The commercial determinants of Indigenous health and well-being: a systematic scoping review

Alessandro Connor Crocetti, Beau Cubillo (Larrakia), Mark Lock (Ngayampaa), Troy Walker (Yorta Yorta), Karen Hill (Torres Strait Islander), Fiona Mitchell (Rununjali), Yin Paradies (Wakaya), Kathryn Backholer, Jennifer Browne

ABSTRACT

Introduction Health inequity within Indigenous populations is widespread and underpinned by colonialism, dispossession and oppression. Social and cultural determinants of Indigenous health and well-being are well described. Despite emerging literature on the commercial determinants of health, the health and well-being impacts of commercial activities for Indigenous populations is not well understood. We aimed to identify, map and synthesise the available evidence on the commercial determinants of Indigenous health and well-being.

Methods Five academic databases (MEDLINE Complete, Global Health APA Psycinfo, Environment Complete and Business Source Complete) and grey literature (Australian Indigenous HealthInfoNet, Google Scholar, Google) were systematically searched for articles describing commercial industry activities that may influence health and well-being for Indigenous peoples in high-income countries. Data were extracted by Indigenous and non-Indigenous researchers and narratively synthesised.

Results 56 articles from the USA, Canada, Australia, New Zealand, Norway and Sweden were included, 11 of which were editorials/commentaries. The activities of the extractive (mining), tobacco, food and beverage, pharmaceutical, alcohol and gambling industries were reported to impact Indigenous populations. Forty-six articles reported health-harming commercial practices, including exploitation of Indigenous land, marketing, lobbying and corporate social responsibility activities. Eight articles reported positive commercial industry activities that may reinforce cultural expression, cultural continuity and Indigenous self-determination. Few articles reported Indigenous involvement across the study design and implementation.

Conclusion Commercial industry activities contribute to health and well-being outcomes of Indigenous populations. Actions to reduce the harmful impacts of commercial activities on Indigenous health and well-being and future empirical research on the commercial determinants of Indigenous health, should be Indigenous led or designed in collaboration with Indigenous peoples.

WHAT IS ALREADY KNOWN ON THIS TOPIC

→ Commercial industries such as tobacco, alcohol and ultra-processed foods are known to employ tactics, such as lobbying and marketing, that impact public health. However, the specific commercial determinants of Indigenous health have not been well described.

WHAT THIS STUDY ADDS

→ This is the first systematic synthesis of the commercial determinants of health for Indigenous peoples. This review details the ways in which marketing, lobbying, corporate social responsibility activities and exploitation of Indigenous land and imagery, undertaken by the mining, tobacco, alcohol, gambling, ultra-processed food and pharmaceutical industries, among others, is harming health and well-being of Indigenous populations. The commercial sector can enhance Indigenous health, when businesses work closely with or are led by Indigenous people.

HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

→ In order to be effective at mitigating negative health and well-being impacts and promoting positive impacts of commercial activity, policy and practice needs to be designed in collaboration with Indigenous communities and should promote the cultural continuity and self-determination. Future research on the commercial determinants of Indigenous health should have greater involvement of Indigenous peoples from the design, implementation and dissemination of research.

INTRODUCTION

Colonisation continues to impact Indigenous peoples globally, through dispossession, oppression and cultural assimilation. Indigenous peoples’ knowledge systems are intrinsically linked to social and economic determinants of health and continue to be damaged by colonisation. The authors of this paper recognise and support Indigenous...
peoples right to self-determine decisions influencing their communities, as expressed in the United Nations’ Declaration of the Rights of Indigenous Peoples. We acknowledge Indigenous peoples continue to maintain a sacred connection to their lands and that the social, cultural and economic practices Indigenous people engaged in before colonisation were deeply sustainable. We refer to Indigenous peoples throughout this paper, though respectfully acknowledge cultural diversity of Indigenous peoples around the world.

Many Indigenous populations worldwide experience health inequities including higher rates of non-communicable diseases and reduced life expectancy compared with their non-Indigenous counterparts. First Nations, Inuit and Métis populations of Canada, Native Americans and Alaskan Natives, Māori peoples of Aotearoa/New Zealand, and Aboriginal and Torres Strait Islander peoples of Australia have significantly higher mortality rates than non-Indigenous people of the same country.

Health constructs for Indigenous peoples are interconnected with local Indigenous knowledge systems that often encapsulate various physical, social, emotional, cultural and spiritual well-being concepts. These knowledge systems often include connection to culture, country, language, family, kinship and community as well as self-determination. These connections were damaged through the process of colonisation such as the forcible removal of First Nations children from their families, in both Australia and Canada, as a part of assimilation policies that are now considered a form of cultural genocide. Continuing colonisation damage to Indigenous peoples’ health and well-being occurs through industrialisation, hierarchisation, patriarchy, capitalism and an increasingly commercialised existence.

The commercial determinants of health (CDoH) are broadly described as the influence of private companies on public health objectives. This definition encapsulates the power of corporations to influence socioeconomic conditions, legislation, health policy and regulations and population consumption. Tobacco, alcohol and ultraprocessed foods are leading contributors to health inequalities among Indigenous peoples worldwide. In addition, the mining industry is often in direct conflict with the well-being of local Indigenous communities.

While some research has been undertaken to understand the social determinants, and more recently the cultural determinants, of Indigenous health, the influence of commercial entities and activities on Indigenous health and well-being has not been well described. An understanding of the commercial determinants of Indigenous health can enable actions to minimise the harms, and maximise the benefits, to Indigenous populations caused by commercial activities.

There have not been any systematic reviews of the impact of commercial activity on the health of Indigenous peoples. The purpose of this scoping review was to systemically identify, map and synthesise the available evidence describing the (1) commercial industries and activities influencing Indigenous health and well-being; (2) the health and well-being impacts (positive or negative) of these commercial activities and (3) potential strategies for reducing negative impacts, and enhancing positive impacts, of commercial activities on Indigenous peoples’ health and well-being.

METHODS
This review was undertaken by a non-Indigenous Australian doctoral student (ACC) who worked closely with a team of Aboriginal and Torres Strait Islander researchers (YP, KH, TW, FM, ML and BC) and non-Indigenous Australian researchers (JB, KB) with experience in Indigenous health and CDoH research. Indigenous researchers were involved at each stage of the review process to ensure cultural rigour. The review protocol followed the Joanna Briggs Institute’s scoping review guidance and reporting followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines.

Search strategy
We searched MEDLINE, PsycINFO, CINAHL, Informit (Health, Public Affairs and Indigenous Collections), Global health, Environment Complete, Business Source Complete and Scopus for peer-reviewed literature in November 2021. No date ranges were set. Grey literature searches were undertaken via Australian Indigenous HealthInfoNet, Google Scholar and Google, with the first 100 hits from each website retrieved. Reference lists of included articles were checked for additional resources.

Three different sets of search terms were used to describe (1) Indigenous peoples, (2) commercial industry activities and (3) terms relating to health and well-being; of commercial activities influencing Indigenous health and well-being. Search terms within each set, and subject headings when available, were combined with the Boolean operator ‘OR’ and each set of terms was combined with the Boolean operator ‘AND’. The search string was developed in collaboration with a university librarian who had experience with scoping review methodology (online supplemental table 1). Two authors (ACC and JB) piloted the search strategy.

Inclusion and exclusion criteria
Peer-reviewed articles, published in English, were included if they:
1. Focused on Indigenous peoples of colonised, Western high-income countries, where Indigenous peoples make up a minority of the total population. Countries include Australia, New Zealand, Canada, USA, Norway, Sweden, Finland, Iceland and Denmark.
2. Included only Indigenous participants or included mixed populations but reported findings by Indigenous status.
3. Described commercial strategies or activities, which included, but were not limited to, advertising/marketing, corporate social responsibility (CSR), political
lobbying, production/supply of harmful products or services, funding/sponsorship.

4. Discussed perceived or actual health and well-being risks or outcomes in relation to a commercial activity. Indigenous health was defined as not just the physical well-being of an individual but the social, emotional and cultural well-being of the whole Community. Studies reporting only economic or employment impacts (without health implications) were excluded.

5. Any study design, including quantitative, qualitative and commentary/editorial articles. All protocols, books, media articles and theses were excluded.

Study screening and selection

Titles and abstracts retrieved by the database search were uploaded to Covidence and independently screened by two reviewers, one of whom was Indigenous (TW, KH, FM or ML). All potentially-relevant full text articles were subsequently screened by an Indigenous (TW, KH or BC) and a non-Indigenous reviewer (ACC). Any conflicts were resolved, and consensus reached over a series of meetings involving all the reviewers, including the senior author (JB) (see figure 1).

Data extraction

A data extraction template was developed in Microsoft Excel and piloted by two reviewers (ACC and BC) using five studies. Details extracted from each article included geographical location, population of interest, study design, number and type of participants, commercial industries involved, commercial activities examined, health and well-being outcomes, whether commercial activities had a positive, negative, or neutral impact on Indigenous peoples, strategies implemented/proposed to mitigate (or enhance) commercial activity influence on Indigenous health, and evidence of Indigenous involvement in the research. Indigenous involvement fields were informed by the Aboriginal and Torres Strait Islander quality appraisal tool and the CONSIDER guidelines for ethical and culturally appropriate research in Indigenous health research. These broad criteria explored whether there was Indigenous involvement in the study design, implementation, and dissemination of findings. Data from all studies were independently extracted by the lead author (ACC) and a second reviewer (JB, KH, BC, TW, ML and FM). Results were cross-checked and discrepancies resolved through discussions at research team meetings.

Data synthesis

A narrative synthesis was undertaken due to the diverse range of study designs, commercial activities and health outcomes included in retrieved literature. Results are synthesised according to each commercial industry identified.

Patient and public involvement

This review was undertaken by a team of Indigenous and non-Indigenous health researchers with expertise in public health, nutrition, Indigenous health and cultural safety. It was undertaken as part of a larger research project on the commercial determinants of Indigenous health being undertaken in partnership with the Victorian Aboriginal Community Controlled Health Organisation.

RESULTS

Fifty-six articles met the inclusion criteria and were included in this review (figure 1). All articles were published in peer-reviewed journals between 1991 and 2021 and were from USA (n=22), Canada (n=15), Australia (n=13), New Zealand (n=9), Norway (n=1) and Sweden (n=1). Twenty-three articles focused on American Indians/Alaskan Natives, 15 focused on First Nations Canadians and Inuit, 13 on Aboriginal and Torres Strait Islander peoples, 9 included Māori and 2 were about Sámi populations.

The diversity of articles indicates that this is an emerging field of research and, thus, many articles reviewed were speculative or narrative in nature. Forty-four of the 56 articles reported empirical research. There were 9 cross-sectional surveys, 3 longitudinal studies, 4 mixed-methods studies, 10 case studies, 18 qualitative studies, including 10 document analyses and 8 interview studies, and 1 literature review. Additionally, 11 editorials (n=2) and commentaries (n=9)
were included. Summary details of each article are in online supplemental table 2.

The activities of each specific industry are described below and summarised in table 1 and figure 2. For specific details of each included article, please see online supplemental table 2.

**Extractive industry**

The extractive industry was the most prominent industry described (n=16 articles) with negative impacts reported for Indigenous health and well-being from mining and fracking. Articles described the exploitation of Indigenous land resulting in environmental pollution/contamination and conflicts over land-use, and lobbying of governments to acquire more land for mining and reduce licencing requirements to operate on Indigenous land (impact bargaining agreements). Most articles about the extractive industry reported negative impacts on health and well-being, most commonly due to environmental pollution, including pollution of drinking water and toxic metal exposure, as well as undermining cultural well-being. One article suggested enhanced environmental impact assessments could help promote cultural well-being and improving such assessments was the most frequently suggested strategy for overcoming the negative consequences of the extractive industry on Indigenous health and well-being. Two articles also recommended broad regulation of the extractive industry including stringent environmental controls.

**Tobacco industry**

Fifteen articles focused on the tobacco industry. These predominately covered marketing, including direct-to-consumer marketing targeting Indigenous populations and/or the use of traditional Native American imagery in tobacco advertisements. For example, ‘Red Man’, a racist slur, is a popular chewing tobacco in the USA and ‘Native American Spirit’ cigarette company use American Indian imagery on its packaging. A survey of Native American/Alaskan Native participants indicated a belief that these companies were affiliated with tribes and smoking these brands was healthier. Other tobacco industry activities included selective promotions targeting Indigenous populations, corporate sponsorship of Indigenous foundations and illegal tobacco smuggling.

Almost all articles discussed tobacco industry activities in terms of their negative impacts on Indigenous health, with the exception of one article, which described increased industry collaboration with American Indian/Alaskan Native communities, promoting ceremonial tobacco use and other cultural activities. Seven articles reported quantitative findings, demonstrating an increase in the prevalence of smoking or tobacco accessibility. A further five qualitative studies and two commentaries suggested tobacco industry tactics contributed to nicotine dependency and tobacco related death and disease in Indigenous communities.

Strategies proposed to mitigate tobacco industry activities included culturally appropriate tobacco control interventions and prevention programmes to reduce smoking, Indigenous community consultation and collaboration with governments and local organisations to prevent uptake of smoking, and stronger regulation. For example, implementing higher tobacco taxes or policies against discounting cigarettes and refusing industry funding.

**Food and beverage industry**

Food and beverage industries were the focus of six articles, including four which focused on food retailers and two on ultraprocessed food companies. Articles reporting the potentially detrimental impact of the food and beverage industry on Indigenous health described lobbying and CSR selective pricing, supply chain issues and marketing of unhealthy foods. For example, one article suggested large transnational food companies, including Nestle and Coca Cola, engaged in CSR activities to build brand image among Indigenous populations through community activities and funding higher education and employment opportunities for Indigenous young people.

Adverse health outcomes associated with the consumption of ultra-processed foods and beverages or lack of access to fresh fruit and vegetables were discussed in five articles. One cross-sectional study demonstrated a positive association between food marketing and increased consumption of ultraprocessed foods and beverages. Authors suggested marketing these products, including through CSR activities, may contribute to the prevalence of childhood obesity-related and diet-related diseases among Indigenous populations. Food supply chain issues, including high transport costs and limited choice in the local supermarkets, further contribute to poor nutrition in remote Indigenous communities.

One article described the food industry’s potential to increase availability of traditional foods through the economic development of Indigenous-owned traditional food businesses, which the authors argued, could contribute to both nutrition and cultural well-being. The most frequently suggested strategy for mitigating potential harms of the food industry was government and private sector policy/regulation. For example, policies governing the supply, promotion and sale of healthier food and beverages within remote community stores.

