

A Kaupapa Māori Review of Māori Food Data Within National Health Surveys in Aotearoa New Zealand

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This paper presents a kaupapa Māori analysis of six national health surveys in Aotearoa New Zealand that collect food and nutrition data from Māori. The concepts of Māori Nutrition Data Sovereignty (MNDS) and Māori Nutrition Data Governance (MNDG) are introduced and applied through a novel framework for assessing surveys and Māori food data in line with MNDS and MNDG principles.

The methodologies and governance structures of six national health surveys were critically examined using this novel framework. The findings demonstrate substantial gaps in culturally safe and self-determined data practices for Māori, with several surveys scoring poorly on MNDS and MNDG criteria. This study highlights the entrenchment of colonial and deficit-based food-data practices in Aotearoa New Zealand, the effects of which are connected to Māori nutritional health inequities.

This paper advocates for structural data reforms and proposes implementing the MNDS and MNDG framework in national health surveys that collect food data from Māori, as a mechanism for mitigating the harms associated with deficit-based food data. Such harms include individualised health stigma and racialised blame for nutritional health inequities. This study also highlights the need to develop Māori-led food and nutrition data systems and assessment tools that uphold Māori values and support health equity. This review contributes to ongoing efforts to decolonise health data systems and affirm mana motuhake, that is, the self-determination of Māori in the collection and use of Māori data.

Introduction

Māori are tangata whenua, the people of the land, Indigenous to Aotearoa New Zealand (Mutu, 2017). As with many Indigenous peoples within settler states, Māori experience staggering health inequities that link to an overburden of chronic health conditions and inequitable health care provision and access (Signal et al., 2007). For example, although Māori experience higher rates of chronic nutrition-related conditions such as diabetes and cardiovascular disease, Māori are less likely to be able to access the relevant primary care services and be referred for specialist care (Kirkcaldy, 2023).

However, Māori who do receive care in these settings report higher rates of racial mistreatment, including racism, and poorer quality care overall (Cormack et al., 2018).

Data is inextricably connected to healthcare services, experiences and provisions (Paine et al., 2021). Data can be broadly defined as any material that carries insight, knowledge, or information (West et al., 2020). Data is and always has been central to Indigenous epistemologies (Kukutai & Taylor, 2016). However, Western data and Western epidemiology systems have been used as tools to collect health data from and about Māori, rather than for and with Māori (Zuberi, 2000). Thus creating what Maggie Walter has termed the 5D's of Indigenous data: data that focuses on Indigenous difference, disparity, disadvantage, dysfunction and deprivation (Walter, 2016). In relation to food and nutrition data specifically, this research presents the powerful connections that exist between health data, health policy, health professional practice and service provision, and the impacts of these connections on Māori health experiences and outcomes (Cormack, 2010; Paine et al., 2021).

This paper presents work from a kaupapa Māori doctoral research project that positions the historical and ongoing complex interactions between food and data as pathways for understanding and remediating the over-burden of food and nutrition-related health conditions among Māori (Rapata, 2025).

Kaupapa Māori theory is a form of critical theory that is politically grounded and culturally anchored in Māori ways of knowing, being, doing, and seeing (Smith & Smith, 2019). Kaupapa Māori theory in research aims to critique settler colonialism and to transform praxis (Mahuika, 2008). My positioning as a trained clinical dietitian and emerging kaupapa Māori health researcher was essential for drawing on kaupapa Māori as an Indigenous research theory and approach in this work. Which, overall, sought to critique colonial food and data systems and structures, whilst also exploring transformative solutions.

In an Aotearoa New Zealand context, IDS as a concept and movement has been championed by Te Mana Rauranga (Māori Data Sovereignty Network), which has developed definitions and guidelines for Māori data sovereignty and Māori data governance (Te Mana Rauranga, 2018). For example, Māori data sovereignty “refers to the inherent rights and interests that Māori have in relation to the collection, ownership, and application of Māori data.” Māori data governance is “the principles, structures, accountability mechanisms, legal instruments and policies through which Māori exercise control over Māori data governance” (Te Mana Rauranga, 2018).

Informed by the foundational work from Te Mana Rauranga and the Global Indigenous Data Alliance (GIDA) this paper offers definitions for Māori nutrition data (MND), Māori nutrition data sovereignty (MNDS) and Māori nutrition data governance (MNDG) (Te Mana Raraunga, 2018; West et al., 2020).

- Māori nutrition data (MND) is any data related to kai, food, nutrition, diet, wellbeing, or food environments that is by, for or about Māori.
- Māori nutrition data sovereignty (MNDS) implies the inherent right of Māori as tangata whenua to access and control MND in line with self-determined aspirations and needs. Māori nutrition data sovereignty also implies complete control over MND to support Māori peoples, resources, environments, languages and wellbeing.
- Māori nutrition data governance (MNDG) is defined as the principles, structures, accountability mechanisms, legal instruments and policies through which Māori can exercise complete control over Māori nutrition data

Methodology

The methods and processes used in this review are underpinned and influenced by kaupapa Māori theory, mātauranga Māori/ Māori epistemologies (Reid et al., 2019), whakapapa (Māori ontologies/ Māori ways of being), Māori ways of doing and our own researcher backgrounds (Rapata, 2025). The expression of these methodological groundings can be observed through the centring of Māori data sovereignty principles as well as the foundational principle of mana whakamārama (equal explanatory power) in this review (Harris et al., 2022; Te Rōpū Rangahau Hauora a Eru Pōmare, 2002). In the context of this work, mana whakamārama is a grounding in the view that Māori have a right to quality, relevant and non-racialised food and nutrition data to support self-determined nutritional and holistic wellbeing.

