



What factors influence our food choices?



We all know that it is important to eat healthy food—for now and for the future, to prevent the development of NCDs (non-communicable diseases) such as diabetes and heart disease. But we don't always eat healthy food all of the time. There are many complex influences on our ability to choose to eat healthy food—and not all of these variables are always within our control.

What factors impact our food choices? Alvina Pauvaale is a scientist from the Liggins Institute at the University of Auckland who looked into this complex question.

In this activity, students collect and analyse variables which might influence food choices for students in their class. Students then compare their ideas with key themes that Liggins scientist Alvina Pauvaale identified as part of her study.

Instructions for teachers

Discuss the idea that there are many complex influences on food choices and on our ability to buy, cook and eat healthy food.

Ask the students: What factors influence your food choices?

Students can work in groups —challenge the groups to brainstorm as many ideas as possible. Ask students to share one idea per group in round robin fashion until no new ideas are added. If necessary, prompt students to think about the many diverse and complex influences by asking them to consider concrete examples—what influenced their choice of breakfast/lunch/dinner yesterday? Cost, time, the food shops in the area, preferences....

Ideas might include: brands, social media, a special occasion, culture, diets, health needs, tradition, freshness, cost, coupons, popularity, advertising, religion, quality, climate, lifestyle, preferences, time for preparation, time for buying, availability, what others eat, mood, emotions, time of day, presentation, or appeal, storage, season, quantity, free-range, permission or parental control, what food is at home, convenience, age, appetite, cravings, judgements, distance, phobias, allergies, upbringing, knowledge, peer pressure, addiction....

Discuss: Analyse the results—which can be grouped or categorised? What are major themes? Which of these factors are influential at the level of the individual? Family? Society? Which of these factors are interconnected?

Learning resources

1. PowerPoint slides: A set of three simple slides introduce Liggins scientist Alvina Pauviale. The slides come with notes to support the narrative.

Discuss: How did students' brainstorm and factor analyses match with Alvina's findings?

2. HAPPY study student learning resource and worksheet: This two-page printable worksheet resource describes and discusses Alvina's work. Questions and learning activities are designed to engage students in thinking about the study and applying findings to their own experiences.

References

Pauviale, A. F. (2018). *Health-related attitudes, perceptions and practices of young people: A comparative observational case study between a school in New Zealand and Tonga (Masters dissertation, ResearchSpace@ Auckland)*.

Pauviale, A. F., Apelu, D., Pamaka, S., Ofanoa, M., Vickers, M., & Bay, J. L. (2019). *Adolescent voices matter: Exploring the nutritional views of Maori and Pacific adolescents in a low-income community in Auckland*. Poster session presented at the DOHaD World Congress 2019, Melbourne, Australia.

Image references: All images used in the resources that accompany this activity have been licensed from iStock.com or are original images owned and created by the Liggins Institute unless otherwise specified.

Slide One

We all know the importance of a healthy diet – but we don't eat healthy food all of the time.

What factors influence our food choices?

A scientist from the **Liggins Institute** looked into this question.

Alvina Pauuvale's research looked at young peoples' food choices and the food environment around them.

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Meet Alvina: Alvina went to Tamaki College in Glen Innes, Auckland. She enjoyed science at school and was involved in a programme developed by the Liggins Institute to encourage more Maori and Pacific students with a passion for science to pursue a career in science. Alvina completed a Bachelor of Science degree at the University of Auckland. However, she realised that science alone wasn't really her calling. Being a young female Tongan, she knew she wanted to do something that helped her Pasifika people. Once Alvina had completed her degree, she began work as a Research Assistant on the Pacific Science for Health Literacy Project (PSHLP) at the Liggins Institute. Her passion became evident in the work she was a part of and that is why she went on to pursue a Masters degree – so that she can continue to help her people in the fight against non-communicable diseases.

Slide Two

The HAPPY study:

Health-related attitudes, perceptions and practices of young people

Alvina's Pauuvale's HAPPY study looked at teenagers' attitudes towards food with the food they eat.

Alvina asked 100 Year 9 Tāmaki College students:
"How much does it matter what you eat?"

66% said, "It mattered a lot"

37% reported regularly eating healthy foods

Alvina asked the students "What influences the food you eat?" They said.....

- Making my own choices about the food I eat
- What I see on social media
- People e.g. Parents and friends
- What I want to eat is what I eat
- The food that is available to me

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The HAPPY study was the result of Alvina's Masters in Health Science degree at the Liggins Institute. She is now completing a PhD building on this research.

She will be working closely with adolescents to explore their views on how the food environment impacts their health. This will help to inform an intervention, led by adolescents, to improve the health of the Glen Innes community.

Alvina asked 100 students at Tamaki College – how much does it matter what you eat?

What influences the food you eat?

These are some of the answers students gave. Alvina analysed her data and decided on key themes.

What key idea or theme do you think each of the above speech bubbles represents?

Slide Three

The HAPPY study:

Health-related attitudes, perceptions and practices of young people

Attitudes

Accessibility

Agency

Advertising

Influential people

Influences on healthy eating behaviours

The **evidence** told us that most of the Year 9 students who took part in the study had **positive attitudes** towards eating healthy food.

BUT the evidence suggested that there are many complex influences on healthy eating behaviour.

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Alvina analysed her data from the 100 students – these are the main categories that she identified.

How do these categories align with the 'influences on food choices' brainstormed ideas that you collected from your class?

To extend this work – collect data like Alvina did by surveying your parents/whanau and friends.

