ORIGINAL ARTICLE
pISSN 0976 3325 | eISSN 2229 6816
Open Access Article
www.njcmindia.org

A Community Based Cross Sectional Study of Morbidity Pattern among Reproductive Age Group Women in Jamnagar District, Gujarat

Trusha Kansagra[1], Mittal Rathod[1], Mehul Kaliya[2], Amrita Sarkar[3], Sumit Unadakat[4], Dipesh Parmar[5]

Financial Support: None declared
Conflict of Interest: None declared

How to cite this article:

Author's Affiliation:
[1]Tutor; Dept of Community Medicine; [2]Asst Prof, Medicine Dept., Shree M P Shah GMC, Jamnagar; [3]Senior Resident, Dept of Community Medicine, NEIGRIHMS, Shillong, Meghalaya; [4]Asso Prof; [5]Prof & Head, Dept of Community Medicine, Shree M P Shah GMC, Jamnagar.

Correspondence
Dr. Mittal Rathod
dr.mittal74@gmail.com

Date of Submission: 18-04-18
Date of Acceptance: 05-06-18
Date of Publication: 30-06-18

ABSTRACT

Background: The study was conducted to identify current & past morbidity prevalence & pattern of morbidity & associated factors.

Methods: A community based cross-sectional study was conducted among 450 women of reproductive age group of Jamnagar district.

Results & Conclusion: Prevalence of morbidity was about 64% currently & about 70% in past one year. Mean age of occurrence of any illness was around 32 years. Currently most common illnesses were weakness, URTI. There was significant association between no. of family members & occurrence of any episode of diarrhoea, warm infestation, URTI. In past year, weakness, anorexia, abdominal pain were common complaints. 12% had past history HT, where as about 8% had past history of DM. On clinical examinations, 24% had pallor; about 60% had BMI ≥23 kg/m^2. 20.5% had high SBP & 5.3% had high DBP.

Conclusion: Mean age of occurrence of illness in last month was 32.38 years, which focuses on periodic check up of women after age of 30 years by grass root health workers & when needed should be referred. It needs community participation as well as community involvement.

Key words: Reproductive age group, Morbidity, Pattern, Prevalence

INTRODUCTION

Women of reproductive age group refer to all women aged 15-49 years. [1] If India intends to accomplish the goal of health for all, far greater attention must be given to women's health and their roles in health and development [2] because maternal health affects the health as whole of family as well as community and thus society. Woman is the nucleus for the growth of family and the community. Promoting women's health bears a hand to the well being of communities and countries. So, considering the RCH services started long back mainly focuses on the Reproductive health profile & the statistics are published regarding the mortality only. As far as health is considered, it is not only the reproductive health but as a state of complete physical, mental & social wellbeing and not merely an absence of disease or infirmity. Women silently suffer from large number of reproductive illnesses called as salient epidemic.[3]While looking at various health programmes related to the reproductive health, majority of them targeted to reduce the mortality. Keeping in view the above stated problems, there is a need of conducting studies which can assess the overall health of reproductive women. Women are more liable to get undiagnosed because of ignorance, non frequent visits to health care centre & major occupation being home maker.

Aim & Objective: The study was conducted to identify current & past morbidity prevalence & pattern of morbidity & associated factors.

MATERIALS & METHODS:

The present cross sectional study employed quantitative research methodology in rural areas of study district from 1 year (July 2013- June 2014) Sample size of this study was decided on the basis of half proportion of reproductive age group women in the population might be suffering of any illness or not.

As per WHO practical manual on sample size determination in health studies by Lwanga and Lemeshow.[4] N = ZαPQ/l2 Where, Zα =1.96 at 5% significance level, N= required sample size, P=proportion or prevalence of interest, Q=100-p, L=allowable error. An anticipated p value is taken as 50% as per WHO practical manual on sample size determination in health studies by Lwanga and Lemeshow. P is taken as 50%, so as q=50%. If l=10%, Then, sample size would be, N = 4x50x50/5x5 = 400. Non-response rate/loss of sample = 10% of sample size so, total sample size comes out to be 440 for the study. To make round figure, 450 study subjects were chosen. Thus the study group comprised of 450 women of reproductive age group of rural areas of study district. The study protocol was reviewed and approved by the institutional ethical committee of the institution. Prior written informed consent was taken after fully explaining the purpose of the study. Ever Married, Reproductive age group women (15-49 years), those who were willing to participate, Not Pregnant Presently women were considered for inclusion criteria in the study.

