

Pesticide Use in Homes and Children's Health

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Saller, J., Reyes, P., Maldonado, P. A., Gibbs, S. G., and Byrd, T. L. March 2007. "Children's Exposure to Pesticides Used in Homes and Farms." *Journal of Environmental Health* 69 (7): 27-31.

Introduction

Many households have pest problems inside and outside their homes. Pests like cockroaches, flies, rats, mice, fleas, spiders can bring allergies and various diseases into the households (U.S. Department of Housing and Urban Development (HUD), 2006). Pesticides are designed to prevent and kill the pests. If the pesticides are not properly used or stored, however, they can be very dangerous to human health (U.S. Environmental Protection Agency (EPA), 2002). Pesticides contain chemicals to kill the pests and these chemicals also can harm people.

Based on data collected from the American Association of Poison Control Centers, EPA (2004) indicates that approximately 71,000 U.S. children were exposed to or poisoned by common household pesticides in 2004. Residents can be poisoned by the hazardous household chemicals including household pesticides not only by eating or drinking the chemical products but also by touching or breathing even a very small amount of them. Symptoms of exposures to the hazardous chemicals can be minor and temporary, such as dizziness, nausea, and itchy skin. However, they also can cause long-term cancer or lung damage, and neurological, developmental and reproductive disorders which may not be discovered for a long time after the exposures (EPA, 2002; HUD, 2006).

This study by Saller, Maldonado, Gibbs, and Byrd (2007) aimed to explore behaviors, attitudes and beliefs about in-home pesticide use and source of health-related information among households in three communities in the Lower Valley of El Paso County, Texas. Especially, the researchers were interested in any possible use of methyl parathion whose use is legally prohibited. Methyl parathion is a pesticide highly toxic to humans and birds (EPA, 1997). Methyl parathion is only allowed to be used on certain open agricultural field and it is legally prohibited to use methyl parathion inside buildings (EPA, 1997). Based on a report by the Texas Department of Health (TDH), however, the researchers indicated that 25% of the residents in the study region were illegally using methyl parathion and considered as a major pesticide threats in the area.

Methodology

The researchers trained bilingual interviewers and the interviewers conducted door-to-door questionnaire surveys to 150 randomly sampled households in Socorro, Sam Elizario, and Febens in the Lower Valley of El Paso County, TX. The Researchers reported that majority of the respondents were Hispanic (97%) and 71% of the surveys were conducted in Spanish for the reason.

Main Ideas

Pesticide Use and Perception of Pesticide Safety

About 89% of the respondents indicated that they used some type of pesticides. The most commonly used brand of pesticide was Raid (74%) followed by Combat (23%). Many of the respondents also reported use of pesticides at their neighborhood farms. But it was found that the respondents were seldom notified of



the pesticide use. In terms of methyl parathion, only a few respondents reported that they used any methyl parathion indoors or outdoors, which was quite different for the findings of the TDH. However, the researchers assumed that the actual number of households that used methyl parathion might be greater than reported. The researchers believed that the respondents knew that the use of methyl parathion was illegal and the respondents might have given socially-desirable answers rather than honest answers.

Majority of the respondents agreed or strongly agreed to the seriousness of illness caused by pesticides (94%) and to the negative impacts of the pesticide use on children's health (88%). However, 62% reported that they believed in the safety of pesticides that could be bought for in-home use. Respondents who used pesticides and who did not showed difference in perceptions and attitudes about the pesticide use. Compared to households who did not use pesticides, households who used pesticides showed less sensitiveness to the pesticide safety concerns and reported most people around them used pesticides.

Source and Confidence of Health Information

Most of the respondents reported that they have seldom received information regarding health issues from any mass-media, government health agencies or university education sources. Forty-five percent of the respondents showed trusts toward information from the Texas Department Health followed by television and the city/county health departments.

Implications for Extension Programs

Households in the U.S. use more than a billion pounds of pesticides indoors and outdoors every year (EPA, 2002). Approximately 47% of households with children under the age of five and 75% of households without children under the age of five have one or more pesticides stored in unlocked cabinets which young children can easily reach (EPA, 2004; HUD, 2006).

The overall findings from Saller et al.'s study indicated some contradiction, between what people are aware should be done and what they actually do as far as pesticide use. Even though majority of the survey respondents reported their awareness of the health impact of pesticide use, the majority of the respondents used pesticides in their homes.

Thus, outreach education activities need to focus not only on increasing knowledge of the dangerous health impacts of the pesticides and of proper use of the pesticides but also on changing actual behaviors of the households especially those with young children. As also suggested by Saller et al. (2007), the information should be distributed through the channels that residents in the area trust to increase the educational impacts.

Additional References

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