

## Dietary behaviour change for caries prevention in the dental setting

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This project expands on a 2014 ACFF funded project which developed an online training module in dietary advice for caries prevention. Motivational interviewing (MI) is an evidence-based approach that can be used in the dental setting, to facilitate dietary behaviour change. However, dental practitioners struggle to implement this in practice due to a lack of confidence and competence. This study aims to improve MI skills and confidence through the development of video resources, which will enhance the existing online learning module. Dental practitioners and student's confidence, knowledge, and integration of skills will be evaluated pre- and post-training using survey measures.

Three objectives were met:

- Development of three 5-10 minute videos demonstrating the use of MI in the dental setting
- Dental practitioners and students utilising the video resources
- Measuring changes in confidence, knowledge, interest and actual integration of MI skills for facilitating dietary behaviour changes.

The project was completed in three key phases:

Phase One: Planning and video development

- Development of a script for filming the MI videos, including consultation with clinical and educational experts
- Filming and editing the videos
- Uploading to the video content into the previously developed online learning module

Phase Two: Implementation

- Dental practitioners and students to utilise the video training resources

Phase Three: Evaluation and Dissemination

- Pre-and post-test survey of skills, knowledge, confidence and interest
- Results written up in an Honours manuscript
- Dissemination in appropriate peer-reviewed journals and conferences (currently preparing)

Results showed the mean confidence score post-module ( $M=7.57$ ,  $SD= 1.39$ ), were higher than the pre-module ( $M=5.28$ ,  $SD= 2.62$   $t(6)= 4.04$ ,  $p<0.01$  so the null hypothesis was rejected and a significant difference was evident between the two time points. The Cohen's  $d$  power calculation for this t-test on participant MI confidence:  $(7.57-5.28)/2.097201 = 1.091932$  showed the effect size was large. Though 2 out of the 7 participants marked no change in knowledge, overall there was notable growth in knowledge scores pre module

( $M=4.0$ ,  $SD= 2.94$ ) to post module survey ( $M=7.14$ ,  $SD= 1.35$ ),  $t(6)=3.18$ ,  $p<0.01$  therefore a significant difference was discernible between the data at two different time points.

Thematic analysis of qualitative responses to client scenarios revealed an improvement following module completion, with the comparison of the total score of responses (addition of all participants score per scenario) in the pre-module ( $M=13.66$ ) compared to the post-module ( $M= 16.0$ ). Empathy and reflective listening increased amongst individuals who completed both pre and post module, some participants more evidently so than others

The results of this research project have generated valuable insights into the education of dental practitioners and students on MI. The study proved that the inclusion of specifically designed MI videos assisted with applied learning of techniques as evident in the overall improvement of the qualitative short answer responses. Furthermore, the use of an online platform and videos has portrayed benefits including MI knowledge and confidence gain to participants involved.

These outcomes can be sustained as the videos are a lasting resource that can continue to be used in online learning materials.