

Journal Abstracts

EDITOR: 'ESETA FINAU*

These abstracts are from Medline using *Tonga* as the search word for the years 1967 - 2000. Some papers were not abstracted but are still included. Papers could have been missed using this search word alone.

Craig P. Halavatau V. Comino E. Caterson I. Perception of body size in the Tongan community: differences from and similarities to an Australian sample. *International Journal of Obesity & Related Metabolic Disorders*. 23(12):1288-94, 1999 Dec.

Institution. Department of Endocrinology, Royal Prince Alfred Hospital, Camperdown, NSW, Australia. pipa@diab.rpa.cs.nsw.gov.au

The prevalence of obesity in Tonga is high and increasing. Attempts to address this major health issue would be assisted by a realistic concept of current and preferred body sizes. In this study, body size perception in Tongans was compared with that of Australians. DESIGN: Cross-sectional comparative study. SUBJECTS: 542 Tongans, 89 of whom were enrolled in a weight-loss programme (WLP), 481 Australians. Measurements: Subjects were weighed and measured. Two series of photographs (one female, one male), representing specific body mass indexes (BMIs) were used to assess body perception. RESULTS: The BMIs of the Tongans were higher than those of the Australians (Tongans: female 32.6+/-0.35 (mean +/- s.e.m); male, 30.4+/-0.33; Australians: female, 25.6+/-0.33; male 26.3+/-0.26 kg/m²) Tongan women underestimated their body size; Tongan men and Australians overestimated. WLP and younger Tongan women preferred smaller body sizes for themselves and for men and women in general. There were gender differences in preferred healthy and attractive female sizes (men: 27 kg/m²; non-WLP women: 25 kg/m²; WLP women: 23 kg/m²) and male sizes (men: 29-30 kg/m²; women: 26-27 kg/m² chosen by Tongans. Preferred, attractive and healthy body sizes chosen by Australian men and women were similar; about 24 kg/m² for males and 21-22 kg/m² for females. The conclusion is Tongans preferred larger body sizes than did Australians, particularly the men, but WLP women's preferences were similar to those of Australians. There is evidence that preferences are changing in Tonga with time, and probably with increasing Western influence.

McGrath BB. Swimming from island to island: healing practice in Tonga. [Review] [88 refs]. *Medical Anthropology Quarterly*. 13(4):483-505, 1999 Dec.

Institution. School of Nursing, University of Washington, USA.

The health care system of the Pacific island nation of Tonga serves as an example of enduring medical pluralism which incorporates traditional and Western medical practice and accommodates contemporary political and social change. Biomedicine is represented by the hospital and the community health centers; traditional medicine is practiced in homes by healers. Both types of therapies are popularly utilized for different ailments or for the same problem at different points in the illness. Contemporary healing is described and is also analyzed as an expression of social change occurring in Tonga as a result of a political movement toward democracy. [References: 88]

Englberger L. Prizes for weight loss. *Bulletin of the World Health Organization*. 77(1):50-3, 1999.

A programme of weight loss competitions and associated activities in Tonga, intended to combat obesity and the noncommunicable diseases linked to it, has popular support and the potential to effect significant improvements in health.

Wilson LG. Human rights of psychiatrically disturbed persons in the tropical Pacific. *Psychiatry & Clinical Neurosciences*. 52 Suppl:S252-5, 1998 Dec.

Institution. Department of Psychiatry, University of Washington Medical School, Harborview Medical Center, Seattle 98104, USA.

The management of acutely disturbed patients in smaller Pacific island communities presents many clinical challenges as well as ethical and human rights questions. The aggressive, excited, sexually inappropriate, and possibly violent disturbed person frequently will need physical restraint and possible seclusion in a secure environment. In practical terms, on many Pacific islands the only physically secure room is a jail cell. This environment will protect others and possibly protect the out-of-control person from themselves. After protection, the next requirements are adequate information about the person and clinically informed individuals who can make a diagnosis and commence treatment in the jail environment. Adequately trained people who can diagnose and suggest initial treatment are few and widely dispersed in Pacific island communities. Two representative case vignettes from the author's experience as a World Health Organization short-term consultant in Tonga and the Commonwealth of the Northern Mariana Islands illustrate the tension between a disturbed person's right to adequate treatment and the right of a citizen/patient to be free of coercion.

* Co-ordinator Pacific SIDS Programme, Dept of Maori and Pacific Health, University of Auckland, New Zealand.

Hoffman M. Pathways to organogenesis: from coconut crazed teeth in Tonga to salivary glands in space. *New Zealand Dental Journal*. 94(417):117-8, 1998 Sep.

