

## Abstract

Asthma is a common problem in Sri Lanka causing high level of disability, psychological distress and economic burden to the patients as well as to the State.

This study aims to measure the physical, psychological and economic burden of asthma in Vavuniya District.

This study was carried out in three phases. In the first phase questionnaire was validated. Construct validity was established between Peak Expiratory Flow Rate Measurements and the Quality of life component of the questionnaire ( $P < 0.05$ ).

In the second phase a community based cross sectional survey was conducted with interviewer administered questionnaire on 1008 participants to measure the period prevalence of asthma. The period prevalence of asthma was 7.4% ( $n=75$ ). Among them five patients were not previously diagnosed of asthma. Fifty one patients had hay fever symptoms. After exclusion of 12 participants with other diseases, those who were diagnosed of asthma alone were administered with internationally validated instruments to measure quality of life and psychological burden in asthma. They were also followed up with another sub-sample of indoor asthma patients at Vavuniya Hospital to measure the economic burden. Correlations between the four domains of

the QOL questionnaire and between the Asthma Bother Profile and QOL component confirm the earlier findings of validity of the QOL component and asthma bother profile. In addition reliability of the QOL component was established with reliability test of Cronbach's alpha. Among asthma patients, professionals have significantly better Quality of Life score when compared to unemployed and house wives ( $P < 0.05$ ). No significant differences were observed between age groups, or sex with respect to QOL scores or psychological distress scores ( $p > 0.05$ ).

Economic burden measurements showed that out of the 63 persons found with asthma alone in the community, 34 patients were treated for asthma within the previous week. They have spent on average Rs.212.05 out of pocket (median Rs.140.00, Range Rs0.00 - Rs. 775.00), average Rs. 93.82 for transport (median Rs.15.00, Range Rs0.00 - Rs. 500.00). Costs incurred to government on these patients were on average Rs.25.66 (median Rs.00.00, Range Rs0.00 - Rs. 280.58). Indirect cost due to absence from work was on average Rs.56.37 (median Rs.00.00, Range Rs0.00 - Rs. 1000.00),

Forty Nine patients admitted with asthma to the Vavuniya Hospital have spent on average Rs.189.25 out of pocket (median Rs.85.00, Range Rs0.00 - Rs. 445.00), average Rs.

110.67 for transport (median Rs.50.00, Range Rs0.00 - Rs. 700.00). Costs incurred to government on these patients were on average Rs.712.83 (median Rs.740.35, Range Rs. 528.76 - Rs. 856.92). Indirect cost due to absence from work was on an average Rs.42.85 (median Rs.00.00, Range Rs0.00 - Rs. 800.00).

Economic burden of the patient differ according to the severity and presentation of the Asthma.

An interventional study to minimize the burden of the disease mainly the cost of the disease is recommended.