ORIGINAL RESEARCH—EPIDEMIOLOGY

How Young does Vulvo-Vaginal Pain Begin? Prevalence and Characteristics of Dyspareunia in Adolescents

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ABSTRACT

Introduction. Dyspareunia remains under-investigated despite recent population-based studies indicating that its prevalence ranges from 12% to 21% in adult women. Although clinical data suggest that dyspareunia can begin during adolescence, a large-scale epidemiological study has yet to be conducted with this population.
Aims. To determine the prevalence and characteristics of dyspareunia in a large-scale sample of adolescents, in addition to the characteristics of vulvo-vaginal insertion pain in nonsexual contexts.
Methods. With written informed consent, data were obtained from 1,425 girls (12–19-year-olds), from seven metropolitan high schools during regular school hours using a self-report questionnaire.
Main Outcome Measures. Dyspareunia prevalence was evaluated by asking sexually active participants whether or not they regularly (at least 75% of the time) experienced pain during intercourse. Pain duration, context of onset, location, intensity, and pain during tampon insertion and pelvic exams were evaluated.
Results. Results revealed that 20% of sexually active girls (N = 251) reported having regular pain during intercourse for at least 6 months or more. A primary form of pain was reported by 67% of adolescents and significantly more girls with chronic dyspareunia identified the vaginal opening (39%; $\bar{x} = 3.9/10$) as being their most painful site compared with internal pain sites (18–29%; $\bar{x} = 2.9$–$3.2/10$) ($P = 0.042$). Chronic dyspareunia cases reported significantly more pain during first and usual tampon insertion ($P = 0.003$; $P = 0.009$) than pain-free controls, while no difference was found between groups regarding pelvic exams ($P = 0.086$). Experiencing severe pain at first tampon insertion was linked to a fourfold risk of reporting chronic dyspareunia ($P = 0.001$).
Conclusions. Results mirror prevalence estimates found in population-based studies with adult women and suggest that chronic dyspareunia is a significant sexual health problem in adolescent girls, with pain extending beyond intercourse to nonsexual contexts. **Landry T, and Bergeron S. How young does vulvo-vaginal pain begin? Prevalence and characteristics of dyspareunia in adolescents. J Sex Med 2009;6:927–935.**

Key Words. Prevalence; Epidemiology; Dyspareunia; Vulvo-vaginal Pain; Adolescents; Vestibulodynia

Introduction

Dyspareunia, or recurrent acute vulvo-vaginal pain associated with intercourse, remains poorly understood despite being a common complaint among women. In fact, large-scale North American epidemiological studies indicate that the prevalence of this pain problem ranges from 12% to 21% in premenopausal adult women, and its incidence is thought to be increasing [1–5]. Furthermore, dyspareunia has serious repercussions on many aspects of daily functioning, namely sexual function, dyadic adjustment, psychological well-being, and quality of life [6–9]. Despite its significant prevalence and serious repercussions in adult women, dyspareunia remains greatly under-investigated, especially in adolescent populations where sexual activity generally first occurs.

Although clinical data suggest that dyspareunia can begin during adolescence, only Berglund

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et al.'s study has examined such a population thus far [10–21]. In total, 34% of their sample aged between 12 and 26 reported chronic pain during intercourse. Despite the interest of Berglund et al.'s study, methodological limitations hamper the conclusions that can be drawn from its findings [21]. Worth noting is the use of a clinical sample composed of both adolescents and adult women, which could possibly lead to an overestimation of dyspareunia prevalence. Apart from this single study with adolescents, research on dyspareunia to date has pertained to adult women exclusively and has rarely included an adequate description of pain characteristics [1,3,5]. Hence, a large-scale epidemiological study has yet to be conducted with an adolescent population.

Aims

The main goals of the present study were to: (i) determine the prevalence of dyspareunia in a large-scale sample of adolescent girls; and (ii) describe the characteristics of vulvo-vaginal pain in sexual and nonsexual contexts within this population. Because of the participants' young age, we expected to detect mostly primary dyspareunia cases in our sample (i.e., pain since the first sexual intercourse attempt). Research shows that about half of the adult women suffering from provoked vestibulodynia, formerly known as vulvar vestibulitis, experienced primary dyspareunia [22–25]. Hence, based on this proportion, it was hypothesized that dyspareunia would be about half as prevalent in adolescents as compared with adult women. Finally, as provoked vestibulodynia appears to be the most frequent cause of dyspareunia in premenopausal woman and that it elicits sharp pain at the vaginal entry, we expected adolescent girls to report higher pain ratings at the vaginal opening than at other internal and external genital pain sites, to describe their pain as being chronic, as well as to report other vaginal insertion pain symptoms [9,26].

