

How do they eat? An ethnographic study of student eating behaviour in a New Zealand University

A qualitative study

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A thesis submitted in partial fulfilment of the requirements for the degree of Master of Health Science in Nutrition and Dietetics

The University of Auckland, 2023

ABSTRACT

Background

Noncommunicable diseases are the cause of 74% of deaths globally. As the obesity pandemic becomes an increasingly serious public health problem of the world – especially in New Zealand – it is important to gain a better understanding of the environmental factors that are conducive to poor diet and weight gain to aid in the prevention and control of obesity. For adolescents transitioning into young adulthood, tertiary education is a critical period for weight gain. While there is evidence regarding factors from the university environment that influence the eating behaviours of university-age students, there is a paucity of evidence within the context of New Zealand universities. The aim of this research project was to investigate how the university food environment and university lifestyle impact the dietary behaviours of university students in a New Zealand university.

Methods

The study used an qualitative approach, and observed students both inside and outside of the university campus grounds. The research project was designed to be explorative, and involved the application of ethnographic methods to gain a deeper ontological understanding of what constitutes the “university environment”, examining how characteristics of the environment such as placements, assignments, exams, peers, and other factors related to the university environment interact with, influence, or determine eating behaviours of students. Nine students’ eating behaviours were observed between the 18th of July and the 1st of November using Indeemo, a mobile ethnography platform. Participants observed eating occasions by creating responses to tasks. Participants were able to use various mediums to complete responses, including photos, videos, text descriptions or a combination of all three. Retrospective interviews about specific eating occasions were also conducted using the Indeemo mobile ethnography platform.

Results

Nine students; all females aged between 19 and 29 years (mean age 22 years) participated in the research project. Across the three-month study period, participants created a total of 1765 responses to tasks, and answered 138 interview questions. Through the process of thematic analysis, 857 codes were generated from the data: 493 codes relating to interpersonal influences of eating behaviour, 177 codes relating to physical environmental influences of eating behaviour, 102 societal influences of eating behaviour and 85 social environmental influences of eating behaviour. From these initial codes, four major themes, and associated sub-themes emerged from the data: 1) time is of the essence, 2) cash is king, 3) the on-off campus conundrum, and 4) miscellaneous influences.

Conclusion

The findings of this research project highlighted that factors of the physical and nonphysical university environment influenced the eating behaviours of students from the study population.

ACKNOWLEDGEMENTS

I first started working on this thesis project in November of 2021, and it is such a surreal feeling that this chapter of my life is finally coming to a close. I am so extremely grateful for the people that I have had around me, who have encouraged and supported me to keep pushing and get this over the line. For the longest time this project felt like an insurmountable task, however as I near the end of the journey, I would like to express my gratitude and thanks towards everyone that played a part.

To start, I would like to give massive thanks to my thesis supervisor, Rajshri Roy. Thank you for providing me with guidance and the uttermost patience as I navigated this process. Completing this research project would have never been possible without your help. Your thoughtful, targeted and swift feedback has enabled me to strive past what I thought was my potential, and deliver a piece of work that I am really proud of.

I would also like to give my thanks to Hannah Fortune and the wider Indeemo support team. Indeemo played a pivotal role in the study design and data collection of this thesis project, and it wouldn't have been possible without them. Thank you for the amazing support!

Thank you to the students from the University of Auckland who participated in the research project. Recording everything that you ate for three months was a huge ask, yet you all stuck at it and I am extremely grateful for that. It was a pleasure working with you all.

To the Nutrition and Dietetics team at the University of Auckland, thank you for all the hard work that you have put in over the last two years. I am really appreciative of the time and effort invested by you all to ensure that myself and the rest of the cohort have the necessary skills, competencies, knowledge and experience heading into our new chapters as graduate dietitians.

To my fellow dietetics cohort, thank you for making the past two years such an enjoyable experience. I have no doubt that everyone will go on to achieve great things, and I am looking forward to seeing where everyone ends up in their careers.

Special thanks to my family for being there by my side throughout the course of my university career. Lara, thank you for your love, unwavering support, wisdom, pragmatic solutions to life obstacles, and for convincing me to persevere in times of doubt. Greg, thank you for the morning wake-ups, the conversations spent discussing the intricacies of research design, and for providing me with an environment that was conducive to getting this project over the line. I've lost count of the amount of times that you've dropped everything to ensure that I was where I needed to be. Jonty, it's such an unbelievable privilege to be able to call my brother my best mate. Thank you for your support, encouragement and reassurance during times of crisis, and for your ability to be critical when you were cognizant of the fact that I was dragging the chain. Thank you all for having such a positive impact on my life, no amount of words could come close to describing my love and appreciation for you three.

I'd also like to give another special mention to Basti Todd. Thank you for your kindness, selflessness, encouragement, and for never doubting me in times where I doubted myself. You're the only person I've ever known to call someone every morning for the better part of a year, just to make sure that I was awake and getting on with what I needed to get on with. In the darkest hour of the night before the sun began to flood the sky, you were a glimmering light in the distance that guided me, and I'll always appreciate you for that.

Finally, I would like to give thanks to all of my incredible friends. To quote the Dutch philosopher Desiderius Erasmus, "There is no joy in possession without sharing". The past six years of my university era have been a wild ride, and the challenges faced, experiences had, and memories made would mean so much less to me if it weren't for the people that were there along the way to share them with and make them special. I am so unbelievably privileged to have you all in my life, and cannot wait to create more memories with you in the future.

Thank you, thank you, thank you all.

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CHAPTER ONE – INTRODUCTION

Each year 41 million people die of causes related to noncommunicable diseases (NCDs), which equates to 74% of global deaths (1). Unhealthy diet is listed as one of the major factors that significantly increases the risk of dying from an NCD, and three of the four dominant NCDs – cardiovascular disease, cancer, and diabetes mellitus – are nutrition-related (2). The obesity epidemic poses a serious public health problem worldwide, with the most recent statistics from 2016 showing the prevalence of overweight and obesity has reached 39% and 13%, respectively (3). Having the third highest adult obesity rate in the OECD, the epidemic is becoming increasingly omnipresent in New Zealand, with 33.7% and 34.3% of New Zealanders being classified as overweight and obese, respectively (4).

To this day there is still a lot of stigma around overweight and obesity, entrenched in a belief system that the solution to obesity is to eat less and move more, and failure to achieve this reflects laziness and lack of willpower (5). This archaic perspective contradicts the overwhelming body of evidence which shows that there is a range of factors that are conducive to weight gain, and therefore increase the risk of developing obesity. Sedentariness, poor sleep, stress, energy-dense foods, genetic and epigenetic factors, changes in gut microbiota, and certain medications are all factors that have the potential to interact with other physiological and environmental cues, to increase the risk of weight gain and obesity (6-12).

Researchers are seeking to understand how the food environment plays a role in the prevention and control of obesity (13). In a review on the relationship between food availability, convenience and obesity, it was found that there is 1) lack of longitudinal data which characterizes changes in the food environment, and how this relates to individual dietary behaviour and obesity, 2) lack of definitions which characterize the food environment, 3) lack of analysis examining individual-level dietary intake leading to obesity and how the environment influences this, and 4) lack of evaluation of food environment change secondary to policy implementation (14). Although other studies have shown predominantly null associations between food outlet availability and obesity, direct associations have been shown between fast food and obesity in adults (15).

For adolescents transitioning into young adulthood, the period of tertiary education is a critical period for weight gain (16-18). During the transition from high school to university, students are exposed to a new environment that they are required to adapt to (19). When unsuccessful in adapting to their new environment, students are at a higher risk of developing unhealthy eating habits, and subsequently gaining weight (17). In terms of the existing literature, there are studies that examine the factors from the university

environment which influence the eating behaviours of university-age students, however there is a paucity of evidence within the context of New Zealand universities.

How do we know we know what university students are really eating? This study used qualitative methods to investigate student eating behaviour during the second semester of study at the University of Auckland. The primary objective of this research project was to identify how the university environment influenced students' eating behaviours. The study used an qualitative approach, and observed students both inside and outside of the university campus grounds. The research project was designed to be explorative, and involved the application of ethnographic methods to gain a deeper ontological understanding of what constitutes the "university environment", examining how characteristics of this environment such as placements, assignments, exams, peers, and other factors related to the university environment interact with, influence, or determine the eating behaviours of students. The two main hypotheses of the research project were that 1) the physical university food environment influences student dietary behaviour, and 2) the university lifestyle – study, social activities, lockdown, peer behaviour – or other factors that contribute to the nonphysical environment influences student dietary behaviour. Therefore, the research question of the project was, "How do the university food environment and university lifestyle impact the dietary behaviours of university students?". A secondary focus of the research project was to look at the factors that influenced the food-purchasing decisions of students while they were on-campus.

This research project aimed to add nuance to the existing literature on student eating behaviour by describing the physical and nonphysical university environment, and by investigating how elements of these environments influenced the eating behaviours of university students within the context of a New Zealand university.

CHAPTER TWO – LITERATURE REVIEW

2.1 Introduction

Before detailing the methodology of my study, I would first like to first explore the literature that covers university student eating behaviour. The subject is expansive, and covers many facets of university student eating behaviour. This literature review will serve two main purposes. The first is to review the current discourse, which will provide context to this research project, while supporting and developing my understanding of the factors that influence university student eating behaviour. The second purpose is to differentiate this research project from the existing literature, to highlight gaps in the literature, and to outline the significance of this research project and how it will contribute nuance to the understanding of student eating behaviours. My literature review will be separated into multiple sections:

1. The first section aims to provide an objective overview of what university students eat.
2. The second section will briefly touch on the impact that COVID-19 had on the dietary intake and eating behaviours of university students.
3. The third section will cover the “fresher five” weight gain phenomenon
4. The fourth section will outline the types of food that students purchase while studying on-campus, including a review of student preferences and opinions that contribute to the purchasing of said foods.
5. The fifth section will outline the strengths and limitations of the existing quantitative research of student eating behaviour.
6. The sixth section will provide a comprehensive overview of the existing qualitative literature, pulling together common themes surrounding the determination of student eating behaviour, including the perceived barriers and facilitators of ‘healthy eating’.

I will then close the literature review by summarising the covered material, and stating the novelty and significance of my study in comparison to the existing literature, which will set the scene to rationalise my research question and objectives. A summary of the literature included in this literature review can be found in **Appendix 1**.

2.2 What are university students eating?

Within the existing literature on the topic of university student eating behaviour, majority of the research has been conducted with the aim to measure the dietary intake of students. Of these studies, almost all have

utilised a cross-sectional survey study design, where students were asked to fill out a food frequency questionnaire, which was then compared to various healthy eating standards, or used to estimate the number of servings of various foods or food groups.

Only the study conducted by Dinger et al compared students' intakes to dietary recommendations, with most students on average failing to meet dietary intake recommendations (20). Hilger et al reported that fresh fruit was consumed multiple times per day by 26.9% of students, while the minority of students ate cooked vegetables, raw vegetables, or salad multiple times per day (21). Another study by Silliman et al had similar findings, reporting that 58% of students ate less than one serving of vegetables per day (22).

The majority of students consumed milk daily. Almost half drank one to two glasses per day. A greater amount of males than females consumed more than three cups of milk or yogurt per day (23). Forty-nine percent of students reported consuming 1-2 portions of rice, pasta, bread, or potatoes per day. More than half consumed poultry one to three times per week, and 43.1% consumed fish one to three times per week. Eighteen percent never ate red meat, and 12.6% ate red meat 4-7 times per week (21).

Snacks regularly consumed by university students were carbonated beverages, chips, apples, popcorn, candy bars, pizza, cookies, and regular and light beer (24). More than half consumed fast food less than once per week, and only 1.9% consumed fast food 4-7 times per week (21).

2.2.1 Food behaviours

Of the studies that reported eating behaviours, three of the studies reported that breakfast was the most skipped meal, with one study reporting that one in four students skip breakfast (22-24). It was also reported that females ate breakfast more often than males did. Two studies, one by Racette et al and the other by Sprake et al were the only studies to report correlations between eating behaviours. Fruit and vegetable consumption was inversely correlated with both fried food and fast-food intake. Racette et al found that there was a positive correlation between fried food and fast-food consumption. It was also found that between the beginning of freshman and the end of sophomore year, consumption of high-fat fast-food and fruit and vegetables did not increase, however fried food consumption declined (16). The study by Sprake et al found that there was a weak negative correlation between vegetarianism and energy intake, and a weak positive correlation for vegetarianism and health-conscious behaviour. The strongest correlations for energy intake were with red meat, convenience, and alcohol, as well as snacking. Only one study by Hilger et al reported

changes in behaviour between freshman and sophomore year. The study reported that most students noted changes in their eating behaviours over the years, however males, as well as students that had moved away from their hometown to attend university reported the most changes. Commonly noted changes among students were increases in fruit and vegetable consumption, decreased intake of red meat, poultry and fish, as well as lower meal frequency (21).

2.2.2 Gender differences

In the study by Dinger et al, no difference in servings of fruit, vegetables and fruit juice was found between males and females (20). Contrary to these findings, four other studies found that females consumed more fruits and vegetables in the forms of whole or canned fruits, fresh fruit, cooked vegetables, salad, and raw vegetables (22,24,25). In the study by Hinger et al, the 'vegetarianism' cluster was most commonly associated with the female gender (21). In the study by Racette, a non-significant difference in amount of meat consumed by males and females was found (25). Contrary to these findings, the studies conducted by Dinger et al and Silliman et al both found that males consumed more high fat meats (20,22). While the study by Silliman claimed that men also consumed more lean meats, another study by Huang et al found that low-fat meats were more popular with females (22,24). The study by Hilger et al found that men consumed more red meat, poultry, sausages, and fish than their female counterparts, and the study by Strawson et al found that eating red meat was most commonly associated with the male gender (21,26).

In terms of dairy products, one study by Silliman et al reported that males consumed higher fat dairy products (22), however females were noted to consume more dairy products, including yogurt, cream cheese and skim milk (21,24). Fast-food and take aways were eaten more often by males (24,25), alongside alcohol, sugar-sweetened beverages, and water (25). Snacks, desserts, and chocolates were consumed more often by females (25). In the study conducted by Tanton et al, no significant differences in gender, age, BMI, ethnicity, or year of study were found between clusters of risky eating, mixed eating, moderate eating, and favourable eating patterns (27).

2.3 What was the impact of the COVID-19 pandemic on student's dietary intake?

On March the 11th of 2020 the World Health Organization declared the Coronavirus disease 2019 – otherwise known as COVID-19 – to be a pandemic (28). In response to the growing number of COVID-19 cases that could not be adequately traced, the New Zealand Government enforced quarantines, lockdowns, and restrictions as a public health measure to abate the rate of infection. While lockdowns and restrictions were

successful in preventing more drastic spreading of the virus, they also had negative flow-on effects by limiting participation in normal daily activities such as travelling, working, social gatherings and physical activity, through increased social distancing (29). In addition to the changes in normal daily activities and physical activity, lockdowns and restrictions also created a change in food-related behaviours, through closure of food suppliers, limited access to fresh food, supply chain issues and increased intake of calorie dense, nutrient poor foods secondary to boredom and anxiety evoked by quarantine. There is still limited evidence that evaluates the effects which lockdowns and restrictions had on the dietary behaviours of students, however this section will review three studies: the first study by Ammar et al looks at how eating behaviours changed in the general adult population during lockdowns and restrictions, and the other two studies by Bertrand et al and Gallo et al look at the impact that lockdowns and restrictions had on the dietary patterns of university students specifically.

In the study by Ammar et al, preliminary data on nutrition responses and physical activity of adults during and prior to home confinement was collected using the ECLB-COVID19 International Online Survey (30). The study found that total diet score was 4.4% higher during home confinement than before, indicating an increase in unhealthy eating behaviours (30). Number of meals, snacking between meals, amount of unhealthy food and incidences of eating out of control were all significantly higher during, compared to before, home confinement, while alcohol binge drinking was lower during home confinement (30). The two other studies by Bertrand et al and Gallo et al both focused specifically on the impact that COVID-19 had on students' dietary patterns. In the study by Bertrand et al, factors such as daily energy, macronutrient, micronutrient intake and prevalence of nutritional inadequacy were estimated using the Canadian Diet History Questionnaire II (CDHQII) in conjunction with Food Processor Nutrition Analysis software (31). In the study by Gallo et al, factors such as total 24-hour energy intake, proportion of participants who consume alcohol, incidence of snacking occasions, energy density of snacks and energy density attributable to snacks was measured using the Automated Self-Administered Dietary Assessment Tool (ADA24-Australia-2016) 24-hour recall assessment tool (32). The study by Bertrand et al showed that total daily energy intake decreased for both males and females (31), while the study by Gallo showed that the total daily energy intake of females increased, while males remained unchanged (32). While the study by Gallo et al reported that there were no changes in the proportion of participants who consumed alcohol during home confinement when compared to before (32), the study by Bertrand et al found that the average intake of alcohol increased significantly (31), which contradicts the findings of the study conducted by Ammar et al. For females, there was a significant increase in snacking occasions, energy density of snacks and energy intake attributable to snacks (32).

2.4 What is the “Fresher Five” phenomenon?

In the years of late adolescence and early adulthood, the transition between secondary school and university is a life-altering moment, often associated with living away from home, unprecedented freedom, high academic pressure, and other lifestyle changes. This period of life is also a time commonly associated with the adoption of an unhealthier lifestyle, alongside changes in body weight (18). Weight gain during adolescence is strongly associated with overweight and obesity in adulthood (33). To combat the rising prevalence of obesity, it is important that weight gain during university – a transitional period between adolescence and adulthood – is researched to be better understood. The phenomenon of weight gain during the first year of tertiary education is often referred to as the “Freshman 15” or the “Fresher Five” – the notion that most students will gain either 15 pounds (6.8kg) or 5kg during their first year of tertiary education (34). This section will review six studies – two meta-analysis, one review and three prospective cohort studies – which assess weight change and factors associated with weight change during students’ freshman year of university. The study conducted by Lloyd-Richardson et al compared two separate study populations within the one study (35).

2.4.1 Mean change in weight and BMI

Across all six studies, students’ mean change in weight during their first year of university ranged between 1.21kg and 3.5kg (16,18,35-38). Both meta-analyses found that there was a moderate, positive, significant relationship between the amount of weight gained by students and the duration of studies (18,36), suggesting that longer studies tend to find greater weight gain in students, or that weight continually increases throughout students’ freshman year. Only the study conducted by Lloyd-Richardson et al investigated changes in Body Mass Index (BMI). During freshman year, mean BMI increased from 22.9kg/m² to 23.6kg/m² in males, and 21.9kg/m² to 22.5kg/m² in females (35).

2.4.2 Proportion of students who gained weight

Two studies measured the proportion of students that gained weight during their freshman year. The studies reported that between 61% and 82% of students gained weight during their freshman year (35,36). In the meta-analysis conducted by Vadeboncoeur et al, of the students who did gain weight during their freshman year, the average amount of weight gained was 3.4kg, which was significantly higher than the pooled mean weight gain (36). Only 9.3% of freshmen gained the “Freshman 15” (6.8kg). The study conducted by Lloyd-Richardson et al found that 40% of students gained 4kg or more (35). Roughly half of the students that gained weight in their first semester gained additional weight during the second semester, while the other half lost some of this weight during the second semester (35). Eight percent of students lost weight during both semesters, with a

mean weight loss of 5.0 kg across the year (35). Students that gained weight during both semesters had the largest weight gain (+4.5 kg). The gain–loss and loss–gain groups both gained 1.2kg and 0.9kg respectively. Only 10% maintained their weight throughout freshman year (35).

