

EVALUATION OF PRE-SCHOOL FEEDING PROGRAMMES
ON THE NUTRITIONAL HEALTH OF ABORIGINAL CHILDREN
IN NEW SOUTH WALES

T. COYNE*, M. DOWLING* and D. CONDON-PAOLONI**

A total of 116, three to five year old Aboriginal children were included in an evaluation of the effect of pre-school feeding programmes on their nutritional health. Seventy-three (73) children attended pre-schools in five communities. Forty-three (43) children lived in five communities which do not have pre-schools. These five communities were matched with the pre-school communities on the basis of size of the Aboriginal population, geographic location and socio-economic conditions.

Children attending pre-schools were examined in February, 1977, within two weeks of the beginning of the school term and again just prior to the end of the school term. Children not attending pre-school were all examined before June, 1977 and again 37 to 39 weeks later. All children had height and weight measurements and haemoglobin determinations. A sub-sample of children had serum determinations for ascorbic acid, ferritin, iron, total protein, albumin, cholesterol and triglycerides.

RESULTS. At the first examination, the pre-school and non-pre-school samples were similar in age, weight and height. At the second examination, both female and male pre-school children had greater mean weights compared to non-pre-school children. This difference was statistically significant for females but not for males. Mean heights of female and male pre-school children were greater than non-pre-school children but these differences were not statistically significant.

Both females and males in the pre-school sample showed significantly greater weight gain than females and males in the non-pre-school sample. Height gain was greater for pre-school children than non-pre-school children but this was statistically significant only for females.

Biochemical parameters for both groups were within acceptable levels, except for ferritin which was lower in the pre-school group. There was little difference between the two groups at the first examination. At the second examination, there was no significant difference between the two groups for mean serum ascorbic acid, mean corpuscular volume, total protein, serum albumin, serum cholesterol or triglycerides. The PS group had significantly higher mean levels of serum iron and MCHC. The NPS group had significantly higher mean levels of ferritin, haemoglobin, haematocrit and MCH.

It appears that pre-school feeding programmes have a significant improvement on the growth of Aboriginal pre-school children, although there was no consistent effect on biochemical parameters. It is widely agreed that growth is an important index of health and nutritional status. It is important that governmental agencies responsible for funding pre-school programmes are aware of the beneficial effects of feeding programmes on Aboriginal children.

* Aboriginal Health Section, Health Commission of N.S.W., Sydney, 2000.

**Dept. of Anthropology, University of Pennsylvania (presently living in Wollongong).