Methods

Study Population

Our cohort was made up of adolescent girls between 12 and 19 years of age who were recruited from seven high schools in a large metropolitan area. Recruitment was conducted in two distinct phases: school recruitment and participant recruitment within selected schools. The main goal of these two phases was to obtain a representative sample of adolescent girls. Therefore, schools having different socioeconomic backgrounds as well as Caucasian and multicultural populations were selected. However, given the difficulty to recruit schools in this region because of oversolicitation for research purposes, they were also chosen based on their interest to participate in the study. Hence, of the 12 schools initially solicited, seven accepted to take part in the study. Five of the seven participating schools were public with multicultural student populations, while the two other schools were private with mostly Caucasian students. This provided an initial population of approximately 5,500 adolescent girls from which to sample. Two to four classes from every grade were selected by the schools' administration according to class schedule and teachers' willingness to give access to their classrooms at a given time. There were no specific selection criteria for the adolescent girls, apart from that of attending high school.

Procedure

Data collection took place during the two separate periods: May–June 2005 and May–June 2006. Participant recruitment was conducted in preselected groups by having research team members explain the study in detail to adolescent girls that had been taken out of their classrooms (i.e., no boys were present). General gynecological health was presented as the research subject instead of dyspareunia, which could have encouraged more girls with this problem to participate. The research team members greatly emphasized that all girls were invited to participate regardless of their sexual/pubertal status (i.e., being sexually active or not, having had their first menstruation or not, etc.). The study presentation was followed by distribution of the consent form. With the legal age of consent being of 14 years old in our country, only girls of less than 14 had to provide informed consent by a parent or legal guardian in order to participate in the study, while girls of 14 years and over could consent on their own.

Testing took place approximately 2 weeks after the participant recruitment session. Groups of participants were taken out of their classrooms for about 1 hour to complete the study questionnaire. This questionnaire was handed out and explained by research team members who remained available during the entire testing period and afterwards to answer questions or offer help if participants felt any distress. Adolescents were also told that they could communicate with research team members

at the laboratory at any time following participation in case of questions or distress. The questionnaire was completed anonymously. Following participation, girls received an information package concerning gynecological and sexual health, a reference list of useful health services, and a coupon for a chance to win a 50$, 75$, or 100$ gift certificate to a local shopping center. All procedures were reviewed and approved by our Institutional Review Board and by the city's School District's Research Committee.

Data Analytic Strategy

In order to exclude pain/discomfort caused by first vaginal intercourse experiences from the prevalence rate, dyspareunia was only considered in girls having had more than five intercourse experiences in their lifetime. As no normative data concerning the number of painful first intercourse experiences were found in the literature, this threshold was determined by doing an internet survey among 40 women in their early twenties, asking them to recall the number of painful intercourse experiences when they first started to be sexually active, and then setting a conservative threshold above the highest reported number (i.e., five). Thus, among those girls reporting more than five intercourse experiences, the chronic dyspareunia prevalence rate was calculated with adolescents who currently reported having pain at least 75% of the time and whose pain had been present for at least 6 months or more [5]. This prevalence rate was also calculated according to two age groups: early teens (i.e., 12–15-year-olds) and late teens (i.e., 16–19-year-olds).

The prevalence rate and pain characteristics were examined via frequencies. Possible sociodemographic confounding factors were examined with Pearson correlations, whereas sexual behaviour and health differences were examined with chi-squared tests and a two-tailed *t*-test. A chi-squared goodness-of-fit test identified which vulvo-vaginal site more dyspareunia sufferers reported as being their most painful, while two-tailed *t*-tests were used to compare the chronic dyspareunia group's tampon insertion and pelvic exam pain ratings to the ones of a pain-free control group comprised of girls having had more than five intercourse experiences but who did not report having pain whatsoever during intercourse. An odds ratio was used to illustrate the risk of having dyspareunia when reporting severe pain during first tampon insertion and was derived from the chi-squared test carried out on this variable. The level of significance was set at $P < 0.05$ for all analyses and the SPSS Graduate Pack for Windows, version 14.0, was used.

