

## **ABSTRACT**

Cancer morbidity and mortality is increasing in Sri Lanka. It has been pointed out by several organizations to put more emphasis on preventive activities such as surveillance of disease and risk factors and education of the population about known cancer risk factors. This was also indicated in the world cancer report 2008.

The present study was undertaken to identify the current status of cancer in Jaffna related to completeness of registration, spatial clustering of cases, prevalence of risk factors and attributable risk of each factors and awareness regarding prevention.

Focus group discussions and Key informant interviews were carried out to identify the sources of cancer data. Sources were contacted and filtered for repetition and duplication. The final number of cases in each of the sources and overlapping of cases between sources were calculated. Capture recapture method was used to estimate the total number of cancer cases. Completeness of reporting was calculated by comparing estimates with cases at the Jaffna cancer unit. Spatial clustering of cancer unit cases was determined by using Google earth data and geographic information system (GIS) techniques.

Prevalence of known cancer risk factors and knowledge about preventive services in the population were determined through a descriptive cross sectional community survey among eight hundred sampled individuals selected by using stratified cluster sampling. Proportion of known cancer risk factors in the cancer cases were obtained from 365 cancer cases treated at the cancer unit of Jaffna. Interviews were conducted by trained interviewers at suitable places. Prevalence of known cancer risk factors in the population, odds ratios and population attributable risk fraction (PAF) were calculated.

Four sources were used to collect information regarding cancer cases. These were the Indoor Morbidity Mortality Registers (IMMR) in the Jaffna Teaching Hospital and other hospitals in Jaffna District, Pathological reports at Teaching Hospital

Jaffna and at Cancer Aid North/East, Records at the Cancer Unit of Jaffna and Death Certificates from Registrars of Births and Deaths in the Jaffna district.

Sources were found to be independent. Estimated number of cancer cases was 1147 (95% CI – 1082- 1215) when all four sources were used. Percentage of completeness ranged from 66.3 percent to 79.5 percent.

Prevalence of family history of cancer (4.8%), tobacco usage (37.0%), betel chewing (28.2%), alcohol usage (8.7%) and inadequate physical activity (42.2%) were obtained. Food frequency questionnaire was used to assess the dietary habit in 23 food domains under four main categories. This revealed high prevalence of excess consumption of sugar and sweetened beverages, and inadequate consumption of pulses and legumes, beta carotene, fruits and fish and fish products.

Logistic regression was done to calculate the adjusted odds ratios for male and female cancers separately and PAFs calculated for the risk factors which were included in the final model. Family history of cancer, smoking, using alcohol, less eating beta carotene containing foods and excess eating of sugar and sweet items, red and processed meat, preserved food, milk and dairy products and whole egg products in males and family history of cancer, tobacco use, less physical activity, less eating of beta carotene containing foods, whole grain product, and fish and fish products and excess eating of sugar and sweet items, red and processed meat, preserved food, plant derived oestrogen products and commercially baked foods are the known risk factors for female cancer diseases which were included in the final logistic model.

First five Known risk factors with high PAF for male cancers were smoking (37.1), using alcohol (25.2), less eating beta carotene foods (50.9), sugar and sweet items

(51.3) and excess eating of preserved food (31.3). The variables plant derived oestrogen products (74.3), fish and fish products (71.5), preserved food (66.3), whole grain product (58.9) and sugar and sweet items (56.6) were the first five known risk factors with high PAF for female cancers.

Population had poor knowledge about preventive services.

Completeness of reporting of cancer unit of Jaffna was around seventy percent. Majority of cancer cases can be attributed to modifiable risk factors such as tobacco usage, inadequate consumption of beta carotene containing foods and alcohol usage.

Cancer preventive services must be accentuated to strengthen the services for surveillance of disease and risk factors of cancer which would help to find out strategies to prevent cancer disease.