



# FNIH RESEARCH BULLETIN

*First Nations and Inuit Health (FNIH) relevant research activities and information  
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In the summer of 2009, 43 youth from Wikwemikong participated in 3 Outdoor Adventure Leadership Experience (OALE) programs that were delivered during a canoe excursion in the community's traditional territory.

## Using Outdoor Adventure Leadership Experience to Promote Resilience and Well-being for Wikwemikong Youth

By Mary Jo Wabano and Stephen Ritchie\*

An Outdoor Adventure Leadership Experience (OALE) intervention appears to be effective in improving psychological resilience among Wikwemikong youth, aged 12-18.

Leaders from Wikwemikong collaborated with Laurentian University researchers to develop, implement, and evaluate an OALE program, which attracted the

participation of 10 per cent of the on-reserve youth.

Trained staff coordinated three ten-day canoe trips in the traditional territory of the youths' community, beginning in Wikwemikong Unceded Indian Reserve on Manitoulin Island in Northern Ontario.

*We are hopeful that policy-makers at all levels will begin to recognize the effectiveness of OALE-type interventions.*

A pre-post study using the 14-Item Resilience Scale (RS-14) refined by Wagnild (2009), as well as field interviews, confirmed the positive impact of the program on youth.

The baseline, or pre-intervention scores for 35 participants indicated low levels of resilience (mean 72.7). One month after the ten-day intervention, the participants' scores were significantly higher, with an improvement of 3.4 points ( $p = 0.028$ ).

The collaborative research team used a mixed-method design, and analysed both quantitative and qualitative results that supported the hypothesis that the intervention

would generate significant improvements in resilience among participants.

### Connecting is important

Activities undertaken during the expedition promoted resilience and well-being using specific goals, training modules, program principles and grandfather teachings.

In support of the quantitative results, the qualitative analysis found that the OALE's ability to promote *connections* was a key factor in improving resilience and well-being.



"I like to think about all of our ancestors that have walked around this area. They probably swam and fished in the same water." - OALE youth participant

The OALE process seemed to enable youth to *connect* with each other, with staff, with creation, and even with themselves.

Interview respondents described how the OALE process helped them develop relationships, appreciate their traditional lands, and become more aware and interested in their cultural heritage.

### The 'Day 3' Phenomena

One of the most interesting research observations was a relatively abrupt attitude transformation, often occurring on the third day of the expedition.

Field interviews and focus groups revealed that during the first couple of days many youth were reluctant or even disappointed about participating; however, on the third day, a transformation occurred and they began to enjoy their experience, and started to view it more positively.

"On day 1 and 2, I really hated it out here. I wanted to go home so bad. I cried both nights. I missed home so much and I didn't want to be here but I stuck it out."  
- OALE youth participant

The research suggests that intentionally designed outdoor programs, such as the Wikwemikong OALE, can serve as powerful short-term interventions for promoting positive mental health for youth in a holistic and culturally appropriate way. In essence, nature becomes the teacher and healer.

There is a dearth of evidence supporting outdoor interventions as effective health promotion modalities for Aboriginal



On day 3, I told myself that I was going to be here for seven more days. I have to do what I have got to do. So I started thinking more positive about the trip.  
-OALE youth participant

communities and the Wikwemikong OALE experience provides new evidence of its value in promoting resilience and well-being for Aboriginal youth.

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Stephen Ritchie is an Assistant Professor and Doctoral Candidate at Laurentian University

### Reference:

Wagnild, G. M. (2009). **The Resilience Scale user's guide for the US English version of the Resilience Scale and the 14-item Resilience Scale.** Worden, MT: The Resilience Center.

## Dietary Intake of Youth in Remote First Nations Communities: Challenges and Opportunities



By Kelly Skinner\*

There is a need for community-specific data on food intake of Aboriginal youth to support policy and program development and to help address the prevalence of obesity and type 2 diabetes in this group.

Since 2003, a University of Waterloo research team has been working with First Nations communities to tailor, validate and implement an innovative dietary assessment tool – the Web-based Eating Behaviour Questionnaire (WEB-Q).

The WEB-Q is a dietary assessment tool that can be used to provide First Nations communities with local data and information to facilitate decision-making. When administered to the population, WEB-Q results identify alarmingly high rates of obesity and low diet quality.

Findings showed vegetable, fruit and milk product intakes were well below Canada Food Guide recommendations and the intakes of specific nutrients (fibre, folate, vitamin A, calcium, and Vitamin D) were also far below recommendations.

There were high intakes (daily consumption) of “other” foods (e.g. pop, French fries, salty snacks), as well as high levels of unhealthy behaviours such as breakfast skipping and regular convenience store food purchases. For example, in one community, almost one-third of youth consumed cola-type pop on the previous day comprising 17% of their total energy intake.

Recent findings indicate that school breakfast, snack and milk programs **can** positively impact students’ eating behaviour.

In addition to these general studies, a number of specific studies of food behaviour among youth in these communities have also been conducted. For instance, a study of the seasonal variation in dietary intake found that youth had low traditional food (e.g. goose) consumption and that the amount of traditional food consumed during different times of the year appeared highly dependent on the success of the most recent hunting season.