Main Outcome Measures

Because no validated instrument was available, a self-administered questionnaire was designed specifically for this study to gather sociodemographic information, gynecological health data, and to evaluate dyspareunia prevalence and characteristics. This questionnaire is an adaptation (for adolescents) of the one used in clinical studies with adult women for over 10 years in our research team. Sociodemographic characteristics included information about the adolescents' age, grade, culture, mother tongue, religion, and perceived familial socioeconomic status. Gynecological health questions pertained to menstruation, tampon use, sexually transmitted infections, vaginal infections, and sexual activity (e.g., presence/absence, age of debut, lifetime frequency). Dyspareunia prevalence was assessed by asking sexually active girls "Do you regularly (at least 75% of the time) experience pain during sexual intercourse?". If the answer to this question was no, no further questions about pain in a sexual context were asked. However, when the answer was yes, additional information concerning pain characteristics was requested. First, intensity of the pain was assessed with a visual analog scale from 0 (no pain) to 10 (worst pain ever) at three pain sites: (i) vaginal opening; (ii) inside the vagina; and (iii) lower abdominal region. A figure illustrating each pain site with an arrow accompanied the visual analog scales to facilitate site location. Participants were then asked to specify the context of pain onset (e.g., primary dyspareunia: pain since their first intercourse experience; vs. secondary dyspareunia: onset after a pain-free intercourse period) and their pain duration in months, this duration being used to classify girls as having chronic dyspareunia when they experienced pain for 6 months of longer. Finally, vulvo-vaginal insertion pain in three non-sexual contexts was evaluated with visual analog scales from 0 (no pain) to 10 (worst pain ever): (i) pain during first tampon insertion; (ii) pain during usual tampon insertion; and (iii) pain during the last pelvic exam.

Results

Final Sample Description

Of the initial 5,500 adolescent girls from which to sample, approximately 2,025 were selected by school administrations to take part in the partici-

Table 1 Sociodemographic characteristics of the sample's 1,425 adolescent girls

	Total N	%
Age (years)		
12–13	225	15.8
14–15	620	43.5
16–17	532	37.3
18–19	48	3.4
Culture		
Canadian/Quebec	870	61.1
Asian	121	8.5
Latin/South American	80	5.6
European	59	4.1
Other	295	20.7
Mother tongue		
French	924	64.8
Spanish	84	5.9
English	74	5.2
Other	343	24.1
Religion		
Catholic	868	60.9
Muslim	103	7.2
Protestant	80	5.6
None	271	19.0
Other	103	7.2
Perceived familial socioeconomic status		
Above middle class	768	53.9
Middle class	597	41.9
Under middle class	60	4.2
Ever had sexual intercourse (N = 364)		
12–13	8	3.6
14–15	112	18.1
16–17	219	41.2
18–19	25	52.1

pant recruitment session (37%), this choice being based on class schedules and teachers' willingness to cooperate. Of these, 1,439 agreed to complete the questionnaires, resulting in a participation rate of 71%. Fourteen participants were excluded from the analyses because of missing data, resulting in a final sample size of 1,425 adolescent girls.

The final sample's mean age was 15 years old (median = 15; range = 12–19; SD = 1.5). Although the sample included girls from diverse sociodemographic backgrounds (see Table 1), the majority reported identifying as Canadian and/or Quebecer, with French as their mother tongue, being Catholic, and perceiving their familial socioeconomic status to be above the mean. Of these 1,425 girls, 364 reported having had at least one intercourse experience in their lifetime (25.5%), with the mean age of first intercourse being 14.6 years old, which precisely echoes norms observed in other studies from our country [27]. This total number of sexually active girls was reduced to 251 to include only those who reported having had more than five intercourse experiences in their lifetime in order to exclude possible pain/discomfort associated with first intercourse attempts.

Prevalence Rate and Dyspareunia Characteristics

Among the sample's 251 sexually active girls, 20% reported having regular pain during intercourse for a duration of at least 6 months, or chronic dyspareunia. Although Table 2 shows that girls in their early teens reported dyspareunia slightly more frequently than those in their late teens, a chi-squared test revealed no significant variations of occurrence according to age, χ^2 (1, N = 251) = 0.06, $P = 0.815$. It is worth noting that the majority of adolescents reporting dyspareunia had been sexually active for 1 year or more ($\bar{x} = 1.7$ years; mode = 1; SD = 1.3), which illustrates that their chronic pain is not limited to their first 6 months of sexual activity.

