

## Gynaecological morbidities among ever married women: A community based study in Nanded city, India.

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**Abstract:** **Background:** Women's health has always remained neglected because of the traditional reductionist approach to women health research. A significant lacuna persists in understanding the factors influencing gynaecological morbidity as well as consequences for women's lives. Gynaecological diseases cover a range of conditions with a wide spectrum of lethality, chronicity and a substantial impact on women's quality of life.

**Objectives:** To study the prevalence of gynaecological morbidities and its association with some socio demographic and reproductive factors among ever married women of reproductive age group **Methodology:** Study Design: Community based cross sectional descriptive study. Study Period: January 2011 to June 2012.

Sampling Procedure: Probability proportionate sampling using 30 stage cluster sampling technique. Sample Size: 750 ever married women from 15 – 49 years age group **Results:** Prevalence of gynaecological morbidities was 568(75.73%). Mean gynaecological morbidities were 1.22. Majority 281(37.47%) study subjects had one gynaecological morbidity. Menstrual disorders 351(46.8%) was the most common gynaecological morbidity.

There was a significant difference between the proportions of study subjects with gynaecological morbidities with respect to their age, educational status, age at menarche and duration marriage. **Conclusions:** There was high prevalence of gynaecological morbidities among study subjects with about 50% suffering from more than one gynaecological morbidities.

**Keywords:** Gynaecological Morbidities, Married women, Menstrual disorders

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### I. Introduction

Reproductive health, a crucial aspect of general health is of significant importance for human development especially for women particularly during the reproductive years. Although most reproductive health problems arise during the reproductive years, in old age general health continues to reflect earlier reproductive life events. Failure to deal with reproductive health problems in terms of obstetric or gynecological disorders at any stage in life sets the scene for later health and developmental problems.<sup>[1]</sup>

Maternal mortality has long been the only indicator for women's health even though reproductive morbidity occurs far more frequently and seriously affects women's lives. The pattern of disability adjusted life years (DALYs) lost from reproductive ill health either due to premature mortality or morbidity associated with obstetric or gynecological disorders is substantially different from that for deaths alone.<sup>[2]</sup>

Gynaecological diseases cover a range of conditions with a wide spectrum of lethality and chronicity and a substantial impact on women's quality of life. Racial and geographic variations in disease and social conditions mean that biomedical as well as social science perspectives should come together in providing consistent information for policy makers on this important aspect of women's health.<sup>[3]</sup>

According to WHO, reproductive ill health accounts for 36.6 per cent of the total disease burden among women aged 15 to 45 years at global level.<sup>[4]</sup> In India, though there are not many studies on women's reproductive morbidity in terms of gynecological diseases, the available data indicate high prevalence in comparison to other developing and its neighboring countries.<sup>[5]</sup> Almost 39 percent of currently married women in India report at least one reproductive health problem related to vaginal discharge, urination or intercourse.<sup>[6]</sup>

Although a few studies have been conducted in this field, but most of them are based on information obtained from clinics or hospitals. Large proportion of women does not visit health facilities unless the disease becomes serious. So, the results from hospitals or clinics do not reflect the magnitude of the disease burden. The statistics provided by the hospitals are based on biomedical causes only, but information on social, economic and demographic determinants are rare.<sup>[7]</sup>

A significant lacuna persists in understanding the factors influencing gynaecological morbidity as well as consequences for women's lives. Studying the prevalence of these morbidities helps in identifying the magnitude of such problems in the community. It identifies special at-risk groups to whom interventions should be directed as well as the most prevalent or serious problems. A community-based assessment also helps to identify the social context of morbidity.<sup>[8]</sup>

Thus, it is necessary to work beyond pregnancies and related complications and pay attention on all aspects of women reproductive health. Considering the above facts in the mind present study was carried out to study profile of some aspect of gynaecological morbidities.

## **II. Objectives**

To study the prevalence of gynaecological morbidities and its association with some socio demographic and reproductive factors among ever married women of reproductive age group.

## **III. Material & Methods**

- a. Study Design: It was a community based cross sectional descriptive study with hospital based laboratory investigations.

3.2) Study Period: The study was conducted during January 2011 to June 2012.

