

ASSOCIATIONS BETWEEN ETHNICITY AND CHILD HEALTH FACTORS IN NEW ZEALAND

Objectives: To identify associations between material and behavioral factors in relation to health among Māori, Pacific, and New Zealand European or other (NZEO) children in New Zealand.

Design: Cross-sectional using a two-stage random clustered sampling procedure.

Participants: 3,275 children: 37.4% Māori, 32.3% Pacific, and 30.3% NZEO.

Main Outcome Measures: Prevalence of demographic, socioeconomic, food security, physical/lifestyle, dietary, and dental factors by ethnic group.

Results: Proportionally more Māori and Pacific children, respectively, lived in large households, and approximately one quarter of each group had an annual household income <\$20,000. Approximately one fifth of Māori and Pacific households respectively relied on food banks when they did not have enough money for food, and more Pacific household occupants felt stressed when food could not be provided for social occasions. A higher proportion of Pacific children were obese. Approximately 40% of Māori and NZEO children did not play physically active games, and almost four fifths of Māori children had watched television every night the previous week. A higher proportion of Pacific children ate breakfast on the way to school or purchased their school lunch. More than half the Māori and Pacific children had consumed a chocolate bar or soda ≥ 4 times the previous month, and a higher proportion of Pacific children added sugar to hot beverages. Proportionally more Māori children had received a restoration or experienced dental pain at night, and a higher proportion of Pacific children had received an extraction due to dental caries.

Conclusions: Marked differences were found in material and behavioral outcomes in relation to child health when ethnicity was considered. (*Ethn Dis.* 2007;17:84–91)

Key Words: Behavioral, Children, Health, Māori, Material, New Zealand, Pacific

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INTRODUCTION

Despite marked improvements in health in the overall child population of many developed countries in recent times, a small proportion of children in such countries carry a disproportionate share of the health burden.¹ Some evidence points to the role of demographic,² socioeconomic,³ physical/lifestyle,⁴ environmental⁵ and dietary^{6,7} factors in these disparities. The impact of food security on child health outcomes is a less explored concept but one that may be a useful proxy measure of socioeconomic status (SES) when investigating groups for whom more traditional SES instruments are culturally inappropriate. Food security is defined as “the ready availability of nutritionally adequate foods and the ability of people to acquire personally acceptable foods in a socially acceptable way.”⁸

One conceptual approach to examining such determinants involves classifying variables as material or behavioral.⁹ Material factors (material life circumstances or assets) are often assessed at a community level. They are structural in nature, relatively resistant to change, and tend to require political intervention.¹⁰ By contrast, behavioral items (observable actions) are usually addressed at an individual level, have been extensively researched, and tend to follow a medical intervention model.

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We must explore the pathways through which these factors influence child health in order to design and implement appropriate interventions.

The main ethnic groups in the New Zealand child population include New Zealand European or others (NZEO), who represent 66.2% of the ≤ 14 -year-old population; Māori (the indigenous group, 23.2%); and Pacific (Cook Island, Western Samoan, Niuen, Tongan, Tuvaluan, Tokelaun, or Fijian, 10.6%).¹¹ Māori and Pacific children do not enjoy the same social advantage as their NZEO counterparts; >60% of Māori and Pacific children live in government-subsidized housing, and one third of Māori and Pacific adults receive a government benefit.¹¹ Māori and Pacific children also do not fare well in terms of general health. They have higher rates of hospitalization (particularly for acute rheumatic fever or pneumonia) than NZEO children and fetal death rates almost double the national average.

Dental services for children in New Zealand are provided through the School Dental Service (SDS), which was established in 1921. The SDS has been attributed, along with exposure to fluoride and increased public awareness, to the marked reduction in untreated dental decay in the child population since the beginning of the 20th century.¹² Some 97% of the 4- to 13-year-old population are currently enrolled in the SDS.¹³ Dental therapists employed by the SDS perform a range of services, without fee, in school-based dental clinics, including restorations to primary and permanent teeth, pulp treatments, and extractions to primary teeth.¹³ Disparities in SDS enrollment and service provision exist; children