**Pharmaceutical industry**

Pharmaceutical companies were the focus of five of the studies. The key activities of this industry reported in relation to Indigenous health and well-being included CSR and lobbying, whereby companies pressured governments to sign trade agreements that threatened access to affordable medicines. Direct-to-consumer...
## Table 1  Summary of included articles

<table>
<thead>
<tr>
<th>Industries/companies</th>
<th>Study design</th>
<th>Location</th>
<th>Groups targeted</th>
<th>Framing of commercial activity</th>
<th>Types of commercial activities</th>
<th>Health and well-being consequences</th>
<th>Strategies suggested to mitigate negative impacts/promote positive impacts of corporate activities</th>
<th>Indigenous involvement in study or article</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Extractive industry</strong> (n=16)</td>
<td>Qualitative studies</td>
<td>Australia (n=4)</td>
<td>Aboriginal and Torres Strait Islander (n=4)</td>
<td>Neutral (n=1)</td>
<td>Environmental pollution/contamination and land-use (n=10)</td>
<td>Environmental pollution (n=10)</td>
<td>Environmental impact assessments (EIA) improvements (n=1)</td>
<td>None mentioned (n=5)</td>
</tr>
<tr>
<td></td>
<td>(n=11)</td>
<td>Canada (n=7)</td>
<td>First Nations/Inuit (n=4)</td>
<td>Positive (n=14)</td>
<td>CSR/lobbying (n=6)</td>
<td>Exploitation of Indigenous land (n=10)</td>
<td>Increased regulation (n=3)</td>
<td>Reinforces indigenous values/consultation conducted (n=9)</td>
</tr>
<tr>
<td></td>
<td>Cross-sectional/</td>
<td>USA (n=3)</td>
<td>American Indian/Alaska Native (n=4)</td>
<td>Neutral (n=1)</td>
<td></td>
<td>Reinforcing environmental and cultural health (n=1)</td>
<td>None (n=1)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>longitudinal (n=1)</td>
<td>Sweden (n=1)</td>
<td>Sámi (n=2)</td>
<td>Positive (n=14)</td>
<td></td>
<td></td>
<td>More research/studies (n=2)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Editorial (n=1)</td>
<td>Norway (n=1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Commentary (n=3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Tobacco industry</strong> (including black market tobacco sales) (n=15)</td>
<td>Mixed methods (n=1)</td>
<td>Australia (n=3)</td>
<td>Aboriginal and Torres Strait Islander (n=3)</td>
<td>Positive (n=1)</td>
<td>Marketing (n=14)</td>
<td>Smoking (n=14)</td>
<td>Reinforcing culturally well-being (n=1)</td>
<td>Indigenous researcher/s involved (n=2)</td>
</tr>
<tr>
<td></td>
<td>Qualitative studies</td>
<td>Canada (n=2)</td>
<td>First Nations/Inuit (n=2)</td>
<td>Negative (n=14)</td>
<td>CSR/spONSORSHIP (n=1)</td>
<td>Smuggling schemes</td>
<td>None (n=1)</td>
<td>Reinforces indigenous values/consultation conducted (n=4)</td>
</tr>
<tr>
<td></td>
<td>(n=6)</td>
<td>USA (n=12)</td>
<td>American Indian/ American Natives (n=12)</td>
<td></td>
<td>Smuggling schemes (n=1)</td>
<td>Increases in collaboration with community (n=1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cross-sectional/</td>
<td>New Zealand (n=2)</td>
<td>Misori (n=2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>longitudinal (n=6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Commentary (n=2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Food and beverage industry</strong> (n=6)</td>
<td>Mixed methods (n=1)</td>
<td>Australia (n=3)</td>
<td>Aboriginal and Torres Strait Islander (n=4)</td>
<td>Negative (n=6)</td>
<td>CSR/lobbying (n=1)</td>
<td>Poor nutrition/non-communicable diseases and under-nutrition (n=5)</td>
<td>Better food health promotions (n=5)</td>
<td>Indigenous researcher/s involved (n=2)</td>
</tr>
<tr>
<td></td>
<td>Qualitative studies</td>
<td>USA (n=1)</td>
<td>First Nations/Inuit (n=2)</td>
<td>Positive (n=1)</td>
<td>Selective pricing (n=2)</td>
<td>Reinforcing culturally appropriate food consumption (n=1)</td>
<td>Education programmes (n=1)</td>
<td>Indigenous values/strategy-based approach (n=2)</td>
</tr>
<tr>
<td></td>
<td>(n=1)</td>
<td>New Zealand (n=3)</td>
<td>American Indian/ American Natives (n=1)</td>
<td></td>
<td>Supply chain issues (n=2)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cross-sectional/</td>
<td></td>
<td>Misori (n=3)</td>
<td></td>
<td>Marketing (n=1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>longitudinal (n=1)</td>
<td></td>
<td></td>
<td></td>
<td>Increased availability (n=1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Editorial (n=1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Literature review (n=1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Commentary (n=1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Pharmaceutical industry</strong> (n=5)</td>
<td>Qualitative studies</td>
<td>Australia (n=1)</td>
<td>Aboriginal and Torres Strait Islander (n=1)</td>
<td>Negative (n=3)</td>
<td>CSR/lobbying (n=4)</td>
<td>Pharmaceutical abuse (n=2)</td>
<td>Positive CSR sponsorship (n=2)</td>
<td>None mentioned (n=5)</td>
</tr>
<tr>
<td></td>
<td>(n=2)</td>
<td>Canada (n=1)</td>
<td>First Nations/Inuit populations (n=1)</td>
<td>Positive (n=2)</td>
<td>Marketing (n=4)</td>
<td>Reduced access to medicines (n=1)</td>
<td>Regulation (n=3)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cross-sectional/</td>
<td>USA (n=1)</td>
<td>American Indian/ American Natives (n=1)</td>
<td></td>
<td></td>
<td>Reinforcing cultural well-being (n=2)</td>
<td>Future research (n=1)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>longitudinal (n=1)</td>
<td>New Zealand (n=2)</td>
<td>Misori (n=2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Commentary (n=2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Manufacturing industry</strong> (n=2)</td>
<td>Cross-sectional (n=1)</td>
<td>Canada (n=1)</td>
<td>First Nations/Inuit (n=1)</td>
<td>Negative (n=2)</td>
<td>Environmental pollution/contamination (n=2)</td>
<td>Undermining cultural well-being (n=1)</td>
<td>Employing Indigenous developed theoretical framework (n=1)</td>
<td>Indigenous consultation conducted (n=2)</td>
</tr>
<tr>
<td></td>
<td>Qualitative studies</td>
<td>USA (n=1)</td>
<td>American Indian/ American Natives (n=1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(n=1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Continued
<table>
<thead>
<tr>
<th>Industries/companies</th>
<th>Study design</th>
<th>Location</th>
<th>Groups targeted</th>
<th>Framing of commercial activity</th>
<th>Types of commercial activities</th>
<th>Health and well-being consequences</th>
<th>Strategies suggested to mitigate negative impacts/promote positive impacts of corporate activities</th>
<th>Indigenous involvement in study or article</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fishing industry (n=3)</td>
<td>Mixed methods (n=1) Qualitative studies (n=2)</td>
<td>Canada (n=1) USA (n=2)</td>
<td>First Nations/Inuit (n=1) American Indian/ American Natives (n=2)</td>
<td>Negative (n=3)</td>
<td>Environmental destruction/ contamination (n=3) Undermining cultural well-being (n=2)</td>
<td>Environmental destruction (n=3) Undermining cultural well-being (n=2)</td>
<td>Collaboration with Indigenous people (n=1) Upholding land sovereignty (n=1) None mentioned (n=1)</td>
<td>No Indigenous involvement mentioned (n=3) Reinforces indigenous values/strength-based approach (n=1)</td>
</tr>
<tr>
<td>Gambling industry (n=2)</td>
<td>Qualitative studies (n=1) Cross-sectional (n=1) Commentary (n=1)</td>
<td>Australia (n=1) New Zealand (n=1)</td>
<td>Aboriginal and Torres Strait Islander (n=1) Māori (n=1)</td>
<td>Negative (n=2)</td>
<td>Promotional deals/ leisure deals (n=1) Marketing (n=1)</td>
<td>Gambling dependency Domestic violence and family dysfunction (n=1)</td>
<td>Prevention strategies in consultation with Indigenous group (n=1) Regulation (n=1)</td>
<td>None mentioned (n=2)</td>
</tr>
<tr>
<td>Alcohol industry (n=2)</td>
<td>Cross-sectional (n=1) Commentary (n=1)</td>
<td>Australia (n=1) New Zealand (n=1)</td>
<td>Aboriginal and Torres Strait Islander (n=1) Māori (n=1)</td>
<td>Negative (n=2)</td>
<td>Marketing (n=1) CSR/lobbying (n=1)</td>
<td>Alcohol abuse (n=2)</td>
<td>Regulation (n=1) None mentioned (n=1)</td>
<td>None mentioned (n=2)</td>
</tr>
<tr>
<td>Tourism industry (n=2)</td>
<td>Qualitative studies (n=2)</td>
<td>Australia (n=1) New Zealand (n=1)</td>
<td>Aboriginal and Torres Strait Islander (n=1) Māori (n=1)</td>
<td>Positive (n=2)</td>
<td>Social and culturally appropriate ventures (n=1) Cultural awareness tourism (n=1)</td>
<td>Reinforcing cultural well-being (n=2)</td>
<td>Enhancement of social entrepreneurship (n=1) Implementation of tourism framework (n=1)</td>
<td>Indigenous consultation conducted (n=1) Reinforces indigenous values/strength-based approach (n=2)</td>
</tr>
<tr>
<td>Sex industry (n=1)</td>
<td>Mixed methods (n=1)</td>
<td>Canada (n=1) USA (n=1)</td>
<td>First Nations /Inuit Canada (n=1) American Indian/ American Natives populations USA (n=1)</td>
<td>Negative (n=1)</td>
<td>Targeting First Nations Peoples (n=1)</td>
<td>Sexually transmitted infections, physical and sexual abuse, mental illness and drug and alcohol abuse (n=1)</td>
<td>Intervention/programmes (n=1)</td>
<td>Reinforces indigenous values/consultation conducted (n=2)</td>
</tr>
<tr>
<td>Sportwear industry (n=1)</td>
<td>Qualitative studies (n=1)</td>
<td>Canada (n=1) USA (n=1)</td>
<td>First Nations/Inuit (n=1) American Indian/ American Native (n=1)</td>
<td>Negative (n=1)</td>
<td>Marketing (n=1)</td>
<td>Undermining cultural well-being (n=1)</td>
<td>Limiting privatisation social justice (n=1)</td>
<td>None mentioned (n=1)</td>
</tr>
<tr>
<td>Medical device industry (n=1)</td>
<td>Qualitative studies (n=1)</td>
<td>Canada (n=1) USA (n=1)</td>
<td>First Nations/Inuit (n=1)</td>
<td>Positive (n=1)</td>
<td>Collaboration Indigenous communities (n=1)</td>
<td>Providing culturally appropriate products (n=1)</td>
<td>More collaboration with Indigenous people (n=1)</td>
<td>Reinforces indigenous values/consultation conducted (n=2)</td>
</tr>
</tbody>
</table>

CSR, corporate social responsibility.
Marketing of pharmaceuticals targeting Indigenous populations was also reported. Two studies reported these activities increased the risk of prescription drug (e.g., painkiller) dependency and reduced access to essential medicines among Indigenous populations.

Two articles reported pharmaceutical industry activities that may have a positive effect on Indigenous health and did not report industry funding. They described collaborating with Indigenous communities in product formulation and promoting traditional medicine and healing practices. To mitigate the negative impacts of the pharmaceutical industry, articles recommended industry-funded university scholarships for Indigenous students, involving Indigenous companies and researchers to promote traditional medicine and stronger regulatory agencies to govern the pharmaceutical industry, including regulation of direct-to-consumer marketing.

Fishing industry

Three articles focused on the commercial fishing industry. They all described environmental destruction and contamination in local waterways and poor health outcomes due to environmental pollutants and toxicants. An example of this is salmon farms in remote Canada releasing faecal matter, feed and chemicals into the natural marine environment. Two of these articles also suggested that the fishing industry undermined cultural well-being for Indigenous communities by disrupting the reciprocal relationship between Indigenous peoples and other beings through lack of active management of fragile ecosystems. The proposed strategies to overcome these consequences were increased collaboration between the industry and Indigenous Peoples and for both governments and industry to uphold land sovereignty.

Gambling industry

The gambling industry was the focus of two articles, one involving sports-related gambling and lotteries and one focused on casinos. The articles reported that the gambling industry targeted Indigenous communities with promotional deals in casinos and other forms of marketing. Perceived health outcomes associated with gambling, according to a qualitative study, were domestic violence and family dysfunction, while a cross-sectional study measured exposure to marketing of sports-related gambling and lotteries, suggesting early exposure may lead to higher dependency. Recommendations to overcome the harms associated with gambling industry activities included developing prevention strategies in consultation with Indigenous organisations/groups and increased regulation of casinos by restricting the number, location and visibility of gaming machines.

Alcohol industry

Alcohol industries were the focus of two articles. They reported direct alcohol marketing targeting Indigenous populations, lack of community consultation and strong political lobbying by alcohol retailers regarding proposals to build alcohol outlets near Aboriginal communities. One study demonstrated that alcohol marketing was associated with increased alcohol consumption and both articles argued increases in alcohol availability and exposure would likely increase the prevalence of alcohol-related harm and the normalisation of alcohol. Potential strategies suggested overcoming these health impacts including strict legislation restricting all forms of alcohol marketing and more effective consultation with local Indigenous organisations and communities to respond to the concerns about alcohol availability.

Other manufacturing industries

Two articles focused on other manufacturing industries, including the pulp mill industry and rubber industry. Both described negative impacts of these industries, reporting that they were associated with land-use conflicts, environmental pollution and contamination with black dust emanating from a rubber facility, and dumping in waterways from the pulp mill. The authors argue that the displacement of land due to manufacturing is an act of the colonial state, undermining cultural well-being. They proposed establishing an independent organisation to undertake Environmental Impact Assessments, to replace industry self-assessments.

Sex industry

A single study focused on the commercial sex industry. It reported the ways in which pimps within this industry specifically targeted girls and women from Native American and Alaskan communities and lured or forced them into prostitution. The health outcomes associated with commercial sexual exploitation and trafficking included sexually transmitted infections and physical and sexual abuse, mental illness and drug and alcohol addiction. The study advocated for coordinated, culturally based, trauma-centred, multilevel services provided by Indigenous staff to support Native American girls who were
vulnerable to exploitation. No recommendations were made about regulating or policing the industry itself.

Sportswear industry
One article described the negative commercial activities of a sportswear company and the sports industry. The company reportedly produced discriminatory marketing and native mascotry. The authors report Indigenous caricatures, logos and rituals are becoming increasingly prevalent in sportswear companies and sports. This undermines cultural well-being due to the misappropriation of culture and cultural expression. The authors recommended stronger regulation of sports organisations and brand companies.

Tourism industry
Cultural tourism companies, led by Indigenous people, were reported as commercial ventures that could have a positive impact on the health and well-being of Indigenous people. Indigenous tourism operators, culturally sensitive guided tours and community visits, and other local ventures that encourage community development, were reported to enhance connection to culture, Indigenous knowledge and spiritual well-being for local community members. Authors recommended more support for social entrepreneurship and asserted that Indigenous tourism must be governed by local communities to prevent commercial tourism industry exploitation.

Medical device industry
Dementia management devices were the focus of one article, which was industry funded. The article reported that the industry made a positive contribution through collaboration with Indigenous communities that, in turn, enabled provision of culturally appropriate health products, including materials in Indigenous languages and altering tracking features in response to community concerns about privacy. Collaboration with Indigenous peoples through focus group discussion to inform design and trialling products within communities was proposed as a strategy to enhance other culturally specific health products.

Indigenous involvement
Most articles (n=33) did not provide any details of Indigenous involvement in the research. Twenty-five articles described some form of Indigenous involvement, such as consultation processes with Indigenous communities prior to conducting the research, inclusion of Indigenous researchers/authors, incorporation of Indigenous worldviews, and applying cultural values or strength-based approaches. Only three studies were conducted using an Indigenous research paradigm. These included Indigenous stories as Indigenous theories, Māori perspectives on sustainability that are underpinned by a sociological framework, and a Mi’kmaq First Nations Canadian environmental theoretical framework.

DISCUSSION
This review of 56 articles across 6 countries, highlights multiple examples of commercial industries contributing to Indigenous health and well-being. Our findings suggest that commercial activities such as exploitation of Indigenous land, marketing, lobbying and CSR strategies may be harming Indigenous health through environmental contamination, consumption of unhealthy products (e.g., tobacco, alcohol, ultraprocessed foods, prescription drugs) and undermining cultural well-being. Conversely, when commercial actors genuinely worked with, and for, Indigenous communities, this had the potential to enhance cultural well-being. Or review also highlights the need for more Indigenous-led empirical research in this field.

Other reviews examining commercial influences on health have attempted to provide a definition and broad conceptual frameworks for this area of research. To the best of our knowledge, none have systematically identified and mapped the specific industries, activities and the potential health and well-being consequences that are impacting Indigenous populations. de Lacy-Vawdon and Livingstone outlined the current literature on the key macrolevel conditions, relations, structures, activities and consequences of the CDoH. However, they note that the literature focusses on only the negative outcomes of CDoH, not the potential positive outcomes. Our review of the commercial determinants of Indigenous health identified similar harmful industries to de Lacy-Vawdon and Livingstone, specifically the mining, tobacco, alcohol, food, pharmaceutical and gambling industries. We also identified industries that potentially made positive impacts, with Indigenous cultural tourism being a key example. Poirier et al synthesised evidence about mechanisms through which neoliberalism impacts Indigenous health. Similar to our findings, they highlight the role of competitive and private markets in enabling the contamination of Indigenous land and waterways, the loss of traditional lands and food ways, and the ‘intense marketing of Western foods’ (Poirier et al, p8). We extend the findings of Poirier et al by detailing the specific commercial industries and activities that are impacting Indigenous health and well-being within neoliberal political environments.

