Morbidity Differentials Amongst The Families of The Employees of Medical College. MEERUT.

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Introduction

Morbidity surveys are intended to provide over all picture of health and sickness of a community. Due to fast development of medical sciences and the medical facilities, the pattern of diseases is changing fast. Mortality is being replaced by morbidity as an index of health and disease. Up to-date inform.tion is needed so that the Government in particular and the society in general can devise new and feasible plans to apply for the maximum benefit of masses. In India due to industrialization and urbanisation, the urban population is growing fast which may lead to changes in the morbidity and mortality pattern of different diseases in the urban areas. The present work has been carried out to find out the general and specific morbidities amongst the employees and their family members residing in the campus of L.L.R M. Medical College, Meerut.

Material & Methods :

The material for the present study consisted of all Government employees & their family members who were residing in the Medical College, campus except the nurses and the students. In total 436 such families were residing in the campus. For the purpose of this study only 356 (81.4%) families with 1623 population could be covered, 18.6% families could not be included because of non-availability at the time of visit. The study was carried out from July 1983 to March 1984 through house to house visit with the help of a pre-designed schedule. Data regarding socio-demographic characteristics, environmental sanitation and physical and clinical examinations of each and every individual belonging to the families was collected. The lab. investigations were done only in those persons where these were needed. The morbid condition was defined as "any departure subjective or objective from a state of physiological wellbeing resulting from disease injury or impairment" (Swaroop 1960). The diseases were classified according to International classification of diseases, (WHO, 1975).

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Observations :

The majority (88.5%) of the families were nuclear type while the remaining 11.5% were joint type of families. The average family size was 4.6 persons per family. Hindus constituted 95.5% of the total population followed by Muslims 2.2%, Christians 1.9% and Sikhs 0.4%.

The population of children below 15 years of age was 44.6% and above 60 years of age was 1.5%. The sex-ratio in the study population has been found to be 930 females per thousand males. The married population was 44.4% never married were 54.7% and 0.9% were widows/widowers.

Only 22.9% of males and 4.1% of females were at work The literacy rate was as high as 73.5%. Those with either college education or professional qualifications were 14.0% in the total population. Out of the total employees, 53.4% belonged to occupational status of class-IV. Only 2.5% of the families belonged to socio-economic class-I. The per capita income was estimated at Rs. 3378/- per annum.

Morbidity in different age groups has been calculated (Table-1). Morbidity was found to be slightly higher (43.2%) in males than females where it was 42.3% In males the morbidity was maximum (59.8%) in 0-4 years age-group followed by (53.6%) in 45-59 years age group and the morbidity.

Table 1 : Morbidity in relation to Age and Sex.

Age group	Male			Female			Total		
years	Number	Morbid	Morbidity%	Number	Morbid	Morbidity%	No.	Morbid	Morbidity%
0— 4	122	79	59.8	120	65	54.2	242	144	59.5
5—14	251	115	45.8	231	93	40.3	482	208	43.2
1 —44	402	134	33.3	389	153	39.3	791	287	36.3
45—59	56	30	53.6	28	11	39.2	84	41	48.8
60+	10	5	50.0	14	9	64.3	24	14	58.3
Total	841	363	43.2	782	331	42.3	1623	694	42.8

Age $X^2=49.39$, d. f.=4, $P<0.001$, Sex : $X^2=0.4$, d. f.=1, $p>0.50$.

was minimum (33 3%) in the age-group 15-44 years. In females the morbidity was maximum (64.3%) in older women (60 years & above) and followed by 0-4 years age-group where the morbidity was 54.2% and least morbidity was found in the age-group of 45–59 years. The differences in relation to the sex (P => .50).

Morbidity was slightly higher (47.2%) in persons living in joint type of families as compared to th se living in nuclear families (42.1%).

Morbidity in relation to marital status has been found to be significantly different (Table-II) Morbidity was maximum (66.6%) in widows/widowers followed by unmarried persons (43.0%) and least in married persons where the morbidity was (41.9%).

Table II : Morbidity in relation to marital status.

Marital Status	Total Population	No. of sick persons	Percentage
Never married	888	382	43.2
Married	720	302	41.9
Widow/Widower	15	10	66.6
Total	1623	694	42.8

$X^2 = 191.89$, d. f.=2, $p < 0.001$.

Morbidity was maximum in Christians (63.3%) followed by Muslims (55.6%) and Hindus (42.3%) and was least in Sikhs (16 7%) where the sample was very small (Table-III). Differences in morbidity between Hindus, Muslims and Christians were not found statistically significant ($p > 0.20$).

Table III : Morbidity in relation to religion.

Religion	Total Population	No. of sick persons	Percentage
Hindu	1551	654	42.3
Muslim	36	20	55.6
Christian	30	19	63.3
Sikh	6	1	16.7
Total	1623	694	42 8

$X^2 = 3\ 24$, df=2, $p > 0.20$.

