

'Stories from the past, the reality of the present, taking control of the future' – Lifestyle changes among Pukapuka people in the Illawarra

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Introduction

The high risk of type 2 diabetes among Pacific Islanders is well documented.^{1,2} In Australia, Pacific Islanders have a diabetes-related hospitalisation rate five times higher than Australian-born people and the highest ratio of diabetes-related mortality for all overseas-born ethnic minorities.² While a genetic predisposition ('thrifty genotype') may help explain this,^{3,4} research points to a combination of genetic, biological, behavioural and environmental risk factors to explain the variation of the disease between ethnic groups.² Increasingly, research points to the impact of the change to 'westernised' lifestyles, increased consumption of fats and sugars, and low physical activity levels on prevalence rates.⁵⁻¹⁰ Although increased physical activity and changes in nutrition help lower risk factors for type 2 diabetes,¹¹ there is limited research on the cultural and social barriers to behaviour change among Pacific Islanders. Researchers struggle to conduct culturally appropriate research with migrant populations. Western research, based on

strict scientific protocols, conflicts with their notion of acquisition, transfer and exchange of knowledge.¹² Participatory research models have been recommended as an avenue to find relevant solutions to the disparity in health status between the general population and Pacific Islanders.¹² This study used action research to explore the impact of westernisation and migration on the lifestyle and health status of Cook Islander people who have migrated to the Illawarra region of New South Wales from the island of Pukapuka. It aimed to develop appropriate interventions to increase physical activity rates and knowledge of nutrition.

Methods

This study followed Stringer and Dwyer's Action Research framework (AR).¹³ The five steps – designing, collecting data, analysing data, communicating outcomes and taking action – are completed in an iterative and collaborative process to incorporate the views, perspectives and experiences of clients

Abstract

Issue addressed: There is strong evidence that physical activity and adequate nutrition are important protective factors against type 2 diabetes, but these are linked to culture and socio-economic status. This study explores the traditional culture of the Pukapuka people living in the Illawarra region of New South Wales and how migration to the region has affected their lifestyle, health and well-being.

Methods: The study used an action research approach, including focus groups, planning workshops, reflection sessions and collaborative evaluation of interventions. Twenty-four adults (13 women and 11 men) from the Pukapuka community were recruited.

Results: Participants increased their understanding of the relationship between lifestyle and health status, increased rates of physical activity, and enhanced their sense of self-efficacy.

Conclusions: The study shows that action research methods can be used effectively to influence behaviour changes in small, culturally and linguistically diverse communities.

Key words: Action research, Pukapuka people, physical activity and nutrition.

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So what?

Action research led to increased levels of physical activity among participants that were sustained over eight months without external involvement or resources.

to resolve a community problem. Extensive discussions were held with the male and female leaders throughout the study to ensure community concerns were addressed appropriately.

Participants were recruited using a convenience sample of Cook Islanders in the Illawarra. Thirteen women and 11 men participated in a study over an eight-month period, including an eight-week intervention phase. The design stage involved a series of focus group discussions that allowed individuals to tell their own stories and have them validated by the group. Community leaders indicated that separate male and female groups were necessary to permit open discussion. The first groups were used to develop a common understanding of how tradition, westernisation and migration have affected the lifestyle of Pukapuka people.

The outcomes from the initial discussions were analysed and fed back to participants during subsequent sessions for analysis and reflection. These results were used to jointly plan activities that respected cultural and socio-economic factors including: walking groups, line dancing, gym work, food diaries, and a nutrition workshop. These were implemented over an eight-week period. An exercise physiologist/nutritionist attended the groups to help develop interventions and to provide guidance and expertise in nutrition.

Data on the physical activity and nutrition interventions were collected through follow-up focus groups conducted six weeks into the intervention. In addition, participants were given pedometers and diaries in which to record daily activity.

Study limitations. Only 24 participants were recruited to the trial.

Results

The study aimed to discover how the process of action research (AR) affected physical activity and nutrition habits of a small, culturally and linguistically diverse (CALD) community.