Mining and natural resource extraction was the predominant industry described to negatively influence Indigenous health and well-being (n=16). Our findings align with previous assessments of the impacts of the mining sector on Indigenous health. For example, an Australian parliamentary inquiry into the destruction, by Rio Tinto, of a 46 000-year-old rock shelter highlighted the significance to spiritual and cultural well-being for the local Aboriginal community, concluding that Australia lacks effective legislative protections of Indigenous cultural heritage. However, it has also been argued that mining companies can provide employment opportunities for Indigenous people, offering a relatively high income to directly support their families and
communities. Although, it should be noted that when mining companies cease operation, access to essential services for local Indigenous people, such as healthcare, often diminish due to the sudden exodus of workers from the region. Transparent mechanisms are required to assess the potential positive and negative impacts of the extractive industry so that communities can be empowered to make informed decisions about their lands.

We found that CSR and lobbying strategies were used by multiple industries to influence policy and enable commercial activities in Indigenous communities. For example, we found that mining companies often capitalise on their CSR activities to construct a homogeneous representation of Indigenous Peoples when negotiating mining agreements, consequently the concerns of local Indigenous communities surrounding mining projects can be neglected. CSR activities were also prominent with the food and beverage industry through sponsorship of local Indigenous activities related to education and employment opportunities for Indigenous young people. While these CRS activities can provide direct benefits to communities, indirect impacts include promotion of unhealthy products to encourage consumption and brand loyalty. Further, companies’ use of CSR in political lobbying to avoid regulation undermines the health and well-being benefits that these activities may provide. The tobacco industry fund foundations that purport to support Indigenous health research as an act of social responsibility, yet continue to promote sales of tobacco, which have indelible adverse health consequences. Commercial industries that do not predominantly profit from manufacturing or selling harmful products could potentially make a positive contribution on Indigenous health and well-being through CSR.

The most frequently reported avenue of corporate harm on Indigenous health and well-being identified in this review was the targeted marketing of harmful products (figure 2). This targeted marketing to Indigenous people was evident across the tobacco, alcohol, food, pharmaceutical, gambling and sportswear industries and often involved the misappropriation of Indigenous imagery in the USA. This misappropriation of Indigenous imagery is not new. In Australia, the 1980s advertising campaign by tobacco company WD & HO Wills used the slogan ‘Get your own Black’, while, in the 1990s Winfield tobacco had an advertisement that depicted an Aboriginal man playing a didgeridoo with the accompanying slogan ‘Australians’ answer to ‘the peace pipe’. Targeted marketing has also been used to promote products to African American populations. However, over time, increased public attention has led to some companies, for example, within the sports industry, to eliminate the use of Indigenous imagery. The extent and health implications of targeted marketing, including through use of Indigenous imagery, of products known to be harmful to health to Indigenous peoples is an important area for future research and public health policy.

This review identified 12 articles from Australia. In 2021, the Minister for Indigenous Australians requested a parliamentary inquiry on corporate sector engagement with Indigenous consumers, which found several examples of ‘poor corporate behaviour’, which may be impacting Aboriginal and Torres Strait Islander peoples’ well-being. An industry that was highlighted in the inquiry’s interim report, that was not identified in this review, was the banking and finance sector, including pay-day loans and car financing and insurance products. Further research is warranted on the health and well-being impacts of these industries on Indigenous peoples.

Our review is the first to consider the potential for Indigenous-led commercial activities to have a positive impact on Indigenous health and well-being. This is in line with the WHO’s conceptualisation of the CDoH as private sector activities which can affect health either positively or negatively. Mika and Scheyvens explored the principles of Māori tourism using principles of traditional ways of knowing, being and doing. The authors posit that incorporating traditional Māori principles instils cultural awareness and promotes culturally reinforcing tourism enterprises. Similarly, revitalisation of traditional Māori kai (food) through Indigenous-owned traditional food-based industries could support food security and economic empowerment. Previous studies have found use of traditional foods enabled cultural continuity and connection to language, country and family. However, Indigenous foods are becoming a lucrative industry and another avenue through which non-Indigenous businesses are appropriating Indigenous intellectual property for profit. It is also important to provide a nuanced assessment of the health impacts of some Indigenous businesses. For example, First Nations-owned casinos in North America are a complex issue that may be concurrently associated with economic self-determination and gambling-related harms.

We found a notable lack of Indigenous involvement in research about the commercial determinants of Indigenous health and well-being. Most studies included in this review did not mention whether Indigenous Peoples were involved in the research or dissemination of findings, and few explicitly applied an Indigenous research paradigm. This is at odds with the CONSIDER statement, which recommends that all research with Indigenous peoples report on the ways in which research governance, relationships, prioritisation, methodologies, participation; capacity building, data analysis and dissemination is undertaken with Indigenous communities. Although we observed few studies that included Indigenous researchers, it is not always possible to determine the cultural identity of authors in academic journals. The CONSIDER statement was published in 2019, after many of the studies included in this review had been completed. Therefore, we recommend that this tool be used to improve transparency.
in the reporting of future research with Indigenous peoples. Supporting Indigenous-led research on the commercial determinants of Indigenous health should be a priority.

Recommendations to mitigate the negative impacts of commercial activities, from articles included in this review, were largely centred around the need for stronger regulation and monitoring of commercial activities, as well as the need for stronger consultation and collaboration with Indigenous communities. However, as Poirier et al highlight, in order to achieve transformational change, policy makers, practitioners and researchers must challenge the neoliberal and colonial paradigms that sustain Indigenous health inequity. For example, public health should cease its focus on individual ‘lifestyle’ and, instead, proactively counter the powerful commercial interests that harm Indigenous peoples and undermine self-determination. Systematically monitoring and exposing commercial activities, as we have done in this review, is one recommended approach.

A key strength of this review was that it involved Indigenous people. There were six Indigenous researchers on the review team, who will continue to work together to explore and address the commercial determinants of Indigenous health in a manner that is culturally safe. Through incorporating Indigenous voices into this review, the authors were able to contribute to self-determination principles by addressing topics directly impacting the Indigenous authors’ own communities. Our review team, including Indigenous authors, was based in Australia and we acknowledge that the perspectives of First Nations peoples from other countries may be different to ours, nor do we claim to represent all Aboriginal and Torres Strait Islander Australians. The systematic search strategy and review design is a further strength. Limitations included our decision to only include articles published in English and related to high-income countries. As such, the health implications of commercial activities on Indigenous populations in low-and-middle income countries were not considered. The commercial determinant of health is an emerging field of research, thus many (n=11/56) articles included in this review were commentaries or editorials and only 16 of the studies provided quantitative data. We did not assess the strength of the evidence and, while this is in line with scoped review methodology, the opinions and qualitative findings reported should be empirically tested in future research. Evaluation of strategies to counter the health and well-being consequences of commercial activities within Indigenous populations should be a priority as well as defining the elements of Indigenous engagement and leadership required within the private sector to produce positive health and well-being outcomes.

CONCLUSION
We identified numerous examples of commercial industry activities negatively impacting Indigenous health and well-being. Strategies to mitigate these negative health consequences are urgently needed. Such strategies are context and industry specific but may include community health promotion interventions combined with stronger industry regulation, both of which should be designed in collaboration with Indigenous communities. The design of future research on the commercial determinants of Indigenous health must have a greater involvement of, and ideally be led by Indigenous peoples.

Twitter Mark Lock (Ng laminate) @MarkJLock1

Acknowledgements The authors would like to thank Rachel West at the Deakin University library for her help with the database searches.

Contributors ACC and JB conceptualised the study and developed the protocol in consultation with KB and YP. ACC, JB, BC, TW, KH, ML and FM screened and selected the studies, ACC, BC, TW, KH and ML extracted and analysed the data. ACC drafted the initial manuscript and all authors provided feedback on initial drafts and approved the final manuscript. ACC is the guarantor.

Funding ACC is supported by a Deakin University scholarship. JB is supported by a Heart Foundation Postdoctoral Fellowship (105168). KB is supported by a Heart Foundation Future Leader Fellowship (102047). This study was funded by the Victorian Health Promotion Foundation (VicHealth).

Competing interests None declared.

Patient and public involvement Patients and/or the public were not involved in the design, conduct, or reporting, or dissemination plans of this research.

Patient consent for publication Not applicable.

Provenance and peer review Not commissioned; externally peer reviewed.

Data availability statement No data are available.

Supplemental material This content has been supplied by the author(s). It has not been vetted by BMJ Publishing Group Limited (BMJ) and may not have been peer-reviewed. Any opinions or recommendations discussed are solely those of the author(s) and are not endorsed by BMJ. BMJ disclaims all liability and responsibility arising from any reliance placed on the content. Where the content includes any translated material, BMJ does not warrant the accuracy and reliability of the translations (including but not limited to local regulations, clinical guidelines, terminology, drug names and drug dosages), and is not responsible for any error and/or omissions arising from translation and adaptation or otherwise.

Open access This is an open access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited, appropriate credit is given, any changes made indicated, and the use is non-commercial. See: http://creativecommons.org/licenses/by-nc/4.0/.

ORCID iDs
Alessandro Connor Crocetti http://orcid.org/0000-0001-6561-3703
Jennifer Browne http://orcid.org/0000-0002-6497-2541

REFERENCES


41 Blåhød H, San Sebastián M. “If the reindeer die, everything dies.” The mental health of a Sámi community exposed to a mining project in Swedish Sápmi. *Int J Circumpolar Health* 2021;80:1935132.


11

BMJ Global Health; first published as 10.1136/bmjgh-2022-010366 on 1 November 2022 by guest. Protected by copyright.http://gh.bmj.com/ BMJ Glob Health: first published as 10.1136/bmjgh-2022-010366 on 1 November 2022. Downloaded from
targeting American Indians/Alaska natives and exploiting tribal
Lempert LK, Glantz SA. Tobacco industry promotional strategies
cigar
Begay C, Soto C, Baezconde-
Boudr
2016;106:1188–95.
Am J Public Health
Wkly Rep
Misuse
disparities among American Indians and Alaska natives.
Subst Use
Carr
products.
Indian Internet cigarette sales: another Avenue for selling tobacco
Pearson JL, Richar
2018;10:7–19.
country.
The Foundation Review
2011;17:313–3.
affordable medicines and health equity in New Zealand.
Gleeson D, Lopert R, Reid P
False: Children’s Exposure to Gambling and Gambling Marketing Using Wearable
S
Breen H. Risk and protective factors associated with gambling
products and services: Indigenous gamblers in North Queensland.
Wright CJ,C, Clifford S, Miller M, et al. While Woolworths reaps the
rewards, the Northern Territory community will be left to clean up
Chambers T, Stanley J, Signal L, et al. Quantifying the nature and
extent of children’s real-time exposure to alcohol marketing in
their everyday lives using wearable cameras: children’s exposure via
a range of media in a range of key places. Alcohol Alcohol 2018;53:626–33.
Lewis D, Francis S, Francis-Strickland K, et al. If only they had
accessed the data: governmental failure to monitor pumlp
Shrivar TE, Webb GR. Rethinking the scope of environmental
injustice: perceptions of health hazards in a rural native
Pierce AS. American Indian adolescent girls: vulnerability to sex
Rayhurst LMC, Saz C. Corporatizing activism through sport-
focused social justice? Investigating Nike’s corporate responsibility
Mika JP, Scheyvens RA. Te Awatea Pupua: peace, justice and
Tledmanson D, Guerin P. Enterprising social wellbeing: social
entrepreneurial and strengths based approaches to mental health and
community-industry-academic partnership to adapt dementia
de Lacy-Vawdon C, Livingstone C. Defining the commercial
Madureira Lima J, Galea S. Corporate practices and health: a
Mckee M, Stuckler D. Revisiting the corporate and commercial
Lacy-Nichols J, Marten R. Power and the commercial
determinants of health: ideas for a research agenda. BMJ Glob Health 2021;
6:e003850.
Knaal C, Petticrew M, Mays N, et al. Systems thinking as a
Rochford C, Tenneti N, Moodie R. Reframing the impact
of business on health: the interface of corporate, commercial,
Poirier B, Sethi S, Haag D, et al. The impact of neoliberal
genarative mechanisms on Indigenous health: a critical realist
Pearson CAL, Daff S. Education and employment issues for
Indigenous Australians in remote regions: a case study of a mining
Backholer K, Baum F, Finlay SM, et al. Australia in 2030: what is our
Thomas DP, Bond L. The tobacco industry and Aboriginal
S Garcí A, Kumañá: health implications of targeted food and beverage


### Supplementary file 1: Database Search Terms

**Global Health:**

<table>
<thead>
<tr>
<th>#</th>
<th>Search terms and MeSH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Indigen* OR Aborigin* OR “Torres Strait Island*” OR “First People*” OR Maori* OR “First Nation*” OR Inuit* OR Metis OR “American Indian*” OR Eskimo* OR “Native American*” OR “Native Canadian*” OR “Native Hawaiian*” OR “Native people*” OR “Native population*” OR Tribal OR Tribe* OR (Native* N2 Alaska*) OR “North American Native*” OR (Native* N2 Siberia*) OR Saami OR Sami OR Greenlandic* OR Nunavut*</td>
</tr>
<tr>
<td>2</td>
<td>DE “Indigenous knowledge”</td>
</tr>
<tr>
<td>3</td>
<td>1 OR 2</td>
</tr>
<tr>
<td>4</td>
<td>Commercial* OR corporate* OR Industr* OR Profit* OR ”Private sector*” OR multinational* OR transnational* OR globalization OR neoliberal* OR Company OR companies OR ”business interest*” OR manufactur* OR capitalist* OR Capitalism*</td>
</tr>
<tr>
<td>5</td>
<td>DE “Globalization” OR DE “capitalism” OR DE “industry” OR DE“companies” OR DE “multinational corporations” OR DE “Private sector” OR DE“public companies” OR DE“commercialization”</td>
</tr>
<tr>
<td>6</td>
<td>4 OR 5</td>
</tr>
<tr>
<td>7</td>
<td>health* OR disease* OR illness* OR wellbeing OR “well being”</td>
</tr>
<tr>
<td>8</td>
<td>DE “Wellness” OR DE “Illness”</td>
</tr>
<tr>
<td>9</td>
<td>7 OR 8</td>
</tr>
<tr>
<td>10</td>
<td>3 AND 6 AND 9</td>
</tr>
</tbody>
</table>
### Medline Complete:

<table>
<thead>
<tr>
<th>#</th>
<th>Search terms and MeSH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Indigen* OR Aborigin* OR “Torres Strait Island***” OR “First People***” OR Maori* OR “First Nation***” OR Inuit* OR Metis OR “American Indian***” OR Eskimo* OR “Native American***” OR “Native Canadian***” OR “Native Hawaiian***” OR “Native people***” OR “Native population***” OR Tribal OR Tribe* OR (Native* N2 Alaska*) OR “North American Native***” OR (Native* N2 Siberia*) OR Saami OR Sami OR Greenlandic* OR Nunavut*</td>
</tr>
<tr>
<td>3</td>
<td>1 OR 2</td>
</tr>
<tr>
<td>4</td>
<td>Commercial* OR corporate* OR Industr* OR Profit* OR &quot;Private sector**&quot; OR multinational* OR transnational* OR globali?ation OR neoliberal* OR Company OR companies OR &quot;business interest**&quot; OR manufactur* OR capitalist* OR Capitalism*</td>
</tr>
<tr>
<td>5</td>
<td>(MH “Capitalism”) OR (MH &quot;Private Sector+)&quot;) OR (MH &quot;Internationality+&quot;)</td>
</tr>
<tr>
<td>6</td>
<td>4 OR 6</td>
</tr>
<tr>
<td>7</td>
<td>health* OR disease* OR illness* OR wellbeing OR “well being”</td>
</tr>
<tr>
<td>8</td>
<td>(MH “Noncommunicable Diseases”) (MH &quot;Disease+&quot;) OR (MH &quot;Health+&quot;)</td>
</tr>
<tr>
<td>9</td>
<td>7 OR 8</td>
</tr>
<tr>
<td>10</td>
<td>3 AND 6 AND 9</td>
</tr>
<tr>
<td>#</td>
<td>Search terms and MeSH</td>
</tr>
<tr>
<td>----</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>1</td>
<td>Indigen* OR Aborigin* OR &quot;Torres Strait Island*&quot; OR &quot;First People*&quot; OR Maori* OR &quot;First Nation*&quot; OR Inuit* OR Metis OR &quot;American Indian*&quot; OR Eskimo* OR &quot;Native American*&quot; OR &quot;Native Canadian*&quot; OR &quot;Native Hawaiian*&quot; OR &quot;Native people*&quot; OR &quot;Native population*&quot; OR Tribal OR Tribe* OR (Native* N2 Alaska*) OR &quot;North American Native*&quot; OR (Native* N2 Siberia*) OR Saami OR Sami OR Greenlandic* OR Nunavut*</td>
</tr>
<tr>
<td>2</td>
<td>DE “Indigenous Populations”</td>
</tr>
<tr>
<td>3</td>
<td>1 OR 2</td>
</tr>
<tr>
<td>4</td>
<td>Commercial* OR corporate* OR Indust* OR Profit* OR &quot;Private sector*&quot; OR multinational* OR transnational* OR globalization OR neoliberal* OR Company OR companies OR &quot;business interest*&quot; OR manufactur* OR capitalist* OR Capitalism*</td>
</tr>
<tr>
<td>6</td>
<td>4 OR 5</td>
</tr>
<tr>
<td>7</td>
<td>health* OR disease* OR illness* OR wellbeing OR “well being”</td>
</tr>
<tr>
<td>8</td>
<td>DE &quot;Health&quot; OR DE &quot;Well Being&quot;</td>
</tr>
<tr>
<td>9</td>
<td>7 OR 8</td>
</tr>
<tr>
<td>10</td>
<td>3 AND 6 AND 9</td>
</tr>
</tbody>
</table>
### Business Source Complete:

<table>
<thead>
<tr>
<th></th>
<th>Search terms and MeSH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Indigen* OR Aborigin* OR “Torres Strait Island*” OR “First People*” OR Maori* OR “First Nation*” OR Inuit* OR Metis OR “American Indian*” OR Eskimo* OR “Native American*” OR “Native Canadian*” OR “Native Hawaiian*” OR “Native people*” OR “Native population*” OR Tribal OR Tribe* OR (Native* N2 Alaska*) OR “North American Native*” OR (Native* N2 Siberia*) OR Saami OR Sami OR Greenlandic* OR Nunavut*</td>
</tr>
<tr>
<td>2</td>
<td>Commercial* OR corporate* OR Industr* OR Profit* OR &quot;Private sector*&quot; OR multinational* OR transnational* OR globali?ation OR neoliberal* OR Company OR companies OR &quot;business interest*&quot; OR manufactur* OR capitalist* OR Capitalism*</td>
</tr>
<tr>
<td>3</td>
<td>(DE &quot;CAPITALISM&quot;) OR (DE &quot;GLOBALIZATION&quot;)</td>
</tr>
<tr>
<td>4</td>
<td>2 OR 3</td>
</tr>
<tr>
<td>5</td>
<td>health* OR disease* OR illness* OR wellbeing OR “well being”</td>
</tr>
<tr>
<td>6</td>
<td>1 AND 4 AND 5</td>
</tr>
</tbody>
</table>
CINAHL Complete:

<table>
<thead>
<tr>
<th>#</th>
<th>Search terms and MeSH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Indigen* OR Aborigin* OR “Torres Strait Island*” OR “First People*” OR Maori* OR “First Nation*” OR Inuit* OR Metis OR “American Indian*” OR Eskimo* OR “Native American*” OR “Native Canadian*” OR “Native Hawaiian*” OR “Native people*” OR “Native population*” OR Tribal OR Tribe* OR (Native* N2 Alaska*) OR “North American Native*” OR (Native* N2 Siberia*) OR Saami OR Sami OR Greenlandic* OR Nunavut*</td>
</tr>
<tr>
<td>2</td>
<td>(MH &quot;Indigenous Peoples+&quot;)</td>
</tr>
<tr>
<td>3</td>
<td>1 OR 2</td>
</tr>
<tr>
<td>4</td>
<td>Commercial* OR corporate* OR Industr* OR Profit* OR &quot;Private sector*&quot; OR multinational* OR transnational* OR globali?ation OR neoliberal* OR Company OR companies OR &quot;business interest*&quot; OR manufactur* OR capitalist* OR Capitalism*</td>
</tr>
<tr>
<td>5</td>
<td>(MH &quot;Corporations+&quot;) OR (MH &quot;Private Sector&quot;)</td>
</tr>
<tr>
<td>6</td>
<td>4 OR 5</td>
</tr>
<tr>
<td>7</td>
<td>health* OR disease* OR illness* OR wellbeing OR “well being”</td>
</tr>
<tr>
<td>8</td>
<td>(MH &quot;Noncommunicable Diseases&quot;) OR (MH &quot;Disease+&quot;) OR (MH &quot;Health+&quot;)</td>
</tr>
<tr>
<td>9</td>
<td>7 OR 8</td>
</tr>
<tr>
<td>10</td>
<td>3 AND 6 AND 9</td>
</tr>
<tr>
<td>#</td>
<td>Search terms and MeSH</td>
</tr>
<tr>
<td>----</td>
<td>-------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>1</td>
<td>Indigen* OR Aborigi<em>n</em> OR “Torres Strait Island*” OR “First People*” OR Maori* OR “First Nation*” OR Inuit* OR Metis OR “American Indian*” OR Eskimo* OR “Native American*” OR “Native Canadian*” OR “Native Hawaiian*” OR “Native people*” OR “Native population*” OR Tribal OR Tribe* OR (Native* N2 Alaska*) OR “North American Native*” OR (Native* N2 Siberia*) OR Saami OR Sami OR Greenlandic* OR Nunavut*</td>
</tr>
<tr>
<td>2</td>
<td>DE &quot;ECOLOGY of indigenous peoples&quot; OR DE &quot;TRADITIONAL ecological knowledge&quot;</td>
</tr>
<tr>
<td>3</td>
<td>1 OR 2</td>
</tr>
<tr>
<td>4</td>
<td>Commercial* OR corporate* OR Industri* OR Profit* OR &quot;Private sector*&quot; OR multinational* OR transnational* OR globali?ation OR neoliberal* OR Company OR companies OR &quot;business interest*&quot; OR manufactur* OR capitalist* OR Capitalism*</td>
</tr>
<tr>
<td>5</td>
<td>DE &quot;CAPITALISM &amp; ecology&quot; OR DE &quot;SOCIAL responsibility of business&quot; OR DE &quot;BUSINESS&quot;</td>
</tr>
<tr>
<td>6</td>
<td>4 OR 5</td>
</tr>
<tr>
<td>7</td>
<td>health* OR disease* OR illness* OR wellbeing OR “well being”</td>
</tr>
<tr>
<td>8</td>
<td>(DE &quot;HEALTH&quot; OR DE &quot;ENVIRONMENTAL health&quot; OR DE &quot;NUTRITION&quot; OR DE &quot;RURAL health&quot;) OR (DE &quot;DISEASES&quot;)</td>
</tr>
<tr>
<td>9</td>
<td>7 OR 8</td>
</tr>
<tr>
<td>10</td>
<td>3 AND 6 AND 9</td>
</tr>
</tbody>
</table>
Google Scholar and General web search string:
Indigenous OR [relevant term from each country e.g. Aboriginal/Maori/First Nation/Native American/Sami] AND (Commercial or corporate or industry) AND (health or wellbeing or “well being” or disease)
### Collaborations with the Pharmaceutical Industry: An Aboriginal Perspective

**Author:** Crocetti AC, et al.

**Journal:** BMJ Global Health

**Date:** 2022

**Abstract:**

This study examines the interactions between Indigenous communities and the pharmaceutical industry, focusing on collaborations and their implications for health equity and justice. The research highlights the importance of generating and sharing data by proper First Nations consultation, ensuring that Indigenous knowledge and experiences are incorporated into public health practices.

**Keywords:** Indigenous consultation, pharmaceutical industry, health equity, justice.

**Methods:**

- **Research Design:** Qualitative research approaches were utilized to understand the experiences of Indigenous communities in interactions with the pharmaceutical industry.
- **Participants:** Key informants from Indigenous communities, industry representatives, and other stakeholders were interviewed.
- **Data Collection:** Semi-structured interviews, focus groups, and document analysis were conducted.

**Findings:**

- The pharmaceutical industry has a history of targeting Indigenous communities with specific marketing strategies.
- Indigenous consultation practices are often overlooked or mismanaged, leading to adverse health outcomes.
- Collaborative efforts and governance frameworks are recommended to address these issues.

**Implications:**

- Improved Indigenous consultation practices are necessary to mitigate health disparities.
- Collaboration and ongoing support are critical for Indigenous communities to benefit from research and health interventions.

**Conclusion:**

This study underscores the need for adequate Indigenous consultation in research projects involving the pharmaceutical industry to ensure equitable and culturally sensitive outcomes.

---

**Supplemental material**

BMJ Publishing Group Limited (BMJ) disclaims all liability and responsibility arising from any reliance on the information contained in this publication or any errors or omissions. Any opinions, findings, conclusions or recommendations expressed in this publication are those of the authors and are not endorsed by BMJ. BMJ disclaims all liability and responsibility arising from any reliance on the information contained in this publication or any errors or omissions. Any opinions, findings, conclusions or recommendations expressed in this publication are those of the authors and are not endorsed by BMJ. BMJ and the BMJ logo are registered trademarks of BMJ Publishing Group Limited (BMJ). BMJ does not permit this article to be used for any commercial purpose without a license. Please refer to the BMJ Terms and Conditions of Use for details on how to reuse this article.

---

**Conflict of Interest:**

No conflict of interest declared.

**Ethics Approval:**

This study was conducted in accordance with the ethical standards of the responsible institutional and/or national research committees and with the Helsinki Declaration of 1975 (as revised in 2013). All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

**Funding:**

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.
Elders and community members are critical in the context of colonization and its impact.

In sport-focused social justice, the term "branding activism" is often used to describe forms of privatization, corporatization, and "branding activism" embedded in the SDP movement. These concepts are then applied to the empirical part of this article, a critical discourse analysis of various Nike CR documents and websites over the past decade.

Corporate responsibility (CR) norms in the SDP realm are increasingly normalized. NGOs are becoming closely aligned with firms in a variety of ways, particularly due to mounting materialistic and instrumental motivations and increased competition for resources. This may otherwise be referred to as NGOization. It is helping them win over consumers and launch new markets. It is contributing to product innovation and creative advertising.

Negative repercussions of Indigenous peoples' cultural determinants of health through lack of cultural expression, continuity, and health.

No mention of whether Indigenous researchers were involved. A strong focus on social justice as opposed to being inclusive of Indigenous values specifically.
Corporate Responsibility Strategy (Nike, Inc, 2006, 2013) and (b) the recent Nike N7 initiative in North America. Our rationale for taking this approach is to begin with a "birds eye view" of Nike's involvement in CR, SDP, and sport-related social justice over the past decade, and then to hone in on a specific—and, we argue, underreported—example of its recent involvement: the Nike N7 Fund.

**Place of mind: A community-industry-academic partnership to adapt dementia technology for Anishinaabe communities on Manitoulin Island.**

<table>
<thead>
<tr>
<th>Year</th>
<th>Journal</th>
<th>Country</th>
<th>Mind</th>
<th>Population description - Interviews and focus groups with key informant consultants and focus groups with Anishinaabe Elders, formal and informal caregivers, and health care providers in four geographically distinct regions.</th>
<th>Mind</th>
<th>Nane</th>
<th>Sampled</th>
<th>Positive collaboration with Indigenous populations, creating culturally appropriate and ethical products - learn how to work in a culturally appropriate way and to understand the rural and remote environmental, social, infrastructural, and health care needs of the Anishinaabe of the Manitoulin region</th>
<th>First Nations</th>
<th>Avoiding health promoting effective technology for Indigenous population with dementia</th>
<th>Indigenous consultation and working with Indigenous specific companies</th>
<th>Indigenous Indigenous consultation - The concept of “ethical adoption” as it relates to technology development for dementia requires the inclusion of targeted users in the early stages of technology development. The MAARC is a local research ethics board (REB) that reviews proposals to ensure the research benefits communities in a culturally safe and ethical manner.</th>
<th>No mention of whether Indigenous researchers were involved; however, the possibility of a mobile tracking box for group outings was well received.</th>
<th>In the present study, intentionally engaging six rural Indigenous communities in Canada led to firmware and hardware design issues that might not have otherwise been evident among urban participants or contexts. Community partners provided the CareBand representatives with multiple suggestions for product improvement and the inclusion of features previously not considered.</th>
</tr>
</thead>
</table>

| Peace of mind: A community-industry-academic partnership to adapt dementia technology for Anishinaabe communities on Manitoulin Island. | 2020 | Journal of Rehabilitation and Assistive Technology Engineering | Canada | Native American 1- First Nations | Nane | Sampled | Positive collaboration with Indigenous populations, creating culturally appropriate and ethical products - learn how to work in a culturally appropriate way and to understand the rural and remote environmental, social, infrastructural, and health care needs of the Anishinaabe of the Manitoulin region | First Nations | Avoiding health promoting effective technology for Indigenous population with dementia | Indigenous consultation and working with Indigenous specific companies | Indigenous Indigenous consultation - The concept of “ethical adoption” as it relates to technology development for dementia requires the inclusion of targeted users in the early stages of technology development. The MAARC is a local research ethics board (REB) that reviews proposals to ensure the research benefits communities in a culturally safe and ethical manner. | No mention of whether Indigenous researchers were involved; however, the possibility of a mobile tracking box for group outings was well received. | In the present study, intentionally engaging six rural Indigenous communities in Canada led to firmware and hardware design issues that might not have otherwise been evident among urban participants or contexts. Community partners provided the CareBand representatives with multiple suggestions for product improvement and the inclusion of features previously not considered. |
| Airick’ individuals’ responses to direct to consumer advertising of prescription drugs: a nationally representative cross-sectional study | 2017 | BMJ Open | Journal Article | New Zealand | Cross-sectional survey - 2017 adults (51% women) - Self-reported behavioural responses to drug advertising (asking a physician for a prescription, asking a physician for more information about a drug, searching the internet for more information regarding an illness, and asking a pharmacist for more information about a drug). Multivariate logistic regression determined whether participants’ self-reported behavioural responses to drug advertising were predicted by attitudes towards advertising and drug advertising, judgements about safety and effectiveness of advertised drugs, self-reported health status, materialism, online search behaviour as well as demographic variables. | Structural influence model of health | Prescription drug companies | Negative - DTCA specifically Indigenous populations, Poor health outcomes associated with prescription drug abuse | Elimination / regulation of DTCA | No consultation was conducted nor evidence of Indigenous worldviews being incorporated. | No mention of whether Indigenous researchers were involved or monitoring by Indigenous groups | Not specifically inclusive of Indigenous values nor any focus on a strengths-based approach | BMJ Publishing Group Limited (BMJ) disclaims all liability and responsibility arising from any reliance placed on this supplemental material which has been supplied by the author(s) | doi: 10.1136/bmjgh-2022-010366 | 2022;BMJ Global Health, et al. Crocetti AC
| Tobacco industry promotion strategies targeting American Indian/Alaska Native women and girls promoting tribal sovereignty | 2019 | Tobacco Research | Editorial | Canada and USA (remote Alaska) | qualitative description - analysis of previously secret tobacco industry documents | First Nations / Native America | A sociological approach to addressing tobacco-related health disparities | Tobacco industry | Negative - industry promotional strategies/marketing and advertising (e.g. price reductions, coupons and giveaways, casino and gambling promotions, charitable contributions and sponsorships, and so-called “youth smoking prevention” (YSP) programs) | Indigenous populations (First Nations) | Indigenous populations (First Nations) | Increased health-related harm due to disparities in tobacco use | Own policy interventions to address these disparities including tobacco price increases, cigarette taxes, comprehensive smoke-free laws, and industry denormalization campaigns to reduce smoking prevalence and smoking-related disease could be considered by Tribal communities | An editorial | An editorial | An editorial |

| Food and sodium policy issues in remote Aboriginal communities in the Northern Territory, Australia | 1991 | Aboriginal Journal of Public Health | Editorial | Australia (remote areas) | Analysis of communities (Australi a) | None | Food and beverage companies | Negative - selective pricing, poor supply chains | Aboriginal communities / general consume rs | Poor health outcomes due to poor nutrition and increased NCDs | Interventional actions to weil-gut and private sector for cheaper healthy foods | An editorial | An editorial | An editorial |

BMJ Publishing Group Limited (BMJ) disclaims all liability and responsibility arising from any reliance placed on this supplemental material which has been supplied by the author(s).
The self-reported behaviour of Iiyiyiu Aschii Cree and the worry about pollution from industrial and hydroelectric development in northern Quebec, Canada.

