Abstract

**Issue addressed:** Indigenous Australians have higher morbidity and mortality rates than do non-Indigenous Australians. Until recently, few health promotion interventions have had more than limited success in Indigenous populations.

**Methods:** This community-based health promotion initiative introduced traditional Indigenous games into schools and community groups in Cherbourg and Stradbroke Island (Queensland, Australia). A joint Community Forum managed the project; and the Indigenous community-based Project Officers coordinated training in traditional games, and undertook community asset audits and evaluations.

**Results:** The games have been included in the activities of a range of community organisations in Cherbourg and Stradbroke Island. A number of other organisations and communities in Australia have included them in their projects. A games video and manual were produced to facilitate the initiative’s transferability and sustainability.

**Conclusions:** Conventional approaches to health promotion generally focus on individual risk factors, and often ignore a more holistic perspective. This project adopted a culturally appropriate, holistic approach; embracing a paradigm that concentrated on the communities’ cultural assets and contributed to sustainable and transferable outcomes. There is a need for appropriate evaluation tools for time-limited community engagement projects.
Key words: Community capacity building, health promotion, Indigenous health, traditional games.

So what?
This project illustrates a health promotion approach that strengthens ties within communities rather than endangering them; therefore, reinforcing the factors that support the wellbeing of communities and individuals. Additionally, the enthusiastic uptake of the initiative by other communities indicates its potential for transferability. The games are still played in the schools, demonstrating the initiative’s sustainability.

Introduction

Globally, the disintegration of Indigenous communities because of historical events has negatively impacted on their social and cultural systems.1-6 This has had adverse consequences for the social, spiritual, psychological and physical health of Indigenous, or First Nations, peoples.2,3,5,6,7,8 Like Indigenous peoples in Canada, USA and New Zealand,7-9 Indigenous Australians have a poorer quality of life than do their non-Indigenous counterparts.1,10,11 Moreover, vis-à-vis health status, Indigenous Australians are one of the most disadvantaged populations in the developing and developed world.12 Non-communicable diseases such as cardiovascular disease and type 2 diabetes contribute to an Indigenous life expectancy dramatically less than that of the non-Indigenous population.10,12
Despite the widespread awareness of Indigenous health status and the increasing research into risk factors, the gap between Indigenous and non-Indigenous health persists. Few interventions designed to reduce disease incidence, mortality and morbidity, have been effective, particularly at a population level.

One of the reasons for such disappointing outcomes is the focus on modifying disease risk factors through individual behaviour change, without considering the social, political and cultural context of health in Indigenous populations. Additionally, there has traditionally been a top down approach to health interventions, with a disregard for the Indigenous communities’ ‘ownership’, and naivety about culture. A significant challenge for health promotion is how to develop and implement effective, appropriate, and sustainable initiatives for Indigenous peoples. Despite some commonalities in their health status, interests and needs, Indigenous Australian groups are not homogenous; consequently, it is crucial that interventions are coordinated with the specific self-identified needs, values and aspirations of the discrete communities. Reflecting on past failures, projects directed at the individual, rather than the family and community, act to threaten values esteemed by Indigenous communities. Although well intentioned, interventions that jeopardize the connections between the individual and the wider social fabric, present health risks for Australian Indigenous communities.

It is at this point, then, that there might be a valuable convergence between the lessons learnt from the failure of past interventions, the identification of more appropriate and effective interventions, and our increased understanding and
respect for cultural factors central to Indigenous life and health. Indigenous Australians, like the NZ Maori and the Canadian and US First Nations Peoples, view disease as an imbalance in their lives, and a consequence of the destruction of their way of life since first contact.\textsuperscript{2,4,7,8,20,21} This perspective is incongruent with the models used as a basis for public health and health promotion practice that attribute responsibility for disease to individuals.\textsuperscript{14}

Central to the Australian Indigenous view of health is the concept of the individual as one part of the whole community.\textsuperscript{3,22} Actions that are seen to disconnect the individual from family and community are regarded as shameful.\textsuperscript{22} Evidence suggests that interventions that incorporate the cultural dimension as a vehicle for community participation and exercise, for the benefit of the wider community or to reinforce group participation, are more likely to succeed than individual exercise programs.\textsuperscript{3,22}