Institution. National Institute for Dental Research, National Institutes of Health, Bethesda, Maryland, USA.

Bell AC. Parnell WR. Nutrient intakes of Tongan and Tokelauan children living in New Zealand. *New Zealand Medical Journal*. 109(1034): 435-8, 1996 Nov 22.

Institution. Department of Human Nutrition, Otago University, Dunedin.

To assess the adequacy of nutrient intakes of 10- to 13-year-old Tongan and Tokelauan children living in New Zealand and to compare these data with data from nonPacific Islands children of the same age. METHODS: A 24-hour diet record was used to assess the nutrient intakes of Tongan and Tokelauan school children (n = 162), aged 10- to 13-years, living in Auckland and Wellington. Nutrient intakes using the same methodology were compared with those from a nationally representative sample of nonPacific Islands, Form 1 children and also with Australian recommended dietary intakes for children aged 12- to 15-years. RESULTS: Data were collected from 162 (68 boys and 94 girls) of 220 children eligible to participate in the study (74%). Mean energy intakes for both the Tongan (8855 kJ for boys, 8610 kJ for girls) and the Tokelauan (9872 kJ for boys, 8826 kJ for girls) children were above the range of intake recommended by the World Health Organisation. The combined average energy intake of the two groups was higher than that of nonPacific Islands children for both boys and girls although not statistically significantly. Total fat intake was significantly higher ($p < 0.05$) for Tongan and Tokelauan boys, protein intake significantly higher for Tongan and Tokelauan boys ($p < 0.01$) and girls ($p < 0.01$), and carbohydrate intake significantly lower ($p < 0.01$) for Tongan and Tokelauan girls than for nonPacific Islands children. Compared with nonPacific Islands children micronutrient intakes were generally lower for Tongan and Tokelauan children with intakes of calcium, riboflavin, thiamin, niacin, folate and vitamin A being significantly lower for both sexes. Vitamin C was also significantly lower for girls ($p < 0.05$). Tongan and Tokelauan children obtain most of their nutrients from meat, bakery products, fast foods and dairy products. Fruit and vegetables were not significant contributors to nutrient intakes. CONCLUSIONS: Tongan and Tokelauan children living in New Zealand consume a diet that is larger in amount but lower in nutrient density compared to that of non Pacific Islands New Zealand children. Their relatively high dietary energy intakes allow them to meet the recommended intake requirements for most nutrients although if current intakes of fat and energy are maintained this may put them at risk of heart disease and other diseases later in life.

Kahn MW. Fua C. Children of South Sea Island immigrants to Australia: factors associated with adjustment problems. *International Journal of Social Psychiatry*. 41(1):55-73, 1995 Spring.

Institution. Department of Psychology, Faculty of Social & Behavioral Sciences, College of Arts & Sciences, University of Arizona, Tuscon 85721, USA.

Social-delinquent problem youth of South Sea Island immigrant to Australia parents, were compared to non-problem youth from the same circumstances, on family, sociocultural, personality, and substance abuse variables. Interviews and testing were done by members of their own community. A consistent pattern of differences most pronounced for males was found between the two groups although not all reached statistical significance. The problem youth compared to the non-problem youth tended to come from families somewhat lower in socioeconomic level, somewhat less traditional in culture, and notably more prone to discipline by physical punishment than by verbal reasoning. The problem youth had significantly lower self-esteem, significantly higher maladjustment test scores, and significantly greater use and problems with alcohol and drugs. They were more alienated and had less clearly established direction for their future. Recommendations for remediation are considered.

Wright DA. Breitenbach R. Adapting diabetes education to the Tongan culture. *Diabetes Educator*. 20(4):279-80, 282, 1994 Jul-Aug.

Tenn L. Sovaleni P. Latu R. Fotu A. Smith J. Getting the community involved in developing a PHC curriculum in Tonga. *International Nursing Review*. 41(5):141-7, 1994 Sep-Oct.

Institution. School of Nursing, University of British Columbia, Canada.

To be relevant and effective, a nursing curriculum must reflect societal needs, health and community structures and resources. Below is a case study of a contractual collaboration between various stakeholders in a post-graduate programme based on primary health care in public health nursing in Tonga. It is one example of the influence and collaborative roles that communities play in the health of people.

Newland HS. Woodward AJ. Taumoepeau LA. Karunaratne NS. Duguid IG. Epidemiology of blindness and visual impairment in the kingdom of Tonga. *British Journal of Ophthalmology*. 78(5):344-8, 1994 May.

Institution. International Community Eye Care, Flinders Medical Centre, Australia.