This research involved the review and analysis of publicly available information and secondary data and did not involve direct contact with human participants. Ethical approval for the study was granted by the Auckland University Human Participants Ethics Committee (UAHPEC24064).

Methods

This review had three key phases: (A) survey identification, (B) the development of a kaupapa Māori analysis framework for MNDS and MNDG, and then (C) the survey review using the framework.

(A) Identifying the six surveys reviewed

These six national surveys that collect food and nutrition data from Māori were identified through conversations with Māori data experts. An overview of each survey is detailed below in [Table 1](#), which contains summaries of the history of each survey, the objectives, the nutrition data collected, and the number of Māori represented in each survey sample ([Table 1](#)).

(B) Developing a kaupapa Māori food and nutrition data analysis framework

The kaupapa Māori food and nutrition data analysis framework was developed based on the Māori data sovereignty principles and Māori data audit tool from Te Mana Raraunga (Te Mana Raraunga, 2016, 2018). The framework consists of six Māori data sovereignty principles, and was used to guide a critique of past health surveys that include Māori food data. [Table 2](#) further delineates the framework, into the six principles across two main streams: Māori nutrition data sovereignty (MNDS) and Māori nutrition data governance (MNDG). Descriptions of key questions and factors that pertain to each principle are listed in the framework, which enabled the assessment of survey design and outputs against each principle.

This model depicts a pathway with the six Māori data sovereignty and governance principles depicted as guiding pou (poles) on the pathway towards realising MNDS and MNDG for Māori.

The framework developed for assessing the health surveys in this project builds upon the work of Te Mana Raraunga and the Global Indigenous Data Alliance, by extending the concepts of Māori data sovereignty and Māori data governance to specifically analyse Māori food and nutrition data. The framework was developed as an assessment tool for determining how MNDS and MNDG are respected. This framework is also different to the Māori data governance model that was recently released by Te Kāhui Raraunga (Kukutai et al., 2023), as the data governance model provides guidance for system-wide governance of Māori data across public sectors. In contrast, the framework developed in this project is designed specifically for Māori food and nutrition data within specific projects and contexts and was developed before the Māori data governance model was released by Te Kāhui Raraunga.

(C) The survey review using the framework

The framework outlined above was used to review and critique publicly available documents (e.g., published results, websites, methodology reports) from the six surveys. For each framework principle, surveys were reviewed, assessed and scored against whether they met the principles' criteria under both MNDS and MNDG. Across the analysis, surveys were scored either “one” if a criterion was met, or “zero” if that criterion was not met. Where

Table 1. Overview of the six surveys included in this review

Survey	Survey Objectives	Food/Nutrition Data Collected	Percentage of Māori Participants
<p>New Zealand Health Survey (NZHS) Annual monitor of population health and wellbeing that began in 1992/93. The Ministry of Health collects information on health risk, protective factors and health service utilisation through the NZHS.</p>	<ol style="list-style-type: none"> 1. Provide an evidence base to inform health system funding, policy, programmes, and advocacy with a focus on long-term priorities. 2. Monitor and research population health status and the prevalence of key health behaviours and risk factors. 3. Monitor barriers to access and use of health care services, including health service user experience. 4. Provide ability to carry out robust statistical analysis and enable linkage to other data collections to address wider information needs. 	<p>Adult nutrition data</p> <ul style="list-style-type: none"> • Daily fruit and vegetable intake • Daily alcohol intake <p>Child nutrition data</p> <ul style="list-style-type: none"> • Exclusive breastfeeding at 4 months and 6 months • Introducing solid food before 4 months and 6 months • Fruit and vegetable intake • Breakfast eaten every day • Fizzy drink intake <p>Other:</p> <ul style="list-style-type: none"> • Anthropometry (height, weight, waist circumference) • Blood pressure • Household food security • Dietary habits 	18% (2021/22 survey)
<p>Health and Lifestyles Survey A national in-home health survey of New Zealand adults aged 16 years and over. A biennial monitor, carried out since 2008 (Te Hiringa Hauora Health Promotion Agency, 2021). This survey is now conducted by Te Whatu Ora Health New Zealand.</p>	<p>Conduct nationwide, face-to-face interviews to monitor short-term and long-term societal changes in behaviours, attitudes, and knowledge on a range of health and lifestyle topics, including food and drink, smoking, vaping, gambling, wellbeing, and being out in the sun.</p>	<ul style="list-style-type: none"> • Fruit and vegetable intake • Days/week main meal is eaten at home • Days/week main meal is eaten outside home • Cooking methods • Meal planning • Where food information is sought • Where food is bought from (i.e. grocery store, markets, convenience store, café, bar, petrol station) • Influences on food decisions (i.e. purchase drivers) 	14.3% (weighted ethnicity data from the 2020 survey)
<p>2008/09 New Zealand Adult Nutrition Survey The most recent national adult nutrition survey was conducted by the Ministry of Health in 2008/09. National nutrition surveys have not been conducted regularly. Only the reports and data from the 2008/09 survey are included in this study due to the lack of continuity between the previous national surveys in timeframes, management, and assessment questions.</p>	<p>The 2008/09 New Zealand Adult Nutrition Survey collected self-reported information on individual eating habits and dietary behaviours associated with diet quality and nutrition-related health status. The survey also included an optional physical examination component comprising anthropometric measures. This information is collected and intended to monitor Ministry of Health nutrition policies, programmes, and inequities.</p>	<ul style="list-style-type: none"> • Individual dietary habits (breakfast, intake of specific foods, fruit and vegetable intake, milk, butter, salt, trimming fat, food product choices, takeaways, fizzy drinks, energy drinks, vitamin/supplements, dietary supplement use) • Energy and nutrient intake • Dietary sources of nutrients • Household food security • Anthropometry • Blood pressure • Biochemical indicators of nutritional health (cholesterol) 	22%
<p>Te Kupenga Te Kupenga is a post-censal survey of the social, cultural, and economic wellbeing of Māori in New Zealand, including information from a Māori cultural perspective. Te Kupenga was first run in 2013, with most of its content retained for the 2018 Survey. Statistics New Zealand is responsible for the national census and any post-censal surveys.</p>	<p>The survey provides key statistics on four areas of Māori cultural wellbeing:</p> <ul style="list-style-type: none"> • wairuatanga (spirituality) • tikanga (Māori customs and practices) • te reo Māori (the Māori language) • whanaungatanga (social connectedness). 	<p>Data within the 'Kaitiakitanga' section includes information relevant to food and nutrition data, including:</p> <ul style="list-style-type: none"> • growing own fruit or vegetables • accessing traditional food sources • household recycling composting • accessing other materials for use in traditional practices • looking after cultural sites of importance 	100%

