

## **The development of preventive interventions to reduce hazardous chemical exposures in small business in New Zealand.**

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### **ABSTRACT**

It has been said that one of the greatest problems in occupational safety and health is the lack of research involving the dissemination, adaptation and utilization of appropriate OHS information. In addition, the need to focus OHS expertise on small businesses is now established in many countries, but effective mechanisms to reach, assist and impact these companies continues to be an area of uncertainty. To date, most OHS research and interventions have been primarily based on lessons learned from large companies. Specific problems, limitations and needs of small businesses have not been thoroughly examined. Only until very recently, has the research been examined to identify effective approaches to small businesses and to suggest future research strategies. Even with this examination, conceptual frameworks for OHS and small business are theoretically vague and empirically not well supported.

This paper presents the background and reports on current findings on research undertaken to determine the nature and extent of use of information on hazardous substances in small business, how small businesses use and manage hazardous substances and how effective strategies can be developed to assist owners/ managers of small businesses reduce chemical exposures from hazardous substances.

### **INTRODUCTION**

There is a growing field of research on the occupational health and safety issues concerning small to medium sized businesses/ enterprises (SME's) internationally. However, the literature is fragmented and the focus of the research is diverse and disparate. Only until very recently, has the research been examined to identify effective approaches to SME's and to suggest future research strategies (Champoux and Brun, 2003; Lamm and Walters, 2003; Hasle and Limborg, 2006). Even with this examination, conceptual frameworks for OHS and small business are theoretically vague and empirically not well supported.

A small number of studies report that exposure to many physical and chemical hazards in small workplaces are excessive, although in general the extent of published data on small workplaces is extremely limited. Examples in the literature include studies from agriculture, construction, manufacturing, wood industry, painting and printing (Hasle and Limborg, 2006).

In all of the literature concerning occupational health and safety and small business, the most recurring theme seems to be the identification of problems and challenges, faced by employers, employees, enforcement agencies and researchers in relation to controls and interventions.

There is a general consensus that the models developed for larger companies have proved to be ineffective and the difficulty contacting smaller firms, their geographical dispersal and their short life spans, have all helped ensure that they have been left more or less to their own devices (Gardner, 1999; Mayhew, 1997, Champoux and Brun, 2003; Lamm and Walters, 2003).

This paper presents the background and reports on current findings on research undertaken to determine the nature and extent of use of information on hazardous substances in small business, how small businesses use and manage hazardous substances and how effective strategies can be developed to assist owners/ managers of small businesses reduce chemical exposures from hazardous substances. The study is funded and supported by the Accident Compensation Corporation (ACC), Wellington, New Zealand.

The aims of the research are to develop recommendations about the design of effective intervention strategies that will reduce exposure to hazardous chemicals for people working in small businesses. Specifically, the study seeks information on small business owners; knowledge of hazardous chemicals and how they prevent or minimise exposure; awareness of legislation and regulations; and information and support with regard to chemical products used in business operations.

Five sub-industry groups were identified that have a high proportion of small businesses and have high levels of chemical exposure. These include; printers; apple growers; hairdressers; wooden furniture and upholstery manufactures; and painters and decorators

## **METHODOLOGY**

Data collection involved completion of an industry specific questionnaire through interviews with owner/ managers of selected small businesses in industry sectors in the Wellington, Manawatu, Taranaki, Hawkes Bay regions. A contact database of small businesses within the regions and industry sectors was compiled by ACC and also through local and national business directories. National and regional industry associations were contacted to provide information on specific chemical usage in the sector and to gain support for involvement in the research at the local level.

Participants completed a questionnaire covering their background and experience in the business, knowledge of health and safety legislation, chemical safety management, details of the substances that they thought were hazardous, perceived health effects and relevant control measures, chemical safety training and sources of advice and information on the chemicals used.

Each small business industry dataset was analysed and descriptive statistics were generated for demographic information, nature and extent of use of information on hazardous substances, advice received by the business; information and advice received on health and safety issues; knowledge and understanding about specific hazardous substances used in the business; where the information, knowledge of chemicals was derived; the management of hazardous substances. Cross tabulations will explore associations between key dependant and independent variables, including industry type, number of employees, length of operation of the business, training and information received, and other relevant factors.

## **RESULTS & DISCUSSION**

The following section provides preliminary results of the survey data for the hairdressing, apple growing and printing industry sectors. Still to be completed is data collection for wood furniture manufacturing sector and painters and decorators. The preliminary results confirm earlier studies that management in small businesses is more informal, the lines of communication are short, the communication is oral, the structure is simple and commercial pressures are very high and immediately felt. Moreover, it is impossible to separate OSH practices from other aspects of small business management. Overall, small businesses' health and safety management is poor.

In addition, these results support the premise that the owner-manager is the key person in the small business and it is their values that determine the businesses approach to health and safety management (Antonsson, 2007; Hasle & Limborg, 2006; Vickers, Baldock, Smallbone, James & Ekanem, 2003). Many owners consider health and safety to be the employees' responsibility (Hasle & Limborg, 2006; Vickers et al, 2003) and are not aware of legislative requirements (Antonsson, 2007; Hasle & Limborg, 2006; Vickers et al., 2003).

In general, small businesses often take a reactive and ad hoc approach to health and safety, as problems are usually only resolved when they become apparent. This appears apparent in these preliminary results. Hasle and Limborg (2006) suggest that this is due to a combination of factors. Firstly, the owner-manager often believes that responsibility for health and safety lies with employees and secondly, that accidents are a rare experience within the individual small business. Interviews with small business owners showed that most of them had a good awareness of the most immediate risks associated with their business (Vickers et al., 2003). Even in those small businesses which demonstrate a high level of health and safety awareness, assessment of risks is likely to be implicit, informal and sometimes reactive as opposed to more systematic and explicit approach that is promoted by the Health and Safety Executive (Vickers et al., 2003).

Furthermore, several studies report that small businesses have a tendency to assess their OSH, chemical risk management and performance more positively than researchers when they assess their knowledge through content questions or site visits (Fairman & Yapp, 2005; Vickers et al., 2003). In a survey of small businesses OSH

practices, it was found that the owner-managers assessment of their knowledge of OSH legislation was very different from the researchers' assessment of their answers to content questions. Some managers with better knowledge rated their knowledge poorly whilst those who rated their OSH legislative knowledge more highly tended to be the least aware.

## CONCLUSIONS

The results reported to date identify a range of issues and themes in relation to the management of hazardous substances in the businesses surveyed. As hypothesised the issues of health and safety management and specifically chemical safety management were generally not well organised, implemented or resourced in the businesses.

### **References**

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