

Understanding Pasifika youth and the obesogenic environment, Auckland and Wellington, New Zealand

Ridvan Tupai-Firestone, Hana Tuisano, Moana Manukia, Keawe‘aimoku Kaholokula, Sunia Foliaki, Te Kani Kingi, Rozanne Kruger, Bernhard Breier, Angelique O’Connell, Barry Borman, Lis Ellison-Loschmann

ABSTRACT

AIM: In New Zealand, the burden of obesity is greatest among Pacific people, especially in children and adolescents. We investigated the factors of the obesogenic environment that were indigenous to Pasifika youths’ social-cultural context, their food purchasing behaviours, and associated anthropometric measures.

METHODS: An exploratory study of 30 Pasifika youth aged 16–24 years in Wellington and Auckland, New Zealand.

RESULTS: A large proportion of the participants were obese (mean body mass index: 31.0kg/m²; waist-to-hip ratio: 0.84; waist-to-height ratio: 0.6), suggesting that the future health and wellbeing trajectory of the studied Pasifika youth is poor. Purchasing behaviours of food and snacks over a 7-day period provided meaningful insights that could be a useful future research tool to examine the role of their physical environment on food access and availability.

CONCLUSIONS: From this exploratory study, we highlight the following: (i) the future health trajectory of Pasifika youth is poor. Developing the youths’ healthy lifestyle knowledge may lend itself to developing culturally relevant intervention programmes; (ii) identifying the enablers and barriers within the Pasifika context of an obesogenic environment can provide very useful information; (iii) use of spatial analysis using purchased food receipts adds to the current knowledge base of obesity-related research, although this was an exploratory investigation. We need to address these highlights if we are to reverse the trend of obesity for this population.

On a global scale, obesity is the single biggest risk factor contributing to poor health outcomes, reduced quality of life, increased health care costs and is a major contributor to chronic disease and disability (eg, type 2 diabetes mellitus).¹ New Zealand has one of the highest obesity rates in world. Three in ten adults (aged 15+ years), or 31% of the total population of New Zealand were obese (ie, having a body mass index (BMI) kg/m² >30).² Pacific people residing in New Zealand have the highest prevalence of obesity based on the BMI definition (68%), and within the adolescent age group (15–24 year olds), 21% were classified as being obese, and the rate increases with age.² Thus, in New Zealand, obesity disproportionately affects Pacific people, compared to the general population.

Pacific people comprise approximately 7% of the total population in New Zealand.³ Much of the previous work has been conducted among older Pacific people, who have established high risk factors for a range of medical conditions such as stroke, cardiovascular disease, and type 2 diabetes mellitus, for which obesity is a risk factor. However, there is a growing amount of work conducted among adolescents and youth, who span a wide age range (aged 8–22 years).^{4,6} There is scant research that has focused on young Pacific people in the 16–24 year age group, who comprise 19% of the total Pacific population.⁷ For this paper, aligned to the New Zealand Census data, we have defined youth according to the 16–24-year-old range. This is an important age group, because they have the

independence and capacity to understand their own, as well as their families, social realities,^{8,9} and if given the opportunity, they could make a unique contribution to addressing issues relating to their social and cultural environment, which may have an important impact on pathways contributing to obesity. In this paper, we proposed to take a social-ecological approach examining obesity that includes environmental influences, which has been defined, according to Swindburn and Eggers (1999), as: “the sum of influences that the surroundings, opportunities, or conditions of life have on promoting obesity in individuals or populations”.¹⁰ The current study focused specifically on the social (including parts of the ecological), cultural and historical pathways, where the biggest gap in the knowledge base was recognised.¹¹