Survey	Survey Objectives	Food/Nutrition Data Collected	Percentage of Māori Participants
		<ul style="list-style-type: none"> taking part in activities to look after the environment involvement in iwi/hapu environmental planning or decision-making groups kaitiakitanga activities are undertaken with. 	
<p>Growing Up in New Zealand (GUiNZ) study <i>The GUiNZ study is the country's largest contemporary longitudinal study in child development. It was officially launched in 2008 and began antenatal data collection in 2009 on more than 6,000 pregnant women.</i> <i>The children born into this study have been followed since birth to produce data which has informed many research studies, reports, and policy briefs which contribute to a growing body of knowledge that seeks to improve wellbeing and early childhood experiences.</i> The GUiNZ study is currently hosted by the University of Auckland and is primarily funded by a consortium of New Zealand government agencies, led by the Ministry of Social Development and the Ministry of Health.</p>	<p><i>The overall objective of this study is to provide robust, population-relevant, evidence-based data to inform public policy for all current New Zealand children and their families.</i></p>	<ul style="list-style-type: none"> 2009 antenatal data collection: Mothers' behaviours related to diet in pregnancy 2012 Now We Are Born data collection: Parental feeding intentions, breastfeeding, formula feeding, food and beverage consumption at nine months 2017 Now We Are Four data collection: Body weight and BMI are highlighted as key nutrition-related issues 2018 research in collaboration with the Ministry of Health: Research using GUiNZ data looked at whether Kiwi families were meeting national food and nutrition guidelines 2021 research into changes in eating behaviours and attitudes during Covid-19 lockdowns 	24% Māori
<p>Youth19 Rangatahi Smart Survey (Youth19) <i>Youth19 is the most recent survey from the Youth2000 series that began in 1999. Youth19 is the survey in focus for this analysis and was led by researchers across the University of Auckland, Victoria University of Wellington, University of Otago, and Auckland University of Technology.</i></p>	<p><i>Youth19 collected data from New Zealand high schools, kura kaupapa Māori, and teen parent units on the core Youth2000 questions as well as emerging topics such as social media and vaping. Researchers are currently working on analysing this data to produce reports and publications to inform schools and policy makers with supports for rangatahi.</i></p>	<ul style="list-style-type: none"> Food security – parents not having enough money for food Food security – not having enough money for food as a barrier to attending school Body weight – happy with body weight Sharing a meal with family living in the same house 	28% (2019 survey)

Note. Many of the survey descriptions and survey objectives listed here are taken straight from survey documentation.

there are two criteria for a principle, both criteria need to be met for the principle to be met. Therefore, surveys were scored out of a possible 20 points.

As this tool and model are novel, it has not yet been tested or applied in other contexts. The scoring process was conducted by the primary researcher and was subsequently reviewed in detail through supervisory input. Given that the criteria were binary (“yes/no”), there was minimal scope for interpretative variation. Therefore, additional independent or blinded scorings was not considered necessary for this stage of development. The review was completed between March and December 2022.