Data on the prevalence and causes of blindness and visual impairment in Polynesians are not readily available nor are they population based. This survey was designed to obtain

an accurate estimate of blindness and its causes in Tonga. A sample of 4056 persons, aged 20 years and over, was selected by stratified cluster sampling. Participants received a screening, visual acuity examination, and, if visually impaired, were referred for detailed ophthalmic examination to determine the cause. The prevalence of bilateral blindness in the study population was 0.47% and all affected were aged over 50 years. It is estimated that the national prevalence of bilateral blindness, adjusted for the sample weight applied in the selection procedure, is 0.56% (95% confidence interval 0-1.13). Monocular blindness was three times more frequent. Cataract was responsible for 68.4% of bilateral and 30.3% of monocular blindness. Risk factors for life time experience of cataract included age and diabetes (self-reported). Neither smoking nor the presence of pterygium were independently associated with cataract. Increasing years of education were protective against cataract for women, but not men. Corneal opacity from infection or trauma, and diabetes were responsible for most of the remaining visual impairment. While these results do not represent a significant public health problem by world standards they do provide a basis for planning blindness prevention programmes in the region.

Hagelberg E. Clegg JB. Genetic polymorphisms in prehistoric Pacific islanders determined by analysis of ancient bone DNA. *Proceedings of the Royal Society of London - Series B: Biological Sciences*. 252(1334):163-70, 1993 May 22.

Institution. MRC Molecular Haematology Unit, University of Oxford, John Radcliffe Hospital, U.K.

A previously characterized Asian-specific mitochondrial DNA (mtDNA) length mutation has been detected in DNA isolated from prehistoric human bones from Polynesia, including Hawaii, Chatham Islands and Society Islands. In contrast, the Asian mutation was absent in skeletal samples from the Melanesian archipelagos of New Britain and Vanuatu and in the oldest samples from Fiji, Tonga and Samoa in the central Pacific (2700-1600 years BP) although it was present in a more recent prehistoric sample from Tonga. These results, augmented by informative DNA sequence data from the hypervariable region of mtDNA, fail to support current views that the central Pacific was settled directly by voyagers from island Southeast Asia, the putative ancestors of modern Polynesians. An earlier occupation by peoples from the neighbouring Melanesian archipelagos seems more likely.

Anonymous. WHO programme for the prevention of rheumatic fever/rheumatic heart disease in 16 developing countries: report from Phase I (1986-90). WHO Cardiovascular Diseases Unit and principal investigators. *Bulletin of the World Health Organization*. 70(2):213-8, 1992.

The programme was initiated in 1984 by WHO in close collaboration with the International Society and Federation of Cardiology (ISFC). Sixteen countries in five WHO Regions participated: Mali, Zambia and Zimbabwe (in Africa); Bolivia, El Salvador and Jamaica (in the Americas); Egypt, Iraq, Pakistan and Sudan (in the Eastern Mediterranean); India, Sri Lanka and Thailand (in South-East Asia); and China, the Philippines and Tonga (in the Western Pacific). The programme was planned for implementation in three phases: pilot study and control programme in a selected area, control programmes in all the selected communities, and their extension to the whole country. In Phase I, a total of 1,433,710 schoolchildren were screened and 3135 cases of rheumatic fever/rheumatic heart disease (RF/RHD) were found, giving a prevalence of 2.2 per 1000 (higher in the African and Eastern Mediterranean regions), 33,651 recently identified or already known cases were registered; completion of secondary prophylaxis was irregular but averaged 63.2% coverage; percentages of adverse reactions (0.3%) and recurrence of acute RF (0.4%) were very small: 24,398 health personnel and teachers were trained. Health education activities were organized for patients, their relatives, and the general public in hundreds of health education sessions. Thousands of pamphlets, brochures and posters were distributed, and health education programmes were broadcast on radio and television. The quality of care for RF/RHD patients improved under the programme, which has been expanded to other areas.

Cutress TW. Powell RN. Kilisimasi S. Tomiki S. Holborow D. A 3-year community-based periodontal disease prevention programme for adults in a developing nation. *International Dental Journal*. 41(6):323-34, 1991 Dec.

Institution. Medical Research Council of New Zealand, Wellington

A field trial of a community programme for improving periodontal health of adults was carried out in a geographically remote, unsophisticated rural population in the South Pacific Islands of Tonga. The 3-year project (1986-89) involved three village communities, each with a population of approximately 1200. Village N received supplies of toothbrushes and toothpaste without charge, health education (videos, talks, posters) and periodic dental scaling (ultrasonic). Village K received the same as N except that dental scaling was not provided. Village E received none of the services provided to the villages N and K. Baseline and final examinations of 20-44-year olds showed that unsupervised self-care promoted at the community level, when supplemented with periodic removal of subgingival calculus, significantly improved periodontal health. Improvement was age dependent.

