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## Exploring Hygienic Behaviors and Vulvodynia

Alexandra M. Klann, MPH<sup>1,\*</sup>, Jessica Rosenberg, MPH<sup>1,\*</sup>, Tanran Wang, MPH<sup>1,\*</sup>, Samantha E. Parker, Ph.D.<sup>1</sup>, and Bernard L. Harlow, Ph.D.<sup>1,2</sup>

<sup>1</sup>Boston University School of Public Health, Boston, MA 02118

<sup>2</sup>Division of Epidemiology & Community Health, School of Public Health University of Minnesota, Minneapolis, MN 55454

### Abstract

**Objectives/purposes of the study:** Vulvodynia is common and characterized by vulvar discomfort and pain. Yet few studies have assessed hygienic practices in relation to onset. We investigated whether hygienic behaviors were associated with the onset of vulvodynia.

**Methods:** We assessed self-reported history of personal hygienic behaviors, including wearing tight fitting clothing, vulva care and genital washing, pubic hair removal, douching, and powdering, a year prior to first reported onset of vulvar pain among 213 clinically confirmed cases and a similar time period among 221 general population controls.

**Results:** Compared to women who reported never wearing tight fitting jeans or pants, women wearing tight fitting jeans or pants 4 times per week had twice the odds of vulvodynia (95% CI: 1.14–3.95). Relative to controls, women with vulvodynia were substantially less likely to report use of soaps and gels to cleanse the vulva (95% CI 0.17–0.63). Among women who chose to remove pubic hair, those who removed pubic hair from the mons pubis compared to bikini-area only hair removal, were 74% more likely to have vulvodynia (95% CI 1.05–2.89). Finally, compared to women who reported bikini-area only hair removal less than monthly, those who removed hair from the mons pubis weekly or more were nearly 2 times more likely to be vulvodynia cases (95% CI 0.83–3.49).

**Conclusions:** Wearing tight fitting jeans or pants and removing hair from the mons pubis area were associated with increased odds of vulvodynia. Research on how hygienic practices could influence vulvar pain in larger and more temporally addressed populations is warranted.

### Precis

Wearing tight fitting jeans or pants and removing hair from the mons pubis **were** associated with an increased odds of clinically-confirmed vulvodynia.

Corresponding author: Bernard L. Harlow, Ph.D., Department of Epidemiology, Boston University School of Public Health, 715 Albany Street, T424E, Boston, MA 02118, (O) 617-638-6736; (C) 612-850-3500; (F) 617-638-4458; harlow@bu.edu.

\*Each of these authors contributed equally to this research and the preparation of the manuscript.

The authors report no conflict of interest.

This study was approved by the Human Subjects Review Committees at both the University of Minnesota and Boston University.

## Keywords

Vulvodynia; hygienic behaviors; vulva care; vulva cleansing; pubic hair removal

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## Introduction

Vulvodynia is a chronic condition characterized by debilitating vulvar discomfort due to burning pain or pain on contact that occurs in the absence of clinically visible pathological findings or identifiable disorders.<sup>1</sup> This condition is highly prevalent in the general population, with lifetime estimates as high as 16%, and a recent study suggesting that by age 40, 8% of women will have developed unexplained vulvar pain that lasted 3 months or longer.<sup>2-3</sup> Previous studies suggest an association between urogynecological infections and vulvodynia.<sup>4-6</sup> Personal hygienic behaviors, such as wearing tight fitting jeans or pants and performing vaginal douching, increase the risk of gynecologic infections,<sup>7-10</sup> yet little is known about how these practices impact the risk of vulvodynia. Research has also reported that pubic hair removal was associated with various sexually transmitted infections including HPV, syphilis, and molluscum contagiosum; likely due to microabrasions that facilitate the spread of infections to the genital area.<sup>11-13</sup> Additionally, a recent study suggests an association between pubic hair removal and vulvar conditions; specifically vulvar inflammation and vulvar dysplasia.<sup>14</sup>

The aim of this study was to explore self-reported personal hygienic behaviors in a population-based study of women with and without clinically confirmed vulvodynia. For the purpose of this analysis, “hygienic practices” included wearing tight fitting garments, vulva care and washing behaviors, pubic hair removal, douching, and genital powdering *prior to* new and clinically confirmed vulvodynia and a comparable time period among controls.