Recent findings indicate that school breakfast, snack and milk programs **can** positively impact students’ eating behaviour with short-term increases in vegetable, fruit and milk product consumption.

However, there were numerous barriers to implementation and having a sustainable long-term impact. From our experience, the keys to the success of First Nations school nutrition interventions were: sustained and sufficient funding, consistent volunteer support or paid personnel (preferably a local program champion), adequate facilities to prepare, store, and distribute food, and consistent access to healthy food.

A study exploring the impact of a greenhouse and gardening project on dietary intake and sustainability of a school nutrition programs is underway.

Continuing these collective efforts will hopefully contribute to better informed, community-specific strategies for addressing dietary and nutritional issues and the related health problems

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## Cultural Aspects of drowning prevention in/with Aboriginal communities

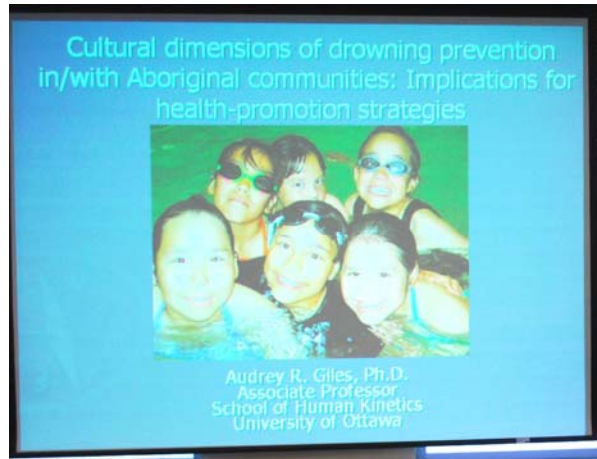
Drowning rates among First Nations populations can be as much as 10 times the rates reported among non-Aboriginals, according to research presented by an associate professor at the University of Ottawa to Health Canada employees.

However, those drowning rates could be reduced if prevention programs made better use of input and traditional knowledge from Elders in First Nations communities.

Dr. Audrey Giles' study, conducted in seven northern communities between 2006 and 2010, probed why drowning rates in the Northwest Territories (NWT) and Nunavut are as much as six to 10 times greater than the national average, particularly among Aboriginal people, in any given year.

The study also examined how water safety programs might be altered to better suit the needs of northern Canadian residents.

For instance, Dr. Giles cited one example involving the Canadian Coast Guard's Pre-Departure Check List for boating trips. This check list does not suggest packing a knife; however, Elders suggest that a knife could be a lifesaver to someone who falls through the ice.



Dr. Audrey Giles November 15<sup>th</sup> presentation revealed that Aboriginal residents drowning rates are much higher than non-Aboriginal residents

With a knife, Elders say, the victim could stab through surrounding ice to pull himself out of the water.

Water safety programs could be further strengthened by following best practices as identified by scholars specializing in cross-cultural communications, said Dr. Giles. In one successful message that emphasized the dangers of drowning, Elders warned: "wear a float coat so that if you drown, people will not have to drag the river for your body." There was reportedly a significant reduction in drowning rates that year (Zaloshnja et al., 2003).

Dr. Giles and her team concluded that although it is important to provide information to communities regarding factors that can reduce drowning rates, culturally-appropriate programs that include traditional knowledge and Elders in the transmission of knowledge are also important in effective messaging.

The research findings by Dr. Giles and her team have been published in several peer-reviewed journals. Her research was funded by the Social Sciences and Humanities Research Council (SSHRC). The team is now working with stakeholders to revise drowning prevention programs.

For more information and to explore collaboration opportunities, please contact: [agiles@uottawa.ca](mailto:agiles@uottawa.ca)

Reference:  
[Zaloshnja et al. \(2003\). Reducing injuries among native Americans: Five cost-outcome analyses. Accident Analysis and Prevention, 35\(5\), 631-639.](#)

## Interview with Roy Kwiatkowski, Director, Environmental Health Research Division



After 36 years of employment with the federal government, Roy Kwiatkowski, director of the Environmental Health Research Division of First Nations and Inuit Health Branch (FNIHB), is retiring.

He began his career in government in 1975 as a biologist with Fisheries and Oceans Canada. His task was to study toxic chemicals in the Great Lakes, as well as eutrophication, which involves the natural or artificial addition of nutrients to bodies of water and the effects of these added nutrients.

### **What other kinds of work with the federal government have you done?**

(After Fisheries and Oceans,) I worked with Environment Canada Ontario Region on the Great Lakes

Surveillance Program, and moved in 1982 to Environment Canada Headquarters working on federal-provincial water quality agreements.

In 1989, I joined Energy, Mines and Resources (now known as NRCan) and worked on environmental assessments within the energy and mining sectors. In 1992, I started up the health impact assessment and risk assessment sections within what is now the Healthy Environments and Consumer Safety Branch of Health Canada, before joining the First Nations and Inuit Health Branch (FNIHB) in 2003.