Whistler WA. Herbal medicine in the Kingdom of Tonga. *Journal of Ethnopharmacology*. 31(3):339-72, 1991 Mar.

Institution. National Tropical Botanical Garden, Lawai, Kauai, Hawaii 96765.

A study of the indigenous medical practices of the Kingdom of Tonga in the South Pacific was carried out from 1983 to 1989 by interviewing over 50 traditional healers. A list of 105 plant species used medicinally in the culture was prepared, which includes scientific and tongan names, voucher specimen numbers, ailments treated and the reported frequency of usage for each plant and remedy. The uses recorded are compared to those published by previous authors in Polynesia.

Ushijima H. Dairaku M. Honma H. Sato K. Sugiyama K. Kitamura T. Inaba N. Incidence of antibodies against human immunodeficiency virus, human T-cell lymphotropic virus type 1, hepatitis B virus, hemorrhagic fever with renal syndrome virus and Chlamydia in Tonga and western Samoa. *Japanese Journal of Medical Science & Biology*. 43(4):101-9, 1990 Aug.

Institution Division of AIDS Virus, National Institute of Health, Gakuen.

Among the populations of Tonga and Western Samoa, serum antibodies against human immunodeficiency virus or hemorrhagic fever with renal syndrome virus were not detected (0/904 and 0/192). No serum samples were considered to be positive for antibody against human T-cell lymphotropic virus type 1 (0/527). Hepatitis B antigen and antibody were found in 4% (8/192) and 47% (90/192), respectively. Chlamydia trachomatis IgG and C. psittaci IgG antibodies were detected in 39% (75/192) and 47% (91/192), respectively. The possibilities of the spread of human immunodeficiency virus and hemorrhagic fever with renal syndrome virus on the islands when the viruses invade from abroad were discussed.

Ruze P. Kava-induced dermatopathy: a niacin deficiency?. *Lancet*. 335(8703):1442-5, 1990 Jun 16.

Institution. Dartmouth Medical School, Hanover, NH 03756.

Heavy chronic consumption of kava (*Piper methysticum*) is associated with a pellagroid dermatopathy that has been attributed to niacin deficiency. Over 200 male kava drinkers in the Tonga Islands were interviewed and examined regarding the characteristic skin changes. A scaly rash suggestive of ichthyosis and eye irritation were present in some heavy kava drinkers. 29 kava drinkers with prominent skin changes were randomised to receive either 100 mg oral nicotinamide or placebo daily for three weeks. Skin examinations and photographs showed clinical improvement in 5/15 of the nicotinamide group and 5/14 of the placebo group. These data, along with history and physical examination findings, suggest that niacin deficiency is not responsible for the rash, which is more characteristic of an acquired ichthyosis.

Lovelace CE. Aalbersberg WG. Aflatoxin levels in foodstuffs in Fiji and Tonga islands. *Plant Foods for Human Nutrition*. 39(4):393-9, 1989 Dec.

Institution. School of Natural Resources, University of the South Pacific, Suva, Fiji.

Fungal growth is a major problem of food storage in humid environments, as occur in South Pacific countries for parts of the year. Major crops, including edible nuts, copra and root crops, are susceptible to *Aspergillus* growth and therefore potential contamination with aflatoxin. Liver cancer occurs in Fiji and Tonga, with the occurrence in Fijians being significantly higher than in the Indian population. Thirty-three peanut samples from farmers were analysed for aflatoxin and 50% of the samples from Fiji were positive but only 9% from Tonga, reflecting different storage practices. Local copra, cassava, and maize samples were found contaminated, with only the maize at a serious level. Twenty-five plate food samples from Fiji showed low contamination. When starch foods from the Fijian diet left after cooking were analysed to follow potential aflatoxin development only sweet potatoes showed some contamination.

Hoffman MP. Cutress TW. Crooks MC. Some epidemiological and scanning electron microscopic features of crazing of the dental enamel of Polynesians. *New Zealand Dental Journal*. 85(381):86-90, 1989 Jul.