2.4.3 Frequency distribution of students across different BMI ranges

In the two studies conducted by Lloyd-Richardson et al, at the start of their freshman year, between 11% and 16.9% of students were overweight, and 3.7% to 4.7% were obese (35). At the end of freshman year, between 13.5% and 28.5% were overweight, and 4.3% to 7.5% of students were obese (35). The study conducted by Lloyd-Richardson et al also measured the prevalence of overweight and obesity amongst students at the end of sophomore year. Of the students with complete data, 16% were overweight and 4.3% were obese start of freshman year, and by the end of sophomore year 25.9% were overweight and 9.2% were obese (35). Another study conducted by Racette et al looked at the combined proportion of students that were overweight or obese between the start of freshman year and the end of senior year, with the proportion of students that were overweight or obese increasing significantly from 15% to 23% (16).

2.4.4 Factors associated with weight gain

The meta-analysis conducted by Vella-Zarb et al found high baseline weight or BMI to be a predictor of weight gain (18). Two of the studies in the review conducted by Crombie et al had similar findings, with one study finding that men and women with higher initial BMI gained significantly more weight than those with a normal BMI (5kg versus 2.8kg). The other study, which had a study population of only females, found that students with a higher BMI gained on average 8.4kg, compared to students with normal BMI who maintained their weight (17).

Only one study in the review conducted by Crombie et al found an association between ethnicity and weight gain, with African American students being significantly more likely to gain weight or be overweight during their college career, compared to Caucasians and Hispanic students (17). None of the studies found a significant difference in weight gain between genders.

Both the review conducted by Crombie et al and the prospective study conducted by Deforche et al found that low fruit and vegetable intake, or a decrease in intake throughout freshman year, was associated with weight gain (17,38). While decreased physical activity was found to be a predictor of weight gain in the meta-analysis by Vella-Zarb et al, and one of the studies in the review by Crombie et al, the other study in the same review

found that moderate to intense exercise decreased in men and increased in women, however this had no significant association with weight gain (17,18). Other predictors of weight gain noted in the meta-analysis by Vella-Zarb et al were high intake of junk food, dieting, evening snacking and high perceived levels of stress. Positive relationships with parents and increased workload for females, as well as intense and frequent exercise, poor relationship with parents and alcohol for males were also associated with weight gain (18).

2.5 What influences on-campus purchasing decisions of university students?

The food environment within a university setting can play an important role towards influencing the dietary behaviours of students, as students can spend a substantial amount of time on-campus – as much as 5 to 30 hours per week, sometimes even longer – over a period of many years (39,40). Because of this, universities have a responsibility and an obligation to provide an on-campus food environment that both encourages and facilitates its students to make healthier food choices (39). The relationship between the university food environment and the eating behaviours of students is particularly important, as this is a period of time where students acquire eating habits which can persist into later life, therefore the university food environment presents unique potential to facilitate and promote healthy eating habits (41). This section will review 10 studies that assess the on-campus purchasing decisions of university students.

2.5.1 Frequency of student on-campus purchasing

Throughout the literature reviewed regarding the on-campus purchasing decisions of students, most students – anywhere between 79% and 94% – purchased food or beverages from a university campus shop (39,40,42-44). Between these studies, students reported a wide range of food purchasing behaviours on-campus, ranging from never purchasing food on-campus, to purchasing food every day on-campus (39,40,42-46). In another study which specifically focused on students' satisfaction with the on-campus cafeteria service, it was reported that 4.1% of surveyed students visited the cafeteria daily, 36.7% visited the cafeteria either once or twice a week, and 20.3% of students visited the cafeteria less than once a week (47).

2.5.2 Weekly amount spent on-campus

Of the studies that reported the amount that students spent on-campus each week, one study reported that students spend on average \$10-25 (\$11-27 NZD) per week (44), with another study reporting that most students (63%) spent less than \$20 (\$22 NZD) per week. Three studies reported that around one-third of participants spent anywhere between \$15-30NZD (40), \$20 and \$40 (\$22-43 NZD) (39), and five to ten pounds (8-16 NZD) at campus food stores per week (45).

2.5.3 Times of day and locations of on-campus food purchases

Most studies reported that food and beverages bought on-campus were mostly purchased around lunchtime, or as snacks in between meals (40,43,45). One study separated food and beverages, reporting that food was purchased mostly for lunch and as snacks, and that beverages were most purchased at similar frequencies for breakfast and lunch (39). Another study reported that food and beverages bought on-campus were mostly consumed during the early or late afternoon (46).

2.5.4 Healthiness of foods available on-campus

In the study conducted by Roy et al (42), healthiness of food and beverage items was classified using the National Healthy Food and Drink Policy Criteria. The study investigated 57 food outlets, including 29 vending machines, across six university campuses. Majority of the food outlets on-campus were classified as intermediately health; five outlets were classed as healthy, while only one outlet was classed as unhealthy (42). Of the 29 vending machines, one was categorized as healthy, and one was categorized as unhealthy (42).

In another study conducted by Martinez-Perez et al (40), three different nutrient profiling models were used to indicate the healthiness of food and beverage items available in vending machines, canteens, and kiosks on-campus. Of the 256 food and beverage items that were surveyed, approximately half of the items did not meet the AECOSAN and UK NPM criteria (40). More than two-thirds of the food items did not meet the Food and Drink Industry Professional Practices Committee Norway (Matbransjens Faglige Utvalg (MFU)) criteria alone, and when all three criteria were combined, 39.8% of the products were classified as “unhealthy” (40). Moreover, 87.7% of food items and 82.4% of beverages were categorized as “ultra-processed” according to the NOVA criteria (40).

2.5.5 Relationship between student health and on-campus purchasing

The relationship between diet quality of students and the number of foods and beverages consumed from university food outlets was investigated in a study by Roy et al (46). The study utilised the Comprehensive Diet Quality Index HEIFA-2013, which assessed diet quality based on 11 component factors (46). Median HEIFA scores showed a statistically significant difference between tertiles of university food consumption, with those in the lowest HEIFA tertile consuming more foods and beverages from university food outlets, as well as takeaways, than those in the highest HEIFA tertile ($p < 0.001$). This study, alongside another study conducted

by Pelletier et al, found that students who had higher intakes of food or beverages purchased on-campus had a higher mean total energy intake, as well as higher intakes of protein, total sugar, added sugar, total fat, saturated fat, sodium, and discretionary or fast foods (46,48). Students who ate more university-bought food items also had lower intakes of vegetables, meats, grains, and fruit (46), compared to students that frequently brought food from home, who had higher intakes of dairy, fruit and vegetables, calcium, and fibre (48).

2.5.6 Frequently purchased food and beverages on-campus

The frequency of food and beverage items purchased on-campus had the most variation between studies. In the study conducted by Martinez-Perez et al, hot drinks and foods were the most frequently purchased items, followed by cold drinks and snacks (43), while the study also conducted by Martinez-Perez reported that cold foods and drinks were the most purchased foods, followed by hot foods and snacks (40). **Table 2.1** summarises food and beverage items that were considered to be purchased “most frequently”, compared to food and beverage items that were purchased “less frequently” (39,40,43,45).

Table 2.1 Frequency of food items purchased on-campus by food category

	More frequently	Less frequently
Hot foods	Asian food	
	Mexican food	
	Burgers	Pizza
	Kebabs	
	Hot chips and wedges	
Cold foods	Sandwiches, bread rolls and wraps	Ice creams
	Salads	Ice blocks
	Sushi	
Snacks	Cakes	fresh fruit
	Cookies	yogurt
	Slices	muesli bars
	Muffins	nuts
	Potato chips	
	Confectionary	
Beverages	Water	
	Coffee, tea, hot chocolate	

2.5.7 Determinants of on-campus food purchasing decisions

Taste, value for money, nutritional value, and availability were found to be the most important determinants for on-campus food and beverage purchases (39,40,43). The studies by Tam and Martinez-Perez also reported that 'two for one' or large portion for reduced price promotions influenced students' on-campus food and beverage purchases (39,43). Another study by Pelletier et al found that part-time students were less likely to purchase food on-campus than full-time students, that students living at home with their parents were more likely to purchase food on-campus than students who were renting, and that older students were far less likely to buy food on-campus, instead bringing food into university from home unlike second-year students (48).

Across multiple studies, cost, poor value for money and preference to either eat at home or bring food from home were the primary reasons for students not purchasing foods or beverages on-campus (39,42,43). In the study by Tam et al, students also reported that stores located off-campus offered more variety, quality, greater convenience, and more concern towards dietary restrictions of preferences (39).

2.5.8 Student satisfaction

Hutchesson et al found that students were predominantly satisfied with beverages, but less satisfied with meals and snacks available to purchase (45). Lower proportions of students were satisfied with the cost of beverages, snacks, and main meals (45). In the study conducted by El-Said et al, which focused on students' satisfaction with the on-campus cafeteria service, high percentages of students were dissatisfied with the nutritional content and health and safety of food items offered (47). Students were only slightly satisfied with the temperature that food was served at, as well as the diversity of food displayed (47). Students' were slightly dissatisfied with freshness of food and beverage items. Overall, students' perceptions of the service quality were poor, with majority of students being dissatisfied or strongly dissatisfied with employee motivation, professionalism, and service speed (47). Most students were dissatisfied with the quality and quantity of food that they received relative to the amount that they had paid (47).

2.5.9 Student-suggested improvements for the on-campus food environment

Some common suggestions for ways to improve the on-campus food environment were increasing the availability of healthy and freshly prepared foods, lowering the cost of food and beverages – especially for healthier options – greater amounts of variety, especially for those with dietary restrictions or preferences, better allergen labelling, and provision of sustainable food items, alongside greater capacity to recycle food and beverage packaging (39,40,43,45). Other suggestions included implementation of a loyalty card with

discounts on certain foods (39,40), improving food and beverage availability outside of regular university operating hours, and decreasing the availability of fast-food and prevalence of vending machines (45).

2.6 What are the strengths and limitations of quantitative studies?

Like other research completed in the nutrition and dietetics space or general health research, the investigation of student eating behaviour has been dominated by quantitative approaches (49). Quantitative research is based on the principle of objectivity; the idea that knowledge is achieved through use of statistical sampling techniques, to prove or disprove cause and effect through reductionism, and therefore allow generalizations to be made regarding characteristics of the studied population (50). Majority of the research that has investigated the dietary behaviours of students – including the impact of COVID-19 on student dietary behaviours, the Freshman Five phenomenon, and the on-campus food purchasing decisions of students – has been conducted using quantitative methods, namely a combination of cross-sectional surveys and prospective cohort studies, as well as reviews and meta-analyses comprised of multiple studies that utilize cross-sectional survey and prospective cohort research designs. While these cross-sectional studies have been useful for generating descriptive data about students' intake of different foods and food groups, food behaviours, on-campus food purchases, nutritional quality of food purchased on-campus, and changes in dietary intake secondary to COVID-19, one of the major limitations of cross-sectional studies is that causal relationships cannot be drawn from the data (51). Another limitation is that a lot of the studies involved participant-reported data variables such as food frequency questionnaires, which can introduce reporting and recall bias (21). The findings of cross-sectional studies are only specific to that transient period of time, and findings of the studies may have been different if a different time frame had been selected (51). The same can be said for the prospective cohort studies, that were used to investigate the Freshman Five phenomenon. Prospective cohort studies are useful for identifying and quantifying the relationships between exposures and outcomes, such as dietary intake, initial BMI, gender and ethnicity, residency, physical activity, and weight change, also allowing for measurement of hazard ratios, relative risk, and attributable risk (52). However, prospective cohort studies are limited by the fact that they are prone to selection bias, are not able to study rare outcomes, and cannot be used to determine causal effect (52). In the case of the studies examined, they also included self-reported data variables, making them subject to reporting bias (52).

While quantitative studies have provided a lot of useful data on student eating behaviour, this approach of research, when broken down to a fundamental basis, assumes the position that food is simply fuel for living; that food provides a source of energy and nutrients, and that there are optimal types and amounts of foods

which can balance to constitute a healthy lifestyle (53). What quantitative research designs fail to recognise or measure is the contexts that surround these optimal types and amounts of food; that food is a primary feature of everyday life, that it permeates relationships, languages and cultures; that food can provide pleasure, pain, fulfilment and anxiety; and is somehow a leading contributor to life and health while subsequently being a leading cause of illness and death (53). It is for this reason that, as quoted by Chamberlain, food is "... constructed, negotiated, socialized and contextualised (53)'. Qualitative research earns its relevance in the field of health research, as it allows researchers to investigate the nuanced relationships behind the how and why of behaviours (49). The next section of this literature review will review a selection of qualitative studies, which investigate the factors that influence student eating behaviours, from the perspectives of university students.

2.7 What are the determinants of student eating behaviour?

2.7.1 Individual level

2.7.1.1 Attitudes and beliefs – desirability

One of the major factors that determined student eating behaviour at the individual level was whether students perceived eating certain foods – ‘healthy’ or ‘unhealthy’ – to be desirable. ‘Healthy’ foods or ‘healthy’ eating can be viewed as desirable or undesirable depending on the individual. For students that perceive ‘healthy’ foods or ‘healthy’ eating as undesirable, common themes are that ‘healthy’ foods do not taste as good as ‘unhealthy’ foods, are less satisfying, and are associated with feelings of obligation or burden, even being compared to “a chore” (54). Students that consider ‘healthy’ foods as undesirable also tend to view ‘unhealthy’ foods as enjoyable, freeing and therefore desirable (54). Students that viewed ‘healthy’ food as desirable attribute healthy eating to physical and psychological benefits such as vigour, vitality, mental fortitude, as well as positive body and self-image (54-56). Perceived lack of vitality as well as prevention of disease and long-term health complications such as obesity, diabetes, and heart disease are also key contributors to the desirability of healthy eating practices (55,57,58). Physical qualities of foods can also influence desirability. Because of their perishable nature, fruits and vegetables may be considered by students as undesirable to purchase, as it is difficult to estimate the number of fruits and vegetables required to last before becoming inedible (58). Food items such as fruit can also become bruised or squashed while being carried around throughout the day, again it’s a less desirable option for students to purchase or consume (58). The desirability of foods or food groups can be dynamic, as certain conditions or stressors that come as a product of the university lifestyle change students’ perceptions of whether a food or food type is desirable. When students are tired or fatigued, they may have a greater urge to consume foods that are energy-dense or high in sugar than they typically

would, to “elevate energy levels” (57). Students can also have an objective attitude towards food, for example viewing food simply as a form of “energy” (54), therefore food is seen as neither desirable nor undesirable.

2.7.1.2 Attitudes and beliefs – prioritisation

For the same reasons that students regard healthy eating as desirable, healthy eating can also be considered for some as a priority. For the students that recognise the importance of healthy eating and treat this as a priority, motivation often stems from maintaining optimal function of the body (54). This is especially true for student-athletes who prioritise healthy eating to maximise practice and performance efforts (54). To achieve and maintain healthy eating, students may prioritise practices such as meal preparation (1). Conversely, many factors that may lead to university students not treating eating as a priority. One of the consistent reoccurring themes throughout the literature is that students don't have enough time to eat, due to the constraints associated with study and university lifestyle (2). This is manifested in different ways depending on the individual. While some students report missing entire meals due to lack of time (55,57), other students indicate that they would prefer to prioritise their time on activities other than cooking, especially when they have a busy workload or are studying for exams, as cooking is perceived to detract from students' ability to focus on their university work and responsibilities (54,57). Outside of university work and responsibilities, students also report that they would prefer to spend time on hobbies and other interests as opposed to spending time preparing food or eating healthily (21). Another consistent theme is that many students fail to recognise eating a healthy, well-balanced diet as a priority, or lack of awareness towards the importance of a healthy diet. This is heavily influenced by students' attitudes towards and perceptions of health. A lot of students believe that achieving a nutritious and well-balanced diet is not a significant or urgent matter at a young age, that healthy eating can be put off until negative consequences were experienced, and in the absence of diagnosed illness or disease there came the notion that it is possible to meet your nutritional needs and maintain a healthy lifestyle without eating a well-balanced diet (54,59,60).

2.7.1.3 Attitudes and beliefs – motivation

Motivation was identified as a key barrier for students throughout the literature. When addressing healthy eating behaviours, students often mentioned the struggle to “overcome inner temptation”, and attributed this to laziness, a “lack of resilience” or lack of motivation (60) Students also highlighted that after finishing university tasks, it was difficult to find the motivation to go grocery shopping or cook a meal, often resorting to something that was easily accessible, nearby, and convenient (60). Lack of motivation also translates to practices such as label reading. Not only do students struggle to read nutritional information on food packages,

but a combination of university-related time constraints and general fatigue means that often students cannot be bothered with the effort required to interpret nutritional information panels and discern the healthiest food options (60). Prevention of illness, diseases, and long-term health complications, as well as perceived improvement in vigour, vitality and cognitive performance all served as positive motivating factors for students to eat a healthy, well-balanced diet (54,55,57). Body image and staying in shape also served as a positive motivator for maintaining healthy eating behaviours (55). Students also highlighted that food could be used as a motivation tool. Sweets and chocolate were regularly identified to replenish energy and assist in completing university tasks (60). Gender-specific differences were also noted in motivation. Significantly more male students report lack of motivation in respect to eating behaviours (21), and although they tend to emphasise personal responsibility over food choice, they were also generally less motivated or concerned to eat a healthy and well-balanced diet (6). On the other hand, women attribute a greater value towards healthy eating (56), and are therefore often more motivated to eat healthily (21).

2.7.1.4 Attitudes and beliefs – thriftiness

When students make the transition from the home environment to the university environment, the increase self-governance of eating behaviour – what, when, where and how much to eat – brings with it many challenges (61). As a way of adapting to the change in environment, students must habitualise new practices to manage these food-related challenges (62). Grocery shopping, budgeting, keeping track of fridge or pantry items, and knowing how much food to cook for a specified period were among a few of the challenges highlighted by students, that required the adoption of responsibility and habitualisation of these new practices (62). These new practices are mostly centred around careful use of resources alongside avoidance of waste – otherwise known as ‘thriftiness’ (54). One of the ways that students sought to maximise value for money whilst dining at on-campus cafeterias – most comparable to eating at a halls of residence in New Zealand – was to eat as much as they could. While students perceived this as a way of “getting their money’s worth”, for some this also acted as a barrier to healthy eating as they felt obliged to fill up on food offered by the cafeteria which they believed to be unhealthy (54). Students also reported that they would eat past the point of satiety in a bid to avoid wasting food (54). Other practices that students adopted to minimize food waste and therefore save money were to know what food items they already had prior to shopping, never building up too larger stockpile of food items, looking out for food items that are on sale when shopping and cooking for more than one day at a time so that leftovers could be eaten at a later date (62). Students would also pre-prepare meals before university, as they found that buying food items on-campus was significantly more expensive than making the equivalent item at home and bringing it with them to university (54).

2.7.1.5 State of mind

Students commonly noted that stress was a factor that would influence on eating behaviour and dietary intake. The transition from the home environment into the university and the subsequent adoption of new responsibilities such as grocery shopping, budgeting, keeping track of fridge or pantry items, and knowing how much food to cook for a specified period was identified by students as stressful (62). Conversely, students that were already accustomed to these habits and practices due to exposure from their parents or practice in the home environment prior to the transition found these practices far less stressful as they were already adept at them (62). Stress related to exam pressures was highlighted by students. Compromised food quality, reduced interest in cooking meals, heavier consumption of convenience foods and practices such as delayed or skipped meals were all attributed frequently to exam-related stress (59). Students also noted that after finishing their exams they would go out to bars and restaurants in order to celebrate (59).