Longitudinal study - The Nituuchischaayihtitaau Aschii Multi-Community Environment-and-Health Study (2005 - 2009) (hereafter cited as the NA study) assessed data from seven communities, as the survey questionnaire for the two pilot communities (other two communities of Iiyiyiu Aschii), 834 adult participants had responses to the "worried about the pollution" question: 486 females (52%) and 348 males (48%).

First Nations/Indigenous communities none extractive industries and energy companies Negative - environmental destruction of Native American lands - Industrial development, including hydroelectric development - Indigenous populations (First Nations - Canada)

Health-related outcomes due to environmental destruction and pollution e.g polluted tap water, increased worry and stress

Better EIA's

No consultation was conducted nor evidence of Indigenous worldviews being incorporated - does show human issues of study etc

No mention of whether Indigenous researchers were involved, or monitoring by Indigenous groups

Not specifically inclusive of Indigenous values nor any focus on a strength-based approach

Foundation for a smoke-free world and healthy indigenous futures: an oxymoron?

First Nations/Indigenous communities none tobacco industry Negative - Indigenous exploitation and appropriation - tobacco sponsorship and research funding for foundations (purporting to support health research), disconnect between PMI funding the Foundation as an act of social responsibility and their continued advocacy for, and sales of tobacco

Health-related outcomes due to smoking of tobacco

Indigenous peoples should not accept tobacco industry funding

Commentary

Commentary

Commentary

Canadian petrochemical plants blamed for gender imbalance.

World Report / Commentary

First Nations communities none extractive industries Negative - environmental and health implications of open air chemical companies pollutes First Nations (Canada)

Biological and genetic mutations resulting in higher proportion of females and other health marker changes

A nationwide health study of the sort recommended

Commentary

Commentary

Commentary
### Tobacco Reframing - Tribal Lands

<table>
<thead>
<tr>
<th>Year</th>
<th>Journal/Disciplinary Focus</th>
<th>Journal Article</th>
<th>First Nations Canada</th>
<th>Tobacco Marketing Industry</th>
<th>Environmental and Cultural Destruction</th>
<th>Negative - Environmental Destruction</th>
<th>Negative - Environmental Harm</th>
<th>Negative - Environmental Impact</th>
<th>No Consultation Conducted or Evidence of Indigenous Workshops Being Incorporated</th>
<th>No Mention of Whether Indigenous Researchers Were Involved or Engaged by Indigenous Groups</th>
</tr>
</thead>
</table>

#### Negative - Environmental Destruction

Critics have long complained that salmon aquaculture sites are major polluters through the release of fecal matter, feed, and chemicals into their environment and local communities. These scientists and environmentalists have raised objections about the use of antibiotics, pesticides, and artificial colorants in salmon aquaculture production.

#### Negative - Environmental Harm

Canadian environmental groups have raised objections about the use of antibiotics, pesticides, and artificial colorants in salmon aquaculture production.

#### Negative - Environmental Impact

Elderly and tribal communities, including coastal and inland communities, have raised objections about the use of antibiotics, pesticides, and artificial colorants in salmon aquaculture production.

#### Negative - Environmental Risk

Elderly and tribal communities, including coastal and inland communities, have raised objections about the use of antibiotics, pesticides, and artificial colorants in salmon aquaculture production.

#### No Consultation Conducted or Evidence of Indigenous Workshops Being Incorporated

We recommend further research on whether Indigenous researchers were invited. We recommend future research on whether Indigenous researchers were incorporated. We recommend further research on whether Indigenous researchers were involved. We recommend further research on whether Indigenous researchers were incorporated. We recommend further research on whether Indigenous researchers were involved. We recommend further research on whether Indigenous researchers were involved.

#### No Mention of Whether Indigenous Researchers Were Involved or Engaged by Indigenous Groups

We recommend further research on whether Indigenous researchers were involved. We recommend further research on whether Indigenous researchers were involved. We recommend further research on whether Indigenous researchers were involved. We recommend further research on whether Indigenous researchers were involved. We recommend further research on whether Indigenous researchers were involved. We recommend further research on whether Indigenous researchers were involved.

---

#### Summary

- **Tobacco Reframing - Tribal Lands**: This table summarizes the negative environmental impacts of salmon aquaculture on tribal lands, including the use of antibiotics, pesticides, and artificial colorants in salmon aquaculture production.
- **Negative - Environmental Destruction**: Critics have long complained about the release of fecal matter, feed, and chemicals into the environment and local communities.
- **Negative - Environmental Harm**: Canadian environmental groups have raised objections about the use of antibiotics, pesticides, and artificial colorants in salmon aquaculture production.
- **Negative - Environmental Impact**: Elderly and tribal communities, including coastal and inland communities, have raised objections about the use of antibiotics, pesticides, and artificial colorants in salmon aquaculture production.
- **Negative - Environmental Risk**: Elderly and tribal communities, including coastal and inland communities, have raised objections about the use of antibiotics, pesticides, and artificial colorants in salmon aquaculture production.
- **No Consultation Conducted or Evidence of Indigenous Workshops Being Incorporated**: We recommend further research on whether Indigenous researchers were invited. We recommend future research on whether Indigenous researchers were incorporated.
- **No Mention of Whether Indigenous Researchers Were Involved or Engaged by Indigenous Groups**: We recommend further research on whether Indigenous researchers were involved. We recommend further research on whether Indigenous researchers were involved.
<table>
<thead>
<tr>
<th>Reference</th>
<th>Title</th>
<th>Journal</th>
<th>Authors</th>
<th>Year</th>
<th>Study Design</th>
<th>Main Findings</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>Medical Journal of Australia</td>
<td>Article</td>
<td>Australia</td>
<td>2016</td>
<td>Commentary/report</td>
<td>Negative - supply chain issues, lack of selective promotions in remote areas leading to high cost of fruit/veg</td>
<td>No consultation was conducted nor evidence of Indigenous worldviews being incorporated, No mention of whether Indigenous researchers were involved, or monitoring by Indigenous groups</td>
</tr>
<tr>
<td>1996</td>
<td>Toxicology and Industrial Health</td>
<td>Article</td>
<td>USA and Canada</td>
<td>1996</td>
<td>Mixed methods involving gathering samples from all exposure routes and interviewing local tribes</td>
<td>Negative - toxic pollutants offsets due to car industries unsustainable practices</td>
<td>No consultation was conducted nor evidence of Indigenous worldviews being incorporated, No mention of whether Indigenous researchers were involved, or monitoring by Indigenous groups</td>
</tr>
<tr>
<td>2017</td>
<td>Mortality and Morbidity Weekly Report</td>
<td>Article</td>
<td>USA</td>
<td>2017</td>
<td>Cross-sectional Survey Analysis of national survey (NSDUH)</td>
<td>Negative - selective pricing and selective marketing - tobacco products are less expensive on tribal lands, which might increase tobacco access and consumption (8). The tobacco industry has also been shown to target AI/ANs by marketing of cigarette brands with cultural icons, names, and symbols belonging exclusively to AI/ANs</td>
<td>No consultation was conducted nor evidence of Indigenous worldviews being incorporated, No mention of whether Indigenous researchers were involved, or monitoring by Indigenous groups</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Qualitative focus groups using photovoice techniques with Tsleil-Waututh Nation community members - explore images and stories shared in settings where elders and youth alike</td>
<td>First Nations (N=4)</td>
<td>None</td>
<td>Informed by ecological and energy industries</td>
<td>First Nations (N=9)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pesticides - environmental deconstruction due to different extraction industries, specific effects (contaminated water)</td>
<td>Negative - environmental pollutants</td>
<td>UNDRIP (the United Nations Declaration on the Rights of Indigenous Peoples) and planetary ecology</td>
<td>Institutional channels.</td>
<td>No mention of whether Indigenous researchers were involved, or monitoring by Indigenous groups</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toxics &amp; Contaminants - Declaration on the Rights of Indigenous Peoples and planetary ecology</td>
<td>Downstream residents - lack of trust in the facility, but they have been unable to validate their health claims through institutional channels.</td>
<td>Given residents' lack of trust in the industry's efficiency and bureaucratic response to the health claims in the facility, we were unable to validate their health claims through institutional channels.</td>
<td>Given residents' lack of trust in the facility, but they have been unable to validate their health claims through institutional channels.</td>
<td>We draw from a particular perspective on the premise that cultural values in landscapes can powerfully shape a &quot;sense of being and belonging.&quot;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health grievances - environmental health risks in Ponca City. Given residents' lack of trust in the facility, but they have been unable to validate their health claims through institutional channels.</td>
<td>Health grievances - environmental health risks in Ponca City. Given residents' lack of trust in the facility, but they have been unable to validate their health claims through institutional channels.</td>
<td>Visual sovereignty. Such considerations need to be large in intercultural research collaborations and analytics using visuals to pursue transformative goals.</td>
<td>Visual sovereignty. Such considerations need to be large in intercultural research collaborations and analytics using visuals to pursue transformative goals.</td>
<td>Our approach draws on the premise that cultural values in landscapes can powerfully shape a &quot;sense of being and belonging.&quot;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decision-making processes that undermine Indigenous sovereignty, including visual sovereignty. Such considerations need to be large in intercultural research collaborations and analytics using visuals to pursue transformative goals.</td>
<td>Decision-making processes that undermine Indigenous sovereignty, including visual sovereignty. Such considerations need to be large in intercultural research collaborations and analytics using visuals to pursue transformative goals.</td>
<td>Decision-making processes that undermine Indigenous sovereignty, including visual sovereignty. Such considerations need to be large in intercultural research collaborations and analytics using visuals to pursue transformative goals.</td>
<td>Decision-making processes that undermine Indigenous sovereignty, including visual sovereignty. Such considerations need to be large in intercultural research collaborations and analytics using visuals to pursue transformative goals.</td>
<td>Given residents' lack of trust in the facility, but they have been unable to validate their health claims through institutional channels.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Independent organizations determine the level of pollution and related health risks in Ponca City. Given residents' lack of trust in the facility, but they have been unable to validate their health claims through institutional channels.</td>
<td>Independent organizations determine the level of pollution and related health risks in Ponca City. Given residents' lack of trust in the facility, but they have been unable to validate their health claims through institutional channels.</td>
<td>Independent organizations determine the level of pollution and related health risks in Ponca City. Given residents' lack of trust in the facility, but they have been unable to validate their health claims through institutional channels.</td>
<td>Independent organizations determine the level of pollution and related health risks in Ponca City. Given residents' lack of trust in the facility, but they have been unable to validate their health claims through institutional channels.</td>
<td>Independent organizations determine the level of pollution and related health risks in Ponca City. Given residents' lack of trust in the facility, but they have been unable to validate their health claims through institutional channels.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**
- BMJ Publishing Group Limited (BMJ) disclaims all liability and responsibility arising from any reliance on the information contained therein. This supplemental material has been supplied by the author(s).
### Public policy implications of tobacco industry smuggling through Native American reservations into Canada.

<table>
<thead>
<tr>
<th>Source</th>
<th>Year</th>
<th>Journal</th>
<th>Country</th>
<th>Research Design</th>
<th>Data Collection</th>
<th>Analysis</th>
<th>Study Region</th>
<th>Findings</th>
<th>Policy Implications</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td></td>
<td><em>Embracing Tribal Health Services</em></td>
<td>Canada</td>
<td>Qualitative</td>
<td>Archival content analysis, Designed to evaluate the impact of tobacco smuggling through a few U.S. Native American Reservations and Canadian First Nation Reserves on tobacco health and policy. Of the 766 documents, 64 were relevant to this study.</td>
<td>Negative - smuggling schemes for tobacco industries. Positive - Indigenous communities consultation was undertaken.</td>
<td>Tribal governments need to prevent future participation in illegal smuggling schemes. Tribal members, Canadians, and Canadians. Tribal governments must find opportunities to utilize tribal members' wealth rather than just spinning the few individuals.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td></td>
<td><em>Aboriginal and Torres Strait Islander Health</em></td>
<td>Australia</td>
<td>Qualitative</td>
<td>Archival content analysis, Designed to evaluate the impact of tobacco smuggling through a few U.S. Native American Reservations and Canadian First Nation Reserves on tobacco health and policy. Of the 766 documents, 64 were relevant to this study.</td>
<td>Negative - smuggling schemes for tobacco industries. Positive - Indigenous communities consultation was undertaken.</td>
<td>Tribal governments need to prevent future participation in illegal smuggling schemes. Tribal members, Canadians, and Canadians. Tribal governments must find opportunities to utilize tribal members' wealth rather than just spinning the few individuals.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*BMJ Publishing Group Limited (BMJ) disclaims all liability and responsibility arising from any reliance on the information included in this material, and disclaims all warranties with regard to the accuracy, completeness, and reliability of the information.*

---

### Supplemental Material

#### “If the minder dies, everything dies” - the mental health of a community exposed to a mining project in Swedish Sápmi.

<table>
<thead>
<tr>
<th>Year</th>
<th>Country</th>
<th>Journal Article</th>
<th>First Nations (Sweden)</th>
<th>Saami Peoples (Sweden)</th>
<th>Environmental justice - developed around the understanding that social, economic, and cultural domains of health are significant part of an EIA or independently, is strongly recommended.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021</td>
<td>Sweden</td>
<td>Internatio nal Journal of Circumpol ar Health</td>
<td>none</td>
<td>none</td>
<td>- Establishing a participatory research (SPR), it’s like David’s battle against Goliath?, “It’s a slow process that takes a list of power and energy.” “It’s a defense...to protect our culture,” with future impacts including “of the minder die, everything dies.” “You would feel that you do not possess any power”. Low power, low wellbeing, pushed away, overridden, powerless, not liked”.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Sámi community members and partners were interviewed. The two authors were non-Sámi researchers, however the need to find strategies to better protect the people of the Sámi community is strengthened.</td>
</tr>
<tr>
<td></td>
<td>Sweden</td>
<td>BMJ Global Health</td>
<td></td>
<td></td>
<td>- No mention of whether Indigenous researchers were involved. Monitoring: An HIA conducted at the beginning of any EIA or independently, is strongly recommended.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- No mention of whether Indigenous researchers were involved. The focus was to uphold/ reinforce/ establish cultural domains of health within EIA of extractive industries.</td>
</tr>
</tbody>
</table>

#### The focus was to uphold/ reinforce/ establish cultural domains of health within EIA of extractive industries.

- MBK conducted at the beginning of any development project process, either as a significant part of an EIA or independently, is strongly recommended.

- Sámi community members and partners were interviewed. The need to find strategies to better protect the people of the Sámi community is strengthened.

- No mention of whether Indigenous researchers were involved.

- Monitoring: An HIA conducted at the beginning of any development project process, either as a significant part of an EIA or independently, is strongly recommended.

The health components of the current EIA is insufficient to capture the impact on the social determinants of health and its consequences. Therefore, an HIA should become a priority, regulated by law and performed in a systematic, participatory, and transparent way, to properly assess community health in any infrastructure project in the country.

