

"It's all the other stuff!" How smokers understand (and misunderstand) chemicals in cigarettes and cigarette smoke

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Abstract

Many people understand chemicals as entities that do not occur naturally, and which are also invariably toxic. Tobacco control messages liberally use the term 'chemicals' to evoke these meanings and create concern among smokers. This may reinforce misunderstandings, potentially leading to smokers making harmful choices. To investigate smokers' understandings of chemicals, we conducted qualitative research using 18 individual interviews and three focus groups with Australian smokers and recently quit smokers. The research was guided by the 'mental models' framework and the recently developed Context, Executive, and Operational Systems theory. We discerned two clusters of mental models: the first cluster focused on combustion as the overarching cause of harm (and were largely consistent with the science) and the second cluster focused on additives as causes of harm. We found most participants displayed limited knowledge of the causes of harm from smoking and some held mutually incompatible beliefs. Most participants believed that cigarettes differ significantly in harmfulness according to whether or not they were believed to contain additives. Only a minority understood that the bulk of the toxicants to which smokers are exposed are combustion products. These findings are directly relevant to tobacco control but also have broader relevance to risk communications about toxic exposures.

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