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Original Research Article

Pelvic floor dysfunction in Mexican women

Karen M. Loya Maldonado¹, Guadalupe Guerrero Reyes^{1*}, Adrian Gutierrez Gonzalez²,
Jennifer E. Reyes Alcaraz², Ricardo Hernandez Velazquez¹, Alejandra Robledo Torres¹,
Omar Trevino Cavazos¹, Jose I. Leyva Vazquez¹, Danahe A. Chavez Loya²

¹Department of Gynecological Urology, 20 de Noviembre National Medical Center, Mexico City, Mexico

²Department of Urology, University Hospital Doctor Jose Eleuterio Gonzalez, Monterrey, Nuevo Leon, Mexico

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*Correspondence:

Dr. Guadalupe Guerrero Reyes,

E-mail: draguerreroreyes84@gmail.com

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ABSTRACT

Background: Pelvic floor dysfunction (PFD) is a term used to describe a variety of disorders that involve moderate to severe impairment of the pelvic floor muscles. Throughout their lives, up to 46% of women will present at least one form of PFD and may even have a combination of this pathology. These afflictions have a profound influence on women's general well-being and quality of life, as well as being an immense economic burden for global health systems.

Methods: This was a populational study which used surveys made in Google Forms of different questionnaires validated in Spanish [Urinary Incontinence Questionnaire (ICIQ), Female Sexual Function Index (FSFI), CPPQ Questionnaire for chronic pelvic pain, Wexner anal incontinence scale and quality of life] which were taken by women with access to social networks and who agreed to carry out an anonymous survey.

Results: Seven hundred and twenty-one participants were evaluated, a total of 61.4% (443) responded positively to involuntary loss of urine, 35% had presented discomfort during sexual activity or lack of sexual interest, 14% had genital pain and 16% reported involuntary loss of feces or gas. Of all the patients that answered any of these questionnaires positively, only 33% had sought medical attention in the past.

Conclusions: We concluded that in our population PFD is underdiagnosed. Our population's prevalence of urinary incontinence and pelvic pain is within the internationally described margins; anal incontinence is above international reports, and our population presented a lower prevalence of sexual dysfunction. With this new information we must impulse awareness to guide various preventive behaviors.

Keywords: Fecal incontinence, Pelvic floor dysfunction, Pelvic pain, Sexual dysfunction, Urinary incontinence

INTRODUCTION

In the field of public health, epidemiology has historically played a relevant role in the production of information for decision-making, contributing to a better understanding of public health phenomena. This information makes the definition of policies, interventions, and practices aimed at preventing, monitoring, and reducing the impact of these events on health possible.¹

Pelvic floor dysfunction (PFD) is used to describe a variety of disorders that involve deterioration of the pelvic floor muscles which in turn lead to symptoms that affect the quality of life.² PFD can be divided into two broad categories: relaxing and non-relaxing. Associated symptoms of relaxing PFD include urinary incontinence, anal incontinence, and pelvic organ prolapse. The less common of the two types is hypertonic or non-relaxing dysfunction, in this disorder the pelvic floor muscles remain contracted, causing increased pressure and pain.²

Classified as PFD are; urinary incontinence, pelvic pain, sexual dysfunction, anal incontinence, and pelvic organ prolapse. There are international reports which conclude that throughout their lives, women will present at least one form of PFD in up to 46%. It is quite frequent that they present combinations of these forms of PFD. This is why we must increase awareness of the profound impact that PFD has on general well-being, quality of life, and the economic burden it represents on health systems around the globe.³

Identified risk factors for PFD are childbirth, previous surgeries, generalized weakness of connective tissue. Many of these factors are combined by two or more of the different PFD forms. Vaginal delivery is probably the most important etiological risk factor and has been proven to contribute to the development of some or all types of PFD.³

Each of these dysfunction's prevalence varies depending on the population which is studied. In our country, Mexico, PFD epidemiology is not well established however in the Netherlands there is a general prevalence of 25% of PFD.⁴ A 30% prevalence was found for urinary incontinence, 8% for fecal incontinence and 15% for pelvic organ prolapse.⁵

According to the 2020 Population and Housing Census, in Mexico there were 64,540,634 women, which made up 51.2% of the total population. This is why it is important to know the true prevalence of the main urogynecological diseases in this group.⁶

METHODS

This was descriptive population study. The Mexican women, randomly selected, who were at least 18 years old, who had access to social media networks, and were able to answer electronic questionnaires. Timeframe between January 1 2021, until February 28, 2022.

