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Attitudinal and behavioural changes in Coconut (*Cocos nucifera*) oil consumption with the occurrence of Aflatoxin contamination in Sri Lanka

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In the recent past, there was a serious controversy within the Sri Lankan community since certain imported coconut oil brands were detected unsafe for consumption as they exceeded the permissive aflatoxin levels. The present study investigates the noticeable changes in consumption patterns and behaviours as well as the degree of awareness of households on basic information regarding aflatoxin contamination. The survey study was conducted with the participation of 521 households representing Western and Southern provinces. A simple random sampling method was used as the sample design. Data were gathered using a self-administered questionnaire which was distributed through different media. Collected data were analyzed using the social science statistical program IBM SPSS 25, along with Microsoft Excel with Data Analysis Add-in. The results showed that 91.2% of respondents are aware of aflatoxin as a potential hazard, while only 42.8% were concerned about different aspects of aflatoxin contamination, up to a considerable level. Out of the coconut oil consumers, 12.6% did not have a proper idea about the reasons for the aflatoxin contamination. A few participants (1.6%) stated that aflatoxin has no adverse effect on human health, while the majority (91.6%) believed the main effect is the carcinogenic effect. Many agreed that buying a local reputed oil brand (54.6%) and preparing your own at household levels (66.8%) are the best control measures that can be taken at household levels. Although 93.3% of respondents showed a positive interest in learning more about this food safety concern, there is no significant association ($p > 0.05$) between the highest education level of the consumers and the awareness of aflatoxin contamination as per the cross-tabulation and Chi-square test. According to the Paired sample T-test, the purchasing places, factors affecting purchasing decisions, and the buying frequency have changed significantly ($p < 0.05$) based on the different perceptions regardless of educational level. But most of the consumers did not shift to an alternative oil instead of coconut oil, while 22% have started using different oils. The significant factor considered at the purchasing point was changed from brand to standards and specifications, and the concern for the nutritional attributes has also increased after the incident. There is no correlation between the factors that affected the purchasing decisions before and after the issue ($p > 0.05$). The study concluded that the majority of coconut oil consumers have a satisfactory awareness of the potential hazard of aflatoxin, and the consumption patterns and purchasing decisions have deviated significantly after the incident. The trends and habits rather than knowledge and greater awareness on the matter are seemed to be accountable for these behavioural changes. Therefore, the relevant authorities should induce consumer education campaigns to enhance the awareness of consumers on these food safety issues, which will lead them to assure health safety and confidence in coconut oil products. Moreover, quality and safety analyses of coconut oil manufactured on small, medium, and large scales will be conducted to gain in-depth knowledge as future projects align.

Keywords: Aflatoxin, Awareness, Coconut oil, Consumer behaviour, Sri Lanka