### **What brought you to the Environmental Health Research Division?**

Back in the mid 1990s, at the request of the World Health

Organization, the Pan American Health Organization and the International Development Research Centre, I started doing International Health Impact Assessment training in developing countries within Asia, South America, the Caribbean and the Middle East. As a result, I moved away from doing research, to managing and teaching.

This had a significant impact on my work as I look back now. Between 1975 and 1991, I published 29 scientific peer reviewed papers; since then, only nine. Yet, I truly enjoyed working with developing countries and teaching others how to do environmental health research.

With the FNIHB Environmental Health Research Division's work in community-based research and focus on knowledge exchange, it seemed like a logical place for me to end my career.

### **What has been your biggest achievement and the biggest challenge since joining government?**

At a personal level, I see the work I did in developing the *Canadian Handbook on Health Impact Assessment* as my biggest achievement. The four volume handbook is used today as a touchstone document in developing countries around the world concerned with the impacts of large-scale development projects on the health and well being of individuals, communities and nations. The *Canadian*

*Handbook* is freely available at the Health Canada web, and thousands of copies have been sent out.

Prior to the development of the *Canadian Handbook*, health impact assessment was restricted to risk assessments. The federal, provincial, and territorial governments' determinants of health model proposed in the *Canadian Handbook* expanded health impact assessments beyond the biophysical health to include social, economic, cultural and spiritual health.

The broader determinants of health model caught on in developing countries and is much more consistent with Indigenous thinking regarding impacts on health and well-being. Indeed, the First Nations University has used the *Canadian Handbook* and incorporated health impact assessment as part of their science curriculum.

My biggest challenge has been convincing scientific colleagues in government, academia, and the private sector (of) the need to look beyond the biophysical approach and integrate the social, economic, cultural and even spiritual components described within the broader determinants of health in an Impact Assessment Report. Getting the scientific community, which has been trained in western science's hypothesis testing approaches, to accept and use traditional indigenous knowledge in an Impact Assessment Report is a job that still needs considerable work.

**In an idealized vision of the future, where would you like to see Environmental Health Research Division (EHRD) go from here?**

**NEW JOURNAL CLUB (FNIHB)**  
HIARD is planning to host an informal bi-monthly journal club within FNIHB.

The lunch-time meeting will provide a forum to present, analyse and discuss a recent research publication in Aboriginal health that might apply to program and policy work within the branch.

The journal club is open to anyone who is interested. Please contact [samir.khan@hc-sc.gc.ca](mailto:samir.khan@hc-sc.gc.ca) or [Jennifer.nowak@hc-sc.gc.ca](mailto:Jennifer.nowak@hc-sc.gc.ca) to join.

EHRD has made significant advancements in the concept of Indigenous research versus exclusive research. Yet much more needs to be done to build on existing knowledge and expertise, adapt traditional approaches to contemporary needs and integrate the best of western and Indigenous Traditional Knowledge.

In the future, I would like to see EHRD's continued support of Indigenous people, communities and organizations in taking the lead in building their capacity to carry out environmental health

research that respects the learning and teaching styles of Indigenous learners and community members.

Throughout my time with FNIHB, I kept thinking of the *dictum* from the Native American teachings "We do not inherit the earth from our ancestors; we borrow it from our children." Once that concept truly sinks home, you realize there is so much more we can do and we must do in the area of environmental health.

I would like to see EHRD be the leader in working with Indigenous people in the development of credible and understandable science-based information for First Nation and Inuit peoples.

**From a broader perspective, how would you like to see the relationship between First Nations communities and the federal government evolve in the coming years, specifically with regards to conducting environmental health-related research?**

Indigenous communities have repeatedly stated that they have been studied to death by outsiders. They want inclusive rather than exclusive research done. EHRD staff have focussed their efforts on enhancing Indigenous peoples understanding of western-based science. It is hoped that learning more about western-based science will assist Indigenous peoples in protecting their environment, their health and their well-being.

**What advice would you have for someone just starting out their career in Health Canada? What would you tell them about working in FNIHB?**

We can quickly identify the environmental health problems that exist within Indigenous communities, whether they are a First Nation or an Inuit community. Everything from toxic chemicals to climate change. Finding solutions is not so easy.

Although Indigenous peoples share a number of common cultural traits and values, each Nation or people has many distinctive beliefs, customs and traditions -- complete with local variations. There is no one-size solution that fits all needs. As a result, working at FNIHB will never be boring. You will, however, experience many other emotions like joy, anger, a sense of achievement or frustration, etc. But most definitely you will never be bored.

**When you are fully into retirement, years from now, and you pick up a newspaper, what story would you hope to see regarding FNIHB and Environmental Health Research?**

In 10 years, I would like to read about a large-scale (regional or national) cooperative research effort between industry and Indigenous people/organizations, with the First Nations and Inuit

Health Branch staff being invited by both stakeholders to act as a trusted advisor to the research.

**Is there anything else you would like us to add?**

I have truly enjoyed working within the federal government and I really can't think of a better place to have ended my career than working within the Primary Health Care and Public Health Directorate of FNIHB. For those evidence-based science geeks like myself, the fact that I have worked in government for 36 years should be all the evidence you need.