Previous research has examined how social changes could affect the health and well-being of young people aged 13–18 years, in particular, the role of ‘family meals’.¹² Results from the Youth’07 Survey highlighted similar findings from international evidence, that shared family meals provide: opportunities for building family relationships;¹³ consumption of healthy food;^{13,14} and protection against indicators of depression or risk-taking behaviours.¹⁵ Approximately 30% of Pacific adolescents reported infrequently sharing meals with their families, compared to 20% of European adolescents, and this was partially explained by economic deprivation.¹⁶ However, the national survey results do not provide any mechanisms for understanding how, who, and why, or the number of shared meals required, in order to promote better health and well-being, and protection against obesity. The survey is also limited in understanding the Pacific culture of food and family structure (for example, traditionally, Pacific children tend to eat separately from the adults). Few reported studies have investigated the role of the social-cultural determinants of the obesogenic environment, which is defined as: “physiological, behavioural, and environmental factors such as social marketing strategies of persuasive and pervasive food, that drive the obesity environment”.¹⁷ To our knowledge, there is limited data on the social-cultural determinants (eg, social-peer

interactions and support, family relationships, racism and discrimination) of overall health and well-being in relation to socio-economic position, cultural nativity, and acculturation, particularly in the 16–24-year-old age group, and among young Pacific people. Social-cultural determinants were highlighted by Durie,¹¹ as well as others,¹⁸ as playing a potentially important role having some causal basis in the acculturation process.

Arguably, if the biological risk factors were the only drivers of ethnic differences in all-cause mortality, then Pacific people should have the highest mortality rates.¹⁹ For the most part, investigating Pacific culture and its benefits on health is necessary, but it is often defined and investigated differently, thus making comparisons between studies difficult.^{20,21} Exploring culture and health encompassed in a broader social-ecological spectrum (eg, indigenous knowledge), may provide important information that can point to innovative ideas for intervention, be culturally acceptable for a specific age group, and actionable in relation to policy development and implementation. Indigenous knowledge encompasses life experiences developed over generations and include: culturally coded ways of communication; preservation and reproduction of the arts; genealogical ties; and close integration with the environment. Much of this knowledge is continued and sustained through churches, communal gatherings, reciprocal exchange of goods, ceremonial occasions and transference of stories and values to the younger generation.^{22,23} Due to the strong nature and structure of Pacific people and their cultures, Pasifika youth are more likely to have this indigenous knowledge embedded very early on in life and sustained through their communal and familial gatherings.

The aim of this study was to explore the social-cultural determinants of the obesogenic environment among young Pacific people aged 16–24 years living in New Zealand. The investigation included documenting lived experiences of obesity and body size, relationship of cultural values and beliefs regarding food, and the impact of these experiences as they relate to the participants. The 16–24 year age

group was selected for several reasons. It: (i) comprises approximately 19% of the total Pacific population in New Zealand⁸ and 21% of this age group are obese;²⁴ (ii) is regarded as a critical period for developing a basis for better health, and good health-promoting behaviours;⁸ and (iii) is an age group that has the capacity to take up early prevention and intervention strategies if the opportunity is available,²⁵⁻²⁹ because they have the independence to make lifestyle changes, that not only will improve their own future health status, but it will also have long-term implications for the wellbeing of future generations of Pacific peoples. The origins of this study, *Chewing the facts on fat* (CTFF), provides an overall understanding integrating knowledge drawn from social, cultural and historical data that can be translated later into actionable knowledge (eg, development of resources) specifically for Pacific people. The project received ethical approval from the Central Health and Disability Ethics Committee, New Zealand (13/CEN/22).

Methods

The current paper presents, in part, findings from the work conducted in the first phase of the study. We conducted in-depth interviews among a convenience sample of 30 Pacific participants (16–24 years). The number of interviews required for the study was based on purposive sampling, determined on the basis of theoretical saturation, which may be achieved from anywhere between 15–20 interviews.³⁰⁻³² However, we elected to conduct up to 30 interviews for each phase, which is more than sufficient as an exploratory study. The youth were recruited and invited to participate through two primary health care providers in two different locations: Wellington and Auckland, New Zealand. Both providers played an important role in the recruitment and follow-up of the participants throughout the initial part of the study. The trained research assistants, of whom were both registered nurses and youth counsellors also resided and worked at the collaborating health providers, contacted Pacific youth who: (i) self-identified as being Pacific youth between the aged 16–24 years; (ii) had one living parent and grandparent

or care-giver that was of Pacific ethnicity; and (iii) were enrolled at the participating Primary Health Organisations in Wellington or Auckland, New Zealand. From here onwards, we will refer to the young Pacific people as Pasifika youth.