3.3) Study Site and Population: The study was conducted in Nanded city in Maharashtra state. The total population of the city was 430733 distributed in 65 Municipal Corporation Wards. The Municipal Corporation is further organized into five geographical divisions for effective service delivery and management.<sup>[9]</sup>

3.4) Sample Size and Sampling Procedure: Reproductive ill health accounts for 36% of disease burden in Indian women.<sup>[10]</sup> Thus considering this prevalence, sample size<sup>[11]</sup> was calculated using formula:  $N = z^2 X p X (1 - p) / e^2 = 4 X 36 X 64 / (3.6)^2 = 711$ , 5% population added to 711 as non response, incomplete answers. Thus the final sample size came to 750.

(In above equation,  $z = 1.96$  for 95% confidence interval,  $N = \text{size of study population}$ ,  $p = \text{estimated proportion in study population}$ ,  $e = \text{allowable error which is considered here as 10\% of total prevalence}$ )

Probability proportionate sampling method with 30 stage cluster sampling technique was used for selecting the study population.<sup>[12]</sup> Estimating 25 study subjects from each ward, 30 wards were selected for entire sample of 750 study subjects.

3.5) Inclusion Criteria: 1) Ever married women of reproductive age group (15-49 years) 2) Women who have given voluntary consent for participating in study.

3.6) Exclusion Criteria: 1) Pregnant women 2) Women within puerperal period (< 42 days of delivery) 3) Seriously ill women (not related with gynaecological morbidities) 4) Non-resident women (those residing < 6 months in ward) 5) Failure to follow up for investigations

3.7) Data Collection Process: The study was approved by Institutional Ethical Committee. Participation in the study was purely on voluntary basis. Before start of the study, all subjects were assured of confidentiality about information obtained from them and privacy during examination and a written consent was obtained from them.

3.7.1) Rapport building with the community: Before starting the field survey, a good rapport was built with the community with the help of health care workers (i.e. social worker, Anganwadi workers, link workers etc.) who work in close contact with community.

3.7.2) Field survey: The face to face interview was carried out in local language (*Marathi/ Hindi*). Data was collected using pre-designed and pre-tested semi-structured questionnaire.

3.7.3) Study Variables: Socio-demographic characteristics of study subject were recorded. Information regarding age at menarche, age at first pregnancy, no. of pregnancies, no. of abortions, and gynaecological problem in women like details of vaginal discharge, menstrual irregularity, type of bleeding, age at menopause, fertility related problems, h/o anything coming out through vagina, continuous passage of urine or micturition during sneezing or coughing etc. was also asked for and detailed gynaecological examination was performed

3.7.4) Laboratory investigation: The investigations performed for confirmation of diagnosis of various gynaecological morbidities were vaginal swab examination for bacterial vaginosis, candidiasis, and trichomoniasis (vaginal pH examination, wet mount, KOH mount, Whiff test and Gram stain), endocervical swab examination for gonorrhoea (Gram stain), urine microscopy, RPR test for syphilis & Pap test for cervical malignancy.<sup>[13]</sup>

3.8) Analysis: Data analysis was carried out with the help of statistical measures, such as percentages, proportion, chi square test and chi square test for trend using software Graph Pad Prism Version 5.01 and Open Epi Version 2.3.

## **IV. Results**

The mean age of study subjects was 31.47 years. Majority 324(43.2%) study subjects were from age group 25 – 34 years, 693(92.4%) were married, 198(26.4%) had taken secondary education. 560(74.67%) study subjects were housewives while 190(25.33%) were working women. Majority 537(71.6%) of study subjects belong to Modified BG Prasad socioeconomic class V followed by 128(17.07%) belongs to class IV. Most of study subjects 394(52.53%) were Buddhist by religion followed by 211(28.13%) Hindus and 127(16.93%) Muslim. 18(2.4%) study subjects belong to other religion like Jain, Christian, Sikh. Majority 417(55.6%) study subjects were from nuclear family followed by 225(30%) from three generation family and 108(14.4%) from joint family.