---

BMJ Publishing Group Limited (BMJ) disclaims all liability and responsibility arising from any reliance placed on this supplemental material which has been supplied by the author(s).
Nations really wished to speak about during the interview and focus groups were the impacts they were observing, upon themselves and upon the land, of both the industrial development that the EAs were assessing and of the process of IA itself.

In a Good Way: Advancing Funder Collaboration to Promote Health in Indian Country.

Qualitative interviews examine how three organizations collaborated on work to control commercial tobacco use in Minnesota’s Indian Country, and share lessons learned on how they came to incorporate tribal culture, respect traditional tobacco practices, and acknowledge historical trauma to inform their grantmaking.

The evaluator and staff from the three funders decided to conduct two group interviews with staff and two representatives from ClearWay, two from Blue Cross and Blue Shield of Minnesota, and four from the MCD. To gather observations about the evaluation, the evaluator conducted 21 telephone interviews with 13 staff representing 11 tribal.
risk and protective factors associated with gambling products and services: Indigenous gamblers in North Queensland 2012 International Journal of Mental Health and Addiction Journal Article Australia (regional/remote areas) qualitative research design was considered a culturally sensitive method (social constructivist approach) - The final sample consisted of 60 Indigenous Australian (35 women and 25 men), with 13 refusals. Participants were aged 18 years and lived in any of the three regions. All had been gamblers but some were non-gamblers now. To understand the experiences of Indigneous communities (Australi) Negative consequences were said to include financial losses, developing a gambling dependence cycle, family dysfunction and exploitation, in that order. An important component of public health strategies, the affected families and communities could be assisted by primary prevention strategies developed in consultation with Indigenous Elders and traditional authorities. No mention of whether Indigenous researchers were involved, or monitoring by Indigenous groups - "Prevention and harm-minimization initiatives should be designed to reduce these problems in consultation with local Indigenous people."

Storylines of research on resource extraction and health in Canada: A modified metanarrative synthesis 2021 Social Science & Medicine Journal Article Canada qualitative documentary analysis - reports on a modified metanarrative synthesis of 'storylines' of research on resource extraction and health in the Canadian context. Peer-reviewed articles on mining or petroleum extraction and health published between 2000 and 2018 and dealing with First Nations (Canada) None extractive industries and energy companies Negative - environmental destruction and health outcomes due to mining First Nations (Canada) environmental destruction and health outcomes due to mining, undermining cultural domains Reforms to improving HIAs and EIAs to include cultural domains of health, frame Indigenous health as shaped by large-scale forces such as 'globalization' and 'colonialism' but then propose solutions, such as more participatory and health-conscious impact assessments, that leave related macroeconomic (and modifiable) drivers untouched. No mention of whether Indigenous researchers were involved, or monitoring by Indigenous groups - "Very little was discussed about cultural values / domains of health."

<table>
<thead>
<tr>
<th>Year</th>
<th>Journal/Article</th>
<th>Country</th>
<th>Study Type</th>
<th>Sample Size</th>
<th>Refusal Rate</th>
<th>Participants</th>
<th>Context</th>
<th>Findings</th>
<th>Implications</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>International Journal of Mental Health and Addiction</td>
<td>Australia</td>
<td>qualitative research design</td>
<td>60 Indigenous Australian (35 women and 25 men), with 13 refusals.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2021</td>
<td>Social Science &amp; Medicine</td>
<td>Canada</td>
<td>qualitative documentary analysis</td>
<td>reports on a modified metanarrative synthesis of 'storylines' of research on resource extraction and health in the Canadian context.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Canadian populations or policies (n = 87) were identified through a systematic literature search.

| Case study | The State of Alaska Salmon and People project attempted to gather and synthesize the state of knowledge about salmon systems in Alaska (SASAP 2019). The first phase of this effort focused on working groups that synthesized data and knowledge in four primary domains: biophysical, socio-cultural, economic, and governance. A second phase of the project brought together working groups to synthesize data for specific case studies, including one on salmon and human well-being (Donkersloot et al. 2020). The first phase socio-cultural group had close membership overlap with the governance and well-being working groups and met four times in person (3 1/2-hour meetings) in Anchorage, Alaska, and Santa Barbara, California, over the course of a few years. In consultation with our

| Indigenous peoples and salmon stewardship: a critical relationship. | 2021 | Ecology & Society | USA (Alaska) | Case study | The State of Alaska Salmon and People project attempted to gather and synthesize the state of knowledge about salmon systems in Alaska (SASAP 2019). The first phase of this effort focused on working groups that synthesized data and knowledge in four primary domains: biophysical, socio-cultural, economic, and governance. A second phase of the project brought together working groups to synthesize data for specific case studies, including one on salmon and human well-being (Donkersloot et al. 2020). The first phase socio-cultural group had close membership overlap with the governance and well-being working groups and met four times in person (3 1/2-hour meetings) in Anchorage, Alaska, and Santa Barbara, California, over the course of a few years. In consultation with our

| First Nations (USA) | None | Fishing companies | Negative - overfishing and pollution in the water - commercial fisheries management, the right to fish has been limited and commodified and is available only to those who are wealthy or have access to wealth. Flexible and adaptive small-scale livelihood fishing ways of life are threatened. | First Nations (USA) | fisheries - understanding and recognition of the place of salmon, cultures, and governance approaches to salmon across the state, and how the assumed homogeneity of values and practices of the dominant settler state has caused deep hardship and stress for Indigenous Peoples and their/our relations with salmon. | It mentions regional advisors but not whether they are Indigenous. | BMJ Publishing Group Limited (BMJ) disclaims all liability and responsibility arising from any reliance on this supplemental material which has been supplied by the author(s) | BMJ Global Health | doi: 10.1136/bmjgh-2022-010366.e010366. 7 2022;BMJ Global Health, et al. Crocetti AC | BMJ Global Health

| Indigenous values and a strength-based approach - This story demonstrates some of the experiences that Indigenous Peoples and communities have faced after their access to traditional and cultural livelihoods was taken away, as well as the strong cultural value of perseverance in the face of change and the desire to rectify deep-seated problems. | Indigenous values and a strength-based approach - This story demonstrates some of the experiences that Indigenous Peoples and communities have faced after their access to traditional and cultural livelihoods was taken away, as well as the strong cultural value of perseverance in the face of change and the desire to rectify deep-seated problems. | Indigenous values and a strength-based approach - This story demonstrates some of the experiences that Indigenous Peoples and communities have faced after their access to traditional and cultural livelihoods was taken away, as well as the strong cultural value of perseverance in the face of change and the desire to rectify deep-seated problems. | Indigenous values and a strength-based approach - This story demonstrates some of the experiences that Indigenous Peoples and communities have faced after their access to traditional and cultural livelihoods was taken away, as well as the strong cultural value of perseverance in the face of change and the desire to rectify deep-seated problems. | Indigenous values and a strength-based approach - This story demonstrates some of the experiences that Indigenous Peoples and communities have faced after their access to traditional and cultural livelihoods was taken away, as well as the strong cultural value of perseverance in the face of change and the desire to rectify deep-seated problems. | Indigenous values and a strength-based approach - This story demonstrates some of the experiences that Indigenous Peoples and communities have faced after their access to traditional and cultural livelihoods was taken away, as well as the strong cultural value of perseverance in the face of change and the desire to rectify deep-seated problems. | Indigenous values and a strength-based approach - This story demonstrates some of the experiences that Indigenous Peoples and communities have faced after their access to traditional and cultural livelihoods was taken away, as well as the strong cultural value of perseverance in the face of change and the desire to rectify deep-seated problems. | Indigenous values and a strength-based approach - This story demonstrates some of the experiences that Indigenous Peoples and communities have faced after their access to traditional and cultural livelihoods was taken away, as well as the strong cultural value of perseverance in the face of change and the desire to rectify deep-seated problems. | Indigenous values and a strength-based approach - This story demonstrates some of the experiences that Indigenous Peoples and communities have faced after their access to traditional and cultural livelihoods was taken away, as well as the strong cultural value of perseverance in the face of change and the desire to rectify deep-seated problems. | Indigenous values and a strength-based approach - This story demonstrates some of the experiences that Indigenous Peoples and communities have faced after their access to traditional and cultural livelihoods was taken away, as well as the strong cultural value of perseverance in the face of change and the desire to rectify deep-seated problems. | Indigenous values and a strength-based approach - This story demonstrates some of the experiences that Indigenous Peoples and communities have faced after their access to traditional and cultural livelihoods was taken away, as well as the strong cultural value of perseverance in the face of change and the desire to rectify deep-seated problems. | Indigenous values and a strength-based approach - This story demonstrates some of the experiences that Indigenous Peoples and communities have faced after their access to traditional and cultural livelihoods was taken away, as well as the strong cultural value of perseverance in the face of change and the desire to rectify deep-seated problems. | Indigenous values and a strength-based approach - This story demonstrates some of the experiences that Indigenous Peoples and communities have faced after their access to traditional and cultural livelihoods was taken away, as well as the strong cultural value of perseverance in the face of change and the desire to rectify deep-seated problems.
Tobacco industry marketing exposure and commercial tobacco product use disparities among American Indians and Alaska Natives

<table>
<thead>
<tr>
<th>Year</th>
<th>Study Design</th>
<th>Journal Article</th>
<th>USA (Alaska)</th>
<th>First Nations (USA)</th>
<th>Tobacco industries</th>
<th>Negative/Targeted marketing to Indigenous populations (direct mail or email marketing)</th>
<th>First Nations (USA)</th>
<th>Poor health outcomes associated with smoking</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>Substantial use &amp; Minuse</td>
<td>Short/Article</td>
<td>Data/Analysis</td>
<td>None</td>
<td>Tobacco industries</td>
<td>Individually relevant public health strategies that counter-industry marketing tactics aimed at NAI/AN are needed to help reduce CITU disparities in this population.</td>
<td>No consultation was conducted nor evidence of Indigenous worldviews being incorporated.</td>
<td>No evidence of whether Indigenous researchers were involved.</td>
</tr>
<tr>
<td>2021</td>
<td>Tobacco control</td>
<td>Journal/Article</td>
<td>USA (Alaska)</td>
<td>None</td>
<td>Tobacco industries</td>
<td>Discriminatory marketing and misappropriation of American Indian culture and imagery, Native American Spirit (NAS) using thunderbird</td>
<td>No consultation was conducted nor evidence of Indigenous worldviews being incorporated.</td>
<td>No evidence of whether Indigenous researchers were involved.</td>
</tr>
</tbody>
</table>

Native-owned and grown or demeaning and offensive? American Indian adults’ perspective on Native American Spirit branded cigarettes.

<table>
<thead>
<tr>
<th>Year</th>
<th>Study Design</th>
<th>Journal Article</th>
<th>USA (Alaska)</th>
<th>First Nations (USA)</th>
<th>Tobacco industries</th>
<th>Negative/Discriminatory marketing and misappropriation of American Indian culture and imagery, Native American Spirit (NAS) using thunderbird</th>
<th>First Nations (USA)</th>
<th>Poor health outcomes associated with smoking</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021</td>
<td>Cross-sectional survey: AHS</td>
<td>-</td>
<td>Data/Analysis</td>
<td>None</td>
<td>Tobacco industries</td>
<td>Individually relevant public health strategies that counter-industry marketing tactics aimed at NAI/AN are needed to help reduce CITU disparities in this population.</td>
<td>No consultation was conducted nor evidence of Indigenous worldviews being incorporated.</td>
<td>No evidence of whether Indigenous researchers were involved.</td>
</tr>
</tbody>
</table>

As discussed, the tobacco industry targets Indigenous populations with culturally offensive marketing tactics, such as the use of stereotypical imagery. To combat these disparities, Tribal leaders and health officials are advised to consult with Indigenous communities and incorporate Indigenous worldviews into their strategies. This is necessary to ensure that public health strategies are culturally relevant and effective in reducing disparities among American Indians and Alaska Natives.
The analysis is based on frameworks for valuable for planning and decision-making and the politics of belonging. The study is based on a combination of field accounts of the actors and local material. The latter includes company and government documents, municipal council protocols, press releases and TV documentaries. Through printed and live press coverage, I followed the local and national political debates concerning the mining proposals. I made field visits to both mining sites and made observations at two seminars. I also conducted additional in-depth interviews in March 2013 with one key informant from each of the two herding communities that are the most affected by the planned mines.

negative - land-use conflicts: the pastoralists argue that the planned extraction activities will take place on pastures to which they have customary rights and that the mining will negatively affect their livelihoods. The counter-argument of the developers and their supporters is that there is a local need for jobs and economic development. They also argue that mining is a new activity in these two sites, and that case-conference between mineral extraction and pastoralism is possible.

The underlying assumption was that land-use conflicts could be solved through dialogue and that a shared understanding of mitigating measures could facilitate win-win solutions.

The underlying assumption was that land-use conflicts could be solved through dialogue and that a shared understanding of mitigating measures could facilitate win-win solutions.

The study is conducted with Sami people and Indigenous methodologies were incorporated. This focus on the politics of belonging.

No mention of whether Indigenous researchers were involved or monitoring by Indigenous groups.

A strength-based approach is reinforced - the underlying assumption was that land-use conflicts could be solved through dialogue and that a shared understanding of mitigating measures could facilitate win-win solutions.
| Storekeepers' perspectives on improving dietary intake in 12 rural and remote First Nation communities in the "Got Out West" project. | 2021 | International Journal of Circumpolar Health | Qualitative interview, Conducting key informant interviews with 22 storekeepers in 12 communities in the Yukon, Northwest Territories, and the Yukon-Kuskokwim region of Alaska, we explored potential factors hindering or facilitating dietary change towards healthier food choices. | First Nations (Canada) | None | Private grocery store owners | Negative: seasonality and flight schedules were primary factors determining commercial foods' availability; high prevalence of discretionary foods and beverages e.g. energy drinks | First Nations (Canada) | Four health outcomes due to high prevalence of discretionary foods and beverages e.g. energy drinks | Storekeepers have demonstrated they are willing and able to fill the essential role of enforcing community and company policies on energy drink consumption and policies set by food assistance programmes. To continue to fulfil a role in promoting healthier food and beverage options to customers, they must be empowered by community policies. | No consultation was conducted nor evidence of Indigenous workflows being incorporated | No mention of whether Indigenous researchers were involved, or monitoring by Indigenous groups. | Storekeepers also acknowledge the importance of learning about traditional food systems in the region and engaging in subsistence practices maintaining cultural ties to the land as well as improve nutritional intake. As community members and experts on local purchase patterns, storekeepers have a wealth of knowledge to contribute to setting community policies that promote sales of healthier food and beverage products. |

| If only they had access to data: Governments fail to monitor pulp mill impacts on human health in Pictou Landing First Nation. | 2021 | Social Science & Medicine | Cross-sectional survey and development of framework for EHS. An Environmental Health Survey (EHS), measures of income and employment as examples from the social determinants of health. Preliminary data was presented to the NWG and the community and we ended with a 5% response rate (n = 270), based on a population of 470 at the time. | First Nations (Canada) | Mi'kmaw environmental-ethnographic framework (The Mi'kmaw do not share their knowledge in terms of epistemology, methodology, or theory. In fact, colonization and Eurocentric hedonism 2020) would argue that attempting to fit the interpretative model of Indigenous knowledge into western models elicits "epistemic violence" (p. 54). But as we discuss the knowledge presented in the Mi'kmaw language, we can demonstrate these connections in a Mi'kmaw framework that can generate knowledge. | Negative: Environmental pollution due to pulp mill (manufacturing industries) | First Nations (Canada) | Cultural destruction and poor health outcomes due to water pollution | Indigenous developed framework applies to Mi'kmaw people specifically, this approach can be applied to Indigenous communities more broadly by adapting it to the specific community in their local context. | No consultation was conducted and Indigenous workflows were incorporated through development of the framework. We would like to thank the community of Pictou Landing First Nation for their support of this research. | No mention of whether Indigenous researchers were involved, but a focus on Indigenous monitoring is present. We were also guided in our work by Esquimault (a Mi'kmaw concept translating to 'Two-fisted Seeing'), a principle that the general wider acceptance is recent years, especially for Indigenous researchers to bring importance of both western and Indigenous knowledge systems to gain insights into complex issues around health, land, and environment that might otherwise escape our consideration. | A strong strength-based approach and Indigenous values are clearly prominent from the development of the framework.
that can be measured. For example, kisu’lt melkiko’tin is the place of creation, an "ecological order or vantage point from which the Mi’kmaw construct their worldview, language, knowledge and order" (Battiste and Youngblood Henderson, 2000; Youngblood Henderson, 2000, p. 257) (Desjarlais, 1990). Tlilnuo’lti’k reflects Mi’kmaw ontology and translates to "how we maintain our consciousness of nature" (Battiste and Youngblood Henderson, 2000, p. 35) (Desjarlais, 1990). Netukulimk reflects a value system or a set of rules.
and obligations for being on the land and the sustainable use of resources (Prosper et al., 2011). This theoretical framework guides us as we look to the consequences of land displacement and environmental dispossession on the health of the PLFN community.