The prevalence of enamel crazing was determined from the maxillary incisors and canines of 1,109 Tongan residents aged 5-20 years, 1,417 Cook Island residents aged 6-20 years, 520 French Polynesian residents aged 10-15 years, and 92 New Zealand-born and -resident Polynesians aged 11-18 years. Crazing occurred in 22 percent of Tongans, 7 percent of Cook Islanders, but not in French Polynesians or New Zealand-born Polynesians. Cracks become clinically apparent at about 8 years of age, were more common in males than females; and became more common with increasing age. The central incisors were the most commonly affected of the maxillary anterior teeth. Cross-sections of teeth with crazing viewed by light and scanning electron microscopy appeared similar to other stained cracks. The indications are that crazing is a post-eruptive change caused by trauma from local environmental factors resulting in stress fractures. The significance of crazing on enamel structure and strength is unknown, but it is probably minor without long-term disadvantages. The prevalence of crazing may prove useful in anthropology as an indicator of the use of teeth as tools and in assessing the "modernisation" of a population.

Sawata S. Hidaka H. Yasuda H. Tomomatsu K. Sato R. Oka H. Prevalence of cardiovascular diseases in the Kingdom of Tonga. *Japanese Heart Journal*. 29(1):11-8, 1988 Jan.

Institution. First Department of Internal Medicine, University of Tokyo, Japan.

The blood pressure, electrocardiographic findings and serum total cholesterol of Tongans, characterized by extreme obesity, were compared with those of Japanese employees of a trading firm in Tokyo. The prevalence of cardiovascular diseases in Tongans as far as assessed by these measurements was rather low for their excessive obesity. It is unclear whether the relatively low prevalence rate of cardiovascular diseases among the Tongans is due to genetic factors which might be considered an ethnological difference, or to environmental factors. Reducing weight is very difficult for many obese people. Accordingly, if "healthy obesity" exists, elucidation of its mechanism will be glad tidings for obese persons. However, the most prevalent diseases among the Tongans were the same as those of the developing countries. Consequently, imitating the Tongan lifestyle does not necessarily assure the longevity of obese persons of developed nations, although it may decrease the risk of the cardiovascular diseases.

Finau SA. Taylor L. Rheumatic heart disease and school screening: initiatives at an isolated hospital in Tonga. *Medical Journal of Australia*. 148(11):563-7, 1988 Jun 6.

Institution. Niu'eiki Hospital, 'Eua, Tonga Island.

A simple and inexpensive assessment of cardiac murmurs and school health problems was conducted in an isolated island in the kingdom of Tonga. The prevalence of rheumatic and congenital heart disease in the population of 'Eua was 0.5% and 0.15%, respectively. The incidence of rheumatic heart disease for 1985 was 0.8 per 1000 population. The screening of 1106 students, who were aged five to 12 years, showed skin disease to be the most important problem. All identified cases were treated and referred for follow-up. The total cost of this study was US \$281.48. This exercise demonstrated an alternative approach to maximizing the use of health resources as well as maintaining the skill and morale of health workers in isolated areas.

Wainwright RB. McMahon BJ. Bender TR. Heyward WL. Nakanishi S. Wainwright KY. Foliaki S. Erickson SL. Fields HA. Prevalence of hepatitis B virus infection in Tonga: identifying high risk groups for immunization with hepatitis B vaccine. *International Journal of Epidemiology*. 15(4):567-71, 1986 Dec.

A serological survey for evidence of hepatitis B virus (HBV) infection was conducted in the Kingdom of Tonga as the first step in developing a strategy for an immunization programme. There were 414 individuals from the general population plus 137 pregnant women included in the

survey. HBsAg was found in 20% of the general population and 88% had one or more serologic markers of HBV infection. In the 5-9 year age group, 80% of the children had one or more markers of HBV, and in the 10-19 year age group, the prevalence was 96.4%, indicating that most transmission of HBV in the Tongans studied occurs in the young. Of the pregnant women studied, 15% were positive for HBsAg, and 57% of those positive for HBsAg were also positive for HBeAg. Evidence of delta virus infection was not found in any of 82 HBsAg positive sera tested. Surveillance data suggested that significant serious sequelae to HBV infection (cirrhosis and primary hepatocellular carcinoma) also occur in Tonga. Immunization of infants and children is the most effective strategy for reducing or eliminating HBV infection and its sequelae in developing countries like Tonga.

Finau SA. Fungalei S. Isama'u O. Finau S. Moa P. Environmental and sanitary conditions after a cyclone in Tonga. *Community Health Studies*. 10(3):336-43, 1986.

Roberts SK. Vengelen-Tyler V. The distribution of ABO and Rh(D) and selected high- and low-frequency antigens in the people in the Kingdom of Tonga. *Transfusion*. 26(4):366-7, 1986 Jul-Aug.

The incidence of red cell A, B, and D antigens in 7903 people from the Kingdom of Tonga is reported. ABO and D typings were performed by the slide method while establishing a registry of potential blood donors. The results of selected high-frequency antigens and one low-frequency antigen typing of 1009 donors also are reported.