Study subjects were selected by multistage sampling. Out of the total 7 blocks in the district, 3 blocks were selected randomly. Five Primary Health Centres were selected from each of the blocks by simple random sampling. From each PHC, three sub centres were selected by simple random sampling method. So total 45 sub centres were selected from 3 blocks. Sub centre was taken as natural cluster. From the one geographically identified point, one direction was chosen randomly and from each area 10 women were selected and interviewed till the desired number was achieved. So, total 450 women were recruited from rural area. Data were collected in a pre-designed and pre-tested Proforma by interviewing woman. The study was carried out by undertaking house to house visits. Proforma consisted sociodemographic profile & morbidity profile. Whenever there was a felt need of probing questions, various probes were used. Following completion of one to one interview, counselling was done to accomplish the lacunas. The data entry was done in Microsoft Office Excel 2007.Analysis was done using Epi info and Microsoft office Excel2007 & SPSS. Proportions are used as descriptive statistics. Difference between means was tested by student's t test. Qualitative variables are subjected to chi square test. P value ≤ 0.05 is considered as statistically significant.

RESULTS

There was even distribution in almost all Age group of reproductive age group women except for15-19 years and 40-44 years. Majority belonged to middle and lower socio economical class. Higher literacy rate among husbands of participants (71.43%) than females (56%).Most Women were engaged in house hold activities (74%) where as their husbands were engaged in labour work (40.81%), some kind of business (20.40%), farming (14.81%).

The prevalence of illness in last one month was 64.44% with some kind of illness while for last year 70% have had suffering from any kind of morbidity. When looked at the mean age of occurrence of illness in last one month, it was 32.38 years, which was not statistically significant. Whereas mean age of occurrence of illness in last one year, it was 32.95 years, whereas mean age of non occurrence of illness in last year was 30.13 years, which was statistically significant.

Table 1: Distribution of women according the mean age & their illness in last 1 month & last 1 year

Illness	Mean age (yrs)	P value	Mean difference (95% CI)
Illness in last one month			
Yes	32.38	0.393	0.763 (0.991- -2.517)
No	31.61		
Illness in last one year			
Yes	32.95	0.002	2.816 (1.001-4.631)
No	30.13		

Table 2: Distribution of women according to their illness in last 1 month (Current Morbidity pattern)

Any Illness	Frequency* (%)
Weakness	281 (62.44)
URTI	180 (40)
Fever	153 (34)
Headache	153 (34)
Backache	126 (28)
Diarrhoea	90 (20)
Worm infestation	63 (14)

* Multiple Responses

Table 3: Distribution of various illnesses with different numbers of family members

Illness	Family Members			P value
	≤2	3-5	≥6	
Any episode of Diarrhoea				
Yes (90)	9 (10)	36 (40)	45 (50)	0.039
No (360)	18 (5)	191 (54)	151 (41)	
Worm Infestation				
Yes (63)	9 (14.3)	18 (28.6)	36 (57.1)	<0.001
No (387)	18 (4.6)	209 (54)	160 (41.4)	
Upper Respiratory Tract Infection				
Yes (180)	9 (5)	90 (50)	81 (45)	<0.001
No (270)	18 (6.67)	137 (50.7)	115 (43)	

Table 4: Distribution of women according to their illness in last 1 year

Any Illness	Frequency (%)
Weakness	315 (70)
Anorexia	180 (40)
Abdominal Pain	137 (30.44)
Acute peptic Disease	117 (26)
Dental Problem	90 (20)
Ophthalmic Problem	45 (10)
Ear Problem	36 (8)
Constipation	35 (7.78)
Arthritis	26 (5.77)
HT	23 (5.11)
Tuberculosis	18 (4)
Skin Disease	17 (3.78)
Diabetes	14 (3.11)
Asthma	10 (2.22)
IHD	3 (0.67)

Table 5: Distribution of women according to their general examination findings:

Clinical signs	Frequency (%)
Pallor	108 (24)
Body Mass Index	
<18.5 (Underweight)	37 (8.22)
18.5-23 (Normal Range)	139 (30.89)
23-24.99 (Normal Range)	93 (20.67)
25-29.99 (Obese class-I)	143 (31.78)
30.00-34.99 (Obese class-II)	38 (8.44)
Blood pressure measurement	
<120	123 (27.3)
120-139	235 (52.2)
140-159	85 (18.9)
≥160	07 (1.6)
<80	156 (34.7)
80-89	270 (60.0)
90-99	24 (5.3)
≥100	0 (0)
Past History	
DM	36 (8)
HT	54 (12)
IHD	18 (4)
Hypothyroidism	9 (2)
Appendicectomy	8 (1.77)
Hysterectomy	20 (4.44)

On further analysis about the illness in last one month, most common complaint was weakness in 62.44% subjects, followed by upper respiratory infection in 40%, followed by fever as well as headache in 34% subjects, followed by backache in 28% subjects, followed by diarrhoea in 20% subjects, followed by worm infestation in 14% subjects. Around 20% of the women had some kind of addiction like bajar & chewing tobacco.