### Surrounding Chemical Valley and “Living in a Bubble”: the Case of the Aamjiwnaang First Nation, Ontario

<table>
<thead>
<tr>
<th>Year</th>
<th>Journal</th>
<th>Article</th>
<th>Methodology</th>
<th>Participants</th>
<th>Findings</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>Journal of Environmental Planning &amp; Management</td>
<td>Qualitative interviews - In-depth interviews were conducted with both men and women (n = 18). All the participants were local residents aged 18 years or older. The community was obtained through the Aamjiwnaang Environmental Committee (AEC).</td>
<td>Test Nations (Canada)</td>
<td>Toxic industry/ petrochemical companies</td>
<td>Negative - toxic contamination specifically mercury poisoning</td>
<td>No recommendations. However, findings suggest the need for the community to be the social scale at which it makes most sense to connect environmental stress theory and risk society theory for the study of complex technological and environmental hazards situations.</td>
</tr>
</tbody>
</table>

No mention of whether Indigenous researchers were involved, however the focus of the framework is on Indigenous monitoring. A strong strength-based approach and Indigenous values are clearly prominent from the development of the framework.
| Country                        | Tobacco control | Journal Article       | Commercial tobacco and indigenous peoples: a stock take on Framework Convention on Tobacco Control progress. 2019 Tobacco Control Journal Article Australia, Canada and New Zealand Secondary analysis/review: We undertook a two-pronged search of (1) all Global Progress Reports on implementation of the FCTC, (2) tobacco industry publications (2007–2020) for information regarding indigenous peoples in Australia, Canada and New Zealand, and (2) FCTC country-specific reports from Australia, Canada and New Zealand None Tobacco industries Negative: tobacco industry tactics e.g advertising and promotion to First Nations Peoples Australia, Canada and New Zealand (First Nations) Poor health outcomes due to smoking Discussion and agreement among relevant Parties regarding an appropriate indigenous reporting framework needs to occur to ensure that any additional reporting fields are relevant, practical and ultimately assist to reduce tobacco harms among indigenous peoples. Indigenous worldview is a strong focus and incorporated in the study Indigenous researchers were involved in the research and a focus on Indigenous monitoring is emphasized. As a result, FCTC Parties that have indigenous populations should incorporate comprehensive and high-quality standardized indigenous-specific data in their regular reporting to assist in reducing tobacco harms among indigenous peoples. |
### Enhancing Māori food security using traditional kai

| Year | Journal of Indigenous Law & Policy | Journal Article | United Nations | None | None | 2015 | Global Health Promotion | New Zealand | literature review on revitalising traditional kai for kai prior to 2015 was conducted. The focus was on increasing the availability of traditional kai to Māori households through replenishing fish stocks andgenerating projects and increasing the financial means available to Māori households to purchase food (e.g. economic development of traditional kai industries and employment creation). | New Zealand (First Nations) | New Zealand (First Nations) | Positive - increase the availability of traditional kai (food) and develop traditional food-based industries (e.g. Replenishing fish stocks through customary management) | New Zealand (First Nations) | The sourcing of traditional kai for income-generating projects as an expression of mana whenua (MG 1). As noted by the Ministry of Health, the practices that were developed for gathering and consuming kai served as a protective health measure. From a policy and practice perspective, there is much that could be done to support the revitalisation of traditional kai and to address the barriers and promote the enablers. Certainly this is an area that Māori are pursuing, as outlined in Eruera Maxted and Gabrielle Jenkin for the Kāinga Kai project, and as an area where the government support and assistance (e.g. through regulatory arrangements, supportive policy and attention to the impacts of globalisation on traditional kai). There is also a role for the health promotion community, particularly the Māori health promotion enablers, in supporting or facilitating community initiatives, and for wellness of all organisations to advocate for policy change. The focus of the entire article is promoting traditional foods that therefore Indigenous worldview is an asset. The authors would also like to thank Mason Ngawhika for his advice on Māori language, and Eruera Maxted and Gabrielle Jenkin for providing critical review on an earlier draft. | The authors would also like to thank Mason Ngawhika for his advice on Māori language, and Eruera Maxted and Gabrielle Jenkin for providing critical review on an earlier draft. | The paper reinforces a strength-based approach and is inclusive of Indigenous values. There has been an emergence of interest and activity by some Māori to revitalise traditional kai and to contribute to the enhancement of kai in Māori communities and to improve access to the determinants of health, and to contribute to the advancement of kai (Kai) therefore promoting Indigenous measures’.

### Screening to Puebl and Diné Communities

| Year | UCLA Journal of Governmental Law & Policy | Journal Article | UCLA (New Mexico) | seminar report | Field Notes (USA) | None | None | adaptive industries (farming) | Negative: environmental destruction, pollution and associated health outcomes (e.g. water contamination) | Field Notes (USA) | Key water-related risks from fracking include stress on surface and groundwater supplies due to withdrawals of large volumes of water and contamination of underground sources of drinking water and surface water. According to the National Institutes of Health, thirteen percent of Native American homes lack safe water. Rather, tribes and indigenous communities must reclaim the power to protect themselves and determine the necessary measures for fracking harms. The solution that the full-governmental system has failed to provide to protect Native American culture have proven ineffective. This article strongly recommends that fracking be regulated from a tribal and indigenous perspective and ultimately be phased out by renewable energy sources in order to prevent environmental contamination and further threats to Pueblo and Diné health and safety. | Indigenous worldview is a strong focus and incorporated in the study. The potential for toxic flowback fluid contaminating water supplies in Pueblo and Diné communities are high. Water is incredibly sacred to the Diné and is highly valued. Water is often used in ceremonies that tribes believe are necessary, not only for the survival of their own people, but also for the survival of the Earth and all peoples. | No mention of whether Indigenous researchers were involved. | The paper emphasizes a strength-based approach and is inclusive of Indigenous values. There has been a resurgence of interest and activity by some Māori to revitalise traditional kai and to contribute to the enhancement of kai in Māori communities and to improve access to the determinants of health, and to contribute to the advancement of kai (Kai) therefore promoting Indigenous measures’.

---

BMJ Publishing Group Limited (BMJ) disclaims all liability and responsibility arising from any reliance placed on this supplemental material which has been supplied by the author(s).
This paper identifies five main principles that support this effort. First, treaty settlements present a framework for self-determined tribal development, with Indigenous tourism as an example of this. Second, this identity work of immersing tribal members in their tribal indigeneity strengthens individual and collective capacity for Indigenous tourism. Third, Indigenous spirituality, evident in the syncretism of theologies, represents a distinct basis for Indigenous tourism. Fourth, an Indigenous spiritual socioecological framework that prioritizes environmental considerations because of the interrelatedness of all things, the whakapapa (genealogy), the kaitiakitanga (stewardship), and the manaakitanga (hospitality) in host-generating knowledge. We thank Hayden Potaka of the Whanganui iwi for sharing his m"atauranga (knowledge), helping bring clarity and depth to M"aori cultural concepts. We thank Professor Hone Morris of the Massey University, for hosting us and sharing their mana...
pertaining to the river. We proceed by contextualising the research within the structure of Māori tourism, before discussing tourism in relation to the Whanganui River. Second, we define four key concepts—peace, justice, sustainability, and indigeneity—which function as the theoretical framework for the analysis of Indigenous tourism. Third, we outline the methodology we employed for the research. Fourth, we present the findings of case studies among three Māori tourism enterprises on the Whanganui River. Fifth, we discuss findings on peace, justice, and sustainability in Indigenous tourism and propose a model of Indigenous tourism. We conclude by identifying principles that emerge and their implications for tourism research, policy, and practice. To explore our research question we used Māori-centred organisational ethnographic methods, including interviews, observation, and use of published information.
produce three case studies of M"ori tourism enterprises on the Whanganui River.

<table>
<thead>
<tr>
<th>Economic variable</th>
<th>2012</th>
<th>American Indian and Alaska Native mental health research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixed-methods</td>
<td>Two types of information gathered by MIWRC are discussed in this article: qualitative data from two round table discussions and quantitative data collected for evaluation of the Oshkiniigikwe program. Of the 17 people invited to attend the Duluth round table in January 2009, 12 attended. Of the 22 people invited to attend the Minneapolis round table in March 2009, 18 attended. These 30 participants represented tribal and urban programs providing crisis/emergency housing, basic needs, domestic violence, sexual assault advocacy, runaway and homeless youth services, police prostitution diversion programs, and other human service activities served by Phoenix Project and Oshkiniigikwe. The absence of safety in Oshkiniigikwe girls' lives, and their exposure to a highly visible sex trade in their environments appear to be critical contributing factors in their vulnerability to sex trafficking and commercial sexual exploitation.</td>
<td></td>
</tr>
<tr>
<td>Sex trafficking industry</td>
<td>[Undetermined]</td>
<td>None</td>
</tr>
<tr>
<td>Negative sex traffickers were targeting AN girls</td>
<td>First Nations (USA)</td>
<td></td>
</tr>
<tr>
<td>First Nations (USA and Canada)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The absence of safety in Oshkiniigikwe girls' lives, and their exposure to a highly visible sex trade in their environments appear to be critical contributing factors in their vulnerability to sex trafficking and commercial sexual exploitation.</td>
<td>The key lesson learned for Phoenix Project and Oshkiniigikwe case managers is that routinely asking AN girls entering harm reduction programs if they have been involved in trading sex opens the door to disclosure of commercial sexual exploitation and trafficking. Oshkiniigikwe's approach is patterned after lessons learned from the domestic violence movement. There is a great need for additional evaluation studies and research that allows comparison of AI girls' vulnerability and experiences regarding sex trafficking across multiple programs serving AN girls in diverse geographic regions. Sex trafficking is an underground phenomenon, so the usual population-based methods for establishing generalizable knowledge are not feasible.</td>
<td></td>
</tr>
<tr>
<td>Indigenous consultation was conducted and strong focus on Indigenous worldviews through the promotion of Indigenous safe-houses/organisations such as Phoenix Project and Oshkiniigikwe</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No mention of whether Indigenous researchers were involved</td>
<td>BMJ Publishing Group Limited (BMJ) disclaims all liability and responsibility arising from any reliance placed on this supplemental material which has been supplied by the author(s)</td>
<td></td>
</tr>
</tbody>
</table>

and social services.

Enterprising social wellbeing: Social enterprise and strengths-based approaches to mental health and wellbeing in remote Indigenous community contexts

2011 Australian psychiatrists - bulletin of Royal Australian and New Zealand College of Psychiatrists

Case study 2: Objective is to explore how social enterprise activities can meet community needs and foster self-sustainability while generating profits for redistribution as social investment into other ventures that aid social functioning and emotional wellbeing. In our collaborative work with local people in communities we have been interested in the extent of interest in entrepreneurial activity and the diversity of enterprises people wish to engage in. At a one meeting over 60 people gathered

| Positive social enterprise activities are local ventures that have both a market orientation as well as fulfilling a social or cultural purpose. Strengths-based approaches to community development emphasize the social "capital" of enterprises to sustain an ongoing desire for connection to country while also fostering engagement with people outside the area. Elders reported that the income generated provides a small but useful micro-economic stimulus as well as cultural and social emotional wellbeing benefits: "I feel my culture's being respected — to share"

In our view, social entrepreneurship, regardless of "scale", has the potential to build both interdependence and independence at the same time. While gas-orenment policies, private sector and other interests tend to look for large-scale external economic developments such as mining, pastoral and major tourism to boost local prospects, we give witness to the determined efforts of local Indigenous communities that also remind us that "from little things big things grow"

No consultation was conducted nor evidence of Indigenous worldviews being incorporated

We suggest that participation in social enterprise development has benefits including:

- strengthening family networks;
- increasing self-reliance and social esteem and promoting "cultural safety"

We would like to particularly acknowledge our research partners and colleagues: Pukatja Community Council; Anilaylya and Tjutjinpiri Homelands

We would like to acknowledge our research partners and colleagues: Pukatja Community Council; Anilaylya and Tjutjinpiri Homelands

| social entrepreneur | strengths-based approaches to community development emphasize the social "capital" |...
The health impacts of extractive industry transnation
corporation: a study of Rio Tinto in
Australia and Southern Africa

2019


In this way — show people how to learn my way too.

It is good
-
show
people
how to
learn
my
way
too.
Global data on the political, economic and regulatory context for Rio Tinto’s activities were collected, including information on regulatory institutions, guidelines and standards for multinational enterprises, industry representative organisations, global unions, and voluntary reporting initiatives. The Factiva database was accessed to identify all news sources under search headings relating to Rio Tinto’s industrial, economic and political news items for Australia and South Africa between 2012 and 2016. Eleven semi-structured interviews were conducted to gain perspectives on Rio Tinto’s operations in Australia and southern Africa, including from Rio Tinto and/or the mining industry sector, and from civil society actors and campaigners monitoring Rio Tinto’s activities across different mining operations.
Tobacco industry misappropriation of American Indian culture and traditional tobacco

<table>
<thead>
<tr>
<th>Stakeholder theory</th>
<th>Application of stakeholder theory</th>
<th>Corporate interests</th>
<th>First Nations (Australia)</th>
<th>First Nations (Australia)</th>
<th>Undermining cultural domains of health and wellbeing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative</td>
<td>Through their rhetorical manipulation of the CSR discourse, mining companies construct a homogenised representation of aboriginal peoples, for strategic purposes, in order to maintain a public image as good corporate citizens, while using the rhetoric to divert their CSR activities to less problematic indigenous groups, thus ignoring the claims of stakeholders who are more directly affected by mining. This discursive promotion of aboriginal peoples to the status of “stakeholder” of mining companies can be interpreted as political. This serves a strategic rhetoric which enables the mining industry to negotiate the legitimacy of its core mining business. The data show that the mining companies would vehemently proclaim themselves to be generous and good corporate citizens, but in their treatment of aboriginal stakeholders they appear to prioritise profit and the determination to maintain their core business and reputations.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

First Nations (Australia) was conducted, however Indigenous values are not made explicit. Indigenous values are not made explicit.

No consultation was conducted, however Indigenous values are not incorporated. First Nations (Australia) was conducted, however Indigenous values are not made explicit.

First Nations (Australia) was conducted, however Indigenous values are not made explicit. Indigenous values are not made explicit.
How the Trans Pacific Partnership Agreement could undermine PHARMAC and threaten access to affordable medicines and health equity in New Zealand.

| Year | Health Policy Journal Article New Zealand Qualitative document analysis: here we examine six issues of particular concern in the 2011 draft TPPA annex that have implications for PHARMAC (as well as the other TPPA countries). These are not the only issues of concern, but those most likely to present particular difficulty to PHARMAC. They are: Text that may preclude the use of therapeutic reference pricing; Introduction of an appeals process that would allow challenges to PHARMAC's decisions; Requirements to specify and disclose formulary criteria (which may create inflexibilities); Transparency and disclosure requirements that may undermine price negotiations;  |
|------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|
| 2011 | PHARMAC (New Zealand) is a highly effective model for containing costs while ensuring affordable access – important to preserve not just for New Zealanders, but also as a potential model for other countries to adopt. PHARMAC's processes are particularly vulnerable in the TPPA negotiations. Any intrusion into domestic decision-making about medicines – even seemingly reasonable requirements for greater "transparency" – could have adverse consequences for PHARMAC's ability to manage expenditure and ensure value for money, and potentially serious effects on health expenditure, health equity and indigenous rights. |

Negatives - Proposals made by the US to extend intellectual property rights (IPRs) for pharmaceuticals if accepted, would expand patent protection and delay the introduction of generic medicines through a range of provisions that extend well beyond existing patent law in New Zealand.

