

# **Construction Apprentices, Work and Noise**

## **Executive Summary**

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# Executive Summary

## Introduction

Noise-induced hearing loss (NIHL) continues to be a major problem for those employed in the construction industry. Work-related NIHL is among the most common occupational diseases. Besides hearing loss, exposure to loud, persistent noise has been linked to the development of Tinnitus, a persistent buzzing in the ear that can be debilitating and lead to sleep loss, depression and suicide. Noise at work is also associated with a range of mental health issues and lowered job satisfaction. In this study we examined the experiences and perceptions of a group of carpentry apprentices in Melbourne, Australia who were in the early stages of their career and training. The study focussed specifically on the issue of noise at work, apprentices' perceptions of noise as a hazard and their views toward noise control and hearing protection at work.

## Method

The purpose of this study was to examine how carpentry apprentices who work in the construction sector understand their risks at work, with a special focus on noise. We also examined, from a instructors' perspective, the employment preparation process for new workers, including how health and safety messages are delivered and understood by these workers.

A qualitative approach was taken in order to explore complex and multi-faceted issues (e.g. perceptions of risks, motivations behind certain actions, contradictory feelings or practices). Focus groups were used as a method of data collection with both apprentices and instructors.

Permission was granted to recruit participants via a large Melbourne TAFE (Training and Further Education) college. Instructors were approached via an email from the head of department. One focus group of instructors was conducted with a total of seven participants (6 Carpentry, 1 Plumbing). Apprentices completing a Carpentry course were then invited to participate. A short presentation about the study was given and apprentices were given the option to sign up to participate. Participants received a study package which included a study information sheet, consent form, honorarium and a short demographic questionnaire. A total of 8 focus groups (n=41) were conducted with a minimum of 2 and a maximum of 9 carpentry participants in each focus group.

### Apprentice Focus Groups – Demographic information

	Apprentice age group		Total
	18-24 (n=32)	25-38 (n=12)	
Level			
1 <sup>st</sup> year	14	8	22
2 <sup>nd</sup> year	11	2	13
3 <sup>rd</sup> year	7	2	9
Total	32	12	44
Sector			
Domestic	25	7	32

Commercial	1	3	4
Domestic/commercial	6	2	8
<b>Total</b>	<b>32</b>	<b>12</b>	<b>44</b>
<b>No. Employers</b>			
0 employers	1	0	1
1 employer	23	9	32
2 employers	5	1	6
3 employers	0	1	1
4 employers	0	1	1
<b>Total</b>	<b>29*</b>	<b>12</b>	<b>41</b>

\* Three apprentices did not report number of employers

All focus groups were recorded and then transcribed. Common themes were identified and all transcribed data was then coded. Codes were developed by review of the initial transcripts and refined as the study progressed and new data were collected. Data were organized using Nvivo qualitative data analysis software.

Once all transcripts were coded Nvivo was used to extract all data corresponding to each code (e.g. all data coded “noise”, “communication”, “hearing protection”, etc). Each code was then analysed and key themes were identified, noting discrepancies or contradictions.

## Key Findings

- Differences in working environment, training and work culture were observed between apprentices working in the domestic and commercial sectors. Overall, apprentices in the commercial sector were more likely to be provided with personal protective equipment (PPE) from their employer compared to those in the domestic sector. More training was also provided to those in the commercial sector compared to the domestic sector, however a more supportive, close knit working environment was noted amongst domestic apprentices.
- Apprentices reported being exposed to many different types of noise, especially from machinery and power tools. Noise was generally viewed as something that was constant and unavoidable at work. Apprentices were more concerned about hazards that could cause immediate injury (such as cuts, falls etc.).
- Different strategies for reducing noise, and barriers associated with carrying out these strategies were identified. Apprentices held the view that noise was not on the employer’s agenda and not a high priority. Hearing protection was viewed as the main strategy to reduce noise.
- Hearing protection was used inconstantly, with only certain tools/jobs prompting use. Types of hearing protection varied; practicality, comfort, cost, level of protection were all factors identified by apprentices as influencing choice of hearing protection. Workplace culture also influenced the use of

hearing protection. Apprentices from sites where hearing protection was used by employers/colleagues were more likely to say they used hearing protection. Apprentices working in the domestic sector tended not receive hearing protection and training consistently. All apprentices had very limited technical knowledge about levels and types of hearing protection.

- Importance of getting into the habit of using hearing protection was noted, however barriers were also emphasised. Apprentices felt communication was affected when using hearing protection and this in turn interfered with safety. General discomfort with wearing earmuffs or earplugs was mentioned, as was the inconvenience of having to wear them for short tasks.
- Apprentices, while not overly concerned about noise on their worksites, were interested in getting hearing tests, particularly if tests could be delivered at the training college and were free. A number of participants noted that if hearing tests revealed a loss of hearing, they would be more likely to consistently wear hearing protection at work.

## **Conclusion**

Based on data collected from focus groups the research team identified a number of ways to increase apprentice awareness of noise as a hazard and potentially influence noise reduction strategies and use of PPE. These suggestions include informing employers about their responsibilities under the Occupational Health & Safety Act, enforcing induction/training on domestic sites, the provision of safety equipment in the workplace, increased education about ratings of hearing protection and the delivery of safety messages about noise/hearing loss through peers. Hearing tests at the training college would provide information to apprentices about their level of hearing and could also be ideal opportunities to deliver information about noise at work to apprentices.