## Methods

The University of Minnesota and Boston University Institutional Review Boards approved this study and all participants provided written consent. Further details of the study were described previously.<sup>15</sup> Briefly, 30,676 women 18–40 years of age were identified from the administrative database of a large healthcare network in the Minneapolis/Saint Paul metropolitan area between March 2010 and October 2013 and screened for a history of vulvar pain symptoms regardless of their reason for the outpatient clinic visit. Self-administered questionnaires were used to assess lifetime history of vulvar pain symptoms. After reviewing the questionnaire, clinical visits were conducted for women likely to meet the International Society for the Study of Vulvovaginal Disease (ISSVD) criteria for vulvodynia.<sup>16</sup> Among the 350 subjects clinically examined, 234 women were clinically-confirmed and enrolled as cases.

Women from the same pool of screened women with no history of vulvar discomfort were randomly selected to serve as controls. Among the 251 women selected and consented to participate, 234 were clinically confirmed as having no vulvar pain and were enrolled in the study as controls. Enrolled controls were matched to cases and assigned a “reference age” corresponding to their matched case’s age at first onset of vulvar pain. Controls were

required to be older than the age at which their matched case was diagnosed with vulvodynia. The interval between actual age and age at onset of vulvodynia in cases, and actual age and reference age in controls, was no more than 2 years. For cases, we attempted to collect all historical information within the temporal context that preceded their age at first onset of vulvar pain. The same temporal context was used for collecting data among controls based on their assigned reference age. Thus, exposures were assessed using the same temporal context for both cases and controls. The prevalence of hygienic practices among controls in this study ranged from 4% to 64%. Thus, with 234 participants in each group, we were able to detect odds ratios ranging from 1.8 to 2.8 with 80% power.

We examined five specific types of hygienic behaviors and practices including 1) wearing tight fitting garments, 2) vulva care and cleaning methods, 3) pubic hair removal, 4) douching, and 5) powdering. Data on hygienic behaviors and practices were reported for the time period one year before age of first onset of vulvodynia among cases and the year before an assigned reference age among matched controls.

We asked participants about the usual frequency (never, monthly, once per week, 2–3 times per week, 4 times per week or more) of wearing thong underwear, tight fitting jeans or pants, and spandex shorts. To assess vulvar cleansing, we asked women how often (more than once a day, daily, 3–6 times a week, or less than 3 times a week) they cleansed the vulvar area, and which products and materials, if any, were used. Other cleansing related questions included bathing frequency and temperature, hot tub use, cleansing after toileting, including wiping habits and cleansing products, and cleansing after sexual intercourse. To measure pubic hair removal, we asked about frequency, location (Bikini area, Mons pubis, Perineum, Anus), and method of hair removal, as well as products applied during and after removal. In the questionnaire, bikini area was defined as “The area of the skin along the lower abdomen and between the legs that is exposed by bikini style undergarments.” Mons pubis was defined as “The soft mound of skin above the genitals that protects the pubic bone.” Perineum was defined as “The strip of skin between the genitals and anus.” **We obtained information on methods used to remove pubic hair which included shaving, waxing, depilatory cream, clippers/electric razor, tweezing, threading and laser removal.** Lastly, we collected information on powdering and douching. Powdering exposure was categorized as no powder exposure, non-genital exposure, or any genital exposure, while data on douching duration **were** examined based on tertiles.