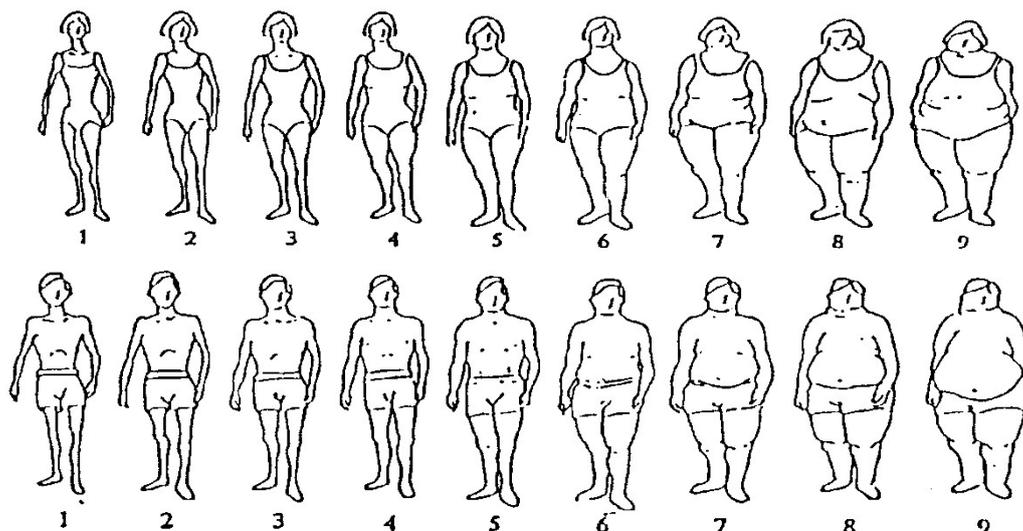
Overall, there were three phases of the study. However, for the purpose of this paper, we will be presenting the findings from phase one of the project. Phase one included a 90-minute interview by a trained Pacific research assistant. All interviews were conducted face-to-face and in English. Each participant had access to a copy of the questionnaire during the interview, so they could refer to the questions during the interview. Where possible, questions were drawn from validated and/or previously used questionnaires. The questionnaire comprised information on demography, cultural perspectives, living arrangements, and a range of health behaviours such as sleep hygiene and quality, cigarette smoking habits, diet and nutrition (over a 7-day period).

Age and ethnicity were defined and self-identified, respectively, at the time of the interview. Deprivation was assessed using the New Zealand Deprivation Index 2013 measure,³³ a small area based measure of deprivation derived from the 2013 Census, which uses nine variables (benefit income, employment, household income, communication, transport, support, qualifications, living space and home ownership) from the Census to place small area blocks on a deprivation scale from 1 to 10, with 10 representing the most deprived 10% of New Zealand areas, while 1 represents the 10% least deprived areas. For analyses, deprivation was categorised into quintiles combining deciles 1–2, 3–4, 5–6, 7–8 and 9–10.

Education achievement was dichotomised into whether participants left school with some measured national level of school qualifications (eg, NCEA) and those who obtained post-school qualifications (ie, Trade Course Certificates, Diplomas).