QUESTIONS TO THINK AND TALK ABOUT

A career in science research:

- What qualifications has Alvina gained that enable her to do this work?
- What advice would you give to a year nine student to help them on a pathway like Alvina's?
- What are the findings of Alvina's Masters research?
- What questions would you like to ask Alvina about her career or research?

Science knowledge:

The food stores around each school contribute to the 'built food environment' of the community.

- Look up a definition for 'built food environment'

What are NCDs?

- Do NCDs impact your family? If so, how?
- How can you help?

Reflecting on your actions:

Talk with your group about the food/drink you consumed today and yesterday.

If you had to give yourself a health rating from 1 – really unhealthy to 5 – only healthy food/drink passed my lips – what would your rating be?

- Now discuss your rating with your group.
- We know we should be eating healthy food. What different things might stop us from eating a healthy diet or make it harder to eat healthy food?
- What do you think "eat healthy food regularly" means?

From evidence to action:

Do you think that built food environment might influence the type of food that Year 9 students in each community are eating? Justify your answer.

Use the QR code to choose from sentence starters to present your argument:



Compare and contrast the findings for Tāmaki College and Tonga High School.

- make a list of similarities and differences in the data from each school community
- suggest possible reasons for the similarities and differences

How could you use the evidence and information from this study to:

- explore the built food environment around your school
- explore how the built food environment might influence YOUR food choices
- improve the built food environment for students in YOUR school

What other research questions about the built food environment could be useful to explore?



Google Earth Pro is the mapping tool that Alvina used to plot the food stores near each school on a Google map.



Thank you to the students who participated in this research. If you have any questions please email Alvina Pauuale at: a.pauuale@uakland.ac.nz



We are what we eat?



We all know the importance of a healthy diet – but we don't eat healthy food all of the time.



What factors influence our food choices?

A scientist from the Liggins Institute looked into this question.



Alvina Pauuale's research looked at young peoples' food choices and the environment around them.

- Meet Alvina: "I went to Tamaki College in Glen Innes, Auckland. I enjoyed science at school and I was involved in a programme developed by the Liggins Institute to encourage more Maori and Pacific students with a passion for science to pursue a career in science.
- I completed a Bachelor of Science degree at the University of Auckland. However, I realised that science alone wasn't really my calling. Being a young female Tongan, I knew I wanted to do something that helped my Pasifika people.
- Once I had completed my degree I began work as a Research Assistant on the Pacific Science for Health Literacy Project (PSHLP) at the Liggins Institute. My passion became evident in the work I was a part of and that is why I went on to pursue my Masters degree so that I can continue to help my people in the fight against non-communicable diseases.
- The HAPPY study was the result of my Masters in Health Science degree at the Liggins Institute.
- I am now completing a PhD, building on this research. I will be working closely with adolescents from the Glen Innes community to explore their views on how the food environment impacts their health.

Find out more about Alvina and her career journey here:



Find out more about Alvina's study



The HAPPY study:

Health-related attitudes, perceptions and practices of young people

Alvina's HAPPY study compared teenagers' attitudes towards food with the food they eat.

Alvina and her research team compared attitudes towards food and diets of Year 9 students in Auckland with Year 9 students in Tonga.



Tamaki College: We listened and this is what YOU had to say!

In 2017 we asked 100 Year 9 Tāmaki College students: "How much does it matter what you eat?"

66% said, "It mattered a lot"

37% reported regularly eating healthy foods



This evidence told us that most of the Year 9 students who took part in the study had positive attitudes towards eating healthy food. BUT suggested that there might be factors influencing the ability of students to adopt healthy eating behaviours.

Influences on healthy eating behaviours:



Alvina and her research team MAPPED the food stores surrounding Tāmaki College

Quality of food in food-stores	Distance from Tāmaki College (radius)				Total
	250m	500m	800m	1000m	
Very unhealthy	3	4	5	24	36
Unhealthy	0	0	0	10	10
OK	0	0	0	4	4
Healthy	0	0	0	2	2
Total	3	4	5	40	52
Cumulative Total	3	7	12	52	

Number of food-stores in each food-store category in the area surrounding Tāmaki College



Food stores within 1km of Tāmaki College
 - Outline of school, - 250m, - 500m, 800m and - 1km
 ● Very Unhealthy ● Unhealthy ● OK ● Healthy
 Note: Not all icons (circles) are visible due to overlapping

This study was approved by the University of Auckland Human Participants Ethics Committee Ref 011307, 018603 and the Tongan National Health and Ethics Research Committee Ref 040614.2. Participating schools are named in this leaflet as it is designed to communicate the findings of the research to research participants within these communities. For further information please contact Dr Jacquin Bay jbay@uakland.ac.nz

Tonga High School: We listened and this is what YOU had to say!

In 2016 we asked 81 Year 9 Tonga High School students: "How much does it matter what you eat?"

63% said, "It mattered a lot"

44% reported regularly eating healthy foods



We asked the students "What influences the food you eat?" They said.....



Alvina and her research team MAPPED the food stores surrounding Tonga High School

Quality of food in food-stores	Distance from Tonga High School (radius)				Total
	250m	500m	800m	1000m	
Very unhealthy	12	41	76	18	147
Unhealthy	0	0	1	0	1
OK	0	0	0	0	0
Healthy	0	0	1	1	2
Total	12	41	79	19	150
Cumulative Total	12	53	131	150	

Number of food-stores in each food-store category in the area surrounding Tonga High School



Food stores within 1km of Tāmaki College
 - Outline of school, - 250m, - 500m, 800m and - 1km
 ● Very Unhealthy ● Unhealthy ● OK ● Healthy
 Note: Not all icons (circles) are visible due to overlapping