\textit{Our Games, Our Health}

“Our Games, Our Health” was developed with two discrete Indigenous communities in Queensland, Stradbroke Island and Cherbourg. The application for funding was submitted jointly through the two communities and Queensland University of Technology (QUT). The QUT team members were known to both communities through previous initiatives; and collaborated with them to determine the priorities for action, through meetings with various community groups prior to the funding submission. The project was underpinned by the holistic context in which
Indigenous communities view health, one centred on connectedness at three levels – family, community and society;\textsuperscript{14} and emphasised the centrality of relationships.\textsuperscript{16,23} Using the analogy of the traditional Indigenous games as a ‘cultural thread’ the project drew together the communities’ own resources to develop and integrate the project to enhance physical activity in a meaningful way. Prior to this project, traditional Indigenous games have been played in schools, but to our knowledge have not been utilised to mobilise Indigenous communities. However, the revival of traditional games encourages people to contemplate their origins; this may initiate new activities that have a positive effect on building community capacity,\textsuperscript{24} and sport is an important ‘community building instrument’ that can encourage social cohesion and address many of the issues impacting on Indigenous Australians.\textsuperscript{25}

The aim of the project was to develop, implement and evaluate a community-based, multi-strategy health promotion intervention that focussed on men’s and older people’s health in the Cherbourg and Stradbroke Island communities. However, as the project progressed it was found to be more efficacious to redirect the focus to school children. This was due to the difficult personal circumstances of some members of the men’s and elders’ groups, whereas with the support of the Community Project Officers and the schools, the children’s participation was more consistent. The Cherbourg School is an Indigenous school, while the Stradbroke Island School has a high proportion of Indigenous children; there are Indigenous and non-Indigenous teachers at both Schools.
The specific objectives were to:

- consolidate the Community Forum to manage the project;
- conduct a family-based health promotion intervention;
- collaborate with Indigenous Sport and Recreation Officers;
- develop action research/evaluation skills;
- evaluate the project;
- build sustainable activities throughout the project through community ownership.

**Methods**

The project was structured through three interlocking stages, with each stage being enriched by the previous, so that knowledge and skills development opportunities were integrated into as many aspects of the project as possible. The stages were community engagement, community mobilisation and capacity building. The project operated between March 2001 and July 2002.

**Community engagement**

A Community Forum was established, comprising 10 members of both the Cherbourg and Stradbroke Island communities, who met alternately in each community. Traditional games were held at each forum, allowing members to learn about the games, be physically active and become acquainted. Indigenous Community Project Officers were employed in each community to coordinate
training in traditional games and undertake community asset audits. A short course in health promotion was conducted for staff.

**Community mobilisation**

Two ‘asset audit’ audit workshops were conducted in each community, where existing strengths and gaps were identified and actions on physical activity priorities were mapped. Strengths included, for example, ‘cultural activities in schools’ and ‘satisfactory roads’, while gaps include ‘insufficient recreational facilities’ and ‘no good walking path’. ‘Train the trainer’ games workshops were held to transfer skills to community leaders and engage regional Indigenous Sport and Recreation Officers. These were held at QUT, as it was closer to both communities than they were to each other. A project newsletter was distributed throughout the two communities to encourage the ‘adoption’ of the intervention, as someone considering change may be influenced by observing the results of the adoption of an innovation by others.\(^{26}\) The newsletters included, for example, comments from students regarding their participation in the games, updates from the Community Project Officers, and information on the benefits of physical activity.

The games used for the project are from the book *Choopadoo: games from the dreamtime* (Table 1).\(^{27}\) This is one of the few resources available describing Australian traditional Indigenous games, and the most comprehensive. The games derive from most areas of Australia, including the Torres Strait Islands. They are
suitable for a range of age groups and include cooperative and competitive games. The duration of the games is 10-30 minutes.

Table 1 about here

Community capacity building

A video and manual (owned by QUT) were produced for project sustainability. The video features an introduction to traditional Indigenous games and shows children from Cherbourg and Stradbroke Island playing some of the games; the manual outlines the games’ history and rules. The video was distributed to communities involved in the project, in addition to other interested communities. The activities of the video are available on the Australian Sports Commission website. Currently unavailable, the updated edition of Choopadoo is due out in 2006. Grant applications to extend the project were written collaboratively with the communities. Successful grants from the Telstra Community Development Fund have allowed the transfer of the project to Weipa, Charleville and Cunnamulla (Queensland). In addition, the children demonstrated the games at the Croc Eistedfodd, Weipa (2002).

