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The University also acknowledges and is grateful to the Traditional Owners, Elders and Knowledge Holders of all Indigenous nations and clans who have been instrumental in our reconciliation journey.

We recognise the unique place held by Aboriginal and Torres Strait Islander peoples as the original owners and custodians of the lands and waterways across the Australian continent, with histories of continuous connection dating back more than 60,000 years. We also acknowledge their enduring cultural practices of caring for Country.

We pay respect to Elders past, present and future, and acknowledge the importance of Indigenous knowledge in the Academy. As a community of researchers, teachers, professional staff and students we are privileged to work and learn every day with Indigenous colleagues and partners.



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Amplifying awareness: A pilot of Audiology students teaching Oral Health students about hearing loss

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Background



- Noise-induced hearing loss (NIHL) in dental settings is a significant occupational hazard for oral health therapists (OHTs) (Henneberry et al., 2021).
- Dental professionals often have a limited understanding of the risks of NIHL, particularly the occupational causes and long-term consequences (Theodoroff & Folmer, 2015)
- Some previous research between dental and audiology students suggests collaborative education can improve knowledge on hearing loss (Brame et al., 2019)
- More can be done within the Oral Health profession to raise awareness of NIHL and protective strategies

Aim and methods



Aim

- This pilot program aimed to improve OHT students' ability to **recognize, prevent, and manage** hearing-related issues in dental settings through an interprofessional education approach.

Methods



- 1-hour workshop created and delivered by 3 Audiology students to all BOH students



- Pre- and post-intervention Likert survey (96 students)



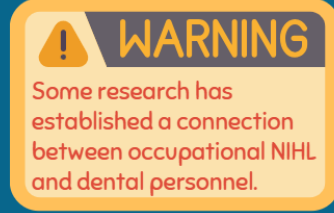
- Audiology students as partners

Workshop

Topics covered:

1. Risks for NIHL
2. Signs and symptoms of NIHL
3. Occupational risks for NIHL among dental professionals
4. Strategies for reducing risks of NIHL
5. Strategies for communicating with patients/others with hearing loss

Occupational NIHL amongst dental professionals



Did you know?

- Ultrasonics can generate a sound intensity level of 70–92 dB SPL (sound pressure level) above 20 kHz!

What does it all mean?

From suction machines to ultrasonic handpieces operating daily:

- Noises may be moderate to loud for an extended period of time
- OR
- Noises may be loud for a short period of time



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Facilitative Strategies: Do's and Don'ts

Do's

- Clear vision of face/mouth
- Ensure lighting is on speaker's face
- Clear, enunciated voice
- Concise messages
- Indicate when the topic changes
- Move away/minimising background noise
- Asking the listener if they can hear you

Don'ts

- Speaking too fast or too slow
- Having hand over mouth/facial hair/face masks*
- Long, complex messages
- Poor lighting/ glare/shadows over speaker's face

Survey



- **Demographics (Age, Gender, Year Level)**
- **Hearing Loss and/or Tinnitus?**
- **Hearing Loss Knowledge (5 items)**
- **Hearing Protection Knowledge (4 items)**
- **Communication Strategies Knowledge (4 items)**

Pre-workshop survey findings



78% understood how noise exposure in dental clinics can put hearing at risk



16% aware of strategies to protect their hearing in a dental clinic setting



19% of students aware of when to use earplugs to protect hearing



21% feel confident in how to communicate effectively with patients who have HL



5% of students used earplugs in practice, but 44% intend to wear in future

Post-workshop survey findings



98% understood how noise exposure in dental clinics can put hearing at risk

78%



93% aware of strategies to protect their hearing in a dental clinic setting

16%



90% of students aware of when to use earplugs to protect hearing

19%



90% feel confident in how to communicate effectively with patients who have HL

21%



81% intend to wear ear plugs as part of their practice in the future

44%

Significant improvement for all questions

Open ended responses

Name any strategies you are aware of that could help to communicate with someone who has hearing loss:



Pre (16 responses)	Post (20 responses)
1. Gesture	1. Gesture
2. Written format	2. Written format
3. Louder	3. Louder
4. Annunciate	4. Annunciate
5. Auslan interpreter	5. Auslan interpreter
6. Use simple language	6. Use simple language
	7. Face the patient
	8. Clear view of mouth (no mask)
	9. Check if they can hear you
	10. Good lighting
	11. Repair strategies
	12. Rephrase don't repeat
	13. Use of assistive listening devices
	14. Use supporting diagrams

Discussion



- Effective improvement in students' hearing loss knowledge (and intention to prevent HL)
- Aligns with previous research on dental students
- Highlights need for hearing health education in oral health curricula
- Demonstrates value of interprofessional collaboration

Conclusions and future directions



- Value of HL related workshop in dental education
- Need for further research
 - Longer term follow up
 - Ear protection trials

Thank you



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Questions?