TABLE 1: Distribution of study subjects according to socio-demographic variables (n = 750)

Sr. No.	Socio-demographic variables	No. of study subjects (%)	
1)	Age (Years)	15 – 19	35(4.67)
		20 – 24	115(15.33)
		25 – 29	169(22.53)
		30 – 34	155(20.67)
		35 – 39	127(16.93)
		40 – 44	83(11.07)
		45 – 49	66(8.80)
2)	Marital status	Married	693(92.4)
		Widowed	20(2.67)
		Separated	37(4.93)
3)	Education	Illiterate	196(26.13)
		Primary	75(10)
		Middle	159(21.2)
		Secondary	198(26.4)
		Higher secondary	86(11.47)
		Graduate & PG	36(4.8)
4)	Socioeconomic status (Modified BG Prasad Classification)	Class I	17(2.27)
		Class II	28(3.73)
		Class III	40(5.33)
		Class IV	128(17.07)
		Class V	537(71.6)

Among all 750 study subjects, 568(75.73%) had gynaecological morbidities while 182(24.27%) had no gynaecological morbidities. Mean gynaecological morbidities among study subjects were 1.22. Majority 281(37.47%) study subjects had one gynaecological morbidity followed by 229(30.53%) had two gynaecological morbidities while only 3(0.40%) had more than three gynaecological morbidities.

Menstrual disorders 351(46.8%) was most common gynaecological morbidity among 750 study subjects followed by reproductive tract infection in 189(25.2%) and pelvic organ prolapse in 114(15.2%). Regarding other gynaecological morbidities, 87(11.6%) subjects had infertility, 61(8.13%) had cervical dysplasia, 44(5.87%) had stress urinary incontinence, 30(4.0%) had urinary tract infections, 26(3.47%) had premature menopause, 8(1.07%) had pelvic inflammatory disease while 5(0.67%) had fistula. Uterine malformation 1(0.13%) was least common gynaecological morbidity.

TABLE 2: Distribution of study subjects according to types of gynaecological morbidities (n = 750)

Gynaecological morbidities	No. of study subjects (%)
Reproductive tract infection	189(25.2)
Menstrual disorders	351(46.8)
Pelvic organ prolapsed	114(15.2)
Infertility	87(11.6)
Pelvic inflammatory disease	08(1.07)
Stress urinary incontinence	44(5.87)
Cervical dysplasia	61(8.13)
Urinary tract infection	30(4.00)
Premature menopause	26(3.47)
Uterine malformation	01(0.13)
Fistula	05(0.67)

\* The study subjects reported more than one gynaecological morbidities.

Out of 169 study subjects of 25 – 29 years age group, 118(69.82%) had gynaecological morbidities. Out of 127 study subjects of 35 – 39 years age group, 105(82.68%) had gynaecological morbidities. The difference between proportions of gynaecological morbidities with respect to age of study subject was found to be statistically significant ( $p < 0.05$ ). The proportion of study subjects with gynaecological morbidities increases significantly with increase in age. ( $p < 0.0001$ )

Table 3: Association between gynaecological morbidities & age of study subjects (n = 750)

Age of women (years)	Gynaecological morbidities		Total (%)
	Present (%)	Absent (%)	
15 – 19	24(68.57)	11(31.43)	35(100)
20 – 24	77(66.96)	38(33.04)	115(100)
25 – 29	118(69.82)	51(30.18)	169(100)
30 – 34	118(76.13)	37(23.87)	155(100)
35 – 39	105(82.68)	22(17.32)	127(100)
40 – 44	72(86.75)	11(13.25)	83(100)
45 – 49	54(81.82)	12(18.18)	66(100)
Total	568(75.73)	182(24.27)	750(100)

( $\chi^2 = 19.16$ , df = 6, p = 0.0039, Significant)  
 $\chi^2$  test for trend = 16.09, df = 1, p < 0.0001, Significant)

Out of 196 illiterate study subjects, 157(80.1%) had gynaecological morbidities. Out of 86 study subjects with higher secondary education, 70(81.4%) had gynaecological morbidities. Out of 36 graduate and post graduate study subjects, 25(69.44%) had gynaecological morbidities. The difference between proportions of gynaecological morbidities among study subjects was found to be statistically significant according to their educational status. (p < 0.05)

TABLE 4: Association between gynaecological morbidities & education

Education	Gynaecological morbidities		Total (%) (n = 750)
	Present (%)	Absent (%)	
Illiterate	157(80.10)	39(19.90)	196(100)
Primary	56(74.67)	19(25.33)	75(100)
Middle	127(79.87)	32(20.13)	159(100)
Secondary	133(67.17)	65(32.83)	198(100)
Higher secondary	70(81.4)	16(18.6)	86(100)
Graduate and Post graduate	25(69.44)	11(30.56)	36(100)
Total	568(75.73)	182(24.27)	750(100)

( $\chi^2 = 13.74$ , df = 5, p = 0.0174, Significant)