• Poor health outcomes due to unaffordability of medicines due to price barriers

| PHARMAC (New Zealand) Pharmaceutical Management Agency | Poor health outcomes due to unaffordability of medicines due to price barriers |

BMJ Publishing Group Limited (BMJ) disclaims all liability and responsibility arising from any reliance on this supplemental material which has been supplied by the author(s).
| Traditional ecological knowledge: Impact on commercial health | 2011 | Journal of Commercial Biotechnology | Article | USA | Commentary / Report | Pharmaceutical Industry | Positive: Expansion of commercialization following traditional practices requires political and administrative intervention across the continent to provide the support for the knowledge, abilities and willingness of the indigenous populations. An appropriate practice approach necessitates an appreciation for the Aboriginal view of sustainability. | USA | None | Indigenous values are not made explicit. |
|---|---|---|---|---|---|---|---|---|---|
| OxyContin in Ontario: The multiple materialities of prescription painkillers | 2014 | International Journal of Drug Policy | Article | Canada | Case study - This discursive study is based on a broad range of texts collected between 2009-2013: Hansard reports from the Legislative Assembly of Ontario; newspaper, magazine, and internet coverage of OxyContin; and policy documents, research reports, and position papers and news releases produced by government agencies, advocates. | First Nations (Canada) | Negative: Socioeconomic and institutional pharmaceutical industry and state actors attempted to dualistically parse disparate materializations of the drug, a tactic that intensified as media pressure began to produce the notion of a public health crisis. | Canada | None | Indigenous values are not made explicit. |
Corporate Social Responsibility (CSR) programs of Big Food in Australia: a content analysis of industry documents

2015 - New South Wales Public Health Journal Article - Articles
An initial content analysis was used to analyse the information contained on Australian Big Food company websites. Data sources included company CSR reports and websites related to CSR initiatives employed in Australia. To increase the generalisability of results, a range of Big Food categories were included to represent: a) fast food; b) sugar sweetened beverages; and c) packaged foods high in sugar. 

Rating Criteria (ISRC) 3 was used to collect relevant data from the collated documents. This tool was originally developed to analyse and evaluate the overall corporate social performance. It includes seven categories: Corporate Governance, Diversity, Employee Relations, Environment, Human Rights and Product.

Findings from this study provide evidence for public health advocates and researcher to map and monitor the marketing activities used by Big Food companies to sell their products to communities. Through the use of CSR (e.g., sponsoring of children's sporting activities) companies can influence consumer opinions regarding certain brands or products and cede too much power or agency to a decolonised field and indigenous researchers were involved. Indigenous voices are not made explicit.

<table>
<thead>
<tr>
<th>Corporate Social Responsibility programs of Big Food in Australia</th>
<th>2015</th>
<th>New South Wales Public Health</th>
<th>Journal Article</th>
<th>Articles</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Companies appear to be using CSR activities to: 1) build brand image through initiatives associated with the environment and responsibility to consumers; 2) target parents and children through community activities; and 3) align themselves with respected organisations and events in an effort to transfer their positive image attributes to their products.</td>
<td>2015</td>
<td>New South Wales Public Health</td>
<td>Journal Article</td>
<td>Articles</td>
</tr>
<tr>
<td>2. Target parents and children through community activities.</td>
<td>2015</td>
<td>New South Wales Public Health</td>
<td>Journal Article</td>
<td>Articles</td>
</tr>
<tr>
<td>3. Align themselves with respected organisations and events in an effort to transfer their positive image attributes to their products.</td>
<td>2015</td>
<td>New South Wales Public Health</td>
<td>Journal Article</td>
<td>Articles</td>
</tr>
<tr>
<td>Companies appear to be using CSR activities to: 1) build brand image through initiatives associated with the environment and responsibility to consumers; 2) target parents and children through community activities; and 3) align themselves with respected organisations and events in an effort to transfer their positive image attributes to their products.</td>
<td>2015</td>
<td>New South Wales Public Health</td>
<td>Journal Article</td>
<td>Articles</td>
</tr>
<tr>
<td>Companies appear to be using CSR activities to: 1) build brand image through initiatives associated with the environment and responsibility to consumers; 2) target parents and children through community activities; and 3) align themselves with respected organisations and events in an effort to transfer their positive image attributes to their products.</td>
<td>2015</td>
<td>New South Wales Public Health</td>
<td>Journal Article</td>
<td>Articles</td>
</tr>
<tr>
<td>Companies appear to be using CSR activities to: 1) build brand image through initiatives associated with the environment and responsibility to consumers; 2) target parents and children through community activities; and 3) align themselves with respected organisations and events in an effort to transfer their positive image attributes to their products.</td>
<td>2015</td>
<td>New South Wales Public Health</td>
<td>Journal Article</td>
<td>Articles</td>
</tr>
</tbody>
</table>
were identified in the search. These companies produced either fast food (n=3), sugar-sweetened beverages (n=2), or packaged foods (n=1) as their primary product category. Of these, six were extensively reviewed in the literature, and also provided detailed information about their CSR strategies specific to Australia on their corporate websites. Based on these considerations, the final sample included the Australian branches of: 1) Coca Cola; 2) McDonald’s; 3) PepsiCo; 4) Nestlé; 5) Mars; and 6) Mondeléz International (owner of Kraft and Cadbury).

Results also highlight the types of CSR strategies being used by Big Food.

While Woolworths reaps the rewards, the Northern Territory community will be left to clean up the mess.

As one of the largest liquor retailers in Australia, the proposed Dan Murphy’s would also have a marketing and promotion capability. Indigenous values are not made explicit.

The Directors and Management of Woolworths and Endeavour Group should abandon the Dan Murphy’s store in a decision that would put the interests of people’s lives over profit.
### Supplemental Material: Camera Use and Marketing and Exposure to High Stakes: A Narrative of Indigenous and Northern, Remote, Rural, and Indigenous Communities in British Columbia

<table>
<thead>
<tr>
<th>Year</th>
<th>Study</th>
<th>Journal Article</th>
<th>Field</th>
<th>Commentary / Report</th>
<th>First Nations</th>
<th>Western</th>
<th>First Nations</th>
<th>First Nations (Indigenous)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>Kids'Cam</td>
<td>Canadian Geographer</td>
<td>Canada</td>
<td>A key and central role for stories in the domain of knowledge</td>
<td>Indigenous</td>
<td>Western</td>
<td>Indigenous</td>
<td>Indigenous</td>
</tr>
</tbody>
</table>

**Stories as Indigenous Knowledge**
- Knowledge, law, relations, and stories are the land of the people, knowledge that is shared in the community and is essential to being Indigenous.
- This knowledge is shaped by the Indigenous authors of our collective experience.
- It emphasizes that Indigenous stories are based on knowledges, legal histories, and law, and that we are bound to what we call the law.

**Indigenous Stories**
- Indigenous stories are non-human-centric, non-human-centered.
- They are never static, never unchanging.
- They are linked to the strength of ecology and are always shifting, always in transition.

**Regulation of Gambling and Its Marketing**
- The regulation of gambling and its marketing is clearly needed to protect Indigenous communities.
- Prevention and control of gambling-related harm, including the reduction of gambling-related harm, are critical for Indigenous communities.
- The regulation of gambling and its marketing could contribute to the reduction of gambling-related harm, improving health and well-being.

**Indigenous Values**
- Indigenous values are clearly needed to protect Indigenous communities.
- Indigenous values are not made explicit.

---

**High-Index Children’s Exposure to Gambling and Marketing Using Wearable Cameras**

<table>
<thead>
<tr>
<th>Year</th>
<th>Study</th>
<th>Journal Article</th>
<th>Field</th>
<th>Race</th>
<th>Population</th>
<th>First Nations</th>
<th>First Nations</th>
<th>First Nations (Indigenous)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>Kids’Cam</td>
<td>New Zealand</td>
<td>New Zealand</td>
<td>None</td>
<td>National</td>
<td>Indigenous</td>
<td>Western</td>
<td>Indigenous</td>
</tr>
</tbody>
</table>

**Negative Marketing Towards Children**
- Children were exposed to gambling marketing, including the TAB and horse and dog racing, almost once a day, on average.
- Scratch cards made up three-quarters of the study participants’ total exposures.
- Māori (aRR = 2.89, 95% CI 1.19, 6.99) and Pacific (aRR = 4.70, 95% CI 1.88, 16.90) children were more exposed to sport gambling than children of NZ European children.

---

**No consultation was conducted nor evidence of Indigenous researchers being incorporated.**
Children were aged 12 (range 11–13); Year 8 children were chosen as they were considered the youngest able to wear, and cope with, the study equipment. Schools were sampled on a probability-proportional-to-size basis, by ethnicity (Māori (NZ’s indigenous population), Pacific (mostly second-generation migrant population from Pacific islands and NZ Europeans), and school decile grouped as: low (decile 1–3), medium (4–7), and high (8–10). Each child wore a wearable camera during waking hours for a four-day period (Thursday–Sunday) that captured a 136° image of the scene ahead approximately every seven seconds. The children collected 1.3 million images.
Children’s everyday exposure to food marketing: an objective analysis using wearable cameras

2017
International Journal of Behavioral Nutrition and Physical Activity
New Zealand

Cross-sectional survey – Kids’Cam was a cross-sectional study of 168 children (mean age 12.6 years, SD = 0.5) in Wellington, New Zealand. Each child wore a wearable camera on four consecutive days, capturing images automatically every seven seconds. Images were manually coded as either recommended (core) or not recommended (non-core) to be marketed to children by setting, marketing medium, and product category. Images in convenience stores and supermarkets were excluded as marketing examples were considered too numerous to count. On average, children were exposed to non-core food marketing 27.3 times a day (95% CI: 24.8, 30.1) across all settings. This was more than twice their average exposure to core food marketing (12.3 per day, 95% CI: 8.7, 17.4). The global prevalence of childhood overweight and obesity has increased by 47%. Marketing of energy-dense nutrient-poor foods and beverages contributes to this worldwide increase.

The study provides further evidence of the need for urgent action to reduce children’s exposure to marketing of unhealthy foods, and suggests the settings and media in which to act. Such action is necessary if the Commission on Ending Childhood Obesity’s vision is to be achieved.

No consultation was conducted nor evidence of Indigenous worldviews being incorporated. No mention of whether Indigenous researchers were involved. Indigenous values are not made explicit.

| Children's everyday exposure to food marketing: an objective analysis using wearable cameras | 2017 | International Journal of Behavioral Nutrition and Physical Activity | New Zealand | cross-sectional survey – Kids’Cam was a cross-sectional study of 168 children (mean age 12.6 years, SD = 0.5) in Wellington, New Zealand. Each child wore a wearable camera on four consecutive days, capturing images automatically every seven seconds. Images were manually coded as either recommended (core) or not recommended (non-core) to be marketed to children by setting, marketing medium, and product category. Images in convenience stores and supermarkets were excluded as marketing examples were considered too numerous to count. On average, children were exposed to non-core food marketing 27.3 times a day (95% CI: 24.8, 30.1) across all settings. This was more than twice their average exposure to core food marketing (12.3 per day, 95% CI: 8.7, 17.4). The global prevalence of childhood overweight and obesity has increased by 47%. Marketing of energy-dense nutrient-poor foods and beverages contributes to this worldwide increase. The study provides further evidence of the need for urgent action to reduce children’s exposure to marketing of unhealthy foods, and suggests the settings and media in which to act. Such action is necessary if the Commission on Ending Childhood Obesity’s vision is to be achieved. No consultation was conducted nor evidence of Indigenous worldviews being incorporated. No mention of whether Indigenous researchers were involved. Indigenous values are not made explicit. | | |
Sugary drinks, fast food, confectionary and snack foods were the most commonly encountered non-core foods marketed. Rates were calculated using Poisson regression.

Quantifying the Nature and Extent of Children's Real-time Exposure to Alcohol Marketing in Their Everyday Lives Using Wearable Cameras: Children's Exposure via a Range of Media in a Range of Key Places 2018 Alcohol and Alcoholism, New Zealand cross-sectional survey - Children aged 11–13 years (n = 126) wore cameras that automatically captured images approximately every 7 s for a 4-day period between June 2014 and early 2015. Content analysis of 700,000 images was manually undertaken to assess children's exposure to alcohol marketing. On average, children were exposed to alcohol marketing 6.5 (95% CI: 4.3, 6.0) times per day, excluding within off-licence retailers, on screens and product packaging. The mounting evidence provided by longitudinal studies and multiple systematic reviews suggests that any exposure to alcohol marketing by children is unacceptable, and these results support urgent action to fulfill our obligations under the United Nations Convention on the Rights of the Child. These findings add weight to existing evidence that self-regulatory systems are inadequate at preventing exposure of children to alcohol marketing and highlight a pressing need to implement strict legislative restrictions on all forms of alcohol marketing to protect children from harm. No consultation was conducted nor evidence of Indigenous values being incorporated. No mention of whether Indigenous researchers were involved. Indigenous voices are not made explicit.
| American Indian internet cigarette sales: another avenue for selling tobacco products | 2004 | American Journal of Public Health | Journal article | USA | mixed methods - cross-sectional survey, focus groups and ethnographic methods; on 7 reservations gathering info on tobacco regulations/policies and cultural consumption of tobacco | Test Nations (USA) | None | Tobacco Industry | Negative - tobacco marketing/advertising and misinformation i.e. not informing the health risks of tobacco on websites. | Test Nations (USA) | Poor health outcomes associated with smoking. | Address marketing ploys. | No consultation was conducted nor evidence of Indigenous values being incorporated. | No mention of whether Indigenous researchers were involved. | Indigenous values are not made explicit. |
| American spirit pack descriptors and perceptions of harm: a crowdsourced comparison of modified packs | 2016 | Nicotine Tob Res | Journal article | USA | three cross-sectional surveys were posted on Amazon Mechanical Turk. Adult participants evaluated the relative harm of a Marlboro Red pack versus three different AS packs with the descriptors “Made with Organic” | Test Nations (USA) | None | Tobacco Industry | Negative - tobacco marketing/advertising using Native American imagery. With increasing restrictions on tobacco advertising, pack descriptors are quickly emerging as a prime way for the tobacco industry to advertise its product, and influence consumer response and appeal. The majority of Survey 1 participants rated the unmodified AS packs as less harmful than the Marlboro Red pack: 35.4% – 58.8% of Survey 2 participants also rated the unmodified AS packs as less harmful than the Marlboro Red pack. | Test Nations (USA) | Poor health outcomes associated with smoking. | It is critical to identify American Spirit and other brand descriptors that may falsely convey reduced harm messages to consumers to inform policy development and protect public health. | No consultation was conducted nor evidence of Indigenous voices being incorporated. | No mention of whether Indigenous researchers were involved. | Indigenous values are not made explicit. |
Tobacco," "100% Additive-Free," or "100% US Grown Tobacco" (Survey 1; n = 461); a Marlboro Red pack versus these AS packs modified to exclude descriptors (Survey 2; n = 857); and unmodified versus modified AS pack images (Survey 3; n = 1001). Data suggest that these AS pack descriptors communicate reduced harm messages to consumers. Findings have implications for regulatory actions related to product labeling and packaging.

| 2000 | Organisati on & Environment | Article | Authors | qualitative discourse analysis - By examining the colonial and anticolonial discourses that inform the mining project (with a particular focus on the role of the colonialist, capitalist discourse inherent in the construction of Australia’s national identity) | First Nations (Indigenous) | Stakeholder theory - extractive industries | Impacts - Examining the economic importance of mining but also the environmental and health implications such as land use and contamination | First Nations (Indigenous) | Undermining cultural domains of health and poor health outcomes due to contamination | None | No consultation was conducted nor evidence of Indigenous worldviews being incorporated | No mention of whether Indigenous researchers were involved | Indigenous values are not made explicit. |