Results and Evaluation

Over 200 children from two primary schools participated in the 16 month project, through organised carnivals, and traditional physical activity integrated into the
curricula. Furthermore, the games became part of the daily physical education and cultural curricula at both schools. The games were taught by community members, who had attended training days. The first training day involved a demonstration and try-out of some games, the second and third involved practising familiar games and learning new ones. The Community Forum met six times and hosted the two asset audit workshops.

Process evaluations were conducted at key points throughout the project and the resulting information was used to develop and improve it on an ongoing basis. These key points included the Community Forum, training days and asset audit workshops. The process evaluations used written questionnaires and focus groups, and included questions about satisfaction levels and the quality of information. In summary, most people ‘agreed’ or ‘strongly agreed’ that these were satisfactory.

Feedback from community members included:

*Today was satisfactory*

*I would like to be on the forum*

*Everything seems to be going all right at this point in time*

Feedback from the 109 children surveyed included:

*I like them all*

*I played when at school*

*I played with my cousins, brothers and sisters*

*It was great, it was friendly*

**Limitations**
The original objective of using the participatory action research design as a framework for the evaluation encountered difficulties. While many community members attended the training, it was difficult to integrate them into the Evaluation Group because of long travel distances, and the limited available time due to their work and family commitments. While this model is ideal in theory, the difficulties identified in its application in Indigenous community-based research highlighted the need to develop alternative methods of measuring social capital and networking. Indicators with potential in tool development, identified during the project, include consistent attendance, communication with others about information arising from the Forum, numbers of distribution channels targeted with promotional materials and collaboration with other members at venues. However, limited time and funds prevented these methods from being fully explored; as the funding available to the project was considerably less than that applied for.

Problems were encountered in addressing the issue of a formal impact evaluation of the project; these included a limited timeframe. Difficulties with similar projects are well documented; however, research into appropriate strategies is underway. The limited value of currently available tools for use in evaluating community development projects within Indigenous communities has also been recognised.

The literature on social capital tool measurement was searched and a number of tools were trialled, particularly a modified version of a tool for measuring social networks by Hawe et al. The tool was administered at three Community Forum to
acquire insight into the perceived capacity of the Forum as a ‘network’ between and across services and sectors. This was abandoned because the Forum members had carried out extensive evaluation exercises as part of the comprehensive process evaluation and were experiencing an evaluation ‘overload’. Furthermore, time and funding constraints meant that only a limited evaluation could be undertaken. More funding could have ensured a more robust pre-post test evaluation was utilised, in addition to assessing various impact measures.

At first glance, it may seem inconsistent that the program was extended to other communities when a comprehensive evaluation could not be conducted. However, the project demonstrated significant potential, as considerable interest has been shown in the games, both within the participating communities, as well as outside communities. In addition, the project team are still fielding inquiries regarding the Games from communities Australia-wide.

**Conclusions**

Consistent with the ‘NHMRC Road Map’ criteria, this project highlights three key principles crucial in improving Indigenous health. The first is the focus on the Communities’ strengths, identified in the asset audits, rather than their deficits or disease-centred risk factors. Instead, the developers adopted a ‘positive Indigenous health promotion paradigm’. The second is community control, where the communities participated in the planning and decision-making from the outset. The third is the facilitation of cultural exchanges between two geographically distant
Indigenous communities; which has the potential to enrich capacity by extending networks and enabling the communities to learn from each other, thus enhancing outcomes.

The preoccupation with formal impact evaluation in a multi-dimensional project with the goal of community development, somewhat contradicts the theoretical concepts that underpin such projects. The postulated capacity building would extend beyond the project implementation and increase the sustainability of the project and, by definition, challenge the concept of impact evaluation. Cognisant of this, and the key role of evaluation in developing effective health promotion projects, it was decided that a flexible application of a formative process evaluation consisting of complimentary qualitative and quantitative data collection was appropriate.29