The research assistants measured and reported each participant's weight and height, from which BMI was determined. For this study, we used the international standard cut-offs in defining obesity.³⁴ BMI was analysed as a continuous variable, with a BMI of 25–29.9 kg/m² and ≥ 30 kg/m²

Figure 1: Somatotype body size types.



defined as being obese and overweight, respectively.³⁵ Waist-to-hip circumference was also measured, from which the waist-hip ratio (WHR) was determined, to provide a measure of central adiposity, indicating associated risk of incident cardiovascular events.³⁶ We also calculated the waist-to-height ratio (WHtR), as an adjunct measure of central obesity, which is less prone to measurement error than WHR.^{37,38}

As a novel aspect, we also collected receipts of purchased food from the participants over a 1-week period, to explore actual food purchasing behaviours, in order to obtain a snapshot of what and where Pasifika youth were spending their money. Although obtaining a snapshot of these behaviours is not a novel approach in the public health research context, the use of purchased receipts is new and different. This is the first time that a geographic information system (GIS) tool has been used to map the food receipts as a proxy measure of describing purchasing behaviours of Pasifika youth. In previous studies, geocodes of urban and residential neighbourhoods and fast-food and convenient store outlets using straight line buffers were used to examine their proximities to stores.³⁹⁻⁴² For the current study, we wanted to examine how best to use GIS and receipts as an actual measure of food purchasing behaviours within the Pasifika youths' local and residential obesogenic environment. We used the ArcGIS 10.1 tool to input the receipt information and produced depictions of purchases of food and snacks over a 7-day period, collected from the participants. The food purchases were grouped into four categories: \$100; \$25-99; \$10-24; and <\$10.

Due to the exploratory nature of this study, cultural perspectives on dietary lifestyle and influence on body size underwent thematic analyses, and the responses were grouped and coded according to the main themes drawn out from the analyses. We also grouped analogous themes of responses where open questions were asked to describe or explain beliefs and perspectives. We managed the trustworthiness of the qualitative data at phase three of the study, at a workshop, where we presented the preliminary findings of the overall project to the participants as a process of validating the content. The participants did not identify any issues or discrepancies or misleading inferences from our analysis.

Self-examination of perceived body size was investigated by utilising somatotype pictures, which was used in a previous study that was pretested among Pacific people.⁴³ They are presented in Figure 1. The participants were asked to select the image that best reflects their perceived current body size and then to select a perceived ideal body size, with a space provided for participants to explain their selections, as appropriate.

The acculturation tool used in this study was developed by researchers of the Kohala Health Research Project,⁴⁴ and it was included in this project because it is a validated tool among adult Native Hawaiians examining similar health outcomes (metabolic health problems).⁴⁴ Following the Kohala Health Research Project, we analysed the responses by grouping the summed responses into the following categories: integrated (high affiliation with Pacific heritage and mainstream culture); tradition (high

affiliation with Pacific heritage only); assimilated (high affiliation with mainstream culture only); and marginalised (low affiliation with both Pacific heritage and mainstream culture). A copy of the full questionnaire is available from the authors on request.

Results

Details of the participant's characteristics are described in Table 1. A wide range of pan-Pacific ethnic groups were represented, indicating a diversity of Pacific ethnic groups in the younger generation of Pacific peoples in New Zealand. Samoans were the largest self-identified ethnic group in this study sample. The participants presented with minor co-morbidities, with only 20% presenting with treatment of asthma symptoms. In terms of socio-economic position, almost half of the study sample resided in the highest deprivation quintile.³³

All participants lived in homes with approximately five rooms per house on average, and the number of people living in these homes ranged from one to 13 persons.

The youthfulness attribute of this study was reflected by their educational status as being predominantly school-level achievements being reported, and four of the 30 are currently attending university institutions to attain higher education status.

In describing the study participants, on average they are heavy in weight (90.5kg) and tall in height (170.4cm), thus reporting a higher BMI (range: 20.9–49.4kg/m²), and a relatively high WHR (mean: 0.8; range: 0.7–0.9) and WHtR (mean: 0.56; range 0.4–0.7). The WHO cut-off for WHR for men is ≥ 0.9 and ≥ 0.8 for women.³⁸ In our study, for the WHtR scores ≤ 0.5 is deemed healthy.³⁷

A large proportion (80%) of the participants assessed their acculturation mode as being 'integrated', indicating this study sample as having a high degree of affiliation with both their Pacific heritage and the mainstream culture.

