978).

In the DSM-IV, vaginismus is classified as a sexual dysfunction and is included in the subcategory of sexual pain disorders. The main diagnostic criterion is the presence of a "recurrent or persistent involuntary spasm of the musculature of the outer third of the vagina that interferes with intercourse." The vaginal muscle spasm is described in the associated text as readily observable and in some cases "so severe or prolonged as to cause pain." Although vaginismus is considered a sexual pain disorder, the experience of pain is not necessary for the diagnosis. Additional DSM-IV criteria and subtypes are similar to those used for all sexual dysfunctions (*e.g.*, generalized/situational, lifelong/acquired). Associated features indicate that other phases of the sexual response are not necessarily impaired, unless penetration is attempted. According to the DSM-IV, the disorder is more prevalent in younger women and women with negative attitudes toward sex and with a history of sexual abuse or trauma.

No official gynecological diagnostic system exists for vaginismus. Descriptions of vaginismus reflect the first criterion of the DSM-IV classification, the presence of a vaginal muscle spasm that interferes with intercourse (ACOG, 1995; Droegemueller, 1994) and further that vaginal muscle spasms make penetration painful, difficult, or impossible. Onset may be related to previous painful experiences that are either of a psychological or physiological origin, yet no organic causes are specified. In contrast to the DSM-IV, the experience of pain is a central element of the disorder.

In the ICD-10 (1992) vaginismus is classified as either a "pain disorder associated with female genital organs and menstrual cycle" or as a "sexual dysfunction, not caused by an organic disorder or disease." In the former category, organic causes for vaginismus are not given; vaginismus is merely listed and not described. In the latter category, the disorder is described as a "spasm of the pelvic floor muscles that surround the vagina, causing the occlusion of the vaginal opening. Penile entry is either impossible or painful." "Psychogenic vaginismus" is also listed under the latter category but not described. The role of pain in the diagnosis is ambiguous; however, organic vaginismus is categorized as a "pain disorder." It is unclear whether the putative spasm is included as a diagnostic requirement.

The International Association for the Study of Pain's Classification of Chronic Pain (1994) includes vaginismus in its comprehensive dimensional conceptualization of pain disorders. Unfortunately, no diagnostic criteria are noted and vaginismus is simply listed as "pain of vaginismus or dyspareunia" within the grouping of "diseases of the bladder, uterus, ovaries, and adnexa" (Merskey and Bogduk, 1994).

Critique

Each nosology is problematic considering the lack of well-developed and clearly defined diagnostic criteria and the lack of empirical data to support the proposed criteria. No published studies have either examined the validity of vaginismus as a diagnostic entity or investigated the reliability of the diagnosis. The following issues need to be examined in order to reevaluate the present classification and diagnosis of vaginismus: a) role of the vaginal muscle spasm, b) level of interference with intercourse and/or penetration in general, c) role of pain, and d) classification as a sexual dysfunction.

The Vaginal Muscle Spasm

Although central to most nosologies, the vaginal muscle spasm has received little empirical attention.

TABLE 1
Nosologies for the Classification of Vaginismus

Nosology	Type of classification	Main diagnostic criterion	Type of disorder	Role of pain	Level of interference with coitus	Taxa	Comments
DSM-IV	Categorical	Vaginal muscle spasm	Sexual dysfunction	Pain not essential	Spasm interferes with coitus	Primary/secondary Generalized/situational Primarily psychogenic or combined	2,3,4
ACOG	Categorical	Vaginal muscle spasm	Sexual dysfunction	Pain essential	Coitus is painful or impossible	Primary/secondary Generalized/situational	1,2,3,4
Lamont	Dimensional	Degree of vaginal/perineal muscle activity: 1st: perineal and levator spasm relieved with reassurance 2nd: perineal spasm maintained throughout pelvic exam 3rd: levator spasm and buttock elevation 4th: levator and perineal spasm, elevation: adduction of thighs and pelvic withdrawal	Reflex response to pain or anticipated pain	Pain and fear of pain cycle as the causal and maintaining factors	Categories of interference: 1: Primary apareunia (unconsummated relationship) 2: Secondary apareunia (successful coitus prior to onset of symptoms — no coitus since) 3: Primary dyspareunia (pain with each attempt since first coitus) 4: Secondary dyspareunia (comfortable coitus initially, pain with each attempt since onset of symptoms) 5: Primary vaginismus (levator spasm + non-consummation)	Primary/in responses to dyspareunia Complete/situational	2,4
ICD-10	Categorical	Nonorganic vaginismus: spasm of the pelvic floor muscles Organic vaginismus: unspecified	Pain disorder or sexual dysfunction	Role of pain ambiguous	Spasm causes occlusion of vaginal opening; penile entry impossible or painful (none described for organic vaginismus)	Penile entry is either impossible or painful (nonorganic vaginismus) Categorized as a pain condition (organic vaginismus)	1,2,3,4
IASP	Dimensional	None described	Pain disorder	Pain essential	Not described	None described	1,2,3,4

1 = diagnostic criteria and taxa not fully developed and described; 2 = no reliability studies; 3 = vague description of interference with intercourse; 4 = ambiguous and/or unspecified differentiation between organic and psychogenic vaginismus.

DOES VAGINISMUS EXIST?

At issue are a) the assessment of the vaginal spasm and b) the specific muscles involved. It is generally implied that the spasm, and therefore the diagnosis, must be confirmed during a pelvic exam (*e.g.*, Masters and Johnson, 1970). However, because some clinicians have argued that it is potentially damaging for the progress of therapy to insist on an early gynecological exam (*e.g.*, Drenth, 1988), researchers and clinicians have often relied on self-report. Others (*e.g.*, Biswas and Ratnam, 1995) have claimed that although it may be helpful to confirm the muscle spasm during a gynecological exam, its absence does not invalidate the diagnosis, as long as a history "compatible" with vaginismus is recounted. The result is a diagnostic entity defined by a muscle spasm that may be neither confirmed nor actually present.

In their diagnostic formulations, researchers and clinicians have referred to different muscles and/or muscle groups including the following: muscles of the lower third (*e.g.*, Abrahams, 1977) or the outer third of the vagina (*e.g.*, Fordney, 1978; van Lankveld et al., 1995), the circumvaginal and perivaginal muscles (Poinsard, 1968), the pelvic muscles (*e.g.*, Fertel, 1977; van de Wiel et al., 1990), the perineal muscles (*e.g.*, Shortle and Jewelewicz, 1986), the bulbocavernosus, levator ani, and/or pubococcygeus muscles (*e.g.*, Lamont, 1994; Steege, 1984), etc. None have described how they arrived at, or confirmed, these conclusions. There is only one unpublished study (van der Velde and Everaerd⁴) that directly measured muscle activity/tension via EMG. The investigators found no difference between 45 vaginismic women and 43 controls. It is also interesting that vaginismus is never mentioned in the literature concerning muscle activity, spasms, and cramps (*e.g.*, Jansen et al., 1990; McGee, 1990).

Interference with Coitus

What actually interferes with penetration is never specified; is it the physical barrier posed by a severe muscle spasm, or the expectancy and/or experience of pain (Meana and Binik, 1994)? In either case, "interference" with penetration seems at least partially related to the woman's stoicism and her partner's sensitivity. No corroborating information from partners is available on how difficult the attempt to penetrate is and whether the partner can feel a "barrier." Further confusion is generated by the distinction between "difficult" versus "impossible" pen-

etration (ACOG, 1995; ICD-10, 1992). The notion of "interference" is ambiguous and blurs the boundaries between vaginismus and dyspareunia. Indeed, several publications have demonstrated the difficulty of distinguishing between vaginismus, dyspareunia, and "both conditions combined" (Meana and Binik, 1994; van Lankveld et al., 1995) or vaginismus resulting from vulvar vestibulitis syndrome (VVS; Abramov et al., 1994; Basson and Riley, 1994; Bergeron et al. 1997). Others have argued that vaginismus is the inevitable result of chronic dyspareunia (Shortle and Jewelewicz, 1986), list vaginismus simply as a cause for dyspareunia (Dupree Jones et al., 1997; Kessler, 1988), or argued that "vaginismus is seen purely as a description of a symptom; neither a condition nor a diagnosis; . . ." (Valins, 1992, p. 11).

The Role of Pain

Whereas the experience of pain is not a necessary feature in DSM-IV diagnostic criteria, all other classification systems refer to pain as a prominent characteristic of vaginismus. However, no system includes a description of the quality of the pain and its assessment. Neither the literature nor the nosologies offer explicit information on distinguishing between "discomfort" and "pain" or define a "clinical" level of pain that would presumably make coitus "difficult" or "impossible." Furthermore, one has to consider the cause-or-effect relationship of pain in vaginismus: is the pain secondary to some factor other than the putative vaginismic muscle response (*e.g.*, VVS, infections, STDs, etc.), or is pain the result of the spasmodic muscle activity (Sinaki et al., 1977)? Currently, we neither understand the nature, severity, nor causal mechanism of "vaginismic pain." If pain plays a prominent role in vaginismus, the implications for classification and especially treatment are important.

Vaginismus as a Sexual Dysfunction

Investigators and clinicians have consistently reported that vaginismic women engage in satisfying, nonpenetrative sexual relationships and that penetration difficulties can also occur in nonsexual situations such as gynaecological exams or tampon insertion (*e.g.*, Beck, 1993; Frick-Bruder, 1979; Ghavami-Dicker, 1988; Leiblum et al., 1989). The classification of vaginismus as a sexual dysfunction (APA, 1994) is problematic. If vaginismic women present with other sexual dysfunctions, investigators often suggest these to be secondary their chronic penetration difficulties (*e.g.*, van Lankveld et al., 1995). Generally, reports of women's sexuality

⁴van der Velde J, Everaerd W (1996) Voluntary control over pelvic floor muscles in women with and without vaginismus. Paper presented at the Annual Meeting of the International Academy of Sex Research, Rotterdam, Netherlands, June 1996.

and relationships are positive compared with women with other sexual dysfunctions (*e.g.*, Hawton and Catalan, 1990).

Most pain disorders are labeled by the approximate location of the pain rather than the activity with which the pain interferes with (Meana et al., 1997b). Basson (1996) highlighted this issue by pointing out that osteoarthritis of the shoulder is not considered a "tennis disorder" simply because this may be the context in which pain is most often experienced. Vaginismus may be considered a sexual dysfunction insofar as it interferes with the predominant sexual script of penile-vaginal intercourse. It is, however, different from most sexual dysfunctions, which indicate problems within the sexual response cycle (desire, arousal, and orgasm), not with a particular sexual behavior (penetration).

Etiology

Classical psychoanalytic theory conceptualized vaginismus as a conversion disorder caused by unresolved psychosexual conflicts in early childhood (*e.g.*, Fenichel, 1945). Vaginismic women have been characterized as fixated or regressed to the preoedipal or oedipal stages. Abraham (1956) suggested that in less severe cases women were not able to transfer their libidinal energy from father to husband. In more severe cases, women remained fixated on their mothers, and prognosis was considered unfavorable. With the emergence of new theories of psychopathology, a variety of different points of view concerning the etiology of vaginismus have emerged; there appears to be, however, a basic agreement that vaginismus is a psychophysiological disorder with phobic elements resulting from actual or imagined negative experiences with sexuality/penetration and/or organic pathology (*e.g.*, Masters and Johnson, 1970; Yates, 1970). Fear and anxiety concerning penetration is expressed physiologically via the involuntary vaginal muscle spasm that characterizes vaginismus. What differs across theories is the nature of the negative experiences leading to the development of vaginismus.

Misinformation, Ignorance, and Guilt about Sexuality

A lack of sex education has been noted in vaginismic women (Audibert and Kahn-Nathan, 1980; Ellison, 1968). It was further hypothesized that this lack of information along with the identification with an erotophobic mother leads to fear of pain and ultimately to withdrawal from intercourse. Yet, in the only controlled study, Duddle (1977) found no differences in the level of sex education between a group of vaginismic women and a comparison

group of women visiting a contraception clinic. Ellison (1968) identified a second source of fear important in the development of vaginismus. Sexual guilt was the result of deeper sexual conflict, leading in turn to a fear of punishment and an even stronger physical defense reaction. Vaginismic women's personal theories about the causes and effects of their condition were evaluated by Ward and Ogden (1994). Sixty-seven "sufferers" and 22 "ex-sufferers" gave the second highest rating for causality to "being brought up to believe sex was wrong." Basson (1996) found that the majority of women in her study held negative views about sexuality in general and sexual activity before marriage in particular.

Fear of Pain

Dawkins and Taylor (1961) suggested that fear of pain is a symptom rather than a cause of vaginismus, but others (*e.g.*, Ellison, 1972; Hall, 1952) have stressed its possible causal and maintaining role in the disorder. In an interview study of 476 women with vaginismus, Blazer (1964) listed fear of pain as the primary reason for abstinence. This was supported more recently by Ward and Ogden's (1994) findings, in which 74% of vaginismic women reported fear of pain as the primary reason underlying their condition. A variety of childhood experiences have been implicated in the development of fear of pain, including childhood physical trauma, such as enemas and suppositories (Malleon, 1942), fear of a violent father (Barnes, 1986; O'Sullivan's, 1979; Silverstein, 1989), and negative maternal conditioning (Shortle and Jewelewicz 1986).

Organic Pathology

Organic theories of the etiology of vaginismus are generally limited to lists and short descriptions of pathologies that may lead to painful attempts at penile-vaginal intercourse. The following are usually included in lists of possible organic causes of vaginismus: hymeneal abnormalities, congenital abnormalities, vaginal atrophy and adhesions due to atrophy, vaginal surgery or intravaginal radiation, prolapsed uterus, VVS, endometriosis, infections, vaginal lesions and tumors, sexually transmitted diseases, and pelvic congestion (Abramov et al., 1994; Basson, 1996; Beck 1993; Lamont, 1978; Rey, 1977; Shortle and Jewelewicz, 1986; Stuntz, 1986; Steege, 1994; Weiner, 1973). It has been suggested that when any medical problem causing dyspareunia persists, the likely result is vaginismus (Crenshaw and Kessler, 1985; Lamont, 1978; Stuntz, 1986; Shortle and Jewelewicz, 1986). Steege (1984) has suggested

that the spasm may represent an appropriate initial response to understandably painful stimuli (*e.g.*, intercourse during an episode of vaginitis) but continues as a conditioned response even after the primary problem is resolved. Yet vaginismus is not the likely end result for many women suffering from dyspareunia, even if the problem has been long-standing (Meana et al., 1997c). In clinical studies of vaginismus, Gaafar (1962) found local lesions in 5 of 19 cases, whereas Basson (1996) found a 42% rate of comorbidity with VVS. Lamont (1978) found evidence for physical factors other than the vaginal spasm that was related to the onset of vaginismus in 32% of his sample. Conversely, when examining patients with urethral syndrome, Kaplan and Steege (1983) discovered that 70% also experienced vaginismus.

Sexual Abuse

It has been argued that experiencing or witnessing sexual trauma is a causal factor in the development of vaginismus (*e.g.*, APA, 1994; Biswas and Ratnam, 1995; DeMoor, 1972; Dupree Jones et al., 1997). However, in studies with control or comparison groups, no significant group differences in prevalence of sexual abuse were noted (Barnes, 1986; Hawton and Catalan, 1990; O'Sullivan, 1979; van Lankveld et al., 1995). In one study, the prevalence rate for sexual abuse in vaginismic women was actually lower than that in the general population (Basson, 1996). When asked to indicate their causal attributions for developing vaginismus, current sufferers and ex-sufferers ranked sexual abuse as least important (Ward and Ogden, 1994).

Male Partners of Vaginismic Women

Malleson (1942) implicated male partners in the etiology of vaginismus by arguing that the "trouble is emotionally infectious." The male can potentially cause or exacerbate vaginismus in the female partner by being "under-competent, over-anxious, or too forbearing." The most common assertion is that the male partner has been chosen because he is passive and unassertive, and the couple is involved in an unconscious collusion to avoid intercourse (Chisholm, 1972; Dawkins and Taylor, 1961; Ellison, 1972; Fertel, 1977; Friedman, 1962; Grafeille, 1986; Pillay, 1955; Silverstein, 1989; Stuntz, 1986). However, when personality characteristics of male partners are empirically compared with controls or norms, no group differences have been established (Duddle, 1977; Kennedy et al., 1995; van Lankveld et al., 1995). Masters and Johnson (1970) listed male sexual dysfunction as the most frequent etiological factor. Yet, in studies where subjects were queried about the

chronology of the male dysfunction, erectile dysfunction and premature ejaculation appear to be secondary to vaginismus and/or transient with successful treatment for vaginismus (*e.g.*, Barnes, 1986; Harrison, 1996; Hawton and Catalan, 1990; Lamont, 1994).

Several investigators have suggested that various types of couple difficulties (*e.g.*, infidelity, conflict, etc.) may result in vaginismus (Chisholm, 1972; Lamont, 1994; Shortle and Jewelewicz, 1986; Weiner, 1973). This conclusion was not supported by other research (O'Sullivan and Barnes, 1978; Ward and Ogden, 1994). In one study, Hawton and Catalan (1990) found that vaginismic couples demonstrated significantly better communication and better overall relationship ratings than a comparison group.

Miscellaneous Factors

Religious orthodoxy has been reported to be one of the primary etiological factors in vaginismus (Masters and Johnson, 1970). Although some authors argued that high moral expectations instilled by the mother (*e.g.*, Barnes, 1986) or sexual guilt resulting from a strict, religious upbringing (*e.g.*, Silverstein, 1989) can result in vaginismus, religiosity as a causal factor has failed to receive consistent support (Biswas and Ratnam, 1995; Duddle, 1977; Leiblum et al., 1989).

Personality has also been linked to the development of vaginismus. Based on a clinical sample of 100 vaginismic women, Friedman (1962) hypothesized that women in unconsummated marriages use a variety of defenses to deal with their conflicting emotions about sexuality; these defenses subsequently become part of their personality styles. Attempts to confirm these clinical hypotheses have failed when investigators used standard personality inventories (Duddle, 1977; Kennedy et al., 1995).

Feminist theory conceptualizes sexuality in general, and vaginismus in particular within a sociocultural context as an integral part of the discourse on theories and perceptions of masculinity and femininity (Drenth, 1988; Ogden and Ward, 1995). This approach disregards the vaginal spasm (and the traditional therapy goal of penetrative intercourse) and instead focuses on the emotional hindrances to intercourse underlying vaginismus: fear of intimacy (Ward and Ogden, 1994); a symptom of a defensive need to be closed (Silverstein, 1989); a feminine way of fighting back to gain the right to be coauthor of the sexual agenda (Kennedy et al., 1995); a covert signal to protest against the sexual cast of roles (Drenth, 1988); or a symptom of a lack of self-defined boundaries (Shaw, 1994). This theoretical approach views vaginismus as a defensive bodily response to

emotional pain, but without the negative connotation of a sexual dysfunction. The physical defense may not be due to the experience and/or expectation of physical pain, but can represent a defense from emotional pain and unwanted "intrusion."

Critique

A variety of interesting etiological hypotheses have been proposed to account for the development of vaginismus. Unfortunately, the studies reviewed suffer from such severe and basic methodological problems that a serious evaluation of the hypotheses is not possible. For example, only 5 (Arentewicz and Schmidt, 1983; Duddle, 1977; Hawton and Catalan, 1990; Kennedy et al., 1995; van Lankveld et al., 1995) of the 46 available studies had a data analysis section which included a formal statistical test. Only six studies (Arentewicz and Schmidt, 1983; Barnes, 1986; 1982; Duddle, 1977; Hawton and Catalan, 1990; Kennedy et al., 1995; van Lankveld et al., 1995) had any form of control or comparison group and none of these control groups were matched. Only five studies (Arentewicz and Schmidt, 1983; Duddle, 1977; Hawton and Catalan, 1990; Kennedy et al., 1995; van Lankveld et al., 1995) used standardized measurement instruments with known reliability or validity. Most importantly perhaps, all but three studies (Blazer, 1964; van Lankveld et al., 1995; Ward and Ogden, 1994) were designed as therapy outcome studies rather than direct etiological investigations. Etiological inferences are therefore made based on therapeutic efficacy and recollection of past events, rather than on direct and prospective hypothesis testing. In addition, all studies draw their samples from clinical populations currently or previously in treatment which are not likely to be representative of the population of vaginismic women. With the exception of two studies (Arentewicz and Schmidt, 1983; van Lankveld et al., 1995), data collection was not independent of the professionals involved in diagnosis and treatment.

These methodological problems could be easily remedied with standard cross-sectional designs, systematic selection criteria, matched controls, and standardized measurement procedures and instruments (cf. Meana et al., 1997a). Moreover, it is possible to design prospective studies with potential high-risk groups, such as victims of sexual trauma or women brought up in highly sexually restrictive, religious communities.

Treatment

Historical and contemporary treatment approaches to vaginismus have primarily targeted the

perceived immediate cause, the muscle spasm that prevents intercourse (Masters and Johnson, 1970; Sims, 1861; von Scanzoni, 1867). The basic treatment strategy has been called "incredibly simple" by Kaplan (1974, p. 417) and is summarized as follows: a) progressive vaginal dilatation and/or vaginal muscle exercises intended to desensitize the woman to vaginal penetration and to develop voluntary control of the vaginal muscles, thus preventing spasm; b) information and education are intended to enhance knowledge and beliefs about sexuality as a natural, normal activity; and c) elimination of associated psychological problems, such as phobic elements, negative conditioning, feelings of guilt, fear of pain, etc., via psychotherapeutic or sex therapy interventions. In addition, other, less frequently presented, but reportedly successful approaches include hypnotherapy (Araoz, 1982), biofeedback (Barnes et al., 1984), local injections of acetylcholine blockers (Brin and Vapnek, 1997), controlled enlargement of the vaginal introitus (Graber et al., 1969), application of topical anesthetic (Hassel, 1997), and abreaction interviews supported by intravenous diazepam (Mikhail, 1976). Treatment outcome in vaginismus is generally believed to be excellent (*e.g.*, Beck, 1993; Lazarus, 1963; Leiblum et al., 1989; Shortle and Jewelewicz, 1986; van de Wiel et al., 1990).

Our review of treatment outcome studies is summarized in Table 2 and includes treatment and case studies ($N > 3$) of vaginismus if they provided a minimal description of the treatment approach and offered some information concerning outcome. Case studies involving three or fewer patients (*e.g.*, Brin and Vapnek, 1997; Brinkley-Birk and Birk, 1975; Burchardt and Catalan, 1982; Colgan and Beautrais, 1977; Cooper, 1969; Haslam, 1965; Holroyd, 1970; Lange and Rethemeier, 1997; Leiblum et al., 1989; Ng, 1993; Plaut and RachBeisel, 1997; Zussman et al., 1974; for review see van de Wiel et al., 1990) are not included because they offer limited implications for treatment conclusions. A total of 23 studies carried out between 1952 and 1996 met the criteria for inclusion in the table.

The traditionally held belief in "simple" treatment and "excellent" outcome does not appear justified by our summary. Most treatment outcome reports are uncontrolled clinical studies with unspecified populations, poorly designed or unspecified treatments, inadequate evaluation and outcome measures, little or no follow-up, and limited or no statistical evaluation. The clinical interventions are typically not carefully described, or standardized, and usually imply more than the "simple strategy" described by Kaplan (1974). Successful outcome data, such as they are, vary dramatically, ranging

TABLE 2
Treatment Outcome Studies for Vaginismus (N > 3)

Reference	Design/N	Criteria for diagnosis	Treatment intervention	Outcome measures	Duration: treatment (DU) and follow-up (FU)	Outcome: drop out (DO), at treatment end (TE), and at follow up (FU)	Comments
Barnes, 1986	Uncontrolled clinical study (N = 55)	<i>Spasm</i> : had to be demonstrated during attempted gyne exam <i>Interference</i> : patient had never experienced penetration <i>Pain</i> : ?	Brief, insight oriented psychotherapy, desensitization with vaginal dilators, education, biofeedback (for 5 cases)	<i>Spasm</i> : introduction of largest dilator by husband with ease <i>Interference</i> : detailed questioning to ensure full penetration <i>Pain</i> : ? <i>Coital frequency</i> : ?	<i>DU</i> : 3-24 sessions <i>FU</i> : 6 month	<i>DO</i> : ? <i>TE</i> : "short-term success": 84% <i>FU</i> : 75%	1,2,3,4
Barnes et al., 1984	Uncontrolled clinical study of consecutive cases (N = 5; first on wait list)	<i>Spasm</i> : gyne exam <i>Interference</i> : couple interview <i>Pain</i> : ?	Sensate focus (male-female co-therapy with both partners), education (each spouse alone with same-sex therapist), gyne exam*, biofeedback-EMG (to teach muscle control), graduated dilatation at home with partner, transition to intercourse "simulated" in the clinic	<i>Spasm</i> : ability to relax as measured by EMG, <i>Interference</i> : "detailed questioning" to ascertain full penetration <i>Pain</i> : ? <i>Coital frequency</i> : ?	<i>DU</i> : 6-11 weeks <i>FU</i> : 6-9 month	<i>DO</i> : ? <i>TE</i> : "initial success": 100% <i>FU</i> : "secure coital pattern": 3 couples, "no coitus": 2 couples	1,2,3,4
Biswas and Ratnam, 1995	Uncontrolled clinical study (N = 19)	<i>Spasm</i> : ? <i>Interference</i> : ? <i>Pain</i> : ?	"Rapid desensitization using vaginal molds", counseling	<i>Spasm</i> : ? <i>Interference</i> : ? <i>Pain</i> : ? <i>Coital frequency</i> : ?	<i>DU</i> : 2-6 weeks <i>FU</i> : ?	<i>DO</i> : ? <i>TE</i> : 100% <i>FU</i> : ?	1,2,3,4
Clement and Schmidt, 1983	Uncontrolled clinical study of consecutive cases (N = 27)	<i>Spasm</i> : therapist, "consultant" + couple ratings <i>Interference</i> : interview <i>Pain</i> : ?	Long-term or intensive male-female co-therapy psychotherapy and sex therapy, progressive dilatation (with partner)	<i>Spasm</i> : ? <i>Interference</i> : ? <i>Pain</i> : ? <i>Coital frequency</i> : ?	<i>DU</i> : average of 42 sessions <i>FU</i> : 3 phases: 3 months, 1 year, 2.5-4.5 years after therapy completion	<i>DO</i> : "slightly improved": 0% "unimproved": 7% "separation of couple": 4% <i>TE</i> : "therapy completed (cured)": 67% "therapy completed (distinctly improved)": 11% "therapy completed (improved)": 0% "therapy completed (slightly improved)": 11% "therapy completed (unimproved)": 0% <i>FU</i> : "coitus in last 3 month": at FU2: 93%, at FU3: 78% (12 couples "cured" vs. 18 after TE)	

Dawkins and Taylor, 1961	Uncontrolled clinical study (<i>N</i> = 70)	<i>Spasm</i> : gyne exam <i>Interference</i> : ? <i>Pain</i> : ?	Gyne exam,* digital self-exploration, control of vaginal sphincter, in some cases dilatation, sex education	<i>Spasm</i> : ? <i>Interference</i> : ? <i>Pain</i> : ? <i>Coital frequency</i> : ?	<i>DU</i> : 1 to 5+ interviews <i>FU</i> : ?	<i>DO</i> : ? <i>TE</i> : "consummation": 69% "non-consummation": 31% <i>FU</i> : once pregnancy was achieved, coitus was discontinued; some achieved only a "few mechanical penetrations without pleasure"; and others maintained "satisfying sexual relationships" (proportions unspecified)	1,2,3,4
Drenth et al., 1966**	Retrospective survey (questionnaires sent to former patients; <i>N</i> = 49)	<i>Spasm</i> : ? <i>Interference</i> : ? <i>Pain</i> : ?	Gyne exam,* systematic desensitization in vivo/ progressive dilatation, relational therapy or individual counseling, referral for psychotherapy when indicated, instruction on self-insemination	<i>Spasm</i> : patient questionnaire <i>Interference</i> : patient questionnaire <i>Pain</i> : ? <i>Coital frequency</i> : ?	<i>DU</i> : ? <i>FU</i> : ?	<i>DO</i> : ? <i>TE</i> : "overall success (consummation)": 54%; "success for those with pregnancy as therapy goal": 74%, "for those with the aim to resolve sexual problem": 33% <i>FU</i> : ?	1,2,3,4
Duddle, 1977	Quasi-experimental study (<i>N</i> = 32; control = 50)	<i>Spasm</i> : ? <i>Interference</i> : interview, questionnaire <i>Pain</i> : ?	Mixture of insight directed and behaviour therapy, communication training, progressive dilatation, sensate focus	<i>Spasm</i> : ? <i>Interference</i> : ? <i>Pain</i> : ? <i>Coital frequency</i> : ?	<i>DU</i> : ? <i>FU</i> : ?	<i>DO</i> : "unknown": 21% <i>TE</i> : "success": 72% "failure": 7% (1 woman) <i>FU</i> : ?	1,2,3,4
Ellison, 1968	Retrospective survey (author's own patient files; <i>N</i> = 100)	<i>Spasm</i> : ? <i>Interference</i> : interview <i>Pain</i> : interview	Insight directed therapy simultaneous with "deconditioning" using vaginal dilators	<i>Spasm</i> : ? <i>Interference</i> : interview/ "progress letters" <i>Pain</i> : interview/"progress letters" <i>Coital frequency</i> : ?	<i>DU</i> : from 3 hours to 6+ hours <i>FU</i> : yes, but no data	<i>DO</i> : "unknown": 8% <i>TE</i> : "consummation": 87% "failed": 5% <i>FU</i> : "personality maturing effects of successful consummation and improve sexual adjustment"	1,2,3,4
Friedman, 1963	Retrospective survey (other clinician's files; <i>N</i> = 100)	<i>Spasm</i> : gyne exam <i>Interference</i> : interview <i>Pain</i> : ?	Insight-directed psychotherapy, gyne exam,* progressive dilatation	<i>Spasm</i> : ? <i>Interference</i> : interview? <i>Pain</i> : ? <i>Coital frequency</i> : ?	<i>DU</i> : 1-15 sessions <i>FU</i> : "from weeks to years"	<i>DO</i> : "unknown": 12% <i>TE</i> : "regular intercourse (orgasm)": 20% "regular intercourse (pleasure)": 36% "regular intercourse (frigid)": 5% "technical consummation": 10% "non-consummation": 17% <i>FU</i> : ?	1,2,3,4
Fuchs et al., 1973	Uncontrolled clinical study (<i>N</i> = 43)	<i>Spasm</i> : ? <i>Interference</i> : interview? <i>Pain</i> : ?	In vivo (<i>N</i> = 34) and in vitro (<i>N</i> = 9) systematic desensitization during the hypnotic state"	<i>Spasm</i> : ? <i>Interference</i> : interview <i>Pain</i> : ? <i>Coital frequency</i> : ?	<i>DU</i> : ? <i>FU</i> : in vivo: 1-5 years, in vitro: 1-3 years	<i>DO</i> : ? <i>TE</i> : in vitro: "success": 67% in vivo: "success": 91% <i>FU</i> : "maintenance of normal sexual adjustment"	1,2,3,4

TABLE 2
Continued

Reference	Design/N	Criteria for diagnosis	Treatment intervention	Outcome measures	Duration: treatment (DU) and follow-up (FU)	Outcome: drop out (DO), at treatment end (TE), and at follow up (FU)	Comments
Gaafar, 1962	Uncontrolled clinical study (N = 16)	<i>Spasm: ?</i> <i>Interference: ?</i> <i>Pain: ?</i>	Gyne exam,* education, use of graded dilators and fingers during gyne exam and instruction for the patient to use herself for home practice	<i>Spasm: ?</i> <i>Interference: ?</i> <i>Pain: ?</i> <i>Coital frequency: ?</i>	DU: 24 hours FU: ?	DO: ? TE: "complete success": 86% "need for tranquilizer before dilatation and shortly after intercourse": 14% FU: ?	1,2,3,4
Hall, 1952	Uncontrolled clinical study (N = 26)	<i>Spasm: failure to contract vaginal muscles voluntarily</i> <i>Interference: ?</i> <i>Pain: ?</i>	Gyne exam,* vaginal muscle training (Kegels)	<i>Spasm: ?</i> <i>Interference: interview</i> <i>Pain: ?</i> <i>Coital frequency:</i>	DU: 3 months to 8 years FU: ?	DO: "refusal of treatment/seen only once": 8% TE: "complete cessation of dyspareunia": 62% "unsatisfactory": 30% FU: ?	1,2,3,4
Harrison, 1996	Uncontrolled clinical study (N = 32)	<i>Spasm: ?</i> <i>Interference: interview</i> <i>Pain: ?</i>	Education, sex therapy, relaxation training, progressive dilatation using patient + partner's fingers and sometimes using dilators, "use of imagery", contraceptive strongly recommended	<i>Spasm: ?</i> <i>Interference: Interview, achieved pregnancy?</i> <i>Pain: ?</i> <i>Coital frequency: ?</i>	DU: 2-23 sessions FU: ?	DO: drop-out before begin of therapy: 6% drop-out before termination of therapy for those women without success: 19% total drop-out: 25% TE: "success": 69% "totally without success": 25% FU: ?	1,2,3,4
Hawton and Catalan, 1990	Quasi-experimental clinical study of consecutive couples (N = 30; control = 76)	<i>Spasm: ?</i> <i>Interference: therapist global ratings of sexual history/relationship; relationship questionnaire (completed by patients)</i> <i>Pain: ?</i>	Clinical interview, sensate focus, vaginal muscle training (Kegels), vaginal self-examination, vaginal exploration by partner, cognitive therapy, graded exposure and encouragement in the clinical room	<i>Spasm: ?</i> <i>Interference: therapist ratings on a 5-point scale</i> <i>Pain: ?</i> <i>Coital frequency: ?</i>	DU: 8-37 sessions FU: 3 months	DO: "drop out": 10% "discontinuation due to lack of progress": 7% "other reason": 3% TE: "full sexual intercourse": 43% "intercourse with some difficulty": 37% "improvement but largely unresolved": 7% "no change": 13% FU: "full sexual intercourse": 61% "intercourse with some difficulty": 26% "improvement but largely unresolved": 9% "no change": 4%	1,2,3
Kennedy et al., 1995	Uncontrolled clinical study (N = 18)	<i>Spasm: ?</i> <i>Interference: ?</i> <i>Pain: ?</i>	Individual psychotherapy for both partners, education, "reorientation of sexual attitudes when necessary", in vivo desensitization, retraining of sexual behavior, with priority of interpersonal relationship at all stages	<i>Spasm: ?</i> <i>Interference: ?</i> <i>Pain: ?</i> <i>Coital frequency: ?</i>	DU: 4-14 sessions FU: ?	DO: ? TE: "successful sexual intercourse": 78% FU: ?	1,2,3,4

Lamont, 1978	Uncontrolled clinical study of consecutive cases (<i>N</i> = 80)	<i>Spasm</i> : gyne exam, degree of muscle activity <i>Interference</i> : interview (history of penetration difficulty), categorization into 5 subgroups <i>Pain</i> : interview (history of penetration difficulty and pain (?))	Weekly, 1-hour sessions aimed at systematic desensitization to vaginal penetration, deep and vaginal muscle relaxation (Kegels), physical and verbal communication and pleasuring exercises, progressive dilatation, couple therapy	<i>Spasm</i> : ? <i>Interference</i> : ? <i>Pain</i> : ? <i>Coital frequency</i> : ?	<i>DU</i> : average of 3.4 - 7.3 sessions <i>FU</i> : 6 weeks - "over 2 years"	<i>DO</i> : "assessment only": 18% <i>TE</i> : "success with coital pleasure": 66% "technical success": 11% "no success": 5% <i>FU</i> : ?	1,2,3,4
Masters and Johnson, 1970	Uncontrolled clinical study (<i>N</i> = 26)	<i>Spasm</i> : gyne exam <i>Interference</i> : interview ? <i>Pain</i> : ?	Intense 2-week daily sessions with male-female cotherapy team, demonstration of spasm to both partners, education, graduated dilatation, sensate focus	<i>Spasm</i> : ? <i>Interference</i> : ? <i>Pain</i> : ? <i>Coital frequency</i> : ?	<i>DU</i> : two-week, daily treatment <i>FU</i> : 5 years	<i>DO</i> : ? <i>TE</i> : 100% <i>FU</i> : 100%	2,3,4
Mikhail, 1976	Uncontrolled clinical study (<i>N</i> = 4)	<i>Spasm</i> : gyne exam? <i>Interference</i> : interview? <i>Pain</i> : ?	"Abreaction interviews" with intravenous diazepam* (10-30 mg)	<i>Spasm</i> : ? <i>Interference</i> : ? <i>Pain</i> : ? <i>Coital Frequency</i> : ?	<i>DU</i> : 3-6 interviews with 2-day intervals; individual therapy + marital therapy 2-6 month; <i>FU</i> : 2-6 month	<i>DO</i> : ? <i>TE</i> : 100% <i>FU</i> : 100%	1,2,3,4
O'Sullivan and Barnes, 1978	Uncontrolled clinical study of consecutive cases (<i>N</i> = 46)	<i>Spasm</i> : gyne exam <i>Interference</i> : ? <i>Pain</i> : ?	Gyne exam,* desensitization to vaginal penetration by use of digital examination, dilators or vibrators, sensate focus, couple therapy	<i>Spasm</i> : ? <i>Interference</i> : ? <i>Pain</i> : ? <i>Coital frequency</i> : ?	<i>DU</i> : average 6 sessions <i>FU</i> : ?	<i>DO</i> : "drop-out group": 48% <i>TE</i> : "normal sexual function": 52% <i>FU</i> : ?	1,2,3,4
O'Sullivan, 1979	Quasi-experimental study (<i>N</i> = 23; control = 30)	<i>Spasm</i> : gyne exam <i>Interference</i> : ? <i>Pain</i> : ?	Gyne exam,* assessment	<i>Spasm</i> : ? <i>Interference</i> : ? <i>Pain</i> : ? <i>Coital frequency</i> : ?	<i>DU</i> : 3-7 sessions <i>FU</i> : 1 year	<i>DO</i> : "pre-therapy drop out": 17% "drop out": 37% <i>TE</i> : "recovered": 63% <i>FU</i> : 16% relapse	1,2,3,4
Reamy, 1982	Uncontrolled clinical study (<i>N</i> = 14)	<i>Spasm</i> : inability to tolerate gyne exam? <i>Interference</i> : ? <i>Pain</i> : ?	In vivo and in vitro systematic desensitization (progressive dilatation, imagery), vaginal muscle relaxation (Kegels), gyne exam,* sex education, progressive muscle relaxation, couple counseling, sensate focus	<i>Spasm</i> : inability to tolerate gyne exam? <i>Interference</i> : ? <i>Pain</i> : ? <i>Coital frequency</i> : ?	<i>DU</i> : 2-8 weeks <i>FU</i> : 4 month - 2 years	<i>DO</i> : ? <i>TE</i> : "intercourse": 93% <i>FU</i> : "no apparent relapse"	1,2,3,4
Shaked and Lotan, 1984	Uncontrolled clinical study (<i>N</i> = 145)	<i>Spasm</i> : ? <i>Interference</i> : couple interview, questionnaire <i>Pain</i> : ?	Desensitization with vaginal dilators, "active" couple behavioural therapy with psychodynamic elements, gyne exam,* sex education, muscle relaxation	<i>Spasm</i> : ? <i>Interference</i> : ? <i>Pain</i> : ? <i>Coital frequency</i> : ?	<i>DU</i> : 1-21+ sessions <i>FU</i> : ?	<i>DO</i> : 30% <i>TE</i> : "full success": 46% "partial success": 17% "failure": 6% "still in treatment": 1% <i>FU</i> : ?	1,3,4

DOES VAGINISMUS EXIST?