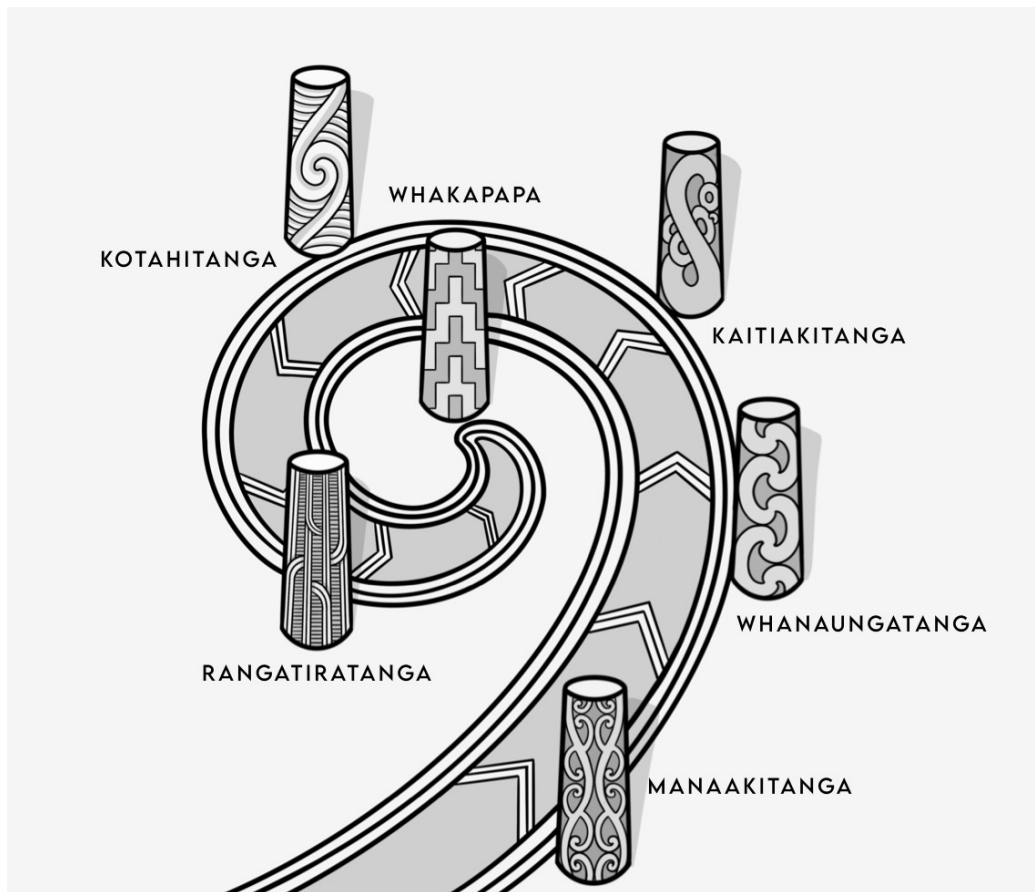


Figure 1. A visual model of the kaupapa Māori food and nutrition data analysis framework

Results

[Table 3](#) contains a concise summary of the overall review outcomes. For example, for each survey and within each kaupapa Māori principle, the numbered criteria for MNDS and MNDG are depicted. Red squares indicate that the survey did not meet the criteria, and green squares indicate that the survey did meet the respective criteria. [Table 3](#) should be read using the framework in [Table 2](#) and [Figure 1](#) as a guide.

Each survey is scored out of 20 in accordance with MNDS and MNDG using the kaupapa Māori nutrition data analysis framework. These scores are also presented in relation to the percentage to which the survey met the criteria. The lowest-scoring surveys were the Health and Lifestyles Survey and the 2008/09 New Zealand Adult Nutrition Survey, which both had a 1/20 (5%) score. The New Zealand Health Survey had the next lowest score with 2/20 (10%). The Te Kupenga post-censal survey had the next highest score with 7/20 (35%), and the Growing up in New Zealand study scored the highest with 9/20 (45%). The Youth19 survey scored the highest with 12/20 meeting MNDS and MNDG criteria at 60%.

[Table 4](#) displays a summary of principled results – that is, the fraction and percentage to which each kaupapa Māori principle was met for MNDS and MNDG across the entire analysis of all six surveys. For principles with two

Table 2. Tabulated criteria within the kaupapa Māori food and nutrition data analysis framework.

Principles	MNDS Assessment Criteria
Rangatiratanga <i>Self-determination:</i> Māori have rights to relevant nutrition data that empowers sustainable self-determination.	1. Do the survey objectives prioritise Māori data that represents Māori priorities? 2. Is the data focused on environmental, systemic, and historical factors and social determinants of wellbeing (as opposed to individual nutritional behaviours)?
Whakapapa <i>Context:</i> The whakapapa of the data should be evident.	3. Is ethnicity captured in line with the standard Stats NZ ethnicity question and measured according to the Stats NZ ethnicity analysis guidelines, and is there evidence of data disaggregation by iwi? 4. Do Māori determine what data is collected from Māori respondents/communities?
Whanaungatanga <i>Balancing rights:</i> Rights, risks, and benefits to Māori nutritional wellbeing need to be in balance.	5. Is there evidence that Māori participants are given information about what their rights are as tangata whenua in participating in the survey/study - i.e. are the specific rights and risks of participation as Māori explained? 6. Is the compensation adequate for the time spent and the data that is shared?
Kotahitanga <i>Benefit:</i> Māori have rights towards a collective benefit that supports nutritional wellbeing of Māori whānau, communities, hapū, and iwi.	7. Does the data align with Māori views and philosophies regarding kai and hauora for collective benefit? 8. Is the survey adaptable to the changing data needs and aspirations of Māori?
Manaakitanga <i>Respect & consent:</i> The collection, use, and publication of Māori nutrition data should uphold the mana of the whānau and individuals the data represents (including free, prior and informed consent).	9. Does the data uphold the mana of the individuals and whānau who contribute to the survey? - e.g. Are ethnic comparisons made without the necessary backgrounds and contexts for the data and inequities? 10. Does the survey support free, prior and informed consent?
Kaitiakitanga <i>Guardianship:</i> Māori nutrition data should be derived, stored, and transferred in a way that supports Māori individuals, hapū, and iwi to exercise kaitiakitanga over Māori data.	11. Is there evidence of tikanga Māori, kawa, or mātauranga Māori informing the survey protocols, data processing, or dissemination?
Principles	MNDG Assessment Criteria
Rangatiratanga <i>Control & jurisdiction:</i> Māori have rights to exercise control over Māori data and Māori data ecosystems.	12. Is there explicit visibility of Māori governance and control over Māori data?
Whakapapa <i>Data disaggregation & future use:</i> Māori have rights to data systems that are adaptable to changing needs and aspirations.	13. Is the survey able to support the changing data needs of Māori and protect against future harm?
Whanaungatanga <i>Visibility & accountability:</i> The individuals and organisations who govern the surveys/studies have obligations to be visible and accountable to the Māori communities they receive data from.	14. Is there evidence that participants are given details on how their personal information is collected, analysed, and managed and who is responsible for this (i.e. support for whanaungatanga between the survey participants and organisers)? 15. Is there visibility and accountability of who is in governance positions over the survey/study data, and therefore responsible and answerable to participants and stakeholders?
Kotahitanga <i>Collective:</i> Relationships between Māori and non-Māori are reflective of partnership and power-sharing.	16. Are there details of how true partnership between Māori and non-Māori, grounded in Te Tiriti, is realised within the survey/study governance? 17. Does the governance relationship between Māori and non-Māori support the management of Māori data in line with common or shared goals?
Manaakitanga <i>Protection:</i> Data governance structures and protocols within the surveys must support the ethical use of Māori nutrition data.	18. Is there evidence within the publicly available survey documents (i.e. documents with details of survey protocols, procedures, and governance structures) that demonstrates the ethical use of Māori nutrition data as set out and determined by Māori?
Kaitiakitanga <i>Ethics & restrictions:</i> Māori data should be stored and transferred in a way that enables Māori continual control over, and access to, Māori nutrition data.	19. Are Māori participants given culturally specific information, support, and guidance in line with cultural values to make well informed decisions about consent to participate in the survey/study? 20. Is there detail of how Māori data is stored and transferred in a way that enables Māori continual control over, and access to, Māori nutrition data?

