A Co-Designed mHealth Programme to Reduce Risk Factors for Heart Disease, Obesity and Diabetes in Māori and Pasifika Communities in New Zealand: Results from the OL@-OR@ cluster randomised controlled trial

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The OL@-OR@ mHealth programme (a smartphone app and website) was co-designed with Māori and Pasifika communities to reduce their risk of non-communicable disease by supporting positive, culturally relevant, changes to lifestyle. Our aim was to determine the effects of the OL@-OR@ programme on key risk factors, i.e. diet, physical activity, smoking, and alcohol consumption.

A two-arm, cluster randomised controlled trial was conducted with Māori and Pasifika communities in New Zealand. Clusters were randomly assigned (1:1 ratio) to either the full OL@-OR@ programme or a control version of the app (data collection only plus a weekly notification), stratified by geographic location (Auckland or Waikato) for Pasifika clusters or by region (rural, urban, or provincial) for Māori clusters. The primary outcome was adherence to healthy lifestyle behaviours measured using a validated, self-reported composite health behaviour score (fruit and vegetable intake, physical activity, smoking behaviour, and alcohol intake) at 12 weeks. Secondary outcomes were self-reported body weight, holistic health and wellbeing status, medication use, and engagement with the OL@-OR@ app.

Between January and July 2018, 69 community clusters (34 Māori, 35 Pasifika) were randomly assigned to the intervention (*n*=37) or to the wait-list control group (*n*=32) and contributed data to the analysis. Of the 1,456 participants, 70% were female and their mean age was 38 years (range 18-78). At baseline, mean daily fruit and vegetable intake overall was 3.2 serves (SD 2.0) and 50% of participants were sufficiently physically active based on weekly moderate/vigorous physical activity (MVPA) score. The majority of participants were non-smokers (76%) and had a non-harmful alcohol intake (91%). Baseline mean body mass index (BMI) was 34.6 kg/m^2 (SD 9.2).

12-week follow up of participants will be completed in December 2018 and full trial results will be presented at the ANA conference.