*Gyne exam is considered a treatment when performed as a method of education, in a relaxed, sensitive, and nonmedical fashion.

**The outcome criterion of this study was pregnancy, not intercourse.

(1) Treatment not sufficiently specified/no manual; (2) limited information on sample characteristics; (3) therapist and outcome evaluator not independent; (4) no statistical tests used.

from 100% (e.g., Biswas and Ratnam, 1995; Gaafar, 1962; Masters and Johnson, 1970; Mikhail, 1976) to below 60% (e.g., Drenth et al., 1996; Friedman, 1962; Hawton and Catalan, 1990). Authors have rarely reported dropout rates. When they do, however, these rates are significant (e.g., Duddle, 1977; Harrison, 1996; Lamont, 1978; O'Sullivan, 1979; O'Sullivan and Barnes, 1978). The treatment of vaginismus can not be considered "well-established" nor "probably efficacious" according to recently proposed criteria (APA, 1995; Heiman and Meston, 1997).

There are a few studies that overcame some of these methodological difficulties and hence may provide a closer estimate of actual therapy outcome (e.g., Clement and Schmidt, 1983; Hawton and Catalan, 1990). For example, Clement and Schmidt (1983) reported the results of a treatment study involving 262 couples with various sexual dysfunctions; 27 women were diagnosed with vaginismus and treated with a modified and extended version of Masters and Johnson's sex therapy (1970). A therapist as well as an independent rater carefully assessed the subjects before and immediately after treatment, and at follow-up (cf. Table 2). Assessments using rating scales, questionnaires, and psychological tests evaluated sexual symptoms, function and behavior, the couple relationship, and general psychological status. Immediately after therapy, vaginismus was "cured" for 67% of subjects. After further improvement of the penetration difficulties at the 3 months follow-up, renewed difficulties with penetration were observed at subsequent follow-ups. Although a significant improvement of vaginismus symptoms was observed for most couples, increased sexual satisfaction and pleasure did not necessarily follow achievement of penile-vaginal intercourse.

Critique

The traditional outcome measure of successful treatment for vaginismus, penile-vaginal intercourse, is questionable on both theoretical and empirical grounds. Feminist theorists have described the goal of penile-vaginal intercourse as one of the normative biases in sex therapy (Drenth, 1988; Ogden and Ward, 1995; Shaw, 1994). Although this view is controversial, it is supported by the frequently reported (e.g., Dawkins and Taylor, 1961; Drenth et al., 1996; Ghavami-Dicker, 1988; Harrison, 1996; Leiblum et al., 1989) clinical observation that for some vaginismus women, the treatment goal is conception rather than the achievement of penetration. Once conception occurs, further therapy gains are often limited, and clients may drop out. Traditional outcome criteria also fail to indicate whether

the putative vaginal muscle spasm has actually been resolved, whether interference with intercourse has significantly decreased, or whether intercourse is less painful and more pleasurable. Finally, the equivocal definition of vaginismus and its subtypes often makes it difficult to evaluate the degree of change because of the lack of validity and reliability of the diagnosis pretreatment. It is not clear whether researchers have failed to empirically demonstrate the clinically reported positive treatment outcome, or whether the presumed positive outcome is an artifact of self-selection and selective reporting.

Conclusions

Our review of the vaginismus literature has raised serious doubts, in our minds, about whether current conceptualizations of vaginismus are appropriate. Three important questions must be empirically addressed. First, is increased vaginal/pelvic muscle tension/spasm characteristic of vaginismus? Our view is that the role of muscle spasm/tension in vaginismus may be similar to that in chronic tension-type headache, *i.e.*, an important symptom but not a defining characteristic (cf. Simons and Mense, 1998). Second, is the experience of pain a defining characteristic of the problem? We believe that pain or altered sensation (dysesthesia) is a crucial characteristic that has been overlooked. Third, should vaginismus be reconceptualized as a phobic reaction to penetration? This seems true for some vaginismus women, but it is not clear whether fear of penetration is cause or effect.

We do not believe that the diagnosis of vaginismus as the "distinct affection" described by Sims in 1861 will survive. Rather, we predict that women currently assessed as vaginismus will be understood as suffering from either a "vaginal penetration aversion/phobia," or "genital pain disorder," or both. The vaginal penetration aversion/phobia conceptualization implies careful assessment of all situations related to vaginal and possibly nonvaginal penetration (cf. Plaut and RachBeisel, 1997). Cognitive behavioural and pharmacological interventions typically used for aversion/fear reduction would be appropriate (Barlow, 1988). A genital pain disorder conceptualization implies a detailed and dimensional assessment of the pain in terms of quality, location, intensity, and time course and a multidisciplinary approach to treatment already exemplified in the treatment of other chronic pain syndromes (Gamsa, 1994; Melzack and Wall, 1983; Wesselmann et al., 1997).

It is not clear to us why there has been so little rigorous research concerning vaginismus. In effect,

the basic ideas introduced over 100 years ago have continued to dominate clinicians' and researchers' thinking and have not been seriously challenged. Beck (1993) has justifiably called vaginismus "an interesting illustration of scientific neglect" (p. 381). Renewed scientific interest in this neglected women's health problem is overdue.

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Literature Review Update

During the period between the fall of 1998 and December 2001, 9 articles have been published discussing the difficulty of differentiating a diagnosis of vaginismus from dyspareunia, in particular Vulvar Vestibulitis Syndrome (VVS), a common cause for dyspareunia in women. In addition, 5 articles addressed the treatment of vaginismus in view of concurrent sexual pain, fear, and phobia. There are, however, no new, empirical studies investigating other determinants of vaginismus.

The increasing clinical evidence that significant proportions of women with vaginismus also suffer from VVS (e.g., de Kruiff, ter Kuile, Weijnenborg & van Lankveld, 2000; Pukall, Reissing, Binik, Khalifé & Abbott, 2000; Wijma, Jansson, Nilsson, Hallböök & Wijma, 2000), has initiated the debate about diagnostic conceptualization that increasingly revolve around the importance of pain and fear of pain in vaginismus. For example, Kaneko (2001) suggested a reformulation of vaginismus as a penetration disorder based on the woman either not being able to experience vaginal penetration, or being able to experience vaginal penetration but with pain, or feelings of fear and/or disgust. Pain, vaginismus (i.e. vaginal spasm), fear, and disgust become secondary criteria to primary difficulties with vaginal penetration. Other authors have conceptualized vaginismus as a multifaceted syndrome where the vaginal spasm is a symptom or response to pain and distress (Butcher, 1999; Ng, 2001; Ng, 1999), to a phobia of vaginal penetration (Ohkawa, 2001), or to female sexual disempowerment (Hiller, 2000).

Despite a growing interest in the revision of the diagnostic formulation of vaginismus, the absence of formal scientific investigation continues to be problematic. A notable exception is de Kruiff et al. (2000) who compared 14 women with vaginismus and 16 with dyspareunia on vaginal muscle tension, vulvar/vaginal pain,

and symptoms of anxiety and stress. The researchers found no differences in tension of the vaginal muscles and stress/anxiety during the physical examination. No differences on retrospective pain report were noted, however, during the examination, women with dyspareunia rated their pain significantly higher. The authors concluded that a clinical differentiation of vaginismus and dyspareunia is “difficult, or nearly impossible”.

Four papers on the treatment of vaginismus have been published since Reissing et al. (1999) review. Leiblum (2000) noted the increasing attention to physiological factors, which may contribute to the development of vaginismus but suggested that the psychological investigation of the woman with vaginismus and her partner continues to be crucial to treatment. Butcher (1999) stresses the inclusion of the exploration of “the phobic” element at the end of the traditional cognitive-behaviour treatment protocol and she emphasizes that this is often the most difficult part of therapy. Har-Toov, Militscher, Lessing and Abramov (2001) reported on the treatment of concomitant vaginismus and VVS of 31 women. Treating vaginismus (vaginal dilation and psychotherapy) alone was sufficient to be able to have pain free intercourse for half the women. However, for the remaining women their complaints of VVS needed to be addressed directly (avoidance of irritants, use of lubricants, anti-yeast treatment, vitamin E topical application, calcium supplements, and low oxalate diet). At the end of the study, 3 women continued to have severe pain and were referred for surgery. One additional case study (Peleg, Press, Ben-Zion, 2001) described a Muslim Bedouin couple that refused the traditional sex therapy approach for vaginismus because of “cultural barriers”. The application of nitroglycerin ointment to the vagina to relax smooth muscles was reported to result in pregnancy and continued intercourse 2 months following delivery.

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Transition Text 1

The critical review of the literature and recent reports regarding the difficulty of differentially diagnosis vaginismus and Vulvar Vestibulitis Syndrome confirmed the importance of examining the existing diagnostic criterion of vaginismus, the vaginal spasm, and the diagnostic reliability based on this taxon. We also noted that there are no studies available examining pain characteristics in vaginismus despite the fact that vaginismus is classified as a sexual pain disorder. We decided to use different health professionals, surface EMG, a structured interview and validated pain measures to assess vaginal spasm, behaviour, and pain to obtain a most comprehensive representation. The following manuscript reports the results of this study.

Vaginal Spasm, Pain and Behaviour: An Empirical Investigation of the
Diagnosis of Vaginismus

Elke D. Reissing, Ph.D.¹, Yitzchak M. Binik, Ph.D.^{2,3}, Samir Khalifé, M.D.⁴,

Deborah Cohen, M.D.⁴, Rhonda Amsel, M.A.²

¹ School of Psychology, University of Ottawa, 11 Marie Curie (604), Ottawa, Ontario, K1N 6N5, Canada.
Send reprint requests to Elke D. Reissing, (Reissing@uottawa.ca).

² Department of Psychology, McGill University, Montréal, Québec, Canada.

³ Sex and Couple Therapy Service, McGill University Health Center, Montréal, Québec, Canada.

⁴ Department of Obstetrics and Gynecology, McGill University Health Center, Montréal, Québec, Canada.

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Abstract

This study investigated the roles of vaginal spasm, pain and behavior in the diagnosis of vaginismus. It also investigated the ability of psychologists, gynecologists, and physical therapists to diagnose vaginismus reliably. Eighty-seven women were individually matched on age, relationship status, and parity and assigned to 3 groups, vaginismus, dyspareunia resulting from vulvar vestibulitis syndrome (VVS), and no pain. Although the level of overall diagnostic agreement between different diagnosticians was moderate, it was poor for differentiating vaginismus and dyspareunia/VVS. Vaginal spasm did not specifically identify women with vaginismus. No measure of pain differentiated between women in the vaginismus and dyspareunia/VVS groups, and all women suffering from vaginismus experienced vulvar pain during the cotton swab test for VVS. Both, women in the vaginismus and dyspareunia/VVS groups exhibited higher levels of pelvic floor tone compared to women with no pain; however, women in the vaginismus group demonstrated the highest levels. The only dependent measure that categorically distinguished vaginismus from other groups was the presence of avoidance and defensive behaviors during gynecological and pelvic floor examinations. These data suggest that the spasm based definition and the subsequent diagnostic reliability of vaginismus may not be adequate. A reformulation of the diagnostic entity of vaginismus is discussed.

Introduction

Vaginal spasm has rarely been questioned as the defining characteristic for the diagnosis of vaginismus since a nineteenth century physician (Sims, 1861) first coined the term to describe vaginal penetration difficulties. All current nosologies use variants of the spasm taxon. For example, the DSM IV classifies vaginismus as a sexual dysfunction and uses the following 3 diagnostic criteria: A. Recurrent or persistent involuntary spasm of the musculature of the outer third of the vagina that interferes with intercourse; B. The disturbance causes marked distress or interpersonal difficulty; C. The disturbance is not better accounted for by another Axis I disorder and is not due exclusively to the direct physiological effects of a general medical condition (DSM; APA, 1994). The DSM also divides vaginismus into subtypes (lifelong/acquired, generalized/situational, due to psychological/mixed factors). Diagnostic criteria B and C and the subtypes listed above are used for all DSM sexual dysfunctions. Thus the only unique diagnostic criterion for vaginismus is a vaginal spasm that interferes with intercourse.

Recently, the International Consensus Development Conference on Female Sexual Dysfunction again endorsed the use of vaginal spasm as the defining criterion for vaginismus (Basson, Berman, Burnett, Derogatis, Ferguson et al., 2000). This 150-year consensus is remarkable and it is equally remarkable that the validity of the spasm-based criterion for vaginismus has never been evaluated (Reissing, Binik & Khalifé, 1999). There are several potential reasons for this. First, there is no generally accepted definition of the term spasm and no consensus concerning how to differentiate severe muscle contractions from cramps, chronic muscle tension, or spasm (Simons, Mense &

Russell, 2001). Second, there is no consensus concerning which vaginal/pelvic muscles are involved in the putative spasm of vaginismus. Existing reports range from vague descriptors such as the “outer third of the vagina” to specific muscles and muscle groups such as the bulbocavernosus and the levator ani (e.g., Reissing et al., 1999). Third, health professionals usually involved in the assessment of vaginismus, rarely have sufficient expertise to diagnose vaginal muscle spasm. Myologists and physical therapists that typically assess and treat muscle problems/spasm have rarely been consulted concerning vaginismus and this problem has never been mentioned in the myology literature. While gynecologists have some relevant training, there has never been a gynecological diagnostic reliability study. Although a gynecological exam is often recommended, it is not required for the diagnosis. Moreover a gynecological exam is presumably inconclusive in the case of situational vaginismus, where a woman is able to have pelvic examinations, but is unable to have intercourse. Often, gynecological confirmation of spasm is waived to avoid causing unnecessary pain (e.g., Biswas & Ratnam, 1995) or discomfort (e.g. Drenth, 1988). Fourth, the interrelationship of muscle spasm, pain, and interference with intercourse has never been adequately described. It is not clear whether the spasm is a reaction to pain or whether pain occurs as a result of the spasm or both (e.g., Ng, 1999). Although vaginismus is currently sub-classified in the DSM IV as a sexual pain disorder, there is no diagnostic requirement for the report of pain and no empirical information concerning the occurrence of pain associated with vaginismus is available.

Only three studies (van der Velde & Everaerd, 1999; van der Velde & Everaerd, 2001; de Kruiff, ter Kuile, Weijnenborg & van Lankveld, 2000) have investigated

vaginal and pelvic floor muscle activity in women with vaginismus. Van der Velde and Everaerd (1999) compared pelvic floor activity in women who were diagnosed with vaginismus to that of control subjects. Muscle activity during a series of pelvic floor contractions (Kegel exercises) was monitored via vaginal surface EMG in 67 women with vaginismus and 43 control subjects. No systematic group differences were found in voluntary control (i.e. ability to contract or relax) the pelvic muscles. In a second study, 22 women with vaginismus and 7 controls were exposed to either physically or sexually threatening, or sexually neutral or positive film segments. Again, no group differences in pelvic floor activity were found either on baseline measures, or during the films (van der Velde & Everaerd, 2001).

While these studies were not aimed at directly investigating the vaginal muscle spasm diagnostic criterion for vaginismus, their important finding was that women with vaginismus are essentially not differentiable from controls in voluntary control and activity of the muscles of the pelvic floor. Interestingly, although inclusion criteria for both studies were based on meeting DSM diagnostic criteria, none of the women with vaginismus experienced spasm with the vaginal insertion of the sensor during the testing sessions. While it is possible that only women with less severe penetration difficulties self-selected for these studies, it is also possible that vaginal spasm does not characterize women with vaginismus and may not be the major source of interference with intercourse.

The third study examining vaginal and pelvic floor muscle activity was an exploratory in nature and aimed at identifying similarities and differences in clinical presentation between 30 patients with vaginismus and dyspareunia. In this study, de

Kruiff, ter Kuile, Weijnenborg and van Lankveld (2000) assessed pelvic muscle tension, pain ratings with attempted intercourse and gynecological examination, as well as anxiety. While women with vaginismus avoided vaginal intercourse more, no differences in vaginal muscle tension, ability to insert a finger, and pain during attempted intercourse were found compared to women with dyspareunia. Interestingly, vaginal spasm is not mentioned as a diagnostic tool, a possible clinical differentiator, or actually present during the gynecological examinations. The authors concluded that the diagnostic differentiation between vaginismus and dyspareunia “is difficult or nearly impossible” (p.152).

The primary goal of the following study was an attempt to systematically investigate the validity of vaginal spasm as a diagnostic criterion for vaginismus. Different methods were employed for assessing spasm including gynecological and physical therapist assessments, vaginal surface EMG, and patient self-report. Pelvic floor physical therapists assessments were included because, in our clinical experience, they are typically more skilled than the average gynecologist in the evaluation of vaginal/pelvic musculature. A second important goal of the study was to assess pain quantitatively and qualitatively in women suffering from vaginismus. Women suffering from vaginismus were compared to two matched control groups, women suffering from dyspareunia resulting from vulvar vestibulitis syndrome (VVS), and those with no pain history. Vulvar vestibulitis syndrome is thought to be the most common form of premenopausal dyspareunia. Its etiology is unknown and there are no known associated physical findings with the possible exception of non-specific inflammation (Binik, Meana, Berkley & Khalifé, 1999). The inclusion of the dyspareunia/VVS group is

particularly important as a control for the woman's repeated experience or expectation of pain during intercourse. It also provides a useful diagnostic comparison group since there have been numerous suggestions that this syndrome is difficult to differentiate from vaginismus (Abramov, Wolman & David, 1994; Basson & Riley, 1994; Kaneko & Watanabe, 1999; van Lankveld, Brewaeys, Ter Kuile & Weijenborg, 1995; Pukall, Reissing, Binik, Khalifé & Abbott, 2000).

We hypothesized that vaginal/pelvic spasm would not characterize women with vaginismus. Other aspects of pelvic floor muscle activity, e.g. chronic tension of the pelvic musculature, would differentiate women with vaginismus, from those in the VVS and no pain with intercourse groups. We further hypothesized that the diagnostic reliability of the category of vaginismus would not be sufficiently high to justify its current use. Finally, we hypothesized that women with vaginismus would report elevated levels of pain during attempted intercourse and during gynecological and physical therapist examinations.

One crucial theoretical and practical issue in studying vaginal/pelvic spasm as the essential diagnostic criterion in vaginismus was that an empirical investigation of the validity of this criterion could not require its *a priori* existence. This required a behavioural definition of vaginismus that could not include vaginal spasm. The behavioural criterion used below relies on a history of vaginal penetration failure, which is part of the DSM IV criterion A (see above) and is typically what clinicians focus upon in practice.

Method

Overview of Research Protocol

Participants were recruited through advertisement, media attention and professional referral. Potential subjects were screened over the telephone and the study was explained in detail. If appropriate, an initial appointment was scheduled. The research protocol was carried out at the participating gynecologists' office and was spread over 4 separate sessions with a minimum of 2 days between each session.

During the first session, subjects signed a consent form and the first author or a trained clinical research assistant administered a structured interview. Group assignment to the vaginismus, vulvar vestibulitis syndrome or no pain with intercourse control group was determined on the basis of this structured interview. Immediately following this, the first gynecological examination and EMG evaluation were completed. The initial session lasted approximately 2 – 3 hours. The physical therapist evaluations occurred on the second and third visits, which lasted about 30 minutes each. At the fourth and final visit, participants underwent their second gynecological exam and EMG test; they were also provided with diagnostic and other information, and were referred appropriately if necessary. Each diagnostician was blind to previous diagnoses, study group assignment, and results of the examinations of all other diagnosticians.

Participants were given \$60 to defray transportation and incidental costs.

Participants

One hundred and ten women came to the first appointment. Eleven women meeting the inclusion criteria for the no pain with intercourse control group and 2 women meeting the inclusion criteria for the vaginismus group dropped out of the study; all women meeting the inclusion criteria for the vulvar vestibulitis group completed the

protocol. The data from 1 woman who met the inclusion criteria for the vaginismus group and 3 who met criteria for the vulvar vestibulitis group were not used in the data analysis because they could not be matched. Five women who met inclusion criteria for vaginismus were excluded from the study following a diagnosis of hymeneal abnormality and one woman was excluded because of the presence of a vaginal septum. The data from 87 women was therefore included in the analyses below. Participants were tested between November 1998 and February 2000.

Inclusion criteria for the different experimental groups were as follows:

Vaginismus. 1. Never having been able to experience vaginal intercourse, despite attempts on at least 10 separate occasions OR, 2. Never having been able to experience vaginal intercourse despite attempts on *at least* two separate occasions and demonstration of “*active avoidance*” of vaginal penetration (see below) OR, 3. A current inability to experience vaginal intercourse AND “*active avoidance*” of vaginal penetration for at least 1 year, although vaginal penetration was experienced at least once before this period. “*Active avoidance*” of vaginal penetration is defined as an average of less than 1 attempt at vaginal intercourse every 2 months over the past year despite adequate opportunity or being involved in a relationship, AND also meeting 1 of the following 2 criteria: 1. Never having seen a health professional for, or never having successfully completed a pelvic exam 2. Never having used tampons.

Vulvar vestibulitis syndrome (VVS) 1. Ability to experience vaginal penetration, but such penetration is painful on at least 50% of all attempts, AND 2. The pain is reported to be located at the entrance of the vagina and starts with vaginal penetration, AND 3.

Is described as burning and/or cutting, AND 4. The pain is personally distressing and has been present for at least 1 year.

No-pain. 1. Able to experience vaginal penetration without difficulty, AND 2. No history of chronic or recurrent vulvar/vaginal/pelvic pain or penetration difficulty during intercourse, gynecological examinations, or tampon insertion.

Specific exclusion criteria for the vaginismus group were the presence of hymeneal abnormalities. These were detected during the initial gynecological examination and these women were referred for a surgical consultation and dropped from the study. General exclusion criteria for all experimental groups included: (1) presence or a history of chronic vulvar/vaginal/pelvic pain not uniquely linked to intercourse; (2) concurrent pregnancy; (3) concurrent uro-genital infection.

Subjects were matched on age (+/- 3 years), relationship status (single/dating, common law/married) and parity (experienced childbirth/did not experience childbirth). The mean age of the participants was 28 years (range = 18 - 43). Fifty-three percent of women were Francophone, 31% were Anglophone, and 16% had another first language. Seventy-five percent were born in North America, 13% were of European origin, and 12% were born elsewhere. Sixty-one percent of the participants were Catholic, 15% were Protestant, 13% belonged to another religion and 11% reported no religious affiliation. Women in this study had, on average, 16 years of education (equivalent to an undergraduate degree), and their annual average income was 45, 000 dollars Canadian. Twenty-three percent of the participants were married, 25% were living with a partner, 32% were dating one partner regularly, and 20% were single. Three participants were primiparous.

Materials

Self Report Measures

A structured interview was used to collect information on socio-demographic background, gynecological status and history. This interview also included a detailed assessment of intercourse/penetration related pain and focused on the presence, onset, location, intensity, and quality of pain with intercourse or attempted intercourse. A series of structured questions evaluated the onset of penetration difficulties, the level of interference with intercourse and causal attributions for pain/penetration problem. Standardized measures included the McGill Pain Questionnaire (Melzack & Katz, 1992), a self-report measure of sensory and affective dimensions of pain, and the Pain Catastrophizing Scale (Sullivan, Bishop & Pivik, 1995), a self-report measure of cognitive and emotional coping statements reflecting levels of catastrophizing style of coping with pain.

Health Professional and Vagina EMG Evaluation

Gynecological Examination. The American College of Obstetricians and Gynecologists (ACOG, 1995) does not provide guidelines for the confirmation of the presence of vaginal spasm in vaginismus. In addition, no specific recommendations are provided for the examination of women with dyspareunia. Therefore, a standardized examination protocol, based on our previous work (Meana, Binik, Khalifé & Cohen, 1997; Bergeron, Binik, Khalifé & Pagidas, 2001) was developed. The protocol consisted of three parts: a) visual and digital examination of the vulva, b) internal digital and speculum examination of the vagina and reproductive organs, and c) a cotton swab test at 4 vestibular sites (3, 5, 7 and 9 o'clock, sequence of testing was randomized)

(Friedrich, 1987). At each step of the exam, the gynecologists were asked to report whether a vaginal spasm was present or not, using their working definition of spasm ("An involuntary contraction of some or all of the pelvic floor muscles which prevents examination"). Gynecologists also globally rated muscle tone (tonicity) of the pelvic floor on a 5-point rating scale, with 0 indicating no tension and 5 indicating perineal and levator ani contractions. Finally, they also rated avoidance and defensive reactions which were defined as behaviours interfering with, delaying or terminating the examination and rated on a 4-point scale with 0 indicating no problematic reaction during the exam and 4 indicating that the participant terminated the exam. During each step of the examination, patients were asked to report their level of pain ranging from 0 (no pain at all) to 10 (the worst pain ever); the first author or a research assistant noted all ratings. The order of gynecologists conducting the first examination was counterbalanced.

After the examination, gynecologists chose a diagnosis from the a list of choices: no diagnosis, vaginismus, vulvar vestibulitis syndrome (VVS), other gynecological problem (e.g. infection, bladder sensitivity, etc.). If more than one diagnosis was made, gynecologists were asked to rank order the diagnoses. Gynecologists endorsed only 4 of the above listed choices (vaginismus, VVS, infection, no diagnosis); consequently, the remaining diagnostic options were excluded from the statistical analysis. For analyses of reliability, only diagnoses ranked as the primary diagnosis were included. The participating gynecologists, one male and one female, have been formally involved in research and clinical work concerning the sexual pain

disorders for the last 10 years and have co-authored several research papers on this topic (e.g. Bergeron, et al., 2001; Meana et al., 1997).

Physical Therapist's Evaluation. In cooperation with the two participating female pelvic floor physical therapists, a standardized protocol for the evaluation of the vaginal and pelvic floor muscles was developed¹. The examination involved external, vaginal palpation and internal vaginal and anal palpation of the superficial and deep pelvic muscle layers. Muscle tone (tonicity) was rated on a 7-point scale, ranging from -3 (very hypotonic) to +3 (very hypertonic) with 0 representing a normal pelvic muscle tone. Muscle strength was evaluated via 1-digit and 2-digit palpation and recorded on a 0 (no contraction) to 5 (maximum contraction). Patients also reported their level of pain at each step of the examinations on a scale from 0 (no pain) to 10 (worst pain ever). The first author or a trained research assistant recorded the patient's pain ratings and the physical therapist's rating of muscle tonicity, strength, and relaxation. The order of physical therapists conducting the first examination was counterbalanced.

At each step of the examination, the physical therapists were asked to report whether vaginal spasm was present or not using their working definition of spasm, "a prolonged muscle contraction not relieved by reassurance." Defensive/protective muscular (muscle twitches and contractions) and avoidance behaviours (closing knees, moving away, crying) were reported by the physical therapists and noted by the assistant. Physical therapists were asked to choose between the following diagnoses: "vaginismus", "dyspareunia", and "normal". Since the physical therapists are not trained to perform the cotton swab test for VVS, their diagnostic formulation was restricted to dyspareunia. The two physical therapists participating in this study have

over 8 years of experience treating sexual pain disorders. Their approach to the assessment of the pelvic floor has been described in the physical therapy literature (e.g., Brown, 1999; Lord, 1999), and presented at numerous conferences and workshops.

Psychologist Diagnosis. A transcript of responses to the sections of the structured interview pertaining to penetration difficulties and to pain with intercourse was provided for review to the psychologists. The two psychologists were asked to determine a DSM IV diagnosis of sexual dysfunction or another DSM IV diagnosis (e.g., somatization disorder). The participating clinicians were Ph.D. level psychologists who had completed doctoral internships with a specialization in sexual dysfunction.

Electromyographic Evaluation (EMG). To measure pelvic floor muscle activity independent of clinical judgment, an EMG protocol was adapted from Glazer, Rodke, Swencionis, Hertz & Young (1995) and consisted of a 6-minute automated test sequence (MyoTrac 3 Incontinence Software, version 1.2, designed by Thought Technology Inc., Montreal, Canada). Gynecologists inserted the single-user plug vaginal sensors (Thought Technology Inc., Montreal, Model T6050) after the gynecological examination had been completed. Women were asked to assume a supine position with stretched legs parallel to each other; a support cushion was placed under their knees to assure optimal pelvic floor relaxation. EMG recording was initiated and terminated with a 60-second relaxation baseline period, in between which the participants were requested to execute the following: 1. six maximum intensity rapid contractions (flick contractions); 2. one 10 -second maximum contraction; 3. five alternate cycles of 5-second contraction/relaxation; 4. one 40-second maintained contraction. Vaginal spasm during EMG testing was defined as a sustained contraction

¹ a copy of the examination protocol is available from the first author.

lasting at least 1 minutes which could not be relieved voluntarily and was accompanied by at least a 15mv increase above the participant's baseline EMG reading. Participants were given instructions on the specific exercise required prior to each new step of the protocol. The directions were visible on the computer screen and read aloud by the first author or research assistant. Each woman received both auditory and visual feedback concerning her performance during the testing sequence. At the conclusion of the session, participants removed the vaginal sensor themselves. The data were recorded on a Pentium 166Hz laptop computer.

Results

Socio-demographic Characteristics

A series of univariate tests (chi-square, ANOVA) of group differences on socio-demographic and background variables was initially performed. Women in the no-pain group, reported the equivalent of 1-year of graduate education (M=17 years), and had significantly more years of education than the women in the vaginismus (M=15 years) and the VVS groups (M=15 years), $F(2,86) = 5.3$, $p < .01$. However, education showed no significant relationships with the dependent measures. Some significant group differences observed on particular background variables were expected because of the inclusion criteria (see Table 1). Women meeting inclusion criteria for vaginismus reported a significantly higher frequency of a previous diagnosis of vaginismus, $\chi^2(2,87) = 29.2$, $p < .001$, fewer gynecological examinations, $\chi^2(4,87) = 34.0$, $p < .001$, less tampon use, $\chi^2(2,87) = 25.1$, $p < .001$, and greater interference with intercourse, $F(2,86) = 76.5$, $p < .001$.

Descriptive Statistics

Diagnosis of Vaginal Spasm

Vaginal spasm was reported by one or the other gynecologist in 28% of women in the vaginismus group, in 4% of the women in the VVS group, and in 0% of the women in the no-pain group. None of the women experiencing a spasm during one gynecological examination also experienced a spasm during the other gynecology examination. Three women in the vaginismus group refused a second gynecological examination, whereas none of the women in the VVS or control group refused a second exam. One or both of the physical therapists reported a vaginal muscle spasm in 86% of women in the vaginismus group, in 93% of the women in the VVS group, and in 54% of the women in the no-pain group. Only 24% of women in the vaginismus group self-reported having experienced vaginal spasm with attempted intercourse. Vaginal surface EMG testing revealed no vaginal spasms during insertion of the sensor or during testing in any of the participants.

Diagnostic Agreement

Overall Diagnosis. Diagnostic agreement was calculated as percent agreement between the two gynecologists, two physical therapists and two psychologists. In addition, Cohen's Kappa was calculated in order to correct for chance agreement. A kappa value of 0 represents "poor" agreement, agreement ranging from .0 - .2 is "slight", .21 - .4 is "fair", .41 - .6 is "moderate", .61 - .8 is "substantial" and .81 - 1 is "almost perfect" (Landis & Koch, 1977).

The percent diagnostic agreement for all subjects combined was 78% for the participating gynecologists, resulting in a kappa value of .60. Physical therapists agreed

77% of the time, resulting in a kappa value of .64. Psychologists agreed in 71% on their diagnoses resulting in a kappa value of .58.