Design phase

The design phase involved discussions with community leaders and focus group discussions with participating community members. In addition to discussions with the research team, leaders were employed as focus group facilitators to ensure that cultural expectations were respected.

Outcomes of the initial focus groups

Focus groups were attended by an average of 18 community members. They started with a light dinner as a way of demonstrating respect and friendship. Traditions such as prayer and song were observed to open and close the sessions. The groups became the first step towards the development of trust between researchers and the community.

Discussion, in separate male and female groups, focused on

traditional island life, participants' health beliefs and the effect of westernisation and migration on their lifestyle, health and well-being. They described their traditional roles, centred on the need to grow, gather and prepare food, build shelter and make canoes for fishing.

"The father's job is to go fishing with the boys."

"Men might spend all day fishing for tuna – they would make their own canoe."

"The women grow the taro. It's hard work, the taro patch, because it can be very muddy, and your feet sink into the ground. The earth can be hard too, we don't have forks, we use sticks to make the earth soft."

Social life, religion and sport were also discussed. Cricket and other sports challenges between the three villages provided much enjoyment and reason for celebration during the Christmas period.

"We challenge the other villages in cricket. The loser has to do something for the winner, like cook food ... we tease the other team, we sing, it's a lot of fun."

Participants commented that life in Pukapuka has not changed much and has been limited to white man's introduction of bread, flour, rice, sugar, corned beef and, more recently, the acquisition of a truck. Since leaving the island, the Pukapuka people have tried to maintain their traditions, but their lifestyle has changed dramatically and their health is deteriorating. Several factors have contributed to the deterioration in their health. Food is readily available in shops and take-away outlets, short winter days, not feeling safe outside the home after dark, and the long distances to cover when visiting friends and family force them to drive instead of walk.

"We still eat fish and taro, we love our traditional foods, but they don't taste the same here. We can't cook in earth ovens, too much smoke and the neighbours complain. Now people tend to buy lots of other food, like McDonalds, chips, cakes."

Outcomes of subsequent focus groups

Focus group data were fed back to the participants to provide an opportunity to reflect on the determinants of health and well-being.

Most of the women said that they ate too much, especially bread and meat. Bread has replaced taro, and while meat was eaten on special occasions in Pukapuka, in Australia they eat it most days. For some, food provides comfort.

Although the women were busy they felt they worked harder on the island, and many complained that here, they sit a lot with nothing to do. The men expressed concern about their health, and wanted specific information about diabetes. They felt that their physical activity was adequate, team sport was still an important part of daily life, but they acknowledged that they were putting on weight.

"In the island you eat and get fit, here you eat and get fat."

Both men and women saw diabetes as a community concern. Many were personally affected by either having diabetes or by having to look after elderly parents with the disease. They identified physical activity and nutrition as the main modifiable risk factors for diabetes and produced a list of preferred activities thought to be appropriate, accessible and affordable. The women chose walking groups and line dancing, while most of the men saw no need for additional exercise. They felt they were already active, playing cricket and football several times each week. Some expressed interest in gym work.

Physical activity interventions

As the community lives in two separate areas, they decided to establish two walking groups that met three times a week. Four women volunteered as group leaders and some men decided to join.

Line dancing sessions were held at the local Migrant Resource Centre, an hour before the community meeting. Participants contributed towards the instructors' fees. Initially, line dancing sessions were well attended and the women enjoyed the activity; however, after a period of time attendance dropped and the sessions ceased because of cost.

Some men supplemented their usual sport schedule with gym and resistance band work. Only two gym sessions were held and attendance was poor. Exercise physiology students worked with the groups during that time. All participants were given pedometers and asked to record the steps taken each day for four weeks, although few recorded their results.

Reflections. The groups reconvened to reflect on their physical activity after six weeks. Members of the walking groups were still walking regularly, some having increased activity from three times per week to daily. The groups had dispersed and participants were walking in small groups or alone as this was easier to organise. Participants enjoyed walking because it was free, they could do it at any time and it was pleasurable, as most lived near the beach or lake. They enjoyed wearing a pedometer and monitoring their own progress.