Communicable diseases tends to occur where there is overcrowding. One infected member can infect others & it would be the reason for morbidities. In present study, when numbers of family members were compared with various communicable illnesses present in among study subjects, there was spastically significant difference in occurrence of illness with various numbers of family members. Those families who had more than six family members, occurrence of illnesses were as follow: 50% for any episode of diarrhoea, 57.1% for worm infestation, & 45% for URTI.

The illness in last one year, 70% women had complaint of weakness, 40% had anorexia, 30.44% had abdominal pain, 26% had acute peptic disease, 20% had dental problem, 10% had ophthalmic problem like eye pain, watering from eyes, low vision,, 8% had ear problem like ear ache, pus discharge, difficulty in hearing, 7.77% had constipation, 5.77% were diagnosed as having arthritis, 5.11% women were diagnosed as having HT in last year as against total of 12% having past history, 3.11% women were diagnosed as having DM in last year as against total of 8% having past history, 4% had tuberculosis, 0.67% had IHD.

On clinical examination of palpebral conjunctiva, 24% women showed pallor where as 76% women did not. Body mass index (quetelet's index) is an age independent and the same for both sexes. The risk associated with increasing BMI is continuous and graded.[5]

According to the world health organization recommendations a BMI of 18.5-22 kg/m^2 has been considered healthy for asian populations.[6] Recent studies in various parts of india established lower limits for ideal BMI for asian populations. It was shown for urban Indian population that at a BMI of >23kg/m^2 the risk for diabetes was significant for both genders. Therefore the healthy BMI for an Indian is definately below 23 kg/ m^2.[7] It was reason for splitting normal range of BMI in to two parts: 18.5-23 kg/ m^2 & 23-24.99 kg/ m^2. Thus only about 30.89% had normal range BMI. 20.67% considered as high risk group. 40.22% had overweight, which indirectly suggests unhealthy lifestyles had way to rural populations too, which would contribute to the existing burden of non communicable disease.On BP measurement, Out

Table: 6 Distribution of women according to their health seeking behaviour for last month illness: (n=290)

Health seeking behaviour	Participants (%)
Self	193 (66.55)
Relatives	123 (42.41)
ASHA	227 (78.28)
FHW	109 (37.59)
AWW	107 (36.90)
Doctor	177 (61.03)

* Multiple responses

of 450 study subjects, according to systolic BP measurement, 27.3% were normotensive, 52.2% were in pre hypertensive stage, whereas 20.5% where hypertensive, of which 18.9% had stage-I HT and 1.6% had stage-II HT. On BP measurement, Out of 450 study subjects, according to diastolic BP measurement, 34.7% were normotensive, 60% were in pre Hypertensive stage, whereas 5.3% had stage-I HT and none of the subject fall in stage-II HT. Findings of the past history are as follows: 8% had Diabetes Mellitus, 12% had HT, 4% had IHD attack, 2% were diagnosed as Hypothyroidism, 1.77% had appendicectomy and 4.44% had hysterectomy.

DISCUSSION

According to DLRHS-1 (2011), 95.8% were Hindu and 4.2% were Muslim in the same district.[8] According to NFHS-3 (2005-06) data, majority of households in Gujarat were Hindu (91%), Muslims were 9% and other religion was less than1%.[9] According to DLRHS-1, 35.6% women were illiterate in this district[8] and according to census 2011 of India; Literacy rate of females in the same district was 65.97%.[10]

64.44% women suffered from some kind of illness during last month. Ill health during any time leads to loss of daily wedges; affect the health of their child & family, cumulatively it is a reason for DALY. Around one third women suffered from fever, which could be a sign of malaria because study district is an endemic zone for malaria disease. As per NVBDCP[11] 10% of all fever cases tends to be malarial cases. Upper respiratory tract infections complaints like, cough, cold, sinusitis, sore throat, tonsillitis were present in 40% of the women, when it was compared with total numbers of family members, there was statistically significant difference in the occurrence of illness with various no. of family members. Diarrhoea & worm infestation was present in 20% & 14% subjects, respectively, which indirectly suggested the poor hygiene & sanitation. These diseases are social diseases, one member can infect to whole family and others if given the opportunity. There was significant difference in occurrence of illness like diarrhoea & worm infestation with various numbers of family members.