Demographic covariates of interest included current age and reference age. Medically-related covariates included BMI, physical activity, age at first intercourse, number of sexual partners, antecedent gynecologic conditions and infections, antecedent urinary tract infections (UTIs), antecedent yeast infections, antecedent anxiety and antecedent depression. Antecedent is defined as exposures reported a year before the age of first onset of vulvodynia among cases, or the reference age among controls.

### Statistical Analyses

Data were analyzed using SAS® 9.4 software (SAS Institute, Inc., Cary, North Carolina, USA, 2018). We assumed that women with a reference age of less than 12 years old, were unlikely to have had the antecedent exposures and covariates of interest (e.g. worn thong

underwear, had sexual intercourse, etc.), and therefore these cases and controls were excluded from the analyses (15 cases and 9 controls). In addition, 6 cases and 4 controls were excluded because they had missing values for at least one of the key hygienic practices of interest. After all exclusions were applied, 213 cases and 221 controls were included in the analysis. Due to these exclusions, *reference age matching was not retained, and reference age was instead considered* as a potential covariate<sup>17</sup>. Descriptive statistics (means, standard deviations, frequencies, and percentages) were calculated for all exposures and covariates of interest. To estimate associations between each hygienic practice and subsequent onset of vulvodynia, simple logistic regression models were fit, and odds ratios were calculated. Covariates were selected from the available literature and those that affected a model's crude odds ratio by more than 10% were included in the final multivariate logistic models. Separate models were fit to estimate the association of each hygienic behavior with vulvodynia, adjusting for current age, antecedent anxiety, antecedent UTI, antecedent yeast infection, and antecedent gynecologic infections.

## Results

Because controls were required to be the same age or older than the age at which their matched case was diagnosed with vulvodynia, cases were younger than controls by 2 years on average. However, the reference age assigned to controls was comparable to the age of first onset of vulvodynia among cases (Table 1). As reported earlier, women with vulvodynia were more likely to have antecedent anxiety, depression, and gynecologic infections.<sup>6,18</sup> All variables presented in Table 1 were assessed as potential confounders of the association between personal hygienic behaviors and vulvodynia.

In the examination of tight fitting garments, no association was observed between wearing thong underwear or spandex shorts and vulvodynia. However, wearing tight fitting jeans or pants 4 times per week or more was crudely associated with a nearly 3-fold odds of vulvodynia compared to those who never reported wearing tight fitting jeans or pants (Table 2). After adjustment for confounders, this association was attenuated but remained strong (OR: 2.13; 95%CI: 1.14, 3.95).

The frequency or method of reported vulva washing, in the year prior to vulvodynia diagnosis or at reference age in controls, did not differ between vulvodynia cases and controls, (Table 3). However, we did observe that women reporting use of soaps, gels or washes to cleanse the vulva were less likely to be vulvodynia cases compared to women reporting use of water only (Soaps: OR=0.37, 95%CI 0.19–0.72; Gels: OR=0.31, 95%CI 0.17–0.63). We observed no association with types of bathing, hot tub use, or the temperature of bath water with vulvodynia onset. No associations were observed with cleansing habits after toileting or intercourse, nor with any specific cleansing products.

Reported pubic hair removal and frequency in the preceding year was similar between vulvodynia cases and controls (Table 4). However, among women who chose to remove pubic hair, removal of pubic hair from the mons pubis compared to the bikini area only, was associated with a 74% increased odds of vulvodynia (95%CI 1.05–2.89). In addition, relative to women who reported bikini area only pubic hair removal less than monthly, those

who removed pubic hair from the mons pubis weekly or more were nearly 2 times more likely to be vulvodynia cases. There was a modest increase in the OR with each category from less frequent bikini only shaving to more frequent mons pubis shaving. **Although we collected details on all methods hair removal outlined in the methods above, the majority of women reported shaving as their preferred method. Too few women fell into the other categories. Regardless, no differences were observed with the method or products used to remove pubic hair.**

Lastly, only about 10% of women reported powdering or douching, and of those who did, no differences were observed between cases and controls (data not shown).