2.7.1.6 Dietary patterns secondary to other behaviours

Exercise and physical activity were key influencers of student eating behaviour. Students that completed regular exercise or physical activity – including but not limited to bodybuilding, outdoor sports and running – tended to eat larger quantities of food, specifically foods containing large amounts of protein and carbohydrates (59). For most this came secondary to the philosophy that exercise and physical activity are energy demanding, and therefore any energy expended during exercise needed to be replenished in order to balance energy (59). For some students, exercise and physical activity also acted as a motivator to adopt and follow healthier eating patterns, as when in a phase of exercising regularly they would make a more considerable effort to eat healthily to be as healthy as possible (54). Sleeping pattern influenced eating behaviour. Students that stayed up late secondary to activities such as studying or socialising tended to eat specific foods such as tea, coffee, biscuits, and other processed foods, and skip breakfast with lunch being their first meal of the day (59). These sleeping patterns and associated dietary behaviours were exacerbated around the times of exams, with students also tending to avoid more meals or eat more irregularly, cook less often, and resort to ready-to-eat convenience foods or energy-dense, calorie rich foods (59).

2.7.1.7 Dietary restrictions

For some, eating behaviours are followed in accordance with dietary restrictions. Students that have diet-related conditions or dietary restrictions such as lactose-intolerance or a gluten allergy are forced to be more mindful of what they are eating in order to avoid becoming sick. Because of this, they found that their knowledge of nutrition and healthy eating was improved (54).

2.7.1.8 Discipline

A common belief amongst students was that discipline has an integral role in the determination of eating behaviour. As discussed in the paragraph on thriftiness, the transition from the home environment to the university environment brings with it an increase in self-governance of eating behaviour (61), and therefore the need to look after oneself (57). For the most part, students are aware of what foods are good for their health, and attributed poor dietary practices towards laziness, lack of resilience and the “inability to overcome inner temptation” (60). While some students reported time-related barriers to discipline following finishing university tasks and no longer feeling motivated, other students were sceptical as to whether these barriers were appropriate excuses for eating unhealthily (60).

2.7.1.9 Food or taste preference

Alongside time and cost, food or taste preference emerged as one of the major factors that influenced the dietary behaviours of students. Most students pertained towards preference for foods that they perceived as unhealthy. This was for two reasons – the first being that healthy food was less flavourful, desirable, and pleasurable in comparison to unhealthy food, and the second being that students generally believed that unhealthy food options were both cheaper and more readily accessible (54). While healthy eating was a priority for some students, most students did not consider healthy eating as the most important factor in food choices, instead prioritising factors such as taste and pleasure (55). Taste preference was also a common prerequisite in the determination of fruit and vegetable intake. In most instances, students would state that the reason for not consuming what they believed to be enough fruits and vegetables was simply because they did not like the taste of them (58). Other reasons for varying fruit and vegetable intake were of diversity of different types of fruits and vegetables available and preference for sweeter tasting fruit (58). Ripeness of fruits and vegetables as well as the amount of satiety that they provide both functioned as barriers and enablers of consumption (58). Price also acted as a barrier in the instances that students ate fruit or vegetables solely for healthy eating purposes, as their perceived high cost could not be justified for this reason alone (58). Students frequently reported that the food available on-campus – especially that available at the hall of residence canteens – was repetitious and monotonous, as the same meals, ingredients and elements were recycled throughout the year (59). Other comments about the meals available at the university hall of residence canteens, in particular the healthy meal options, were low quality or did not taste good (60). This meant that students would often seek to enjoy meals that they purchased outside of the university campus (59). Food or taste preference was also determined by students’ beliefs or perceptions about certain foods, either making

them desirable or undesirable (59). An example of this could be the avoidance of rice due to the belief that it is causative of overweight and obesity, or the consumption of eggs and chicken because of their high protein content and relative low-cost (59).

2.7.1.10 Intraindividual variability

Students noted the differences in metabolism between individuals. While some students report gaining weight very easily, others claim that they can eat and drink whatever they like without having any impact on their weight (57). While this is not explicitly reported in the literature, it is implied that this influences on the eating decisions that some students make because of their perceived metabolic function.

2.7.1.11 Knowledge and skills

Students that were not enrolled in health-related studies felt as though they would eat more fruits and vegetables if they were enrolled in a health-related course or degree, as they would have a better understanding of the reasons why it is important to eat fruits and vegetables (58).

2.7.1.12 Self-image

Body or self-image is a factor that students identify to influence their eating behaviours. Socio-cultural image ideals, media advertisement strategies and concerns of the perceptions of others towards students were all topics that were discussed about self-image and how these affect eating behaviour (57). Body image can also be used as a motivator by students to practice and maintain healthy eating (55). While there was no direct correlation between body or self-image and weight concern, it was expressed that gaining or losing weight was an issue for many students (58). Students associated specific dietary behaviours with weight gain, such as high intake of sugar-sweetened beverages or consumption of rice (55,59). Attending university, living at a hall of residence, and studying for exams are commonly associated with weight gain by students (55,57). Students also reported weight gain in association with social interaction with peers or spending a lot of time with their partners, termed by some female students as the “boyfriend effect” (54). Gender differences were also noted in dietary behaviours related to weight. Females are generally more concerned about their bodyweight than males are, and therefore may follow healthier dietary patterns in order to maintain a lower bodyweight or lose weight (21).

2.7.1.13 Time

Time proved to be one of the most influential factors of eating behaviour for students. Consistent across the literature, students note a perceived “lack of time” due to the busy nature of university lifestyle and its associated commitments (55,58,60,63). Time constraints can cause students to eat at random times throughout the day, and even skip meals on occasion (55). One of the most common themes was the inability to prepare healthy meals due to time constraints. Practices such as planning meals, grocery shopping and cooking meals were perceived to be time consuming, and therefore served as barriers towards eating healthfully (55,56,58,60,63). When time was limited, student would often express that the addition of fruits and vegetables to meals would be avoided as they require more time to prepare, however this was occasionally circumvented through the use more readily convenient fruits and vegetables such as frozen vegetables (58,63). Other practices that were utilised to make meal preparation less time consuming were pre-preparing meals in advance, cooking in groups and sticking to a limited variety of dishes that they knew were less labour intensive (59). Students also reported a heavy reliance on pre-packaged or fast foods, otherwise thought of as convenience foods, as they were the quickest to prepare and often the cheapest, however typically unhealthy (56,63). Time was reported to be of further importance during exam period, therefore each of these factors is further exaggerated when students are studying for their exams (57).

2.7.1.14 Values, morals, ethics, and cultural norms

Culture can influence student eating behaviours. For students that align with certain religions, it is normal to follow specific eating patterns or behaviours based on cultural norms or food taboos, such as Hindi people avoiding consumption of beef (59). Eating behaviours may also differ between genders, as in some culture’s females are expected to learn to cook throughout their childhood and adolescent years, while males rarely participate in cooking (59). While some students have dietary restrictions related to food intolerances or allergies, other dietary restrictions such as vegetarianism or veganism can be imposed in relation to moral conviction (57).

2.7.2 Social environmental

2.7.2.1 Parental influences

Learning, adoption and performance of food-related practices and behaviours through parental or family figures during life at home prior to university has a heavy influence on students’ self-efficacy to perform the same tasks within the university environment (62). Students that have already developed the habits, behaviours and skills that relate to food procurement and processing – budgeting, meal planning, list writing,

grocery shopping, meal preparation and food storage – appear to struggle less with the transition from the home environment to the university environment, and subsequent self-agency to create new habits and behaviours on the basis that these skills have already been somewhat developed (62). Conversely, students that have lacked exposure to these food procurement and processing behaviours and skills within the home environment before the transition to the university environment, tend to struggle to assume and habituate these new responsibilities (62). This can then translate into habituation of alternative practices, such as self-perceived overreliance on foods that are quick and easy to prepare, which also tend to be more heavily processed, expensive, and therefore act as a barrier towards healthy eating (62). Parental control was also thought of as having a crucial role in the determination of student eating behaviour. On the one hand, parental control was seen as an enabler to healthy eating, as students felt more inclined to eat a well-balanced diet that they had been habituated towards and demonstrated the importance of by parents during their time living at home before university (54-57,59). Examples of healthy eating practices demonstrated by parents were consumption of ample fruit, vegetables and water, and avoidance of junk and highly processed foods (54,57,58). Parental control could also function as a barrier to healthy eating within the university environment, as food items that were thought of as prohibited – usually less nutritious foods – within the home environment, were far more desirable to students within the university environment once they had the self-agency to make their own food purchasing decisions (54). Students who grew up with lack of parental control or nutrition knowledge felt that this resulted in a self-perceived nutrition knowledge deficit, as they had less of an example or understanding of what healthy eating looked like (54,55).

2.7.2.2 Peer influences

Peers were seen to have a heavy influence on the eating behaviours of students in a variety of different ways. For the most part, students believed that peers had a positive influence on their eating behaviours. Peer support through encouragement, modelling of behaviour, and the introduction of new knowledge, techniques and practices were all identified to be key enablers of healthy eating behaviours (54-56,58,60). Peers were also seen to positively influence eating behaviour through shared preparation of meals. By preparing meals together, students reported spending less money on food, requiring less time to prepare food, and allowing for a greater variety of meals to be prepared (59,60). While modelling of behaviour through peer influence was seen by some students in a positive light (54,56,58,60), many other students felt as though their peers had a negative influence on their eating behaviours. Students reported that they tended to eat larger meals with peers, that they felt more inclined to purchase food on-campus when their peers purchased food on-campus, that they purchased more unhealthy foods on-campus because of their peers, and that social gatherings with

peers posed a barrier to healthy eating due to the greater accessibility of unhealthful foods (54,55,57). Group or peer pressure was described to be an influencing factor two ways. On the one hand, students felt like group or peer pressure had a negative influence on their eating behaviours, with examples such as feeling obliged to drink alcohol when going to student society parties. On the other hand, students felt like they were forced to eat healthily due to social pressures to be perceived as healthy by peers, or to look a certain way secondary to eating healthily (55).

2.7.3 Physical Environmental

2.7.3.1 Availability and accessibility of food

One of the themes that was consistent across multiple studies was the perception that unhealthy foods are far more accessible than healthy foods. Between the grand selection of convenience foods available on-campus, the modern prevalence of fast-food restaurants, and the ever-improving ability to have food delivered to almost anywhere, students felt overwhelmed with how easy it is to purchase unhealthy foods, stating that it is only getting “harder for people to eat healthy” (55,63). Students also reported that when fresh foods such as fruit and vegetables were more readily available, they were inclined to cook more often and therefore were able to maintain a healthier diet (58,59). Seasonality of fruits and vegetables, low prices, availability of fresh produce near to university, as well as parents having fruits and vegetables when visiting home were all factors that were seen to improve accessibility to fresh foods (58,59). Locations of student residences, flats, and the university campus in relation to grocery stores was seen as a barrier, with physical capacity to carry groceries and ease of transportation being factors that limited choice of food (54). For those that had access to it, transportation was seen as having a positive influence on eating behaviours. Bicycles, the bus – although seen as an unideal form of commute for grocery shopping – or cars were seen as a significant facilitator, as students were able to buy a variety of grocery items or buy items in bulk (63). Conversely, students would tend to prioritise foods that were fast, easy and were easier to procure when they did not have access to transportation (63).

2.7.3.2 Institutional environment

Some of the common perceptions of food prepared in residence halls and cafeterias were that meals were monotonous in colour, taste, and smell, that meals served were all of a very similar composition, or that the meal plan cycle was too small, meaning that the same meals were being served repetitively (21,54-56,59,60). Concerns also arose over the types of foods served and the ways in which they were prepared, with students drawing comparisons between the food served at halls of residence and fast food (21,54-56,59,60). While it

was acknowledged by students that there were healthy food options available, however these were still of a low quality and came with the caveat of being more expensive than other cafeteria food (21,54-56,59,60). Another theme that was highlighted by students was the availability of cheap or discounted convenience foods on-campus, paired with the limited availability and exorbitant cost of fruits and vegetables (58,63). Access to cooking facilities on-campus was seen as either a facilitator or a barrier to healthy eating. Students that lived in student residences with good cooking facilities were more likely to engage in cooking, while students that attended halls of residence with small refrigerators and freezers, little storage space and no access to ovens or microwaves, resulting in an inability to have autonomy over preparing more balanced and healthier meals (56,59). Outside of student residences, students that lived in flatting situations shared similar barriers, with limited storage, cookware and utensils being of major issue that was deemed to hinder ability to prepare food and eat healthily (54).

2.7.3.3 Living situation

Living situation was one of the more polarising factors that influenced eating behaviour, as the effect was highly dependent on the individual. For some students, the transition from high school to university was challenging, and had a negative influence on eating behaviour. With decreased parental control and increased autonomy and independence, students are forced into new roles and responsibilities which translate into eating behaviours, habits, and practices. For students that had no to little experience from the home environment carrying out responsibilities integral to living independently such as list writing, grocery shopping, budgeting, storing, preparing, and cooking, adopting these new roles was difficult, and often translated to eating irregularly meals, or eating out often. These new roles and responsibilities combined with other challenges of a new living environment such as living with roommates, frequently moving between new flats or uncleanliness of common areas such as the kitchen negatively influenced eating behaviour, and translated to an overreliance of unhealthful, inexpensive convenience foods. For students that were more familiar with the roles and responsibilities of food acquisition and preparation, the transition between the home environment and the university environment and the adopting of new eating practices was less challenging, with some students thriving off the autonomy of living independently and having the freedom to form their own positive eating behaviours. Some student reported no changes in eating behaviours when transitioning from high school to university. Like the transition between high school and university, the transition between living on-campus to living off-campus a positive effect on eating behaviours for some, and a negative effect on eating behaviours for others. While some students reported that having a greater variety of places to buy groceries compared to when they lived on-campus allowed them to eat better and have more control over what they were eating

throughout the day, others stated that transitioning to living off-campus meant purchasing foods that were more convenient to buy. Students that lived on-campus reported that living in student residences had a significant impact on their eating behaviours. Students attributed having unstructured lives, staying awake late at night and getting up late in the morning, drinking more, eating more, eating the same things as their peers, as well as gaining weight, all towards living in a student residence. Students living in student residences also noted that lack of kitchen space or access to cooking facilities negatively impacted their eating behaviours.

2.7.4 Macrosystem

2.7.4.1 Cost

Cost of food was arguably the most frequently highlighted factor that influenced student eating behaviours. For some students, finances did not pose as a barrier in the procurement of food, and these students acknowledged that having more money made it significantly easier to prioritise healthy eating and have more freedom around the types of foods that they were purchasing (54,60). Students also identified strategies to reduce cost of food, such as being more aware of product prices, shopping for certain items such as fruit and vegetables when they are in season, shopping for locally produced foods at markets or purchasing from discounter stores and preparing meals in groups or sharing grocery shopping (57,58,60,63). While some students reported that preparing food at home was more cost-effective than eating out, others reported that purchasing foods that tended to be less healthy from either restaurants or fast-food establishments was the cheaper option (57,63). Similarly, some students reported that being selective in purchasing certain fruits, vegetables, cuts of meat or other raw ingredients and creating meals themselves was cheaper than eating out, while other students were adamant that junk food, convenience food, takeaways and fast foods were cheaper than buying multiple ingredients for one meal or buying a variety of fruit and vegetables, and that healthier meal options on-campus tended to be more expensive than unhealthy options. Other contributing factors to these claims were discounts on convenience foods on-campus, greater availability of unhealthy foods on-campus, seasonality of raw food items such as fruits and vegetables, labour, logistical considerations such as travel time and expenses that went into grocery procurement, as well as differences in prices of foods between locations and countries (54,55,57-59,63).

2.7.4.2 Education

Lack of nutrition education during high school was noted by students as a potential barrier for healthy eating. Students pointed out that although they had received both life skills and health courses throughout high school,

nutrition education was not included as part of the curriculum, therefore creating potential gaps in their understanding of nutrition and healthy eating habits (54).

2.7.4.3 Policy and legislation

One example was highlighted by students as to how policy and legislation can influence student eating behaviours. In this instance, it was noted that students are restricted by how much alcohol that they can drink in certain situations, as government regulations only allow a certain level of alcohol to be present in the body to be able to drive (57). Although it was not highlighted in the literature, there may be other instances where policy and legislation may have an influence on student eating behaviour. For students in New Zealand carrying out placements at Te Whatu Ora – a public health agency in charge of the planning and commissioning of health services in New Zealand – the National Healthy Food and Drink Policy dictates that hospitals are required to consistently promote a healthy food environment by providing healthy food and drink options (64). Examples of the criteria for healthy foods includes provision of items containing moderate amounts of saturated fat, added sugar and salt, no-deep fried foods and no or limited amounts of confectionary foods (64). Therefore, policy and legislation enforced by the New Zealand Ministry of Health ensures that if students were to purchase food whilst on placements at hospitals, they will only be able to purchase food items that align with the National Healthy Food and Drink Policy.

2.7.4.4 Media

Students saw media to have both positive and negative influences on eating behaviours. Students identified that television or social media platforms can be useful places to find information about nutrition, healthful eating, recipes, as well as inspiration from influencers that promote a healthy lifestyle (54,55,63). Antithetical to the positive role that media can play towards influencing student eating behaviour, the same platforms can be used to spread misleading food promotions, misinformation, advertising, and marketing of unhealthy foods, as well as messages that can have a negative impact on students' relationships with food (12,14,20).

2.8 Summary

One of the major gaps within the qualitative literature on student eating behaviour is that there has been no research conducted regarding the factors that influence university student eating behaviours within the context of New Zealand universities. Although the study conducted by Hartman et al was conducted in New Zealand,

the study only looked at the psychosocial determinants that were associated with fruit and vegetable consumption, as opposed to determinants that were associated with student eating behaviours in general. This study was also conducted in 2005 at a different university in New Zealand (58).

Of the studies that have assessed that factors that influence university student eating behaviours, most of the studies have focused their findings on the barriers and enablers of healthy eating (21,54,60,63). For this research project, the aims and objectives are centred around two main research hypotheses: the physical university food environment influences student dietary behaviour, and the university lifestyle – study, social activities, lockdown, peer behaviour – or other factors that contribute to the nonphysical environment influence student dietary behaviour. Therefore, this research project will contribute to the literature by centering its findings around the ways in which the physical and nonphysical environment influences the dietary behaviours of university students at a New Zealand university.

Another way that this research project will contribute nuance to the literature is through its novel strategy of inquiry. All the current research on the determinants of student eating behaviour uses a phenomenology or lived experience strategy of inquiry, where researchers use either semi structured, structured or focus group interviews to apprehend experiences of students in relation to university and how this influences their behaviours (65). This research project will utilise an ethnographic strategy of inquiry, where the group of students being researched will be closely observed as they go about their daily lives, collecting data such as interviews, photos, videos, and text descriptions to generate a rich, detailed understanding of student eating behaviours, practices and the factors that influence these (65).

2.9 Research Objectives

The primary objective of this research project was to identify how the university environment influences students' eating behaviors. The two main hypotheses of the research project were that 1) the physical university food environment influences student dietary behaviour, and 2) the university lifestyle – study, social

activities, lockdown, peer behaviour – or other factors that contribute to the nonphysical environment influences student dietary behaviour. Therefore, the research question of the project is:

How does the university food environment and university lifestyle have an impact on the dietary behaviours of university students?

A secondary focus of the research project is to look at the factors that influence the food purchasing decisions of students while they are on-campus.

The next chapter will outline the methods that were utilised in data collection, to investigate the factors that influenced the eating behaviours of students within the context of a New Zealand university.

CHAPTER THREE – METHODS

This chapter outlines the methods used to collect data on factors from the university environment that influenced student eating behaviour. The research project followed an ethnographic study design, using

participant observations and unstructured interviewing data collection methods, alongside thematic data analysis.

3.1 Research design, study methodology and theoretical congruence

3.1.1 Research aims and objectives

The primary objective of this research project was to identify how the university environment influences students' eating behaviours. The study used an ethnographic approach and followed students both inside and outside of the university campus grounds. The research project was designed to be explorative, and involved the application of ethnographic methods to gain a deeper ontological understanding of what constitutes the "university environment", examining how characteristics of this environment such as placements, assignments, exams, peers, and other factors related to the university environment interact with, influence, or determine the eating behaviours of students.

