

# Impact of Genitourinary Syndrome of Menopause on Wellbeing, Functioning and Quality Of Life in Postmenopausal Women: A Cross Sectional Survey

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## ABSTRACT

**Objective:** To assess the impact of genitourinary syndrome of menopause on well-being, functioning and quality of life (QoL) in postmenopausal women.

**Study Design:** Cross-sectional survey.

**Place and Duration of Study:** Department of Obstetrics and Gynaecology, Pak Emirates Military Hospital, Rawalpindi Pakistan, from Sep 2019 to Mar 2020.

**Methodology:** The study participants aged 30-60 years old, had last menstrual period about one year ago. The day-to-day impact of vaginal ageing'' (DIVA) questionnaire was filled by the study participants who had one vaginal symptom regardless of its intensity and who was postmenopausal to assess its impact on well-being and quality of life. The comparisons of the mean score of every domain of the day-to-day impact of the vaginal ageing questionnaire were performed for the women with genitourinary syndrome of menopause and without genitourinary syndrome of menopause.

**Results:** A total of 410 postmenopausal women were included in the study. A total of 302(75.3%) women reported with vaginal symptoms and genitourinary syndrome of menopause, while 99(24.68%) with no diagnosis of genitourinary syndrome of menopause. The score was significantly high ( $p<0.001$ ) in the women with genitourinary syndrome of menopause as compared to the women without genitourinary syndrome of menopause. The highest value was reported for the long in the genitourinary syndrome of the menopause Group and the lowest for the daily life activities of both groups.

**Conclusion:** The quality of life of postmenopausal women, their well-being and functioning are impacted by the vaginal symptoms, specifically their sexual function, body image and self-esteem. The scientifically higher impact was found in the women with genitourinary syndrome of menopause.

**Keywords:** Genitourinary Syndrome of Menopause, Menopause, Postmenopausal women, Quality of Life, Wellbeing.

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## INTRODUCTION

Genitourinary Syndrome of Menopause (GSM) is a combined name that explains the life transition of women predisposed to menopausal changes.<sup>1</sup> It includes not only the visible genital changes but also the spectrum of symptoms and signs affecting sexual and urinary functioning.<sup>2</sup> The prevalence of GSM is high in middle-aged to older women. It was found to be 70% of Spanish women.<sup>3</sup> The menopausal age for Pakistan was reported to be between 46 to 52 years.<sup>4,5</sup>

Treatment options for GSM include different therapeutic and non-therapeutic solutions. It includes systemic and vaginal Estrogen products, oral Ospemifene, and vaginal progesterone etc. Therapies include physical therapy, lubricants, moisturizers, hyaluronic acid, laser therapy, etc.<sup>6</sup>

Almost 50% of the menopausal women face GSM. Early diagnosis and prompt treatment can improve the day-to-day activities of middle-aged women.<sup>7</sup> Factors that lead to GSM include low education level because these women cannot develop effective coping strategies or self-care power and are unable to receive treatment, the presence of chronic diseases, etc.<sup>8</sup> This is an indication that health services should focus on issues of menopausal women and direct them to appropriate diagnosis and treatment services and develop supportive programs to increase self-care power and quality of life of women in order to deal with the rising issues like GSM proactively.<sup>9,10</sup>

The study addresses a critical gap in the understanding of the impact of GSM on the well-being, functioning, and QoL in postmenopausal women. Genitourinary symptoms associated with menopause, such as vaginal dryness, pain and discomfort, are known to affect women's lives, however a

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comprehensive assessment of their implications on various domains of daily living is lacking.

### METHODOLOGY

The cross-sectional survey was conducted at Obstetrics and Gynaecology Department of Pak Emirates Military Hospital, Rawalpindi Pakistan, from September 2019 to March 2020 after the approval of the Ethical committee (Certificate number A/28). The sample size was calculated through WHO calculator based on the population mean of long-term sexual function domain scale of 1.8, standard deviation of one.<sup>11</sup>

**Inclusion Criteria:** The women were included on the criteria that age was between 30-60 years, the menstrual period was absent for at least one year when they visited the Gynaecology Clinic.

**Exclusion Criteria:** Women with difficulty in understanding and reading the study consent form and those who had any other physical disability were excluded.