Tuita SP. Schaar D. [The elderly in Tonga]. [German] *Zeitschrift fur Gerontologie*. 19(2):105-7, 1986 Mar-Apr.

After some remarks concerning the geographical, social and political situation in Tonga, the authors present demographic data and report on the informal and formal systems of social security for the aged. Finally they discuss the effects of modern influences on the value-systems.

Clow DJ. Control of diarrhoeal disease in Tonga 1978-83. *British Medical Journal Clinical Research Ed*. 290(6469):691-2, 1985 Mar 2.

Tonga, like many developing countries, suffers from a shortage of medical staff and a high morbidity and mortality from paediatric diarrhoeal disease. In 1980 a programme was started to train medical assistants and village administrators in the correct use of oral rehydration salt solution for rehydration. The effect on morbidity, mortality, and admission to hospital over the six years 1978-83 was assessed. After the introduction of the scheme the number

of deaths due to diarrhoea fell considerably and the state of hydration in children admitted to hospital with diarrhoea greatly improved. It is recommended that similar programmes be adopted where clinical problems of diarrhoea with dehydration persist. Instruction in the use of oral rehydration fluid was most effectively given by non-medical staff to groups of mothers, rather than by paediatricians in their inevitably brief, although important, explanation given in hospital.

Singh YN. Ikahihifo T. Panuve M. Slatter C. Folk medicine in Tonga. A study of the use of herbal medicines for obstetric and gynaecological conditions and disorders. *Journal of Ethnopharmacology*. 12(3):305-29, 1984 Dec.

We report on a study of the role of traditional medicinal practices in two communities in the South Pacific Kingdom of Tonga, with particular emphasis on obstetric and gynaecological complaints of women and the traditional practitioners consulted by them. Data on the nature and frequency of obstetric and gynaecological complaints, patterns of consultations and preferences for the type of practitioner, Western or traditional, were collected from housewives. The nature, range and extent of expertise possessed by traditional practitioners were also assessed. The results indicate that reliance on traditional medicine is rapidly declining in favour of Western medicine. This seems to be due to urbanisation, increased acceptance of Western values and a lack of availability of traditional practitioners in sufficient numbers. However, self-administration of herbal remedies was still common, especially in rural areas, and might even be on the increase. The practitioners treated a variety of obstetric and gynaecological complaints using 60 plant species which were collected and identified.

Koike G. Yokono O. Iino S. Adachi M. Yamamoto T. Puloka T. Suzuki M. Medical and nutritional surveys in the Kingdom of Tonga; comparison of physiological and nutritional status of adult Tongans in urbanized (Kolofo-ou) and rural (Uiha) areas. *Journal of Nutritional Science & Vitaminology*. 30(4):341-56, 1984 Aug.

The physiological and nutritional status of adult Tongans in rural (Uiha, 50 males and 58 females) and urbanized (Kolofo-ou, 77 males and 71 females) areas were surveyed in 1977 and 1979, respectively. Adult Tongans of both sexes in the two districts had considerably large physiques. Being different from the obesity found in peoples of industrialized countries, the obese state of adult Tongans was associated with large muscularity, low incidence of glucosuria, ECG abnormalities and hypertension, and normal plasma cholesterol levels. However, modernization has started to have an influence upon the health of adult Tongans. relatively high levels in parameters relating to obesity as well as higher incidence of hypertension were

observed in adult Tongans in Kolofo-ou as compared to adult Uiha islanders.

Parsons CD. Idioms of distress: kinship and sickness among the people of the Kingdom of Tonga. *Culture, Medicine & Psychiatry*. 8(1):71-93, 1984 Mar.

"Idioms of distress" refers to the popular expression of emotional tension that arises in the relationship between 'sickness' and 'kinship'. By reference to case studies and discussions among the Polynesian people of Tonga, the author shows where such tension arises and how it influences the sickness process. Sickness is necessarily a collective phenomenon which can best be understood not simply as a clinical event, but as an experience that is part of the experience of 'family'. Various ways of expressing distress as a reflexive encounter between personal and cultural meaning systems are reviewed, as are several new concepts such as "doing sickness as kinship", and "turning" in the process of decision making in the kinship management of sickness. The explanatory models of sickness in Tonga are shown to encompass culturally sanctioned expressions of distress as part of the adaptive coping mechanisms in that society. Distress frequently emerges in somatic form, as a number of studies have shown. However, the author emphasizes the "kinship meaning of sickness", "kinship management and sickness therapy", "the adaptive process of idiomatic expressions of distress", which are expanded here and offered as potential avenues for elaboration in other cultural milieu. Two aspects of the notion "idioms of distress" are noted, and the phenomenon is understood as a process which acts as a "prime mover" in social change.