Nutrition interventions

Participants identified the foods that they ate regularly and a food diary was provided with which to record daily food intake for one week. The diaries were analysed and feedback provided. A workshop to illustrate adequate nutritional intake was held and real food samples were displayed and arranged according to recommended number and size of serves.

Reflections. Only four participants used the food diary and the group did not relate to the portion sizes, which they described as inadequate. Most were happy with their normal diet and preferred a heavy meal to one with lots of vegetables. Most

consumed two to three heavy meals a day with snacks in between. Increased exercise did not change perceptions of hunger or food intake.

Overall results of the project

A final session was held eight months after the initial meeting to reflect on the project. Walking groups were still operating, with some participants walking every day and encouraging others to walk. Although walking was hard in the beginning, it now made them feel good. Motivators also included weight loss, wanting to become fit and healthy, and decreasing the risk of sickness. Pedometers had been a good motivational tool, allowing them to set daily goals of a certain number of steps. Some women had lost a considerable amount of weight, which motivated others to increase their exercise levels. The project had increased awareness and had made health a priority issue within the community, but it must be acknowledged that changing cultural beliefs and attitudes takes time.

"We are culturally different ... it takes a while ... the island people need more time and support."

Key lessons for working with diverse communities

Some lessons from this study are worth noting as they may apply to similar communities. Community activities take priority over research. In this case, the community was engaged in drafting its constitution to become an incorporated association. Focus groups were often time-limited and sometimes postponed to permit discussion of the constitution. Pre-Christmas sports and a flexible approach to time meant that meetings started late. As participants explained, on the island there were no set times for activities, including meals. However, the fact that the research was occurring in the midst of these competing activities meant that it was integrated into the community's overall concerns rather than being peripheral.

Discussion

The Illawarra Pukapuka community was aware of the impact of diabetes and other lifestyle-based chronic diseases, but it seems that health education and health promotion strategies have largely passed them by.

Experience suggests that standard health promotion strategies are unlikely to achieve behaviour change among CALD populations. We conclude that this is due to cultural factors particular to these communities that prevent health promotion messages from reaching them. There is a wealth of research in the health promotion field that highlights the importance of ensuring cultural relevance by engaging the communities in all stages of the intervention.¹⁴⁻¹⁷

Adult community members have moved from a non-cash subsistence lifestyle to a market-based society in one generation.

They have left a position of relative affluence and live in a society where they are poor and lack important skills including money management, budgeting and planning, which are particularly necessary for low-income Australians.

Making healthy choices requires a degree of health literacy unnecessary in the islands, where the balance of energy input-output was dictated by traditional life. In Pukapuka food is grown, hunted or fished for and processed by the individual while in Australia it is usually pre-processed and purchased.

Action research has proved acceptable for several reasons. It allows the development of trust between researchers and community that underpins the acceptability of health education and promotion. It permits an exploration of beliefs about health and sickness, their meaning, causes and the most appropriate strategies for improving health and preventing disease. It allows culturally appropriate reflection within legitimate community structures. This contributes to continuity and communication and does not counter community leadership. Competing priorities can be identified and dealt with. This implies that action research has to be accepted by community leaders and researchers must negotiate access and priority and recognise that other priorities will sometimes win out. It also requires considerable flexibility about timelines.

It is important to distinguish between the medium and the message. The medium has allowed learning through action and community reflection on successful and less successful strategies and on strategies that have been successful with one group and not another. Attributing causes to health behaviours was difficult as the researchers and community members view behaviours differently. A behaviour that the community regards as cultural, such as fishing, may also become a regular food source for particular families and appear to be economically motivated. Healthy behaviours may be driven by culture or by financial hardship.

In conclusion, this study has shown that a migrant community is aware of the consequences of lifestyle-based chronic disease and keen to address them in a culturally appropriate manner. Population-focused health promotion activities seem to have had little impact on this migrant community, but an action-

based learning approach may achieve promising behavioural changes.

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