Vaginismus Diagnosis. The percent diagnostic agreement on a diagnosis of vaginismus was 4% for gynecologists, 71% for physical therapists, and 58% for psychologists.

Dyspareunia/VVS Diagnosis. The percentage agreement for a diagnosis of dyspareunia/VVS was 92% for gynecologists, 34% for physical therapists, and 40% for psychologists.

Normal Diagnosis. For women in the no pain group, gynecologists and physical therapists agreed on a diagnosis of "normal" 89% of the time. Psychologists were not asked to make this diagnosis.

The diagnostic errors made by a specific professional group were not random. Gynecologists almost always agreed on the diagnosis of women in the VVS and no-pain groups but rarely agreed on the diagnosis of women in the vaginismus group. They also agreed twice on a diagnosis of VVS for a woman in the no-pain group. Physical therapists agreed most of the time on the diagnosis of women in the vaginismus and no-pain groups but were less reliable with respect to the women in the VVS group. Psychologists agreed about 50% of the time for both the vaginismus and VVS groups.

Tonicity, Muscle Strength, and Voluntary Control of the Pelvic Floor Muscles

Gynecologists. Only one of the participating gynecologists used the scale evaluating pelvic floor muscle tone (tonicity) consistently; consequently, the analysis of the results was based on her ratings only. A significant group effect was observed, $F(2,84) = 20.35, p = <.001$. Tukey HSD post-hoc tests revealed that women in the

vaginismus group showed significantly more pelvic hypertonicity ($M = .76$), than women in the VVS ($M = .17$) and no-pain groups ($M = .00$).

Physical therapists indicated ratings of muscle tone for each muscle group palpated. Tonicity ratings for both therapists of all sites of pelvic floor muscle palpation were included in the analysis. Intercorrelations at the locations palpated between the 2 physical therapists ranged from an average of .61 for palpation of superficial pelvic floor muscles to .69 for deep pelvic floor muscles and were all significant at $p < .01$. Separate analyses for each physical therapist demonstrated the same pattern of significant differences. There was an overall group effect for tonicity, $F(2,84) = 52.63$, $p < .001$. Tukey HSD post-hoc comparisons revealed that women in the vaginismus group had significantly tension of the pelvic floor muscles ($M = 1.39$) than both women in the VVS ($M = .74$) and no pain groups ($M = .15$). Differences in hypertonicity between women in the VVS and no pain group were also significant.

Correlations for the two measures of muscle strength ranged from .62 for 1-digit palpation to .66 for 2-digit palpation; all correlations were significant at $p < .01$. . Separate analyses for each physical therapist demonstrated the same pattern of significant differences. A significant difference was noted for muscle strength evaluated with 1-digit palpation, $F(2,82) = 12.17$, $p < .001$. Tukey HSD post-hoc comparisons showed women in the vaginismus group ($M = 2.04$) demonstrated lower vaginal muscle strength than both women in the VVS ($M = 2.79$) and no pain control ($M = 3.21$) groups. When palpated with 2 digits, differences in strength were also significant, $F(2,74) = 17.38$, $p < .001$. Tukey HSD post-hoc comparisons revealed

significant differences between all groups, vaginismus ($M = 2.36$), VVS ($M = 3.21$), and no pain control ($M = 4.09$).

Vaginal Surface EMG. Forty-six percent of the women in the vaginismus group refused to undergo both EMG evaluations and 27% percent refused to have more than one test performed. None of the women in the VVS or no-pain group refused to undergo the EMG evaluations. Analysis of the remaining data revealed no significant group differences on baseline measures of resting muscle tonicity or post-contraction muscle tone. However, on all measures of vaginal muscle strength, women in the vaginismus and VVS groups demonstrated significantly less vaginal muscle strength than women in the no-pain group: peak strength during flick contractions, $F(2,77) = 5.3$, $p < .01$; average strength of 10-second contraction, $F(2,77) = 11$, $p < .001$; average strength of contraction during work/rest cycles, $F(2,77) = 10.8$, $p < .001$; peak strength during work/rest cycle, $F(2,77) = 48.1$, $p < .001$, and average strength during endurance contraction, $F(2,77) = 12.4$, $p < .001$.

Protective Reactions

Gynecologists. The total number avoidance and defensive reactions during the gynecological examinations were compared and this yielded a significant difference among groups, $F(2,85) = 28.37$, $p < .001$. Tukey HSD post-hoc comparisons revealed that women in the vaginismus group displayed significantly more avoidance and defensive reactions ($M = 5.0$) than women in the VVS ($M = .93$) and no pain groups ($M = .08$). There were no significant differences between the VVS and control groups. Findings for individual gynecologists demonstrated the same pattern of significant differences.

Physical Therapists. The number of avoidance and defensive reactions noted during the physical therapist's evaluation also showed a significant difference among groups, $F(2,85) = 23.47, p < .001$. Tukey HSD post-hoc comparisons showed that women in the vaginismus group reacted with significantly more protective reactions ($M = 5.33$) than women in the VVS ($M = 1.34$) and the no-pain groups ($M = .29$). There were no significant differences between women in the VVS and no-pain groups. Findings for individual physical therapists demonstrated the same pattern of significant differences.

Pain Measures

Retrospective Pain Reports. During the initial structured interview, participant reported the severity of their pain and associated affective distress (0-10) with intercourse or attempted intercourse. A one-way between groups ANOVA of mean pain scores revealed significant differences between groups, $F(2,85) = 94, p < .001$ (see Table 2). Tukey HSD post-hoc comparisons show that women in the vaginismus ($M = 6.1$) and VVS groups ($M = 7.2$) reported significantly higher levels of pain intensity than women in the no-pain group ($M = 0$).

Mean ratings of emotional distress (0-10) regarding the pain with intercourse or attempted intercourse revealed significant differences across groups, $F(2,85) = 121.1, p < .001$ (see Table 2). Tukey HSD post-hoc comparisons showed that women in the VVS group experienced significantly more emotional distress ($M = 8.7$) than women in the vaginismus group ($M = 6.7$), who experienced significantly more distress than the women in the no-pain group ($M = 0$).

Pain during Physical Examinations. Pain ratings (0-10) were noted for each step of the gynecological examinations and the physical therapists' evaluation. Significant

differences were found between groups for mean pain ratings during the gynecological examinations, $F(2,85) = 43.1, p < .001$ (see Table 2). Tukey HSD post-hoc comparisons revealed that women in the vaginismus ($M = 2.4$) and VVS groups ($M = 2.4$) reported more pain during gynecological examinations than those in the no-pain group ($M = .27$).

Mean pain ratings (0-10) during physical therapists' evaluations yielded a significant group difference, $F(2,85) = 23.5, p < .001$ (see Table 2). Tukey HSD post-hoc comparisons demonstrated that women in the vaginismus ($M = 1.5$) and VVS groups ($M = 1.2$) reported more pain during physical therapists' evaluations than women in the no-pain group ($M = 0$).

Pain ratings on cotton swab test. Ratings were given for each of the four vestibular palpation sites (0-10) and the mean was used for analysis. A one-way between groups ANOVA revealed significant differences between groups, $F(2,85) = 70.4, p < .001$ (see Table 2). Tukey HSD post-hoc comparisons revealed that women in the vaginismus ($M = 5.4$) and VVS groups ($M = 5.6$) reported significantly more pain during vestibular palpation than women in the no-pain group ($M = .58$).

McGill Pain Questionnaire (MPQ). The MPQ for pain with intercourse or attempted intercourse was administered only to women in the vaginismus and VVS groups. The overall pain rating index score on the MPQ was 26 for the women in the vaginismus group and 30 for women in the VVS group. An one-way between groups ANOVA revealed no significant differences between groups, $F(1,54) = .97, p = .33$ (see Table 2). Examining differences on subscales of the MPQ on affective, sensory, and miscellaneous items as well as the total number of adjectives endorsed, a one way between groups MANOVA revealed no overall differences, $F(4,51) = 1.03, p = .40$.

Pain Catastrophizing Scale (PCS). Mean scores on the PCS for general, non-genital pain were 19 for the women in the vaginismus group, 19 for the VVS group and 15 for women in the control group. A one way between groups ANOVA revealed no significant differences among groups $F(2,85) = .86, p = .43$ (see Table 2). A one way between groups MANOVA indicated no group differences on PCS subscales (rumination, magnification, helplessness) for general pain, $F(6,81) = 1.15, p = .34$.

The PCS for pain with intercourse or attempted intercourse was administered only to women in the vaginismus and VVS groups. Mean scores on the PCS for vulvar/vaginal pain with intercourse or attempted intercourse were 30 for the women in the vaginismus group and 29 for the women in the VVS group. An one way between groups ANOVA revealed no significant differences between vaginismus and VVS groups, $F(1,51) = .002, p = .99$ (see Table 2). An one way between groups MANOVA indicated no group differences on PCS subscales (rumination, magnification, helplessness) for vulvar/vaginal pain, $F(3, 48) = .39, p = .76$.

Discussion

Vaginal spasm appears neither necessary nor sufficient for a diagnosis of vaginismus. Gynecological examinations could confirm a vaginal spasm in only a minority of the women in the vaginismus group; only one-quarter of women in the vaginismus group reported a vaginal spasm with attempted intercourse. By contrast, physical therapists reported a high incidence of spasm during examinations for both women in the vaginismus and VVS groups. These results strongly confirm our suggestion that the assessment of spasm is not well defined or reliable and basing the diagnosis of vaginismus on this assessment is not currently warranted.

Although our hypothesis that spasm would not adequately characterize vaginismus was confirmed, gynecologists and physical therapists noted significant differences in pelvic floor hypertonicity between vaginismus, VVS, and no-pain groups. Physical therapists also noted a lack of vaginal muscle strength, which has also been described as a lack of voluntary muscle control (van der Velde & Everaerd, 1999). Differences in hypertonicity (chronic muscle tension) and voluntary control appear to be quantitative rather than qualitative (e.g., presence of spasm vs. *degree* of pelvic floor hypertonicity/voluntary control) differences. It will be necessary to further clarify these quantitative differences in future research and evaluate their usefulness as a diagnostic taxon for differentiating vaginismus and dyspareunia/VVS.

Diagnostic agreement overall was moderate but the reliability of different professional groups in distinguishing different patient groups varied. All diagnosticians performed well in differentiating the no-pain from the vaginismus and VVS groups, but they were less successful in differentiating vaginismus from VVS. Diagnostic disagreements however, were not random; gynecologists agreed more frequently on a diagnosis of VVS, while physical therapists agreed more frequently on a diagnosis of vaginismus. This may be accounted for by differences in working definitions of vaginal spasm and different foci and methods of examination. For example, gynecologists tended to diagnose VVS when participants reported pain with the cotton swab test. For a diagnosis of vaginismus, gynecologists looked for a vaginal spasm preventing the continuation of the exam; since the incidence of spasm during the gynecological examination was low, so was the number of positive diagnoses. Physical therapists were likely to attend more to the increased hypertonicity of the pelvic floor as well as

avoidance and defensive reactions in women with vaginismus. Psychologists relied on reported levels of interference with intercourse and self-reported pain with intercourse.

At present, pain is not listed as a primary feature of vaginismus in the DSM-IV (APA, 1994). Yet pain appears to be an integral part of the experience of women with vaginismus (e.g., Basson, 1996; de Kruiff et al., 2000). Women with vaginismus did not differ from women with VVS in either the reported intensity of pain or the cognitive, sensory, and affective qualities of their pain experiences. Furthermore, participants did not differ on measures of general pain catastrophizing. With respect to non-genital pain such as headaches all participants tended to cope in an adaptive, non-catastrophizing way. When experiencing pain with intercourse or attempted penetration, however, women in the vaginismus and VVS groups demonstrated levels of catastrophizing that were equal to those typical of individuals suffering from chronic pain conditions.

These overlapping pain reports may also explain the previously reported diagnostic confusion between VVS and vaginismus (Abramov, Wolman & David, 1994; Basson & Riley, 1994; Kaneko & Watanabe, 1999; van Lankveld, Brewaeys, Ter Kuile & Weijnenborg, 1995). The results of this study suggest that it is the vulvar pain associated with attempted penetration rather than pain associated with vaginal spasm that interferes with intercourse in women diagnosed with vaginismus. In this conceptualization, women with vaginismus differ those with VVS in that they are more fearful of pain and perhaps more unwilling to bear the pain associated with penetration.

A number of limitations of this study should be noted. First, evaluating a diagnostic criterion (i.e. spasm) necessitates its exclusion as an inclusion criterion. Subsequent reliance on a history of interference with and avoidance of intercourse as

inclusion criteria for the vaginismus group may have biased the sample towards increased behavioral avoidance and away from vaginal spasm. Second, volunteers for this study were aware of the necessity to undergo several examinations involving vaginal penetration; it is possible that women with the most severe fears of such examinations did not participate. Third, although the vaginal EMG data was consistent with the physical therapist findings, they must be interpreted with caution considering the high drop-out rate for this part of the study. Fourth, we did not collect data from the women's partners. Recent works on pain (Romano & Schmaling, 2001) and clinical reports on vaginismus (Leiblum, 2000) have suggested that the attitudes and interaction with the spouse are very important in coping. This would appear to be even more important in the case of vaginismus since the spouse is intimately involved.

The most striking data collected differentiating women in the vaginismus group from both control groups, was their elevated number of avoidance and defensive behaviours and their 47% refusal rate to participate in both EMG sessions. The behavioural reactions of these women were not unlike the behaviour of phobic individuals when confronted with their feared stimuli. If this interpretation is correct, vaginismus could be considered a type of specific phobia characterized by clinically significant anxiety or in some cases panic, provoked by exposure to a specific feared object or situation (vaginal penetration), often leading to avoidance behaviour (APA, 1994). This fear/phobic reaction might be understood as conditioned fear to the real or imagined experience of pain or may have other sources that we do not yet understand. Increased vaginal hypertonicity and lack of voluntary muscle control might also be interpreted in part as a conditioned reaction to the repeated experience/expectation of

fear or pain. Continued avoidance of intercourse, typical of women with vaginismus, in turn prevents exposure to potentially disconfirming information and experiences, thus maintaining the disorder.

Our data have potentially significant treatment implications. If the majority of women currently diagnosed with vaginismus also have co-morbid dyspareunia that is not accounted for by vaginal spasm, then pain management techniques should be part of the standard treatment plan. Vaginal hypertonicity and lack of voluntary muscle control, rather than spasm should be addressed. Yet, the traditional progressive dilation exercises prescribed by the therapist and implemented by the client may not be efficient. One patient recently described this approach to us as the “blind leading the blind.” By contrast, the direct, hands-on approach of pelvic floor physical therapists involves an individualized assessment and treatment of the muscular problems that achieves the goal of relieving the relevant problems as well as desensitizing the client to vaginal penetration. If our “penetration phobia” interpretation is correct, even more attention should be paid to the avoidance/fear component of the problem and relevant psychotherapeutic and pharmacological techniques should be considered.

In summary, we believe that the widely held categorical definition of vaginismus based on vaginal spasm needs to be seriously re-evaluated. As Leiblum (2000) aptly suggests, vaginismus is a “most perplexing problem.” (p.181). With renewed scientific interest, however, it may be possible to develop reliable diagnostic algorithms and to differentiate vaginismus from dyspareunia/VVS. This differentiation will need to be based on a multidimensional diagnostic framework including fear of vaginal penetration, genital pain, and vaginal muscle hypertonicity and lack of control.

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Table 1

Participants' Previous Diagnoses and Vaginal Penetration History

Groups	Vaginismus (N=29)	VVS (N=29)	No Pain (N=29)
Intercourse attempts in last 6 months	1 (SD=7.42) **	22 (SD=39.83) *	60 (SD=42.93)
Number previously diagnosed with			
Vaginismus	16**	3	0
Vulvar Vestibulitis Syndrome	2**	8	0
Number never having experienced			
Vaginal penetration	20**	0	0
Tampon insertion	24**	13	5
A gynecological examination	21**	7	2

* p < .05. ** p < .001

Table 2

Self-Report of Sensory, Affective and Cognitive Aspects of Pain Experience

Groups	Vaginismus (N=29)	VVS (N=29)	No Pain (N=29)
Retrospective report (0-10) of			
Pain intensity during (attempted) intercourse	6.05 (SD=3.24)	7.24 (SD=2.23)	0 (SD=0)*
Affective distress associated with pain during (attempted) intercourse	6.65 (SD=3.63)*	8.65 (1.98)*	0 (SD=0)*
Pain ratings (0-10) during			
Cotton swab test	5.41 (SD=2.27)	5.63 (SD=1.97)	.58 (SD=1.01)*
Gynecologists' exam	2.40 (SD=1.26)	2.42 (SD=1.12)	.27 (SD=.50)*
Physical therapists' exam	1.53 (SD=.99)	1.19 (SD=1.00)	0 (SD=0)*
Scores from			
McGill Pain Questionnaire (PI)	26.41 (SD=17.47)	30.27 (SD=11.44)	n/a
Pain Catastrophizing Scale (for pain in general)	18.57 (SD=12.61)	18.46 (SD=9.59)	15.37 (SD=8.98)
Pain Catastrophizing Scale (for pain with attempted intercourse)	30.07 (SD=9.98)	29.89 (SD=8.93)	n/a

Note. Cotton swab test = test for presence of vulvar pain; standard deviations are in brackets. n/a = participants in the no-pain group were not given these measures. * $p < .05$

Transition Text 2

The critical review of the literature demonstrated that there are many speculations about the etiology of vaginismus, but very few empirical studies. DSM IV associated criteria appear to be based on this body of clinical and anecdotal reports. We decided to examine some of the most frequently reported determinants of vaginismus, sexual and physical abuse, sexual knowledge, sexual self-schema, relationship adjustment, as well as sexual function and psychological distress using validated psychometric measures. The following manuscript reports on the findings of this study.

**Etiological Correlates of Vaginismus: Sexual and Physical Abuse, Sexual
Knowledge, Sexual Self-Schema, and Relationship Adjustment**

Elke D. Reissing, B.A., ¹ Yitzchak M. Binik, Ph.D., ^{1 2} Samir Khalifé, M.D., ³

Deborah Cohen, M.D., ³ Rhonda Amsel, M.A.¹

¹ Department of Psychology, McGill University, 1205 Dr. Penfield Ave., Montréal, Québec, H3A 1B1, Canada. Send reprint requests to Elke D. Reissing.

² Sex and Couple Therapy Service, Department of Psychology, Royal Victoria Hospital, Montréal, Québec, Canada.

³ Department of Obstetrics and Gynecology, Jewish General Hospital; Faculty of Medicine, McGill University, Montréal, Québec, H3A 1B1, Canada.

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Abstract

This study investigated the role of sexual and physical abuse, sexual self-schemas, functioning, and knowledge, relationship adjustment, and psychological distress in 87 women matched on age, relationship status, and parity and assigned to 3 groups, vaginismus, dyspareunia/vulvar vestibulitis syndrome (VVS), and no pain. More women with vaginismus reported a history of childhood sexual interference, and women in both, the vaginismus and VVS groups reported lower levels of sexual functioning, and less positive sexual self-schemas. Lack of support for traditionally held hypotheses concerning etiological correlates of vaginismus and the relationship between vaginismus and dyspareunia are discussed.

There has been a long history of speculation but relatively few empirical studies concerning the etiology of vaginismus. Among the etiological factors that have been implicated are sexual and physical abuse (e.g., Biswas & Ratnam, 1995; Dupree Jones, Lehr & Hewell, 1997), negative attitudes toward sexuality (e.g., Ward & Ogden, 1994; Shortle & Jewelewicz, 1986), lack of sexual knowledge/sex education (e.g., Ellison, 1968; Silverstein, 1989), and relationship difficulties (e.g., Grafeille, 1986; Weiner, 1973). Critical reviews of this literature have concluded that the available studies are so methodologically flawed that adequate conclusions concerning etiology cannot be drawn (e.g., Reissing, Binik & Khalifé, 1999; van de Wiel, Jaspers, Weijmar Schultz & Gal, 1990). For example, very few of the available etiological studies use formal statistical analysis, control groups, or standardized measurement instruments. In addition, Reissing et al. (1999) pointed out that only 3 studies (Blazer, 1964; van Lankveld, Brewaeys, Ter Kuile & Weijnenborg, 1995; Ward & Ogden, 1994) were specifically designed to investigate etiology. Despite this, the DSM IV continues to refer to sexual trauma, negative attitudes toward sex, and youth (presumably sexual inexperience) as etiological, or associated features of vaginismus (APA, 1994, p. 514).

The purpose of this study was to test the above etiological hypotheses using matched controls and standardized psychometric interview and questionnaire instruments. In addition, given that a DSM diagnosis requires the presence of significant distress, this study also evaluated the presence of psychological distress in women with vaginismus. Finally, this study also evaluated overall sexual functioning which is generally assumed to remain unaffected except for the vaginal penetration difficulties (e.g., APA, 1994; Kaplan, 1974); however, no empirical data has been presented to

support this assumption. The data to be presented were collected as part of a larger study examining the diagnostic reliability of vaginismus and the utility of vaginal spasm as the defining taxon. In this study (Reissing, Binik, Khalifé, Cohen & Amsel, 2002), 29 women with vaginismus were matched to 29 women with vulvar vestibulitis syndrome (VVS), and 29 women experiencing no problems or pain with intercourse. The inclusion of the VVS group was particularly important since there have been numerous suggestions that this syndrome is difficult to differentiate from vaginismus (Basson, 1996; Har-Toov, Militscher, Lessing & Abramov, 2001; Wijma, Jansson, Nilsson, Hallböök & Wijma, 2000; Pukall, Reissing, Binik, Khalifé & Abbott, 2000). The study protocol included comprehensive physiological examinations by gynecologists and physical therapists, vaginal surface EMG evaluations, and an interview protocol that included measures of pain, sexual knowledge and functioning, sexual self-schema, sexual and physical abuse history, and psychological and relationship adjustment.

A crucial theoretical and practical issue in the larger study was that an investigation of vaginal spasm as the essential DSM IV diagnostic criterion in vaginismus (APA, 1994) could not require its *a priori* existence. This required a behavioural definition of vaginismus that could not include vaginal spasm. The behavioural criterion used below relies on a history of vaginal penetration failure, which is part of the DSM IV criterion and is typically what clinicians focus upon in practice.

In this study, we hypothesized that women suffering from vaginismus as opposed to women with VVS or no pain controls were to show the following: 1) higher rates of sexual and physical abuse; 2) increased levels of sexual dysfunction; 3) less

sexual knowledge; 4) more negative and less positive sexual self-schema; 5) more relationship difficulties; 6) and more psychological distress.

MATERIALS AND METHODS

Participants

One hundred and ten women responded to newspaper advertising and media attention. Potential subjects were screened over the telephone and the study was explained in detail. If appropriate, an initial appointment was scheduled. The research protocol was carried out at the participating gynecologists' office and was spread over 4 separate sessions with a minimum of 2 days between each session. The interview protocol and all questionnaires were administered at the first appointment.

Eleven women meeting the inclusion criteria for the no pain group and 2 women meeting the inclusion criteria for the vaginismus group dropped out of the study; all women meeting the inclusion criteria for VVS completed the protocol. The data from 1 woman who met the inclusion criteria for the vaginismus group and 3 who met criteria for the VVS group were not used in the data analysis because these individuals could not be matched. Five women who met inclusion criteria for vaginismus were excluded from the study following a diagnosis of hymeneal abnormality, and one woman was excluded because of the presence of a vaginal septum. The data from 87 women in total were included in the analyses. Participants were tested between November 1998 and February 2000.

Inclusion criteria for the different groups were as follows:

Vaginismus group.

- A. Never having been able to experience vaginal intercourse, despite attempts on at least 10 separate occasions OR,
- B. Never having been able to experience vaginal intercourse despite attempts on *at least* two separate occasion and demonstration of “*active avoidance*” of vaginal penetration (see below) OR,
- C. A current inability to experience vaginal intercourse AND “*active avoidance*” of vaginal penetration for at least 1 year, although vaginal penetration was experienced at least once before this period.

“*Active avoidance*” of vaginal penetration is defined as an average of less than 1 attempt at vaginal intercourse every 2 months over the past year despite adequate opportunity or being involved in a relationship, AND also meeting 1 of the following 2 criteria: 1. Never having seen a health professional for or never having successfully completed a pelvic exam; 2. Never having used tampons.

Vulvar vestibulitis syndrome (VVS) group.

- A. Able to experience vaginal penetration, but such penetration is painful on at least 50% of all episodes, AND
- B. The pain is located at the entrance of the vagina, starting with vaginal penetration, AND
- C. Is described as burning or cutting, AND
- D. The pain is personally distressing and has been present for at least 1 year.

No-pain group.

- A. Able to experience vaginal penetration without difficulty, AND

B. No history of chronic or recurrent vulvar/vaginal/pelvic pain or penetration difficulty during intercourse, gynaecological examinations, or tampon insertion.

Specific exclusion criteria for the vaginismus group were the presence of hymeneal abnormalities. When such abnormalities were detected during the initial gynaecological examination, the individual was referred for a surgical consultation and dropped from the study. General exclusion criteria for all experimental groups included: (1) presence of a history of chronic vulvar/vaginal/pelvic pain not uniquely linked to intercourse, and (2) concurrent pregnancy.

Groups were matched on age (+/- 3 years), relationship status (single/dating, common law/married) and parity (experienced childbirth/did not experience childbirth). The mean age of the participants was 28 years (range = 18 - 43). Fifty-three percent of women were Francophone, 31% were Anglophone, and 16% had another first language. Seventy-five percent were born in North America, 13% were of European origin, and 12% were born elsewhere. Sixty-one percent of the participants were Catholic, 15% were Protestant, 15% belonged to another religion and 11% reported no religious affiliation. Women in this study had an average of 16 years of education (equivalent to an undergraduate degree), and their annual average income was \$45,000. Twenty-three percent of the participants were married, 25% were living with a partner, 32% were dating one partner regularly, and 20% were single. Three participants were primiparous.

Measures

Sexual and Physical Abuse History Questionnaire (Leserman, Drossman, Zhiming, 1995). This 14-question structured interview was used to assess individuals' history of sexual and physical abuse. Interview items involved behaviourally specific

questions (e.g., "By using force or threatening to harm you, has anyone ever made you watch a sexual act?"). For each behavioural item, participants were also asked to indicate whether this had occurred during childhood (≤ 13 years old) and/or adulthood (≥ 14 years old). Leserman et al., (1997) reported acceptable psychometric properties for the interview. A French version was obtained using translation and back-translation by a professional translation service.

The measure assesses sexual abuse along 3 categories, with 2 to 5 questions for each category: 1) *attempts at sexual abuse* (having been forced to watch a sexual act, the abuser having tried to touch or be touched but did not succeed, or the abuser having attempted to force sexual experiences not involving touch; 2) *sexual abuse involving touch* (forced sexual touching, having been touched with hand, mouth, or objects); and 3) *rape* (forced vaginal or anal penile penetration). For the purposes of this study, we collapsed these three categories to form a single measure of "sexual interference." We employed this strategy to ameliorate any effects of overestimation of sexual abuse events. For example, a woman who had experienced an unsuccessful attempt of forced sex could have indicated both "attempts at sexual abuse" and "sexual abuse involving touch" to describe the same event, since the perpetrator may have touched the victim sexually in the attempt to force sex. Groups were thus compared on whether they had versus had not experienced sexual interference in childhood and/or adulthood. The measure also included a single question to assess physical abuse: "Has anyone – including family members or friends – ever beat you up, hit you, kicked you, bit you, or burned you, regardless of when it happened or whether you ever reported it or not".

Sexual History Form (Nowinski & LoPiccolo, 1979). This is a 28-item measure of sexual functioning (desire, arousal, orgasm, frequency of sexual activities, overall sexual satisfaction). Ratings on 12 of the original 28 items are summed to form the overall Global Sexual Functioning Score, which was used in this study and has demonstrated good reliability and validity (Creti, Fichten, Amsel, Brender, Schover, Kalogeropoulos & Libman, 1998). The mean score is 53 and lower scores indicate better sexual functioning, scores higher than 68 are considered indicative of sexual dysfunction.

Sexual Information Scale (Derogatis & Melisaratos, 1979). This questionnaire, evaluating participants' general knowledge of sexuality and reproduction, is part of the Derogatis Sexual Functioning Inventory, which is used widely and has demonstrated good reliability and validity (Derogatis & Melisaratos, 1979). It consists of 26 true-false items with a mean score of 21.

Sexual Self-Schema (SSS, Andersen & Cyranowski, 1994). The SSS is an unobtrusive, multidimensional measure of sexual cognition, or sexual self-views. The scale contains 26 trait adjectives (e.g. open-minded, cautious) and 24 filler adjective (e.g. generous, practical). Items are rated on a 6-point scale ranging from "not at all descriptive of me" to "very descriptive of me". Two subscales describing "loving/romantic" and "direct/open" dimensions of sexual cognitions are combined to derive a score for the positive sexual self-schema. The "embarrassed/conservative" dimension represents the negative sexual self-schema. The SSS has undergone several studies to establish reliability and validity of the scale (e.g., Cyranowski, Aarestad & Anderson, 1999; Cyranowski & Anderson, 1998). In order to obtain a French version of

the SSS, the scale was translated and back translated by a professional translating service.

Locke Wallace Marital Adjustment Scale (Locke & Wallace, 1959). This 15-item scale is a brief, standard measure of couple satisfaction that has been subject to numerous validity and reliability studies. It consists of ratings of couple agreement on a variety of marital issues (e.g. “handling family finances”) ranging from “always agree” to “always disagree”, an overall “happiness” rating on a 7-point likert scale, and six multiple-choice items, e.g. “do you confide in your mate?”: a) “almost never”, b) “rarely”, c) “in most things”, d) “in everything”). Ratings on the items are summed to derive an overall score with a mean of 100. Only couples that had been cohabiting for at least one year were asked to fill out this questionnaire. Crane, Allgood, Larson & Griffin (1990) reported good psychometric properties for the Locke Wallace Scale.

Brief Symptom Inventory (BSI, Derogatis, 1992). Psychological distress was evaluated using the 53-item BSI, the short version of the widely used and well validated Symptom Check List – 90 (Derogatis & Melisaratos 1983). Participants indicate the extent to which they had experienced each symptom, ranging from “not at all” to “extremely”. The BSI includes 9 subscales (somatization, obsessive-compulsive symptoms, interpersonal sensitivity, depression, anxiety, paranoid ideation, psychoticism, phobia, and hostility) that are combined to derive the Global Severity Index. The norm for female populations is 50 with a clinical cut-off of 63.

RESULTS

Sexual Interference: A significant relationship between group membership and reports of sexual interference was observed only for sexual interference occurring in

childhood, $\chi^2(N=87, 2) = 6.15, p < .05$. Pairwise comparisons among the three groups, using the Bonferroni method to control for Type I error at the .05 level, revealed a significant difference between the vaginismus and no pain groups, $\chi^2(N=58, 1) = 6.05, p < .017$. The women in the vaginismus group were more than twice as likely to have a history of childhood sexual interference than women in the no pain group. A summary and breakdown of the types of sexual abuse (i.e. attempts at sexual abuse, sexual abuse involving touch, and rape) is presented in Table 1.

Physical Abuse. No significant relationship between group membership and physical abuse history was observed for physical abuse occurring during childhood, $\chi^2(N=87, 2) = 2.31, p = .32$, or adulthood, $\chi^2(N=87, 2) = 2.24, p = .89$ (see Table 1).

Sexual History Form. Significant group difference in sexual functioning were noted, $F(2,85) = 25.19, p < .001$. Tukey HSD post-hoc comparisons revealed that women in the vaginismus ($M = 52.57$) and the VVS groups ($M = 56.72$) had significantly higher scores than the no pain group ($M = 38.00$). Lower scores indicate better adjustment. In examining individual items, women in the vaginismus and VVS groups reported less desire, $F(2,85) = 11.1, p < .001$, less pleasure, $F(2,85) = 11.7, p < .001$, less arousal, $F(2,85) = 12.1, p < .001$, and less self stimulation, $F(2,85) = 9.3, p < .001$, than the women in the no-pain group (see Table 2).

Sexual Self-Schema. A significant difference in positive sexual self-schema was observed, $F(2,85) = 3.26, p < .05$. Tukey HSD post-hoc comparisons revealed that women in the vaginismus group ($M=76.59$) have a significantly less positive sexual self-schema compared to the women in the no pain group ($M=84.86$). No significant

difference between women in the vaginismus and no pain group and the VVS group ($M=80.55$) were found. (see Table 2).

Sexual Knowledge. Participants did not significantly differ in their knowledge of basic information on sexuality as assessed by the Sexual Knowledge Scale, $F(2,85) = .51$, $p = .61$. Mean scores were $M = 48.07$ for the vaginismus group, $M = 48.35$ for the VVS group, and $M = 50.59$ for the no pain group (see Table 2).

Relationship Satisfaction. There were no group differences in marital adjustment as measured by Locke-Wallace Marital Adjustment Scale, $F(2,41) = 2.09$, $p = .14$ (see Table 2). Mean scores were: $M = 102.69$ for the vaginismus group; $M = 108.00$ for the VVS group; and $M = 120.08$ for the no pain group.

Brief Symptom Inventory. Women in the vaginismus group did not demonstrate more psychological distress compared to their VVS and no pain counterparts, $F(2,85) = 1.53$, $p = .22$. Scores on the Global Severity Index (GSI) for the vaginismus ($M=56.97$), VVS ($M=59.00$), and no pain no pain groups ($M=60.55$) indicated levels of psychological distress that were below the clinical cut-off.

DISCUSSION

The results of this study show support for two of the traditionally associated etiological correlates of vaginismus. More women in the vaginismus group reported a history of childhood sexual interference and held less positive attitudes about their sexuality. A history of sexual interference, however, could not be confirmed for adulthood. This was consistent with reports in the literature that *early* negative sexual experiences may play a role in the etiology of vaginismus (e.g. Biswas & Ratnam, 1995). Definitional problems tend to compromise the interpretation of research on

childhood sexual abuse (Goldman & Padayachi, 2000). In this study, specific abuse events were not considered independent events. However, despite our conservative analytic strategy of combining attempts at sexual abuse, sexual abuse involving touch, and rape as sexual interference, women in the vaginismus group reported being twice as likely to have a history of sexual interference. A study with a larger sample size will permit to confirm our findings and provide additional information on the potential role of specific types and severity of childhood sexual abuse in the development of vaginismus.

While we had predicted less positive sexual self-views, we could not confirm more negative self-views. Sexual attitudes are frequently regarded as one-dimensional and a lack of positive attitudes is considered synonymous with negative attitudes. However, Anderson and Cyranowski (1994) suggested two independent dimensions of sexual self-views, positive and negative. The less positive sexual self-view of women with vaginismus could be considered consistent with their sexual behaviour, but could have also preceded the development of vaginismus. Noting no differences in negative sexual self-views stand in contrast with the DSM-IV (APA, 1994) associated features, which note that vaginismus “is more often found ... in females with negative attitudes towards sex” (p.514).

One of the more consistent reports in the literature (e.g., Beck, 1993; Drenth, 1988; Ghavami-Dicker, 1988; Hawton & Catalan, 1990; Kaplan, 1974; Lamont, 1978; Silverstein, 1989) and the DSM IV (APA, 1994) has been that the sexual response of women with vaginismus remains unaffected if penetration is not attempted or anticipated. Yet, we found notable differences in sexual desire, arousal, pleasure, and

self-stimulation in women with vaginismus. However, the Sexual History Form did not differentiate between penetrative or non-penetrative difficulties. In addition, the cross sectional design, makes it impossible to determine whether the comparatively lower sexual functioning of women with vaginismus was the result of vaginal penetration problems, or determining factor in the development of vaginismus.

