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Original Research Article

A study to assess common morbidity pattern of an urban population of Tripura

Anjan Datta[1], Kaushik Nag[1]*, Nabarun Karmakar[1], Srabani Datta[2]

[1]Department of Community Medicine, Tripura Medical College and Dr. B.R.A.M. Teaching Hospital, Hapania, Agartala, Tripura, India
[2]Tripura State AIDS Control Society, Agartala, Tripura, India

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***Correspondence:**
Dr. Kaushik Nag,
E-mail: drkaushik86@yahoo.com

ABSTRACT

Background: To plan for effective health measures, knowledge regarding morbidity profile of local area is very important. Preventive health strategies cannot be made without an idea about the disease burden and changing trend of diseases of the locality. Keeping this background in mind the present study was conducted. The objective of the study was to assess the common morbidity pattern of people living in an urban area of Tripura.
Methods: A community based cross-sectional study was conducted among people living in the filed practice area of Urban Health Training Centre, Dukli under Department of Community Medicine, Tripura Medical College & DR. BRAM Teaching Hospital, Hapania for a period of one year. Five hundred fourty participants were selected using simple random sampling technique and data was collected using a pre-designed pretested questionnaire and analyzed using SPSS version 20.0 software.
Results: Majority (50.93%) of the study participants were females and belonged to 19-59 years age group (32.78%). The commonest type of morbidity was found to be acute respiratory infections (31.10%), followed by musculo-skeletal disorders (17.78%), with non-communicable diseases like diabetes mellitus, hypertension, obesity etc. catering 13.70% of all morbidities. Majority of the participants were having single morbidity (55.74%) than those having comorbidities.
Conclusions: There is dual burden of communicable as well a non-communicable diseases in our study population. Future studies for risk factors assessment are required to plan for effective preventive strategies locally.

Keywords: Morbidity, Dual burden, Urban, Tripura

INTRODUCTION

Study of health transitions in India reveals decrease in general mortality at country level as well as state level over the last three decades, but the current status of morbidity in India is yet to be assessed. Whether the years added to life due to increased life expectancy also attribute to the increased burden of morbidity in our population is a concern for the researchers in India these days.

Life expectancy at birth for males and females will increase by 10 years and 11 years respectively from 2006 – 2051 as per "Morbidity and health care" schedule of NSSO 60th round survey and the proportion of elderly are expected to increase at a rapid pace than younger population because of slow decline rate. Moreover the shifting trend of diseases from communicable to non-communicable side posing a dual threat in India will also add to the burden of morbidity.[1]

There is a huge out of pocket expenditure incurred in health care delivery system of India. The central government's budgetary allocation in health is very poor (1.3% of total budget) and even worse in public health sector, with a significant variation of public health expenditure among states. This contributes to inadequate health care infrastructure and resources across the states which may have an impact on increase in morbidity profile.[2]

India is a country with substantial variations in its population depending on geographical distribution, socio-cultural beliefs and practices and standard of living, therefore to have an objective assessment of disease burden, estimation at various population levels is necessary.[3]

With this view keeping in mind the present study was conducted to assess the common morbidity pattern of an urban population of Tripura.

Objective

To assess common morbidity pattern of people living in an urban area of Tripura.

METHODS

A community based cross-sectional study was conducted among people living in the filed practice area of Urban Health Training Centre, Dukli under Department of Community Medicine, Tripura Medical College & DR. BRAM Teaching Hospital, Hapania. The duration of the study was one year (from January 2016 to December 2016).

Sample size was calculated using the formula of $N=4pq/l^2$, for cross-sectional studies and p was considered as 9.3% and l was considered as 10% absolute precision giving a sample size of 135 approximately.[3] There are 4 Paras (sub-units) under the field practice area of UHTC, Dukli. Therefore the total sample size was calculated to be 4×135=540.

Sampling Technique used was simple random sampling for selection of study subjects from each para with first house selected randomly by lottery method considering the UHTC family health survey records as the sampling frame. If more than one person in a family were found to have any morbidity during household survey and all willing to participate, than again lottery method was used to select the study participant.