Concerning possible confounding factors, correlations did not reveal any statistically significant association between dyspareunia and sociodemographic variables (i.e., age, culture, mother tongue, religion, perceived familial socioeconomic status). Furthermore, the chronic dyspareunia sufferers ($\bar{x} = 79.8$; SD = 132.6) did not have a significantly lower number of intercourse experiences than pain-free sexually active girls ($\bar{x} = 105.2$; SD = 142.7), $t(216) = 1.13$, $P = 0.261$. Finally, chronic dyspareunia sufferers did not report having had significantly more sexually transmitted infections, χ^2 (1, N = 218) = 0.92, $P = 0.337$ (5.9% cases vs. 3.0% controls), nor vaginal infections, χ^2 (1, N = 218) = 0.06, $P = 0.809$ (11.8% cases vs. 9.0% controls), in their lifetime then pain-free controls.

Regarding pain characteristics, the vast majority of girls reporting dyspareunia revealed having experienced pain for a substantial period of time, with 83.3% reporting a duration of at least 3 months, and 60.7% of at least 6 months. Chronic dyspareunia sufferers reported a mean pain duration of 15.3 months (SD = 7.5). Concerning self-reported context of pain onset, 66.7% of chronic dyspareunia girls indicated having pain since their first intercourse experience (i.e., primary dyspareunia), while the rest indicated an onset after a pain-free intercourse period (i.e., secondary dyspareunia). Most girls reported that their pain

Table 2 Dyspareunia prevalence rates categorized by age among 251 sexually active adolescent girls

Age	Number of sexually active respondents	Chronic dyspareunia (≥6 months)	
		%	N
12–15-year-olds	56	21.4	12
16–19-year-olds	195	20.0	39
Total	251	20.3	51

Table 3 Pain intensity ratings during first tampon insertion among chronic dyspareunia cases and pain-free controls

Groups	Number of sexually active respondents	Pain intensity during first tampon insertion					
		No pain		Mild/moderate pain		Severe pain	
		%	N	%	N	%	N
Chronic dyspareunia cases	45	15.6	7	42.2	19	42.2*	19
Controls	147	25.9*	38	57.8*	85	16.3	24
Total	192	23.4	45	54.2	104	22.4	43

*Significantly more controls reported having no pain and mild/moderate pain, while more cases reported having severe pain, χ^2 (2, N = 192) = 13.42, $P = 0.001$.

started without an apparent reason (58.8%), while one fifth noticed their dyspareunia after changing partners (19.6%). The remaining girls (21.6%) reported another reason of pain onset, most frequent reasons having to do with stress, lack of lubrication, repeated vaginal infections, or continuous use of oral contraceptives. With regard to pain location and intensity, a chi-squared goodness-of-fit test revealed that significantly more girls with chronic dyspareunia identified the vaginal opening (39.2%; $\bar{x} = 3.9$ on visual analog scale) as their most painful site compared with the internal vagina (17.6%; $\bar{x} = 2.9$ on visual analog scale) and lower abdominal region sites (29.4%; $\bar{x} = 3.2$ on visual analog scale), χ^2 (3, N = 51) = 8.22, $P = 0.042$.

Vulvo-Vaginal Insertion Pain in Nonsexual Contexts: Chronic Dyspareunia Group vs. Controls

Two-tailed *t*-tests showed that chronic dyspareunia sufferers ($\bar{x} = 3.6$ on visual analog scale) and controls ($\bar{x} = 2.7$ on visual analog scale) did not significantly differ with regard to pain during their last pelvic exam, $t(120) = -1.73$, $P = 0.086$. However, the chronic dyspareunia group did report significantly more pain during their first tampon insertion ($\bar{x} = 4.7$ on visual analog scale) than the control group ($\bar{x} = 3.0$ on visual analog scale), $t(190) = -3.06$, $P = 0.003$, and also significantly more pain during usual tampon insertion ($\bar{x} = 1.0$ on visual analog scale) than controls ($\bar{x} = 0.5$ on visual analog scale), $t(156) = -2.66$, $P = 0.009$. Furthermore, following a first tampon insertion experience, significantly more girls with chronic dyspareunia did not use tampons during their menstruation (28.9%) in comparison to pain-free girls (14.3%), χ^2 (1, N = 192) = 5.04, $P = 0.025$.