A further noteworthy finding of this study was the similarity between the vaginismus and VVS groups compared to the no pain group on measures of sexual function and sexual self-view. Women with VVS also demonstrated less positive sexual self-views and lower overall sexual function. The difference in childhood history of sexual abuse may indicate a different etiology of vaginal penetration difficulties for women with vaginismus, but the clinical presentation of both disorders appears to be very similar (de Kruiff, ter Kuile, Weijenborg & van Lankveld, 2000). These findings lend further support to recent reports suggesting that vaginismus and dyspareunia consist on a continuum and are clinically difficult to distinguish (e.g., Kaneko, 2001; Ng, 1999).

Other correlates of the etiology of vaginismus, lack of sexual knowledge, lower relationship adjustment, and physical abuse could not be confirmed by this study. In addition, women with vaginismus did not demonstrate increased levels of psychological distress. The results of the Locke Wallace Marital Adjustment Scale, however, are based on a small sample, which was reduced for the relationship measure since only half of the sample had been in a committed relationship at the time of the study. Small or moderate effects may not have been detected. This study was a first attempt at empirically evaluating etiological correlates of vaginismus and resulted in promising

findings. However, larger scale replications studies should further clarify the role of relationship adjustment, sexual functioning and self-schema, and childhood sexual abuse as determinant of vaginismus.

CONCLUSIONS

Vaginismus has been considered “a most perplexing problem” (Leiblum, 2000), yet etiological research has been lacking. The results of this study challenge the research and clinical community to take a second look at the traditionally held beliefs about etiology and the resulting conceptualizations of vaginismus. We suggest that unwanted sexual experiences during childhood may affect the development of positive cognitive representations of the self as sexual and put the individual at risk for developing sexual difficulties and/or respond negatively to transient sexual problems (Cyranowski & Anderson, 1998). Low desire and arousal or pain with intercourse for example, in turn may result in *symptoms* such as vaginal muscle tension and avoidance of penetration. Treatment for vaginismus has to go beyond the focus of working on vaginal containment towards a more holistic and developmental view of women’s sexuality (e.g. Kleinplatz, 1998; Shaw, 1994).

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General Conclusion and Directions for Future Research

As this is a manuscript-based thesis, the interpretation and implications of each set of results are presented in the appropriate section of each paper. Thus, I will focus primarily on the directions for future research.

Overall, the review of the literature, the investigation of vaginal spasm, pain, and behaviour, as well as commonly associated etiological correlates suggest that the clinical and research community need to revise their understanding of vaginismus and work towards a re-conceptualization as a multifaceted disorder involving pain and fear/phobia. While this study was a first empirical step towards that goal, many questions still remain to be answered.

In this study we evaluated psychological distress globally and found no differences between study groups, but the differences in behavioural and affective responses to anticipated and actual vaginal penetration via speculum or one digit examination were remarkable. We know very little about the cognitions and emotions of women with vaginismus; to access those in the context of an anxiety provoking situation such as a gynecological exam will be a necessary next step. Conversely, some preliminary studies indicated success treating the physiological mediator, pelvic floor tension alone by paralyzing or anaesthetizing vaginal muscles (Brin & Vapnek, 1997; Peleg, Press & Ben-Zion, 2001). Certainly these are interesting findings that need to be replicated in a controlled study with a larger samples size.

Fear of pain has been linked to behavioural avoidance (Sullivan, Rodgers & Kirsch, 2001); our findings suggest a similar link may exist for women with vaginismus. A negative or painful experience may have been at the source of the fear of

penetration, pain, or injury (tearing/bleeding). The subsequent avoidance of intercourse does not provide an opportunity to disconfirm possible faulty, maintaining cognitions. A qualitative study of the cognitive scripts and the symbolic meaning that vaginismus holds for the sufferer will provide information on the factors that initiate and maintain fear and avoidance behaviours. Within this context, studying the role of partners of women with vaginismus will be important given the evidence from the health psychology literature which suggests that a spouse can contribute to and reinforce avoidance behaviours (Flor, Turk & Rudy, 1989).

The findings of our study suggest that the sexual response of women with vaginismus is affected in ways other than vaginal penetration. This was an important preliminary finding since both clinical and classification literature consistently report the contrary. The measure used to evaluate sexuality was a frequently used measure of sexual functioning in men and women who experience intercourse. A more global measure evaluating all aspect of sexual function would provide a more accurate description. Clarifying whether sexual response in women with vaginismus is affected, or was affected preceding the development of specific penetration difficulties, would have important implications for treatment and add to our understanding of the development of penetration difficulties.

Years of “scientific neglect” (Beck, 1994) of vaginismus have hopefully come to an end and with increasing interest in understanding this complex women’s health problem, diagnostic conceptualization, etiology, and treatment will be based on empirical evidence.

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APPENDICES

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SUBJECT CONSENT FORM #1 (Version 3, Oct.15,98)

A Pilot Study Concerning the Causes of Inability to Have Intercourse (Vaginismus)

Principal Investigators

Dr. Irv Binik, Dr. Samir Khalife,
Dr. Deborah Cohen and Elke Reissing

Introduction

This study is being carried out by a multidisciplinary group of psychologists and gynecologists. The principal psychologist is Dr. Irv Binik, Dept. of Psychology, McGill University (398-6094) & Director, Sex and Couple Therapy Service, Royal Victoria Hospital. The principal gynecologist is Dr. Samir Khalifé (933-8877), Dept. of Obstetrics and Gynecology, Jewish General Hospital. The study is supported by research grants from the Medical Research Council of Canada and Pfizer Canada Inc.

Purpose of the Study

This study is being conducted to investigate the nature of vaginismus - the inability to experience vaginal penetration. In particular, we are interested in trying to understand both the physical and psychological barriers preventing intercourse and gynecological examinations. This attempt to better understand a largely neglected problem will help health professionals formulate more effective treatments for women experiencing this frustrating, disruptive and painful condition.

Procedures of the Study

Participation in the study will involve the following procedures: 1) an interview; 2) two gynecological exams; 3) the measurement of pelvic muscle tension; 4) two physiotherapeutic evaluations.

Interview & Questionnaires The structured interview and completion of questionnaires will take about 75 minutes and will cover medical history, pain during intercourse and in other situations, sexual behavior, attitudes and knowledge, relationships, history of sexual abuse or trauma and current physical and psychological symptoms.

Gynecological Exams Two separate gynecological examinations will be carried out by two different gynecologists (Drs. Khalifé and Cohen). There are several reasons for having 2 separate examinations. For women who have difficulty with gynecological examinations, it is often the case that one physician succeeds when another cannot. Even if the first gynecologist is successful, it is important to confirm his/her conclusions with a second examination. During the gynecological examinations, the doctors will visually and manually examine the woman's internal and external genitalia and reproductive organs. The participant, however, is in total control of the procedure and may ask to stop at any time or may control the speed of the examination. In some instances, individuals find it easier with the use of a mirror we provide, to observe the examination. This will be up to the participant. A female chaperone (e.g. trained research assistant) will be present during the examination.

Measurement of Muscle Tension The purpose of measuring vaginal and pelvic muscle tension is to find out whether the level of muscle tension in the vaginal and pelvic muscles of women with vaginismus is higher than average. This measurement consists of the insertion of a small vaginal sensor by the gynecologist. The vaginal sensor is attached to a biofeedback machine which can measure muscle tension. A clinically trained researcher will be in the room to monitor and adjust the equipment. The participant will be able to see the machine and the readings it takes. The participant will be asked to tense the muscles of her vagina and pelvic area several times and then relax. The entire procedure should take

about 10 minutes. The participant is in total control of the procedure and is able to control the speed of the evaluation or may ask to stop at any time

Physiotherapist Evaluation Two physiotherapist with extensive experience in treating pain with penetration and other genito-urinary disorders will assess the pelvic muscles of the participants. The evaluation involves the manual palpation of different muscle groups of the vulva, the vagina and the anus. The participant will be asked to tense and to relax the muscles of her vagina in order to evaluate vaginal tension and the ability to relax these muscles. The entire procedure will take around 20 minutes. The participant is in total control of the evaluation and can slow down or ask to stop the evaluation at any time.

Risks and Benefits

The major risk involved is that some of the above procedures may be uncomfortable or painful. The major benefit will be the possibility of completing a successful and comprehensive gynecological exam and pelvic muscle evaluation.

Compensation

The participant's will be remunerated with \$60 for the entire study.

Participant Rights

The participant is under no obligation to participate in this study and acceptance or refusal will not affect access to services. Furthermore, the participant is free to withdraw from the study at any time or to refuse to answer any questions posed without need of an explanation on her part.

Contacts

In the event that the participant has any complaints or dissatisfactions with this research, they can be communicated to one of the principal investigators. Questions regarding rights as a research subject should be directed to the Patient Representative either at the Jewish General Hospital, (Lianne Brown-340-8222, loc. 5833) or at the Royal Victoria Hospital, (Pat O'Rourke-842-1231, loc. 5655).

Confidentiality

Two different records of the participant's interviews and examinations will be kept. Official hospital records will include the participant's name and the results of the 2 gynecological examinations, and will be kept as are all hospital records. The results of the interviews, questionnaires, measurement of muscle tension, and physiotherapist evaluation will not be kept in hospital records and will be available only to members of the research team. These records will only be identified by a research number and will not have the participant's name on them.

Participant's Signature

The study has been explained to me and my questions have been answered to my satisfaction. I agree to participate in this study. I will keep one copy of this form.

Signature _____

Name (print) _____

Date _____

Investigator _____

Witness _____

Formulaire de consentement du sujet #1 (Oct. 15, 98)

Une étude pilote se rapportant aux causes d'incapacité d'avoir des relations sexuelles (Vaginisme)

**Principaux chercheurs:
Dr. Irv Binik, Dr. Samir Khalifé,
Dr. Deborah Cohen et Elke Reissing**

Introduction

Cette étude est poursuivie par un groupe multidisciplinaire de psychologues et de gynécologues. Le psychologue principal est le Dr. Irv Binik du département de psychologie de l'Université McGill (398-6094) & directeur du service de thérapie sexuelle de couples de l'hôpital Royal Victoria. Le gynécologue responsable est le Dr. Samir Khalifé (933-8877) du département d'obstétrique et de gynécologie de l'hôpital général Juif. L'étude est rendue possible grâce à une subvention de recherche du conseil de recherche médical du Canada, Pfizer Canada Inc. et Thought Technology Limited.

Le but de l'étude

Cette étude est menée pour découvrir la nature du vaginisme (l'incapacité d'avoir une pénétration vaginale). Nous essayons plus particulièrement de comprendre la nature des obstacles psychologiques ou/et physique qui empêchent les relations sexuelles et les examens gynécologiques. Cette tentative pour mieux comprendre ce problème, si longtemps négligé, aidera les professionnels de la santé à promulguer des traitements plus efficaces pour les femmes ayant ce problème à la fois dérangeant et douloureux.

Procédures de l'étude

La participation à cette étude comprend les procédures suivantes:

- 1) une entrevue et questionnaires
- 2) deux examens gynécologiques
- 3) la mensuration de la tensions des muscles pelviens
- 4) deux évaluations physiothérapeutiques

Entrevue et questionnaire

L'entrevue dirigée et l'exécution des questionnaires se feront en 75 minutes et couvriront l'historique médicale, la douleur pendant les relations sexuelles ou autres activités, le comportement sexuel, les attitudes, les connaissances, les fréquentations, l'historique des abus sexuels ou autres traumatismes et les symptômes physiques et psychologiques présents.

Les examens gynécologiques

Deux examens gynécologiques seront effectués par deux gynécologues différents (Drs. Khalifé et Cohen). Il y a plusieurs raisons à ces deux examens. Pour les femmes qui éprouvent des problèmes à l'examen gynécologique, on pense que là où un des gynécologues ne réussira pas, l'autre y parviendra. Même si le premier réussit, il est important de confirmer ses conclusions avec un deuxième. Pendant les examens gynécologiques, les médecins examineront de façon visuelle et tactile les organes génitaux et reproducteurs internes et externes de la femme. Cependant, la participante a le contrôle de la procédure et peut demander en tout temps soit de la ralentir ou soit d'arrêter. Dans certains cas, les femmes trouvent plus facile de suivre ce qui se passe avec un miroir fournie sur place. Un chaperon, c'est à dire une assistante de recherche qualifiée, sera présente tout au long de l'examen.

Mensuration de la tensions des muscles pelviens

Le but de la mensurations des muscles pelviens et vaginaux est de vérifier si le niveau de tension est supérieur à la moyenne. Cette mensuration consiste à insérer un petit détecteur vaginal; ceci est fait par le gynécologue. Ce détecteur vaginal est relié à un appareil biofeedback/

bioénergétique qui mesure la tension. Un chercheur, cliniquement qualifié en ce domaine, sera dans la salle d'examen pour surveiller et ajuster l'équipement. La participante pourra voir l'appareil et en vérifier la lecture. On lui demandera de contracter et relâcher ses muscles pelviens et vaginaux plusieurs fois. Le tout devrait prendre environ 10 minutes. En tout temps la participante sera en contrôle de la vitesse du déroulement et pourra demander de ralentir ou de cesser.

Evaluation physiothérapeutique

Deux physiothérapeutes avec une expérience pertinente dans le domaine de la douleur à la pénétration et des troubles génitaux-urinaires, évalueront les muscles pelviens des participantes. L'évaluation comprend la manipulation de différents muscles vulvaires, vaginaux et anaux. On demandera aux participantes de contracter et de relâcher les muscles de leur vagin afin de mesurer la tension vaginale et l'habileté de détendre ces derniers. Le tout prendra environ 20 minutes. La participante pourra ralentir ou arrêter la procédure en tout temps.

Risk et bénéfices

Le principal risque est l'inconfort et la douleur. Le bénéfice de ce processus est de pouvoir subir un examen complet gynécologique et une évaluation des muscles pelviens.

Rémunération

La participante recevrait \$60.00 pour l'étude.

Droit des participantes

La participante n'est pas tenue d'accepter de participer à cette étude et son refus ne modifiera en rien l'accès aux services. En plus, la participante peut se retirer de l'étude ou refuser de répondre à l'une ou l'autre des questions sans peur des représailles.

Contacte

Si la participante veut formuler des plaintes ou des insatisfactions en rapport à cette recherche elle le fera à l'un ou l'autre des enquêteurs. Les questions se rapportant aux droits des sujets de recherche seront adressées au représentant des patients soit à l'hôpital général Juif (Lianne Brown: 340-8222 poste 5833) ou à l'hôpital Royal Victoria (Pat O'Rourke: 842-1231 poste 5655).

Confidentialité

Deux dossiers différents des entrevues et des examens seront conservés. Les dossiers officiels de la clinique médicale comprendront le nom de la participante et les résultats des deux examens et seront gardés comme tous les autres dossiers médicaux. Les résultats des entrevues, les questionnaires, la mensuration de la tension des muscles et l'évaluation physiothérapeutique, ne seront accessibles qu'aux membres de l'équipe de recherche. Ces dossiers seront identifiés par un numéro seulement sans le nom de la participante.

Signature _____

Nom (lettres maillées) _____

Date _____

Chercheur _____

Témoin _____

**Appendix 2 –
Standardized Gynecological Examination**

GYNAECOLOGICAL EXAMINATION (VAGINISMUS)

Date _____ Visit # _____
Subject # _____ Gynaecologist _____

BEHAVIOURAL MEASURES:

Difficulty assuming supine posture with feet in stirrup:

0	1	2	3	4
no difficulty	tension assuming position	tension when in supine	need encouragement	refusal

TOUCH OF THE THIGH:

Reactivity:

0	1	2	3	4
no reaction	tension	close legs/withdraw pelvis	same, pronounced	termination

Q-TIP:

1) Touch Labia Minora:

0	1	2	3	4
no reaction	tension	pelvic withdrawal	pronounced t. + p.w.	termination

PAIN RATING: (0-10) _____

SPASM: Yes ___ No ___

2) Penetration

0	1	2	3	4
no reaction	tension	pelvic withdrawal	pronounced t. + p.w.	termination

PAIN RATING: (0-10) _____

SPASM: Yes ___ No ___

3) Touch Vestibule

0	1	2	3	4
no reaction	tension	pelvic withdrawal	pronounced t. + p.w.	termination

PAIN RATING: (0-10) _____

SPASM: Yes ___ No ___

1 FINGER:

1) Touch Labia Minora

0	1	2	3	4
no reaction	tension	pelvic withdrawal	pronounced t. + p.w.	termination

PAIN RATING: (0-10) _____

SPASM: Yes ___ No ___

2) Penetration

0	1	2	3	4
no reaction	tension	pelvic withdrawal	pronounced t. + p.w.	termination

PAIN RATING: (0-10) _____

SPASM: Yes ___ No ___

3) Touch Vestibule

0	1	2	3	4
no reaction	tension	pelvic withdrawal	pronounced t. + p.w.	termination

PAIN RATING: (0-10) _____

SPASM: Yes ___ No ___

SPECULUM:

1) Penetration

0	1	2	3	4
no reaction	tension	pelvic withdrawal	prounced t. + p.w.	termination

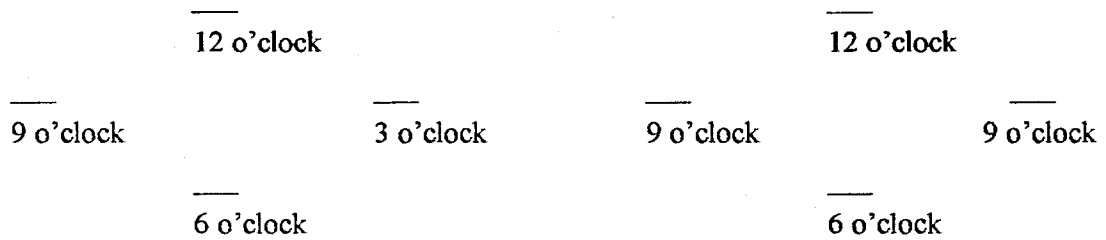
PAIN RATING: (0-10) _____

SPASM: Yes ___ No ___

Presence of hymen:

→ REMNANTS are present:

→ complete RIGID hymen present ___



LAMONT'S CLASSIFICATION OF DEGREE OF MUSCULAR ACTIVITY:

→ please circle one

- 0° normal muscle tone
- 1° perineal and levator spasm (released by reassurance)
- 2° perineal spasm maintained throughout the pelvic exam
- 3° levator spasm + elevation of buttocks
- 4° levator spasm + perineal spasm, elevation: adduction + retreat

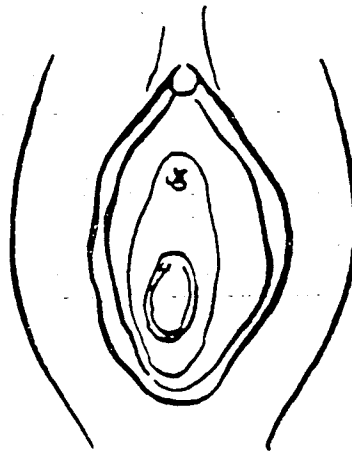
GYNECOLOGICAL EXAMINATION (GENERAL)

Date _____ Visit #: _____

Subject # _____ Gynaecologist _____

LESIONS/EROSION/SCARRING/MICROPAPILLOMA/CONDYLOMA (code as L/E/S/M/C)

VULVA



Other significant clinical findings in vulva

VAGINA

PAIN RATING

Anterior vaginal wall (bladder)

(gyne) (pt)

(gyne) (pt)

(gyne) (pt)

Pubococcygeal muscle

Rt _____

Lt _____

Uterosacral ligament

Rt _____

Lt _____

VAGINAL ATROPHY INDEX

Score

	1	2	3
Skin elasticity and turgor	Poor	Fair	Excellent
Pubic hair	Sparse	Normal	
Labia	Atrophic, dry	Full	
Introitus	< 1 fingerbreadth	1 fingerbreadth	2
fingerbreadths			
Vaginal mucosa	Thin, friable	Smooth	Rugated
Vaginal depth	Shortened	Normal	

Total VAI score _____

PROLAPSED MUCOSA _____

Other significant clinical findings in vagina

UTERUS

PAIN RATING

(gyne) (pt)

___ ___ cervix without motion

___ ___ corpus without motion

___ ___ cervix with motion

___ ___ corpus with motion

Pain at vaginal examination alone ___

Pain at bimanual examination ___

mobile uterus ___

immobile uterus ___

cervical ectropion	yes	no	don't know	
cervical polyp	yes	no	don't know	
prolapsed uterus	yes	no	don't know	1 2 3
fibroids	yes	no	don't know	
anteverted uterus	yes	no	don't know	
intermediate uterus	yes	no	don't know	
retroverted uterus	yes	no	don't know	

Other significant clinical findings in the uterus or cervix

ADNEXAE

felt ____

not felt ____

mobile ____

immobile ____

PAIN RATING

	(gyne) (pt)	(gyne) (pt)
without motion	Rt ____ ____	Lt ____ ____
with motion	Rt ____ ____	Lt ____ ____

Pain at vaginal examination alone ____

Pain at bimanual examination ____

Other significant clinical findings in adnexae

VVS EXAMINATION

Date _____

Visit #: _____

Subject # _____

Gynecologist _____

Pain upon vestibular touch: patient pain ratings 0 (no pain) – 10 (worst pain ever):

9 o'clock

3 o'clock

7 o'clock

5 o'clock

Erythema rating: please circle:

0	1	2	3
none	mild	moderate	severe

Diagnosis of VVS: please circle:

- 1) No VVS symptomatology
- 2) Mild form of VVS
- 3) Moderate form of VVS
- 4) Severe form of VVS

PAIN RELATED DIAGNOSES
DIAGNOSES

(please rank order your diagnoses)

- No findings linked to dyspareunia _____
 - Vulvar vestibulitis syndrome _____
 - Vaginismus _____
 - Vaginal atrophy _____
 - Infection _____
 - Bladder sensitivity/complications _____
 - Muscular contraction/tension _____
 - Prolapsed uterus _____
 - Scarring from previous incision _____
 - Vulvar erosion/lesions _____
 - Fibroids _____
 - Endometriosis _____
 - Cysts _____
 - Tender utero-sacral ligaments _____
 - Tender uterus _____
 - Retroverted uterus _____
 - Polyps _____
 - Tender ovaries _____
 - Cervical eversion _____
 - Cervical inflammation _____
 - Condyloma _____
 - Atypical cell changes in PAP _____
 - Micropapilloma _____
 - Monolilial vaginitis _____
 - Squamous metaplasia _____
 - Congenital anatomical anomaly _____
 - Candidiasis _____
 - Other (please specify) _____
-

NON-PAIN RELATED

- 1. _____
- 2. _____
- 3. _____
- 4. _____

**Appendix 3 –
Standardized Physical Therapist Examination**

VAGINISMUS STUDY

Psychology, McGill University. Claudia Brown, Pht. and Marie-Josée Lord, Pht.

EXTERNAL VAGINAL PALPATION

LOCATION	COMPLIANCE OF TISSUE (softer, N, harder)		PAIN (0-10)	PROTECT. REACTIONS (twitch, increased tone, spasm, closing knees, moving away, contract)
	L / R	L / R	L / R	L / R
under pubis	____/____	____/____	____/____	____/____
beside pubic ramus, lat. to vagina	____/____	____/____	____/____	____/____
beside central perineal tendon	____/____	____/____	____/____	____/____
med. to ischial tuberosity	____/____	____/____	____/____	____/____
between ischial tuberosity and anus	____/____	____/____	____/____	____/____

INTERNAL VAGINAL PALPATION

MUSCLE TONE AT SUPERFICIAL LAYER
(one digit)

	PAIN	PROTECT. REACTIONS
3 o'clock	_____	_____
-3 very hypotonic		
-2 hypotonic		
-1 slightly hypotonic		
0 normotonic		
1 slightly hypertonic		
2 hypertonic		
3 very hypertonic		
6 o'clock	_____	_____
-3 very hypotonic		
-2 hypotonic		
-1 slightly hypotonic		
0 normotonic		
1 slightly hypertonic		
2 hypertonic		
3 very hypertonic		

MUSCLE TONE AT SUPERFICIAL LAYER
(continued)

PAIN

PROTECT. REACTIONS

9 o'clock

- 3 very hypotonic
- 2 hypotonic
- 1 slightly hypotonic
- 0 normotonic
- 1 slightly hypertonic
- 2 hypertonic
- 3 very hypertonic

MUSCLE TONE AT DEEP LAYER
(one digit)

3 o'clock

- 3 very hypotonic
- 2 hypotonic
- 1 slightly hypotonic
- 0 normotonic
- 1 slightly hypertonic
- 2 hypertonic
- 3 very hypertonic

deeper, at 5 o'clock

- 3 very hypotonic
- 2 hypotonic
- 1 slightly hypotonic
- 0 normotonic
- 1 slightly hypertonic
- 2 hypertonic
- 3 very hypertonic

6 o'clock

- 3 very hypotonic
- 2 hypotonic
- 1 slightly hypotonic
- 0 normotonic
- 1 slightly hypertonic
- 2 hypertonic
- 3 very hypertonic

deeper, at 7 o'clock

- 3 very hypotonic
- 2 hypotonic
- 1 slightly hypotonic
- 0 normotonic
- 1 slightly hypertonic
- 2 hypertonic
- 3 very hypertonic

MUSCLE TONE AT DEEP LAYER
(one digit, continued)

PAIN

PROTECT. REACTIONS

9 o'clock

- 3 very hypotonic
- 2 hypotonic
- 1 slightly hypotonic
- 0 normotonic
- 1 slightly hypertonic
- 2 hypertonic
- 3 very hypertonic

CONTRACTILITY

MUSCLE TESTING

- one finger, resting on central perineal tendon:
- 0 no contraction perceived
 - 1 fasciculation
 - 2 contraction palpated
 - 3 good contraction
 - 4 moderate resistance
 - 5 maximum resistance

RELAXATION: 0 returns to resting state

1

2

3

4 remains fully contracted

CONTRACTILITY

PAIN

PROTECT. REACTIONS

MUSCLE TESTING

- one digit, left side:
- 0 no contraction perceived
 - 1 fasciculation
 - 2 contraction palpated
 - 3 good contraction
 - 4 moderate resistance
 - 5 maximum resistance

RELAXATION: 0 returns to resting state

1

2

3

4 remains fully contracted

CONTRACTILITY (continued)

PAIN

PROTECT. REACTIONS

MUSCLE TESTING

-one digit, right side:

- 0 no contraction perceived
- 1 fasciculation
- 2 contraction palpated
- 3 good contraction
- 4 moderate resistance
- 5 maximum resistance

RELAXATION: 0 returns to resting state

- 1
- 2
- 3
- 4 remains fully contracted

POSSIBILITY TO PALPATE WITH 2 DIGITS

(3 - minute test)

- 1 yes, degree of opening: 0 none
- 1 opened one quarter
- 2 opened one half
- 3 opened three quarters
- 4 fully opened

- 2 no

Type of restriction: inelasticity _____ hypertonicity_____

CONTRACTILITY, if possible to palpate with two digits

PAIN

PROTECT. REACTIONS

MUSCLE TESTING

-two digits, lateral placement:

- 0 no contraction perceived
- 1 fasciculation
- 2 contraction palpated
- 3 good contraction
- 4 moderate resistance
- 5 maximum resistance

RELAXATION: 0 returns to resting state

- 1
- 2
- 3
- 4 remains fully contracted

PALPATION
LOCATION

COMPLIANCE OF TISSUE
(softer, N, harder)

PAIN(0-10)

PROTECT. REACTIONS

	L / Ant	_____	_____	_____
-pubo-coccygeus sling (clock: 4-8 post, 9-3 ant.)	L / Post	_____	_____	_____
	R / Ant	_____	_____	_____
	R / Post	_____	_____	_____
	L	_____	_____	_____
-ischio-rectal fossa	R	_____	_____	_____
	L	_____	_____	_____
-coccygeal area	R	_____	_____	_____
	L	_____	_____	_____

INTERNAL ANAL EXAMINATION

PAIN

PROTECT. REACTIONS

Sphincter tone: -1 hypotonic
0 normotonic
1 hypertonic

Ano-rectal angle: _____
(with hypertonicity, angle is less than 90)

Presence of stool : 1 yes
2 no

_____	_____
_____	_____

		TONE	PAIN	PROTECT. REACTIONS
Pubo-rectalis tone:	L	_____	_____	_____
-3 very hypotonic				
-2 hypotonic				
-1 slightly hypotonic	R	_____	_____	_____
0 normotonic				
1 slightly hypertonic				
2 hypertonic				
3 very hypertonic				

		CONTRACT.	PAIN	PROTECT. REACTIONS
Pubo-rectalis contraction:				
0 no contraction perceived				
1 fasciculation	L	_____	_____	_____
2 contraction palpated				
3 good contraction				
4 moderate resistance	R	_____	_____	_____
5 maximum resistance				

		RELAX.	PAIN	PROTECT. REACTIONS
Puborectalis relaxation:				
0 returns to resting state				
1	L	_____	_____	_____
2				
3				
4 remains fully contracted	R	_____	_____	_____

Coccyx position: flexion
normal
extension
deviation

Coccygeal mobility: _____
hypomobile
normal
hypermobile

		TONE	PAIN	PROTECT. REACTIONS
Pubococcygeus tone:				
-3 very hypotonic	L	-----	-----	-----
-2 hypotonic				
-1 slightly hypotonic	R	-----	-----	-----
0 normotonic		-----	-----	-----
1 slightly hypertonic		-----	-----	-----
2 hypertonic		-----	-----	-----
3 very hypertonic				
Iliococcygeus tone:				
-3 very hypotonic	L	-----	-----	-----
-2 hypotonic				
-1 slightly hypotonic	R	-----	-----	-----
0 normotonic		-----	-----	-----
1 slightly hypertonic		-----	-----	-----
2 hypertonic		-----	-----	-----
3 very hypertonic				
Ischiococcygeus tone:				
-3 very hypotonic	L	-----	-----	-----
-2 hypotonic				
-1 slightly hypotonic	R	-----	-----	-----
0 normotonic		-----	-----	-----
1 slightly hypertonic		-----	-----	-----
2 hypertonic		-----	-----	-----
3 very hypertonic				
Deep transversus tone:				
-3 very hypotonic	L	-----	-----	-----
-2 hypotonic				
-1 slightly hypotonic	R	-----	-----	-----
0 normotonic		-----	-----	-----
1 slightly hypertonic		-----	-----	-----
2 hypertonic		-----	-----	-----
3 very hypertonic				

Diagnostic Impression:

1) Evaluation findings *normal*: ____

2) Evaluation findings compatible with *vaginismus*: Mild ____
 Moderate ____
 Severe ____

3) Evaluation findings compatible with *other* reasons for dyspareunia: ____

Please specify: _____

RECOMMENDATIONS FOR PHYSIOTHERAPY: please circle the appropriate choice

- 1) not necessary
- 2) preventative
- 3) can help
- 4) could help significantly
- 5) highly recommended

OTHER RECOMMENDATIONS YOU WOULD LIKE TO ADD:

**Appendix 4 –
Structured Interview**

STRUCTURED INTERVIEW

(Vaginismus Study)

ID: _____

Date: _____

Interviewer: _____

Visit: _____

Sections:

For all respondents:

- socio-democratic information
- relationship history
- gynecological history

Selectively:

- Pain A only for women who have had *regular* intercourse at some point in their lives and *have or have had pain*.
 - Pain B for all women having intercourse presently (in the last 6 months)
-
- Pain C for women *not* having had intercourse in the *last 6 months*, but who have had intercourse in the past regularly
 - Pain D for women who had few attempts at penile vaginal intercourse (<12 attempts/year) or who only were able to achieve partial penetration.

SOCIO-DEMOGRAPHIC INFORMATION

- 1) Date of birth / /
 mo day year

- 2) Place of birth
 - 1) North America
 - 2) Latin/South America
 - 2) Europe
 - 5) Africa
 - 6) Asia
 - 7) Australia
 - 8) Middle East
 - 9) Latin America/South America
 - 10) Caribbean

- 3) What culture do you see yourself as most associated with?
 - 1) Canadian
 - 2) Quebecoise
 - 3) American
 - 4) Irish/Scottish/Welsh
 - 5) Native American
 - 6) Greek or Italian Canadian
 - 7) Western European
 - 8) Eastern European
 - 9) African
 - 10) Asian
 - 11) Australian
 - 12) Middle Eastern
 - 13) Latin /South American
 - 14) Caribbean

- 4) What is your mother tongue?
 - 1) English
 - 2) French
 - 3) other (please specify: _____)

- 5) In what religion were you brought up?
 - 1) Catholic
 - 2) Protestant
 - 3) Jewish
 - 4) None
 - 5) Other (please specify: _____)

- 6) How many years of schooling do you have? _____

- 7) What is the approximate total annual income of your household?
 1) \$000 - \$9,999 4) \$30,000 - \$39,999 7) \$60,000 and over
 2) \$10,000 - \$19,999 5) \$40,000 - \$49,999
 3) \$20,000 - \$29,999 6) \$50,000 - \$59,999

RELATIONSHIP HISTORY

- 1) Which of the following best describes your current situation?
 1) no regular partner at the moment
 2) dating one partner regularly
 3) living with a partner
 4) married
- 2) How long have you been in the situation you circled above?
 _____ years _____ months
- 3) If you have a partner, please state how old he is. _____ years
- 4) Would your partner be willing to participate in this study?
 1) YES ___ 2) NO ___ 3) Don't know/maybe ___ 4) N/A ___
- 5) Have you experienced childbirth? 1) YES 2) NO
 If yes, please specify # of children _____
- 6) Have you ever had penile-vaginal intercourse?
 1) YES 2) NO 3) PARTIAL ONLY
 (if yes continue, if no proceed to Gynecological History)
- 7) What is the total number of partners you have had intercourse with? (Include one-night stands) _____ N/A ___
- 8) How old were you when you had intercourse for the first time? _____ years
- 9) Do you remember it as being painful? 1) YES 2) NO (please rate:)
 a) (sensory)
- | | | | | | | | | | | |
|---------|---|---|---|---|---|---|---|---|---|-------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| no pain | | | | | | | | | | worst |
- b) (affective)
- | | | | | | | | | | | |
|------------------------|---|---|---|---|---|---|---|---|---|-----------------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| not distressing at all | | | | | | | | | | extremely distressing |

GYNECOLOGICAL HISTORY

1) On the following scale, please rate the pain you experience during your menstrual periods.

a) (sensory)

0	1	2	3	4	5	6	7	8	9	10
no pain										worst pain ever

b) (affective)

0	1	2	3	4	5	6	7	8	9	10
not distressing at all										extremely distressing

2) Do you use tampons? 1)YES 2)NO

If yes: (endorse all applicable:)

1) insertion and removal are without problems

2) insertion is difficult

Rate severity on a scale from 1(minor) to 10 (most difficult): _____

3) removal is difficult

Rate severity on a scale from 1(minor) to 10 (most difficult): _____

4) insertion is painful

Rate severity on a scale from 1(minor) to 10 (most difficult): _____

5) removal is painful

Rate severity on a scale from 1(minor) to 10 (most difficult): _____

3) Do you use contraception? 1)YES 2)NO

if yes, which type: _____

4) Which describes you best?