The two main hypotheses of the research project were that

- 1) the physical university food environment influences student dietary behaviour, and
- 2) the university lifestyle – study, social activities, lockdown, peer behaviour – or other factors that contribute to the nonphysical environment influences student dietary behaviour. Therefore, the research question of the project is:

How do the university food environment and university lifestyle impact the dietary behaviours of university students?

A secondary focus of the research project was to look at the factors that influence the food-purchasing decisions of students while they are on-campus.

3.1.2 Research design

The research project followed an ethnographic study design. Between the 18th of July and the 1st of November, I observed 10 students from the University of Auckland using Indeemo. Indeemo is a mobile ethnography platform that is used to help researchers investigate human needs, experiences, behaviours and journeys remotely. The Indeemo platform allows for in-the-moment research enquires, and leverages video, mobile and

AI technology to provide researchers with unfiltered contextual understandings of phenomena that they are investigating within the study population. The Indeemo platform is comprised of two parts: a respondent app which is used by participants to conduct observations, and a researcher dashboard which allows researchers to follow participants and interact with them through the respondent app. Indeemo acted as a virtual link, connecting me with the students and allowing me to understand how the university environment influenced participants' eating behaviours. Using the Indeemo application, I observed each participant's eating occasions from the moment they woke up until the last meal they ate during the day. Participants would conduct their own observations by creating responses to a set of daily tasks. Participants were able to conduct responses using multiple mediums, such as videos, photographs, text descriptions, or a combination of the three. The Indeemo application also allowed me to ask retrospective interview-style questions about specific eating occasions, and uncover pertinent information about factors that may have influenced eating behaviours that were not apparent at face value. By utilising classic ethnographic data collection methods such as participant observation, field-noting and interviewing, alongside modern techniques such as photographing and videotaping, I temporarily immersed myself in the everyday routines of students and observed their eating behaviours.

3.1.3 Theoretical Framework

One of the fundamental concepts that is consistent throughout the existing qualitative literature is that student behaviours are influenced or determined by a complex interplay of factors, which occur at multiple levels of personal and socioenvironmental interaction (66). To frame the factors that either influenced or determined student eating behaviour through this interaction, I used a composite theoretical framework comprised of two existing theoretical frameworks: Bandura's Social Cognitive Theory (66), and Bronfenbrenner's Ecological Model (67). Social Cognitive Theory (SCT) is a theoretical framework that can be used to understand the intricacies of student eating behaviour. SCT theorises that the behaviours of individuals are determined through a dynamic and reciprocal interplay between three factors: personal cognitive factors, socioenvironmental influences, and behavioural factors (66). Personal cognitive factors represent an individual's ability to determine, regulate and analyse behaviour or experience. Three major constructs reflect them: confidence to perform behaviours (self-efficacy), insight towards resulting outcomes of behaviours (outcome expectations), and the understanding of consequence from behavioural enactment (knowledge) (66). Socioenvironmental factors are parts of physical or perceived environments which facilitate, permit, or restrict the enactment of certain behaviours. Socioenvironmental factors include observational learning through role models, normative beliefs about the prevalence, cultural or social acceptability of behaviours,

encouragement through social supports, and facilitation or restriction from enacting behaviours (opportunities and barriers) (66). Behavioural factors are the actions taken by individuals to either improve or compromise their health. Three major constructs encapsulate behavioural factors: existing health capabilities or skills (behavioural skills), aspirations towards behaviour modification (intentions), and consequences from enactment of healthful or unhealthful behaviour (reinforcement) (66). Although SCT acknowledges that environments can shape, constrain or maintain behaviour, it also recognises that people can construct environments that are suited towards their own purposes. This occurs because of the triadic interplay between socioenvironmental influences, personal cognitive factors, and behavioural factors – a tenet central to SCT known as reciprocal determinism (66).

Reciprocal determinism – the theory that individuals and environments both play a part in determining behaviour – is also central to ecological models. Ecological models recognise how individuals behaviours can be influenced through their environment (68). Like the SCT framework, the ecological model proposed by Urie Brofenbrenner recognises that behaviours both effect and are affected by multiple levels of influence (68). Environmental influences on behaviour are categorised into four dynamic, interacting levels: microsystems, mesosystems, exosystems and macrosystems (68). Microsystems refers to face-to-face interactions with family members, schoolmates, workmates, or peers. The interrelationships between microsystems are known as mesosystems; the setting in which microsystems occur, including families, schools, the workplace, or wider social groups. The exosystem refers to forces or events that affect individuals within mesosystems, such as community or media influences. Finally, the macrosystem is the most distal level of environmental influence, and is comprised of cultural belief, political and economic systems (68).

The composite theoretical framework which integrates Bandura's Social Cognitive Theory and Brofenbrenner's Ecological Model creates four broad, integrated levels of influence on eating behaviour: individual or intrapersonal influences, social environmental or interpersonal influences, physical environmental or community influences, and macrosystem or societal influences:

- Individual or intrapersonal factors that influence eating behaviour include attitudes and beliefs towards food, food and nutrition knowledge, self-efficacy towards food procurement and preparation, food and taste preferences, and biological factors such as satiety cues or metabolism. Behavioural factors include eating patterns, eating control behaviours such as dieting, and perceived enablers and barriers of eating.

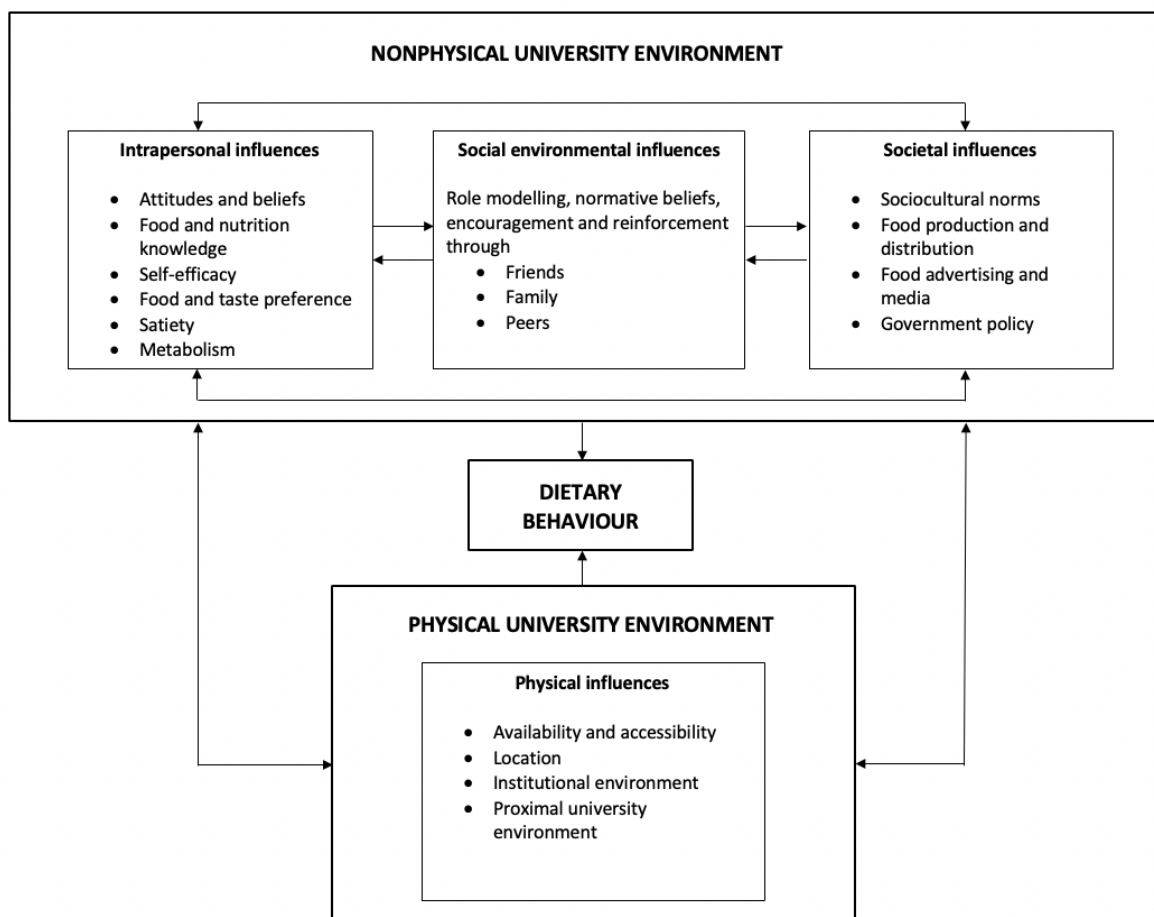
- Social environmental or interpersonal influences refer to how friends, family, peers, or other social environments effect eating behaviours through role modelling, normative beliefs, encouragement, and reinforcement.
- Physical environmental influences reflect the role that physical communities play in influencing the availability and accessibility of foods. Community settings that are part of or proximal to the university environment include university campuses, restaurants, malls, dairies, grocery stores, markets, fast-food outlets, malls, or convenience stores to name a few. Physical environmental influences can also be extrapolated to the location or area that students reside in.
- Macrosystem or societal influences have a far more indirect role in the determination of student eating behaviour. Macrosystem or societal influences include but are not limited to sociocultural eating norms, production and distribution of food, food advertising and media, and government food policy, all of which affect the objective or subjective availability and accessibility of food.

This composite theoretical model can be used to frame and therefore explain the influences of student eating behaviour across multiple levels. For example, a university student might have an energy drink in the afternoon while studying, purely because they like the taste of the drink (intrapersonal factor). However, the student's friend also drinks energy drinks while studying, with the intent of enhancing productivity. At some point the student's friend expressed to the student that they too drink energy drinks while studying, reinforcing this behaviour through normative belief (interpersonal). Because of their popularity among university students, energy drinks are widely available at stores or vending machines on-campus. Energy drink consumption is further promoted through marketing strategies, which highlight the purported focus-enhancing effect. Thus, the social, physical, and societal environments all work synergistically in the determination of student eating behaviour.

Conceived by Story et al (69) to describe the individual and environmental influences on adolescent eating behaviours, and adopted by Amore et al (54) to frame the enablers and barriers of healthy eating in university students, this composite theoretical framework delineates the multiple levels of influence that contribute in the determination of eating behaviour. However, on its own this theoretical framework fails to address the hypotheses of this research project. Therefore, I adapted the framework to include what I defined as the "physical" and "nonphysical" university environment. The "physical" university environment was represented by physical environmental influences, and individual, social environmental and societal influences represented

the “nonphysical” university environment. The way in which these levels interacted, and influenced university student eating behaviours is visually represented as a concept map below.

Figure 3.1 Theoretical framework concept map



3.2 Description of ethnographic research

Ethnography is a method of qualitative research that involves the systematic study of social and cultural characteristics of a group or community using methods such as participant observation, interviewing, and document analysis. Ethnography – originally referred to as the study of culture – has been around a long time; a methodology that has been historically applied in the field of anthropology, sociology, and other social sciences. Ethnography is particularly useful for gaining a deeper understanding of human behaviour and social systems through investigation of the behaviours, beliefs, and practices of people or groups within their natural setting (70). The conceptual definition of ethnography, as well as its applications differ strongly between cultural anthropologists and social scientists (70). While Zigarmi and Zigarmi (71) define an ethnographer as anyone in a natural setting who conducts field research, other researchers such as Warren and Karner (72) suggest that ethnography is the written accounts of researchers based on participant observations. While the

function, form, and application of ethnography differ between researchers, these idiosyncrasies are likely due to no more than a preference of terminology. For the purpose of this research project, I regarded ethnography as a form of research that "...places researchers in the midst of whatever it is they study" to uncover "perspectives, priorities and systems of meaning" while bringing forward the "question of the researcher's own perspective" (70). By utilising classic ethnographic methods such as participant observation, field-noting and interviewing, alongside more modern and novel techniques such as photographing and videotaping, I temporarily immersed myself in students' everyday routines to observe their eating behaviours.

3.3 Researchers positionality

I am a male postgraduate student at the University of Auckland, who participated as a student researcher in the research project "How Do They Eat? An Ethnographic Study of Student Eating Behaviour in a New Zealand University". I participated in this research project as part of my 90-point DIETETIC 793A/B thesis paper, which I completed as part of my Master's degree in Nutrition and Dietetics. Therefore, my goal for this research project was to complete the research, write my thesis and gain my qualification. When considering my goals as a student researcher, my primary goal was in line with the objective of the research, which was to identify how the university environment influences students' eating behaviours. I attempted to achieve this by conducting an ethnographic study with a methodology centered around the research hypotheses and subsequent research question.

Central to qualitative research is the notion that the researcher functions as an instrument of the research, therefore it was important to acknowledge my positionality – a reflection of my experiences, beliefs, prior knowledge, assumptions, ideologies, unconscious biases, values, and the ways in which I perceived the world – as this shaped the ways that I conceptualised the university environment and how it may have influenced students' eating behaviours.

As university students were the study demographic of the research project, I thought that it was important to reflect upon my social identity and experiences as a university student. I have been a university student for six years, beginning my tertiary education journey at the University of Otago in 2017. Food and nutrition have always been an interest of mine, which led me to pursue a degree and a career in Nutrition and Dietetics. It was irrefutable that the university environment had an influence my own personal eating behaviours over the past six years. However, prior knowledge of food, nutrition and health behaviour obtained through my course of study meant that the university environment had likely influenced my eating behaviours in a unique way

when compared to other university students. I had also observed how the university environment could influence students eating behaviour through living and studying with friends and peers. Similar to my own personal experience, the majority of my friends at university studied health professional courses such as medicine, dentistry, and physiotherapy. Because of this, they were likely to have had better health and nutrition literacy than a typical university student, therefore my observed interaction between the university environment and student eating behaviour was a poor reflection of the general university student study demographic. My positionality and social identity as a university student, alongside my university experiences and prior knowledge of food and nutrition, would likely contribute towards the themes I deemed to be significant, and the types of retrospective interview questions that asked participants.

In terms of prior knowledge, it is also important to recognise that I had a very limited understanding of ethnography, content analysis and qualitative research. Majority of my understanding of research design stemmed from quantitative research literature, as my academic background was in science. A significant amount of my conceptual understanding, theoretical framework, research design and methods were heavily inspired based on other preexisting research, as I needed a more co understanding of qualitative research. Because of this, the findings of the research project are likely to add only a small amount of nuance to the existing literature on student eating behaviour, as the study methodology and theoretical framework were heavily inspired based on preexisting research.

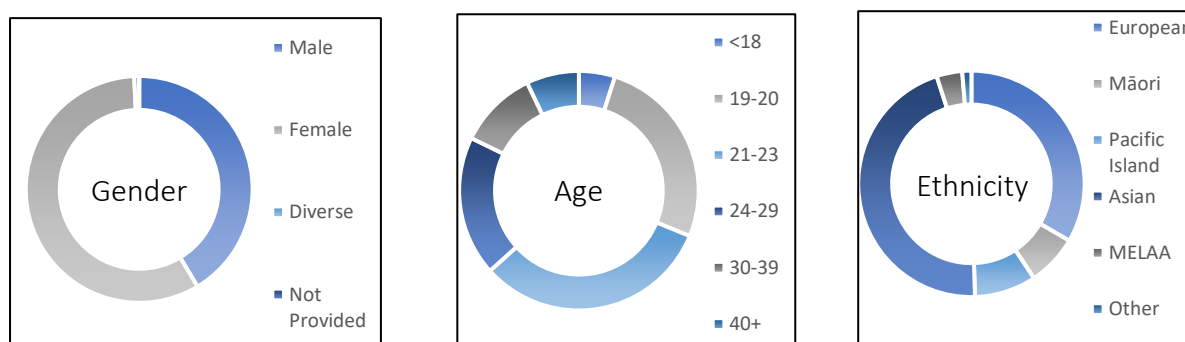
3.4 Study context and location

The research project was conducted at The University of Auckland, a public research university located in Auckland, New Zealand. The University of Auckland is the tertiary education provider of 46,000 students, with 8000 students studying internationally and 36,000 students studying locally in New Zealand. A diverse mixture of genders and ethnicities make up the student demographic, with most students falling between the ages of 21 and 23 (73).

Table 3.1 Descriptive Statistics of the University of Auckland Student Demographic (73)

Gender	Students (n)	Age	Students (n)	Ethnicity	Students (n)
Male	19060	<18	2245	European	15372
Female	26667	19-20	12115	Māori	3363
Diverse	321	21-23	14800	Pacific Island	4058
Not provided	0	24-29	8709	Asian	20965
		30-39	4902	MELAA	1689
		40+	3277	Other	601

Figure 3.2 Descriptive statistics of the University of Auckland student demographic (73)



The University of Auckland has seven campuses spread across the Auckland Region. Central Auckland campuses include the City, Newmarket, Epsom, and the Grafton campus. The other three campuses include the Leigh Marine Laboratory located north of Auckland, the Te Papa Ako o Tai Tonga campus located in South Auckland, and the Goldie Estate Wine Science Centre located on Waiheke Island.

The target population of the research project was students that attended the University of Auckland at the time of recruitment and throughout the proposed research period. Initially, students chosen to participate in the research were intended to be students that regularly purchased food from university food outlets. However, due to limited expression of interest, participants were chosen from the general student population. Flyers advertising the research project were placed around University of Auckland campuses located within central Auckland (City, Newmarket, Epsom and Grafton campus). Emphasis was placed around positioning advertisement flyers around university food outlets, in an attempt to recruit participants that were likely to purchase food on-campus. Advertisements were also placed near entrances to buildings, lecture halls, and other places of common thoroughfare to maximise reach. The research was also advertised online using University of Auckland social media channels and online platforms. Online advertising also served to ameliorate the possibility of poor engagement from physical advertisements, as COVID-19 may have

reduced the amount of students on-campus. Advertisements were uploaded to the University of Auckland social media channels on the 23rd of June 2022, and advertisement flyers were distributed on the 16th of July (Appendix 2).

The research was conducted within the university setting. To be eligible for participation in the research project, students had to be enrolled at the University of Auckland at the time of recruitment, and throughout the proposed research period. Participants were encouraged to observe their eating occasions wherever they were at the time of the occasion – this may have been at a university location, a restaurant, a cafe, in public or at home. Because of how the Indeemo application functioned, the researcher was able to assign tasks and ask interview questions at any time, observations were not limited to one site. Data gathered using the Indeemo application was analysed on-campus, or at the home of the student researcher.

3.5 Research sample

3.5.1 Recruitment of Participants

Participants were recruited using convenience sampling; a non-probability approach where the first students to express interest and meet the eligibility criteria were recruited. Participants were identified through self-selection, by emailing the student researcher and expressing interest.

To be eligible to participate in the research project, students had to:

- Study at the University of Auckland at the time of expressing interest and throughout the proposed research period
- Be over 18 years of age
- Live independently with the ability to give their own informed consent
- Have access to a mobile device that could run the Indeemo application (smartphone with iOS 10 and above or Android 5 and above)
- Be willing to record eating occasions using the Indeemo application over a period of 3 months in 2022

Students that had studied or were studying a Bachelor of Science in Nutrition or a Bachelor of Science in Food Science were also excluded from the study, as their nutrition literacy was not reflective of the general student population and may have influenced the findings of the study. To avoid power dynamics and conflicts of interest, students within the 2021/2022 Masters of Health Sciences in Human Nutrition and Dietetics cohort,

students the researcher knew personally, or students that reported to the principal investigator were also excluded from participating in the study.

Once a student had expressed interest in participating in the research, they were emailed:

- A Participant Information Sheet, which included a project outline, inclusion criteria, details of participation, potential discomforts and risks, benefits, confidentiality, data storage and publishing of results (**Appendix 3**).
- A consent Form to participate in the study (**Appendix 4**).
- A Participant Information Questionnaire to provide background information about the participant, such as age, gender, ethnicity, living arrangement, field of study and length of study career (**Appendix 5**).