Kirk RL. Microevolution and migration in the Pacific. *Progress in Clinical & Biological Research*. 103 Pt A:215-25, 1982.

Archaeological, linguistic, and ethnocultural studies suggest the Pacific was colonized by two, or possibly three, genetically distinct groups of people. Australoids moved first into New Guinea and Australia, followed by Papuan-speaking people, who penetrated as far as Santa Cruz in the Solomons. Austronesian speakers began their migrations 6,000 years ago and mixed with preexisting populations to a varying extent until they finally reached the unpopulated islands. Here, in Samoa and Tonga, they developed the cradle of Polynesian culture, which spread to the central Pacific and from there north to Hawaii and west to New Zealand. Detailed genetic studies have indicated that, in New Guinea, geographical propinquity is an important determinant of genetic similarity between populations. A wider survey indicates, however, that Austronesian speakers have more in common, despite great geographical separation than is true for Papuan speakers. In the Banks and Torres Islands and the Solomons, Polynesian "Outliers" can be differentiated from other Melanesian island

populations, while for the Pacific as a whole it is shown that Amerindian populations cluster with north Mongoloids and Polynesian populations cluster with south Mongoloids, with Australian Aborigines and New Guinea Papuans maintaining separate identities. It is concluded that Polynesians originated from a south Mongoloid population, losing a number of specific marker genes along their migratory path, and becoming modified genetically before establishing themselves in the Polynesian centre of dispersal.

Finau SA. The Tongan family: relevance to health. *New Zealand Medical Journal*. 95(722):880-3, 1982 Dec 22.

Blaser MJ, Newman LS. A review of human salmonellosis: I. Infective dose. [Review] [80 refs] *Reviews of Infectious Diseases*. 4(6):1096-106, 1982 Nov-Dec.

The notion that large inocula of salmonellae are necessary to induce illness in humans is based on the results of studies involving volunteers. However, investigations of outbreaks of salmonellosis suggest that the infective dose was often low. This incongruity was investigated by an examination of factors that could affect the infective dose of *Salmonella*, a review of nine studies in which salmonellae were administered to volunteers, and a review of 11 outbreaks of salmonellosis for which the infective doses could be calculated. Determination of the minimal infective doses from studies involving volunteers is limited by the strains used for testing, repeated testing of the same subjects, and the use of too few volunteers at the lower dose levels. In six of the 11 outbreaks, the actual doses ingested were calculated to be less than 10(3) organisms, the outbreaks with higher doses involved very high rates of attack and short periods of incubation. Data presented on median incubation periods during 12 typhoid outbreaks suggest that low doses were involved. [References. 80]

Finau SA. Hepatocellular carcinoma and liver pathology in tonga. *New Zealand Medical Journal*. 93(675):5-8, 1981 Jan 14.

All liver histology records from Tonga during 1970-79 were reviewed, including 42 biopsy and one necropsy specimens. Primary hepatocellular carcinoma was the histological diagnosis in 13 (30 percent). The age standardised incidence rate for confirmed cases are: males 2.9 and females 1.5 per 100 000. These are unremarkable compared to some reported rates, but many of these areas have included a high percentage of unconfirmed cases. Other diagnosis included cirrhosis (14), cholangiocarcinoma (2), metastatic carcinoma (2), cholangitis (2), hepatic fibrosis (2), and actinomycosis (1). The difficulties of diagnosis and areas for further studies are discussed

Price J, Eastwell HD. Psychological problems relating to the educated elite in some Pacific peoples. *Australian & New Zealand Journal of Psychiatry*. 14(3):199-202, 1980 Sep.

The educated elite of many Pacific peoples are exposed both to traditional cultural influences on the one hand and to a Western mode of education and an urban life style on the other. Examples are given of the problems that arise among the Melanesians of Fiji, the Polynesians of Tonga, Western Samoa and the Cook Islands and the Aborigines of Australia from the existence of these two sets of values. Conflict areas include money, property ownership, health care, family boundaries and adoption. The content and form of the conflicts are shaped by the original culture but the basic cause in each case is differential rates of modernization among members of the same ethnic group.

Murphy HB, Taumoepeau BM. Traditionalism and mental health in the South Pacific: a re-examination of an old hypothesis. *Psychological Medicine*. 10(3):471-82, 1980 Aug.