1) never saw a gynaecologist

2) never had a pelvic exam

3) saw gynaecologist but could not have pelvic exam

4) see gynaecologist once every few years (please specify: _____)

5) see gynaecologist once per year

6) see gynaecologist more than once per year (please specify: _____)

5) How many yeast infections have you had? _____

6) How were they diagnosed?

N/A

1) clinical plus positive culture (# of times: _____)

2) clinical only (# of times: _____)

3) self-diagnosed (# of times: _____)

7) Have you had repeated yeast infections in the past? 1)YES 2)NO

8) What other types of gynecological problems have you had: (check all applicable)

- 1) bladder/urinary infections
- 2) interstitial cystitis _____
- 3) Chlamydia _____
- 4) Gardnerella vaginalis _____
- 5) Genital herpes _____
- 6) Genital warts _____
- 7) Gonorrhea _____
- 8) H.I.V _____
- 9) Syphilis _____
- 10) Trichomonas _____
- 11) Pelvic inflammatory disease _____
- 12) Endometriosis _____
- 13) Other (please specify: _____)
- 14) None

9) What kind of gynecological interventions have you had: (check all applicable)

- 1) Hysterectomy
- 2) Laparoscopy
- 3) Ovariectomy
- 4) Tubal ligation
- 5) Abortion
- 6) C+T
- 7) Other (please specify: _____)
- 8) None

10) How many gynecologists or other health professionals have you consulted *specifically* for your problems with intercourse? N/A (never saw gynecologist) _____ # _____

11) Have you ever received a diagnosis of: N/A

- | | | | |
|-------------------------|-----|----|-----------|
| a) Vaginismus? | YES | NO | by: _____ |
| b) Dyspareunia? | YES | NO | by: _____ |
| c) Vulvar Vestibulitis? | YES | NO | by: _____ |
| d) Vulvodynia? | YES | NO | by: _____ |

12) What other diagnoses did you receive concerning your penetration problem? n/a
by: _____

13) Have you ever discontinued a gynecological exam?

- 1) YES (#of times: _____) 2) NO _____ 3) Don't remember _____

If yes , what were your reasons:

- 1) fear
- 2) pain
- 3) penetration (finger, speculum) impossible
- 4) gynecologist's decision
- 5) other (please specify: _____)

**DO YOU, OR HAVE YOU EXPERIENCED PAIN *DURING *
INTERCOURSE, IF YES, CONSIDER THE FOLLOWING:**

PAIN *A*

1) How did it start?

- 1) with first intercourse
- 2) after repeated candidal infections
- 3) after childbirth
- 4) for no apparent reason
- 5) change of partner
- 6) after repeated bladder infections
- 7) with onset of menopause
- 8) after gynecological surgery (_____)
- 9) life stress (e.g. marital conflict, financial problems)
- 10) after an abortion
- 11) other (please specify: _____)

2) Have you always felt pain during intercourse since your first experience of pain with intercourse?

- 1) yes, since first time
- 2) no, it depended on the partner
- 3) no, when I stopped taking the pill, it went away
- 4) no, it came and went without any apparent reason
- 5) no, after childbirth, it stopped temporarily and then came back
- 6) no, after treatment _____, it stopped and then came back
- 7) no, other _____

3) Have you had more than one partner since the pain started? 1) YES 2) NO

4) How many health professionals have you consulted for the pain? _____

5) What diagnoses and treatments were you given by the health professionals to whom you reported the pain? N/A _____ None given _____

Diagnosis	Treatment	Number of times taken
-----------	-----------	-----------------------

_____	_____	_____
_____	_____	_____

6) What have you tried in alleviating your pain?
Treatment

None tried _____
Number of times taken

_____	_____
_____	_____

(all women * *presently* * having intercourse)
PAIN *B*

1) Over the past 6 months approximately how many times have you attempted to have intercourse? _____

→IF ANSWER = <6 proceed to Pain *C* or *D*

2) In the past 6 months, have you ever experienced pain or significant discomfort before, during or after intercourse? 1) YES 2)NO

→If *no*, proceed to Pain *C* or *D*

3) Why do you think you have pain with intercourse? What is your personal theory about your discomfort?

4) When you do have pain, is the pain always the same intensity?
YES NO (it varies)

5) If applicable: Is there anything special about the times when you have less or no pain? Are there any special circumstances you can identify? Please check off any of the following that apply or specify circumstances not listed.

How tired I was _____	How aroused I was _____
How lubricated I was _____	How long foreplay lasted _____
The intercourse position we used _____	The place where we had intercourse _____
How nervous or anxious I was _____	The time of my menstrual cycle _____
The partner I was having sex with _____	Whether I was angry with my partner _____
Whether we were alone in the house _____	Whether I had taken any drugs _____
The time of day _____	Whether I had had an alcoholic beverage _____
The length of time since the last episode of intercourse _____	
How long we had been having intercourse for _____	
Other _____ (please specify) _____	

6) When does the pain typically start?

- 1) before penis touches vaginal opening
- 2) when penis starts to enter vagina
- 3) when penis has entered and is thrusting (moving)
- 4) within 1/2 hour after intercourse
- 5) more than 1/2 hour after intercourse
- 6) Other (Please specify: _____)

7) How long does the pain typically last ?

- 1) during penile entry only
- 2) during the penile thrusting only
- 3) only for a period after penile exit
- 4) during penile entry and after penile exit
- 5) during penile entry and during penile thrusting
- 6) during penile thrusting and for some time after penile exit
- 7) during penile entry, during penile thrusting and after penile exit
- 8) it is never the same: there is no typical pattern

If it lasts after penile exit, please state for how long after, the pain is felt

Time: _____ hours _____ days (_____ minutes)

8) Where do you typically feel the pain during intercourse? Is there a specific spot you can show me? If yes, where ? (You may select more than one)

(Show model and code on the diagram)

- 1) at the vaginal opening
- 2) everywhere on the vulva
- 3) inside the vagina
- 4) in the pelvic or abdominal region

9) Can you differentiate the different pains indicated in #8?

1)YES____ 2)NO____ 3)DON'T KNOW____ 4)only one pain____

→ if "yes", "one pain" or "don't know" go on

→ if "no" go on to question # 15

10) Rate the average intensity of the pain at *the vaginal opening* (past 6 months) on a scale of 0-10

a) (sensory)

0	1	2	3	4	5	6	7	8	9	10
no pain										worst pain ever

b) (affective)

0	1	2	3	4	5	6	7	8	9	10
not distressing at all										most distressing ever

11) Rate the average intensity of the pain in the *everywhere on the vulva* (past 6 months) on a scale of 0 to 10

a) (sensory)

0	1	2	3	4	5	6	7	8	9	10
no pain									worst pain ever	

b) (affective)

0	1	2	3	4	5	6	7	8	9	10
not distressing at all									most distressing ever	

12) Rate the average intensity of the pain *inside the vagina* (past 6 months) on a scale of 0-10

a) (sensory)

0	1	2	3	4	5	6	7	8	9	10
no pain									worst pain ever	

b) (affective)

0	1	2	3	4	5	6	7	8	9	10
not distressing at all									most distressing ever	

13) Rate the average intensity of the pain in the *on the pelvic or abdominal region* (past 6 months) on a scale of 0 -10

a) (sensory)

0	1	2	3	4	5	6	7	8	9	10
no pain									worst pain ever	

b) (affective)

0	1	2	3	4	5	6	7	8	9	10
not distressing at all									most distressing ever	

14) Rate the average intensity of *pain with intercourse* (past 6 months) on a scale of 0-10

a) (sensory)

0	1	2	3	4	5	6	7	8	9	10
no pain									worst pain ever	

b) (affective)

0	1	2	3	4	5	6	7	8	9	10
not distressing at all									most distressing ever	

15) Do you **regularly** suffer from any of the following pains? Please check off as many of the following as apply.

- 1) Stomach aches (apart from menstrual cramps) ___
- 2) Neck pain ___
- 3) Pain in kidneys ___
- 4) Sore throat ___
- 5) Toothaches ___
- 6) Earaches ___
- 7) Arthritis ___ (where?: _____)
- 8) Back pain ___
- 9) Chest pain ___
- 10) Headache ___
- 11) Muscle pain ___ (where?: _____)
- 12) Other (Please specify: _____)
- 13) None

(women **not** having intercourse **now**, if women *rarely* (<12/yr) had penile-vaginal intercourse, proceed to next section)

PAIN *C*

1) How long has it been since the last time you have made an attempt at penetration?
_____ months _____ years

2) What is the reason you have not had intercourse in the past 6 months?

- 1) I have no partner at the moment
- 2) it hurts too much
- 3) I have no desire
- 4) my partner has erection problem
- 5) my partner has no desire
- 6) my partner is concerned about hurting me
- 7) I fear pain
- 8) my vagina is too small
- 9) my vaginal muscles cramp up
- 10) my vagina is blocked
- 11) Other (Please specify: _____)

3) Do you want to resume intercourse? 1)YES 2)NO 3)DON'T KNOW

4) When you had intercourse in the past did you ever experience pain or significant discomfort before, during or after intercourse? 1)YES 2)NO

→ if *no*, proceed to next section

5) Why do you think you have had pain with intercourse in the past? What is your personal theory about your discomfort?

6) In the past approximately how many times per month were you attempting to have intercourse? _____

7) When you had pain, was the pain always the same intensity?

- 1) YES 2) NO (it varied)

8) If applicable: Was there anything special about the times when you have had less or no pain? Were there any special circumstances you can identify? Please check off any of the following that applied or specify circumstances not listed.

It depended on (put check mark on as many as apply)

How tired I was _____	How aroused I was _____
How lubricated I was _____	How long foreplay lasted _____
The intercourse position we used _____	The place where we had intercourse _____
How nervous or anxious I was _____	The time of my menstrual cycle _____
The partner I was having sex with _____	Whether I was angry with my partner _____
Whether we were alone in the house _____	Whether I had taken any drugs _____
The time of day _____	Whether I had had an alcoholic beverage _____
The length of time since the last episode of intercourse _____	
How long we had been having intercourse for _____	
Other _____ (please specify) _____	

9) When did the pain typically start?

- 1) before penis touched vaginal opening
- 2) when penis started to enter vagina
- 3) when penis had fully entered and is thrusting
- 4) immediately after intercourse
- 5) more than 1/2 hour after intercourse
- 6) Other (Please specify _____)

10) How long did the pain typically last?

- 1) during penile entry only
- 2) during penile thrusting only
- 3) only for a period after penile exit
- 4) during penile entry and after penile exit
- 5) during penile entry and during penile thrusting
- 6) during penile thrusting and for some time after penile exit
- 7) during penile entry, during penile thrusting and after penile exit
- 8) it was never the same; there is no typical pattern

If it lasted after penile exit, please state for how long after, the pain was felt
 Time: _____ minutes _____ hours _____ days

11) Where did you typically feel the pain during intercourse? Is there a specific spot you can show me? If yes, where? (You may select more than one)

(Show model and code on the diagram on next page)

- 1) at the vaginal opening
- 2) everywhere on the vulva
- 3) inside the vagina
- 4) in the pelvic or abdominal region

12) Can you differentiate the different pains indicated in #8?

- 1) YES ___ 2) NO ___ 3) DON'T KNOW ___ 4) only 1 pain ___

→ if "yes", "1 pain" or "don't know" go on
 → if "no" go on to question # 18

13) Rate the average intensity of the pain at *the vaginal opening* (past 6 months) on a scale of 0 to 10

a) (sensory)

0	1	2	3	4	5	6	7	8	9	10
no pain										worst pain ever

b) (affective)

0	1	2	3	4	5	6	7	8	9	10
not distressing at all										most distressing ever

14) Rate the average intensity of the pain in the *everywhere on the vulva* (past 6 months) on a scale of 0-10

a) (sensory)

0	1	2	3	4	5	6	7	8	9	10
no pain										worst pain ever

b) (affective)

0	1	2	3	4	5	6	7	8	9	10
not distressing at all										most distressing ever

15) Rate the average intensity of the pain *inside the vagina* (past 6 months) on a scale of 0-10

a) (sensory)

0	1	2	3	4	5	6	7	8	9	10
no pain									worst pain ever	

b) (affective)

0	1	2	3	4	5	6	7	8	9	10
not distressing at all									most distressing ever	

16) Rate the average intensity of the pain in the *on the pelvic or abdominal region* (past 6 months) on a scale of 0 - 10

a) (sensory)

0	1	2	3	4	5	6	7	8	9	10
no pain									worst pain ever	

b) (affective)

0	1	2	3	4	5	6	7	8	9	10
not distressing at all									most distressing ever	

17) Rate the average intensity of *pain with intercourse* (past 6 months) on a scale of 0-10

a) (sensory)

0	1	2	3	4	5	6	7	8	9	10
no pain									worst pain ever	

b) (affective)

0	1	2	3	4	5	6	7	8	9	10
not distressing at all									most distressing ever	

18) Do you **regularly** suffer from any of the following pains? Please check off as many of the following as apply.

- 1) Stomach aches (apart from menstrual cramps) ___
- 2) Neck pain ___
- 3) Pain in kidneys ___
- 4) Sore throat ___
- 5) Toothaches ___
- 6) Earaches ___
- 7) Arthritis ___ (were?: _____)
- 8) Back pain ___
- 9) Chest pain ___
- 10) Headaches ___

- 11) Muscle pain ___ (were?: _____)
- 12) Other (Please specify: _____)
- 13) None

(women **with few attempts (<12/yr) at full penile-vaginal
intercourse and/or only partial penetration)
PAIN *D***

- 1) How many times have you attempted penetration? _____
- 2) When you attempted intercourse what were your reasons for not continuing to full penile-vaginal intercourse?
 - 1) experienced pain
 - 2) feared pain
 - 3) I was too afraid (anxious)
 - 4) his penis could not enter my vagina
 - 5) I did not want penetration
 - 6) my vaginal muscles cramped up/tightened too much
 - 7) other (please specify: _____)

→ If the *experience of pain* as a reason for discontinuing attempts at intercourse was endorsed, please answer question # 3 to question # 10 (if not, proceed to question # 15)

- 3) Why do you think you had pain with attempted intercourse? What is your personal theory about your discomfort?

- 4) When you do have pain, is the pain always the same intensity?
1) YES 2) NO (it varies)

- 5) If applicable: Is there anything special about the times when you have less or no pain?
Are there any special circumstances you can identify? Please check off any of the following that apply or specify circumstances not listed.

It depended on (put check mark on as many as apply)

How tired I was _____	How aroused I was _____
How lubricated I was _____	How long foreplay lasted _____
The intercourse position we used _____	The place where we had intercourse _____
How nervous or anxious I was _____	The time of my menstrual cycle _____
The partner I was having sex with _____	Whether I was angry with my partner _____

Whether we were alone in the house _____ Whether I had taken any drugs _____
The time of day _____ Whether I had had an alcoholic beverage _____
The length of time since the last episode of intercourse _____
How long we had been having intercourse for _____
Other _____ (please specify) _____

6) When did the pain typically start?

- 1) before penis touched vaginal opening
- 2) when penis started to enter vagina
- 3) when penis was pushing to enter fully my vagina
- 4) immediately after attempting intercourse
- 5) more than 1/2 hour after intercourse
- 6) Other (Please specify _____)

7) How long does the pain typically last ?

- 1) during penile entry only
- 2) during the penile thrusting only
- 3) only for a period after penile exit
- 4) during penile entry and after penile exit
- 5) during penile entry and during penile thrusting
- 6) during penile thrusting and for some time after penile exit
- 7) during penile entry, during penile thrusting and after penile exit
- 8) it is never the same: there is no typical pattern

If it lasts after penile exit, please state for how long after, the pain is felt

Time: _____ hours _____ days (_____ minutes)

8) Where did you typically feel the pain when attempting intercourse? Is there a specific spot you can show me? If yes, where ? (You may select more than one)

- 1) at the vaginal opening
- 2) everywhere on the vulva
- 3) inside the vagina
- 4) in the pelvic or abdominal region

9) Can you differentiate the different pains indicated in #8?

1) YES _____ 2) NO _____ 3) DON'T KNOW _____ 4) only 1 pain _____

→ if "yes", "1 pain" or "don't know" go on

→ if "no" go on to question # 16

10) Rate the average intensity of the pain at *the vaginal opening* on a scale of 0-10

a) (sensory)

0	1	2	3	4	5	6	7	8	9	10
no pain										
worst										

b) (affective)

0	1	2	3	4	5	6	7	8	9	10
not distressing at all										
most distressing ever										

11) Rate the average intensity of the pain *everywhere on the vulva* on a scale of 0-10

a) (sensory)

0	1	2	3	4	5	6	7	8	9	10
no pain										
worst pain ever										

b) (affective)

0	1	2	3	4	5	6	7	8	9	10
not distressing at all										
most distressing ever										

12) Rate the average intensity of the pain *inside the vagina* on a scale of 0-10

a) (sensory)

0	1	2	3	4	5	6	7	8	9	10
no pain										
worst pain ever										

b) (affective)

0	1	2	3	4	5	6	7	8	9	10
not distressing at all										
most distressing ever										

13) Rate the average intensity of the pain in the *on the pelvic or abdominal region* on a scale of 0-10

a) (sensory)

0	1	2	3	4	5	6	7	8	9	10
no pain										
worst pain ever										

b) (affective)

0	1	2	3	4	5	6	7	8	9	10
not distressing at all										
most distressing ever										

14) Rate the average intensity of *pain with intercourse* on a scale of 0-10

a) (sensory)

0	1	2	3	4	5	6	7	8	9	10
no pain									worst pain ever	

b) (affective)

0	1	2	3	4	5	6	7	8	9	10
not distressing at all									most distressing ever	

15) If you avoid intercourse or have difficulties with penetration and the reason is other than the experience of pain, what is your personal theory why you have intercourse difficulties: N/A

***16) Do you **regularly** suffer from any of the following pains? Please check off as many of the following as apply. N/A

- 1) Stomach aches (apart from menstrual cramps) ___
- 2) Neck pain ___
- 3) Pain in kidneys ___
- 4) Sore throat ___
- 5) Toothaches ___
- 6) Earaches ___
- 7) Arthritis ___ (were?: _____)
- 8) Back pain ___
- 9) Chest pain ___
- 10) Headaches ___
- 11) Muscle pain ___ (were?: _____)
- 12) Other (Please specify: _____)
- 13) None

17) What are your reasons for never/rarely or only partially having had vaginal-penile intercourse?

- 1) no opportunity
- 2) my vagina is too small
- 3) my vagina is too tight
- 4) I feel "blocked"
- 5) his penis just won't go in
- 6) I am too "dry" to be penetrated
- 7) I fear penetration
- 8) I don't want penetration
- 9) I don't want to be sexual (even without penetration)
- 10) I get too anxious to go on to penetration

- 11) I am afraid of pregnancy
- 12) I am afraid of STDs
- 13) I don't like male genitalia
- 14) I am not interested in heterosexual sex
- 15) I avoid romantic relationships
- 16) Don't know
- 17) Other (please specify) _____

18) Do you have difficulties with other types of "penetration" of your body, like for example injections, ear examinations, brushing teeth, swallowing pills.

- 1) YES 2) NO 3) DON'T KNOW

if yes, please specify: _____

19) Do you have a vaginal muscle spasm when attempting intercourse?

- 1) YES 2) NO 3) DON'T KNOW 4) SOMETIMES

20) How do your vaginal muscles feel when you attempt intercourse?

- 1) don't feel anything
- 2) not sure
- 3) feel relaxed
- 4) feel tight
- 5) cramp up
- 6) hurt
- 7) other (please specify: _____)

ENTREVUE DIRIGÉE

ID: _____

Date: _____

Interviewer: _____

Visit: _____

Sections:

For all respondents:

- socio-democratic information
- relationship history
- gynecological history

Selectively:

- Pain A only for women who have had regular intercourse at some point in their lives and have or have had pain.

- Pain B for all women having intercourse presently (in the last 6 months)

- Pain C for women not having had intercourse in the last 6 months, but who have had intercourse in the past regularly

- Pain D for women who had few attempts at penile vaginal intercourse (<12 attempts/year) or who only were able to achieve partial penetration.

INFORMATION SOCIO-DÉMOGRAPHIQUE

- 1) Date de naissance / /
 mois jour année
- 2) Lieu de naissance
- 1) Amérique du Nord
 - 2) Amérique Latine /Amérique du Sud
 - 3) Europe
 - 4) Afrique
 - 5) Asie
 - 6) Australie
 - 7) Moyen-Orient
 - 8) Caraïbbes
- 3) Quelle est la culture à laquelle vous vous sentez le plus étroitement liée?
- 1) Canadienne
 - 2) Québécoise
 - 3) Américaine
 - 4) Scottish/Irish/Welsh
 - 5) Autochtone
 - 6) Greco/Italien
 - 7) Européenne de l'Ouest
 - 8) Européenne de l'Est
 - 9) Africaine
 - 10) Asiatique
 - 11) Australienne
 - 12) Moyen-Orient
 - 13) Latino-Américaine/Sud-Américaine
 - 14) Caraïbbes
- 4) Quelle est votre langue maternelle?
- 1) Anglais
 - 2) Français
 - 3) Autre (_____)
- 5) Dans quelle religion avez-vous été élevée?
- 1) Cath. _____
 - 2) Prot. _____
 - 3) Juif _____
 - 4) Aucune _____
 - 5) Autre (svp. spec. _____)
- 6) Combien d'années de scolarité avez-vous? _____
- 7) Quel est le revenu annuel approximatif de votre ménage?
- | | | |
|------------------------|------------------------|---------------------|
| a) \$000 - \$9,999 | d) \$30,000 - \$39,000 | g) \$60,000 et plus |
| b) \$10,000 - \$19,999 | e) \$40,000 - \$49,999 | |
| c) \$20,000 - \$29,999 | f) \$50,000 - \$59,000 | |

HISTOIRE RELATIONNELLE

1) Lequel des points suivants décrit le mieux votre statut civil actuel?

- 1) célibataire non engagée dans une relation
- 2) célibataire avec un partenaire régulier
- 3) en union de fait
- 4) mariée

2) Depuis combien de temps êtes-vous dans la situation encadrée ci-dessus?

_____ années _____ mois

3) Si vous avez un partenaire, quel âge a-t-il? _____ ans

4) Votre partenaire serait-il intéressé à participer à notre étude? 1) OUI 2) NON 3) ne sais pas 4) N/P

5) Avez-vous déjà accouché? 1) OUI 2) NON

Si oui, spécifier le # d'enfants _____

6) Avez-vous déjà eu des relations sexuelles avec pénétration? 1) OUI 2) NON 3) PARTIELLEMENT

→ si OUI, continuez, si NON, continuez votre histoire gynécologique

7) Quel est le nombre total de partenaires avec qui vous avez eu des relations sexuelles (incluant les aventures d'un soir) _____

8) À quel âge avez-vous eu votre première relation sexuelle? _____ ans

9) Vous souvenez-vous de cette expérience comme étant quelque chose de douloureux? 1) OUI 2) NON

si oui, évaluez la:

a) (sensorielle)

0 1 2 3 4 5 6 7 8 9 10
aucune douleur la plus intense

b) affective

0 1 2 3 4 5 6 7 8 9 10
pas alarmante du tout la plus alarmante

HISTOIRE GYNÉCOLOGIQUE

- 2) Évaluez sur l'échelle suivante l'intensité de la douleur que vous ressentez lors de vos menstruations.
c) (sensorielle)

0	1	2	3	4	5	6	7	8	9	10
aucune										douleur la
douleur										plus intense
d) affective										

0	1	2	3	4	5	6	7	8	9	10
pas alarmante										la plus
du tout										alarmante

- 2) Utilisez-vous des tampons? 1) OUI 2) NON

→ si oui:

- 1) L'insertion est sans problème, retirer le tampon est sans difficulté
- 2) L'insertion est difficile
Évaluez le degré de difficulté sur une échelle de 0 (mineur) à 10 (le plus difficile) _____
- 3) Retirer le tampon est difficile
Évaluez le degré de difficulté sur une échelle de 0 (mineur) à 10 (le plus difficile) _____
- 4) L'insertion est douloureux
Évaluez le degré de difficulté sur une échelle de 0 (mineur) à 10 (le plus difficile) _____
- 5) Retirer le tampon est douloureux
Évaluez le degré de difficulté sur une échelle de 0 (mineur) à 10 (le plus difficile) _____

- 3) Utilisez-vous la contraception? 1) OUI 2) NON

→ si oui, quelle type: _____

- 4) Qu'est-ce que vous représente le mieux?

- 1) jamais vu de gynécologue
- 2) jamais eu d'examen pelvien
- 3) ai vu une gynécologue sans pouvoir avoir d'examen pelvien
- 4) vois un gynécologue une fois à tous les deux ans (spécifiez s.v.p. _____)
- 5) vois un gynécologue une fois par année
- 6) vois un gynécologue plus d'une fois par année (spécifiez s.v.p. _____)

- 5) Combien d'infections vaginales (candida, etc.) avez-vous eu? # _____

- 6) Comment les infections ont-elles été diagnostiquées? S/A

- 1) avis du médecin et cultures positives # _____
- 2) avis du médecin seulement # _____
- 3) auto-diagnostic # _____

- 7) Avez-vous eu des infections vaginales à répétition dans le passé? 1) OUI 2) NON 3) ne sais pas

- 8) Quel autre type de problème gynécologiques avez-vous eu? (cochez si oui)

- 1) vessie/infection urinaires _____
- 2) cystites _____
- 3) Chlamydia _____

- 4) Gardnerella vaginalis _____
- 5) Herpes génital _____
- 6) Condylomes _____
- 7) Gonorrhée _____
- 8) V.I.H _____
- 9) Siphylis _____
- 10) Trichomoniasis _____
- 11) Maladie inflammatoire pelvienne
- 12) Endométriose
- 13) Autre _____ Veuillez spécifier _____
- 14) Aucune

9) Quelle sorte d'intervention gynécologiques avez-vous subi? (cochez si nécessaire)

- 1) hystérectomie
- 2) Laparoscopie
- 3) Ovariectomie
- 4) Ligatures des trompes
- 5) Avortement
- 6) Curtage
- 7) Autre (spécifiez s.v.p. _____)
- 8) Aucune

10) Combien de gynécologues ou professionnels de santé avez-vous consulté spécifiquement pour vos problème de pénétration? Aucun/e _____ # _____

11) Avez-vous reçu un diagnostic de: s/a

- | | | | |
|-------------------------|-----|-----|------------|
| 1) Vaginisme | OUI | NON | par: _____ |
| 2) Dyspareunie | OUI | NON | par: _____ |
| 3) Vestibulite vulvaire | OUI | NON | par: _____ |
| 4) Vulvodynie | OUI | NON | par: _____ |

12) Quel autre diagnostic avez-vous reçu en ce qui a trait à votre problème de pénétration? S/A
par: _____

13) Avez-vous déjà abandonné un examen pelvien?

- 1) OUI 2) NON 3) ne sais pas

→ si oui, quelles étaient les raisons?

- 1) la peur
- 2) la douleur
- 3) pénétration (avec doigt, le speculum) était impossible
- 4) la décision du gynécologue
- 5) autre (spécifiez s.v.p. _____)

HISTOIRE DE LA DOULEUR PAIN *A*

1) Comment les douleur ont-t-il commencé? (cochez tout ce qui s'applique)

- 1) avec ma première relation sexuelle
- 2) après des infections vaginales répétées
- 3) après avoir accouché
- 4) sans raison apparente
- 5) quant j'ai changé de partenaire
- 6) après des infections urinaires répétées
- 7) avec l'arrivée de ma ménopause
- 8) après une chirurgie gynécologique (_____)
- 9) après un stress important (e.g. conflit conjugal, problèmes financiers, etc.)
- 10) après un avortement
- 11) autre (spécifiez s.v.p. _____)

2) Avez-vous toujours ressenti de la douleur pendant les relations sexuelles depuis la première fois que vous avez ressenti ce type de douleur?

- 1) oui
- 2) non, ça dépend du partenaire
- 3) non, quand j'ai arrêté de prendre la pilule, la douleur est disparue, puis est revenue
- 4) non, ça vient et ça part sans raison apparente
- 5) no, après avoir accouché, ça s'est arrêté temporairement et puis c'est revenu
- 6) non, après le traitement suivant _____, ça s'est arrêté et puis c'est revenu
- 7) non, autre _____

3) Avez-vous eu plus d'un partenaire depuis que la douleur a commencé? 1)OUI 2)NON

4) Combien de professionnels de la santé avez-vous consulté pour votre douleur? _____

5) Quels diagnostics et quels traitements vous ont-ils été donnés par les professionnels de la santé à qui vous avez parlé de votre douleur? S/A _____ pas de diagnose _____

Diagnostic	Traitement	Nombre de fois reçu
_____	_____	_____
_____	_____	_____
_____	_____	_____

6) Avez-vous déjà essayé de traiter ou de soulager la douleur vous même? Pas essayé _____

Traitement	Nombre de fois reçu
_____	_____
_____	_____

**DOULEUR
PAIN *B***

1) Durant les derniers 6 mois, environ combien de fois avez-vous essayé d'avoir des relations sexuelles?

→si < 6, continuez avec Pain *C* or *D*

2) Durant les derniers 6 mois, avez-vous ressenti de la douleur ou un inconfort significatif avant, pendant ou après les relations sexuelles? 1) OUI 2)NON

→si non, continuez avec Pain *C* or *D*

3) Pourquoi croyez-vous que vous ressentez de la douleur pendant les relations sexuelles? Quelle est votre théorie personnelle en ce qui concerne votre douleur?

4) Lorsque vous avez de la douleur, est-elle toujours de la même intensité ou varie-t-elle?

1) OUI 2) NON (varie)

5) Si ça s'applique: Avez-vous remarqué quelque chose de spécial à propos des fois où vous avez plus ou moins de douleur? Pouvez-vous identifier des circonstances particulièrement favorables ou défavorables? Veuillez cocher les points qui s'appliquent à votre cas ou spécifier les circonstances qui ne sont pas énumérées ci-dessous.

Jusqu'à quel point je suis fatiguée _____	Jusqu'à quel point je suis excitée _____
Jusqu'à quel point je suis lubrifiée _____	La durée des jeux préliminaires _____
La position que nous adoptons pour faire l'amour _____	L'endroit où nous nous trouvons _____
Jusqu'à quel point je suis nerveuse ou anxieuse _____	Où je me trouve dans mon cycle menstruel _____
Le partenaire avec lequel je me trouve _____	Si je suis fâchée contre mon partenaire _____
Si nous sommes seuls dans la maison _____	Le moment de la journée _____
Si j'ai consommé un breuvage alcoolisé _____	Si j'ai consommé des drogues _____
Le durée de temps écoulé depuis notre dernière relation sexuelle _____	
La durée de notre relation sexuelle _____	
Autre _____ (veuillez spécifier) _____	

6) Quand la douleur *commence-t-elle* habituellement?

- 1) avant que le pénis ne touche à l'entrée du vagin
- 2) quand le pénis commence à entrer dans le vagin
- 3) quand le pénis a pénétré le vagin et qu'il y a du va-et-vient
- 4) moins d'1/2 heure après la fin de la relation sexuelle
- 5) plus d'1/2 heure après la fin de la relation sexuelle
- 6) autre (veuillez spécifier) _____

7) Une fois la douleur apparue, durant quelles étapes de la relation sexuelle la ressentez-vous?

- 1) seulement durant l'entrée du pénis
- 2) seulement durant le mouvement de va-et-vient du pénis
- 3) seulement pour un peu de temps après la sortie du pénis
- 4) durant l'entrée du pénis et après sa sortie
- 5) durant l'entrée du pénis et durant le mouvement de va-et-vient
- 6) durant le mouvement de va-et-vient du pénis et quelque temps après sa sortie
- 7) à l'entrée du pénis, durant son mouvement de va-et-vient et après sa sortie
- 8) ce n'est jamais pareil: il n'y a pas de "pattern"

S'il y a lieu, indiquez la durée de la douleur après le retrait du pénis

Durée: _____ minutes _____ heures _____ jours

8) À quel endroit de la région génitale ressentez-vous habituellement la douleur lors des relations sexuelles? Pouvez-vous m'indiquer un endroit précis? Si oui, où? (Vous pouvez choisir plus d'un endroit) (Montrez modèle et codez sur le diagramme)

- 1) à l'entrée du vagin
- 2) partout sur la vulve
- 3) à l'intérieur du vagin
- 4) dans la région abdominale (utérus, etc.)

9) Pouvez-vous faire la différence entre les douleur indiguées au #8?

- 1) OUI 2) NON 3) ne sais pas

→si oui, ou ne sais pas, continuez

→si non, allez à la question #14

10) Évaluez l'intensité moyenne de votre douleur à l'entrée du vagin sur une échelle de 0 à 10

a) (sensorielle)

0	1	2	3	4	5	6	7	8	9	10
aucune										douleur la
douleur										plus intense

b) (affective)

0	1	2	3	4	5	6	7	8	9	10
pas alarmante										la plus
du tout										alarmante

11) Évaluez l'intensité moyenne de votre douleur partout sur la vulve sur une échelle de 0 à 10

a)(sensorielle)

0	1	2	3	4	5	6	7	8	9	10
aucune										douleur la
douleur										plus intense

b) (affective)

0	1	2	3	4	5	6	7	8	9	10
pas alarmante du tout										la plus alarmante

12) Évaluez l'intensité moyenne de votre douleur dans à l'intérieur du vagin sur une échelle de 0 à 10
a) (sensorielle)

0	1	2	3	4	5	6	7	8	9	10
aucune douleur										douleur la plus intense
b) (affective)										

0	1	2	3	4	5	6	7	8	9	10
pas alarmante du tout										la plus alarmante

13) Évaluez l'intensité moyenne de votre douleur dans la région abdominale sur une échelle de 0 à 10
b) (sensorielle)

0	1	2	3	4	5	6	7	8	9	10
aucune douleur										douleur la plus intense
b) (affective)										

0	1	2	3	4	5	6	7	8	9	10
pas alarmante du tout										la plus alarmante

14) Évaluez l'intensité moyenne de votre douleur pendant les relation sexuelles sur une échelle de 0 à 10
c) (sensorielle)

0	1	2	3	4	5	6	7	8	9	10
aucune douleur										douleur la plus intense
b) (affective)										

0	1	2	3	4	5	6	7	8	9	10
pas alarmante du tout										la plus alarmante

15) Souffrez-vous régulièrement des douleurs suivantes? Cochez tous les points qui s'appliquent.

- 1) Maux de ventre (différents des douleurs menstruelles)
- 2) Mal de cou ___
- 3) Mal de reins ___
- 4) Mal de gorge ___
- 5) Mal de dents ___
- 6) Mal d'oreilles ___
- 7) Douleurs arthritiques

- 8) Mal de dos
- 9) Mal d'estomac
- 10) Mal de tête
- 11) Douleur musculaires
- 12) Autre _____ Veuillez spécifier _____
- 13) Aucune

Pain *C*

- 1) Combien de temps cela fait-il que vous n'avez pas eu de relations sexuelles?
 _____ mois _____ années

- 2) Quelle est la raison pour laquelle vous n'avez pas eu de relations sexuelles dans les derniers 6 mois?
 - 1) Je n'ai pas de partenaire présentement
 - 2) Ça fait trop mal
 - 3) Je n'ai pas de désir sexuel
 - 4) Mon partenaire a des problèmes d'érection
 - 5) Mon partenaire n'a pas de désir sexuel
 - 6) Mon partenaire a peur de me faire mal
 - 7) J'ai peur de la douleur
 - 8) Mon vagin est trop petit
 - 9) Mes muscles vaginaux se contractent
 - 10) Mon vagin est obstrué
 - 11) Autre _____

- 3) Désirez-vous recommencer à avoir des relations sexuelles? 1) OUI 2) NON 3) ne sais pas

- 4) Lors de vos relations sexuelles passées, avez-vous ressenti de la douleur ou un inconfort significatif avant, pendant ou après les relations sexuelles? 1) OUI 2) NON
 → Si non, passez la section Pain *D*

- 5) Pourquoi croyez-vous que vous ressentez de la douleur pendant les relations sexuelles? Quelle est votre théorie personnelle en ce qui concerne votre douleur?