Sport plays a role in the life of many Australians and its significance in Indigenous Australian societies should not be underestimated. The use of games to increase physical activity allowed the Indigenous communities to re-establish a part of their cultural identity; thus enhancing the project’s effectiveness and sustainability. This project, which was driven by, and targeted, the whole community, is in keeping with the Indigenous holistic approach to health. The approach of building on community strengths worked well in this modest project; and the philosophy of eschewing the standard ‘disease’ deficit-model of health promotion that underpinned the project enabled active community engagement in the asset audits of physical, health and social infrastructure and the actions that arose from these.
This project provides evidence that the theory of ‘social capital’ and ‘community
capacity building’ can be translated into practice. The capacity of the communities
has been developed to the point where they have collectively identified a priority for
action and demonstrated the will to make this happen. The social capital that has
accumulated will help to restore the essential balance in the Indigenous cultural
view of health; it strengthens the connectedness to community and family. To a
point, the ‘ties that bind’ have been re-established through the cultural thread that
symbolises this project. Through these ties the protective factors central to the
Indigenous view of health and underpinned by current research, have begun to be
restored within these communities. The games provided a culturally appropriate
activity that combined physical activity and opportunities for social interactions with
the possibility for a revitalisation of one facet of Indigenous Australian cultural
identity.

**Ethics**

The QUT Human Research and Ethics Committee granted approval for this project in
February 2001. Informed consent for interviews was gained from all participants in
the games project, and from the parents of participating students.

**Acknowledgements**

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missed by all her colleagues. The authors thank the people of the Cherbourg and Stradbroke Island communities for their generous contribution and support; the community-based Project Officers, Amanda Coombs (formerly Stradbroke Island) and Richard Coleman (Cherbourg) for their invaluable advice and assistance; Health Promotion Queensland – Queensland Health for funding this project; and Julie Appleton for the final evaluation.
References


Table 1: Some examples of Traditional Games used in *Our Games Our Health*

<table>
<thead>
<tr>
<th>Games</th>
<th>Description of Games</th>
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</thead>
<tbody>
<tr>
<td><strong>Ball Games</strong></td>
<td><strong>Kai</strong> Teams hit the ball up in the air with hands, while trying to keep it from touching the ground</td>
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<td></td>
<td><strong>Keentan</strong> Running, passing and catching. Players on opposite team try to intercept ball when thrown.</td>
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<tr>
<td><strong>Ball Rolling</strong></td>
<td><strong>Juluhya</strong> Players roll a marble down a tube, the players whose marble appears first is the winner.</td>
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<td></td>
<td><strong>Koolchee</strong> Teams roll balls towards each other, aiming to hit the opposing team’s balls.</td>
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<tr>
<td><strong>Disc Game</strong></td>
<td><strong>Gorri</strong> One player rolls a ball or disc towards a marked area, the other players attempt to hit it with their balls or discs.</td>
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<td><strong>Throwing Games</strong></td>
<td><strong>Wana</strong> A player tries to deflect balls thrown by all the other players at a target, which she/he must defend.</td>
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<td></td>
<td><strong>Boomerang</strong> Players attempt throw the boomerang in such a way that it returns to them.</td>
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<td><strong>Dodging Game</strong></td>
<td><strong>Taktyerra</strong> Teams throw balls at each other, and attempt to dodge the balls being thrown at them.</td>
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<td><strong>Hitting Game</strong></td>
<td><strong>Kalq</strong> One player throws a ball to the player next to them in a circle, who must then hit it on to the next person.</td>
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<tr>
<td><strong>Finding Object Game</strong></td>
<td><strong>Luka-pul Pul</strong> One player hides an object, another player attempts to find it, if unsuccessful, the first player gives clues to guide the searcher.</td>
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<td><strong>Imitation Game</strong></td>
<td><strong>Beejan Eejar</strong> Players act out cooking, eating and storing food, making camp etc (As a part of role-playing for adult life)</td>
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<td><strong>Tag Game</strong></td>
<td><strong>Puuny</strong> A blindfolded player tries to catch one of the other players, the player caught takes the place of the blindfolded player.</td>
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<tr>
<td><strong>Running Games</strong></td>
<td><strong>Tarnambai</strong> Players start at different distances depending on ability. They run as fast as possible, but try and finish together</td>
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<tr>
<td><strong>Guessing Games</strong></td>
<td><strong>Wabbyn</strong> Players attempt to guess what another player has seen. Clues may be given. (Similar to ‘animal, vegetable or mineral?’ game)</td>
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<tr>
<td><strong>Dance/Corroboree</strong></td>
<td><strong>Yongar Ngardongin</strong> An acting contest, one player acts as the kangaroo the other as the hunter.</td>
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</table>

See *Choopadoo: Games from the Dreamtime* (1999) by Ken Edwards, for more information about the origins, history and rules of the games.