

## ORIGINAL ARTICLE

## DEMOGRAPHIC PROFILE OF PATIENTS ADMITTED WITH DIFFERENT DISEASES IN MEDICAL AND SURGICAL WARDS OF AYUB TEACHING HOSPITAL

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**Background:** People being admitted in the different wards of the Ayub Teaching Hospital (ATH), Abbottabad, present with diverse demographic profiles, and the relations of the variables making up these profiles can be extrapolated to their inter-dependency on the disease burden pouring from the area catered by this tertiary care hospital. The medical and surgical units of ATH were selected to evaluate demographic profiles. **Methods:** This is a descriptive cross-sectional study, carried out among 193 admitted patients, between 16–75 years of age, chosen by simple random sampling technique. Data on demographic factors was collected from the patients. **Results:** One hundred and ninety-three patients (admitted from March 2015, till May 2015) were questioned; 113 males, 80 females. Mean age was 41.1 years, the age group 31–45 years represented the most number of patients. A male: female ratio of 1.4:1 was observed. Majority were from rural areas (63.2%), and spoke Hindko (67.9%). Almost 60% were married, and 53.8% were illiterate. The occupation of most male patients was farming and labour while females being mostly housewives. Socioeconomic status of 51.3% patients was “not satisfactory” (lower, <15000 Rs. income). **Conclusion:** The patient burden can be related to illiteracy and a poor socio-economic status. Poor health resources in the rural areas also contribute as a major factor. Disease burden is influenced by the demographic factors.

**Keywords:** ATH, demographic profile, Illiteracy, socioeconomic status

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## INTRODUCTION

Demographic thoughts can be traced back to antiquities. The period 1860–1910 can be characterized as a period of transition wherein demography emerged from statistics as a separate field of interest.<sup>1</sup> The word *demography* is a combination of two Greek words, *demos* meaning people, and *graphia* meaning description. With the use of modern techniques and advancement in this field, the researchers have come up with the definition of demography as “the scientific study of characteristics and dynamics pertaining to human population”. In this arena, the main focus is on the *changes, composition* and *distribution* of population in space. These three phenomena are determined by five major “demographic processes”, which include fertility, mortality, marriage, migration and social mobility.<sup>2</sup>

The importance of studying demography is to determine the current and future public health needs. The current public health needs are affected by the age structure and sex ratio and also the existence of substantial immigrants and refugees<sup>3</sup>, whereas the future needs for health care provision are affected by the population growth rates. All this specific information is gathered by the

demographers from a population through census and other vital statistical records.<sup>4</sup>

Demographic profiling is essentially an exercise in making generalizations about a group of people. The demographic variables, which include age, sex, socioeconomic status, education etc., are vital or social statistics of an individual, sample group or population, and are of considerable importance, as determining them may help identifying a factor playing role on a large scale in the presence of a common disease.<sup>5,6</sup> Successful management of diseases requires that we understand the benefits, lifestyles, attitudes, family and social networks of the patients being treated. Therefore, demographic studies give important information for effective health policies and an opportunity to obtain better results treating such diseases.

The aims of this study were to determine the relation of some demographic variables, such as age, sex, area of residence, education, marital status, socioeconomic status and occupation, with the patient- and disease-burden on the hospital, as studies have shown association of disease prevalence with such factors. Significance of the study lies in the fact that most of the patients coming to ATH are from rural areas, lacking education, having poor socioeconomic status, and

having no effective knowledge about the diseases affecting them.

ATH was selected for the study, because it is the only tertiary care unit in the Hazara Division, catering a wide ranged population from Hasanabdal to Gilgit, a part of Kashmir on one side and a part of Punjab on the other side.<sup>7</sup>

## MATERIAL AND METHODS

It was a descriptive cross-sectional study, enrolling a total of 193 patients (113 males, 80 females; aged 16–75 years), presenting with different diseases, admitted during March 2015 and May 2015 participated in this study.

The surgical and medical units were selected for study as these units encounter huge number of patients with a plethora of diseases. Participant patients were chosen by simple random sampling technique. Questionnaires were filled regarding the demographic profile of the patients recording the following demographic variables: gender, age, diagnosis, current marital status, blood group, mother tongue, area of residence, education, occupation, socio-economic status, household monthly income and number of family members.

All the data was analysed using SPSS-19 software. We then interpreted the results further into some conclusive results.

## RESULTS

Out of a total of 193 patients, 105 patients were from the medical units, while 88 patients were from the surgical units. During the course of the study none of the patients expired. The male: female ratio was 1.4:1, overall. 44.6% of the patients fell in the 31–45 years age group, the next large age group presentation being from 16–30 years (37.3%), the mean age was 41.1 SD±21.2 years. Around 60% patients were married, in which male to female ratio was 1.35:1.

Most of the patients (67.9%) were Hindko speakers, the native language of the area, and 63.2% were residents of rural areas. The socioeconomic status of 51.3% patients ranked in the lower limit (<15000 Rs. monthly income). No specific pattern for blood group was observed in the study group. The occupation of 55.7% male patients was either farming or manual labour, while 94% female patients were housewives. 53.9% patients were illiterate, the male to female ratio being 0.86:1.