In a study by Umed Patel (2000) in the same district over all occurrence of illness in last month was 28.83%. 18% accounted for URTI, 2.16% had fever, 2% had diarrhoea, 1.16% dysentery, and 3.83% had worm infestation[12] In a WHILA study approximately one-quarter of women had more than seven different somatic complaints. The most common symptoms were pain (headache, back and/or leg pain) and joint problems that were independent of hormonal status. [13] Compared with age-matched men, women have significantly more health-related symptoms.[14, 15]

According to, JAPI supplement overall prevalence of HT among Urban people was 25% & among Rural people was 15%.[16] In present study conducted among rural women found higher prevalence of the hypertension than other studies.

According to, Agrawal VK (2006), prevalence of HT among rural female was 17%.[17] The health care system is also highly concentrated in urban areas. This results in many individuals in rural areas seeking care from unqualified providers with varying results.[18]

CONCLUSIONS & RECOMMENDATIONS:

Mean age of occurrence of illness in last month was 32.38 years, which focuses on periodic check up of women after age of 30 years by grass root health workers & when needed should be referred. It needs community participation as well as community involvement. Around 62% women suffered from weakness; which are common symptoms of low levels of micronutrient deficiency like iron, folic acid & calcium. It also leads to the opportunity for other infections too by lowering over all immunity. Around 80% contacted ASHA, a village level health care provider for their complaints, is a good sign of community participation & it is an effective way of managing such illnesses at grass root level. It shows faith of people in the public health services. Involvement of FHW & AWW was found in around 36-38% of the subjects for their consultation. 61.03% consulted to doctor directly for their illnesses. Only about 30.29% had normal BMI. On Systolic Blood Pressure measurement, 20.5% were diagnosed as Hypertension, of which 18.9% had stage-I HT and 1.6% had stage-II HT. 52.2% were in pre hypertensive stage. Only 27.3% were normo tensive, which also suggests prevalence of unhealthy life styles. Periodic health profile assessment can be utilised for prevention of occurrence of health problems. Early

access to health facility can be explained by grass root health workers.

Limitation of Study

Relative small sample size limits its possibility of generalizability. Multi centric study & systemic review & Meta analysis can give better results. Other components of health like social health, mental health were not able to evaluate.

REFERENCES

1. World Health Organization, Geneva. Reproductive health indicators ; guidelines for their generation, interpretation and analysis for global monitoring, WHO; Dept. of Repro health & Research 2006, chapter-2, pg 9.
2. K.park, Park's text book of preventive & social medicine, 22nd ed. Jabalpur: Bhanot publishers; 2013.p. 833.
3. Bansal k m, singh k, bhatnagar s et al. Prevalence of RTIs among married females in the reproductive age group, Health population perceptive issues. 2001, (24),157-63.
4. World Health Organization, Geneva. Practical manual on sample size determination in health studies by S.K. lwanga & S. lemeshow; 1991. p1-5.
5. MMR Report (2012): available at: http://nrhm.gov.in/nrhm-components/rmnch-a/maternal-health/background.html. Accessed September 27th 2015.
6. World Health Organization, Geneva.WHO report on Maternal Health;2000.p103.
7. J.kishore's. National health programs of india. 11th ed. Century Publications; 2014. Pg. 543-544.
8. Ministry of health and family welafare, government of gujarat, social infrastructure development board, gov. Of gujarat. DLHRS-1, evaluation of mch services in gujarat: district level rapid household suevey. National rural health mission. 2011. p72
9. Ministry of health and family welfare, Government of India, Delhi. National family health survey 3, fact sheet , gujarat. 2005-2006. p.22-24
10. Office of Registrar General & Census commissioner, India; Ministry of Home affairs, Govt. of India.Population Enumeration Data, Census of india. 2011 pg 46-49.
11. National vector borne disease control programme module 2013 available at: http://www.nvbdcp.gov.in/malaria .html. Accessed November 13th 2015.
12. Umed patel et al. A study on health and reproductive profile of the women in reproductive age (15-45 years) in rural & urban areas. A dissertation submitted to Saurashtra University;, 2000. pg 93
13. Cairu li kittisak et al. Health profile of middle-aged women: the women's health in the lund area (WHILA) study Journal of Human reproduction,2002;17 (5): 1379–1385.
14. Ladwig et al. Gender difference of symptom reporting and medical health care utilization in the german population. Europian Journal of Epidemiology.2000 (16) 511–518.
15. Kandrack et al. Gender differences in health related behavior. Soc. Sci. Med. 1991 (1) 22-24.
16. Indian Guidelines on HT (I.G.H.)-III: Hypertension in special situations.2013 (61); 1-10
17. Agrawal vk, basannar rp, sing rp, et al.Coronary risk factors in rural community, Indian j. Public health 2006;50 (1):19-23.
18. Rao mohan; Rao krishna. Human resources for health in india. Lancet.2011; (377): 587–98.