Over 80% of the participants have strong connections with their communities, as characterised by their strong affiliation with a church group, heavily placed values in spiritual beliefs, and participation in community affairs. This is common of New Zealand Pacific and other youth (school-aged) in general.^{45,46} However, when asked if their cultural and spiritual beliefs influence the food they eat, the majority (66%) of the participants reported that their

Table 1: Distribution of participant characteristics.

Characteristics	N	%
Sex		
Male	11	36.7
Female	19	63.3
Ethnicity		
NZ European	3	10
Māori	1	3.3
Samoan	14	46.7
Cook Island Māori	3	10
Tongan	7	23.3
Niuean	4	13.3
Chinese	5	16.7
Indian	1	3.3
Other	9	30
Education		
Obtained school qualifications	22	73
Obtained qualifications since leaving school	13	43
Co-morbidities		
Asthma	6	20
Psychological problem	1	3.3%
Sleep problem	1	3.3
Other conditions: Eczema	2	6.6
NZ Dep2013 (quintiles)		
1–2	2	6.6
3–4	4	13.3
5–6	1	3.3
7–8	9	30
9–10	14	46.7
	N	Mean
Body Weight		
Weight	30	90.5kg
Height	29	170.4cm
Waist	26	95.4cm
Hip	26	113.1cm
BMI	29	31.0kg/m ²
WHR	26	0.84
WHtR	25	0.6
Domestic Environment		
Rooms in house	30	5.6
People living in house	29	5.9

Table 2: Cultural perspectives.

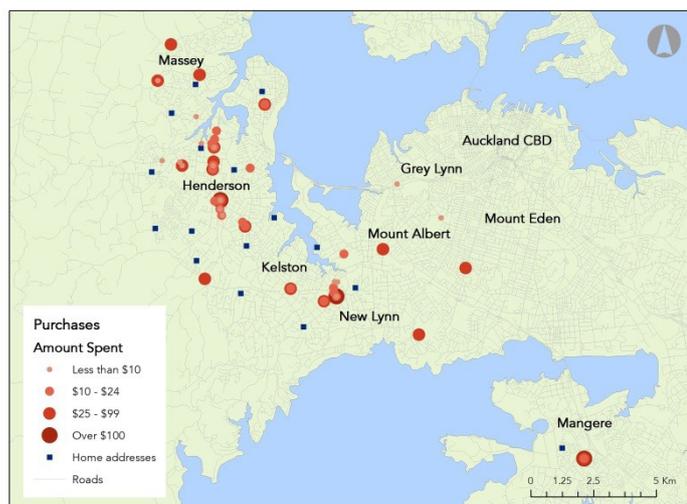
Questions	N	%
Do you have cultural-spiritual beliefs?		
Yes	25	83
No	5	16.7
Do the cultural-spiritual beliefs influence body size perceptions?		
Yes	9	30
No	20	66.7
Missing	1	3.3
Select the body size that you perceive looks most like you now?		
Size 2	4	13.3
Size 3	6	20
Size 4	9	30
Size 5	6	20
Size 6	5	16.7
Select your ideal body size?		
Size 2	7	23.3
Size 3	11	36.7
Size 4	7	23.3
Size 5	5	16.7
Acculturation scores		
Integrated	24	80
Traditional	2	6.7
Assimilated	3	10
Marginalised	1	3.3

belief systems do not have an influence on the food they eat. Six participants did not answer this question. For the remainder of participants who reported that their spiritual beliefs do have an influence, we grouped similar responses into two main themes: (i) spiritual beliefs influence food, because it is part of the Pasifika culture (n=10), personal interactions generally involve a reciprocal exchange of food (or money); and (ii) it is part of the culture of the church (n=9), including traditional activities such as, weddings, Sunday school, White Sunday (n=9).

