RISK FACTORS ASSOCIATED WITH PURCHASING PESTICIDE FROM SHOPS FOR SELF-POISONING – A POPULATION-BASED CASE CONTROL STUDY

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Objectives: We aimed to investigate risk factors associated with purchasing pesticides for acts of self-poisoning from pesticide shops to help guide public health policy.

Methods: We used a case control design with 50 patients who bought pesticides from shops specifically for the act of self-poisoning (cases) compared with 200 unmatched individuals who bought pesticides for agricultural purposes at the same shop without using them for self-poisoning (controls). Data was collected from 13 hospitals in a rural area of Sri Lanka. An interviewer-administered semi-structured questionnaire was used to record socio-demographic data, event specific information, and history of self-harm. Alcohol use and common mental disorders were recorded using Alcohol Use Disorders Identification Test (AUDIT) and Clinical Interview Schedule – Sinhalese version (CIS-Sn) respectively. Ordinary logistic regression models were used to identify risk factors for purchasing pesticides for self-poisoning from shops.

Results: The mean age of cases was 34 (SD 11) years and controls 44 (SD 11). The most significant risk factors associated with purchase from shops for self-poisoning were alcohol intoxication at the time of purchase (OR = 47.7), purchasing one pesticide bottle (OR = 20.7), not storing/using pesticides at the time of purchase (OR = 18.6), being a non-farmer (OR = 16.9), purchasing only pesticides (OR = 14.6), previous self-harm attempts (OR = 14.3) and purchasing an insecticide (OR = 7.9). The combination of non-farmer and alcohol intoxication at the time of purchase had an OR of 82.9 (95%CI 28.5-241.2, P<0.0001). In 16 (32%) of the cases, this was their first purchase of pesticides whereas this was the case for only 4 (2%) controls. Eight (16%) cases had previously self-harmed compared to 7 (3.5%) controls. Cases have travelled an averaged of 5.1 km to shops; 14% had by-passed the nearest pesticide shops because they wanted to avoid familiar vendors. Controls had travelled were 4.4 km; 46 (23%) had by-passed shops, mainly due to attractive discounts at urban shops. Sixty six percent of cases were drinking hazardously compared to 42% of controls. Depressive ideas was the most common mental health disorder among cases while irritability was most common among controls.

Conclusions: Our findings suggested that avoiding selling pesticides to alcohol intoxicated persons and/or non-farmers may prevent a considerable proportion of cases where pesticides were brought from shops specifically for self-poisoning. This information will help inform policy options aimed at reducing access to pesticides for self-poisoning.