## Discussion

There are few studies that have assessed hygienic practices in relation to vulvodynia which provides little with which to compare our findings. In the present study, we report an association between tight fitting jeans or pants and vulvodynia after adjusting for covariates, including past gynecologic infections. This finding suggests that wearing tight fitting jeans or pants may serve as a proxy for other hygienic and behavioral factors involved in a pathway to vulvodynia. However, upon adjustment for other hygienic factors, specifically shaving the mons pubis area, the association between tight fitting jeans or pants and vulvodynia remained unchanged. Tight fitting jeans or pants may also trap moisture in the vulvar area and create an environment that fosters infections, particularly yeast, which was found to be related to vulvodynia in this dataset.<sup>15</sup> **Unfortunately, we cannot assess whether these findings would differ among women who did or did not wear underwear beneath their tight fitting jeans or pants.**

Women with vulvodynia appeared to more frequently cleanse only with water which may suggest that even before the self-reported onset of vulvar pain, these women may have experienced sensitivity to soaps, cosmetics, and other abrasive materials. We can also not rule out that women with vulvodynia may selectively recall the use of these materials and products differently due to their perineal trauma. This may also hold true for the inverse association of toileting habits, specifically wiping from back to front; perhaps attributed to most women knowing not to wipe from the back to front and to women experiencing pain early on and not wanting to wipe near the vulvar region.

With respect to hair removal practices, roughly 70% of both cases and controls reported any pubic hair removal. Among women removing pubic hair, those who removed pubic hair from the mons pubis area had roughly two times the odds of being vulvodynia cases, compared to those who removed hair from the bikini-area only. If cases are immunologically and/or genetically predisposed to vulvar inflammation<sup>19</sup>, untrimmed pubic hairs may irritate or inflame the already sensitive vulva area leading more cases to remove at least some pubic hair than controls, while careful grooming, (e.g. trimming) on the other hand, specifically of the bikini area, may result in fewer micro abrasions in areas of the vulva that are more susceptible to infection and/or inflammation. This practice is consistent with recommendations from women's health organizations such as the Center for Young Women's Health, as well as the advice from a popular vulvodynia support forum.<sup>20-21</sup>

While we report modest associations between some hygienic practices and the onset of vulvodynia, some limitations should be noted. All exposures in this study were assessed retrospectively, which may result in differential misclassification of information. Women with vulvodynia may be more vigilant when trying to identify the potential factors related to vulvodynia, and thus introduce recall bias into the study. The strongest association with vulvodynia was found among women who wear tight fitting jeans or pants most frequently (four times per week or more) and women who removed pubic hair from the mons pubis at least weekly. It is possible that this is due to hypervigilance of reporting among vulvodynia cases. Furthermore, women with vulvodynia may have already experienced vulva discomfort before first onset of vulva pain and changed their personal hygienic behaviors accordingly. This may make it difficult to assess the temporal relationship between hygienic behaviors and vulvodynia, thereby hindering our ability to identify hygiene related risk factors for vulvodynia. **Finally, since few studies have assessed hygienic exposures in relation to vulvodynia, we cannot rule out chance as an explanation for our findings and we welcome future research in this area.**

## Conclusion

We have found that wearing tight fitting jeans or pants and removing hair from the mons pubis area is associated with increased odds of vulvodynia, while the use of soap/gels as cleansing products was inversely associated with vulvodynia. However, possible changes of behavior after experiencing vulvar discomfort among women with vulvodynia make it difficult to assess antecedent hygienic behaviors. Further studies are needed to rule out reverse causation and evaluate potential misclassification of reported information. Mediation analyses may help to clarify potential causal pathways. Nevertheless, with the practice of genital shaving increasing, particularly among adolescent girls<sup>13,22</sup> and the prevalence of vulvodynia shown to affect nearly 1 in 10 women during their reproductive years<sup>2,4</sup>, more research on how hygienic practices could influence vulvar pain in larger and more temporally addressed populations is warranted.