Nineteenth-century theory held that mental disorder was rare in stable, traditional rural societies. Today most societies are rapidly changing, but Tonga still fits that model and the evidence suggests that the psychoses are genuinely infrequent there. It is proposed that both the theory and the evidence deserve further examination.

Nicholson G. Incidence of hepatitis B-antigenaemia and positive alphafoetoprotein in New Zealand, Western Samoa and Tonga—a pilot study of Polynesian liver disease. *Annals of the Academy of Medicine, Singapore*. 9(2):201-2, 1980 Apr.

A pilot study was carried out to determine the nature of Polynesian liver disease by a study of blood donors and liver biopsy material from natives in Samoa, Tonga and Auckland, New Zealand. The data is suggestive that the Hepatitis B carrier state and hepatoma are greater in Polynesians than in Europeans. One familial hepatoma in two Maori brothers at ages of 11 and 13 years are reported.

Clark WF. The rural to urban nutritional gradient: application and interpretation in a developing nation and urban situation. *Social Science & Medicine*. 14D(1):31-6, 1980 Mar.

Du Plessis PA. Some traditional Tonga eye remedies. *Medical Journal of Zambia*. 12(4):95-7, 1978 Aug-Sep.

Tonga eye syndromes, aetiological concepts, and eye drops are presented. The attitude of a group of Secondary School Students to common traditional eye drops are presented together with ocular findings in a group of users

and alleged non-users. No statistically significant difference was found between the groups. Not all traditional eye drops are dangerous, and a positive education approach is suggested to improve ocular health.

Price J. The ascertainment of psychiatric cases in a developing country. *Revue d'Epidemiologie et de Sante Publique*. 26(5):413-7, 1978.

This article suggests procedures for locating these individuals in a developing country who have mental health problems. It assumes minimum facilities, e.g. that there is no mental hospital and no qualified psychiatrist and is based on experience in Tonga. The register of those involuntarily admitted to an institution looking after the mentally sick is invaluable for a variety of reasons and will well repay detailed study. Voluntary health and Welfare organisations may also supply valuable data. Home visiting often achieves much more than prearranged hospital or clinic appointments which are often not kept. A study of neglected cases may indicate the need to educate a community to recognize the value of medical treatment for the mentally sick.

Gubler DJ. Reed D. Rosen L. Hitchcock JR Jr. Epidemiologic, clinical, and virologic observations on dengue in the Kingdom of Tonga. *American Journal of Tropical Medicine & Hygiene*. 27(3):581-9, 1978 May.

An outbreak of dengue type 2 infection occurred in the Pacific island Kingdom of Tonga in 1974 and an outbreak of dengue type 1 occurred there in 1975. The 1974 outbreak was characterized by relatively mild clinical disease with few hemorrhagic manifestations, a low attack rate, and relatively low viremia levels. The 1975 outbreak was characterized by relatively severe disease with frequent hemorrhagic manifestations and a high attack rate. The differences between the outbreaks could not be attributed to differences in abundance of, or susceptibility to infection of, mosquito vectors or to the prior immune status or other characteristics of the human population. It appeared that a difference in viral virulence was the most likely explanation.

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Anonymous. Dr Sione Tapa. *WHO Chronicle*. 31(7):261, 1977 Jul.

Fineanganofa A. Interview: return to Tonga. *Nursing Times*. 72(45):1750-1, 1976 Nov 11.

Desowitz RS. Hitchcock JC. Hyperendemic bancroftian filariasis in the Kingdom of Tonga: the application of the membrane filter concentration technique to an age-stratified blood survey. *American Journal of Tropical Medicine & Hygiene*. 23(5):877-9, 1974 Sep.

A survey carried out in Tonga, an area of hyperendemic subperiodic *Wuchereria bancrofti* filariasis, compared the diagnostic efficiency of the membrane-filtration and stained blood film techniques. Membrane filter concentration of 1 ml blood revealed a microfilaria rate that was approximately the same for all age groups, from 5 to 9 years old to greater than 50 years old, about 70%. The microfilaria rate by examination of stained 60 mm³ thick blood films was lower for all age groups. Membrane filter concentration detected 7.8 times as many infections as thick film diagnosis in the 5- to 20- and 21- to 50-year-old groups, and 1.6 times in the greater than 50-year-old group. Concentration revealed the presence of microfilariae in the blood of 5 of 8 patients with gross elephantiasis, whereas microfilariae were found in the stained thick-film of only 1 of these individuals.

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Hitchcock JC. Transmission of sub-periodic filariasis in Tonga by *Aedes oceanicus* Belkin. *Transactions of the Royal Society of Tropical Medicine & Hygiene*. 65(3):408-9, 1971.

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