- 6) Par le passé, environ combien de fois par mois essayiez-vous d'avoir des relations sexuelles?

- 7) Lorsque vous avez eu de la douleur, est-elle toujours de la même intensité ou varie-t-elle?
 1) OUI 2) NON (varie)

- 8) Si ça s'applique: Avez-vous remarqué quelque chose de spécial à propos des fois où vous avez plus ou moins de douleur? Pouvez-vous identifier des circonstances particulièrement favorables ou défavorables? Veuillez cocher les points qui s'appliquent à votre cas ou spécifier les circonstances qui ne sont pas énumérées ci-dessous.

Jusqu'à quel point je suis fatiguée _____ Jusqu'à quel point je suis excitée _____
 Jusqu'à quel point je suis lubrifiée _____ La durée des jeux préliminaires _____
 La position que nous adoptons pour faire l'amour _____ L'endroit où nous nous trouvons _____
 Jusqu'à quel point je suis nerveuse ou anxieuse _____ Où je me trouve dans mon cycle menstruel _____
 Le partenaire avec lequel je me trouve _____ Si je suis fâchée contre mon partenaire _____
 Si nous sommes seuls dans la maison _____ Le moment de la journée _____
 Si j'ai consommé un breuvage alcoolisé _____ Si j'ai consommé des drogues _____
 La durée de temps écoulé depuis notre dernière relation sexuelle _____
 La durée de notre relation sexuelle _____
 Autre _____ (veuillez spécifier) _____

9) Quand la douleur a-t-elle *commencé* habituellement?

- 1) avant que le pénis ne touche à l'entrée du vagin
- 2) quand le pénis commence à entrer dans le vagin
- 3) quand le pénis a pénétré le vagin et qu'il y a du va-et-vient
- 4) moins d'1/2 heure après la fin de la relation sexuelle
- 5) plus d'1/2 heure après la fin de la relation sexuelle
- 6) autre (veuillez spécifier) _____

10) Une fois la douleur apparue, durant quelles étapes de la relation sexuelle l'avez vous ressentie?

- 1) seulement durant l'entrée du pénis
- 2) seulement durant le mouvement de va-et-vient du pénis
- 3) seulement pour un peu de temps après la sortie du pénis
- 4) durant l'entrée du pénis et après sa sortie
- 5) durant l'entrée du pénis et durant le mouvement de va-et-vient
- 6) durant le mouvement de va-et-vient du pénis et quelque temps après sa sortie
- 7) à l'entrée du pénis, durant son mouvement de va-et-vient et après sa sortie
- 8) ce n'est jamais pareil: il n'y a pas de "pattem"

Si'il y a lieu, indiquez la durée de la douleur après le retrait du pénis

Durée: _____ minutes _____ heures _____ jours

11) À quel endroit de la région génitale avez-vous ressentie la douleur lors des relations sexuelles? Pouvez-vous m'indiquer un endroit précis? Si oui, où? (Vous pouvez choisir plus d'un endroit) (Montrez modèle et codez sur le diagramme)

- 1) à l'entrée du vagin
- 2) partout sur la vulve
- 3) à l'intérieur du vagin
- 4) dans la région abdominale (utérus, etc.)

12) Pouvez-vous faire la différence entre les douleur indignées au #8?

- 1) OUI 2) NON 3) ne sais pas

→si oui, ou ne sais pas, continuez

→si non, allez à la question #14

10) Évaluez l'intensité moyenne de votre douleur à l'entrée du vagin sur une échelle de 0 à 10

c) (sensorielle)

0	1	2	3	4	5	6	7	8	9	10
aucune douleur b) (affective)										douleur la plus intense

0	1	2	3	4	5	6	7	8	9	10
pas alarmante du tout										la plus alarmante

11) Évaluez l'intensité moyenne de votre douleur partout sur la vulve sur une échelle de 0 à 10
a)(sensorielle)

0	1	2	3	4	5	6	7	8	9	10
aucune douleur d) (affective)										douleur la plus intense

0	1	2	3	4	5	6	7	8	9	10
pas alarmante du tout										la plus alarmante

12) Évaluez l'intensité moyenne de votre douleur dans à l'intérieur du vagin sur une échelle de 0 à 10
d) (sensorielle)

0	1	2	3	4	5	6	7	8	9	10
aucune douleur b) (affective)										douleur la plus intense

0	1	2	3	4	5	6	7	8	9	10
pas alarmante du tout										la plus alarmante

13) Évaluez l'intensité moyenne de votre douleur dans la région abdominale sur une échelle de 0 à 10
e) (sensorielle)

0	1	2	3	4	5	6	7	8	9	10
aucune douleur b) (affective)										douleur la plus intense

0	1	2	3	4	5	6	7	8	9	10
pas alarmante du tout										la plus alarmante

14) Évaluez l'intensité moyenne de votre douleur pendant les relation sexuelles sur une échelle de 0 à 10

f) (sensorielle)

0	1	2	3	4	5	6	7	8	9	10
aucune douleur										douleur la plus intense

b) (affective)

0	1	2	3	4	5	6	7	8	9	10
pas alarmante du tout										la plus alarmante

15) Souffrez-vous régulièrement des douleurs suivantes? Cochez tous les points qui s'appliquent.

- 1) Maux de ventre (différents des douleurs menstruelles)
- 2) Mal de cou _____
- 3) Mal de reins _____
- 4) Mal de gorge _____
- 5) Mal de dents _____
- 6) Mal d'oreilles _____
- 7) Douleurs arthritiques
- 8) Mal de dos
- 9) Mal d'estomac
- 10) Mal de tête
- 11) Douleur musculaires
- 12) Autre _____ Veuillez spécifier _____
- 13) Aucune

Pain *D*

- 1) Combien de fois avez-vous essayé la pénétration? _____
- 2) Quand vous avez essayé l'avoir des relation sexuelles quelles étaient les raisons pour ne pas poursuivre jusqu'à la pénétration?
 - 1) Vous avez des douleurs
 - 2) Vous avez peur des douleurs
 - 3) Vous avez peur (anxieuse)
 - 4) Son pénis ne pourrait pas pénétrer
 - 5) Je ne voulais pas de pénétration
 - 6) Mes muscles vaginaux se serraient/se contractaient
 - 7) Autre (spécifiez s.v.p. _____)

→ si l'expérience de la douleur était une raison pour ne pas poursuivre jusqu'à la pénétration, s.v.p. répondre aux questions # 3 à # 10 (si non, allez à la question #15)

3) Pourquoi croyez-vous que vous ressentez de la douleur pendant les relations sexuelles? Quelle est votre théorie personnelle en ce qui concerne votre douleur?

4) Lorsque vous avez eu de la douleur, est-elle toujours de la même intensité ou varie-t-elle?
1) OUI 2) NON (varie)

5) Si ça s'applique: Avez-vous remarqué quelque chose de spécial à propos des fois où vous avez plus ou moins de douleur? Pouvez-vous identifier des circonstances particulièrement favorables ou défavorables? Veuillez cocher les points qui s'appliquent à votre cas ou spécifier les circonstances qui ne sont pas énumérées ci-dessous.

Jusqu'à quel point je suis fatiguée _____	Jusqu'à quel point je suis excitée _____
Jusqu'à quel point je suis lubrifiée _____	La durée des jeux préliminaires _____
La position que nous adoptons pour faire l'amour _____	L'endroit où nous nous trouvons _____
Jusqu'à quel point je suis nerveuse ou anxieuse _____	Où je me trouve dans mon cycle menstruel _____
Le partenaire avec lequel je me trouve _____	Si je suis fâchée contre mon partenaire _____
Si nous sommes seuls dans la maison _____	Le moment de la journée _____
Si j'ai consommé un breuvage alcoolisé _____	Si j'ai consommé des drogues _____
Le durée de temps écoulé depuis notre dernière relation sexuelle _____	
La durée de notre relation sexuelle _____	
Autre _____ (veuillez spécifier) _____	

6) Quand la douleur a-t-elle *commencé* habituellement?

- 1) avant que le pénis ne touche à l'entrée du vagin
- 2) quand le pénis commence à entrer dans le vagin
- 3) quand le pénis a pénétré le vagin et qu'il y a du va-et-vient
- 4) moins d'1/2 heure après la fin de la relation sexuelle
- 5) plus d'1/2 heure après la fin de la relation sexuelle
- 6) autre (veuillez spécifier) _____

7) Une fois la douleur apparue, durant quelles étapes de la relation sexuelle l'avez vous ressentie?

- 1) seulement durant l'entrée du pénis
- 2) seulement durant le mouvement de va-et-vient du pénis
- 3) seulement pour un peu de temps après la sortie du pénis
- 4) durant l'entrée du pénis et après sa sortie
- 5) durant l'entrée du pénis et durant le mouvement de va-et-vient
- 6) durant le mouvement de va-et-vient du pénis et quelque temps après sa sortie
- 7) à l'entrée du pénis, durant son mouvement de va-et-vient et après sa sortie
- 8) ce n'est jamais pareil: il n'y a pas de "pattem"

S'il y a lieu, indiquez la durée de la douleur après le retrait du pénis

Durée: _____ minutes _____ heures _____ jours

8) À quel endroit de la région génitale avez-vous ressentie la douleur lors des relations sexuelles? Pouvez-vous m'indiquer un endroit précis? Si oui, où? (Vous pouvez choisir plus d'un endroit) (Montrez modèle et codez sur le diagramme)

- 1) à l'entrée du vagin
- 2) partout sur la vulve
- 3) à l'intérieur du vagin
- 4) dans la région abdominale (utérus, etc.)

9) Pouvez-vous faire la différence entre les douleur indignées au #8?
 1) OUI 2) NON 3) ne sais pas

→ si oui, ou ne sais pas, continuez
 → si non, allez à la question #15

10) Évaluez l'intensité moyenne de votre douleur à l'entrée du vagin sur une échelle de 0 à 10

e) (sensorielle)

0	1	2	3	4	5	6	7	8	9	10
aucune										douleur la
douleur										plus intense

b) (affective)

0	1	2	3	4	5	6	7	8	9	10
pas alarmante										la plus
du tout										alarmante

11) Évaluez l'intensité moyenne de votre douleur partout sur la vulve sur une échelle de 0 à 10

a) (sensorielle)

0	1	2	3	4	5	6	7	8	9	10
aucune										douleur la
douleur										plus intense

f) (affective)

0	1	2	3	4	5	6	7	8	9	10
pas alarmante										la plus
du tout										alarmante

12) Évaluez l'intensité moyenne de votre douleur dans à l'intérieur du vagin sur une échelle de 0 à 10

a) (sensorielle)

0	1	2	3	4	5	6	7	8	9	10
aucune										douleur la
douleur										plus intense

b) (affective)

0	1	2	3	4	5	6	7	8	9	10
pas alarmante										la plus
du tout										alarmante

13) Évaluez l'intensité moyenne de votre douleur dans la région abdominale sur une échelle de 0 à 10

a) (sensorielle)

0	1	2	3	4	5	6	7	8	9	10
aucune										douleur la
douleur										plus intense
b) (affective)										

0	1	2	3	4	5	6	7	8	9	10
pas alarmante										la plus
du tout										alarmante

14) Évaluez l'intensité moyenne de votre douleur *pendant les relation sexuelles* sur une échelle de 0 à 10
a) (sensorielle)

0	1	2	3	4	5	6	7	8	9	10
aucune										douleur la
douleur										plus intense
b) (affective)										

0	1	2	3	4	5	6	7	8	9	10
pas alarmante										la plus
du tout										alarmante

15) Si vous avez des difficulté pendant les relation sexuelles et la raison est d'autre que l'expérience de la douleur, quelle est votre théorie personnelle en ce qui concerne votre problème de pénétration? S/A

16) Souffrez-vous régulièrement des douleurs suivantes? Cochez tous les points qui s'appliquent.

- 1) Maux de ventre (différents des douleurs menstruelles)
- 2) Mal de cou ___
- 3) Mal de reins ___
- 4) Mal de gorge ___
- 5) Mal de dents ___
- 6) Mal d'oreilles ___
- 7) Douleurs arthritiques
- 8) Mal de dos
- 9) Mal d'estomac
- 10) Mal de tête
- 11) Douleur musculaires
- 12) Autre ___ Veuillez spécifier _____
- 13) Aucune

17) Quelles sont les raisons pour ne jamais avoir de relations sexuelles avec pénétration?

- 1) pas d'occasion
- 2) mon vagin est trop petit
- 3) mon vagin est trop serré
- 4) je me sens obstrué
- 5) son pénis ne peut entrer
- 6) je suis trop sèche pour la pénétration

- 7) j'ai peur de la pénétration
- 8) je ne veux pas de pénétration
- 9) je ne veux pas être sexuel (même pas sans pénétration)
- 10) je suis trop tendue pour continuer jusqu'à la pénétration
- 11) j'ai peur de tomber enceinte
- 12) j'ai peur des maladies transmises sexuellement
- 13) je n'aime pas le génitale de l'homme
- 14) la sexualité hétérosexuel m'intéresse pas
- 15) j'évite les relations romantiques
- 16) je ne sais pas
- 17) autre (spécifiez s.v.p. _____)

18) Est-ce que vous avez d'autres problèmes de pénétration de votre corps autre que la pénétration pendant les relations sexuelles, comme par exemple les injections, les examens d'oreilles, brosser les dents, avaler des pilules?

- 1) OUI 2) NON 3) ne sais pas
- si OUI, spécifiez s.v.p. _____

19) Avez-vous des spasmes vaginaux quand vous essayez d'avoir une pénétration?

- 1) OUI 2) NON 3) ne sais pas

20) Comment sont vos muscles vaginaux quand vous essayez d'avoir une pénétration?

- 1) je ne sens rien
- 2) je ne suis pas certaine
- 3) mes muscles sont détendus
- 4) mes muscles sont tendus
- 5) mes muscles sont contractés
- 6) mes muscles font mal
- 7) autre (spécifiez s.v.p. _____)

**Appendix 5 –
Structured Interview for Vaginismus**

VAG – questionnaire

NAME/ID: _____

DATE: _____

INTERVIEWER: _____

VISIT: _____

1) Do you *currently* experience difficulties with vaginal penetration?

- 1) Yes ___ 2) No ___ 3) Don't know ___

→ If "no" or "don't know", proceed to question # 7

2) Does this totally prevent intercourse?

- 1) all the time
2) some of the time (___ %)
3) never

3) How many times have you tried to have intercourse in the last year? # of times: ___

→ if 0 in last year, how many times have you tried ever? # of times: ___

4) Is your partner able to partially penetrate your vagina with his penis?

- 1) Yes ___ 2) No ___ 3) Don't know ___ 4) no partner ___

5) Does your partner have a full erection and maintains his erection long enough to penetrate you?

- 1) Yes ___ 2) No ___ 3) Don't know ___ 4) no partner ___

6) Are you sexually aroused and lubricated when you attempt intercourse?

- 1) Yes ___ 2) No ___ 3) Don't know ___ 4) Sometimes ___ (___ %)
5) Yes, but only subjectively (no lubrication) ___ (___ %)

***7) In the *past*, have you experienced difficulties with vaginal penetration?

- 1) Yes ___ 2) No ___ 3) Don't know ___ 4) N/A ___ (if response was "yes" in #1)

→ if "no", discontinue questionnaire. → if "N/A", go to question # 13

8) Do these *past difficulties* totally prevent intercourse *now*?

- 1) all the time
2) some of the time (___ %)
3) never

→ if "never", discontinue questionnaire.

9) Was your partner able to partially penetrate your vagina?

- 1) Yes ___ 2) No ___ 3) Don't know ___ 4) no partner ___

10) Did your partner have a full erection and maintained his erection long enough to penetrate you?

- 1) Yes ___ 2) No ___ 3) Don't know ___ 4) no partner ___

11) Does your partner presently have full erections?

- 1) Yes ___ 2) No ___ 3) Don't know ___ 4) no partner ___

12) Were you sexually aroused and lubricated when you tried intercourse?

- 1) Yes ___ 2) No ___ 3) Don't know ___ 4) Sometimes ___ (___ %)
5) Yes, but only subjectively (no lubrication) ___ (___ %)

→ All respondents having responded "all the time" or "some of the time" to questions #2 and #8, please continue

- 13) Since when have you had vaginal penetration problems? #5!
1) since first attempt (m: ___/y: ___)
2) after a period of problem free intercourse (from: m: ___/y: ___ to m: ___/y: ___)
3) never tried vaginal penetration
4) has always be like that even so I never actually tried vaginal penetration
- 14) Do you have penetration difficulties in situations other than penile penetration?
1) No
2) Don't know
3) Yes (pl. specify: _____)
- 15) Have you had vaginal penetration problems with more than 1 partner?
1) No
2) Yes
3) Always had same partner
4) Never had a partner
- 16) Do you find your penetration difficulties are due to any of the following (endorse all applicable)
1) my vaginal muscles tighten up
2) I have vaginal muscle spasm
3) my vagina is blocked
4) penis can't enter my vagina
5) my vagina is too small
6) I don't know
7) none of the above
8) other (please specify _____)
- 17) How do your vaginal penetration problems affect your life in general?
Rate from 0 (not at all) to 10 (most important problem in my life): _____
- 18) How do your vaginal penetration problems affect your relationship with your partner?
Rate from 0 (not at all) to 10 (most important problem): _____ no partner _____
- 19) How do your vaginal penetration problems affect your relationship with your family, friends, etc.?
Rate from 0 (not at all) to 10 (most important problem): _____
- 20) Do you suffer from any chronic illnesses? 1)Yes ___ 2)No ___
if yes, specify _____
- 21) What medications have you taken in the last year: None _____

- 22) What, if any, street drugs have you used in the last year: None _____

- 23) Have you ever consulted a psychologist, psychiatrist, social worker or any other mental health professional for anything other than your vaginal penetration difficulties? N/A ___
Professional: _____ For: _____ Treatment: _____
Professional: _____ For: _____ Treatment: _____

24) How distressing do you find your pain condition overall:
Rate from 0 (not at all) to 10 (most distressing): ____

25) Your penetration problem is due to:

- 1) result of pain with intercourse **only**
- 2) result of vaginal muscle tension/contraction **only**
- 3) result of pain *and* vaginal muscle tension/contractions
- 4) other: (please specify: _____)

Questionnaire: Vaginisme

NOM/ID: _____

DATE: _____

INTERVIEWEUR: _____

VISITE: _____

- 1) Avez-vous présentement des difficultés avec la pénétration vaginale?
1) QUI 2) NON 3) NE SAIS PAS

→ si non, ou je ne sais pas, continuez au # 7

- 2) Est-ce que cela vous empêche d'avoir des relations sexuelles?
1) tout le temps
2) quelquefois (____%)
3) jamais

- 3) Combien de fois avez-vous essayé d'avoir des relations sexuelles l'année passée?
de fois: _____

→ si 0 fois l'année passé, combien de fois avez-vous essayé en tout? # de fois: _____

- 4) Est-ce que votre partenaire peut vous pénétrer partiellement avec son pénis?
1) QUI 2) NON 3) NE SAIS PAS 4) pas de partenaire

- 5) Est-ce que votre partenaire a une érection complète et la garde assez longtemps pour vous pénétrer?
1) QUI 2) NON 3) NE SAIS PAS 4) pas de partenaire

- 6) Etes-vous excitée et lubrifiée quand vous essayez d'avoir les relations sexuelles?
1) QUI 2) NON 3) NE SAIS PAS 4) des fois (____%)
5) Qui, mais seulement subjectivement (pas de lubrification)____(____%)

- ***7) Par le passé, avez-vous eu des problèmes avec la pénétration vaginale?

1) QUI 2) NON 3) NE SAIS PAS 4) S/P if responded yes in #1

→ si non, arrêtez de répondre – if S/P in #7 move on to #14

- 8) Est-ce que vos problèmes du passé vous empêchent d'avoir des relations sexuelles?
1) tout le temps
2) quelquefois (____%)
3) jamais

→ si jamais, arrêtez de répondre

- 9) Par le passé, est-ce que votre partenaire pouvait vous pénétrer en partie?
1) QUI 2) NON 3) NE SAIS PAS 4) pas de partenaire

- 10) Par le passé, est-ce que votre partenaire avait une érection complète et la conservait assez longtemps pour vous pénétrer?
1) QUI 2) NON 3) NE SAIS PAS 4) pas de partenaire

- 11) Est-ce que votre partenaire a des érections complètes maintenant?
1) QUI 2) NON 3) NE SAIS PAS 4) pas de partenaire

- 12) Par le passé, étiez-vous excitée et lubrifiée quand vous avez essayé d'avoir les relations sexuelles?

- 1) QUI 2) NON 3) NE SAIS PAS 4) des fois (____%)
 5) Qui, mais seulement subjectivement (pas de lubrification)____(____%)

→ Tous les répondants ayant répondu *oui* ou *je ne sais pas* aux questions #1 et #13, répondez aux questions suivantes.

- 13) Depuis quand est-ce que vous avez des problèmes de pénétration? #5!
 1) depuis le premier essai (j:___/m:___/a:___)
 2) après une période de relations sans douleur
 3) jamais essayée d'avoir une pénétration
 4) c'était toujours comme ça même si j'ai jamais essayée d'avoir une pénétration
- 14) Avez-vous des problèmes de pénétration autre que la pénétration du pénis?
 1) Non
 2) Ne sais pas
 3) Oui (spécifiez où s.v.p.:_____)
- 15) Avez-vous eu des problèmes de pénétration avec plus que un partenaire?
 1) Non
 2) Oui
 3) Toujours eu le même partenaire
 4) Jamais eu de partenaire
- 16) Ressentez-vous ou avez-vous ressenti certains de ce symptômes pendant la pénétration?
 1) mes muscles vaginaux se contractent
 2) J'ai des spasmes des muscle vaginaux
 3) mon vagin est obstrues
 4) le pénis ne peut pas me pénétrer
 5) mon vagin semble trop petit
 6) je ne sais pas
 7) aucun de ces symptom
 8) autre (spécifiez où s.v.p.:_____)
- 17) Comment les problèmes de pénétration dérange-t-elle votre vie en général?
 De 0 (aucunement) à 10 (c'est le problème le plus grave):_____
- 18) Comment les problèmes de pénétration affecte-t-elle l'entente avec votre partenaire?
 De 0 (aucunement) à 10 (c'est le problème le plus grave):_____ pas de partenaire_____
- 19) Comment les problèmes de pénétration affecte-t-elle l'entente avec votre famille/amies?
 De 0 (aucunement) à 10 (c'est le problème le plus grave):_____
- 20) Souffrez-vous de maladies chronique? 1) Oui____ 2) Non____
 Si *oui*, spécifiez:_____
- 21) Quels médicaments prenez-vous ou avez-vous pris l'année passée? Aucun____

- 22) Quels droque de la rue avez-vous utilisé l'année passée, si vous en avez utilisé? Aucun____

- 22) Avez-vous déjà consulté un psychologue, un psychiatre, un travailleur social ou autres professionnels de la santé mentale pour autre chose que la douleur pendant les relations sexuelles? N/A

Professionnel: _____ Pour: _____ Traitement: _____

Professionnel: _____ Pour: _____ Traitement: _____

24) Pouvez vous évaluer le niveau de détresse que votre problème de pénétration vous apporte?
De 0 (aucunement) à 10 (le plus stressant): _____

25) Votre problème de pénétration, est la conséquence:

- 1) Conséquence de la **douleur** pendant les relations **seulement**
- 2) Conséquence des tensions/contractions **musculaires** du vagin **seulement**
- 3) Conséquence d'une **combinaison** de la douleur **et** des contractions/tensions musculaires
- 4) autre: (spécifiez s.v.p.: _____)

Appendix 6 –
Structured Interview for Vulvar Vestibulitis Syndrome

VULVAR VESTIBULITIS questionnaire

NAME/ID: _____

DATE: _____

INTERVIEWER: _____

VISIT: _____

1) Do you *presently* experience recurrent or persistent pain with intercourse, that is when your partner's penis penetrates your vagina? 1)Yes ___ 2)No ___ 3)Don't know ___

→ if no, have you experienced recurrent or persistent pain with intercourse *in the past*?
1)Yes ___ 2)No ___ 3)Don't know ___

→ if no, discontinue questionnaire; if yes or don't know, proceed to question # 13

2) Is your pain *clearly linked* to situations with direct or indirect pressure or touch on the vulvar area (e.g. penetration, tight clothing, bicycling)? 1)Yes ___ 2)No ___ 3)Don't know ___

→ if no, discontinue questionnaire

3) Typically, what % of intercourse occasions are painful: _____

4) Where do you feel pain during intercourse? (Endorse all applicable)

- 1) outside my vagina
- 2) at the entrance of my vagina
- 3) inside my vagina
- 4) in my abdomen (pl. specify where: _____)
- 5) other (please specify: _____)

SHOW DIAGRAM

5) When does the pain start? (Endorse all applicable)

	Pain 1)	Pain 2)	Pain 3)	Combo
1) before penetration				
2) at the time of penetration				
3) during penile thrusting				
4) after penetration				

6) What is the quality of the pain? (Endorse all applicable)

	Pain 1)	Pain 2)	Pain 3)	Combo
1) Sharp				
2) cutting				
3) lacerating				
4) hot				
5) drilling				
6) flashing				
7) burning				
8) scalding				
9) searing				
10) dull				
11) cramping				

7) Rate the overall degree of pain you experience with intercourse from 0 (no pain) to 10 (worst pain ever): _____

8) Rate the overall degree to which this pain interferes with intercourse? 0 (no interference) to 10 (total interference/no penetration): _____

please check off where, if at all, pain interferes:

- 1) desire ___ 2) pleasure ___
 3) arousal ___ 4) frequency ___
 5) orgasm ___ 6) other ___ (pl. specify: _____)

9) Since when have you had pain with intercourse?

- 1) since first attempt (m: ___/y: ___)
 2) after a period of pain free intercourse (from: m: ___/y: ___ to: m: ___/y: ___)

10) Do you experience this pain during activities other than penile penetration?

- 1) Yes ___ (please specify: _____)
 2) No ___

11) Are you typically sexually aroused and lubricated when you attempt intercourse?

- 1) Yes ___ 2) No ___ 3) Don't know ___ 4) Sometimes ___ (___%)
 5) Yes, but only subjectively (no lubrication) ___ (___%)

12) Do you, or did you experience any of the following with vaginal penetration:

- 1) my vaginal muscles tighten up
 2) I have vaginal muscle spasm
 3) my vagina is blocked
 4) penis just can't enter my vagina
 5) my vagina feels too small
 6) I don't know
 7) none of the above
 8) other (please specify: _____)

→ if Yes, in question #1, continue to question # 27

***13) Does the pain you experienced *in the past* have an effect on intercourse NOW?

- 1) Yes ___ 2) No ___ 3) Don't know ___

→ if no, discontinue questionnaire.

14) In the past, was your pain *clearly linked* to situations with direct or indirect pressure or touch on the vulvar area (e.g. penetration, tight clothing, bicycling)? 1) Yes ___ 2) No ___ 3) Don't know ___

→ if no, discontinue questionnaire

15) In the past, typically, what % of intercourse occasions was painful?: _____

16) In the past, where did you feel pain during intercourse? (Endorse all applicable)

- 1) outside my vagina
 2) at the entrance of my vagina
 3) deep in my vagina
 4) in my abdomen (pl. specify where: _____) SHOW DIAGRAM
 5) other (please specify: _____)

17) In the past, when did the pain start? (Endorse all applicable)

	Pain 1)	Pain 2)	Pain 3)	Combo
5) before penetration				
6) at the time of penetration				
7) during penile thrusting				
8) after penetration				

18) In the past, what was the quality of the pain? (Endorse all applicable)

	Pain 1)	Pain 2)	Pain 3)	Combo
1) sharp				
2) cutting				
3) lacerating				
4) hot				
5) drilling				
6) flashing				
7) burning				
8) scalding				
9) searing				
10) dull				
11) cramping				

19) Rate the degree of pain you experienced with intercourse in the past from 0 (no pain) to 10 (worst pain ever): ___

20) Rate the degree to which this pain interfered with intercourse **IN THE PAST**

0 (no interference) to 10 (total interference/no penetration): ___

please check off where, if at all, pain interfered:

- 1) desire ___ 2) pleasure ___
 3) arousal ___ 4) frequency ___
 5) orgasm ___ 6) other ___ (pl. specify: _____)

21) Rate the degree to which pain interferes with intercourse **NOW?**

0 (no interference) to 10 (total interference/no penetration): ___

please check off where, if at all, pain interferes:

- desire ___ pleasure ___
 arousal ___ frequency ___
 orgasm ___ other ___ (pl. specify: _____)

22) Since when did you have pain with intercourse?

- 3) since first attempt (d: ___/m: ___/y: ___)
 4) after a period of pain free intercourse (from: d: ___/m: ___/y: ___ to d: ___/m: ___/y: ___)

23) When did the pain stop? (d: ___/m: ___/y: ___)

24) In the past, did you experience this pain during activities other than penile penetration?

- 12) Yes ___
 13) No ___

25) Where you sexually aroused and lubricated when you had intercourse?

- 1) Yes ___ 2) No ___ 3) Don't know ___ 4) Sometimes ___ (%)
 5) Yes, but only subjectively (no lubrication) ___ (%)

26) Do you, or did you experience any of the following with vaginal penetration:

- 1) my vaginal muscles tighten up
 2) I have vaginal muscle spasm
 3) my vagina is blocked
 4) penis just can't enter my vagina
 5) my vagina feels too small

- 6) I don't know
- 7) none of the above
- 8) other (please specify _____)

→ ALL respondents having endorsed Yes or Don't know at question # 1 or 13, please answer the following questions.

- 27) How does pain with intercourse affect your life in general?
Rate from 0 (not at all) to 10 (most important problem in my life): ____
- 28) How does pain with intercourse affect your relationship with your partner? No partner ____
Rate from 0 (not at all) to 10 (most important problem): ____
- 29) How does pain with intercourse affect your relationship with your family, friends, etc.?
Rate from 0 (not at all) to 10 (most important problem): ____
- 30) Do you suffer from any chronic illnesses? 1) Yes ____ 2) No ____
if yes, specify _____
- 31) What, medications have you taken in the last year: None ____

- 32) What, if any, street drugs have you used during last year: None ____

- 33) Have you ever consulted a psychologist, psychiatrist, social worker or any other mental health professional for anything other than pain with sexual intercourse (during the time you had pain)? N/A ____
Professional: _____ For: _____ Treatment: _____
Professional: _____ For: _____ Treatment: _____
- 34) How distressing do you find your pain condition overall:
Rate from 0 (not at all) to 10 (most distressing): ____
- 35) Your pain is due *exclusively* to:
 - 1) due **exclusively** to vaginal muscle tension/contractions
 - 2) due to other causes which I may not yet know
 - 3) due to the combination of muscle tension/contraction and another cause
 - 4) other (please specify: _____)

Questionnaire: Vestibulite Vulvaire

NOM/ID: _____

DATE: _____

INTERVIEWEUR: _____

VISITE: _____

1) Ressentez-vous une ancienne douleur ou une douleur permanente pendant les relations sexuelles, c'est-à-dire quand votre partenaire pénètre son pénis dans le vagin?

- 1) OUI ___ 2) NON ___ 3) NE SAIS PAS ___

→ si non, avez-vous déjà ressenti une ancienne douleur ou une douleur permanente par le passé?

- 1) OUI ___ 2) NON ___ 3) NE SAIS PAS ___

→ si non, interrompé le questionnaire; si oui ou ne sais pas, allez à la question # 13.

2) Est-ce que votre douleur est reliée à des touchers directs ou indirects dans la région vulvaire (i.e. la pénétration, des vêtements serrés, de la bicyclette)?

- 1) OUI ___ 2) NON ___ 3) NE SAIS PAS ___

→ si non, arrêtez le questionnaire

3) Exactement, quel % des relations fait mal: _____

4) Où avez-vous mal lors des relations sexuelles? (chochez si nécessaire)

- 1) à l'extérieure du vagin
 2) à l'entrée du vagin
 3) à l'intérieur du vagin/dans le fond du vagin
 4) au ventre (spécifiez où s.v.p.: _____)
 5) autre (spécifiez où s.v.p.: _____)

5) Quand commence la douleur? (chochez si nécessaire)

	douleur 1)	douleur 2)	douleur 3)	Combinaison
1) avant la pénétration				
2) au moment de la pénétration				
3) durant le mouvement de va-et-vient du pénis				
4) après la pénétration				

6) Quel est la nature de la douleur? (cochez si nécessaire)

	douleur 1)	douleur 2)	douleur 3)	Combinaison
1) vive				
2) aigue				
3) déchirante				
4) chaude				
5) qui pique				
6) brusque				
7) brûlante				
8) bouillante				
9) comme marqué au fer rouge				
10) sourde				
11) qui crampe				

7) Évaluez l'intensité de douleur pendant les relations sexuelles.

De 0 (aucune douleur) à 10 (douleur la plus intense): _____

8) Évaluez à quel degré la douleur affecte vos relations sexuelles.

De 0 (pas du tout) à 10 (interférence total/pas de pénétration): _____

s.v.p. cochez où, si c'est le cas, la douleur dérange:

- 1) le désir__ 2) le plaisir__
3) l'excitation__ 4) la fréquence__
5) l'orgasme__ 6) autre (spécifiez où s.v.p.: _____)

9) Depuis quand avez-vous de la douleur pendant les relations sexuelles?

- 1) depuis le premier essai (m: __/a: __)
2) après une période de relations sans douleur (de: m: __/a: __ à m: __/a: __)

10) Ressentez-vous cette douleur à part pendant la pénétration?

- 1) OUI__ (spécifiez s.v.p.: _____)
2) NON__

11) Êtes-vous excitée et lubrifiée quand vous essayez d'avoir des relations sexuelles?

- 1) OUI 2) NON 3) NE SAIS PAS 4) des fois (____%)
5) Oui, mais seulement subjectivement (pas de lubrification) (____%)

12) Ressentez-vous ou avez-vous ressenti certains de ces symptômes pendant la pénétration?

- 1) mes muscles vaginaux se contractent
2) J'ai des spasmes des muscles vaginaux
3) mon vagin est obstrué
4) le pénis ne peut pas me pénétrer
5) mon vagin semble trop petit
6) je ne sais pas
7) aucun de ces symptômes
8) autre (spécifiez où s.v.p.: _____)

→ si oui à la question #1, allez à la question # 27

13) Est-ce que la douleur ressentie par le passé vous dérange maintenant:

- 1) OUI__ 2) NON__ 3) NE SAIS PAS__

→ si non, arrêtez de répondre

14) Par le passé, est-ce que la douleur était liée directement ou indirectement par une pression ou un toucher sur la région vulvaire (i.e. la pénétration, des vêtements serrés, de la bicyclette)?