Self-examination of 'perceived' current and ideal body sizes depicted from Figure 1, indicated that the majority of participants regarded size four as being their perceived current body size, and size three as being their perceived 'ideal' body size. A

large proportion (66.7%) of the participants agreed that their cultural beliefs do not influence body size perceptions. Only eight participants said that "being big is normal and healthy", from a Pasifika perspective. Five of these eight people reported that being big in body size is not an important social issue, and nor is it regarded as a health priority. Alternatively, other viewpoints from 22 participants reported that having a 'big body is not healthy', with a similar number (n=21) agreeing that a big body size has the propensity for poor health. A small number of the participants (n=4) supported a cultural perspective as a "way of thinking" that inhibits people's views of how health and body size are perceived. That is, cultural viewpoints can impede living a healthier lifestyle and being receptive to new knowledge, although this was not a strong indicator in this study.

Figure 2: Food purchasing patterns for Pacific youth, Auckland, New Zealand.



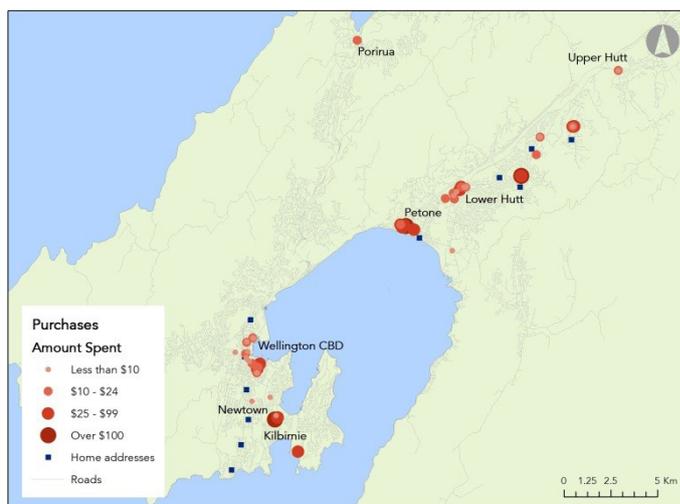
Based on the acculturation tool used in this study, the majority of the participants were reportedly: integrated (80%), followed by assimilated (10%), traditional (6.7%), and marginalised (3.3%). This indicates that for Pasifika youth in this study, most of them have equally strong affiliations to their Pasifika, and the mainstream culture.

By observing the food purchasing behaviours of Pasifika youth by entering their spontaneous and weekly food purchases, the GIS tool illustrates exploratory patterns that differ between the Auckland and Wellington-based youth, as seen in Figures 2 (Auckland) and 3 (Wellington). In particular, the Auckland youth bought food only within their immediate neighbourhood, and the Wellington youth purchased food across a diverse range of food outlets and across a larger geographic distance, in some cases over 10kms from their home address (individual data not presented here).

Discussion

The findings presented here provide interesting social-cultural perspectives of obesity from Pasifika youth in New Zealand. Many of the findings are in agreement with what has been previously reported on known obesity risk factors associated with poor health outcomes for Pacific people, in general.^{3,26,28,29} However, some important new patterns of behaviour and knowledge were found that may be beneficial for researchers to consider when developing obesity intervention and preventative strategies, particularly for populations that have a strong affiliation

Figure 3: Food purchasing patterns for Pacific youth, Wellington, New Zealand.



with their culture, regardless of being obese or having a large body size.

Before discussing these, we acknowledge that the study has some limitations, particularly as it is primarily exploratory in nature and involved a small number of study participants. However, in this discussion segment, we would like to highlight the knowledge gained from this study.