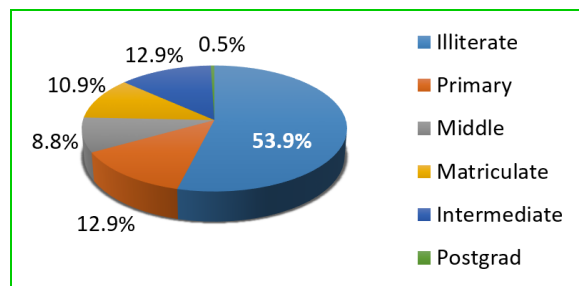


Figure-1: Educational Status

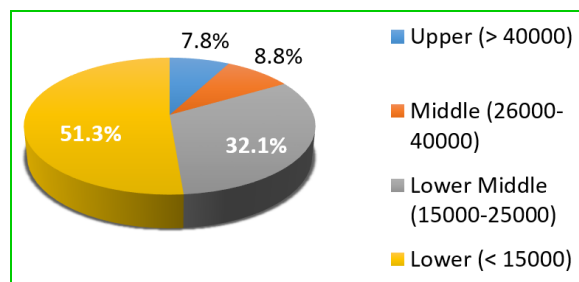


Figure-2: Socio-economic Status

## DISCUSSION

This study was conducted to correlate demographic profile of the patients admitted to the surgical and medical wards of the ATH. Previous studies are done on correlating demographic variables with a prevalent disease. It was a bit difficult to compare the results of our study with that of the results of the previous studies due to the fact that a very few efforts are made in this arena, and the exact same topic. In this research project almost every demographic variable is covered and correlated with the disease-burden in the wards in general, not with one particular disease. The following demographic variables were correlated, compared, and computed as a statistical data: age, gender, area of residence, current marital status, blood group, mother tongue, education status, occupation and socioeconomic status.

The study shows that the majority of the patients were from rural areas (63.2%). The reason for this can be that the population from rural areas are more prone to develop infectious diseases due to lack of proper sanitation, poor hygiene and lack of supply of good clean water for drinking purposes. Also, the rural areas lack the health resources, or the quality is not that good, as compared to the urban areas. Majority of the patients were from hilly areas. The literature cited narrates the same fact, that certain diseases like infectious diseases are more common in rural areas.<sup>8,9</sup> So our study confirmed the same fact, and suggests that by improving the above mentioned deficiencies in rural areas, we can

improve the health status of the rural community. The study also showed that urban areas have different health problems and diseases as compared to rural areas, like CRF, cancer, asthma etc. because of different environmental and dietary factors, but still the disease-burden is low.

Through our study we confirmed a positive-correlation between the socio-economic status and the disease prevalence. As shown by the results, majority of the patients were from lower socio-economic class (51.3%). Such a poor socio-economic status is linked with poor hygiene level, failure to afford and avail health facilities, which in turn is strongly related to disease prevalence as reflected through our study. Not able to afford treatment, check-ups, a disease may remain undiagnosed or left untreated, the patient being a potential source of spreading an infectious disease, especially in a close large family. A study in Karachi on cardiovascular diseases showed dependency on socio-economic status<sup>10</sup>, and so did a study on cleft lip and palate in India<sup>11</sup>.

Gender susceptibility to diseases is also demonstrated by the study, i.e., certain diseases like IHD, BPH, etc. are common in the male gender, while carcinoma breast, cervical cancer, etc. are more common in the female gender. The male-to-female ratio of the admitted patients was 1.4:1. This may be due the fact that Pakistan is a very conservative country. The males are mostly dominant and considered as a bread winner of the family whereas the females are mostly neglected. Whenever the female get ill, they do not get the proper attention from their male counterparts and are only carried to the hospitals in their extreme stages. A study conducted in ATH on acute lymphoblastic leukemia<sup>12</sup>, and in Karachi on coronary artery diseases<sup>10</sup>, and in Kashmir on HIV/AIDS<sup>13</sup>, showed a male preponderance.

The age-related prevalence of diseases followed a predicted rise in incidence with the age as the age of the patients fell into the age group 31–45 years. These findings suggest that the diagnosed patients were mainly diseases of adulthood, like cancer, IHD, CRF, BPH, etc. These diseases have got genetic susceptibility and are common in advance ages as the study shows.

We observed in our study that on average overall 60% of the patients admitted were married, while 30% patients were never married. Similarly 18 out of total 193 patients were widows/widowers. This variable was investigated as certain diseases are sexually transmitted, e.g. syphilis, AIDS, etc. From

the diagnosis of the patients we come to know that certain patients were having diseases which are genetically and sexually transmitted.

Public awareness is strongly related to the educational status of the population. Literacy rate was found to be very poor by our study, as 53.9% of the admitted patients were illiterate. The study strongly suggested that an increase in the disease burden was mostly due to a low literacy rate. The number of patients with good education status decreases as the education status rises from primary to middle to intermediate, as only a single female patient in medical ward was found to be a postgraduate. Educational status is very important for an improved health status, personal hygiene and a healthy life style. Studies in India on iron deficiency anaemia in females, and on cleft lips and palates showed a link with low literacy rate.<sup>11,14</sup>

## CONCLUSION

A middle-aged (31–45 years) and male population represented majority of the patients admitted in the medical and surgical wards. But the low literacy rate and poor socioeconomic status were the main reasons behind the patient burden in the wards, as most of the patients were illiterate, and had low socio-economic status (income <15000 Rs.). Low literacy reflects lack of awareness of health problems and gravity of serious complications and ailments. A poor socioeconomic status indicates lack of affordability of satisfactory health resources, and a lack of healthy life style and hygiene. Lastly, due to lack of proper health resources in rural areas, speaking the native languages Hindko and Pushto mostly, most of the patients of rural background come to this tertiary care centre to avail better health services.

Summarizing, the disease burden was shown to be influenced by demographic variables, as shown by other studies carried out to check the relation of demographic factors with certain diseases.

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