

Abstract

Food is essential for the growth and maintenance of life. There is a wide variation in foods used for human consumption and the food, per se, undergoes complex production, processing and handling procedures before the consumption. As a result, it is liable to be contaminated with various biological, chemical and physical agents injurious to health.

Deliberate addition of artificial substances as additives and, on certain occasions, as adulterants is becoming increasingly common and the safety of these substances is often not properly assessed or assured. Food-borne infections, the health effects of food additives and adulterants, and food unintentionally contaminated with harmful substances are major problems all over the world. Food safety, the assurance of safe and wholesome food supply to the community is, thus, a major challenge in the present context. The responsibility of food safety is vested in all its stakeholders i.e., the food producers, sellers, regulatory authorities and the consumers.

The food safety situation in Sri Lanka is not different, especially, from other developing countries. It operates at different levels with the Divisional level being closest to consumption. The primary food safety activities at Divisional level include inspection and rating of food handling establishments (FHE), sampling of food for analysis, taking corrective action following inspections and sampling, and education of food handlers and consumers.

Medical Officers of Health (MOH) and Public Health Inspectors (PHI), the Authorized Officers under the Food Act No. 26 of 1980 (the Food Act), are responsible for carrying out these activities. They operate under the guidance and cooperation of higher officials of the Department of Health Services, representing the Director General of Health Services who is the Chief Food Authority, and the heads of the Local Government Authorities who are the local Food Authorities under the Food Act. Food safety activities comprise only a part of the general responsibilities of these officials and the level of the performance of food safety activities at Divisional level depends on several factors including the ability and effort of the Authorized Officers and the opportunities given to them.

The objectives of the present study, comprising 2 components, were to assess the level of performance of selected food safety activities at Divisional level, to determine factors associated with the performance of these activities, to obtain the opinions of consumers, food handlers and the Authorized Officers on the relevance and the adequacy of current food safety activities and to make recommendations to improve these activities.

The study was carried out in seven provinces in Sri Lanka except the Northern and Eastern Provinces. In component 1, the performance of selected food safety activities in 199 MOH areas was measured using a self-administered questionnaire. Data on selected attributes of the MOH areas and the Authorized Officers were obtained concurrently and factors associated with the performance were determined using appropriate analysis.

In component 2 of the study, the opinion on the relevance and the adequacy of the Divisional level food safety activities was obtained using a self-administered questionnaire, from 1082 eligible authorized officers of the seven provinces and from 639 consumers and 619 owners/managers of the food handling establishments (FHE) in the North Western Province.

There was a wide variation in the performance of food safety activities at Divisional level and the strength and direction of the association of the factors predicting performance. Inspection performance ranged from 1.22 to 34.79 (mean = 11.7) inspections per PHI per month and was dependent only on the characteristics of the PHI and the PHI range.

Rating performance, measured as a proportion of registered FHEs rated using form H 800, averaged at approximately 50%. The presence of an AMOH, population of the area, the number of FHEs in the area, the average number of FHEs per medical officer and the average duration since last in-service training on food safety received by the PHIs were predictive of rating performance.

In the majority of MOH areas, the total number of samples obtained for analysis by a PHI per month was less than 1 and that of formal samples even less. The age and the experience of the MOH as a medical officer, and the number of FHEs per filled PHI

range were predictive of the total number of food samples explaining 18.3% of its variability. In the case of formal food samples, only the age of the MOH was a significant predictor explaining only 3.2% of its variability.

The average percentage of formal samples found to be unsatisfactory was approximately 57% with the majority of MOH areas reporting a rate in excess of 50%. The absence of a SPHI, the only variable predictive of the proportion of unsatisfactory samples, increased the proportion of unsatisfactory samples by 14.5% (Table 4.38) explaining 3.1% of the variability of its performance.

Legal action was initiated on all formal food samples found to be unsatisfactory in 66.9% of the MOH areas and more than 50% were litigated in 25.0% of the MOH areas. Population density and the density of FHEs of the MOH area, when taken separately, were significantly and negatively correlated with the proportion of prosecutions and all land area parameters showed a significant positive correlation. A significantly higher proportion of prosecutions was reported from MOH areas having an AMOH and a SPHI. None of the above factors were predictive of the log transformed proportion.

