

ABSTRACT

Introduction

Leptospirosis is a zoonotic disease which has become a major public health threat in Sri Lanka. Majority of the patients are farmers. In agricultural communities, children are also involved in agriculture and some will take up agriculture as their future occupation. Moreover, effectiveness of children as messengers of technical health information to the parents has been confirmed. Furthermore, Galgamuwa MOH area reported the highest case load in Kurunegala district in 2011. Assessment of level of knowledge and the preventive practices among students will highlight the gaps that can be improved by health educational programmes specially in high risk areas.

Objective

The purpose of the present study was to describe knowledge and practices regarding Leptospirosis among grade 9, 10 school students in Galgamuwa educational division in Kurunegala district and to determine factors associated with knowledge.

Methods

A descriptive cross sectional study was conducted in Galgamuwa educational division in Kurunegala district. Study population (n=460) included all the adolescents studying in grade 9 and 10 of government schools in Galgamuwa Educational division. The key variable as well as the primary outcome in this study was the level of knowledge on leptospirosis. Sample size was calculated using a multistage cluster sampling technique. A structured, pretested, self administered questionnaire was used to collect data. The questionnaire consisted of sections on socio demographic characteristics, knowledge and current practices regarding leptospirosis. Selection of the classes and students was done two weeks prior to the date of data collection. Written informed consent from the parents/guardian of the selected students was taken. The questionnaires were collected on the same day after giving adequate time to fill it. Data analysis was done by the principal investigator using the Statistical Package for Social Sciences (SPSS), version 17.0, software. Socio-demographic characteristics of the study population were described using frequency distributions. Knowledge level was assessed by scoring each question. The mean score of knowledge was obtained and was presented. Individual practices were described. Sociodemographic factors, education level of the parents, involvement in paddy cultivation by the parents and other family

members, involvement in paddy cultivation by the study units themselves and the individual preventive practices regarding leptospirosis were the factors that were assessed for its association with knowledge regarding leptospirosis.

Results

Calculated sample size was 460 and the response rate was 100%. All had heard of the disease leptospirosis and 95.7% knew, 'rat' as the main animal responsible for leptospirosis transmission. However, only 6.3% could correctly identify the disease agent as 'bacteria'. Of the study population, 92.2% identified leptospirosis as a preventable disease while 60.7% was aware of the prophylaxis treatment on leptospirosis. The knowledge score obtained by the study population ranged from a minimum value of 18.0 to a maximum value of 78.0. Mean knowledge score was 54.0 (SD = ± 11.1) while a majority (52.0%) had 'good' level of knowledge. Among the study population, 62.2% of students were involved in paddy cultivation activities either frequently or rarely. Furthermore, 70.4% of the fathers and 50.4% of the mothers were involved in paddy cultivation. Of the students involved in paddy cultivation, only 18.2% use gloves and boots frequently. Among the 9.3% of students who participated in handling cattle or buffalo, 60.5% were washing hands and feet frequently, after handling cattle or buffalo. Of the study population, only 13.0% were swimming, bathing and washing in stagnated water pods. Use of prophylaxis treatment for leptospirosis by family members was reported by 60.3%. The level of knowledge regarding leptospirosis was significantly associated with the fathers' involvement in paddy cultivation ($p < 0.001$), mothers' involvement in paddy cultivation ($p = 0.012$) and self involvement of paddy cultivation ($p = 0.045$).

Conclusions and Recommendations

Though the overall level of knowledge regarding leptospirosis was satisfactory, the study identified several gaps in knowledge in specific important areas. Overall level of knowledge was better with the involvement in paddy cultivation by the students and their parents. Study also identified gaps in personal practices and household practices related to prevention of leptospirosis. The study recommends specific areas of knowledge to be emphasised and specific practices to be improved in public health interventions.

Key words; Leptospirosis, Knowledge, Practices, Adolescents