Evaluation procedure

Surveys were carried out on Mexican adult women (18 years of age); performed through Google forms. The questionnaires were validated in their native language which was Spanish and were the following: Urinary Incontinence Questionnaire (ICIQ), Female Sexual Function Index (FSFI), CPPQ questionnaire for chronic pelvic pain, Wexner anal incontinence scale, and quality of life questionnaire. A data concentrate was filled in which had the variables of age, educational level, as well as sexual symptoms such as pain, anorectal symptoms, and general quality of life.

RESULTS

A total of 721 patients responded, 66.3% (477 patients) were between the age range of 30 to 49. Women from northern Mexico were more inclined to answer the questioners representing 47% (343) of the responses. Approximately 84.3% of the respondents had an

undergraduate and/or postgraduate education. Overweight and obese patients represented a 57% (414), only 41.8% of the respondents had a normal BMI. The maximum BMI recorded was 64.8 kg/cm² (Table 1).

Table 1: Demographic data.

Demography	N=721 (%)	
Age	18-29	107 (14.8)
	30-39	283 (39.3)
	40-49	194 (26.9)
	50-59	105 (14.6)
	60-69	31 (4.3)
	>70	1 (0.1)
Region	Northern states	343 (47)
	Center states and Mexico City	308 (43)
	Southern states	70 (10)
Educational level	1 st -6 th year	0 (0)
	7 th -9 th year	22 (3.1)
	11 th -12 th year	90 (12.5)
	University	328 (45.5)
	Postgraduate	280 (38.8)
BMI	<18.5 kg/cm ²	5 (0.69)
	18.5-24.9 kg/cm ²	302 (41.8)
	25-29.9 kg/cm ²	247 (34.2)
	30-34.9 kg/cm ²	109 (15.1)
	35-39.9 kg/cm ²	35 (4.8)
	>40 kg/cm ²	23 (3.1)

Urinary incontinence

Of the total number of patients surveyed, 61.4% (443) responded positive to involuntary urine loss during the last month (Figure 1).

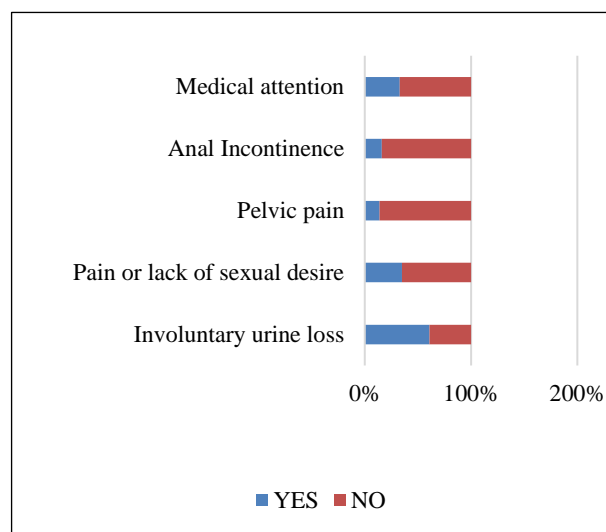


Figure 1: Pelvic floor dysfunction in Mexican women.

When performing the ICIQ questionnaire, we observed that only 7.7% (34/443) had the need to urinate frequently,

58.2% (258) had urinary loss related to urgency. Of this last group, 178 reported presenting it a few times a week and only 4.7 % (21/443) had it daily. Involuntary loss of urine related to effort was observed in 74% (332/443), of these 7.9% (35/443) had it on a daily basis. Approximately 71.6% (317/443) denied having difficulty emptying their bladders and 51% (229/443) claimed to have discomfort in the abdominal, pelvic, or genital area (Table 2).

Table 2: ICIQ answers.