The women consecutively visiting the Gynaecology Clinic with any complaint were requested to participate in the study. Every participant signed the consent; the women were asked to confirm the genitourinary symptoms and investigate their general and gynaecological health. The gynaecological examination of every participant was also performed for the evaluation and presence of vulvovaginal signs. The genital and urinary signs and symptoms were checked, and the association was found with menopause for the diagnosis of GSM; when two symptoms or one symptom and one sign were found, the case was taken for the study. The difficulty was reported, which does not have any other pathological confirmation. The "day-to-day impact of vaginal ageing" (DIVA) questionnaire was filled by the woman who was suffering from one vaginal symptom regardless of its intensity and who was postmenopausal to assess its impact on well-being and quality of life.<sup>11</sup> The questionnaire was filled in private by the participants who visited the gynaecologist.

The basic endpoint was taken as the assessment of vaginal symptoms like dryness of the vaginal area, its itching or irritation, pain and soreness on the quality of life of the postmenopausal women in the previous month; the DIVA questionnaire contains 23 items grouped into domain scales like assessing the activity of daily life; the scale was 1, 2, 3, 4 & 5, 6, 7, 8 and 9 were taken for the emotional wellbeing, for assessment

of sexual functioning shortly scale 10, 11, 12, 16, and 18, for the assessment of long term the version was from 10-18 scale, The self-perception and image of the body by items 19-23. For assessing the sexual functioning domain, the questionnaire had two scales, i.e., long and short-term. All of the participants filled out short versions, while the long version was only for those who were sexually active in the last month. The scale scoring was done on a Likert scale (0-4). Zero was for not at all and 4 for extremely. The mean score was calculated for every scale item to get the total score for the domain. The impact of vaginal symptoms was assessed from the score of the domains; a higher score showed a greater impact. The DIVA scale was translated into Urdu for easy to understand by every participant.

Statistical Package for Social Sciences (SPSS) version 21.0 was used for the data analysis. Quantitative variables were expressed as Mean $\pm$ SD and qualitative variables were expressed as frequency and percentages. The median of every domain of the DIVA questionnaire was compared with the women with GSM and without GSM using a nonparametric Wilcoxon signed-rank test. The *p*-value of  $\leq 0.05$  was considered significant.

### RESULTS

A total of 410 postmenopausal women were taken in the study. The participants included those from 30-60 years of age. The mean age of the participants was reported to be 57.8 $\pm$ 7.2 years. The mean of last menstruation was experienced at 9.3 $\pm$ 6.9 years before participating in the study. The maximum reported natural menopause was 370(90.2%); 173(42.2%) of them reported very good health status, and 144(35.1%) reported good opinion of health status. Sexual activeness was reported by 303(74%) of the participants. A routine check-up was reported as the main reason for the visit to the gynaecologist, which was found to be 243(59.2%). The previous diagnosis of VVA or GSM was reported in 172(42%) of the participants, while 238(58%) were diagnosed by the gynaecologist at the time of check-up. At least one vaginal symptom was reported in 401(97.8%) of the participants, and they filled out the DIVA questionnaire. Out of that 401 participants, 258(64.3%) were found sexually active in the last month. A total of 302(75.3%) were reported with vaginal symptoms, and GSM was also diagnosed in them, while 99(24.68%) were found to have no diagnosis of GSM. The women's

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gynaecological pathology history is explained in detail in Table-I.

**Table-I: Gynecological Pathologies of Women (n=410)**

Gynecological Pathology	n (%)
Vulvovaginal atrophy or Genitourinary syndrome	172(42)
Stress incontinence	102(24.8)
Recurrent urinary tract infection	51(12.4)
Vaginal prolapse	45(10.9)
Mixed incontinence	21(5.2)
Overactive bladder	19(4.6)

The assessment of the impact of GSM on the functioning, well-being and quality of life is shown from the median score of each parameter of the domain scale of the DIVA questionnaire in all the postmenopausal women who filled out the questionnaire. The long-term sexual function domain scale showed the highest median score, i.e., the reported score was Median 2(1-3); the short version of sexual function reported the second highest score, Median 2(1-3), and the median for self-perception and body image reported as 2(1-3). Daily living activity and emotional well-being were assessed with a median of 1(0-2) and 1(0-2), respectively, on the domain scale. A High score showed greater symptoms. The assessment of all these domains with and without GSM was also done. The score was significantly high ( $p<0.001$ ) reported in the women with GSM compared to those without GSM. The complete details of every domain are shown in Table-II.