## Acknowledgments

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## Abbreviations and Acronyms:

<b>95%CI</b>	95% Confidence Interval
<b>OR</b>	Odds Ratio
<b>ISSVD</b>	International Society for the Study of Vulvovaginal Disorders

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**Table 1.**

Demographic characteristics by vulvodynia status, n=434

Characteristics	Cases n=213	Controls n=221
<b>Current age, mean (SD)</b>	29.0 ( 5.3)	31.3 ( 5.1)
<b>Reference age, mean (SD)</b>	21.3 ( 5.4)	21.5 ( 5.5)
<b>BMI, mean (SD)</b>	26.3 (11.6)	27.4 (10.6)
<b>Age at first sexual intercourse <sup>*</sup>, years, mean (SD)</b>	18.2 ( 3.3)	18.0 ( 3.4)
<b>No. of sexual partners <sup>**</sup>, means (SD)</b>	8.0 ( 9.2)	9.1 (10.8)
<b>Physical Activity, n(%)</b>		
None	23 (11.1)	18 ( 8.3)
Moderate	44 (21.2)	44 (20.2)
Vigorous	141 (67.8)	156 (71.6)
Missing	5	3
<b>Antecedent <sup>***</sup> Anxiety, n(%)</b>		
None	121 (57.4)	163 (74.1)
Yes, diagnosed	64 (30.3)	31 (14.1)
Yes, not diagnosed	26 (12.3)	26 (11.8)
Missing	2	1
<b>Antecedent Depression, n(%)</b>		
None	131 (61.5)	145 (66.2)
Yes, diagnosed	67 (31.5)	52 (23.7)
Yes, not diagnosed	15 ( 7.0)	22 (10.1)
Missing	0	2
<b>Childhood Abuse <sup>****</sup>, n (%)</b>		
None	88 (41.9)	106 (48.0)
Moderate	39 (18.6)	55 (24.9)
Severe	83 (39.5)	60 (27.2)
Missing	3	0
<b>Antecedent UTI, n(%)</b>	94 (44.1)	65 (29.4)
<b>Antecedent Gynecological Condition, n(%)</b>		
0	145 (68.1)	163 (73.8)
1	36 (16.9)	26 (11.8)
2	20 ( 9.4)	24 (10.9)
3 or more	12 ( 5.6)	8 ( 3.6)
<b>Antecedent Gynecological Infection, n(%)</b>		
0	102 (47.9)	140 (63.4)
1	92 (43.2)	59 (26.7)
2 or more	19 ( 8.9)	22 (10.0)
<b>Antecedent Yeast Infection, n(%)</b>		
Yes	97 (46.0)	82 (37.4)
No	114 (54.0)	137 (62.6)



Characteristics	Cases n=213	Controls n=221
Missing	2	2

\* 4 cases and 8 controls are missing age at first sexual intercourse.

\*\* 5 cases and 1 control are missing number of sexual partners.

\*\*\* Antecedent is defined as exposures reported before the age of first onset of vulvodynia among cases, or the reference age among controls.

\*\*\*\* We classified women “severely” physically abused if they (a) were ever choked, burned, or physically attacked, or (b) responded to any other item more than a few times. All other physical abuse was considered “moderate.” We considered women to be severely sexually abused if any item was answered “more than a few times.” Sexual abuse

abuse a few times or less was considered moderate.