criteria/questions, both criteria had to be met for the principle to meet the overall principle criteria. The percentage score indicates the degree to which each principle was minimally honoured across the analysis of all six surveys.

Table 3. Overview of review scores for MNDS and MNDG

	New Zealand Health Survey		Health and Lifestyles Survey		2008/09 New Zealand Adult Nutrition Survey		Te Kupenga		GUiNZ Study		Youth19	
	MNDS	MNDG	MNDS	MNDG	MNDS	MNDG	MNDS	MNDG	MNDS	MNDG	MNDS	MNDG
Rangatiratanga	1	12	1	12	1	12	1	12	1	12	1	12
	2		2		2		2		2		2	
Whakapapa	3		3		3		3		3		3	
	4	13	4	13	4	13	4	13	4	13	4	13
Whanaungatanga	5	14	5	14	5	14	5	14	5	14	5	14
	6	15	6	15	6	15	6	15	6	15	6	15
Kotahitanga	7	16	7	16	7	16	7	16	7	16	7	16
	8	17	8	17	8	17	8	17	8	17	8	17
Manaakitanga	9	18	9	18	9	18	9	18	9	18	9	18
	10		10		10		10		10		10	
Kaitiakitanga	11	19	11	19	11	19	11	19	11	19	11	19
		20		20		20		20		20		20
Total scores	2/20 (10%)		1/20 (5%)		1/20 (5%)		7/20 (35%)		9/20 (45%)		12/20 (60%)	

Table 4. The fractions and percentages to which each kaupapa Māori principle was met for MNDS and MNDG

	MNDS	% 'yes' across 6 surveys	MNDG	% 'yes' across 6 surveys
Rangatiratanga	2/6 surveys	33%	1/6 surveys	17%
Whakapapa	0/6 surveys	0%	2/6 surveys	33%
Whanaungatanga	0/6 surveys	0%	2/6 surveys	33%
Kotahitanga	2/6 surveys	33%	0/6 surveys	0%
Manaakitanga	0/6 surveys	0%	0/6 surveys	0%
Kaitiakitanga	1/6 surveys	17%	0/6 surveys	0%

Where principles were considered, rangatiratanga and kotahitanga for MNDS were the principles most supported across the analysis of the six surveys (33%). With regards to MNDG, whakapapa and whanaungatanga were the most respected principles in practice (33%). However, multiple principles were not evident through the analysis across any of the six surveys; this included whanaungatanga, whakapapa and manaakitanga concerning MNDS. Overall evidence of MNDG across the surveys was poor, as three out of the six Kaupapa Māori principles scored 0 (kotahitanga, manaakitanga, and kaitiakitanga)

Discussion

This research also highlights the intrinsic link between food data, discourse on Māori nutritional health and health professional practice. In addition to issues of consultation versus governance, questioning food assessment and monitoring tools and the complexity of cultural tokenism versus cultural inclusion in national health surveys.

Food data, discourse and health professional practice

The review demonstrates that when Māori food data is decontextualised, it is likely to support a 5 D's approach to analysis (Walter, 2016). The problematic nature of these decontextualised 5D narratives has been identified by other Māori researchers, including the work by Isaac Warbrick and colleagues on the biopolitics of biomass for Māori (Warbrick et al., 2016) as well as the work by Ashlea Gillon on fatness and mana tinana for Māori (Gillon, 2020; Gillon et al., 2022). Therefore, while methods, tools and fields of quantitative data collection have evolved, the underlying assumptions across these methods and tools have essentially remained grounded in positivist, colonial ontologies and epistemologies (Paine et al., 2021; Zuberi & Bonilla-Silva, 2008).

The food and nutrition data collected in national health surveys informs clinical standards of practice and nutritional guidelines that form the foundations of Western clinical health, nutrition and dietetics practices in Aotearoa New Zealand (Korohina, 2023). Health professionals can be problematic perpetrators of this individualised, deficit discourse surrounding Māori nutritional health inequities that is created by Western food and