Out of 175 study subjects attaining menarche up to 12 years of age, 146(83.43%) had gynaecological morbidities. Out of 225 study subjects attaining menarche at or more than 15 years of age, 162(72%) had gynaecological morbidities. The difference between proportions of gynaecological morbidities among study subjects was statistically significant according to age at menarche. (p < 0.05) The proportion of gynaecological morbidities among study subjects decreases with increase in age at menarche. (p < 0.05)

TABLE 5: Association between gynaecological morbidities & age at menarche (n = 750)

Age of menarche (years)	Gynaecological morbidities		Total (%)
	Present (%)	Absent (%)	
≤ 12	146 (83.43)	29(16.57)	175(100)
13 – 14	260(74.29)	90(25.71)	350(100)
≥ 15	162(72)	63(28)	225(100)
Total	568(75.73)	182(24.27)	750(100)

( $\chi^2 = 7.744$ , df = 2, p = 0.0208, Significant)  
 $\chi^2$  test for trend = 6.559, df = 1, p = 0.0104, Significant)

Out of 172 study subjects married till 14 years of age, 140(81.4%) had gynaecological morbidities. Out of 82 study subjects married at 19 - 20 years of age, 58(70.73%) had gynaecological morbidities. The proportion of gynaecological morbidities among study subjects decreases with increase in their age at marriage. (p < 0.05)

TABLE 6: Association between gynaecological morbidities & age at marriage

Age at marriage (years)	Gynaecological morbidities		Total (%) (n = 750)
	Present (%)	Absent (%)	
≤ 14	140(81.4)	32(18.6)	172 (100)
15 – 16	216(76.06)	68(23.94)	284(100)
17 – 18	113(76.35)	35(23.65)	148 (100)
19 – 20	58(70.73)	24(29.27)	82 (100)
≥ 21	41(64.06)	23(35.94)	64 (100)
Total	568(75.73)	182(24.27)	750(100)

( $\chi^2$  test for trend = 7.857, df = 1, p = 0.0005, Significant)

Out of 255 study subjects married since less than 10 years, 176(69.02%) had gynaecological morbidities. Out of 175 study subjects married since 21 - 30 years, 145(82.86%) had gynaecological morbidities. The difference between proportions of gynaecological morbidities among study subjects was statistically significant according to duration of marriage. ( $p < 0.05$ ) The proportion of morbidities among study subjects increases with increase in duration of marriage. ( $p < 0.05$ )

TABLE 7: Association between gynaecological morbidities & duration of marriage (n = 750)

Duration of marriage ( years)	Gynaecological morbidities		Total (%)
	Present (%)	Absent (%)	
≤ 10	176(69.02)	79(30.98)	255(100)
11 – 20	220(76.12)	69(23.88)	289(100)
21 – 30	145(82.86)	30(17.14)	175(100)
≥ 31	27(87.10)	04(12.90)	31(100)
Total	568(75.73)	182(24.67)	750(100)

( $\chi^2$  = 13.29, df = 3, p = 0.0041, Significant)

( $\chi^2$  test for trend = 13.19, df = 1, p value = 0.0003, Significant)

## V. Discussion

Gynecological health is an important component of any woman's health status. Gynecological disorders can have a substantial impact on many aspects of quality of life, including reproductive ability, sexual functioning, mental health, and the ability to work and to perform routine physical activities. Such studies have a pronounced impact in settings where no information on gynaecological morbidities exists and where there is an absence of consensus on the extent of such morbidity.

In the present community based study carried out among 750 study subjects, 568(75.73%) had gynaecological morbidities while 182(24.27%) had no gynaecological morbidities. Prevalence of gynaecological morbidities in present study was similar with study by Dangal Ganesh [14] 5893(76.2%) and Sehgal Alka et.al. [15] 163(72.7%) while in study conducted by Sogarwal Ruchi et. al. [16] 3192 (46%) and Prasadet Jasmine Helen et. al. [17] 266(59%) prevalence was lesser and Tehrani Fahimeh Ramezani et. al. [18] 887(79.4%), and Bang R.A. et. al. [19] 599(92.2%) prevalence was higher than our study.

Mean gynaecological morbidities among our study subjects were 1.22. Average gynaecological morbidities in study conducted by Rathore Monika et. al. [20] (1.18) and Garg Suneela et. al. [21] (1.02), were similar with present study while in contrast Bang R. A. et. al. [19] had mean gynaecological morbidities (3.6). Majority 281(37.47%) study subjects had only one gynaecological morbidity. Women generally ignores early symptoms of any gynaecological problem which latter results into involvement of more than one reproductive organs resulting into more than one gynaecological problem simultaneously.