Inclusion criteria for the study subjects were people diagnosed having common morbidity, who were resident of Dukli area for more than 6 months and those who gave their consent to participate in the study.

Operational definitions

Common morbidity was considered when a person is already diagnosed having any known disease or the investigator diagnosed a disease based on clinical signs and symptoms and examination of the study subject.

A pre-designed pre-tested structured questionnaire was developed to collect the information. The questionnaire consisted of two parts, the first part consisted of questions related to socio-demographic information of the participants and history of any present and past illness and the second part consisted of details related to individual health examination. Mercury Sphygmomanometer for measuring blood pressure, bathroom weighing scale, measuring tape for measurement of height was also used. Data was collected by trained health workers of UHTC under direct supervision of investigators.

Data so collected was analyzed using computer software SPSS version 20.0 and represented in percentages with the help of tables and pie charts. A written informed consent form translated in Bengali (local language) was obtained from all the participants before they were interviewed or examined. Ethical clearance was obtained from Institutional Human Ethics committee before commencement of data collection

RESULTS

The present study reveals out of the total 540 study participants, majority (50.93%) were females and from 19 – 59 years age group (32.78%), followed by less than 10 years age group (24.63%). Majority belonged to lower middle class (Class IV) families as per modified B G Prasad's Socio-economic Status (SES) scale, followed by lower class (Class V) respectively. Most of the study participants belonged to Nuclear families (68.33%) as shown in Table 1.

Table 1: Socio- demographic variables of the study population (n=540).

Variables	Frequency (%)
Age (years)	
Less than 10	133 (24.63)
10 – 18	101 (18.7)
19 – 59	177 (32.78)
60 and above	129 (23.89)
Sex	
Male	265 (49.07)
Female	275 (50.93)
Socio-economic status (as per modified BG Prasad's SES scale, May 2014)	
Class I	24 (4.44)
Class II	67 (12.41)
Class III	108 (20.00)
Class IV	210 (38.89)
Class V	131 (24.26)
Type of families	
Nuclear family	369 (68.33)
Joint family	171 (31.67)

In this study majority (31.1%) of the study participants were suffering from acute respiratory infections (ARI), followed by musculo-skeletal disorders (low back pain, joint pain, myalgia etc.), anemia (pallor and generalized weakness), non-communicable diseases (diabetes mellitus, hypertension, obesity etc.) respectively (Figure 1).