As more than half (52.1%) of the girls who experienced severe pain during their first tampon insertion did not use tampons regularly, pain during usual tampon insertion will not figure in the following analyses. In order to examine more closely how pain intensity during first tampon insertion varied between groups, the 10-point visual analog scale was divided into three severity categories by using the mean (3.4/10) and standard deviation (3.2/10) as classification markers. Hence, the chronic dyspareunia group and controls were classified as either having no pain (below first SD: score of 0), mild/moderate pain (within first SD: scores from 1 to 6), or severe pain (higher than first SD: scores from 7 to 10) in this nonsexual insertion context (see Table 3). A chi-squared test revealed that significantly more girls with chronic dyspareunia reported having had severe pain during their first tampon insertion than controls, while significantly more controls reported having had no pain and mild/moderate pain, χ^2 (2, N = 192) = 13.42, $P = 0.001$. More specifically, 42.2% of chronic dyspareunia cases had experienced severe pain during first tampon insertion before having become sexually active (vs. 16.3% of controls), while only 15.6% did not experience any pain in this first nonsexual insertion context but still went on to develop dyspareunia. Finally, the odds ratio obtained from the chi-squared analysis revealed that girls who reported severe pain during their first use of tampons were 4.3 times more likely to report chronic dyspareunia than girls who did not experience such pain ($CI_{95\%}$ = 1.57–11.75).

To see whether virgins in our sample would report experiencing vulvo-vaginal insertion pain in a nonsexual context, we examined the presence of severe pain during first tampon insertion in girls who had never engaged in intercourse. Among 473 virgin adolescents who had already inserted tampons, 28.1% (N = 133) gave a pain rating of 7 or higher on the 10-point visual analog scale. These girls thus have a fourfold risk of experiencing chronic dyspareunia when they become sexually active.

Discussion

The present large-scale cross-sectional study is the first of its kind to provide an adequate description of dyspareunia among adolescent girls. The main

findings of this study show that: (i) dyspareunia is highly prevalent in sexually active adolescents, affecting about one in five girls; (ii) most adolescents report a primary and chronic form of vulvo-vaginal pain during intercourse; (iii) young women more frequently identify the vaginal opening as the most painful site as opposed to more internal pain sites; and (iv) the pain experience extends beyond intercourse with participants also reporting vulvo-vaginal pain in nonsexual contexts.

Our 20% chronic dyspareunia prevalence in sexually active adolescents seems to mirror previous estimates reported in population-based studies conducted with adult women [1–3,5]. More specifically, results from these studies show that between 12% and 21% of adult women aged in their twenties to early thirties report experiencing chronic dyspareunia and that prevalence rates appear to decrease with increasing age. These findings suggest not only that dyspareunia is a significant pain problem in adolescent girls, but also, coupled with existing adult data, that younger age groups may be more at risk of suffering from dyspareunia than older women [1–3,5].

Interestingly, our sample consisted primarily of girls reporting dyspareunia for a significant period of time (i.e., 6 months or more) indicating that, in most cases, adolescents' pain is not simply transient. Furthermore, most adolescents experiencing dyspareunia reported that their pain was more frequently located at the vaginal opening than at internal pain sites. This result is not surprising considering that the most common cause of persistent dyspareunia in premenopausal women is thought to be provoked vestibulodynia, which is characterized by severe pain on vulvar vestibule contact, that is, at the vaginal opening [9,26,28,29]. Taken together, these findings suggest that early dyspareunia experiences could possibly open the door to a more long-standing form of vulvo-vaginal pain as often seen in adulthood [5,20,30–33]. While this is an interesting hypothesis, only a longitudinal study could lead to more conclusive results concerning this phenomenon.

While studies with adult women show that approximately one-third to one-half experienced pain since their first intercourse experience, our results illustrate a different picture, with two-thirds of the adolescents reporting primary dyspareunia [22–25]. A possible explanation for these contrasting proportions could be that some of these early dyspareunia cases heal over time with a simultaneous increase in secondary cases, which also suggests differing etiologies between pain presentations. For example, an increase in secondary dyspareunia cases could be explained by the peripheral sensitization hypothesis that proposes an exaggerated inflammatory response of the vestibular tissues following repeated peripheral injury, such as recurrent vaginal infections [34–36]. On the other hand, more central pathophysiological mechanisms, such as generalized sensory abnormalities or a congenital birth defect, could explain why some women report having pain since their first sexual intercourse experience seemingly without an identifiable cause [36–39].