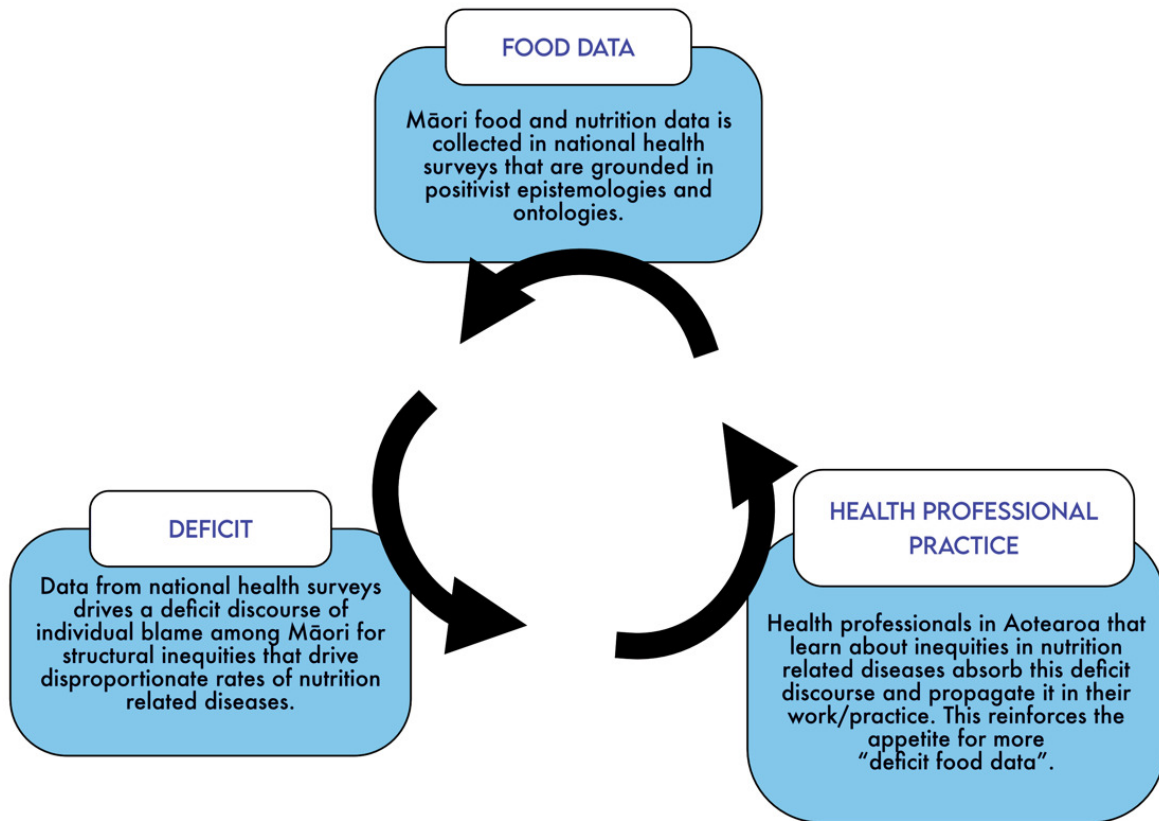


Figure 2. The positive feedback loop of deficit food data and health professions

nutrition data systems. This is because health professionals, especially those trained in nutrition, dietetics, public health and medicine, are educated in Western nutritional health and diseases based on food and nutrition data, including data from the national health surveys assessed in this study (Hantke, 2022). Therefore, it may be deduced that food data from national health surveys drives a racialised deficit discourse of Māori nutritional wellbeing, which is, in turn, perpetuated by the education curricula and standards of practice among health professionals. This phenomenon is depicted as a positive feedback loop in Figure 6.1.

This phenomenon is evidence of deep-rooted institutional racism in data systems and public health nutrition fields that leads to food data being collected on and about Māori rather than data collected by Māori, for Māori and with Māori. This research asserts that work on decolonising Māori nutrition data cannot be done without humanising the food-data ecosystems that influence health professional practice in Aotearoa New Zealand (Tuck & Yang, 2013). Therefore, the following sub-sections present areas of food and nutrition monitoring that require further advancement to support humanisation and decolonisation in national food-data ecosystems.

Consultation ≠ Governance

Consultation on Māori data issues does not and cannot equate to Māori data sovereignty or governance (Kukutai & Cormack, 2021). Consultation and governance were assessed in the survey review using the criteria associated with the principle of rangatiratanga. Specifically, the explicit visibility of Māori control over Māori data ecosystems was assessed, in addition to the presence of data that aligned with Māori-determined survey priorities. While some surveys demonstrated that they aligned with some aspects of rangatiratanga, there were clear areas where there was no alignment. However, the space between consultation with Māori and Māori data governance is not a linear process (Kukutai & Cormack, 2021). As Tahu Kukutai and Donna Cormack (2021) have stated, “the fullness of Indigenous data sovereignty cannot be realised within the architecture of the colonial settler state” (p.31).

Therefore, it is contended that national health surveys that collect food and nutrition data from Māori could align the survey objectives, methods and methodologies with the requirements of the survey review framework presented in this project to collect, store and produce food data in a manner that is safer and more relevant for Māori. The Māori Data Governance model developed by Te Kāhui Raraunga could also be used to support structural changes and relationship building to better enable Māori involvement to shift more from consultation to governance (Kukutai et al., 2023). However, Māori data consultation cannot be a bridge to fully realising Māori nutrition data governance. Therefore, developing kaupapa Māori food-data surveys and systems is a requirement for working towards MNDS and MNDG at local and national levels. These considerations also led to critiques of the assessment methods often used in national nutrition surveys and the logics embedded in these tools.

Questioning food assessment and monitoring methods

This research questions how relevant and appropriate current food and nutrition measurement and monitoring methods are for Māori, which are concerns that have been raised by other researchers (Korohina, 2023; Shelling, 2024). Common methods of food monitoring and assessment are called dietary assessment tools (DATs) and are designed to be used at individual and population levels to assess nutrient intakes and dietary habits. The data collected using DATs informs clinical health practice, epidemiology research, nutrition guidelines, population health interventions and policies (Cade, 2017).