- 1) OUI__ 2) NON__ 3) NE SAIS PAS__

→ si non, arrêtez de répondre

15) Par le passé, quel % des relations était douloureux (en moyenne): _____

16) Par le passé, où avez-vous ressenti la douleur pendant les relations sexuelles? (choisissez si nécessaire)

- 1) à l'extérieur du vagin
2) à l'entrée du vagin
3) à l'intérieur du vagin/dans le fond du vagin
4) au ventre (spécifiez où s.v.p.: _____)
5) autre (spécifiez où s.v.p.: _____)

17) Par le passé, quand a commencé la douleur? (chochez si nécessaire)

	douleur 1)	douleur 2)	douleur 3)	Combinaison
1) avant la pénétration				
2) au moment de la pénétration				
3) durant le mouvement de va-et-vient du pénis				
4) après la pénétration				

18) Par le passé, quel était la nature de la douleur? (chochez si nécessaire)

	douleur 1)	douleur 2)	douleur 3)	Combinaison
1) vive				
2) aiguë				
3) déchirante				
4) chaude				
5) qui pique				
6) brusque				
7) brûlante				
8) bouillante				
9) comme marqué au fer rouge				
10) sourde				
11) qui crampe				

19) Par le passé, évaluez l'intensité de douleur pendant les relations sexuelles.

De 0 (aucune douleur) à 10 (douleur la plus intense): _____

20) Par le passé, évaluez à quel point la douleur dérange les relations sexuelles.

s.v.p. cochez où, si c'est le cas, la douleur a dérangé:

- 1) le désir _____ 2) le plaisir _____
 3) l'excitation _____ 4) la fréquence _____
 5) l'orgasme _____ 6) autre (spécifiez où s.v.p.: _____)

21) Évaluez à quel point la douleur dérange les relations sexuelles maintenant.

s.v.p. cochez où, si c'est le cas, la douleur a dérangé:

- 1) le désir _____ 2) le plaisir _____
 3) l'excitation _____ 4) la fréquence _____
 5) l'orgasme _____ 6) autre (spécifiez où s.v.p.: _____)

22) Depuis quand avez-vous de la douleur pendant les relations sexuelles?

- 1) depuis le premier essai (m: ___/a: ___)
 2) après une période de relations sans douleur (de: m: ___/a: ___ à m: ___/a: ___)

23) Quand la douleur a-t-elle cessé? (m: ___/a: ___)

24) Par le passé, avez-vous eu de la douleur à part pendant la pénétration?

- 1) OUI _____ 2) NON _____ 3) NE SAIS PAS _____

25) Êtes-vous excitée et lubrifiée quand vous essayez d'avoir des relations sexuelles?

- 1) QUI 2) NON 3) NE SAIS PAS 4) des fois (____%)
 5) Qui, mais seulement subjectivement (pas de lubrification) (____%)

- 26) Ressentez-vous ou avez-vous ressenti certains de ces symptômes pendant la pénétration?
- 1) mes muscles vaginaux se contractent
 - 2) J'ai des spasmes des muscles vaginaux
 - 3) mon vagin est obstrué
 - 4) le pénis ne peut pas me pénétrer
 - 5) mon vagin semble trop petit
 - 6) je ne sais pas
 - 7) aucun de ces symptômes
 - 7) autre (spécifiez où s.v.p.: _____)

→ Tous les répondants ayant répondu *oui* ou *je ne sais pas* aux questions #1 et #13, répondez aux questions suivantes.

- 27) Comment la douleur pendant les relations dérange-t-elle votre vie en général?
De 0 (aucunement) à 10 (c'est le problème le plus grave): _____
- 28) Comment la douleur pendant les relations affecte-t-elle l'entente avec votre partenaire?
De 0 (aucunement) à 10 (c'est le problème le plus grave): _____ pas de partenaire _____
- 29) Comment la douleur pendant les relations affecte-t-elle l'entente avec votre famille, les amis?
De 0 (aucunement) à 10 (c'est le problème le plus grave): _____
- 30) Souffrez-vous de maladies chroniques? 1) OUI _____ 2) NON _____
Si *oui*, spécifiez: _____
- 31) Quels médicaments prenez-vous ou avez-vous pris l'année passée, si c'est le cas? Aucun _____
- 32) Quelles drogues de la rue avez-vous utilisées l'année passée, si vous en avez utilisées? Aucun _____
- 33) Avez-vous déjà consulté un psychologue, un psychiatre, un travailleur social ou autres professionnels de la santé mentale pour autre chose que la douleur pendant les relations sexuelles? N/A
Professionnel: _____ Pour: _____ Traitement: _____
Professionnel: _____ Pour: _____ Traitement: _____
- 34) Pouvez-vous évaluer le niveau de détresse que votre problème de douleur vous apporte?
De 0 (aucunement) à 10 (le plus stressant): _____
- 35) Votre douleur est la conséquence directe:
 - 1) conséquence des contractions/tensions musculaires du vagin **seulement**
 - 2) conséquence d'un problème dont j'ignore la cause
 - 3) une combinaison des contractions/tensions musculaires et une autre cause
 - 4) autre (spécifiez où s.v.p.: _____)
-

**Appendix 7 –
Sexual and Physical Abuse Structured Interview**

SEXUAL AND PHYSICAL ABUSE INTERVIEW (Leserman et al., 1996)

NAME/ID: _____

DATE: _____

INTERVIEWER: _____

VISIT: _____

Do you consider yourself abused?: 1) PHYSICALLY: yes no

2) SEXUALLY: yes no

SEXUAL:

Attempts: (positive response to any of the 5 items below)

"By using force or threatening to harm you, has anyone ever:

- 1) made you watch a sexual act,
- 2) tried to touch the sex parts of your body, but did not succeed,
- 3) tried to make you have sex, but he did not succeed, and
- 4) attempted any other sexual experience not involving contact?"

Touch: (positive response to any of the 5 items below)

"Has anyone ever succeeded in touching the sex parts of your body by using force or threatening to harm you? By touch we mean:

- 1) with their hands, touched or fondled your sexual organs (breast, public area, anus),
- 2) with their mouth or tongue on your vagina or anus (oral sex), and
- 3) putting fingers or objects in your vagina or anus?

Has anyone ever succeeded in making you touch the sex parts of their body by using force or threatening to harm you? By touch we mean:

- 1) made you touch or fondle their genital area, and
- 2) made you put their penis in your mouth (oral sex)?"

Rape: (positive response to any of the 2 items below)

"Has anyone made you have vaginal or anal sex by using force or threatening to harm you? By sex we mean:

- 1) vaginal intercourse (man putting his penis in your vagina), and
- 2) anal intercourse (man putting his penis in your anus)?"

CHILD (13-)		ADULT (14+)		# TIMES	# OF PERP.
yes	no	yes	no		
yes	no	yes	no		
yes	no	yes	no		
yes	no	yes	no		
yes	no	yes	no		
yes	no	yes	no		
yes	no	yes	no		
yes	no	yes	no		
yes	no	yes	no		

PHYSICAL

Being beat, hit, or kicked: (positive response to item below)

"Has anyone – including family members or friends – ever beat you up, hit you, kicked you, bit you, or burned you, regardless of when it happened or whether you ever reported it or not? (Include experiences that were outside the range of normal "spanking" or kids fighting)."

Life threat: (positive response to any of the 2 items below)

- 1) "Has anyone – including family members or friends – ever attacked you with a gun, knife, or some other weapon, regardless of when it happened or whether you ever reported it or not?"
- 2) "Has anyone – including family members or friends – ever attacked you without a weapon, but with the intent to kill or seriously injure you?"

CHILD		ADULT		TIMES	# OF PERP.
				0=never 1=seldom 2=occasionally 3=often	
yes	no	yes	no		
yes	no	yes	no		
yes	no	yes	no		

ENTREVUE D'ABUS PHYSIQUE ET SEXUEL (Leserman et al., 1996)

ID: _____

DATE: _____

INTERVIEWEUR: _____

VISITE: _____

Pensez-vous être abusée?: 1) PHYSIQUEMENT: oui non

2) SEXUELLEMENT: oui non

SEXUEL:

Essais: (positive response to any of the 5 items below)

"En utilisant la force ou en menaçant de vous faire mal, est-ce que quelqu'un:

- 1) Vous a demandé de regarder un acte sexuel,
- 2) A essayé de touches certains parties de votre corps mais n'a pas réussi,
- 3) A essayé d'avoir des relations avec vous mais n'a pas réussi
- 4) A essayé d'autres expériences sexuelles sans contact?"

Toucher: (positive response to any of the 5 items below)

"Est-ce que quelqu'un a réussi à toucher une partie de votre corps en utilisant la force ou en menaçant de vous faire mal, par "toucher" nous voulons dire:

- 1) avec leurs mains ils on touché ou tâté vos organes sexuels (les seins, autour du pubis, l'anus),
- 1) Avec leur bouche ou leur langue sur votre vagin ou l'anus (sex oral)
- 2) En mettant leurs doigts ou des objets dans votre vagin ou anus?

Est-ce que quelqu'un a réussi à vous faire toucher à leur organes génitaux en utilisant la force ou en vous menaçant de vous faire mal, par "toucher" nous voulons dire:

- 1) Vous ont fait toucher ou tâter leurs organes génitaux
- 2) Vous ont fait mettre leur pénis dans votre bouche (sex oral)?"

Viol: (positive response to any of the 2 items below)

"Est-ce que quelqu'un vous a forcé à avoir des relations sexuelles vaginales ou anales en utilisant la force ou en vous menaçant de vous faire mal,

ENFANT (13-)		ADULTE(14+)		# FOIS	# OF PERS.
oui	non	oui	non		
oui	non	oui	non		
oui	non	oui	non		
oui	non	oui	non		
oui	non	oui	non		
oui	non	oui	no		
oui	non	oui	no		
oui	non	oui	no		
yes	no	yes	no		
yes	no	yes	no		

par "sex" nous voulons dire:

- 1) Relations sexuelles vaginales (l'homme met son pénis dans votre vagin)
- 2) Relations sexuelles anales (l'homme met son pénis dans votre anus)?"

ENFANT (13-)		ADULTE(14+)		# FOIS	# OF PERS.
oui	non	oui	non		
oui	non	oui	non		

PHYSIQUE:

Être battu, frappé ou se faire donner un ou des coups de pied:
(positive response to item below)

"Est-ce que quelqu'un – incluant les membres de votre famille, des amis – vous ont déjà frappé, mordu, brûlé, sans compter quand ou que cela ait été rapporté ou pas (Relatez les expériences autres que les simples réclées d'enfants)."

Menace à votre vie: (positive response to any of the 2 items below)

- 1) "Est-ce que quelqu'un – y compris les membres de votre famille, amis – vous ont déjà attaqué avec un fusil, un couteau ou tout autre arme sans compter l'année ou les circonstances?"
- 2) Est-ce que quelqu'un – y compris les membres de votre famille, amis – vous ont déjà attaqué sans arme mais dans le but de vous tuer ou vous blesser?"

ENFANT		ADULTE		FOIS	# OF PERS.
				0=jamais 1=rarement 2=occasionnellement 3=souvent	
oui	non	oui	non		
oui	non	oui	non		
oui	non	oui	non		

**Appendix 8 –
McGill Pain Questionnaire**

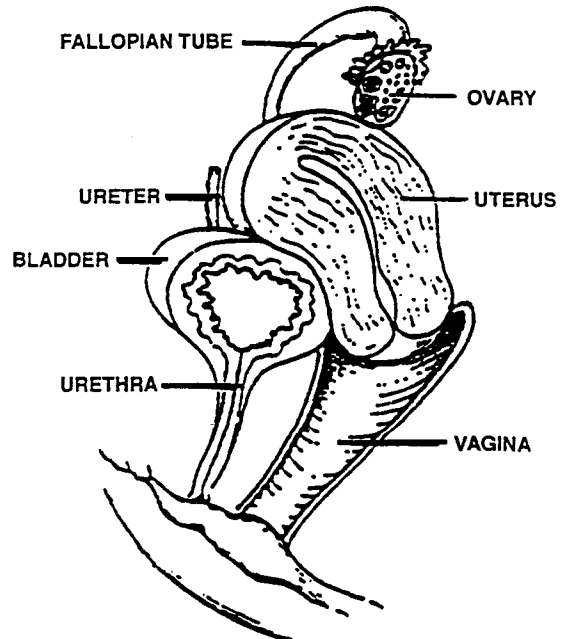
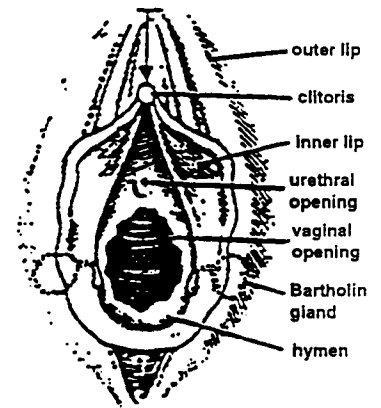
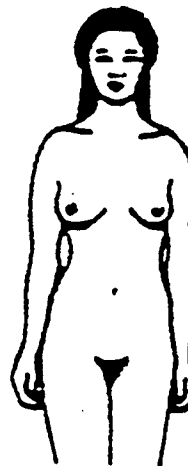
McGill - Melzack Pain Questionnaire

Patient's Name _____ Date _____

PRI: S _____ A _____ E _____ M(S) _____ M(AE) _____ M(T) _____ PRI(T) _____
 (1-10) (11-15) (16) (17-19) (20) (17-20) (1-20)

1 Flickering Quivering Pulsing Throbbing Beating Pounding	11 Tiring Exhausting
2 Jumping Flashing Shooting	12 Sickening Suffocating
3 Pricking Boring Drilling Stabbing Lancinating	13 Fearful Frightful Terrifying
4 Sharp Cutting Lacerating	14 Punishing Gruelling Cruel Killing
5 Pinching Pressing Gnawing Cramping Crushing	15 Wretched Blinding
6 Tugging Pulling Wrenching	16 Annoying Troublesome Miserable Intense Unbearable
7 Hot Burning Scalding Searing	17 Spreading Radiating Penetrating Piercing
8 Tingling Itchy Smarting Stinging	18 Tight Numb Drawing Squeezing Tearing
9 Dull Sore Hurting Aching Heavy	19 Cool Cold Freezing
10 Tender Taut Rasping Splitting	20 Nagging Nauseating Agonizing Dreadful Torturing
	PPI
	0 No Pain
	1 Mild
	2 Discomforting
	3 Distressing
	4 Horrible
	5 Excruciating

PPI _____ COMMENTS: _____



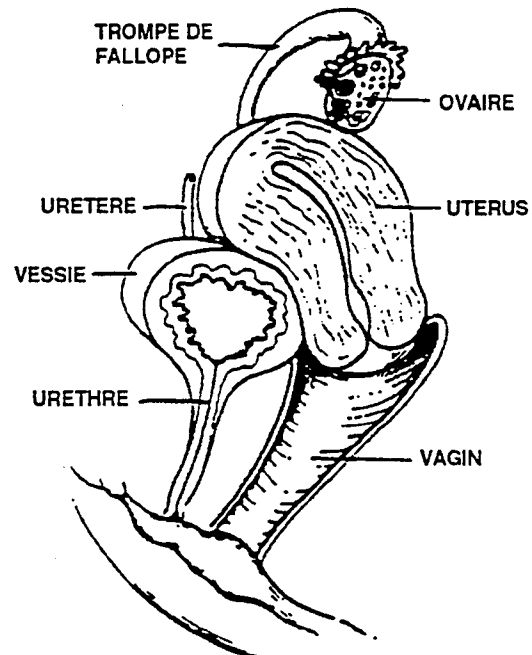
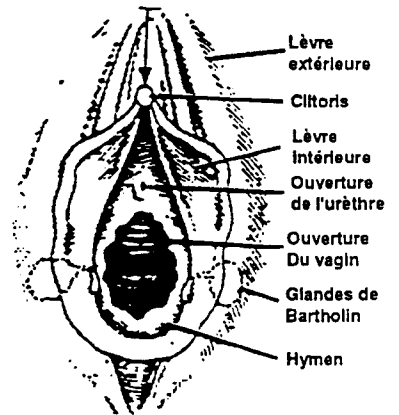
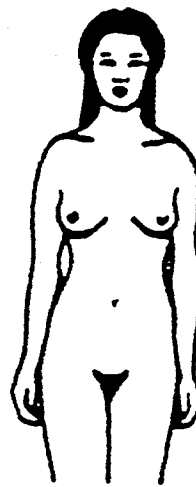
Questionnaire Melzack sur la douleur (McGill)

Nom du Patient _____ Date _____

PRI _____ S _____ A _____ E _____ M (S) _____ M (AE) _____ M (T) _____ PRI (T) _____
 (1-10) (11-15) (16) (17-19) (20) (17-20) (1-20)

1 Qui tremblotte _____ Qui tremble _____ Qui palpite _____ Qui bat _____ Qui élance _____ Qui martèle _____	12 Ecoeurante _____ Etouffante _____
2 Par secousse _____ Brusque _____ Fulgurante _____	13 Epeurante _____ Effrayante _____ Terrifiante _____
3 Qui pique _____ Qui perce _____ Qui pénètre _____ Qui poignarde _____	14 Violente _____ Ereintante _____ Cruelle _____ Tuante _____ Torturante _____
4 Vive _____ Aigüe _____ Déchirante _____	15 Déprimante _____ Aveuglante _____
5 Qui pince _____ Qui presse _____ Qui ronge _____ Qui écrampe _____ Qui écrase _____	16 Agaçante _____ Exasperante _____ Intense _____ Horrible _____ Intolérable _____
6 Qui tiraille _____ Qui tire _____ Qui tord _____	17 Qui s'étend _____ Qui rayonne _____ Qui rentre _____ Qui transperse _____
7 Chaude _____ Brûlante _____ Bouillante _____ Comme marqué au fer rouge _____	18 Raide _____ Engourdie _____ Tendue _____ Qui serre _____ Qui arrache _____
8 Qui fourmille _____ Qui démange _____ Cuisante _____ Cinglante _____	19 Fraîche _____ Froide _____ Glacée _____
9 Sourde _____ Douloureuse _____ Drue _____ Pénible _____ Poignante _____	20 Enervante _____ Dégoutante _____ Epouvantable _____ Atroce _____ Agonisante _____
10 Sensible _____ Crispée _____ Qui écorche _____ Qui tend _____	PPI 0 Pas de douleur _____ 1 Faible _____ 2 Inconfortable _____ 3 Forte _____ 4 Sévère _____ 5 Insupportable _____
11 Fatigante _____ Epuisante _____	

PPI _____ COMMENTAIRES:



Appendix 9 –
Pain Catastrophizing Scale



PCS

Name: _____ Age: _____ Gender: _____ Date: _____

Everyone experiences painful situations at some point in their lives. Such experiences may include headaches, tooth pain, joint or muscle pain. People are often exposed to situations that may cause pain such as illness, injury, dental procedures or surgery.

We are interested in the types of thoughts and feelings that you have when you are in pain. Listed below are thirteen statements describing different thoughts and feelings that may be associated with pain. Using the following scale, please indicate the degree to which you have these thoughts and feelings when you are experiencing pain.

0 - not at all 1 - to a slight degree 2 - to a moderate degree 3 - to a great degree 4 - all the time

When I'm in pain...

- 1 I worry all the time about whether the pain will end.
- 2 I feel I can't go on.
- 3 It's terrible and I think it's never going to get any better.
- 4 It's awful and I feel that it overwhelms me.
- 5 I feel I can't stand it anymore.
- 6 I become afraid that the pain will get worse.
- 7 I keep thinking of other painful events.
- 8 I anxiously want the pain to go away.
- 9 I can't seem to keep it out of my mind.
- 10 I keep thinking about how much it hurts.
- 11 I keep thinking about how badly I want the pain to stop.
- 12 There's nothing I can do to reduce the intensity of the pain.
- 13 I wonder whether something serious may happen.

...Total



RCD

Nom: _____ Age: _____ Sexe: _____ Date: _____

Chacun d'entre nous aura à subir des expériences douloureuses. Cela peut être la douleur associée aux maux de tête, à un mal de dent, ou encore la douleur musculaire ou aux articulations. Il nous arrive souvent d'avoir à subir des expériences douloureuses telles que la maladie, une blessure, un traitement dentaire ou une intervention chirurgicale.

Dans le présent questionnaire, nous vous demandons de décrire le genre de pensées et d'émotions que vous avez quand vous avez de la douleur. Vous trouverez ci-dessous treize énoncés décrivant différentes pensées et émotions qui peuvent être associées à la douleur. Veuillez indiquer à quel point vous avez ces pensées et émotions, selon l'échelle ci-dessous, quand vous avez de la douleur.

0 - pas du tout 1 - quelque peu 2 - de façon modéré 3 - beaucoup 4 - tout le temps

Quand j'ai de la douleur...

- 1 j'ai peur qu'il n'y aura pas de fin à la douleur.
- 2 je sens que je ne peux pas continuer.
- 3 c'est terrible et je pense que ça ne s'améliorera jamais.
- 4 c'est affreux et je sens que c'est plus fort que moi.
- 5 je sens que je ne peux plus supporter la douleur.
- 6 j'ai peur que la douleur s'empire.
- 7 je ne fais que penser à d'autres expériences douloureuses.
- 8 avec inquiétude, je souhaite que la douleur disparaisse.
- 9 je ne peux m'empêcher d'y penser.
- 10 je ne fais que penser à quel point ça fait mal.
- 11 je ne fais que penser à quel point je veux que la douleur disparaisse.
- 12 il n'y a rien que je puisse faire pour réduire l'intensité de la douleur.
- 13 je me demande si quelque chose de grave va se produire.

...Total

**Appendix 10 –
Sexual Self-Schema Scale**

DESCRIBE YOURSELF

Below is a listing of 50 adjectives. For each word, consider whether or not the term describes you. Each adjective is to be rated on a scale ranging from 0 = *not at all descriptive of me* to 6 = *very much descriptive of me*. Choose a number of each adjective to indicate how accurately the adjective describes you. There are no right or wrong answers.

Please be thoughtful and honest.

Question: To what extent does the term _____ describe me?

RATING SCALE:

0	1	2	3	4	5	6
not at all descriptive						very much descriptive

- | | |
|---|---|
| <ol style="list-style-type: none"> 1. generous ___ 2. <i>uninhibited</i> ___ 3. <i>cautious</i> ___ 4. helpful ___ 5. <i>loving</i> ___ 6. <i>open-minded</i> ___ 7. shallow ___ 8. <i>timid</i> ___ 9. <i>frank</i> ___ 10. clean cut ___ 11. <i>stimulating</i> ___ 12. unpleasant ___ 13. <i>experienced</i> ___ 14. short-tempered ___ 15. irresponsible ___ 16. <i>direct</i> ___ 17. logical ___ 18. <i>broad-minded</i> ___ 19. kind ___ 20. <i>arousable</i> ___ 21. practical ___ 22. <i>self-conscious</i> ___ 23. dull ___ 24. <i>straightforward</i> ___ 25. <i>casual</i> ___ | <ol style="list-style-type: none"> 26. disagreeable ___ 27. serious ___ 28. <i>prudent</i> ___ 29. humorous ___ 30. sensible ___ 31. <i>embarrassed</i> ___ 32. <i>outspoken</i> ___ 33. level-headed ___ 34. responsible ___ 35. <i>romantic</i> ___ 36. polite ___ 37. <i>sympathetic</i> ___ 38. <i>conservative</i> ___ 39. <i>passionate</i> ___ 40. wise ___ 41. <i>inexperienced</i> ___ 42. stingy ___ 43. superficial ___ 44. <i>warm</i> ___ 45. <i>unromantic</i> ___ 46. good-natured ___ 47. rude ___ 48. <i>revealing</i> ___ 49. bossy ___ 50. <i>feeling</i> ___ |
|---|---|

DESCRIPTION DE SOI-MÊME

Instruction: Voici une liste de 50 termes (mot ou expression). Pour chacun, veuillez juger s'il est descriptif de vous-même ou non. Tous les termes doivent être classés à l'aide d'une échelle d'évaluation allant de 0 *pas descriptif du tout* à 6 *très descriptif*. Choisissez un chiffre pour décrire à quel degré le terme vous décrit. Il n'y a pas de bonne ou mauvaise réponse.

Veuillez être attentive et honnête.

Question: À quel point le terme _____ me décrit-il?

ÉCHELLE D'ÉVALUATION:

0	1	2	3	4	5	6
Pas descriptif du tout						très descriptif

- | | |
|---|---|
| <ol style="list-style-type: none"> 1. <i>généreuse</i> _____ 2. <i>sans inhibition</i> _____ 3. <i>circonspecte</i> _____ 4. <i>serviable</i> _____ 5. <i>affectueuse</i> _____ 6. <i>ouverte d'esprit</i> _____ 7. <i>sans profondeur</i> _____ 8. <i>timide</i> _____ 9. <i>sincère</i> _____ 10. <i>apparence soignée</i> _____ 11. <i>intéressante</i> _____ 12. <i>déplaisante</i> _____ 13. <i>expérimentée</i> _____ 14. <i>vive de caractère</i> _____ 15. <i>irresponsable</i> _____ 16. <i>directe</i> _____ 17. <i>logique</i> _____ 18. <i>tolérante</i> _____ 19. <i>gentille</i> _____ 20. <i>excitable</i> _____ 21. <i>pratique</i> _____ 22. <i>complexée</i> _____ 23. <i>ennuyante</i> _____ 24. <i>franche</i> _____ 25. <i>décontractée</i> _____ | <ol style="list-style-type: none"> 26. <i>Désagréable</i> _____ 27. <i>sérieuse</i> _____ 28. <i>prudente</i> _____ 29. <i>Comique</i> _____ 30. <i>raisonnable</i> _____ 31. <i>embarrassée</i> _____ 32. <i>Sans détour</i> _____ 33. <i>équilibrée</i> _____ 34. <i>responsable</i> _____ 35. <i>romantique</i> _____ 36. <i>polie</i> _____ 37. <i>compréhensive</i> _____ 38. <i>conservatrice</i> _____ 39. <i>passionée</i> _____ 40. <i>sage</i> _____ 41. <i>inexpérimentée</i> _____ 42. <i>avare</i> _____ 43. <i>superficielle</i> _____ 44. <i>chaleureuse</i> _____ 45. <i>peu romantique</i> _____ 46. <i>accommodante</i> _____ 47. <i>insolente</i> _____ 48. <i>communicative</i> _____ 49. <i>autoritaire</i> _____ 50. <i>sensible</i> _____ |
|---|---|

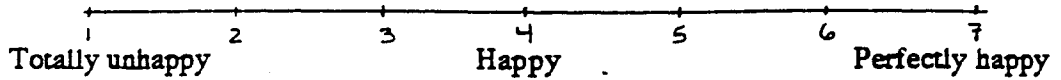
Appendix 11 –
Locke Wallace Marital Adjustment Scale

Name: _____

Date: _____

RELATIONSHIP ADJUSTMENT SCALE

1. Check the point on the scale below which best describes the degree of happiness, everything considered, of your present marriage/relationship. The middle point, "HAPPY", represents the degree of happiness which most people get from their marriage/relationship, and the scale gradually ranges on one side to those few who are very unhappy in their marriage/relationship, and on the other, to those few who experience extreme joy or felicity in marriage/relationship.



State the approximate extent of agreement or disagreement between you and your mate on the following items. Please check the one most appropriate column for each item.

- | | Always
Agree | Almost
Always
Agree | Occa-
sionally
Disagree | Fre-
quently
Disagree | Almost
always
Disagree | always
Disagree |
|--|-----------------|---------------------------|-------------------------------|-----------------------------|------------------------------|--------------------|
| 2. Handling family finances | | | | | | |
| 3. Matters of recreation | | | | | | |
| 4. Demonstration of affection | | | | | | |
| 5. Friends | | | | | | |
| 6. Sex relations | | | | | | |
| 7. Conventionality (right good, or proper conduct) | | | | | | |
| 8. Philosophy of life | | | | | | |
| 9. Ways of dealing with partner's parents | | | | | | |

10. When disagreements arise, they usually result in:

Man giving in _____ Woman giving in _____ Agreement by mutual give and take _____

11. Do you and your mate engage in outside interests together?

All of them _____ Some of them _____ Very few of them _____ None of them _____

12. In leisure time do you generally prefer: To be "on the go"? _____ to stay at home? _____
Does your mate generally prefer: To be "on the go"? _____ to stay at home? _____

13. Do you ever wish you had not married/moved in with your partner?

Frequently _____ Occasionally _____ Rarely _____ Never _____

14. If you had your life to live over, do you think you would:

Marry/live with the same person? _____ Marry/live with a different person? _____
Not marry at all? _____

15. Do you confide in your mate?

Almost never _____ Rarely _____ In most things _____ In everything _____

Nom: _____

Date: _____

ENQUETE MARITALE LOCKE-WALLACE

1. Veuillez cocher sur l'échelle ci-dessous le point qui décrit le mieux le degré de bonheur qui existe dans votre mariage actuel. Le point central, 'HEUREUX', représente le degré de bonheur que la plupart des gens éprouvent au cours de leur union maritale. L'échelle s'étend graduellement d'une part vers le petit nombre de personnes dont le mariage est très malheureux et, d'autre part, vers le petit nombre qui vivent une expérience maritale de bonheur absolu.

Très malheureux

Heureux

Parfaitement heureux

Veuillez indiquer pour chaque point suivant le degré approximatif d'accord ou de désaccord entre vous et votre conjoint. Veuillez donner une seule réponse appropriée pour chaque item.

Toujours d'accord	Presque toujours d'accord	Désaccord occa- sionnel	Désaccord fréquent	Presque toujours en dé-	Toujours en dé- saccord
----------------------	---------------------------------	-------------------------------	-----------------------	-------------------------------	-------------------------------

2. Administration du budget familial

3. Récréation

4. Témoignages d'affection

5. Amis

6. Relations sexuelles

7. Usages conventionnels
(conformité aux exigences de la société)

8. Philosophie de la vie

9. Façon d'agir avec la belle-famille

10. Lorsqu'il y a désaccord, il en résulte habituellement:

que l'époux cède _____ que l'épouse cède _____ qu'il y a accord par concessions mutuelles _____

11. Est-ce que vous et votre conjoint prenez part ensemble à des activités à l'extérieur?

Toutes _____ Quelques-unes _____ Très peu _____ Aucune _____

12. Pendant vos heures de loisirs, vous préférez habituellement _____ sortir _____ rester à la maison. Votre conjoint préfère habituellement _____ sortir _____ rester à la maison
13. Avez-vous déjà souhaité ne pas être marié?
Fréquemment _____ de temps en temps _____ rarement _____ jamais _____
14. Si vous aviez le choix de refaire votre vie, que feriez-vous?
_____ Je marierais la même personne. _____ Je marierais quelqu'un d'autre _____
_____ Je ne me marierais pas.
15. Vous vous confiez à votre conjoint:
presque jamais _____ rarement _____ le plupart du temps _____ toujours _____

Appendix 12 –
Sexual Knowledge Scale

SEXUAL KNOWLEDGE

Below are some statements concerning general information about sexual functioning. Please read each statement carefully. Once you have read it, indicate whether you agree with the statement or not by marking TRUE for those you agree with, and FALSE for those you do not.

	<u>TRUE</u>	<u>FALSE</u>
1. Usually men achieve orgasm more quickly than women.	T	F
2. Having intercourse during menstruation is not a healthy practice.	T	F
3. The penis must be erect before ejaculation may occur.	T	F
4. Simultaneous orgasm is not necessary for a good sexual relationship.	T	F
5. Masturbation by either partner is an indicator of poor marital adjustment.	T	F
6. A woman who has had a hysterectomy can no longer experience orgasm.	T	F
7. Men reach the peak of their sexual drive in their late teens while women reach their peak during their 30's.	T	F
8. A woman can become pregnant during menstruation.	T	F
9. Most men and women lose interest in sex after age 60.	T	F
10. A male's orgasm is more satisfying than a female's orgasm.	T	F
11. The prophylactic (rubber) protects against conception and against venereal disease.	T	F

- | | | | |
|-----|--|---|---|
| 12. | Lubrication in the female shows sexual excitement like the male's erection. | T | F |
| 13. | Oral-genital sex is unhealthy because it enhances the possibility of contracting venereal disease. | T | F |
| 14. | Women who have fantasies during intercourse are dissatisfied with their sex lives. | T | F |
| 15. | Frequency of intercourse is an accurate measure of success of a relationship. | T | F |
| 16. | A woman may be brought to orgasm by manual stimulation of her genitals. | T | F |
| 17. | Menopause in a woman creates a sharp reduction in her sexual drive. | T | F |
| 18. | Women desire sex about as frequently as men. | T | F |
| 19. | An effective form of contraception is douching after intercourse. | T | F |
| 20. | After intercourse there is a period when a man cannot respond to sexual stimulation. | T | F |
| 21. | Females can maintain a sexual response through multiple orgasms. | T | F |
| 22. | Most women are able to enjoy sex even without experiencing orgasm. | T | F |
| 23. | The bigger the penis the more satisfying it is to the female in intercourse. | T | F |
| 24. | A woman can no longer become pregnant once menopause has begun. | T | F |
| 25. | Erection in the male is brought about by congestion of blood in the penis. | T | F |

26. The clitoris is not a particularly sensitive area of the female's genitals. "

T

F

INSTRUCTIONS

Dans ce questionnaire, qui porte sur vos pensées et vos sentiments, vous serez appelé à nous renseigner sur certaines de vos attitudes et opinions, et à nous donner des renseignements concernant certaines de vos expériences sexuelles. Vos réponses seront confidentielles et seuls les membres de l'équipe qui s'occupent directement de la présente recherche pourront y avoir accès. A moins que vous n'en fassiez la demande expresse, ces renseignements ne seront divulgués à personne d'autre. Le présent inventaire comprend dix sections dont chacune vous demande quelque chose de légèrement différent. Dans certaines sections, vous aurez ainsi à répondre à des questions, tandis que dans d'autres, vous devrez vous décrire.

Chaque section comporte une brève description de ce que vous aurez à faire. Veuillez lire les énoncés attentivement et répondre à chacun d'eux.

SECTION I

Voici quelques énoncés concernant l'information générale sur la physiologie sexuelle. Une fois que vous les aurez lus attentivement, indiquez si vous êtes d'accord ou non avec chacun en cochant votre réponse (VRAI ou FAUX) dans la colonne appropriée.

	<u>VRAI</u>	<u>FAUX</u>
1. Habituellement, les hommes atteignent l'orgasme plus rapidement que les femmes.	0	0
2. Il n'est pas sain d'avoir des relations sexuelles pendant les menstruations.	0	0
3. Le pénis doit être en érection avant que l'éjaculation puisse se produire.	0	0
4. L'orgasme simultané n'est pas nécessaire à une bonne relation sexuelle.	0	0
5. Le fait de se masturber est signe d'un mauvais ajustement conjugal.	0	0
6. La femme qui a eu une hystérectomie ne peut plus avoir d'orgasme.	0	0
7. Les hommes atteignent le sommet de leur besoin sexuel à la fin de l'adolescence tandis que les femmes atteignent le leur au cours de la trentaine.	0	0
8. Une femme peut devenir enceinte même en étant menstruée.	0	0
9. La plupart des hommes et des femmes perdent tout désir sexuel après 60 ans.	0	0

DSFI

	<u>VRAI</u>	<u>FAUX</u>
10. L'orgasme de l'homme est plus satisfaisant que celui de la femme.	0	0
11. Le préservatif (condom) empêche la conception et protège contre les maladies transmises sexuellement (vénéériennes).	0	0
12. La lubrification vaginale chez la femme est signe d'excitation sexuelle tout comme l'érection chez l'homme.	0	0
13. La sexualité bucco-génitale est malsaine parce qu'elle augmente la possibilité de contracter une maladie transmise sexuellement.	0	0
14. Les femmes qui ont des fantasmes pendant les relations sexuelles sont insatisfaites de leur vie sexuelle.	0	0
15. La fréquence des relations sexuelles d'un couple est une bonne mesure du succès de sa relation.	0	0
16. Une femme peut atteindre l'orgasme par stimulation de ses organes génitaux.	0	0
17. La ménopause entraîne chez la femme une diminution marquée de son besoin sexuel.	0	0
18. Les femmes ont envie de rapports sexuels aussi souvent que les hommes.	0	0
19. La douche vaginale après le coit est une forme efficace de contraception.	0	0
20. Après le coit, il existe une période au cours de laquelle l'homme ne peut répondre à la stimulation sexuelle.	0	0
21. Les femmes peuvent maintenir leur excitation sexuelle en ayant plusieurs orgasmes.	0	0
22. La plupart des femmes peuvent aimer les rapports sexuels même si elles n'atteignent pas l'orgasme.	0	0
23. Plus le pénis est gros, plus le coit est satisfaisant pour la femme.	0	0
24. Une fois sa ménopause commencée, une femme ne peut plus devenir enceinte.	0	0

DSFI

	<u>VRAI</u>	<u>FAUX</u>
25. L'érection (chez l'homme) est causée par un afflux de sang dans le pénis.	0	0
26. Le clitoris n'est pas une partie particulièrement sensible des organes génitaux de la femme.	0	0

**Appendix 13 –
Sexual History Form**

Name: _____

Date: _____

SEXUAL HISTORY FORM

Please circle the most appropriate response to each question.