**Table-II: Descriptive Analysis of the Five Components of "Day-to-Day Impact of Vaginal Ageing" (DIVA) Index (n=410)**

Day to day impact of Vaginal Aging	Minimum	Maximum	Mode	Median	Inter Quartile Range
Activity of daily life score	0	2	2	1	0-2
Emotional wellbeing score	0	2	2	1	0-2
Assessment of sexual functioning shortly	1	3	2	2	1-3
Assessment of sexual functioning complete	1	3	3	2	1-3
Self-perception and image of the body assessment	0	3	3	2	1-3

**Table-III: Comparison of Median Values of Five Different Components of Day-to-Day Impact of Vaginal Aging Index (DIVA) between Subjects Categorized in with Genitourinary Syndrome of Menopause" and "Without Genitourinary Syndrome of Menopause (n=410)**

Day to Day Impact of Vaginal Aging Questionnaire Sections	Median and Inter Quartile Range		p-value
	Without Genitourinary Syndrome of Menopause	With Genitourinary Syndrome of Menopause	
Activity of daily life score	0(0-1)	1(1-2)	<0.001
Emotional wellbeing score	1(0-1)	2(1-2)	<0.001
Assessment of sexual functioning shortly	1(1-2)	2(2-3)	<0.001
Assessment of sexual functioning complete	1(1-2)	2(1.5-3)	<0.001
Self-perception and image of the body assessment	1(0-2)	2(1-3)	<0.001

### DISCUSSION

According to this study, GSM had a negative impact on daily living activities, Relationships and

quality of life, which reflects several surveys done in the past.<sup>12,13</sup> WHO has projected that an estimated 1.2 billion women will show a cohort of over 50 years in Age-gender pyramid by 2030.<sup>14</sup> An international survey was conducted by VIVA (Vaginal Health Insight View and Attitude) from 3520 participants with an age range of 55-65 years from Britain, the US, Finland, Norway, Denmark, Canada and Sweden.<sup>15</sup> The survey results showed that 45% of the participating women had experienced vaginal symptoms, and 32% never consulted for gynaecologist help. The survey results also explore that vaginal atrophy was found in the majority, i.e., 75%, which negatively impacts their lives. Sexual intimacy was reported in 64%, Relationships with partners were reported in 32%, the overall quality of life was also reported in 32% while feeling healthy was found in 21%, and the impact on feeling attractive was reported in 21% of women. Another survey was also conducted from this region named CLOSER (Clarifying Vaginal Atrophy's Impact on Sex and Relationships), which was collected from 4100 women from nine countries, also showed close parallel results as of that survey.<sup>16</sup>

This study results by using a DIVA questionnaire matching the literature. Vaginal symptoms impacted the quality of life and wellbeing. Sexual functioning was found to be highly impacted, followed by self-perception and domain scale of body image. The vaginal symptoms highly impact the sexual functioning mainly in sexually active females, which

also indicates that staying sexually active after menopause is healthy and important for general health and important for successful ageing. The QOL associated with sexual functioning was also

demonstrated in the REVIVE survey and several other surveys.<sup>17,18</sup>

Results of this study also confirmed that the vaginal symptoms had smaller impact on daily living activities and wellbeing. Daily living activities were mostly reported with general aspects rather than GSM, i.e., physical appearance, fats, and physical activities. Additionally, some women misidentified their emotional wellbeing with body image or self-perception. Many women assume that vaginal symptoms are an ageing factor. Interestingly, all the sub-domains of the DIVA questionnaire were significantly higher in GSM Women than non-GSM women, indicating the relationship between GSM and QoL in postmenopausal women. Ghandi *et al.* study showed that for improvement of sexual health and QoL, vaginal moisturizers and low-dose vaginal estrogen are also helpful.<sup>19</sup>

This survey also highlights the important issues that need to be evaluated during the diagnosis and management of GSM. Gynaecologists and other related medical staff value the importance of GSM for the QoL and its understanding of managing it properly. There is a need to assess premenopausal and postmenopausal women in routine and guide them in the management to overcome health issues. It is important for sexual health. Unfortunately, sexual health issues are mostly avoided in medical consultations.

## CONCLUSION

The quality of life of postmenopausal women, their well-being and functioning are impacted by the vaginal symptoms, specifically their sexual function, body image and self-esteem. A scientifically higher impact was found in the women with GSM compared to those without GSM. This condition can be easily manageable with available treatment. The affected QoL of women can be easily improved by managing this problem.

**Conflict of Interest: None.**

## Authors' Contribution

Following authors have made substantial contributions to the manuscript as under:

AB & NA: Data acquisition, data analysis, drafting the manuscript, critical review, approval of the final version to be published.

TY & FZ: Study design, data interpretation, drafting the manuscript, critical review, approval of the final version to be published.

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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