A recent master’s thesis by Māori nutritionist Erina Korohina sought to understand the barriers and enablers to administering DATs among Māori by interviewing Māori dietitians, nutritionists, and researchers who have training and experience in using DATs (Korohina, 2023). In her master’s work, Erina Korohina articulated that DATs are Western methods for monitoring

food intake and nutritional health outcomes from a positivist lens and that inaccuracies occur when DATs are developed and administered from a different epistemological lens to the individuals and populations that fill them out (Korohina, 2023). These inaccuracies in dietary assessment lead to discrepancies between the lived realities of the individuals and populations who are assessed using these methods, and the quantitative nutrition data outcomes that influence clinical decisions, research outcomes and health policies (Korohina, 2023). This critique of DATs is important in the context of national health surveys that collect food and nutrition data from Māori, as these surveys commonly use DATs that have been deemed largely inappropriate for Māori (Korohina, 2023). This indicates that developing culturally informed dietary assessment tools for food and health surveys is a necessary step towards reducing the ongoing reproduction of deficit nutrition data (Korohina, 2023).

Cultural tokenism versus cultural inclusion

A key kaupapa Māori principle in the framework developed for the MNDS and MNDG review is kaitiakitanga. In this context, kaitiakitanga relates to “how data is derived, stored and transferred in a way that supports Māori control over Māori data” (Te Mana Raraunga, 2018). Within the framework, a key consideration for MNDS under kaitiakitanga is whether there is evidence of tikanga Māori, kawa or mātauranga Māori informing the survey protocols, data processing and dissemination.

During the assessment of the six national health surveys analysed in this study, the process of determining the scores for kaitiakitanga revealed a discord between pushing for the inclusion of cultural principles and priorities within national health surveys and the risks of cultural tokenism. For example, the inclusion of tikanga Māori and mātauranga Māori through Māori principles and priorities supports the protection of such data under Māori-led culturally-determined guidelines. However, on the other hand, there is a great risk for documentation and policies for including Māori principles and priorities within health surveys becoming “tick box” items that lead to “non-performative” (Ahmed, 2012) actions, and even worse, the watering down or appropriation of tikanga Māori and mātauranga through the ongoing control of colonial capitalist data systems. Donna Cormack and Tahu Kukutai, in discussing Māori data sovereignty, have described the essence of this risk, being that Māori will be co-opted into supporting and approving our ongoing surveillance (Kukutai & Cormack, 2021).

These are very pragmatic concerns given that many of the surveys in this review are controlled by the Crown, and all of the surveys are organised and led through Crown entities. Therefore, in response to these risks, the structures of data advocacy and activism must be considered to extend the

work of Māori data sovereignty as it pertains to MNDS and MNDG without inadvertently propping up cultural tokenism in an effort to support cultural inclusion and data safety.

Conclusion

This review critically assessed the alignment of six national health surveys with kaupapa Māori principles of Māori nutrition data sovereignty (MNDS) and Māori nutrition data governance (MNDG), exposing systemic shortcomings in existing data practices. The findings reveal that the current food and nutrition data systems in Aotearoa New Zealand largely fail to serve Māori aspirations for self-determination, perpetuating colonial and racialised narratives through decontextualised and individualised data framings. Consultation mechanisms, often conflated with governance, fall short of enabling rangatiratanga over Māori nutrition data. Furthermore, the widespread use of Western dietary assessment tools (DATs) underscores an epistemological mismatch that risks misrepresentation and deficit framing of Māori nutritional realities.

Addressing these issues demands a dual approach involving harm mitigation within existing state-run data systems and the active creation of kaupapa Māori food-data ecosystems. Such systems must be grounded in mātauranga Māori, resist cultural tokenism, and support Māori collectives to exercise full kaitiakitanga over their data. This paper ultimately advocates for the use of the MNDS and MNDG framework developed in this project as a tool for reducing the harm of food and nutrition data collected in national health surveys. In addition to developing Indigenous-led methodologies and infrastructures that position Māori at the centre of decisions about how food and health data are defined, collected, and used, in order to restore relational balance and foster genuine nutritional health equity.

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Glossary

Aotearoa – Indigenous Māori name for New Zealand
Hapū - subtribe
Hauora - health, wellbeing
Iwi – tribe
Kai - food, meal
Kaitiakitanga – guardianship, stewardship
Kaupapa - subject/topic
Kawa – Māori protocols & etiquette
Kotahitanga – unity, solidarity, collective benefit
Mana – pride, prestige, power
Manaakitanga – respect, hospitality, kindness
Mana motuhake -
Mana whakamārama – equal explanatory power
Māori - Indigenous person of Aotearoa/New Zealand
Mātauranga – Indigenous Māori knowledge
Pou - pole/post
Rarauka/Raraunga - data, database
Rangatiratanga – self-determination
Tangata whenua - people of the land, Indigenous
Te Kāhui Raraunga – national Māori data governance trust
Te Mana Raraunga – national Māori data sovereignty network
Te reo Māori – the Māori language
Tikanga – Māori customs and protocols
Tinana – physical body
Wairuatanga - spirituality
Whakapapa – heritage, genealogy
Whanaungatanga – kinship, social connectedness