**Table 2.**

Crude and adjusted association between tight fitting garments and vulvodynia, n=434

	Cases n (%)	Controls n (%)	Crude OR	Adjusted OR <sup>*</sup> (95% CI)
<b>Thong Underwear</b>				
Never (10 or fewer)	106 (49.8)	124 (56.1)	1.0 (Ref)	1.0 (Ref)
Monthly/ < weekly	16 ( 7.5)	24 (10.9)	0.78	0.50 (0.23, 1.05)
About once per week	17 ( 8.0)	15 ( 6.8)	1.33	0.93 (0.42, 2.08)
2–3x per week	31 (14.6)	18 ( 8.1)	2.02	1.79 (0.90, 3.55)
4x per week or more	43 (20.2)	40 (18.1)	1.26	0.82 (0.47, 1.45)
<b>Tightfitting Jeans or Pants</b>				
Never (10 or fewer)	55 (25.8)	87 (39.4)	1.0 (Ref)	1.0 (Ref)
Monthly/ < weekly	29 (13.6)	31 (14.0)	1.48	1.40 (0.73, 2.68)
About once per week	27 (12.7)	33 (14.9)	1.29	1.12 (0.58, 2.15)
2–3x per week	44 (20.7)	38 (17.2)	1.83	1.50 (0.83, 2.71)
4x per week or more	58 (27.2)	32 (14.5)	2.87	2.13 (1.14, 3.95)
<b>Spandex Shorts</b>				
Never (10 or fewer)	110 (51.6)	125 (56.6)	1.0 (Ref)	1.0 (Ref)
Monthly/ < weekly	25 (11.7)	31 (14.0)	0.92	0.85 (0.45, 1.60)
About once per week	34 (16.0)	25 (11.3)	1.55	1.45 (0.78, 2.69)
2–3x per week	20 ( 9.4)	24 (10.9)	0.95	1.17 (0.59, 2.34)
4x per week or more	24 (11.3)	16 ( 7.2)	1.71	1.57 (0.76, 3.25)

\* Adjusted for current age, antecedent urinary tract infection, antecedent anxiety, and antecedent gynecological infection, antecedent yeast infection.

**Table 3.**

Hygienic care of the vulvar among women with and without vulvodynia, n=434

	Cases n=213	Controls n=221	Crude OR	Adjusted OR (95% CI)*
<b>Frequency of washing</b>				
Daily or more	139 (65.3)	146 (66.1)	1.0 (Ref)	1.0 (Ref)
3–6x/week	59 (27.7)	64 (29.0)	0.97	0.92 (0.58, 1.45)
3x/week	15 (7.0)	11 (5.0)	1.43	1.53 (0.64, 3.65)
<b>Materials used to wash</b>				
Wash cloth	81 (38.0)	91 (41.2)	0.88	0.99 (0.65, 1.50)
Hand	131 (61.5)	141 (63.8)	0.91	0.88 (0.58, 1.34)
Sponge/Loofa	50 (23.1)	56 (25.3)	0.90	0.69 (0.42, 1.11)
Wipes	19 (8.8)	17 (8.0)	1.18	0.68 (0.32, 1.45)
<b>Cleansing products</b>				
Water only	44 (20.7)	19 (8.6)	1.0 (Ref)	1.0 (Ref)
Soap only	66 (31.0)	91 (41.2)	0.31	0.37 (0.19, 0.72)
Gels, washes, shampoos	103 (48.4)	111 (50.2)	0.40	0.31 (0.17, 0.63)
<b>Types of bathing</b>				
Showers only	171 (80.3)	182 (82.4)	1.0 (Ref)	1.0 (Ref)
Baths only	12 (5.6)	9 (4.1)	1.42	1.70 (0.66, 4.39)
Both	30 (14.1)	30 (13.6)	1.06	1.18 (0.66, 2.14)
<b>Temperature during bathing</b>				
Cool/warm	20 (47.6)	20 (51.3)	1.0 (Ref)	1.0 (Ref)
Hot	22 (52.4)	19 (48.7)	1.16	0.69 (0.24, 1.98)
<b>Toileting habits</b>				
Wiping front to back	167 (78.4)	151 (68.3)	1.0 (Ref)	1.0 (Ref)
Wiping back to front	46 (21.6)	69 (30.9)	0.60	0.70 (0.44, 1.11)
<b>Cleansing after toilet use</b>				
No cleansing	198 (93.0)	209 (93.7)	1.0 (Ref)	1.0 (Ref)
Any cleansing	13 (6.1)	12 (5.4)	1.14	1.16 (0.48, 2.79)
<b>Cleansing after intercourse</b>				
No cleansing	85 (52.5)	76 (50.3)	1.0 (Ref)	1.0 (Ref)
Any cleansing	77 (47.5)	75 (49.7)	0.92	0.99 (0.62, 1.56)
Water only	28 (37.3)	28 (36.4)	0.89	1.08 (0.56, 2.10)
Soaps only	12 (16.0)	6 (7.8)	1.79	2.05 (0.67, 6.23)
Gels/washes	16 (21.3)	21 (27.3)	0.68	0.74 (0.34, 1.62)
Prepackaged wipes	19 (25.3)	22 (28.6)	0.77	0.64 (0.30, 1.34)