Question	N=443 (%)	
Need to urinate frequently	Never	93 (21)
	Bit	143 (32.3)
	Moderate	173 (39.1)
	A lot	34 (7.7)
Leaks before you can get to the toilet	Never	185 (41.8)
	A few times a month	178 (40.2)
	A few times a week	59 (13.3)
Leaks when coughing or sneezing	Never	111 (25.1)
	A few times a month	232 (52.4)
	A few times a week	65 (14.7)
	Daily	35 (7.9)
Small amounts of urine leaks	Never	155 (35)
	A few times a month	200 (45.1)
	A few times a week	62 (14)
	Daily	26 (5.9)
Difficulty for voiding	Never	317 (71.6)
	A few times a month	102 (23)
	A few times a week	17 (3.8)
	Daily	7 (1.6)
Pain or discomfort when urinate	Never	212 (48.1)
	A few times a month	192 (43.5)
	A few times a week	31 (7)
	Daily	6 (1.4)

Sexual dysfunction

Around 35.3% (254/721) reported having experienced discomfort during sexual activity or lack of interest the month previous to the investigation (Figure 1).

Of the 254 women who presented pain or lack of sexual interest, 27.2% (69) answered positively to almost never or never having sexual desire; 22.6% (57) reported never having sexual arousal, in addition to 17.4% (44) did not achieve adequate lubrication during intercourse. A total of 15.3% (39) reported never having an orgasm during sexual activity, and 5.5% (14) reported experiencing pain during penetration (Table 3).

Pelvic pain

One hundred and four women (14.4%) answered affirmatively to have experienced genital pain in the 4 weeks previous to answering the questioner (Figure 1).

The area below the navel or pubis was the most common site of pain, presenting itself in up to 49% of patients, secondly vulvar pain was present in 36.5% (38/104). About 38.5% of the patients reported experiencing pain a few times a month.

Dysuria and dyspareunia were reported in 52.3% and 47.7% respectively (Table 4).

Table 3: Sexual dysfunction.

Question	N=254 (%)	
Sexual desire	Almost always	10 (3.9)
	Most of the time	28 (11)
	Sometimes	53 (20.9)
	A few times	94 (37)
	Almost never or never	69 (27.2)
Sexual arousal during activity	Almost always	40 (15.7)
	Most of the time	63 (24.8)
	Sometimes	34 (13.4)
	A few times	60 (23.6)
Vaginal lubrication during activity	Almost always	55 (27.7)
	Most of the time	74 (29.2)
	Sometimes	36 (14.2)
	A few times	44 (17.4)
Orgasm during sexual activity	Almost always	44 (17.4)
	Almost always	59 (22.9)
	Most of the time	76 (30)
	Sometimes	31 (12.3)
Pain	A few times	49 (19.4)
	Almost never or never	39 (15.3)
	Almost always	14 (5.5)
	Most of the time	25 (9.9)
Pain	Sometimes	51 (20.2)
	A few times	60 (23.7)
	Almost never or never	103 (40)

Anal incontinence

Of all the respondents, 16% (116) experienced anal incontinence to gases, liquids, or solids in the last 4 weeks. (Figure 1).

According to the Wexner scale for anal incontinence, of the 116 women who responded positively to anal incontinence, 82% of them had a score between 1-8 points. This would classify them as experiencing mild incontinence. Only 3 patients (2.5%) had over 16 points (Table 4).

Out of all the patients who responded positively to at least one type of dysfunction, only 32.9% had received medical attention. Unfortunately, 67.1% of the women who suffered a sort of PFD did not receive medical attention (Figure 1).

Table 4: Chronic pelvic pain questionnaire.

		N=104 (%)
Area that has experienced pain	Perineal zone	10 (9.6)
	Vulva or labia	38 (36.5)
	Clitoris	3 (2.9)
	Below the navel, pubic pain or bladder	51 (49)
	Ninguno	2 (1.9)
How often does the pain occur?	Always	3 (2.9)
	Almost always	10 (9.6)
	Many times	15 (14.4)
	Sometimes	40 (38.5)
	Rarely	33 (31.7)
	Never	3 (2.9)
Type of pain	Dysuria	45 (52.3)
	Dyspareunia	41 (47.7)
How much has pain impaired you from doing your daily activities?	A lot	4 (4)
	Something	8 (7.9)
	Only a little	32 (31.7)
	Never	57 (56.4)
How frequently do you think about the referred pain?	A lot	12 (11.8)
	Something	19 (18.6)
	Only a little	53 (52)
	Never	18 (17.6)

Table 5: Wexner scale.