In accordance with findings in adult women, vulvo-vaginal pain in adolescents does not appear to be restricted to sexual contexts [1,2,9,25,28,40,41]. In fact, although pain during pelvic exams was not associated with dyspareunia—which is probably due to a lack of statistical power (only half of sexually active cases and controls had undergone such an exam)—our results reveal that dyspareunia sufferers report more pain during first and usual tampon insertion. Although differences in pain ratings appear to be small, it is noteworthy that more chronic dyspareunia cases have stopped using tampons compared with pain-free controls. Hence, if vulvo-vaginal pain is already limiting adolescents' tampon use, one could wonder what other significant vaginal insertion activity they could be avoiding presently or in the future. For example, their early experience of pain could lead to the avoidance of pelvic exams, with the negative consequence of putting their gynecological health at risk. Finally, considering the absence of significant group differences concerning frequency of intercourse, our results suggest that adolescents with chronic dyspareunia do not seem to be avoiding painful sexual activity. It is possible that girls with chronic dyspareunia may be engaging in intercourse for interpersonal reasons, such as fear of losing the partner, which could contribute to exacerbate the problem over time.

From a theoretical perspective, there has been an ongoing debate as to whether or not dyspareunia should be classified as a sexual dysfunction or as a chronic pain problem [29,42]. Findings from the present study show that 28% of virgins experience severe pain at first tampon insertion and that they are four times more likely to develop chronic dyspareunia in the future. Similarly, other studies have shown not only that about half of adult women suffering from dyspareunia first noticed the pain while using tampons, but also that elevated levels of pain during first tampon insertion lead to a sevenfold risk of developing chronic

vulvo-vaginal pain [1,2,25]. In summary, the presence of severe vulvo-vaginal insertion pain in virgin adolescents suggests not only that classifying dyspareunia as a sexual dysfunction is inadequate, but that it could also be detrimental. In fact, by focusing solely on pain in its sexual context, this classification can lead health professionals to ignore earlier markers of vulvo-vaginal pain, thus hindering its detection.

In the present study, 42% of the total number of schools approached during recruitment chose not to participate in the study. Nonetheless, nonparticipation was mostly due to the schools' involvement in other research studies and it is thus unlikely that girls in these schools had a different dyspareunia experience than participants. Furthermore, an acceptable response rate was obtained, with 71% of girls in recruitment classrooms accepting to take part in the study [43]. The use of an unstandardized questionnaire should also be mentioned, this unfortunately being due to the absence of validated measures for dyspareunia. Another limitation is the absence of a gynecological examination to diagnose the cause of dyspareunia, rendering it difficult to determine whether adolescents' dyspareunia was due to a chronic vulvo-vaginal pain condition or to an infection (e.g., candida). However, it is unlikely that this was the case considering that such infections have symptoms that will prompt a majority of women to consult a physician (e.g., itching), that pain is usually not their main characteristic, and that they are typically transient, which was not the case for the pain reported by our participants. Notwithstanding these limitations, this study is innovative not only in providing a comprehensive picture of dyspareunia within a large-scale sample of sexually active adolescent girls, but also in inquiring about vulvo-vaginal insertion pain characteristics in nonsexual contexts with virgins. Finally, evaluation of dyspareunia prevalence in past research was usually carried out with a general question inquiring about the presence or absence of pain within a certain time period. To overcome this lack of specificity, our study characterized pain during intercourse in terms of its frequency, intensity, location, and duration.

In summary, the present study indicates that dyspareunia is a highly prevalent pain problem in sexually active adolescents. Knowing that few adult women consult a health professional for ongoing dyspareunia and that those who do often do not receive a diagnosis, it is likely that many adolescents go undiagnosed and untreated for years [1,5]. Moreover, most health professionals are still reluctant to bring up the subject of vulvo-vaginal pain themselves because of its association with sexual activity, which further increases the possibility of adolescents having to cope with their pain problem alone [44,45]. This silent suffering is especially alarming when considering that most adolescents report a primary form of dyspareunia, which is associated with greater risks of treatment failure [46]. Feasible measures to prevent the development of a chronic vuvlo-vaginal pain problem could include routinely inquiring either about pain during intercourse or at first tampon insertion to detect an early presentation in girls. Additionally, physicians, parents, and schools should provide education regarding this aspect of female sexuality. Finally, considering the immediate and long-term negative consequences of dyspareunia and its high prevalence in young girls, multidimensional early interventions targeted toward this population are warranted [6–9,12,31,47].

Conclusion

Within a large adolescent sample, dyspareunia was reported by one in five girls, was mostly primary, chronic (i.e., 6 months or more) and located at the vaginal opening. Vulvo-vaginal insertion pain was also present in nonsexual contexts with chronic dyspareunia sufferers reporting more pain during first and usual tampon insertion than controls. Furthermore, having severe pain at first tampon use was linked to a fourfold risk of reporting dyspareunia. Findings thus suggest that chronic dyspareunia is a significant sexual health problem in adolescent girls which merits further empirical and clinical attention.

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Statement of Authorship

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