Students were given two weeks to read over the Participant Information Sheet, email the student researcher about any questions regarding the research project, and fill out the Consent Form and Participant Information Questionnaire. Once 10 students had filled out Consent Form and Participant Information Questionnaire, each participant was sent an email containing information on how to register with Indeemo, create a password and download the Indeemo application. Participants were also invited to join a digital workplace on Slack, an instant messaging application which was used as a general communication channel between the researcher and the students. This created another medium for the researcher to access the field, as the student researcher could interact with the participants directly and mimic qualities of being physically present 'in the field', which is typical of ethnographic research. Alongside instructions on the 'task list' section on the Indeemo application (**Appendix 6**), the student researcher also sent a video tutorial outlining how to use the Indeemo application and create responses to tasks. The aim of the task list instructions and tutorial video was to create a sense of involvement between the researcher and the participants, outline expectations, and potential outcomes of the research. The task list instructions and the tutorial video emphasised key points such as recording food intake without recording food quantity, and the focus on details such as locations of meals, who participants were with, what they were doing and how they are feeling. Communication and interaction via Slack was encouraged to create a positive atmosphere around the research project, while allowing participants to ask questions prior to and during data collection.

3.6 Data collection

Data collection began on the 18th of July and ran over a three months, finishing on the 1st of November 2022. Data was collected using a mobile ethnography methodology. Mobile ethnography, otherwise known as digital ethnography or online ethnography (70), is a methodology where the respondents use smartphones to create observations of their everyday lives through videos, photographs, or text descriptions. The proliferation of mobile phone use accompanied by a shift in general consumer practices has embedded mobile phone use into people's everyday lives (74). Mobile ethnography now serves as a non-invasive technique, which allows researchers to naturalistically observe the lives of multiple research participants across different locations. Data collection was completed using Indeemo, a mobile ethnography platform and application. The Indeemo application – within the context of this research project – functioned as a food consumption diary. Using the Indeemo application, participants provided insight into their eating behaviours by capturing eating occasions throughout the day.

Prior to data collection, participants were assigned a set of daily tasks by the student researcher. Tasks were comprised of a set of questions which related to students' eating occasions. The questions were designed to assist in contextualising eating occasions, by probing for information such as where the participant was, who they were with, what they were doing, what they were thinking or how they were feeling during any eating occasion. Participants were set a total of four daily tasks: one for breakfast, lunch, dinner, and a final task for snacks. Participants completed tasks by creating "responses" to tasks. Participants could create more than one response to each task every day. For this research project, responses were the equivalent of participant observations. One of the more unique characteristics of the research project was that the participants conducted their own observations by creating responses to tasks. When conducting an observation or creating a response to a task, participants could either take a photo, record a video, write a text description, or upload a combination of all three. While the research participants were encouraged to complete observations by creating video responses, they ultimately had the freedom to decide which format of response they felt best captured an eating occasion, whether that was a video, photo or text description. Because the participants conducted their own observations, data created through responses was spontaneous, media rich and authentic, and had the potential to uncover hidden perspectives, motivations and emotions which may not have been achievable by using other data collection methods.

3.6.1 Task list and participation observation outline

- Task one – Introduction
- Task two – Breakfast
- Task three – Lunch
- Task four – Dinner
- Task five – Snacks

See **Appendix 6** for full Indeemo task list.

While there is not always a clear distinction between participant observations and interviews in traditional ethnographic research methods (75), this research project was anomalous in the sense that the participants conducted observations of themselves by creating responses to tasks, and that the student researcher would conduct interviews retrospectively in response to observations. Interviews were conducted using the Indeemo application. When participants created a response to a task, the student researcher could view these responses from an administrator account. The student researcher was then able to ask interview-style questions, with the intention of gaining a deeper understanding of the eating occasion. Participant interviews served to uncover pertinent information about factors that may have influenced eating behaviours, that were not apparent at face value. Interviews were informal, opportunistic and reflexive, changing and evolving as the researcher learned more about the university environment and its influence on the eating behaviours of participants. The student researcher was also able to create narratives through participant interviews. This was achieved by subtly bringing topics of interest into conversation, that were either related to the research question or had been previously identified to influence student eating behaviour in previous research. A list of interview questions asked can be found in **Appendix 7**. To create a sense of ritual around interview timing, the student researcher attempted to ask all questions around 7pm, followed by a message on Slack the next morning in case participants had missed the Indeemo notification.



15 Aug 2022 · 15:43
Snacks. Hungry after tutoring, quick and easy. In kitchen by myself. Feeling ok

Participant

Target Group: **Auckland University**
Task: **5. Snacks (NOTE: DAILY TASK)**

+ Tag + Notes ☆

Participant 16 Aug 2022 · 0:23
No I don't feel motivated. Just because University has taken all my steam and I just want to relax, and preparing a meal means dishes, which is a bit stressful. Snacks like this or something I can grab from the fridge is best :)

Researcher 15 Aug 2022 · 23:08
After a busy day of university - or in this instance tutoring - do you feel motivated to prepare meals? If so or if not, why?

Figure 3.3 Interview question example

3.7 Data analysis

Responses or participant observations were uploaded from the participants' smartphones onto Indeemo servers. Data was observed using the Indeemo administrator profile. All data including text descriptions, photographs, text transcriptions of videos, interview questions and answers were exported to nine separate Microsoft Word documents, organised by participant. Research data is available to be viewed upon request. Video text transcriptions were created using Indeemo transcription software. NVivo Release 1.7.1 was used to systematically code and analyse research data. The nine Microsoft Word documents containing the compiled data were uploaded onto NVivo. Research data was analysed using thematic analysis, an approach where patterns or themes are identified within qualitative data. Thematic analysis is a flexible data analysis method as it is not bound to a particular theoretical or epistemological perspective, hence it was used in this research project.

Within thematic analysis, patterns or themes can be identified using two approaches: a deductive "top down" approach, or an inductive "bottom up" approach (76). When adopting an inductive "top up" approach, themes identified by the researcher are strongly linked to the data itself, and may bear little to no relation to the research hypotheses. The analysis process involves trying to steer clear of preconceptions on the phenomenon of

interest by the student researcher, and therefore does not follow a premeditated coding frame. (77). Antithetical to an inductive “top up” approach, a deductive “bottom down” thematic analysis would be driven by the theoretical framework of the research project, the research hypotheses, and the researcher’s analytic interests or preconceived knowledge on the topic (77). The research project was driven by the two research hypotheses of the researcher’s theoretical framework – that the physical university environment influences students’ dietary behaviour, and that the nonphysical environment or university lifestyle influences students’ dietary behaviour – therefore the analysis conducted was more “top down” deductive than it was “bottom-up” inductive, however there was still opportunity for novel emergent themes to be identified from the data corpus. Themes were identified at an explicit or semantic level, where the researcher finds meaning in exactly what has been said or written by participants and does not search for meaning beyond this data (77). There reason for identifying themes at this level was because the student researcher found it easier to interpret and theorise significance of patterns and broader meanings from the data, as he had previous experience analysing data at a semantic level from similar qualitative literature as part of their literature review (78).

Thematic analysis can be approached in many different ways, however the student researcher chose to follow Braun and Clarke’s six-step framework (77). While Braun and Clarke’s framework was written as a teaching resource to be used in the field of qualitative psychology, it provides a structured outline for the theory and application of thematic analysis, designed specifically for students that are not particularly familiar with the diversity, complexity, and nuance of qualitative data analysis approaches (77). Phases of Braun and Clarke’s six step framework can be summarised in **Table 3.2**.

Table 3.2 Phases of thematic analysis

Phase	Description
One	Familiarisation with the data corpus
Two	Generation of initial codes
Three	Identification of themes
Four	Review of themes
Five	Definition and naming of themes
Six	Report writing

Adapted from Using Thematic Analysis in Psychology (77)

While Braun and Clarke’s framework provided a structured outline in the application of thematic analysis, to fit the research questions, some flexibility needed to be applied in the process of moving between phases. The first phase involved transcription of any verbal data from video observations, and the reading and re-reading of the compiled Microsoft Word documents to become familiar with the data. During the data collection period,

the student researcher kept a record of interview questions and answers using nine Microsoft Excel spreadsheet documents. At the end of the data collection period, the nine spreadsheets were compiled into one Excel spreadsheet. The range of cells containing interview questions was searched for duplicates, which were removed to leave a list of unique interview questions. To ensure that interview questions and answers were included in data within the nine Word documents, each interview question was checked against participants' compiled word file using the NVivo search function. In the second phase, initial codes were generated by the student researcher. Initial coding was systematic and theory driven; information from the data corpus was coded to identify features of data that were specific to the research questions. Initial codes were sorted based on physical and nonphysical environmental influences of eating behaviour, with physical influences consisting solely of the physical university environment, and nonphysical influences consisting of intrapersonal, social, and societal influences. Once all data had been coded and collated into intrapersonal, social environmental, physical environmental or societal influences, the codes were analysed by the student researcher, and condensed down into candidate themes. Candidate themes were reviewed at the level of the coded data extracts, by reading through the collated extracts or codes for each theme. Following this, major themes were generated, and condensed sections of texts were organised beneath each of the major themes to form sub-themes.

3.8 Study Rigor

While there is great potential for qualitative research in the field of health research – in this instance the investigation of factors that influence student eating behaviour – one of the issues with the type of evidence produced by qualitative research is that it is not empirically generalisable. For this reason, the findings of qualitative research cannot be used to make inferences about characteristics of a wider population than the population being studied (49). However, it is possible that the evidence produced through qualitative research like ethnography can be theoretically generalisable, meaning findings can be used to make theoretical propositions, develop concepts, and understand phenomena about other groups of individuals or settings (49). For a quantitative inquiry to be considered as generalisable, it is paramount for the research to be designed taking reliability and validity into account (79). In qualitative research, analogues of reliability and validity – rigor and trustworthiness – are determined differently than in quantitative research. Rigor can be defined simply as the quality being exact, careful, or acting with strict precision, while trustworthiness refers to truthfulness of findings, quality and authenticity of qualitative research (79). This research project was designed considering the four benchmarks of study rigour and trustworthiness theorised by Lincoln and Guba – credibility, transferability, dependability, and confirmability. Credibility – the truthful or accurate portrayal of the students

lived experience (79)– was achieved through prolonged engagement. The objective of prolonged engagement is to learn the how the phenomenon studied – student eating behaviour – interacts within its specified context, the university environment. To achieve this, I spent three months observing students using the Indeemo mobile ethnography application. A wide variety of data collection methods including photos, videos, text descriptions and participant interviews were used to approach student eating behaviour from multiple angles. Less emphasis was placed around building trust and rapport with participants than in traditional ethnographic research as I was not interacting with participants face to face, however I used Slack, an instant messaging application as a general communication channel to break down the communication barrier between students and myself. I tried to keep communications as casual as possible, using colloquial language styles and avoiding academic Jargon. I also attempted to conduct interviews at the same time of day – around 7pm – to create a sense of ritual. Transferability, the ability of findings to be transferred to other settings or contexts (79), was strengthened by using a purposive sampling method – convenience sampling – and robust data was achieved by using a multitude of data collection methods to contribute towards thick description. Confirmability involves the researcher using reflexive practice to highlight experiences and minimise researcher bias (79), which was considered through the ‘researcher’s positionality’ reflection in this chapter. Dependability, the process of involving other researchers in the research process to improve repeatability of research, was not considered (79).

3.9 Funding and ethical considerations

This research project was unfunded; therefore, no funder had potential to influence the analysis or resulting publication. The principal investigator and the student researcher did not have any financial relations or commercial interests with study sponsors or funders.

To incentivise participation, participants received a \$100 supermarket voucher at the end of the data collection period. Participants were also offered to enter their contact details (name, email and address) for a chance to win a Lenovo M7 Android Tablet.

Ethical approval for this research project was obtained from the University of Auckland Human Participants Ethics Committee on the 4th of April 2022 for three years (Reference: UAHPEC23986). All participants were provided with a Participant Information Sheet (**Appendix 3**) outlining key aspects of the research project, as well as any ethical considerations to ensure that the participant had sufficient information to provide informed consent. Participants provided informed consent by signing a Consent Form (**Appendix 4**). Participation in

the research project was voluntary, and participants held the right to withdraw from the project at any point without giving a reason. Participants also held the right to withdraw their data from the study up to two weeks after completing the study. Participants were able to remove their own data from the Indeemo platform or ask the student researcher to remove their data for them. Participant observations and interviews were completed using the Indeemo mobile ethnography application. All video observations were transcribed verbatim into a password-protected Microsoft Word document, alongside collated photographs and text descriptions. All project data stored on the Indeemo servers was automatically deleted on the 3rd of January 2023. All project data was stored on the University of Auckland servers using a password-protected computer.

The next chapter will outline the participant characteristics of the study population, participant compliance throughout the data collection period, and findings of the investigation into factors that influenced the eating behaviours of students within the content of a New Zealand university.

CHAPTER FOUR – RESULTS

4.1 Introduction

The primary objective of this research project was to identify how the university environment influences students' eating behaviors. The study used a qualitative approach, and observed students both inside and outside of university campus grounds using the Indeemo mobile ethnography platform. Data collection occurred across a three month period, between the 18th of July and the 1st of November. Once the data collection period ended, the data corpus was coded using Nvivo Release 1.7.1, and analysed using a thematic analysis method. The two hypotheses of the research project were that 1) the physical university food environment influences student dietary behaviour, and 2) the university lifestyle – study, social activities, lockdown, peer behaviours – or other factors that contribute to the nonphysical environment influences student dietary behaviours. Thematic analysis of the data corpus was kept congruent with the research hypothesis by organising initial codes using the theoretical framework outlined in the methods chapter. This chapter will be broken down into five sections:

1. The first section outlines the participant characteristics of the study population
2. The second section will outline participant response rates to participation in the study, study tasks and interviews
3. The third section will provide a brief description of the codes generated using the method of thematic analysis
4. The fourth section provides a brief summary of the major themes and associated sub-themes
5. The fifth section will discuss how the four themes identified – time is of the essence, cash is king, the on off-campus conundrum, and miscellaneous influences – and how these relate to the phenomenon of student eating behaviour.

4.2 Participant characteristics

Participant characteristics are summarised in **Table 4.1** and **Table 4.2**. The total study sample consisted of nine participants; all females aged 19-29 years old (mean = 22 years). The majority of the participants were either New Zealand European or Chinese (33.3% and 33.3%, respectively), whilst the other participants were either European, Cambodian, or Filipino. The study population was comprised of students from both health and non-health-related fields of study (77.7% and 22.2%, respectively). Majority of the participants were

domestic students studying for undergraduate degrees, with only one postgraduate student and one international student. All the participants were studying full-time at the University of Auckland.

Table 4.1 Demographic characteristics of participants (n = 9)

Participant	Age	Gender	Ethnicity	Student type	Field of study	Years studied	Living situation
1	25	Female	New Zealand European	Postgraduate, full-time, domestic	Pharmacy	5	Flatting
2	20	Female	New Zealand European	Undergraduate, full-time, domestic	Health science	3	Flatting
3	21	Female	Filipino	Undergraduate, full-time, domestic	Science	3	Flatting
4	29	Female	Chinese	Undergraduate, full-time, domestic	Medicine and Surgery	8	Flatting
5	22	Female	Chinese	Undergraduate, full-time, domestic	Optometry	5	Flatting
6	18	Female	New Zealand European	Undergraduate, full-time, domestic	Arts	1	Living with parents
7	20	Female	Cambodian	Undergraduate, full-time, international	Nursing	3	Living with parents
8	23	Female	European	Undergraduate, full-time, domestic	Medicine and Surgery	3	Student accommodation
9	19	Female	Chinese	Undergraduate, full-time, domestic	Optometry	2	Halls of residence

Table 4.2 Demographic characteristics of the study population (n = 9)

Participants (n = 9)		
	n	%
Gender, n (%)		
Female	9	100
Male	0	0
Age		
18-20	4	44.4
21-23	3	33.3
24-26	1	11.1
27-29	1	11.1
Ethnicity		
Cambodian	1	11.1
Chinese	3	33.3
European	1	11.1
Filipino	1	11.1
New Zealand European	3	33.3
Enrollment		
Full-time	9	100
Part-time	0	0
Field of Study		
Arts	1	11.1
Health Sciences	1	11.1
Medicine and Surgery	2	22.2
Nursing	1	11.1
Optometry	2	22.2
Pharmacy	1	11.1
Science	1	11.1
Length of study career (years)		
1-3	6	66.6
4-5	2	22.2
6+	1	11.1

4.3 Response rate – participants

Of the ten students that were initially invited to participate in the study, one of the students withdrew from the study and another student was lost to follow up. Because the student that withdrew from the study withdrew early in the data collection period, another student that had expressed interest to participate in the study was randomly selected as a replacement. Therefore the response rate of the study sample was 81%. The most recent statistics on the demographic at the University of Auckland show that females make up 57.6% of the student population (73). The study sample was comprised entirely of female students, therefore the study sample was not reflective of the study population of the University of Auckland.

4.4 Response rate – Tasks

Across the three-month study period, participants created a total of 1765 responses to tasks. The student that uploaded the most responses created 305 responses – 2.9 responses per day – while the student that uploaded the least responses created only 39 responses, which averaged out to one response every three days. Across the study population, students created an average of 1.9 responses per day. Based on the assumption that students would eat on average more than twice per day, compliance to task response was moderate, however task response was technically 100% as each of the students responded to each task – Breakfast, Lunch, Dinner, Snacks – at least once over the three-month study period.

4.5 Response rate – Interviews

A record of interview questions and answers was kept for each participant by the researcher. At the end of the study period, interview questions and answers for each participant were compiled into a Microsoft Excel spreadsheet, and the amount of unique interview questions was determined using the Remove Duplicates and Count functions. Across the three-month study period, a total of 138 unique interview questions were asked and answered by participants. The student that answered the most interview questions answered 75 questions, while the student that answered the least interview questions only answered five. Although the researcher tried to conduct interviews based on participant responses each day, this proved to be too much to keep up with, therefore generating an average amount of interview questions answered per day would be inappropriate.

4.6 Codes

Through the process of thematic analysis, a series of initial codes were generated in relation to the theoretical framework, which was used as a basis to determine factors of the physical and nonphysical university environment that influenced student's eating behaviours. Using the nine Microsoft Word documents containing data from each participant, 493 codes relating to individual and intrapersonal influences, 177 physical environmental influences, 102 societal or macrosystem influences and 85 social environmental or interpersonal influences were generated from sections of data. A visual representation of this distribution can be seen below in **Figure 4.1**. All coding and thematic analysis was conducted independently by the student researcher.