Although, the quantitative findings are subjected only to the participants of this study, we wanted to observe how participants with high or low WHtR rated across the different modes of acculturation. The results showed that 55% of participants with an integrated acculturation mode had a high WHtR (>0.5), indicating that this group of Pasifika youth have an unequivocally strong affiliation with the mainstream and Pasifika cultures. The strong connection towards the mainstream culture was expected, particularly as 50% of Pasifika children and youth are born in New Zealand.³ An interesting aspect of this finding is to determine whether the move away from traditional Pasifika cultures alone is due to acculturation, which may play an important role in weakening traditional values and lifestyle.⁴⁷ This is important, because it is thought that indigenous Pasifika cultures could provide protection for optimal health and wellbeing for their own people. For example, according to the New Zealand Mental Health Survey (Te Rau Hinengaro), Pacific-born people who migrated to New Zealand at an older age (18+ years) have a lower prevalence of mental disorders, compared to New Zealand-born Pacific people.⁴⁸ The participants' perceptions of

their cultural context and spiritual beliefs having less or no influence on their body size and the types of food they eat support the interesting aspect highlighted above. There was also a good indication that the youth participants have a good knowledge base of the serious health consequences of being overweight or having a large body size.

For those who perceived that Pasifika culture and spiritual beliefs do have an influence on body size, our crude thematic analyses highlighted that our Pasifika participants have a greater acceptance of large body sizes based on a spiritual foundation (ie, that we were created in the image of God). Having a thinner body size was less tolerated and often denoted sickness. However, the participants reported that being big attracts social risks (eg, being teased and feeling embarrassed). These same participants also rated themselves as being marginalised, according to the acculturation tool.

Increased body weight is a known risk factor for long-term non-communicable diseases, such as cardiovascular disease^{26,28} and diabetes.^{1,29} However, the study participants presented with a higher than average BMI (WHR and WHtR) scores, and this is compounded by the presence of other known proximal factors (high deprivation and comorbidity), which illustrates time and again the poor health outcomes projected for Pasifika people, and particularly that of the younger generation.^{1,24,49,50}

Our study highlighted the impact of social and cultural factors within their immediate obesogenic environment. Firstly, participant perceptions in relation to perceived and ideal body sizes demonstrated that there is an unequivocal awareness and knowledge among this group of participants about the impending poor health outcomes, secondary to obesity. While the youth identified themselves as having bigger somatotype body sizes, they also viewed themselves as having a slightly smaller somatotype body size, as their ideal body size. Anecdotally, the participants' ideal perspectives on wanting a slightly smaller body size, was not an indication of body size dissatisfaction, irrespective of their current body size according to their actual BMI and WHtR. In our view, the perceived 'ideal' body sizes suggest that the youth in this study preferred

body sizes that were physiologically healthy (not very skinny or very big), and likely to be attained. This indication does not align with previous Polynesian ideals that very large bodies are highly valued,⁵¹ but is aligned with more recent work that demonstrated Pacific adolescents do not place idealistic views and values according to ethnicity, and have a more positive perception of their bodies.⁵²⁻⁵⁴ Only a small number of participants remained steadfast to cultural values, whereby having a large body size is indicative of social standing and wellbeing.²⁸

Interestingly, it is often speculated that Pacific culture provides a central framework for protecting and developing optimal health and wellbeing for Pacific people. More often than not, researchers examine Pacific peoples' socioeconomic position and socio-cultural factors illuminating the full impact on health, but there is emerging research^{52,55,56} investigating health-enabling and social protective effects of culture and indigenous knowledge, and how this impacts on health with increasing acculturation. More than 80% of the participants interpreted their current cultural status as being 'integrated', demonstrating that the participants in this study have a positive attitude and place a good degree of importance on their Pacific and New Zealand mainstream cultures. A small proportion (10%) of the study participants aligned to 'assimilation', suggesting they have adopted a high degree of the attitudes and knowledge of the mainstream culture. Less than 7% were classified as 'traditional', when a person only engages in and places a high importance on their Pacific heritage. Marginalisation occurs when there is very limited or no involvement with both Pacific and mainstream heritage, and for the current study, this was not the case. Our exploratory findings were similar to that of the Kohala Research project.^{44,57} That is, the integration mode of acculturation was a prominent feature, but differed according to assimilated and traditional modes. Although the design, purpose and study samples were markedly different to that of the Kohala research, important inferences can be made about the current study, particularly in relation

