

Multi-Disciplinary Interventions for Children and Adolescents with Obesity: The Whānau Pakari experience

Yvonne C Anderson^{1,2}, Lisa E Wynter¹, Tami L Cave², Cervantée E K Wild², Cameron C Grant^{3,4,5}, José G B Derraik², Wayne S Cutfield^{2,4}, Paul L Hofman^{2,4}

¹ Department of Paediatrics, Taranaki District Health Board (DHB), New Plymouth, New Zealand

² Liggins Institute, University of Auckland, New Zealand

³ Department of Paediatrics, Child and Youth Health, University of Auckland, Auckland, New Zealand

⁴ Starship Children's Hospital, Auckland District Health Board, Auckland, New Zealand

⁵ Centre for Longitudinal Research - He Ara ki Mua, University of Auckland, Auckland, New Zealand

Background/Objectives

Multi-disciplinary interventions remain recommended best practice for management of childhood obesity. The purpose of this research was to create and assess a multi-disciplinary intervention programme for children/adolescents with obesity in Taranaki, incorporating a randomised clinical trial (RCT).

Methods

Whānau Pakari means healthy, self-assured families that are fully active. The programme was an intersectoral collaboration between Taranaki DHB, Sport Taranaki and the University of Auckland. It specifically focusses on those over-represented in obesity statistics, namely Māori and those from most deprived households, thereby addressing health inequities. Audit and community consultation informed the creation of Whānau Pakari. An RCT was embedded within the new service, offering holistic, 6-monthly, home-based assessments and advice (control), or assessments and weekly group sessions for 12 months. Multi-source evaluation was undertaken to determine satisfaction, and economic evaluation was undertaken.

Results

Enhanced levels of engagement with at-risk groups were achieved. Engagement with Whānau Pakari was associated with a significant decrease in BMI standard deviation score in the low-intensity control (-0.12, 95% CI -0.2 to -0.03) and high-intensity intervention (-0.10, 95% CI -0.19 to -0.02) at 12 months. Attendance $\geq 70\%$ in the high-intensity intervention doubled the effect (-0.22, 95% CI -0.36 to -0.09, $p = 0.04$). Improvements occurred in quality of life and cardiovascular fitness in both groups. Multi-source programme evaluation found high stakeholder, referrer and participant satisfaction. Economic evaluation demonstrated Whānau Pakari was cost-effective when compared with the previous model.

Key take-home messages

Whānau Pakari is an acceptable, appropriate intervention for children/youth with obesity that has improved health inequity in service delivery, and weight status at 12 months. It is a service that utilises intersectoral collaboration. It is a unique one-team model of care providing continuity, with a comprehensive assessment that identifies and manages weight-related comorbidities and assists in planning individualised interventions. Scalability and transferability appear possible.