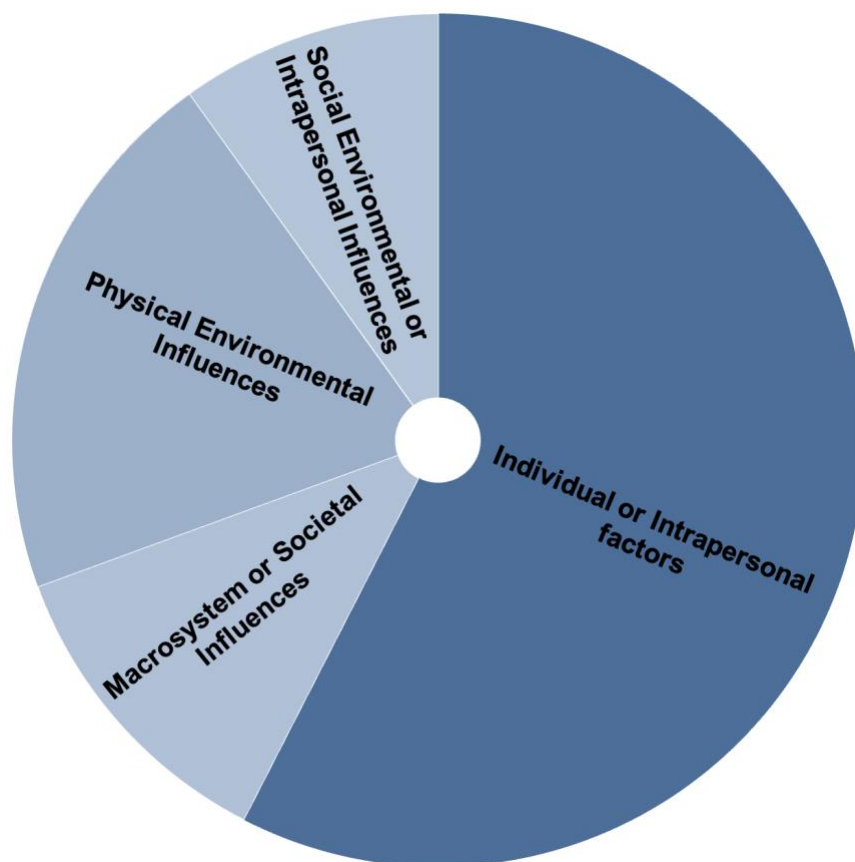


Figure 4.1 Proportion of codes contributing to data analysis by level of influence

4.6.1 Visualisation of dataset using Word Frequency Search

To assist with the identification, review and defining of themes, a Word Frequency Search was conducted using the Query function on Nvivo release 1.7.1. For the Word Frequency Search Criteria, the 30 most frequently quoted words within the codes were identified. Stemmed words (e.g., “time”, “Times”) were included. Words such as dates (e.g., 2022), times (e.g., 7.12pm), linking or transitional words (e.g., “also”, “again”) and other miscellaneous words that the student researcher did not deem to be useful in the synthesis of the Word Frequency Search were removed using the Stop Words List function. A visualisation of the Word Frequency Search can be seen below in **Figure 4.2**.

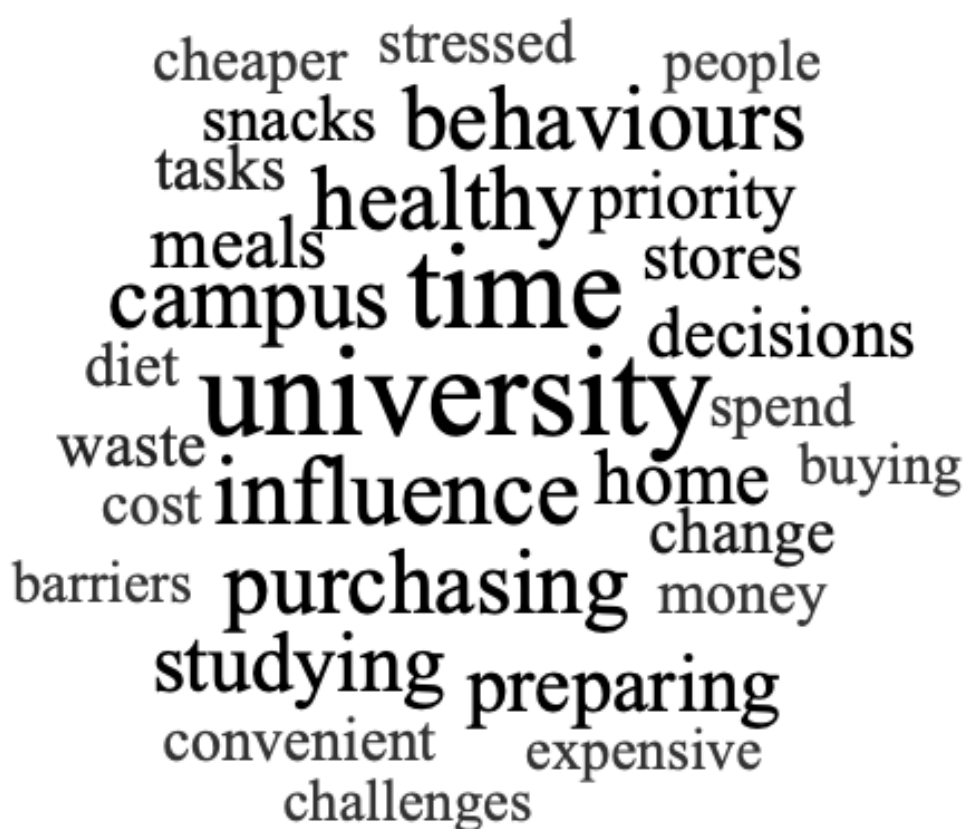


Figure 4.2 Words most frequently quoted by students when discussing factors that influence eating behaviours

4.7 Summary of major themes and sub-themes

Using the method of thematic analysis, four major themes were identified from the task response and interview data. The themes were 1) time is of the essence, 2) cash is king, 3) the on-off campus conundrum, and 4) miscellaneous influences which didn't fit any of the overarching themes yet the researcher thought to have a significant influence on student eating behaviour. Below is a summary of the major themes and their associated sub-themes. Sub-themes were categorised by level of influence which is described by the theoretical framework in the Methods chapter.

Table 4.3 Summary of major themes and associated sub-themes

Time is of the essence	Cash is king	The on-off campus conundrum	Miscellaneous influences
The importance of convenience	Strategies to ameliorate food cost	Studying on-campus versus off-campus	Food and nutrition knowledge
Healthy eating	Food and flatmates	The on-campus food supply	Family
Meal prepping	Friends and spending	Changes to food on-campus	Wastefulness
University commitments	Healthy eating		Location of residence
Stress, fatigue and tiredness	Food cost while living at home		Halls of residence
Times of heavy academic load	Motivation to prepare food		COVID-19
Snacking and studying			Social media
Cost versus time			

4.8 Theme one – Time is of the essence

Time was by far the greatest influencing factor of student eating behaviour. As part of the NVivo word frequency search, time was quoted a total of 543 times by students in the sections of coded data. Similar to the cost of food, time was a factor that directly influenced student eating behaviour, while also acting as a determinant for other factors at different levels of influence. For this reason, the theme “time is of the essence” was the first overarching theme to be identified.

4.8.1 Intrapersonal – the importance of convenience

When students were asked if there were any qualities about being a university student or studying at university that they could identify to impact their eating behaviours, most of them noted that being a student made them value time and therefore convenience foods. Students noted that they tended to purchase foods that were either non-perishable or took a long time to expire, that are premade and take minimal effort to prepare, items such as frozen foods or noodles, and tried to steer away from dishes that took an abundance of ingredients to create. Not only was this a method of saving time, but it also ended up saving students' money in the end as the food that they purchased tended to go further and less would go to waste. Students noted that when they were stressed or overwhelmed during busy academic periods, they were even more likely to turn to foods that were quicker and more convenient to prepare. A lot of the time, this would mean that students would go out and purchase takeaways as opposed to preparing food themselves, as this was the most convenient way to attain a meal with the least preparation time. Students noted that this resulted in them spending more money on food, however most students were willing to prioritise time over cost in circumstances where they needed more time to focus on academic tasks.

Photo caption: "I didn't organise a lunch, didn't think to and so I ended up buying a sandwich from the campus cafe. It was actually epic, and kept me decently full so I'm going to remember that as an option and stop ragging on the campus cafe. I had this before doing a presentation and was busy practising while I ate it".



Figure 4.3 Purchasing food when busy with university tasks

"When I'm stressed or busy, I would tend to order more takeaways, both for meal or snack as I don't want to cook as much and get hungry more easily. Also I tend to purchase food that are fast to make instead of what I want to eat, like complicated dishes that takes long to cook".

4.8.2 Intrapersonal – Healthy eating

One of the questions that students were asked was in relation to their perception of “healthy” foods, and whether they prefer to try to follow a diet that they consider to be “healthy” or not. For most of the students, the consensus was that they had an awareness of what they considered to be “healthy” and “not healthy”. Although most of the students agreed that they would probably like to eat healthier, or that they could make more effort to eat a more balanced diet, they were also of the opinion that it was unhealthy to think of food strongly as “healthy” or “unhealthy” either way, as food was also meant to be enjoyed outside of being a source of fuel.

“I also don’t like the connotation of healthy and unhealthy foods as I just see vegetables and meat and things like that as food and not necessarily healthy and I hate how as a society we tend to now categorise as food being one or the other instead of being like this is nutritious for me and this is not so nutritious for me”

While healthy eating was considered to be a priority by students, it was also noted that there were factors that posed significant barriers to eating healthily that were related to being a student. One of the major barriers that students pointed out was the barrier of limited time. Students noted that during periods of heavy academic load, a combination of stress, the feeling of being overwhelmed and time constraints to complete assignments or study for exams meant that it was hard to keep up with healthy eating routines.

Photo caption: “Poke bowl with prawns, bought from hospital cafeteria Where: at clinical placements at hospital How: feeling good because I love poke bowls! Why: wanted something relatively healthy to eat, especially after having cake for breakfast. There was no dinner leftover from last night (family had without me as I was working until late last night) and I was also too lazy and tired to prepare lunch from home, so decided to buy lunch”.



Figure 4.4 Healthy eating

“I find 1 hour every day for cooking is a good balance, but when I’m busy with university tasks I would take faster processed food which can be less healthy”.

Whether or not students found healthy eating to influence their ability to study based on the individual student. While some students noted that their mindset affected their eating more than their eating affected their mindset – e.g. when they were stressed or busy they were less likely to allocate time towards healthy eating – other students noted that when they went through periods of healthier eating they felt better overall, and were, therefore, able to better focus on university-related tasks.

4.8.3 Intrapersonal – meal prepping

Meal prepping was a tool that students used in order to save time at certain points of the day. Students also noted that preparing meals in advance allowed them to have more control over how healthy the meals that they created were. Another motivation behind meal prepping was the notion that this would save students a lot of energy, as well as money and most importantly time. Although students identified meal prepping as an effective method for providing themselves with more time, they also acknowledge that the act of meal prepping took a lot of foresight and energy in itself. It was for this reason that meal prepping was a behaviour that tended to fall off during busy academic periods when students were juggling multiple university tasks or assignments, studying for exams, or were just generally stressed or overwhelmed secondary to university. In these situations, students tended to prioritise less of their time on meal preparation and more of their time on their university commitments. This manifested in two main ways: either students would purchase food items that were quick and easy to prepare – students noted that these food items were often less healthy than the meals that they would normally prepare – or they would resort to purchasing food that was ready to eat on-campus, from restaurants or takeaway spots that were nearby.

Photo caption: *"Honey soy sauce chicken with sauteed green beans in the pan sauce over white jasmine rice. Chicken was a frozen meal prep I made - I like doing a lot of bulk cooking. Green beans were frozen because they're cheap and convenient :) Eating by myself tonight at home - I like the convenience and comfort of homemade meal preps".*



Figure 4.5 Meal prepping

4.8.4 Intrapersonal – university commitments

On the occasions that students were forced to come into university for lectures or other commitments, how this would influence eating behaviours was dependent on the individual. Some stated that they ate less food than they normally would, usually based on a preference to eat at home as opposed to at university. Shorter breaks meant that students would lean towards more convenient foods that were quick to eat, therefore a lot of students preferred to snack during the day as opposed to bringing full meals. It was frequently noted that coming into university meant students were more likely to purchase food on-campus. This was mostly as a result of convenience and time, as some students would skip breakfast or not be bothered to organise preparing food to bring to university, therefore making purchasing food on-campus or at stores surrounding campus far more convenient. For some students this disincentivised coming into university, as they knew that they would either have to spend time preparing food to take which they would enjoy less than if they ate it at home, or spend more money on expensive takeout food bought on-campus or at surrounding stores. Students also noted that they purchased more food out than they normally would when they were going through particularly busy periods of the term, either due to build-up of assignments or preparation for examinations. This was mostly because students preferred to prioritise their time towards studying as opposed to either shopping or preparing food.

“Yes I do go out to buy food more than I usually would when I have other university responsibilities. Not only that but even once I finish the exam or finish the assignment I can get stuck in the habit of buying food instead of making it because it is easier and I have time to put myself back in the old habit of making nutritious food”.

4.8.5 Intrapersonal – stress, fatigue and tiredness

Stress and fatigue are something that is experienced by all university students, and often stems from a high or increased academic load. Examples of this might include juggling a lot of subject papers, having multiple assignments due at once, as well as studying for or sitting tests and exams. When students were busy, stressed or overwhelmed with university deadlines, a majority agreed that they tended to make meal preparation less of a priority. This manifested in numerous ways: some would snack more often as this was more time convenient or they didn't feel like eating big meals as their appetite had decreased secondary to stress, some would adjust the meals that they did prepare so that they were quicker to make – occasionally at the expense of perceived “healthiness”, and others would buy takeaway food as they would prefer to spend more money in exchange for more time to complete university tasks. Most students agreed that they were less likely prioritise healthy eating, and more likely to justify spending more money on food in exchange for more time to study and focus on university tasks. In saying this, some of the students pointed out that when they are feeling stressed or fatigued, a wholesome or healthy meal was a way of decompressing.

Photo caption: “For lunch, I’m eating a mince and cheese pie, I’m eating alone on-campus feeling a bit stressed. I’m eating this because I have like 20 mins before class and I didn’t bring anything for lunch so I just bought something cheap from munchi mart”.



Figure 4.6 Convenient food during times of stress

“Eating things I like and making nice meals is consistently a focus of mine. I am a big fan of a good dinner or good lunch, so the things that stop me doing that are that I simply haven’t made it to the supermarket or haven’t finished up food I’ve already got so don’t have a need to go. I am also a student who likes to do things early, enjoys writing assignments and really gets into the process of it so I’m usually pretty sorted in that area”.

4.8.6 Intrapersonal – times of heavy academic load

When asked if there were any times of the year when their eating behaviours changed, the most common response was around the times of exams. The ways in which eating behaviours changed around the time of exams was highly variable based on the student, however some of the frequently mentioned changes included spending less time grocery shopping and cooking, placing less emphasis around eating healthily, purchasing takeaway foods more often, as well as eating more liberally and indulgently in order to validate study efforts.

“If I have an exam coming up I’m going to put that first”.

“At the moment I’m in exams and in an extremely busy patch of uni, and it has really messed my normal eating habits because we don’t have a flat cooking roster while it’s so busy, so my normal meals are chaos and I’m in too much of a hectic state to deal with these simple things properly”.

“I’m lazier with what is cooked and slack of in terms of health because I view food as a treat that I deserve during exams”.

“I have coffee every morning during exam times to help me focus better, but I don’t have coffee everyday normally”.

Photo caption: "I'm in the absolute chaos end of my semester, haven't been grocery shopping in ages and had a fire couple days eating chaotic scattered meals including two oranges as a meal. Today I had muesli and yogurt for breakfast, to keep things quick before I left for uni".



Figure 4.7 Eating behaviour during heavy academic load

While some students reported that their eating behaviours were unaffected by placements, others reported eating less due to having a busier schedule, alongside drinking more water and eating more carbohydrate-dense snacks in order to maintain energy levels.

4.8.7 Intrapersonal – snacking and studying

Snacking with study was a double-edged sword. While snacking was a form of procrastination for some students, others used snacking as a way to motivate themselves, provide energy or to maintain attention.

"I do like to snack when I'm studying, it's like a lil treat to hold my attention and keep me seated".

Others would only snack during breaks in between studying. Some of the students also pointed out that they might snack more or eat more junk food as a comforting mechanism "to relieve the burden of stress and make the situation better". One of the students also noted that snacking rather than preparing full meals was more time efficient and that often when they are stressed or fatigued they might lose their appetite and don't feel like eating full meals.

4.8.8 Intrapersonal – skipping meals because of university

Skipping meals was a common occurrence for students. Some examples of the reasons students were skipping meals included working full-time hours while keeping up with course work on placement, forgetting to eat meals when having a busy day, clinics going over time, missing breakfast due to sleeping in or having no appetite secondary to being overwhelmed or stressed.

4.8.9 Cost versus time

One of the more notable relationships was the correlation that students drew between cost and time. Whether a student values the cost of food or time is dependent on both the individual and the circumstance. The consensus was that saving money is most important when time is available, however when time is limited due to circumstances such as assignment deadlines or exams, students are willing to spend more money in exchange for convenience. In saying that, some students stated that they will always prioritise cost over time, as time can be managed efficiently so that saving money is always possible.

4.9 Theme two – Cash is king

As seen in the word frequency search visualisation, words such as “expensive”, “purchase”, “money”, “cheap” and “cost” were frequently quoted by students when analysing the factors that have influenced eating behaviour. For this reason, the second major theme “cash is king” was devised based on the innumerable ways in which the factor of costs influences the eating behaviours of students, as well as being a factor that is often linked to other separate determinants of eating behaviour across multiple levels of influence.

Students noted multiple features of university living that contributed to financial strain such as the cost of rent, international tuition fees and not receiving cost of living support from the government. Consistent across all students was the notion that food was generally expensive, and that budgeting was a challenging yet essential practice. Another common perception is that the affordability of food items such as fruits and vegetables make healthy eating difficult, and that food selection is limited by cost which often results in a diet that is less well-balanced. For the most part all students agreed that the cost of groceries would no longer be an issue once they were finished at university and working full-time.

4.9.1 Intrapersonal – strategies to ameliorate food cost

Some of the strategies that students use to save money and ameliorate the cost of food are buying food in bulk, meal-prepping large batches of food and freezing them to be consumed later, shopping for the cheapest

brands and in-season produce, eating leftovers, bringing food and snacks to campus, knowing where the cheapest spots to buy food on-campus and attending events with free food available.

4.9.2 Social environmental – food and flatmates

Another strategy to save money and ameliorate the cost of food which deserved individual recognition was sharing the cost of meals with flatmates. Students that chose to prepare meals with their flatmates noted that grocery shopping was cheaper, meal proportions were greater, the quality of meals were superior, and that meal preparation time was shorter than if a student was to purchase groceries and cook meals independently. However, for this to be possible, students would have to compensate for their flatmates dietary requirements. If this is not possible, students tended to cook independently from their flatmates despite the purported financial benefits.

Photo caption: “My flatmate made a very simple budget pasta for dinner, with spaghetti, store bought tomato sauce and the cheapest supermarket sausages. It was really good in a comfort meal way and we ate it in the living room watching mountaineering disaster documentaries, so it was a pleasant and wholesome meal and environment. It left me full to do uni work in the evening”.



Figure 4.8 Cheap meal shared with flatmates

“I normally cook meal as a flat because we have similar eating pattern and diet preferences. And by cooking meal together it saves up preparation time, more efficient. It also saves up the cost of grocery as we get to buy food in larger portions and cheaper price”.

4.9.3 Social environmental – friends and spending

One of the few instances where students were willing to spend more money on food is when they were socialising. Multiple students reported that when they were hanging out with friends, they were less likely to worry about spending money as they were more concerned with enjoying time with their peers, therefore they tended to spend more or buy more expensive food.

“I usually eat whatever/wherever they may suggest as I don't have any dietary requirements but a lot of my friends do. I also generally don't think too much about how I spend with friends, compared to buying food alone”.

4.9.4 Intrapersonal – healthy eating

Alongside time, another major barrier for students is the cost of healthy food. Students noted that foods which they perceived as healthy were more expensive, both in terms of foods purchased from the supermarket and foods purchased when buying premade food on-campus or from stores surrounding the campus.

“budget which is a challenge I find as a student, food selection would be more limited and therefore may result in a less balanced diet”.

Although students noted that it was possible to purchase foods that are healthy either on-campus or at stores surrounding campus, they also acknowledged that there wasn't a great availability for healthy foods, and that it was easier and cheaper to purchase unhealthy foods.

“A lot of the time, there aren't a lot of very healthy, It's also usually more expensive to eat healthily. The cheapest options are generally not healthy and cheap is what students go for. There are also not that many healthy options available on-campus”.