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REFERENCES

- Ahmed, S. (2012). *On being included: Racism and diversity in institutional life*. Duke University Press. <https://doi.org/10.1515/9780822395324>
- Cade, J. E. (2017). Measuring diet in the 21st century: Use of new technologies. *Proceedings of the Nutrition Society*, 76(3), 276–282. <https://doi.org/10.1017/S0029665116002985>
- Cormack, D. (2010). *The practice and politics of counting: Ethnicity data in official statistics in Aotearoa/New Zealand*. Te Rōpū Rangahau Hauora a Eru Pōmare. <http://www.ethnicity.maori.nz>
- Cormack, D., Stanley, J., & Harris, R. (2018). Multiple forms of discrimination and relationships with health and wellbeing: Findings from national cross-sectional surveys in Aotearoa/New Zealand. *International Journal for Equity in Health*, 17, Article 26. <https://doi.org/10.1186/s12939-018-0735-y>
- Gillon, A. (2020). *Mana tinana: An exploration of fatness and Māori identity* [Master's thesis]. University of Auckland.
- Gillon, A., Cormack, D., & Borell, B. (2022). Whakapapa, mana and fatness: An Indigenous critique of obesity discourse. *Fat Studies*, 11(1), 15–29. <https://doi.org/10.1080/21604851.2021.1892857>
- Hantke, D. (2022). Cultural competence or cultural safety? Decolonising dietetic education in Aotearoa. *New Zealand Journal of Dietetics*.
- Harris, R., Paine, S. J., Atkinson, J., Robson, B., King, P. T., Randle, J., Mizdrak, A., & McLeod, M. (2022). We still don't count: The under-counting and under-representation of Māori in health and disability sector data. *New Zealand Medical Journal*, 135(1567), 54–78. <https://doi.org/10.26635/6965.5849>
- Kirkcaldy, N. (2023). Adjustment to chronic illness: A qualitative synthesis of studies and best practice guidelines. *MAI Journal*, 12(2), 207–218. <https://doi.org/10.20507/MAIJournal.2023.12.2.10>
- Korohina, E. (2023). *Tōku kai, tōku oranga: Exploring barriers and enablers to dietary assessment among Māori* [Master's thesis]. Massey University.
- Kukutai, T., & Cormack, D. (2021). Mana motuhake in official statistics: Māori Data Sovereignty in Aotearoa. *Statistical Journal of the IAOS*, 37(1), 29–40. <https://doi.org/10.3233/SJI-210774>
- Kukutai, T., Cormack, D., & Te Kāhui Raraunga. (2023). *Māori Data Governance Model*. Te Kāhui Raraunga.
- Kukutai, T., & Taylor, J. (2016). *Indigenous data sovereignty: Toward an agenda*. ANU Press.
- Mahuika, R. (2008). Kaupapa Māori theory is critical and anti-colonial. *MAI Review*, 2008(3), Article 4. <https://www.journal.mai.ac.nz/system/files/maireview/153-877-1-PB.pdf>
- Mutu, M. (2017). *Weeping Waters: The Treaty of Waitangi and constitutional change* (pp. 13–40).
- Paine, S.-J., Cormack, D., Reid, P., Harris, R., & Robson, B. (2021). Kaupapa Māori-informed approaches to support data rights and self-determination. In T. Kukutai & J. Taylor (Eds.), *Indigenous data sovereignty and policy* (pp. 187–203). Routledge. <https://doi.org/10.4324/9780429273957-13>
- Rapata, H. (2025). *Kai Ora, Piki Ora: Intersections of kai, race, data and identity* [Doctoral dissertation, University of Auckland]. <https://hdl.handle.net/2292/72855>

- Reid, P., Cormack, D., & Paine, S. J. (2019). Colonial histories, racism and health—The experience of Māori and Indigenous peoples. *Public Health*, 172, 119–124. <https://doi.org/10.1016/j.puhe.2019.03.027>
- Shelling, M. (2024). *Kai security: A kaupapa Māori critique and reconceptualisation of food security and food sovereignty definitions and assessment frameworks in Aotearoa* [Doctoral dissertation]. University of Auckland.
- Signal, L., Martin, J., Reid, P., Carroll, C., Howden-Chapman, P., ... Ormsby, V. K. (2007). Tackling health inequalities: Moving theory to action. *International Journal for Equity in Health*, 6(12). <https://doi.org/10.1186/1475-9276-6-12>
- Smith, G. H., & Smith, L. T. (2019). Doing Indigenous work: Decolonizing and Transforming the academy. In E. A. McKinley & L. T. Smith (Eds.), *Handbook of Indigenous Education* (pp. 1075–1101). Springer Nature Singapore. https://doi.org/10.1007/978-981-10-3899-0_69
- Te Mana Raraunga. (2016). *Māori Data Audit Tool*. <https://www.temanararaunga.maori.nz>
- Te Mana Raraunga. (2018). *Principles of Māori Data Sovereignty*. <https://www.temanararaunga.maori.nz>
- Te Rōpū Rangahau Hauora a Eru Pōmare. (2002). *Mana Whakamārama - Equal explanatory power: Māori and non-Māori sample size in national health surveys*. Wellington School of Medicine and Health Sciences, University of Otago. https://www.fmhs.auckland.ac.nz/assets/fmhs/Te%20Kupenga%20Hauora%20Māori/docs/Equal_explanatory_power.pdf
- Tuck, E., & Yang, K. W. (2013). R-words: Refusing research. In *Humanizing research* (pp. 223–248). SAGE Publications.
- Walter, M. (2016). Data politics and Indigenous representation in Australian statistics. In T. Kukutai & J. Taylor (Eds.), *Indigenous data sovereignty: Toward an agenda* (pp. 79–98). ANU Press.
- Warbrick, I., Dickson, A., Prince, R., & Heke, I. (2016). The biopolitics of Māori biomass: Towards a new epistemology for Māori health in Aotearoa/New Zealand. *Critical Public Health*, 26(4), 394–404. <https://doi.org/10.1080/09581596.2015.1096013>
- West, K., Hudson, M., & Kukutai, T. (2020). Data ethics and data governance from a Māori world view. In L. George, J. Tauri, & L. T. Ata (Eds.), *Indigenous research ethics: Claiming research sovereignty beyond deficit and the colonial legacy*. Emerald Group.
- Zuberi, T. (2000). *Thicker than blood: How racial statistics lie*. University of Minnesota Press.
- Zuberi, T., & Bonilla-Silva, E. (2008). *White logic, white methods: Racism and methodology*. Rowman & Littlefield. <https://doi.org/10.5040/9798216386278>