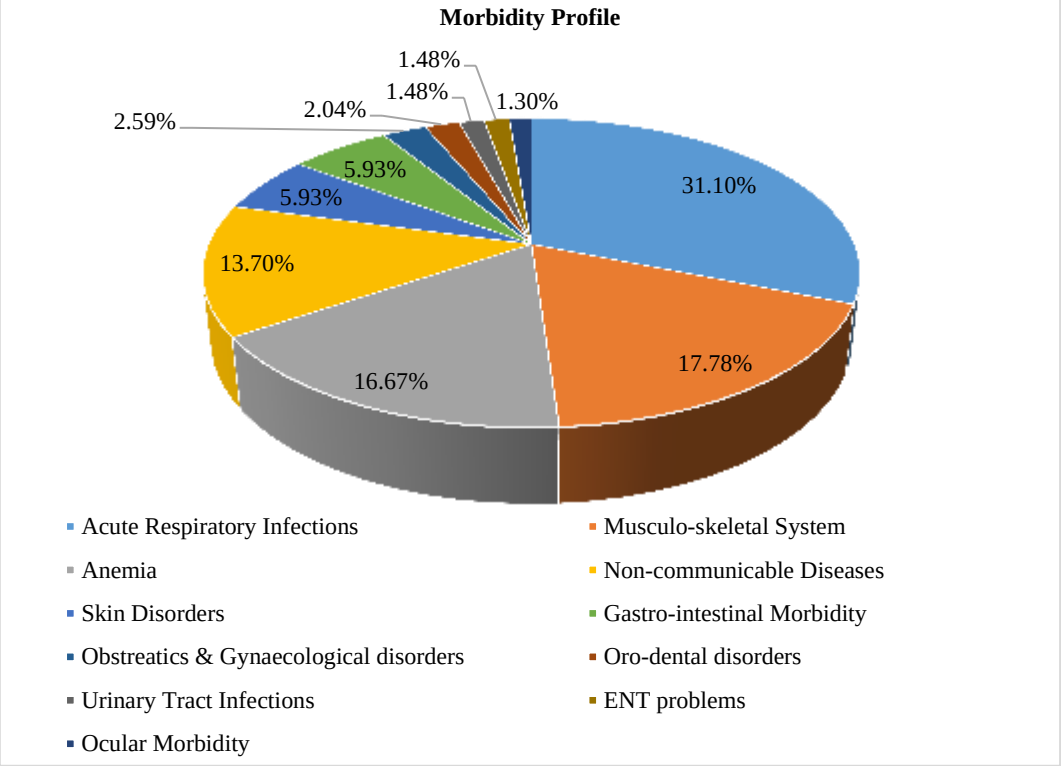

Figure 1: Pie chart showing morbidity pattern of the study population (n=540).

This study also reveals majority (55.74%) of the respondents were suffering from single type of above mentioned morbidity, followed by 32.78% having single co-morbidity as shown in Table No 2.

Table 2: Distribution of study population based on number of morbidity per person (n = 540).

Number of morbidity per person	Frequency (%)
One	301 (55.74)
Two	177 (32.78)
Three or more	62 (11.48)

DISCUSSION

This study revealed slightly higher morbidity among females than males and higher prevalence of morbidity in 19–59 years age group which might be because of higher proportion of population included within this age group. Again this 19–59 years age group is the most productive age group. Therefore higher prevalence of morbidity in this age group means more loss to the society in terms of productivity. The present study also revealed communicable diseases to be the commonest type of morbidity, majority (31.10%) suffering from acute respiratory infections. Although non-communicable diseases were also not far behind with musculoskeletal disorders being the second most common morbidity (17.78%), followed by anemia and non-communicable diseases like Diabetes mellitus, Hypertension, Coronary Heart Disease, Obesity etc. This dual burden of diseases is similar to the national picture.[4,5]

A similar study done by Mane et al in a tertiary care hospital of Tamil Nadu revealed musculo-skeletal disorers to be the commonest morbidity followed by gastrointestinal and skin disorders.[6] Although their study population were similar in baseline characteristics with ours but variation in morbidity profile might be because their study was hospital based which often fails to reveal the exact picture of morbidity pattern in the community.

Similar to this study, Gopalakrishnan et al in their study of morbidity profile of rural population in Tamil Nadu (February 2015) also revealed school going children and adults were having higher levels of morbidity compared to elderly and under five children and the burden of illness increased with age.[7] But males were more affected with common illnesses in their study unlike ours.

'Health of the people of Tripura-A Prelude based on secondary data' revealed minimal morbidity among the people of North district of Tripura but the magnitude of morbidity was not mentioned clearly, neither the prevalence of different morbidities were assessed unlike the present study.[8] Again study conducted by Sanjay Sinha et al on prevalence of morbidity among women of North Tripura and Unokuti district (July 2012) revealed urban women were more suffering from communicable and seasonal diseases (21%) than chronic non-communicable diseases (12%) which is similar to our study results.[9] It also reflects, over the years the morbidity pattern has remained the same only the chronic non-communicable diseases shows increasing trend in this state.

CONCLUSION

The study revealed dual burden of communicable as well as chronic and non-communicable diseases in the urban community with women and adults being more affected with various morbidities. Further evaluation of factors responsible for the burden of diseases is required so that preventive measures can be taken in future to make the socially and economically productive age group disease free.

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Ethical approval: The study was approved by the Institutional Ethics Committee

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