4.9.5 Social environmental – Food cost while living at home

Students that lived at home with their parents noted that this helped to relieve some of the financial pressure of purchasing food. While circumstances differed significantly between students, each of the students who lived at home acknowledged that they would likely spend more money on groceries each week if they weren't living at home, and that groceries purchased by parents tended to be better balanced with a wider range of ingredients due to less financial strain.

“Living at homes means that I don’t have to worry about buying food, like if I wanted to bring lunch from home every day and that’s an option and I wouldn’t have to pay for it. It also means I don’t have to worry too much if I do buy lunch on-campus since I don’t have to pay for food all the time”.

4.9.6 Intrapersonal – motivation to prepare food

For students that classified themselves as unmotivated food preparers, the major implication of this was that they felt they were more inclined to purchase food on-campus or from nearby stores when they were at university.

4.10 Theme three – The on-off campus conundrum

Students eating behaviour while on-campus differed based on the individual. While some students preferred to bring food items such as sandwiches or wraps from home, others would make use of cooking facilities on-campus and reheat leftovers. For a lot of students, being on a time crunch meant eating something quick before they left for university, knowing that they would be able to purchase food while at university. Students also noted that food is “so accessible it means that I probably make less of an effort to make food since I know it’s easy to buy”. Another common notion was that students were reluctant to bring lunch with them to university as “food sitting in your bag for hours is never as good and enjoyable as when made fresh”.

4.10.1 Physical environmental – studying on-campus versus off campus

One of the findings that stood out was the number of students that preferred to study from home. A significant number of students noted that studying from home allowed them more flexibility around eating, as they were able to make a wider variety of foods that were more enjoyable to eat as they could be eaten fresh, and were able to eaten at any time of the day. This also meant that students didn’t have to pre-emptively plan what they wanted to eat during the day, and didn’t have to spend time preparing food that they would enjoy less once it had been sitting in their bag for hours at university. Students also pointed out that studying at home tended to be a lot cheaper, as they were eating food purchased from the supermarket as opposed to being tempted to purchase at one of the stores on-campus or nearby campus. An interesting point that was made by one of the students, “because my degree has been in covid it works better for me” to study at home “and I’m used to it. I usually avoid studying at uni because I like to be at home”, which indicates that the COVID-19 pandemic may be responsible for students preference to study at home. In some instances, students would avoid attending university as a means of saving money.

“I’d like uni food to be cheaper as I often skip uni because I don’t want to spend money or spend time cooking food that won’t be as good as it is when fresh at home”.

Photo caption: for breakfast is oatmeal with banana eating alone in my apartment after skipping my 8 AM so I can wake up peacefully and eat



Figure 4.9 Skipping university for convenience of meal times

On the days that students were forced to come into university because of commitments such as clinics, they stated that they were more likely to purchase food on-campus for the sake of convenience. Students also noted that on the days that they had to come into university, they would try and spend a full day on-campus, which meant that they were more likely to purchase food on-campus or from stores surrounding campus.

4.10.2 Physical environmental – the on-campus food supply

In the instances where students did not bring food with them from home to university, a common notion was that students preferred to purchase food from the stores surrounding the campus as opposed to purchasing from stores on-campus. This was for two main reasons, the general consensus being that stores surrounding campus offered a wider variety of healthy and substantial food items – especially for students with dietary requirements or preferences – and that food items sold were far less expensive than equivalent items found at the shops on-campus. For this reason, most students were willing to travel a small distance to save money on healthier food options.

“Most of the time when I decide to purchase food, it is based on two main factors - what I am craving and how convenient it is for me to buy that item. As a result, most of the time they are from stores near the campus”.

In the instances where students chose to purchase food on-campus, the motivation was that of convenience, as stores on-campus offered a comfortable environment that was close to lectures or clinics, therefore allowing more time for students that had short lunch breaks and didn't "have time to walk across the road", however students acknowledge that this would either cost them more money or that they would have to settle for a less healthy option.

“I find that buying relatively unhealthy and fast food is cheaper on-campus”

4.10.3 Physical environmental – suggested changes to the on-campus food supply

When asked what they would like to see changed about the food available on-campus, the consensus amongst students was a greater variety of food at a more affordable price.

4.11 Theme four – Miscellaneous influences

4.11.1 Intrapersonal – food and nutrition knowledge

Students that studied a health-related degree were asked whether they believed that they had a better understanding of nutrition than university students that study non-health related degrees. Some of the answers from students were that they “understand the importance of nutrition and diet by learning the associated complications” and that they “know a bit of a better understanding than non-health students”. Students studying a non-health related degree were asked whether they thought people studying health-related degrees had better nutrition literacy than people studying non-health related degrees. For the most part students agreed that students in health-related fields of study would likely have a better nutrition literacy than those that weren't, one student pointed out that they “also think non-health students can still be very interested in it as I think multiple factors contribute”.

4.11.2 Social environmental – family

When discussing parental influence, students mostly reported the retrospective influence that their parents have had on their eating behaviours. One of the more interesting relationships identified was the correlation between cooking as a child or teenager and cooking ability at university. Students whose parents emphasised helping in the kitchen, preparing meals, and learning to cook noted that this improved their self-efficacy and ability to read recipes and put together meals. Students also noted that this changed their perception of cooking, stating that they did not see cooking as laborious or drudgery. Antithetically, students whose parents did not emphasise participation in the kitchen translated to a lack of knowledge, especially in terms of the number of things that they knew how to cook. Multiple students also noted that they had a tendency to cook the types of foods that their parents made, or they had been brought up on, especially for students that were brought up on foods that were traditional in their respective cultures. Outside of the influence that parents had on cooking ability, students also noted customs that they adopted from their parents growing up. Customs ranged from buying seasonal produce to save money or reducing environmental damage by limiting food waste, to traditional customs such as avoiding drinking cold water as this is seen to be detrimental for the digestive system as a traditional Chinese belief.

Photo caption: "Dinner at my partner's family home. Homemade stir-fried noodles with bean sprout, tofu slices, mushroom and carrots. With a mushroom, baby corn, celery stirfrys and takeaway Chinese staples bbq pork and siu yuk (roast pork)".



Figure 4.10 Meal with family

While some of the university students reported that these behaviours have remained unchanged since studying at university, others pointed out that factors such as financial pressure, the cost and a more westernised food supply have forced a change in these behaviours. One of the students also noted that they are far more independent now that they study at university, and have greater autonomy over their own health,

what types of foods they prepare and have therefore improved their cooking skills significantly because of this university related independence.

4.11.3 Intrapersonal – wastefulness

For the most part students were very aware of wastefulness. Some of the strategies that students employed to reduce food waste was to plan grocery shopping to best use perishable foods such as fruits and vegetables. Students would often take leftover dinner from the night before to university and heat it using on-campus microwaves. Not only did this reduce food waste, it was also a way of saving money as well as time to prepare meals. Students would also try to make more than one meal out of takeaway food options, again saving money and time needed to prepare meals.

Photo caption: *“I had bought some pad Thai with chicken and added my own sprouts I’m hoping to eat this for lunch and dinner”*



Figure 4.11 Multiple meals out of one takeaway

4.11.4 Physical environmental – location of residence

Location of residence relative to food stores acted as a barrier for some students. While some students lived in areas of Auckland such as Newmarket which has a plethora of restaurants and supermarkets that are nearby, other students lived in areas of Auckland which made grocery shopping more difficult. Factors that made grocery shopping more difficult included having no access to a car, or living in an area of Auckland where parking isn't possible. For some students, this limited the types of foods that they had access to in the sense that they were only able to carry so many groceries between the supermarket and their place of residence, meaning that they had to be selective over what they purchased. Secondary to the amount of time

associated with travelling to the grocery store, students would try and limit grocery shopping to once every one or two weeks, purchasing groceries in bulk and buying snacks from more expensive convenience stores closer by or getting takeout in between shops. Other than location of grocery stores relative to residence, finances were the greatest barrier limiting the types or amounts of foods that students could purchase.

Some of the students also noted that they were limited in the types of foods that they were able to prepare based on the kitchen space in their place of residence. Barriers such as having no oven, minimal counter space as well as limited fridge and freezer space meant that some students were only able to store a finite amount of groceries, prepare food with the appliances available and then store any leftovers efficiently. Although one of the students was not limited in the types of foods that they prepared because of kitchen space, they noted that “one main driver for my eating is the ease of cooking”, therefore having inadequate appliances “would impact me”.

“I’d say I’m a disciplined eater and university definitely has challenge that since I don’t have a large enough kitchen to support the way I used to eat. During my undergrad I had a very good diet but that was only because I had a nice kitchen and I had a nice small locally owned grocery store nearby that I was able to get fresh vegetables and ingredients from I was very fortunate to have that and I miss it a lot”.

4.11.5 Physical environmental – halls of residence

Only one student from the study population attended a hall of residence and was able to comment on the ways in which living in halls influenced their eating behaviours. Overall, the student found the food provided at their catered hall was “not too bad”. The student stated that for the most part they eat “what is given to me or what is most convenient”, especially when in a rush, and try to eat as much food provided by the halls of residence as well as “try to save money from not buying lots of food”. One of the points that the student made is that there is limited access to facilities to make their own food, as well as limited availability of certain foods such as fruits. For example, “I would usually have smoothies in the morning with protein powder and lots of fruit. However, as there are limited options of fruit available and equipment, I have a less healthy breakfast” and “fruit selection is limited to fruits such as apples, pears, oranges and mandarins, therefore “I see a lot of people going to the supermarket to buy fruits that they prefer to eat”. When asked if there was anything that they would change about the halls of residence food supply, the student stated, “I would change the options of protein available at each meal so there is a white meat, red meat and vegan/vegetarian. I rarely eat red meat and many times, the only 2 option are both red meats and the vegan/vegetarian protein options are usually

very unappetising. As a result, I skip meals and have snacks instead”. When asked whether the student thought their diet was better when they were living at home versus living in halls, they responded,

“I absolutely eat better when I am at home because mum always make sure that I am having a balanced diet and getting enough calcium, protein, vitamins, etc. When I'm at halls I just decide to grab whatever is the most convenient, whatever I feel like eating and will keep me full until I next have the time to eat”.

4.11.6 Societal – COVID-19

A few of the students stated that the COVID-19 pandemic ended up being beneficial in some ways, as they ended up living at home with their parents who not only did most of the cooking but also had better appliances, as well as access to better ingredients. Another commonality between some students was that they ate more treats or comfort foods as a coping mechanism for isolation. Of the students that talked about their eating behaviours when they had COVID-19, one of the students reported that they ate less food as they were tired, while other students reported having a greater appetite and making a conscious effort to eat healthier to aid recovery.

Photo caption: “I have covid and unfortunately have to mark student papers this whole week. I'm pretty bored so I have a huge appetite and I'm eating more. I've also been conscious about eating healthier too since I want to recover”.



Figure 4.12 Student eating with COVID-19

4.11.7 Societal – social media

For the most part, students noted a positive influence of social media. Students used examples such as bringing friends together to try out new restaurants with high ratings or tasty-looking food, new techniques on ways to prepare food or new recipe ideas. However, they also made mention of greater awareness of food portion sizes in relation to modern beauty standards, as well as falsified dieting information on Instagram.

The next chapter will discuss the findings of the research project, how the results compare to findings within the existing literature, strengths and limitations of the research project, and future directions for research that investigates the phenomenon of student eating behaviour.

CHAPTER FIVE – DISCUSSION

5.1 Overview

This qualitative study examined how the university environment influences student eating behaviours. The research project involved nine full-time students from the University of Auckland, who were followed up for a period of three months between the 18th of July and the 1st of November. The research project was designed to be explorative, and involved the application of ethnographic methods to gain a deeper ontological understanding of what constitutes the “university environment”, examining how characteristics of this environment such as placements, assignments, exams, peers and other factors related to the university environment interact with, influence or determine the eating behaviours of students. Using an ethnographic qualitative approach, this research project aimed to determine whether 1) the physical university food environment influences student dietary behaviour, and 2) the university lifestyle – study, social activities, lockdown, peer behaviours – or other factors that contribute to the nonphysical environment influences student dietary behaviours. The findings of this research project give an insight towards how the physical and nonphysical university environment influences university students’ eating behaviours, therefore addressing the research question, “How does the university food environment and university lifestyle have an impact on the dietary behaviours of university students?”.

This chapter will be broken down into six sections.

1. The first section is a reflective piece by the student researcher outlining their experiences and perspectives throughout the research process
2. The second section will discuss the results of the research project, and compare these findings to the existing literature on student eating behaviour
3. The third section will discuss the strengths of the research project
4. The fourth section will discuss the limitations of the research project
5. The fifth section will give an insight towards potential future directions in the study of student eating behaviour

5.2 Researcher reflection

As stated in my Researcher Positionality reflection in the Methods chapter, my primary goal for this research project was in line with the objective of the research project, which was to identify how the university environment influences the eating behaviour of students. Heading into the data collection period of the research project, I was quite unsure of what was to come in terms of the data that the study was going to generate. I had spent quite a lot of time designing the tasks on the Indeemo mobile ethnography platform (see Indeemo task list in **Appendix 6**), and was confident that the prompts I had written were explicit enough for the student participants to create naturalistic responses which would relate back to the two research hypotheses.

One of the elements of the research project that I struggled with was finding the time to keep on top of the amount of data that was being generated each day. At the time of data collection I was in the middle of a 10-week clinical placement, which required me to be at the hospital for 40-hours per week. This meant that by the time I got home, I only had a limited amount of time during the week to check in with participants, analyse participant observations and conduct participant interviews. Because of this, I feel as though I didn't have an adequate amount of time to build trust and rapport with participants, and didn't have an adequate amount of time spend in the field.

Another thing that I noticed after the first month of data collection was that a lot of the data that was being generated through participant observation was not particularly relevant to the research hypotheses. My assumption is that because participants were expected to create responses to tasks multiple times per day, the participants would find the most efficient way to do this, and got into the habit of answering the set prompts for each response as briefly as possible. In retrospect this could have been remedied by adjusting the prompts for each task so that they were more explicit and framed to better generate responses that were specific to the research hypotheses.

Instead of doing this, I decided to focus my attention towards asking questions that were specific to the research hypothesis. A lot of the interview questions that I asked drew inspiration from the findings of other studies that investigated the factors that influenced students eating behaviours. Although this generated data that was specific to the research hypotheses, it meant that majority of the data that was coded and used in the generation of themes originated from participant interviews. The main implication of this is that the emergent themes and sub-themes are likely to be heavily biased towards factors from the physical and

nonphysical university environment that I knew to influence student's eating behaviours from previous studies, as opposed to emerging naturalistically from participant observations through responses to tasks. It is also possible that this may have exaggerated "pink elephant" bias, the theory that the researcher is biased towards identifying themes and sub-themes in the data that were anticipated (80). Because of this, there was less opportunity to identify factors from the physical and nonphysical university environment that may not have been identified by other studies, or that were unique to either the University of Auckland or New Zealand contexts.

As outlined in my Researchers Positionality reflection in the Methods chapter, I am familiar with the phenomenon of student eating behaviour and the ways in which the university environment can influence students' eating behaviours, as I have been a university student for the past six years. Having now completed the research project, I don't believe that my own personal experiences as a student have had an influence towards methodological or theoretical decisions during the research project. However, it would be naïve to dismiss the possibility that my own personal experiences as a student did not influence the types of questions that I asked during interviews, or the themes and sub-themes that I identified to significantly influence the eating behaviours of the study sample.

One dynamic that I think is important to consider as a male student researcher is that the study sample was comprised entirely of female students. At face value, my assumption is that there is nothing about being a male that would inherently influence the ways in which I conducted this research project when analysing a study sample of female students. This assumption is driven by my review of the existing literature, which showed that there was very little in terms of differences in eating behaviours between males and females. However, it is important to reflect on my positionality as a male student researcher further. Because of my social status as a student, my analysis of student eating behaviour is from an emic perspective, as I identify with and portray the features of being a student (81). However, as a male, my analysis of female students' eating behaviours is from an etic perspective, as I do not portray the features of being a female and therefore cannot culturally identify with this group as an insider (81). Because of my etic perspective as a male, it is possible that I failed to acknowledge or identify voices, feelings, actions and meanings in the data which a female researcher may have found to be significant.

5.3 Findings

5.3.1 Time is of the essence

One of the commonalities between the findings of this research project and findings within the existing literature is that time is a central influence of student eating behaviour. One of the sub-themes that was emergent from the data was the way in which students valued convenience when it came to choices around foods. Within the existing literature, students reported a heavy reliance on pre-packaged or fast foods, as these were cheap and took little time to prepare (56,63). The findings of this research project added nuance and depth to the notion of convenience, as students pointed out that they tended to consume more foods that they thought to be convenient during busy academic periods such as exam weeks, and that one of the added benefits of consuming more convenience foods was that they generated less waste.

Consistent across the existing literature and the findings of this research project was the perception that students had a shortage of time secondary to the busy nature of university lifestyle and its associated commitments (55,58,60,63). One of the prominent subthemes of the research project was the interplay between time and healthy eating. While healthy eating was considered to be a priority by most students, time posed as a significant barrier towards healthy eating, as it required a combination of meal planning, grocery shopping and cooking; all practices which students noted as being significantly time consuming (55,56,58,60,63). While the existing literature acknowledged that students identified meal prepping as an effective method to provide oneself with more time (59), findings from this research project showed that meal prepping in itself required time, foresight and energy. This meant that during busy academic periods, the practice of meal prepping tended to fall off, as students preferred to prioritise more time towards university commitments, which is paradoxical as meal prepping was a means of generating more time. Other time-saving practice that were consistent across the existing literature and this research project were skipping meals throughout the day and preparing meals with flatmates (59,60).

Some of the nuanced findings of the research project that fell under the overarching theme of time, was the interplay between time, stress, fatigue, and tiredness, as well as the dynamic of studying at university versus studying at home, and the ways in time and scheduling influenced the eating decisions of students.

5.3.2 Cash is king

Alongside the influence of time, the influence of cost on student eating behaviour was a common theme across the existing literature and the findings of this research project. Similar to the influence of time, cost

also acted as a barrier towards healthy eating. For some students, finances did not pose a barrier to the procurement of food, and students admitted that having more money made it significantly easier to prioritise healthy eating (54,60). For other students, finances acted as a barrier towards healthy eating, which resulted in a less balanced diet.

Strategies to ameliorate the cost of food as a student were consistent across the existing literature and the findings of this research project, and included purchasing food in bulk, meal prepping, shopping for cheap brands and in-season produce, purchasing locally grown produce, and cooking with flatmates (57,58,60,63). Strategies identified to reduce the cost of food as a student that were unique to this research project were bringing food and snacks to campus from home as opposed to buying food on-campus, attending free university events that are catered, and knowing the cheapest locations to purchase food on-campus.

In terms of the ways in which students peers influenced their eating behaviours, findings from the existing literature were mainly focused around modelling of behaviour – either having a positive influence through peer encouragement or sharing of knowledge, or a negative influence through social obligation and peer pressure (54-58,60) – the main influence identified by students as part of this research project was through willingness to spend more money while socialising with peers.

Another novel finding from this research project was the interrelationship between cost and time. While students noted that saving money took priority when time at ones disposal, in circumstances when time was limited secondary to busy academic periods, students were willing to spend more money in exchange for convenience and therefore time.

5.3.3 The on-off campus conundrum

The on-off campus conundrum refers to differences in students eating behaviours when they are studying on-campus versus studying off-campus. This major theme also discusses the factors that influence the on-campus food purchasing decisions of students within the University of Auckland, which was a secondary focus of the research project.