All prosecutions in 46.3% of the MOH areas and more than 50% of the prosecutions in 48.8% of the MOH areas were convicted. Only the number of FHEs per MOH area and the MOH office having telephone facilities were independently and significantly associated with the proportion of convictions. The absence of a telephone increased the proportion of convictions. This model explained 6.0% of the variability of the proportion of convictions.

Upto 65 health education programmes were reported to be carried out per PHI during the year with an average of 7.86. In the majority of MOH areas, less than 10 programmes were conducted by a PHI. Health education performance decreased with the increase in the number of PHIs. Performance was better in rural areas, in areas having a single Local Government Authority, and in areas not having an AMOH. Performance in health education activities decreased with increasing experience of the MOH as a Medical Officer of Health and in Public Health. The MOH training had a positive impact on health education activities. Performance of health education activities was poorer in

areas having basic audiovisual equipment than those without them. Only the University of undergraduate training of the MOH was predictive of performance in health education activities in a multivariate model. This model explained only 5.9% of the variability in health education performance.

The majority of consumers (97.4%) and food handlers (96.6%) admitted the general need for food safety activities and 93.2% of consumers and 79.8% of food handlers admitted that these activities need to be carried out as a preventive measure. A high percentage of respondents admitted that the food safety as a problem that warrants high priority though correspondingly less priority is been given. The food safety policy in Sri Lanka appeared to be poorly communicated at the operational level.

The majority of consumers (55.1%) and Authorized Officers (52.9%) were not satisfied with the level of enforcement of food safety rules and regulations at the Divisional level, though the majority of food handlers (55.4%) expressed their satisfaction over the current level of enforcement. The majority of the consumers (63.0%) and most of the food handlers (42.9%) stated that the capability of the institutions involved in food safety activities, though satisfactory, has a potential for further improvement. Even though the majority of the consumers and the food handlers were satisfied with the competency of the Authorized Officers, the majority of consumers stated that they do not carry out their duties satisfactorily.

The inadequacy of the number of Authorized Officers engaged in food safety activities at Divisional level was highlighted at many points of data collection. Opinions of different Authorized Officers on specific food safety activities revealed the inadequacy of coverage and intensity, not giving priority on a scientific basis, and the need for better feed back and follow up actions as the most important that need improvement.

The use of form H 800 for rating of FHEs by a large proportion could be linked to the recent introduction of the revised form together with a series to training programmes.

Deficiencies of Authorized Officers, administrative, managerial, and supervisory deficiencies of the system, the lack of resources, process deficiencies of food safety

activities, poor coordination among different agencies, the attributes of the food industry, trade and the persons involved food handling, and the attributes of the MOH areas and the PHI areas were the broad categories of reasons identified as responsible for the current deficiencies. Most of the reasons cited were intrinsic to the food safety system and were amenable for improvement through appropriate intervention.

Deficiencies such as poor execution of activities beyond the duty hours and inadequate coverage of common and flourishing food trades such as food catering for special functions and night time temporary food stalls were identified as areas that need urgent attention. Focusing on potentially hazardous places, which are not adequately covered by the definition of FHE under the Food Act too, were highlighted.

Immediate steps are recommended to correct negative factors and to promote and foster positive ones, as most of the identified factors associated with food safety activities at Divisional level were intrinsic to the food safety system and amenable for improvement. The distribution of manpower needs to be reviewed for redistribution on a rational basis.

Areas recommended for further study include performance of food safety activities in Northern and Eastern Provinces, factors that were not included in the present study due to practical reasons, and the study of performance of food safety activities at the level of the PHI range.

The rules and regulations governing the sanitary situation at food handling establishments need to be reviewed and revised periodically. Current food safety activities should be expanded to cover a wider range of the food continuum including intervention at harvesting level and enhancing educational activities covering schools. Due publicity should be given through improved interaction with the consumers to maintain the consumer confidence at the highest level.