		n=116 (%)
Anal incontinence	Light	96 (82)
	Moderate	17 (14.6)
	Severe	3 (2.5)

DISCUSSION

PFD has a profound influence on well-being and quality of life, as well as having an overwhelming negative impact, economically, on any health system around the globe.³ In Mexico the incidence or prevalence of pelvic floor dysfunctions is not known.⁴ Demographically our study had a universe of 721 patients, of which most were in the age range between 30-49 years of age. Involuntary urine loss was present in 61% of the women during the previous month before the study, within the international reported ranges. FIGO reports a prevalence of 5-69%, of which 10-39% are SUI, and 1-7% are UUI.⁵ The EPINCONT study states that a 17% of women have SUI, 18% endure MUI and 38% suffer UUI.⁷ Wennberg et al concluded that the general prevalence of urinary incontinence increased from 15 to 28% in the timeframe of 1991 to 2007.³

Human sexuality results from complex interactions between biological and psychosocial factors. These can vary between cultures, the environment, and circumstances experienced by the individual.⁸

Female sexual dysfunction (FSD) significantly affects the quality of life for many women. It is estimated that 40% of women in the US have some sort of FSD.⁹

There is limited data on the incidence and prevalence of FSD. It has been estimated to range between 25.8% to 91%, depending on the source. A 2006 review by Haydes et al reported sexual desire difficulties in 64% of women, arousal difficulties in 31%, orgasm difficulties in 35%, and sexual pain in 26%.¹⁰ We found that 35% of women who we studied reported having sexual dysfunction, of these 27% reported having no sexual desire, 15% reported not having orgasms, and 17% had difficulty lubricating during activity, in addition 40% reported not experiencing any type of dyspareunia. We observed that 60% of women with FSD have some degree of pain.

Chronic pelvic pain (CPP) affects 26% of the world female population.¹¹ With scant information on prevalence and frequency. It is estimated that in the US CPP is approximately 15% and is twice as common in women than in men.¹² It represents 10% of gynecology consultations, 40% of laparoscopies and 12% of hysterectomies.^{13,14}

Chronic pelvic pain is defined as pain perceived to originate in the pelvis that lasts for more than 6 months and is often associated with negative cognitive, behavioral, sexual, and emotional consequences and symptoms. CPP is suggestive of lower urinary tract disorders, sexual, intestinal, myofascial or gynecological dysfunction.¹⁵ The 6-month time period is not required for diagnosis if centrally sensitizing pain mechanisms, i.e., cognitive, behavioral, and emotional impairment, are documented.¹⁶ In the population we studied we observed that 14% of patients had pelvic pain. Of the areas referred to be most affected by pain were the infraumbilical area in first place and vulva in second place.

The referred prevalence of anal incontinence was of 12.4%. During pregnancy, anal incontinence occurs in up to 10% of nulliparous women, while 90% of these patients only suffer from flatus incontinence. Fecal incontinence during pregnancy in nulliparous women did not present an increase of presentation during the second or third trimester.

MacArthur et al performed a study lasting 12 years, in which the prevalence of fecal incontinence estimated in 11.5% for women who had a spontaneous vaginal delivery, compared to 11.7% in patients who had a cesarean section.

In primiparous women, clinical sphincter injury occurred in around 7% and in those who underwent review by endoanal ultrasound, sphincter injury was found in 35%.

A second-degree tear or graver injury was associated with nearly doubling the prevalence of suffering late fecal incontinence.¹⁷ In our investigation we observed that

16.1% of women reported anal incontinence, of these patients, 82% suffered only a mild degree.

An important consideration, viewed in this investigation, is that even though most of the women surveyed were well educated, only 32.9% of them sought medical care.

CONCLUSION

Within the scrutinized pathologies, we observed that urinary incontinence and pelvic pain in Mexican women had a prevalence similar to that reported in the international literature, while anal incontinence was above that which was reported. Regarding sexual dysfunction in Mexico, we report a cipher slightly below the international prevalence. We conclude that pelvic floor dysfunctions are underdiagnosed; despite being pathologies that directly affect the quality of life of women and that, despite having a predominance in certain age groups, do not rule out the fact that women of any age may present them. This is an area of opportunity to carry out more extensive research, which can lead to campaigns which could raise awareness about these pathologies, both for patients and for first-contact health personnel.

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Ethical approval: Not required

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