Menstrual disorders 351(46.8%) was most common reproductive morbidity among study subjects followed by reproductive tract infection in 189(25.2%), similar to our findings study done by S. Zafer [22] & Bonetti T.R. [23] had menstrual irregularity most common gynaecological morbidity among 4464(41.1%), 735(36.2%) women resp. followed by reproductive tract infection in 3051(27.8%) & (11.1%) women. Prevalence of reproductive tract infection 189(25.2%) was similar as findings of Khatri R. B. [24] (23.5%), and UNFPA in Nepal [13] 580(28%). Pelvic organ prolapse was seen in 114(15.2%) women similar to (15%) in Khatri RB [24], 136(10%) in Asya Al Riyami [8] and 207(10%) in UNFPA in Nepal studies [13]. Majority of women with menstrual disorders remain undiagnosed in the community as they were not perceived as health problem. Women generally do not consult to health personnel for menstrual problems thus it persists in the community in large proportion.

87(11.6%) women had infertility similar finding was seen in study done by R. A. Bang [19] 44(6.76%), UNFPA in Nepal [13] 150(7.4%) and Ganesh Dangal [14] 719(9.3%). While in contrast prevalence was less among study done by Suneela Garg et. al. [21] 14(6.1%) & Monika Rathore [20] 57(5.7%). 08(1.07%) women had pelvic inflammatory disease. Finding was similar with study done by Indra P. Kambo [25] 1400(1.5%), while in other similar studies prevalence of PID was more, such as study by Monika Rathore [20] 164(15.7%) & Jasmin Helen Prasadet [17] 28(6%). Stress urinary incontinence was seen in 44(5.87%) women in contrast with study conducted by Begüm Özeli [26] 51(21.7%).

Cervical dysplasia was prevalent among 61(8.13%) women similar with M Temmerman [27] 63(12%) Radha Y. Aras [28] 88(14%) and UNFPA Nepal [13] 53(16%) while Ca. cervix was absent in women similar to studies by Asya Al Riyami [8] & R. A. Bang [19]. Urinary Tract Infection was seen in 30(4%) women similar with studies conducted by Mary E. Deeb [29] 20(3.8%) & R. A. Bang [19] 26(4%). In contrast, Urinary Tract Infection more prevalent in studies by Jasmin Helen Prasadet [17] 31(7%) and Asya Al Riyami [8] 150(11%), and less in Monika Rathore [20] 10(0.96%). Premature menopause was seen among 26(3.47%) women greater than findings of J.L. Luborsky [30] 126(1.1%) study and less than among S. Zafar [22] 933(8.6%).

In present study, there was a significant difference between the proportions of study subjects with gynaecological morbidities with respect to their age, educational status, age at menarche and duration marriage. The proportion of study subjects with gynaecological morbidities increases with increase in their age and duration of marriage. In the study of Akl Ola A. et. al. [2] significant association was found between gynaecological morbidities and age of women, education and duration of marriage. Sagarwal Ruchi et. al. [16] found significance with age of women only; while Parikh Indumati et. al. [31] found significance with education . With increasing age women experience more sexual life, pregnancies, gynaecological surgeries and deliveries, etc. which make women vulnerable for gynaecological morbidities. Early age of menarche may be associated with poor menstrual hygienic practices further responsible for gynaecological problems. The women who are exposed to sexual activity at biologically immature age are more vulnerable to gynaecological morbidities compared to those who enter late in conjugal union. Long marital duration is associated with high parity and in turn higher gynaecological morbidities among reproductive age group women in developing countries. The illiterate and less educated women suffer from high gynaecological morbidity burden due to lack of information and awareness about gynaecological morbidity.

## VI Conclusions

In present study prevalence of gynaecological morbidities was 75.53%. 50% women in the community were diagnosed with two or more gynaecological morbidities. The proportion of study subjects with gynaecological morbidities increases significantly with increase in age. Gynaecological morbidities were more common among illiterate and less educated women. Early age of menarche if associated with poor hygienic practice may result into development of gynaecological morbidities. Some investigations and examinations like Ultrasonography, Antigen testing, Urine culture, Pad test etc. which are important for diagnosing gynaecological morbidities were not performed in our study due to feasibility and recourse constrain.

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