The morbidity was found to be negatively associated with the level of education of the individuals (Table IV). The differences in levels of morbidity were found statistically significant in relation to educational status ($P < .001$).

Table IV : Morbidity in relation to educational status.

Educational Status	No. of individuals	No. of sick persons	Percentage
Pre-School	217	124	57.1
Illiterate	372	180	48.4
Upto Primary	395	176	44.7
Upto High School	324	122	37.7
Intermediate	88	29	33 0
College education	147	42	28 6
Professional education	80	21	26 3
Total	1623	694	42.8

$X^2 = 52.14$, $df = 6$, $p < 0.001$

Morbidity was significantly different service classes (Table-V). It may be seen that morbidity increased with the lowering of service class status. In class-I the morbidity was 25.4% which increased to the level of 46.1% in class-IV employees.

Table V : Morbidity pattern according to Occupational Status.

Occupational status	No of individual	No. of sick persons	Percentage
Class I	71	18	25.4
Class II	16	6	37.5
Class III	117	45	38 5
Class IV	233	108	46.4
Total	437	177	40.5

$x^2 = 10.73$, $df = 3$, $p < 0.001$

The morbidity has been found to be negatively correlated with the socio-economic status. The morbidity was lowest (33.0%) in the social class-I which increased to 52.2% in class-V (Table-VI). The differences in the levels of morbidity in different socio-economic classes have been found to be statistically significant($P<0.001$)

Table-VI. Morbidity according to socio-economic classes.

Social Class	No. of families	No of individuals	No. of persons	Percentage
I	45	162	37	33.0
II	67	215	75	34.8
III	85	361	137	38.0
IV	150	812	407	50.1
V	9	73	38	52 2
Total	356	1623	694	42.8

$x^2=55.39$, df=4, $p<0.001$

The ten leading causes of morbidity per thousand population were ill defined intestinal lesions (53.0), malaria (35.7), diarrhoea (27.1), dysentery (20.9), acute bronchitis (19.8), measles (18.5), disorders of mensturation and other bleeding from female genital tract (17.9), amoebiasis (17.2), disorders of refractions and accommodation (15.4) and conjunctivities (4.2 .

Discussion : Age and sex distribution of tbe study population was typical that of the developing countries as chracterised with a broad base and gradually declining proportion of people in higher age-groups. The total number of children below the age of 15 years were 44.6% which is slightly higher than that of Marwah et al (1970), 41.6%, Bhatnagar et al (1979) and Census of India (1981) of 39.3%. The proportion of elderly people above the age of 60 years in this study was only 1.5% which is much lower than th t of Census of India (1981) of 8 3%, the reason being that most of the employees were residing away from their homes and from their elderly parents.

The overall morbidity at the time of survey was 42.8% which is less than that of Tamboli et al (1976) of 48.8% but it was higher in comparision to Marwah et al

(1970) Joshi and Sharma (1971) and Bhatnagar et al (1979) who reported the morbidity rates of 29.6%, 25.2% and 25.9% respectively. The higher morbidity in the present study may be primarily due to the higher health counsciousness in the study population.

In this study morbidity in males was 43.2% and in females 42.3% which is almost similar in both the sexes whereas Marwah et al (1970, reported that morbidity was higher in females (38.4%) in comparison to males (26.2%). Morbidity in this study was 58.3% and 59.5% in the age-group of 60 years and above and 0–4 years respectively. Similar were the findings of Tamboli et al (1979) from Jaipur City and Bhatnagar et al (1976) from Meerut City while Marwah et al (1970) reported that morbidity was highest (55.2%) in the 0–4 years age group while it was lowest (13.6%) in 60 years and above age–group.

The morbidity was slightly higher (47.2%) in joint families as compared to 42.1% in clear families. This difference might be due to the fact that in joint families old parents were also living.

In the present study the morbidity was inversely related to the occupational status. It was minimum in class–I (25.4%) and increased to 46.4% in class–IV employees while Marwah et al (1970) reported maximum (44.2%) morbidity in teaching staff and minimum (26.9%) in ministerial staff.

Morbidity was found to be negatively correlated with the level of education of the individual which is a usual phenomena and has also been reported by Garg et al (1981). By grouping the leading causes of morbidity in the present study it can be concluded that it was maximum (229.8 per 1000 population) due to infective and parasitic diseases while Marwah et al (1970 reported that five most leading causes of morbidity were acute respiratory tract infections (20.6%), diarrhoeas and dysentries (10.4%) and typhoid-paratyphoid fevers (3.3%).

In the present study the total number of morbidities were 756 which amounted to 0.5 sickness per person The average sickness per sick person was 1.1 while Marwah et al (1970) reported 0.4 sickness per person and average sickness per sick person being 1.27.

References :

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