to the youthfulness of our participants and their interaction within an environment that is less restricted to Pacific cultural boundaries. Additionally, we recognise that in future obesity-related and Pasifika youth work, other relevant dimensions of acculturation (eg, retention of strong cultural attitudes and behaviours that lead to positive benefits) would provide important information and assist in identifying potential avenues of culturally acceptable preventative efforts.⁵⁸⁻⁶⁰

Our geospatial findings, showed that the pattern of purchases of food and consumption provide some initial information that could be important when planning and evaluating the built and food obesogenic environment, particularly given the observed food spending behaviours of Pasifika youth. When we presented the GIS findings to the youth and asked them to comment on their behaviours collectively, the common thread of how their local environment marketed 'known' and 'cheaper' food that are frequently purchased by Pasifika people (eg, "lollie saiga") played a major role in where the youth would spend their money. This is not new knowledge as indicated by previous research conducted on snacking behaviours,⁶¹ and collected knowledge on how "local shop-keepers know how to cater for Pasifika peoples' tastes and needs."⁶² However, GIS could be an important research resource that can examine the role of the physical environment and its constituencies (eg, local stores, community organisations), and how they can work together to change the nature of the community and environment, for the sake of healthier living.

Conclusion

The participants from this study were youthful, obese, living in the most deprived areas and culturally adapted to the mainstream, without being isolated from their Pacific heritage. However, this is not a positive trajectory for the future generation of the young Pacific generation in New Zealand. From this exploratory study, we highlight the following: (i) the future health and wellbeing of our Pasifika youth remains to be poor. There continues to be a lack of understanding on the social-cultural mind set of Pasifika youth in New Zealand, and having this knowledge may lend itself to developing culturally and temporally relevant intervention programmes, the analyses of diet and eating behaviour in the second part of this study will contribute to this; (ii) in addition, an in-depth examination of the role of culture as a social protective framework requires further robust investigation to identify if indigenous knowledge and practices change with societal pressures and acculturation. Identifying the enablers and barriers against the obesogenic backdrop, can provide very useful information. This is necessary, particularly if we continue to use the concept of 'culture', as an important health resource that will protect the health and wellbeing of a population that is already high risk; (iii) use of spatial analysis using purchased food receipts, can provide new information to add to the current knowledge base of obesity-related research.

Overall, what is needed now, is information of developing methods or programmes in which this information can be translated into actionable knowledge. This needs to be a priority, particularly for Pasifika people in New Zealand.

Competing interests:

Nil

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Author information:

Ridvan Tupai-Firestone, Centre for Public Health Research, Massey University, Wellington; Hana Tuisano, Centre for Public Health Research, Massey University, Wellington; Moana Manukia, The Fono, Auckland; Keawe'aimoku Kaholokula, Department of Native Hawaiian Health, University of Hawaii; Sunia Foliaki, Centre for Public Health Research, Massey University, Wellington; Te Kani Kingi, Te Mata o Te Tau, Massey University, Wellington; Rozanne Kruger, Institute of Food and Technology for Human Health, Massey University, Palmerston North; Bernhard Breier, Institute of Food and Technology for Human Health, Massey University, Palmerston North; Angelique O'Connell, Child and Adolescent Mental Health Services, Capital & Coast District Health Board, Wellington; Barry Borman, Centre for Public Health Research, Massey University, Wellington; Lis Ellison-Loschmann, Centre for Public Health Research, Massey University, Wellington.

Corresponding author:

Ridvan Tupai-Firestone, Centre for Public Health Research, Massey University, P O Box 756 Wellington, New Zealand.
r.t.firestone@massey.ac.nz

URL:

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