1. How frequently do you and your partner have sexual intercourse or activity?
 - 1) more than once a day
 - 2) once a day
 - 3) 3 or 4 times a week
 - 4) twice a week
 - 5) once a week
 - 6) once every two weeks
 - 7) once a month
 - 8) less than once a month
 - 9) not at all

2. How frequently would you like to have sexual intercourse or activity?
 - 1) more than once a day
 - 2) once a day
 - 3) 3 or 4 times a week
 - 4) twice a week
 - 5) once a week
 - 6) once every two weeks
 - 7) once a month
 - 8) less than once a month
 - 9) not at all

3. Who usually initiates sexual intercourse or activity?
 - 1) I always do
 - 2) I usually do
 - 3) my partner and I initiate about equally often
 - 4) my partner usually does
 - 5) my partner always does

4. Who would you ideally like to initiate sexual intercourse or activity?
 - 1) myself, always
 - 2) myself, usually
 - 3) my partner and I equally often
 - 4) my partner, usually
 - 5) my partner always

5. How often do you masturbate (bring yourself to orgasm in private)?
 - 1) more than once a day
 - 2) once a day
 - 3) 3 or 4 times a week
 - 4) twice a week
 - 5) once a week
 - 6) once every two weeks
 - 7) once a month
 - 8) less than once a month
 - 9) not at all

6. For how many years have you and your partner been having sexual intercourse?
 - 1) less than 6 months
 - 2) less than 1 year
 - 3) 1 to 3 years
 - 4) 4 to 6 years
 - 5) 7 to 10 years
 - 6) more than 10 years

7. For how long do you and your partner usually engage in sexual foreplay (kissing, petting, etc.) before having intercourse?
- | | |
|-----------------------|---------------------------|
| 1) less than 1 minute | 5) 11 to 15 minutes |
| 2) 1 to 3 minutes | 6) 16 to 30 minutes |
| 3) 4 to 6 minutes | 7) 30 minutes to one hour |
| 4) 7 to 10 minutes | |
8. How long does intercourse usually last, from entry of the penis to the male's orgasm/climax?
- | | |
|-----------------------|-------------------------|
| 1) less than 1 minute | 6) 11 to 15 minutes |
| 2) 1 to 2 minutes | 7) 15 to 20 minutes |
| 3) 2 to 4 minutes | 8) 20 to 30 minutes |
| 4) 4 to 7 minutes | 9) more than 30 minutes |
| 5) 7 to 10 minutes | |
9. Overall, how satisfactory to you is your sexual relationship with your partner?
- | | |
|-------------------------------------|----------------------------|
| 1) extremely <u>unsatisfactory</u> | 4) slightly satisfactory |
| 2) moderately <u>unsatisfactory</u> | 5) moderately satisfactory |
| 3) slightly <u>unsatisfactory</u> | 6) extremely satisfactory |
10. Overall, how satisfactory do you think your sexual relationship is to your partner?
- | | |
|-------------------------------------|----------------------------|
| 1) extremely <u>unsatisfactory</u> | 4) slightly satisfactory |
| 2) moderately <u>unsatisfactory</u> | 5) moderately satisfactory |
| 3) slightly <u>unsatisfactory</u> | 6) extremely satisfactory |
11. When your partner makes sexual advances, how do you usually respond?
- | | |
|-----------------------------------|-------------------|
| 1) I usually accept with pleasure | 3) often refuse |
| 2) accept reluctantly | 4) usually refuse |
12. If you try, is it possible to reach orgasm (sensation of climax) through masturbation?
- | | |
|---|-----------------------------------|
| 1) nearly always (over 90% of the time) | 4) seldom (about 25% of the time) |
| 2) usually (about 75% of the time) | 5) never |
| 3) sometimes (about 50% of the time) | 6) have never tried |

13. If you try, is it possible for you to reach orgasm (sensation of climax) through having your genitals caressed by your partner?
- | | |
|--|-----------------------------------|
| 1) nearly always
(over 90% of the time) | 4) seldom (about 25% of the time) |
| 2) usually (about 75% of the time) | 5) never |
| 3) sometimes (about 50% of the time) | 6) have never tried |
14. If you try, is it possible for you to reach orgasm (sensation of climax) through sexual intercourse?
- | | |
|--|-----------------------------------|
| 1) nearly always
(over 90% of the time) | 4) seldom (about 25% of the time) |
| 2) usually (about 75% of the time) | 5) never |
| 3) sometimes (about 50% of the time) | 6) have never tried |
15. What is your usual reaction to erotic or pornographic materials (e.g. pictures, movies, books?)
- | | |
|---------------------|---|
| 1) greatly aroused | 3) not aroused |
| 2) somewhat aroused | 4) negative (disgusted, repulsed, etc.) |
16. Does the male have any trouble getting an erection before intercourse begins?
- | | |
|---------------------------------------|---|
| 1) never | 4) sometimes (50% of the time) |
| 2) rarely (less than 10% of the time) | 5) usually (75% of the time) |
| 3) seldom (less than 25% of the time) | 6) nearly always (over 90% of the time) |
17. Does the male have any trouble keeping an erection once intercourse has begun?
- | | |
|---------------------------------------|---|
| 1) never | 4) sometimes (50% of the time) |
| 2) rarely (less than 10% of the time) | 5) usually (75% of the time) |
| 3) seldom (less than 25% of the time) | 6) nearly always (over 90% of the time) |

18. (WOMEN ONLY) Can you reach orgasm (sensation of climax) through stimulation of your genitals by an electric vibrator or any other means (i.e., running water, rubbing with some object, etc.)?
- | | |
|---|-----------------------------------|
| 1) nearly always (over 90% of the time) | 4) seldom (about 25% of the time) |
| 2) usually (about 75% of the time) | 5) never |
| 3) sometimes (about 50% of the time) | 6) have never tried to |
19. (WOMEN ONLY) Can you reach orgasm during sexual intercourse if, at the same time, your genitals are being caressed (by yourself or your partner with a vibrator, etc.)?
- | | |
|---|-----------------------------------|
| 1) nearly always (over 90% of the time) | 4) seldom (about 25% of the time) |
| 2) usually (about 75% of the time) | 5) never |
| 3) sometimes (about 50% of the time) | 6) have never tried |
20. (WOMEN ONLY) When you have sex with your mate (including foreplay and intercourse) do you notice some of these things happening: your breathing and pulse speed up, wetness in your vagina, pleasurable sensations in your breasts and genitals?
- | | |
|---|-----------------------------------|
| 1) nearly always (over 90% of the time) | 4) seldom (about 25% of the time) |
| 2) usually (about 75% of the time) | 5) never |
| 3) sometimes (about 50% of the time) | 6) have never tried |
21. (MEN ONLY) Do you ever ejaculate without any pleasurable sensation in your penis?
- | | |
|---|-----------------------------------|
| 1) nearly always (over 90% of the time) | 4) seldom (about 25% of the time) |
| 2) usually (about 75% of the time) | 5) never |
| 3) sometimes (about 50% of the time) | 6) have never tried |

THE REMAINING QUESTIONS ARE TO BE ANSWERED BY BOTH MEN AND WOMEN

22. Does the male ejaculate (climax) without having a full, hard erection?
- | | |
|---------------------------------------|---|
| 1) never | 4) sometimes (50% of the time) |
| 2) rarely (less than 10% of the time) | 5) usually (75% of the time) |
| 3) seldom (less than 25% of the time) | 6) nearly always (over 90% of the time) |

23. Does the male ever reach orgasm while he is trying to enter the vagina with his penis?
- | | |
|---------------------------------------|---|
| 1) never | 4) sometimes (50% of the time) |
| 2) rarely (less than 10% of the time) | 5) usually (75% of the time) |
| 3) seldom (less than 25% of the time) | 6) nearly always (over 90% of the time) |
24. Is the female's vagina so "dry" or "tight" that intercourse cannot occur?
- | | |
|---------------------------------------|---|
| 1) never | 4) sometimes (50% of the time) |
| 2) rarely (less than 10% of the time) | 5) usually (75% of the time) |
| 3) seldom (less than 25% of the time) | 6) nearly always (over 90% of the time) |
25. Do you feel pain in your genitals (sexual parts) during intercourse?
- | | |
|---------------------------------------|---|
| 1) never | 4) sometimes (50% of the time) |
| 2) rarely (less than 10% of the time) | 5) usually (75% of the time) |
| 3) seldom (less than 25% of the time) | 6) nearly always (over 90% of the time) |
26. How often do you experience sexual desire (this may include wanting to have sex, planning to have sex, feeling frustrated due to lack of sex, etc.)?
- | | |
|-------------------------|---------------------------|
| 1) more than once a day | 6) once every two weeks |
| 2) once a day | 7) once a month |
| 3) 3 or 4 times a week | 8) less than once a month |
| 4) twice a week | 9) not at all |
| 5) once a week | |
27. When you have sex with your partner do you feel sexually aroused (e.g., feeling "turned on", pleasure, excitement)?
- | | |
|---|-----------------------------------|
| 1) nearly always (over 90% of the time) | 4) seldom (about 25% of the time) |
| 2) usually (about 75% of the time) | 5) never |
| 3) sometimes (about 50% of the time) | |
28. When you have sex with your partner, do you have negative emotional reactions (e.g., fear, disgust, shame or guilt)?
- | | |
|---------------------------------------|---|
| 1) never | 4) sometimes (50% of the time) |
| 2) rarely (less than 10% of the time) | 5) usually (75% of the time) |
| 3) seldom (less than 25% of the time) | 6) nearly always (over 90% of the time) |

29. Does the male climax without ejaculation (semen coming out of the penis)?

- | | |
|---------------------------------------|---|
| 1) never | 4) sometimes (50% of the time) |
| 2) rarely (less than 10% of the time) | 5) usually (75% of the time) |
| 3) seldom (less than 25% of the time) | 6) nearly always (over 90% of the time) |

Nom: _____

Date: _____

FORMULAIRE D'HISTOIRE SEXUELLE

Veillez indiquer la réponse la plus appropriée à chacune des questions suivantes.

1. A quelle fréquence avez-vous des activités ou des relations sexuelles avec votre partenaire?
 - 1) Plus d'une fois par jour
 - 2) Une fois par jour
 - 3) De 3 à 4 fois par semaine
 - 4) Deux fois par semaine
 - 5) Une fois par semaine
 - 6) Une fois chaque deux semaines
 - 7) Une fois par mois
 - 8) Moins d'une fois par mois
 - 9) Jamais

2. A quelle fréquence aimeriez-vous avoir des relations ou des activités sexuelles?
 - 1) Plus d'une fois par jour
 - 2) Une fois par jour
 - 3) De 3 à 4 fois par semaine
 - 4) Deux fois par semaine
 - 5) Une fois par semaine
 - 6) Une fois chaque deux semaines
 - 7) Une fois par mois
 - 8) Moins d'une fois par mois
 - 9) Jamais

3. Qui est habituellement l'initiateur de vos relations ou activités sexuelles?
 - 1) Toujours moi
 - 2) Moi, habituellement
 - 3) Ma/mon partenaire et moi-même en proportion assez égale
 - 4) Ma/mon partenaire, habituellement
 - 5) Toujours ma/mon partenaire

4. Par qui préféreriez-vous que vos relations ou activités sexuelles soient initiées?
 - 1) Toujours moi
 - 2) Moi, habituellement
 - 3) Ma/mon partenaire et moi-même en proportion assez égale
 - 4) Ma/mon partenaire
 - 5) Toujours ma/mon partenaire

5. A quelle fréquence vous masturbez-vous?
 - 1) Plus d'une fois par jour
 - 2) Une fois par jour
 - 3) De 3 à 4 fois par semaine
 - 4) Deux fois par semaine
 - 5) Une fois par semaine
 - 6) Une fois chaque deux semaines
 - 7) Une fois par mois
 - 8) Moins d'une fois par mois
 - 9) Jamais

6. Depuis combien d'années avez-vous des relations sexuelles avec votre partenaire?
 - 1) Moins de 6 mois
 - 2) De 6 mois à un an
 - 3) De 1 à 3 ans
 - 4) De 4 à 6 ans
 - 5) De 7 à 10 ans
 - 6) Plus de 10 ans

7. Combien de temps durent habituellement vos "jeux préliminaires" avant d'avoir une relation sexuelle?
- | | |
|-----------------------|------------------------------|
| 1) Moins d'une minute | 5) De 11 à 15 minutes |
| 2) De 1 à 3 minutes | 6) De 16 à 20 minutes |
| 3) De 4 à 7 minutes | 7) De 30 minutes à une heure |
| 4) De 8 à 10 minutes | |
8. Quelle est la durée moyenne de vos relations sexuelles habituellement, c'est-à-dire, de la pénétration jusqu'à l'orgasme de monsieur?
- | | |
|-----------------------|-----------------------|
| 1) Moins d'une minute | 6) De 11 à 15 minutes |
| 2) De 1 à 2 minutes | 7) De 15 à 20 minutes |
| 3) De 2 à 4 minutes | 8) De 20 à 30 minutes |
| 4) De 4 à 7 minutes | 9) Plus de 30 minutes |
| 5) De 7 à 10 minutes | |
9. Dans l'ensemble, jusqu'à quel point diriez-vous que vos relations sexuelles avec votre partenaire sont satisfaisantes pour vous?
- | | |
|---------------------------------|-------------------------------|
| 1) Extrêmement insatisfaisantes | 4) Légèrement satisfaisantes |
| 2) Modérément insatisfaisantes | 5) Modérément satisfaisantes |
| 3) Légèrement insatisfaisantes | 6) Extrêmement satisfaisantes |
10. Dans l'ensemble, jusqu'à quel point diriez-vous que vos relations sexuelles avec votre partenaire sont satisfaisantes pour elle/lui?
- | | |
|---------------------------------|-------------------------------|
| 1) Extrêmement insatisfaisantes | 4) Légèrement satisfaisantes |
| 2) Modérément insatisfaisantes | 5) Modérément satisfaisantes |
| 3) Légèrement insatisfaisantes | 6) Extrêmement satisfaisantes |
11. Quand votre partenaire vous fait des avances, comment répondez-vous habituellement?
- | | |
|--|-----------------------------|
| 1) J'accepte habituellement avec plaisir | 3) Je refuse souvent |
| 2) J'accepte à contrecoeur | 4) Je refuse habituellement |
12. Si vous essayez, vous est-il possible d'atteindre l'orgasme par la masturbation?
- | | |
|--|-----------------------------------|
| 1) Presque toujours, plus de 90% du temps. | 4) Rarement, environ 25% du temps |
| 2) Habituellement, environ 75% du temps. | 5) Jamais |
| 3) Parfois, environ 50% du temps | 6) Je n'ai jamais essayé |
13. Si vous essayez, vous est-il possible d'atteindre l'orgasme grâce aux caresses que votre partenaire vous fait aux organes génitaux?
- | | |
|---|-----------------------------------|
| 1) Presque toujours, plus de 90% du temps | 4) Rarement, environ 25% du temps |
| 2) Habituellement, environ 75% du temps | 5) Jamais |
| 3) Parfois, environ 50% du temps | 6) Je n'ai jamais essayé |

14. Si vous essayez, vous est-il possible d'atteindre l'orgasme par la relation sexuelle?
- | | |
|---|-----------------------------------|
| 1) Presque toujours, plus de 90% du temps | 4) Rarement, environ 25% du temps |
| 2) Habituellement, environ 75% du temps | 5) Jamais |
| 3) Parfois, environ 50% du temps | 6) Je n'ai jamais essayé |
15. Quelle est votre réaction habituelle à du matériel érotique ou pornographique?
- | | |
|-----------------------|---|
| 1) Très excité | 3) Pas excité |
| 2) Quelque peu excité | 4) Réaction négative de dégoût, répulsion, etc. |
16. Est-ce que monsieur a de la difficulté à obtenir une érection avant le début de la relation sexuelle?
- | | |
|--|---|
| 1) Jamais | 4) Parfois, 50% du temps |
| 2) Rarement, moins de 10% du temps | 5) Habituellement, 75% du temps |
| 3) A l'occasion, moins de 25% du temps | 6) Presque toujours, plus de 90% du temps |
17. Est-ce que monsieur a de la difficulté à conserver une érection avant le début de la relation sexuelle?
- | | |
|--|---|
| 1) Jamais | 4) Parfois, 50% du temps |
| 2) Rarement, moins de 10% du temps | 5) Habituellement, 75% du temps |
| 3) A l'occasion, moins de 25% du temps | 6) Presque toujours, plus de 90% du temps |
18. (POUR FEMMES SEULEMENT) Pouvez-vous atteindre l'orgasme par la stimulation de vos organes génitaux à l'aide d'un vibreur ou d'autres moyens tels que l'eau courante, frottement d'un objet, etc.?
- | | |
|---|-----------------------------------|
| 1) Presque toujours, plus de 90% du temps | 4) Rarement, environ 25% du temps |
| 2) Habituellement, environ 75% du temps | 5) Jamais |
| 3) Parfois, environ 50% du temps | 6) Je n'ai jamais essayé |
19. (POUR FEMMES SEULEMENT) Pouvez-vous atteindre l'orgasme durant la relation sexuelle si vos organes génitaux sont caressés en même temps (par vous-même, ou votre partenaire, un vibreur, etc.)?
- | | |
|---|-----------------------------------|
| 1) Presque toujours, plus 90% du temps | 4) Rarement, environ 25% du temps |
| 2) Habituellement, environ 75% du temps | 5) Jamais |
| 3) Parfois, environ 50% du temps | 6) Je n'ai jamais essayé |

20. (POUR FEMMES SEULEMENT) Quand vous faites l'amour avec votre partenaire ("jeux préliminaires" et relation sexuelle compris), remarquez-vous que certaines des choses suivantes vous arrivent: accélération de votre respiration et de votre pouls, lubrification de votre vagin, sensations plaisantes dans vos seins et vos organes génitaux?

- | | |
|---|-----------------------------------|
| 1) Presque toujours, plus de 90% du temps | 4) Rarement, environ 25% du temps |
| 2) Habituellement, environ 75% du temps | 5) Jamais |
| 3) Parfois, environ 50% du temps | 6) Je n'ai jamais essayé |

21. (POUR HOMMES SEULEMENT) Vous arrive-t-il d'éjaculer sans avoir de sensation agréable au pénis?

- | | |
|--|---|
| 1) Jamais | 4) Parfois, 50% du temps |
| 2) Rarement, moins de 10% du temps | 5) Habituellement, 75% du temps |
| 3) A l'occasion, moins de 25% du temps | 6) Presque toujours, plus de 90% du temps |

LES QUESTIONS SUIVANTES S'ADRESSENT A L'HOMME ET A LA FEMME

22. Est-ce qu'il arrive à monsieur d'éjaculer sans avoir une érection complète, dure?

- | | |
|--|---|
| 1) Jamais | 4) Parfois, 50% du temps |
| 2) Rarement, moins de 10% du temps | 5) Habituellement, 75% du temps |
| 3) A l'occasion, moins de 25% du temps | 6) Presque toujours, plus de 90% du temps |

23. Est-ce qu'il arrive à monsieur d'atteindre l'orgasme alors qu'il tente une pénétration?

- | | |
|--|---|
| 1) Jamais | 4) Parfois, 50% du temps |
| 2) Rarement, moins de 10% du temps | 5) Habituellement, 75% du temps |
| 3) A l'occasion, moins de 25% du temps | 6) Presque toujours, plus de 90% du temps |

24. Est-ce que la pénétration est impossible en raison du manque de lubrification ou de la contraction du vagin?

- | | |
|--|---|
| 1) Jamais | 4) Parfois, 50% du temps |
| 2) Rarement, moins de 10% du temps | 5) Habituellement, 75% du temps |
| 3) A l'occasion, moins de 25% du temps | 6) Presque toujours, plus de 90% du temps |

25. Ressentez-vous de la douleur aux organes génitaux durant la relation sexuelle?

- | | |
|--|---|
| 1) Jamais | 4) Parfois, 50% du temps |
| 2) Rarement, moins de 10% du temps | 5) Habituellement, 75% du temps |
| 3) A l'occasion, moins de 25% du temps | 6) Presque toujours, plus de 90% du temps |

26. A quel fréquence ressentez-vous du désir sexuel? Il peut s'agir d'un désir de faire l'amour, de projeter de faire l'amour, de se sentir frustré(e) sexuellement du au manque d'activité sexuelle, etc.
- | | |
|------------------------------|----------------------------------|
| 1) Plus d'une fois par jour | 6) Une fois chaque deux semaines |
| 2) Une fois par jour | 7) Une fois par mois |
| 3) De 3 à 4 fois par semaine | 8) Moins d'une fois par mois |
| 4) Deux fois par semaine | 9) Jamais |
| 5) Une fois par semaine | |
27. Quand vous faites l'amour avec votre partenaire, est-ce que vous vous sentez excité(e) sexuellement?
- | | |
|---|-----------------------------------|
| 1) Presque toujours, plus de 90% du temps | 4) Rarement, environ 25% du temps |
| 2) Habituellement, environ 75% du temps | 5) Jamais |
| 3) Parfois, environ 50% du temps | 6) Je n'ai jamais essayé |
28. Lorsque vous faites l'amour avec votre partenaire, ressentez-vous des réactions émotives négatives comme la peur, le dégoût, la honte ou la culpabilité?
- | | |
|--|---|
| 1) Jamais | 4) Parfois, 50% du temps |
| 2) Rarement, moins de 10% du temps | 5) Habituellement, 75% du temps |
| 3) A l'occasion, moins de 25% du temps | 6) Presque toujours, plus de 90% du temps |
29. Est-ce qu'il arrive à monsieur d'atteindre l'orgasme sans éjaculer (sans sperme qui sort du pénis)?
- | | |
|--|---|
| 1) Jamais | 4) Parfois, 50% du temps |
| 2) Rarement, moins de 10% du temps | 5) Habituellement, 75% du temps |
| 3) A l'occasion, moins de 25% du temps | 6) Presque toujours, plus de 90% du temps |

**Appendix 14 –
Brief Symptom Inventory**

INSTRUCTIONS:

Below is a list of problems people sometimes have. Please read each one carefully, and circle the number to the right that best describes **HOW MUCH THAT PROBLEM HAS DISTRESSED OR BOTHERED YOU DURING THE PAST 7 DAYS INCLUDING TODAY**. Circle only one number for each problem and do not skip any items. If you change your mind, erase your first mark carefully. Read the example below before beginning, and if you have any questions please ask about them.

SEX
MALE <input type="radio"/>
FEMALE <input type="radio"/>

NAME: _____

LOCATION: _____

EDUCATION: _____

MARITAL STATUS: MAR ___ SEP ___ DIV ___ WID ___ SING ___

DATE			ID. NUMBER	AGE
MO	DAY	YEAR		

EXAMPLE	NOT AT ALL	A LITTLE BIT	MODERATELY	QUITE A BIT	EXTREMELY
HOW MUCH WERE YOU DISTRESSED BY:					
1. Bodyaches	0	1	2	3	4

VISIT NUMBER: _____

HOW MUCH WERE YOU DISTRESSED BY:	NOT AT ALL	A LITTLE BIT	MODERATELY	QUITE A BIT	EXTREMELY	
1. Nervousness or shakiness inside	1	0	1	2	3	4
2. Faintness or dizziness	2	0	1	2	3	4
3. The idea that someone else can control your thoughts	3	0	1	2	3	4
4. Feeling others are to blame for most of your troubles	4	0	1	2	3	4
5. Trouble remembering things	5	0	1	2	3	4
6. Feeling easily annoyed or irritated	6	0	1	2	3	4
7. Pains in heart or chest	7	0	1	2	3	4
8. Feeling afraid in open spaces or on the streets	8	0	1	2	3	4
9. Thoughts of ending your life	9	0	1	2	3	4
10. Feeling that most people cannot be trusted	10	0	1	2	3	4
11. Poor appetite	11	0	1	2	3	4
12. Suddenly scared for no reason	12	0	1	2	3	4
13. Temper outbursts that you could not control	13	0	1	2	3	4
14. Feeling lonely even when you are with people	14	0	1	2	3	4
15. Feeling blocked in getting things done	15	0	1	2	3	4
16. Feeling lonely	16	0	1	2	3	4
17. Feeling blue	17	0	1	2	3	4
18. Feeling no interest in things	18	0	1	2	3	4
19. Feeling fearful	19	0	1	2	3	4
20. Your feelings being easily hurt	20	0	1	2	3	4
21. Feeling that people are unfriendly or dislike you	21	0	1	2	3	4
22. Feeling inferior to others	22	0	1	2	3	4
23. Nausea or upset stomach	23	0	1	2	3	4
24. Feeling that you are watched or talked about by others	24	0	1	2	3	4
25. Trouble falling asleep	25	0	1	2	3	4
26. Having to check and double check what you do	26	0	1	2	3	4
27. Difficulty making decisions	27	0	1	2	3	4
28. Feeling afraid to travel on buses, subways, or trains	28	0	1	2	3	4
29. Trouble getting your breath	29	0	1	2	3	4
30. Hot or cold spells	30	0	1	2	3	4
31. Having to avoid certain things, places, or activities because they frighten you	31	0	1	2	3	4
32. Your mind going blank	32	0	1	2	3	4
33. Numbness or tingling in parts of your body	33	0	1	2	3	4
34. The idea that you should be punished for your sins	34	0	1	2	3	4
35. Feeling hopeless about the future	35	0	1	2	3	4

HOW MUCH WERE YOU DISTRESSED BY						
	NOT AT ALL	A LITTLE BIT	MODERATELY	QUITE A BIT	EXTREMELY	
36. Trouble concentrating	36	0	1	2	3	4
37. Feeling weak in parts of your body	37	0	1	2	3	4
38. Feeling tense or keyed up	38	0	1	2	3	4
39. Thoughts of death or dying	39	0	1	2	3	4
40. Having urges to beat, injure, or harm someone	40	0	1	2	3	4
41. Having urges to break or smash things	41	0	1	2	3	4
42. Feeling very self-conscious with others	42	0	1	2	3	4
43. Feeling uneasy in crowds, such as shopping or at a movie	43	0	1	2	3	4
44. Never feeling close to another person	44	0	1	2	3	4
45. Spells of terror or panic	45	0	1	2	3	4
46. Getting into frequent arguments	46	0	1	2	3	4
47. Feeling nervous when you are left alone	47	0	1	2	3	4
48. Others not giving you proper credit for your achievements	48	0	1	2	3	4
49. Feeling so restless you couldn't sit still	49	0	1	2	3	4
50. Feelings of worthlessness	50	0	1	2	3	4
51. Feeling that people will take advantage of you if you let them	51	0	1	2	3	4
52. Feelings of guilt	52	0	1	2	3	4
53. The idea that something is wrong with your mind	53	0	1	2	3	4

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Nom : _____

Date : _____

Voici une liste de problèmes dont se plaignent parfois les gens. Lisez attentivement chaque énoncé et encerclez le chiffre qui décrit le mieux COMBIEN VOUS AVEZ ÉTÉ INCOMMODÉ(E) PAR CE PROBLÈME DURANT LES SEPT (7) DERNIERS JOURS, INCLUANT AUJOURD'HUI ?

0 = Pas du tout
1 = Un peu
2 = Passablement
3 = Beaucoup
4 = Excessivement

- | | | |
|------|--|-----------|
| ✓ 1. | Nervosité ou impressions de tremblements intérieurs | 0 1 2 3 4 |
| ✓ 2. | Faiblesses ou étourdissements | 0 1 2 3 4 |
| ✓ 3. | L'idée que quelqu'un peut contrôler vos pensées | 0 1 2 3 4 |
| ✓ 4. | L'impression que d'autres sont responsables de la plupart de vos problèmes | 0 1 2 3 4 |
| 5. | Difficulté à vous rappeler certaines choses | 0 1 2 3 4 |
| 6. | Facilement irritée et contrariée | 0 1 2 3 4 |
| 7. | Douleurs à la poitrine ou cardiaques | 0 1 2 3 4 |
| 8. | Peur dans des espaces ouverts ou sur la rue | 0 1 2 3 4 |
| 9. | Des pensées de vous enlever la vie | 0 1 2 3 4 |
| 10. | Le sentiment que vous ne pouvez pas avoir confiance en personne | 0 1 2 3 4 |
| 11. | Manque d'appétit | 0 1 2 3 4 |
| 12. | Soudainement effrayé(e) sans raison | 0 1 2 3 4 |
| 13. | Crises de colère incontrôlables | 0 1 2 3 4 |
| 14. | Sentiment d'être seul(e) même avec d'autres personnes | 0 1 2 3 4 |
| 15. | Blocage devant une tâche à accomplir | 0 1 2 3 4 |
| 16. | Vous sentir seul(e) | 0 1 2 3 4 |
| 17. | Vous sentir triste, nostalgique | 0 1 2 3 4 |
| 18. | Absence d'intérêt | 0 1 2 3 4 |
| 19. | Avoir peur | 0 1 2 3 4 |
| 20. | Vous sentir facilement blessé(e) ou froissé(e) | 0 1 2 3 4 |
| 21. | Sentir que les gens ne sont pas aimables ou ne vous aiment pas | 0 1 2 3 4 |
| 22. | Vous sentir inférieur(e) aux autres | 0 1 2 3 4 |

0 = Pas du tout
 1 = Un peu
 2 = Passablement
 3 = Beaucoup
 4 = Excessivement

23.	Nausées, douleurs ou malaises à l'estomac	0 1 2 3 4
24.	Sentiments qu'on vous observe ou qu'on parle de vous	0 1 2 3 4
25.	Difficulté à vous endormir	0 1 2 3 4
26.	Besoin de vérifier et de re-vérifier ce que vous faites	0 1 2 3 4
27.	Difficulté à prendre des décisions	0 1 2 3 4
28.	Peur de prendre l'autobus, le métro ou le train	0 1 2 3 4
29.	Difficulté à prendre votre souffle	0 1 2 3 4
30.	Bouffées de chaleur ou des frissons	0 1 2 3 4
31.	Besoin d'éviter certains endroits, certaines choses ou certaines activités parce qu'ils vous font peur	0 1 2 3 4
32.	Des blancs de mémoire	0 1 2 3 4
33.	Engourdissements ou picotements dans certaines parties du corps (i.e. bras, jambes, figure, etc.)	0 1 2 3 4
34.	L'idée que vous devriez être puni(e) pour vos péchés	0 1 2 3 4
35.	Sentiment de pessimisme face à l'avenir	0 1 2 3 4
36.	Difficulté à vous concentrer	0 1 2 3 4
37.	Sentiment de faiblesse dans certaines parties du corps	0 1 2 3 4
38.	Sentiment de tension ou de surexcitation	0 1 2 3 4
39.	Pensées en relation avec la mort	0 1 2 3 4
40.	Envie de frapper, d'injurier ou de faire mal à quelqu'un	0 1 2 3 4
41.	Envie de briser ou de fracasser des objets	0 1 2 3 4
42.	Tendance à l'anxiété en présence d'autres personnes	0 1 2 3 4
43.	Vous sentir mal à l'aise dans des foules - au centre d'achat ou au cinéma	0 1 2 3 4
44.	Ne jamais vous sentir près de quelqu'un d'autre	0 1 2 3 4
45.	Moments de terreur et de panique	0 1 2 3 4
46.	Vous disputer souvent	0 1 2 3 4

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- | | | |
|-----|---|-----------|
| 47. | Nervosité lorsque vous êtes laissé(e) seul(e) | 0 1 2 3 4 |
| 48. | Sentiment de ne pas être reconnu(e) à votre juste valeur | 0 1 2 3 4 |
| 49. | Vous sentir tellement tendu(e) que vous ne pouvez pas rester en place | 0 1 2 3 4 |
| 50. | Sentiment d'être bon(ne) à rien | 0 1 2 3 4 |
| 51. | Sentiment que les gens vont profiter de vous si vous les laissez faire. | 0 1 2 3 4 |
| 52. | Avoir des sentiments de culpabilité | 0 1 2 3 4 |
| 53. | Avoir l'impression que votre esprit (tête) est dérangé(e) | 0 1 2 3 4 |

Appendix 15 –

Advertisement for recruitment of experimental groups

Advertisement used for recruitment of participants.

Vaginismus group:

UNABLE TO HAVE INTERCOURSE?

Are you unable to have vaginal penetration?

Are you unable to insert a tampon?

Are you unable to have a gynecological exam?

A research study sponsored by the Sex & Couple Therapy Service of the Royal Victoria Hospital, the Dept. of Obstetrics & Gynecology of the Jewish General Hospital (Drs. Binik and Khalifé) and supported by the Medical Research Council of Canada seeks to understand the physical and psychological causes of vaginismus.

Participation in this study includes:

- 2 gynecological examinations
- 2 pelvic floor physical therapist's examinations
- and 2 EMG evaluations of the muscles of the pelvic floor.

For more information please contact Elke Reissing at 398-5323.

Dyspareunia (VVS) group:

DO YOU HAVE PAIN WITH VAGINAL INTERCOURSE?

A research study sponsored by the Sex & Couple Therapy Service of the Royal Victoria Hospital, the Dept. of Obstetrics & Gynecology of the Jewish General Hospital (Drs. Binik and Khalifé) and supported by the Medical Research Council of Canada seeks to understand the physical and psychological causes of vaginismus.

Participation in this study includes:

- 2 gynecological examinations
- 2 pelvic floor physical therapist's examinations
- and 2 EMG evaluations of the muscles of the pelvic floor.

For more information please contact Elke Reissing at 398-5323.

No pain control group:

DO YOU WANT INFORMATION ON SEXUALITY AND WOMEN'S REPRODUCTIVE HEALTH?

A research study sponsored by the Sex & Couple Therapy Service of the Royal Victoria Hospital, the Dept. of Obstetrics & Gynecology of the Jewish General Hospital (Drs. Binik and Khalifé) and supported by the Medical Research Council of Canada seeks to understand the physical and psychological causes of vaginismus.

Participation in this study includes:

- 2 gynecological examinations
- 2 pelvic floor physical therapist's examinations
- 2 EMG evaluations of the muscles of the pelvic floor
- and you will have the opportunity to ask any questions you may have concerning women's health and sexuality.

For more information please contact Elke Reissing at 398-5323.