\* Adjusted for current age, antecedent urinary tract infection, antecedent anxiety, and antecedent gynecological infection, antecedent yeast infection.

**Table 4.**

Crude and adjusted associations between pubic hair removal and vulvodynia, N=434

	Cases n (%)	Controls n (%)	Crude OR	Adjusted OR* (95% CI)
<b>Any Pubic Hair Removal</b>	153 (71.8)	161 (72.9)	1.00 (Ref)	1.00 (Ref)
Yes	60 (28.2)	60 (27.2)	1.05	1.63 (1.00, 2.65)
No				
<b>Frequency of Pubic Hair Removal</b>				
Monthly	62 (29.1)	83 (37.3)	1.00 (Ref)	1.00 (Ref)
1x per week	49 (23.0)	41 (35.3)	1.56	1.19 (0.66, 2.14)
2x per week or more	42 (19.7)	36 (16.4)	1.60	0.97 (0.52, 1.83)
<b>Location of Pubic Hair Removal</b>				
Bikini (Only)	46 (21.6)	76 (34.4)	1.00 (Ref)	1.00 (Ref)
Mons pubis (Any)	107 (50.2)	85 (38.5)	2.08	1.74 (1.05, 2.89)
BO/ Monthly**	24 (15.7)	39 (24.4)	1.00	1.00 (Ref)
BO/ 1x per week	22 (14.4)	36 (22.5)	0.99	0.81 (0.36, 1.79)
MP/ Monthly	38 (24.8)	44 (27.5)	1.40	1.37 (0.66, 2.82)
MP/ 1x per week	69 (45.1)	41 (25.6)	2.74	1.73 (0.83, 3.49)
<b>Methods Used to Remove Pubic Hair</b>				
Shaving (Only)	112 (52.6)	111 (50.2)	1.00 (Ref)	1.00 (Ref)
Other (Any)	41 (19.3)	50 (22.6)	0.81	0.78 (0.45, 1.34)
<b>Products used to Aid Removal of Pubic Hair</b>				
No products/H2O (Only)	34 (16.0)	33 (14.9)	1.00 (Ref)	1.00 (Ref)
Scented (Only)	82 (38.7)	78 (18.0)	1.02	0.88 (0.47, 1.65)
Unscented (Only)	10 (4.7)	22 (10.0)	0.45	0.49 (0.18, 1.30)
Both	26 (12.3)	28 (12.7)	0.90	0.80 (0.37, 1.75)
<b>Products Used to Soothe Pubic Area After Hair Removal</b>				
No Products	77 (36.2)	87 (39.4)	1.00 (Ref)	1.00 (Ref)
Any Products	76 (35.7)	74 (33.5)	1.16	1.24 (0.74, 2.07)

\* Adjusted for age, history of gynecologic infection, antecedent anxiety, antecedent UTI, antecedent yeast infection, and tight-fitting jeans.

\*\* BO = Bikini only; MP = Mons Pubis only; adjusted for age, history of gynecologic infection, antecedent anxiety, antecedent UTI, antecedent yeast infection, and tight-fitting jeans.