Some of the shared beliefs about on-campus food availability between students from the University of Auckland and students attending other universities is that there is an abundance of cheap or discounted “unhealthy” food, and that healthy food options are available however these options are limited and tend to

be far more expensive than foods that are perceived to be unhealthy (21,54-56,59,60). This research project added some novel perspectives about on-campus purchasing decisions, in that stores surrounding campus tended to be favored by students as they offered a greater variety of healthy food items – especially for students with dietary restrictions or preferences – at a significantly cheaper price, and that students tended to purchase more food either on-campus or from surrounding stores during busy academic periods.

Another notable finding of the research project was the prevalence of students that preferred to study from home secondary to their eating behaviours. By studying at home as opposed to studying on-campus, students noted that they had more flexibility around the times that they could eat, the types of foods that they could eat, and that they tended to spend less money when studying from home as they would stick to their grocery shopping and not purchase food from stores on or surrounding the university campus. One of the students even stated that they would prefer to skip university to save money and effort preparing meals to take to university. Another student iterated that, “because my degree has been in covid it works better for me” to study at home “and I’m used to it. I usually avoid studying at uni because I like to be at home”, which indicates that COVID-19 may have changed the university experience of students and therefore influencing their eating behaviours.

5.3.4 Miscellaneous influences

Miscellaneous influences were themes that emerged from the data, which did not fall under the description of the three other major themes. Although these themes did not relate directly to the other major themes, the student researcher still believed that they highlighted how the physical or nonphysical university environment influenced the eating behaviours of the participants, and therefore wanted to include them into the research findings.

While students that were not enrolled in health-related degrees noted that they would likely eat a healthier diet if they were enrolled in a health-related degree (58), students also noted that it was possible for students that were not enrolled in health-related degrees to have a good understanding of healthy eating secondary to an interest in the area of nutrition.

The retrospective influence that parents had on students eating behaviours identified in the existing literature was congruent with the findings of this research project. Parental influences included learning, adoption and performance of food-related practices through parental and family figures (62). These practices and

behaviours were seen to translate into eating practices whilst at university, and students that lacked exposure to food procurement and processing behaviours within the home environment noted gaps in their knowledge of food preparation, especially in terms of the amount of meals that they knew how to prepare (62).

One of the novel findings of the research project was the ways in which location of residence influenced students eating behaviours. Based on where students were living in Auckland, students had different challenges to practices such as grocery shopping, either through lack of transport, difficulty parking, or grocery stores being a significant distance away from the area that students were living. This meant that students would limit the amount of times that they went grocery shopping, purchasing food items in bulk so to minimise the need to go grocery shopping often, and resort to takeaways or convenience foods when the practice of grocery shopping was considered to be too time consuming for their schedule at the time.

5.3.5 Findings in relation to the research hypotheses

The two main hypotheses of the research project were that 1) the physical university food environment influences student dietary behaviour, and 2) the university lifestyle – study, social activities, lockdown, peer behaviour – or other factors that contribute to the nonphysical environment influences student dietary behaviour. The results of the research project were organised into major themes and sub-themes, and sub-themes were categorised based on their level of influence in accordance with the theoretical framework outlined in the Methods chapter. For each of the major themes, there were sub-themes based on findings from the data corpus that related to both the physical and nonphysical university environment, therefore confirming both hypotheses. Therefore, based on the findings of the research project, both the physical university environment and the nonphysical university environment played a role in influencing the student eating behaviours of the students within the study sample.

5.4 Strengths

One of the main strengths of this research project is that it is one of the first qualitative studies to examine the factors that influence student's eating behaviours within the context of New Zealand universities. While there are other qualitative studies that have investigated the phenomena of student eating behaviour within the context of New Zealand universities, existing studies have only examined determination of specific eating behaviours, such as fruit and vegetable consumption (58). This research project is the first study of its kind to examine how the physical and nonphysical university environment influences the eating behaviours of university students within a New Zealand context. Furthermore, this research project is one of the first

studies to utilise an ethnographic study design to examine the phenomenon of student eating behaviour. This research project can therefore contribute nuanced research findings to the existing pool of knowledge on the phenomenon of student eating behaviour. The findings of this research project have the potential to be used in conjunction with the findings of overseas studies to inform the direction of further research in the area of student eating behaviour.

One of the strengths of ethnographic research is that it allows for a deep understanding of the social and cultural context of the group or community being studied (82). Because ethnographic research designs make use of multiple data collection techniques such as participant observation, interviews, focus groups, and field notes, data collected has the potential to provide a rich description of a groups behaviours, beliefs and practices (82). Using a wide variety of data collection methods means that multiple topics and issues can be explored simultaneously, allowing for nuanced understandings about complex social phenomena – in this instance student eating behaviour (82).

This research project utilised an emergent methodology of ethnography called mobile ethnography. Mobile ethnography, a branch of digital or online ethnography (70), is a methodology where respondents use their smartphones to create observations of their everyday lives through videos, photographs, or text descriptions. To date, mobile ethnography has been minimally employed in research design, however the proliferation of mobile phone use as a part of everyday life means that there is potential for researchers to use mobile phones as a means of collecting data (74). One of the main benefits of the mobile ethnography research design is it breaks down a lot of the challenges that traditional ethnographic research projects face. To start, the use of a mobile device as a data collection method provides a sense of security to participants, as they use their own device that they are accustomed to which allows for a more naturalistic experience while being observed (74). Because all participant observations and interviews were conducted using the participants mobile devices, collection of data was less invasive than traditional ethnographic methodologies. To facilitate full discourse, it is important for the researcher to build rapport and trust with the research participants (83). This was achieved by the student researcher providing the students with an informal video tutorial on how use the Indeemo mobile ethnography platform, as well as interacting with the students frequently via the Slack instant messaging application. The process of building rapport and trust with participants is usually a challenging aspect of ethnographic research (83). Because all participant observation, interviews and communication were conducted virtually using the participant's mobile phones as opposed to in person, less time and emphasis needed to be placed around building trust and rapport with participants (74).

Another challenge that mobile ethnography addresses is the issue of “accessing the field”. Historically, gaining access to the field is the most difficult phase in the process of ethnographic research, however because the student researcher did not need to be physically present to conduct participant observations and interviews, gaining access was not a challenge (84). Another challenge of traditional ethnographic research projects is that they are resource intensive, both in terms of cost and time (83). Typically the cost of travel required to access the field, as well as the amount of time taken to travel to and from the field would have to be taken into account, however because all observations and interviews were conducted using the participants mobile devices, this was not an issue. This also meant that the researcher was able to access multiple sites simultaneously, which would typically increase the cost and amount of time spent accessing the field by the researcher (83).

The research project was compared with the Consolidation Criteria for Reporting Qualitative research (COREQ). COREQ was developed as a formal reporting checklist for both focus groups and interviews, which are common methods of data collection in qualitative research. The aim of the COREQ was to provide a reference point for studies using focus group and interview methods, to improve rigor, credibility and comprehensiveness, as well as promote complete and transparent reporting of qualitative data. The COREQ criteria is comprised of 32 criteria, which are grouped into three domains: research team and reflexivity, study design, and data analysis and reporting (85).

5.4.1 Domain one – research team and reflexivity

The person conducting the interviews was the student researcher, and this was outlined in both the methods chapter and the Participant Information Sheet (see **Appendix 3**). The credentials, occupation, gender and experience or training were also outlined in the methods chapter. In terms of the student researcher’s relationship with the participants, the student researcher established rapport with students by providing a video tutorial on how to use the Indeemo application, and communicated with students regularly using the Slack messaging application. It is important to note that the establishment of a relationship between the student researcher and the students was not as critical as traditional ethnographic research, as all communications between the student researcher and the students were via online channels. The rationale of the research project and the researchers personal goals was outlined in the Participant Information Sheet (see **Appendix 3**), and the researchers intellectual goals, biases and assumptions were outlined in the Methods chapter under “Researchers Positionality” (85).

5.4.2 Domain two – study design

The methodological orientation, including the theoretical framework that was used to inform the study of the phenomenon in question – student eating behaviour – was outlined in the methods chapter. Method of sampling, participant selection, and the size of the study sample were also outlined in the methods chapter. Non-participation in the research project, including drop out and loss to follow up was outlined in the results chapter. The setting of data collection was outlined in the methods chapter, while the description of the sample including participant characteristics and demographic data was presented in the results chapter. Details on data collection, including data collection methods and interview details were outlined in the methods and results chapters. Information on data prompts – the Indeemo task list – and interview questions can be found in **Appendix 6** and **Appendix 7**, respectively. It was unnecessary for transcripts to be returned to participants as the participants had access to all of their uploaded data via the Indeemo mobile application, and could edit or reupload responses to tasks or answers to interview questions at their own discretion. In terms of data collection, the only two criteria that were not met, as the student researcher did not take any field notes, and data saturation was not discussed in the results chapter (85).

5.4.3 Domain three – data analysis and findings

Number of data coders, description of the data coding tree including a word frequency search, and a description on how themes were derived is detailed in the results section. Nvivo Release 1.7.1 was used in the management of data as well as the process of coding. Participants were not able to provide feedback on the research findings, as this was not considered in the study design. Findings were consistent with the data corpus, and quotations from transcribed video data, text descriptions of task responses and interview answers were presented to illustrate themes and findings. Major themes and associated sub themes were clearly presented in the results section (85).

Overall, the research project met 29 out of 32 of the COREQ criteria. The three criteria that were not met by the research project was in relation to data saturation, the return of transcripts to participants and the checking of findings with participants, as these factors were not taking into consideration during the design phase of the research project.

5.5 Limitations

One of the main limitations of the research project is in relation to the student researchers limited understanding of ethnographic research. Since the method of ethnography is a specialist method, it is important that research design, sampling, data collection and analysis is completed in consolidation with a researcher that is trained in social theory, with an understanding of best-practice (83). As outlined in the Researchers Positionality reflection in the Methods chapter, the student researcher had a very limited understanding of qualitative research and ethnographic study design. Because of this, the conceptual framework, theoretical congruence and the study methodology of the research project were heavily inspired from existing qualitative literature investigating the phenomenon of student eating behaviour. Because of this, it is possible that the findings of this research project may closely reflect the findings of preexisting literature which investigates the phenomenon of student eating behaviour in university students.

Another limitation is the study sample of the research project. The study sample was selected using convenience sampling, a type of nonprobability sampling whereby the members of the target population are selected to participate in the study based on practical criteria such as willingness to participate, availability at a given time, or geographical proximity (86). Participants recruited into the study based on self-selection; the first students to express interest in participation that met the eligibility criteria of the research project – see Recruitment of Participants in the Methods Chapter – were recruited to participate in the research project. One of the main disadvantages of convenience sampling is the likelihood of the study sample to be biased, due to both apparent and hidden biases (86). The most apparent bias of the study sample is that it was comprised entirely of female students. Based on the most recently available data, the University of Auckland has 26,667 female student, therefore females make up 57.9% of the student population (73). For this reason, the study sample is not representative of the student population at the University of Auckland, as females are significantly represented in the sample. One of the hidden biases of the study sample stems from self-selection bias. Self-selection bias is the theory that participants who volunteer to participate may be different in a way that is unrelated to the sampling criteria than those from the same population that did not volunteer to participate (87). Within the context of this research project, self-selection bias is evident in that students who expressed interest to participate in the research project may be more interested in the topic of eating behaviour than other students from the University of Auckland. This means that the findings of the research project may be reflective of the eating behaviours of students that are more conscious of or interested in their own eating behaviours, as opposed to the eating behaviours of the general University of Auckland student population. This theory is congruent with research conducted by Dindia & Allen, which found that females

show a higher tendency towards self-disclosure than males do (88), which may also explain the overrepresentation of female participants in the study sample.

Credibility addresses whether there is consistency between the participants' views or lived experiences, and the interpretation or representation of these by the researcher in relation to the phenomenon of interest (89). By describing their experiences and verifying findings with participants, the researcher can enhance credibility (89). This can be achieved through the practices of prolonged engagement and persistent observation (90). Prolonged engagement involves building rapport and trust with the participants, to facilitate full discourse and detailed responses (89). The researcher can encourage this by collecting data using multiple methods – interviews, focus groups, documents, pictures, and videos – to witness multiple realities of the research phenomenon, and by allowing adequate time for data collection (89). Persistent observation addresses the researchers awareness of the emotions and feelings of the research participants (89). Prolonged engagement and persistent observation are instrumental in reducing observer effects (89), such as the Hawthorne effect: the alteration of participants' behaviour due to awareness of being observed (91). Although multiple data collection methods – participant observations via text descriptions, photographs and videos, as well as participant interviews – were conducted through the Indeemo mobile ethnography application, more emphasis could have been placed around building trust and rapport with participants in order to better facilitate detailed responses and full discourse. Because the student researcher conducting participant observations and interviews was on placement during the period of data collection, it meant that less time was available to interact with participants to build trust and rapport. While the feelings and emotions of students were documented as part of responses to task (see task list in **Appendix 6**), more emphasis could have been placed by the student researcher around the ways in which these feelings and emotions influenced the eating behaviours of students.

Transferability refers to whether the findings of a research project can be applied to other groups or settings (92). Transferability of findings can be enhanced through use of purposive sampling methods and by providing thick description (79). While there is no set definition as to what constitutes a 'thick description', it is agreed that a thick description should be able to provide enough contextually relevant detail so that a non-participant can gather essential facts about the phenomenon in question to determine the validity of conclusions (93). While the research project utilised a convenience sampling approach – a nonprobability approach where the firsts eligible students to express interest were recruited to participate – one of the main issues is that a large sample is necessary when conducting unstructured interviews to provide enough data for thick description (90). Although multiple methods of data collection were incorporated into the research

project, it is difficult to determine whether thick description of the phenomenon of student eating behaviour was achieved, as data saturation was not something that was considered during the design of the research project. The implication of this is that cherry picking of superficial findings from the data is more likely (94).

Dependability is attributed to the constancy of data over homogenous conditions (89), when enough detail is provided to determine how dependable the researcher and the research project is (95). In theory, if a study is dependable then similar results should be obtained if the same work were repeated using the same methods, in the same context, and with the same participants (96). Dependability can be achieved by providing evidence of an audit trail, a collection of notes and materials that document evidence and reasoning behind decisions, assumptions and choices made throughout the research process (89,95). While participant interview transcripts were kept (see **Appendix 7**), each stage of the research process was not clearly documented, especially during the process of coding and thematic analysis, therefore stepwise replication of the research project would be difficult, if not impossible to achieve.

Confirmability addresses whether the interpretation and conclusions of the research findings by the researcher are reflective of the participants' responses, as opposed to representing the researchers own viewpoints or biases about the phenomenon of interest (89,95). Confirmability is achieved when the researcher can provide evidence that the research findings are clearly derived from the data corpus (97). Confirmability can also be demonstrated in the reporting of qualitative research by providing rich quotes from participants which depict themes or sub-themes (89). A plethora of quotes were included in the Results chapter, both from content analysis of photographic and videographic responses to tasks, as well as interview question answers, which support the findings of emergent themes and sub-themes (see Results chapter). To minimise the effects of researcher bias, it is important for the researcher to look back at their own experiences, and reflect upon actions taken throughout the research project and how these may have influenced the overall research process. Reflexivity is a critical consideration of the researchers own role in the research process (98). It involves self-scrutiny of the researchers background, values and previous experiences with the phenomenon of interest, and how this may affect the research process (89,98). Reflexivity can be addressed through the researcher maintaining a reflexive journal which outlines their thoughts and feelings throughout the research process (89). Throughout the research project, the student researcher provided two reflective pieces. The first was the researchers positionality prior to data collection, which outlined the researchers personal and intellectual goals, their social identity as a university student, their experiences, beliefs, assumptions, ideologies, unconscious biases, values, vies and prior knowledge about the phenomenon of student eating behaviour, and how this might influence the findings of the research

project (See Researcher Positionality in the Methods Chapter). The second reflective piece created post data collection and analysis, which reiterated the researchers personal and intellectual goals, their initial understanding of the phenomenon of interest and how this changed throughout the research process, the positionality of a male university student studying the eating behaviours of female university students, and potential biases of the research project. Although these reflective pieces provide useful insight into the researchers positionality and how this may have influenced the direction and findings of the research project, the student researcher did not conduct a reflexive journal throughout the process of data collection and data analysis. Seeing as the researcher was the sole instrument of the study, it is now impossible to determine whether any researcher bias was introduced by the student researcher during the process of data collection and data analysis.

5.6 Future directions and recommendations

This research project provides evidence that there is strong future potential for the phenomenon of student eating behaviour to be investigated using an ethnographic methodology. Like other health research or research conducted in the space of Nutrition and Dietetics, investigation into the phenomenon of student eating behaviour has been dominated by quantitative research methods (49). Cross-sectional studies have generated useful descriptive data about students' intake of different foods and food groups, food behaviours, on-campus food purchases, and nutritional quality of food purchased on-campus. Prospective cohort studies have served to identify and quantify the relationships between exposures and outcomes such as dietary intake, initial BMI, gender and ethnicity, residency physical activity, and weight change. While statistical sampling techniques have allowed generalisations to be made about the phenomenon of student eating behaviour through principles of objectivity and reductionism, quantitative research fails to provide useful context for the reasons as to why these objective measures occur. For this reason, qualitative methodologies are increasingly being recognised as being pivotal in developing the understanding of food and nutrition-related issues, and therefore driving health policy and practice (99). Ethnography offers a way of understanding these contexts, and generates information about behaviours, beliefs, values, practices, and their meanings within a naturally occurring setting (100).

This research project is the first study of its kind to examine the how the physical and nonphysical university environment influenced the eating behaviours of university students within a New Zealand context using an ethnographic methodology. While this research project had a number of strengths, there were a number of theoretical and methodological flaws that affect the generalisability of its findings. The findings of this

research project can be used to influence further qualitative research which investigates the phenomenon of student eating behaviour within the New Zealand context. Future research projects should seek to

- Consolidate research design, data collection and data analysis decisions with a researcher that is experienced in qualitative research and ethnographic enquiries
- Recruit a study sample that is reflective of the student population being studied
- Ensure that the researcher is spending ample time in the field to build trust and rapport, facilitate detailed responses and full discourse
- Consider data saturation in the design phase of the research project
- Create key documentation such as field notes, audit trails, and reflexive journals to provide context behind theoretical and methodological decisions.

The next chapter will provide an overview of the research project, summarising the aims and objectives of the study, research hypotheses and study question, the significance of the research, as well as the findings and implications of the research project.

CHAPTER SIX – CONCLUSION

The primary objective of this research project was to identify how the university environment influences students' eating behaviours. The two main hypotheses of the research project were that 1) the physical university food environment influences student dietary behaviour, and 2) the university lifestyle – study, social activities, lockdown, peer behaviour – or other factors that contribute to the nonphysical environment influences student dietary behaviour. Therefore, the research question of the project was, “How do the university food environment and university lifestyle impact the dietary behaviours of university students?”

The study utilised an qualitative approach, and followed students both inside and outside of the university campus grounds. The research project was designed to be explorative, and involved the application of ethnographic methods to gain a deeper ontological understanding of what constitutes the “university environment”, examining how characteristics of this environment such as placements, assignments, exams, peers, and other factors related to the university environment interact with, influence, or determine the eating behaviours of students.

Four major themes, which related to factors from the physical and nonphysical university environment that influenced the eating behaviours of the university students, emerged from the data collected over the three-month study period. The first major theme, “time is of the essence”, discussed how students' find value in convenience, that lack of time poses as a barrier to healthy eating, strategies for reducing the amount of time spent preparing food, the trade-off between cost and time, and how stress, fatigue, tiredness, and university commitments influence available time and therefore eating behaviours. The second major theme, “cash is king”, discussed students' strategies to ameliorate the cost of food, how flatmates and friends influence food spending, and cost as a barrier to healthy eating. The third major theme “the on-off campus conundrum” discussed students' justification for studying on or off-campus and how this impacted eating behaviours, and provided an emic perspective of the on-campus food supply, as well as student-proposed changes. The fourth and final major theme “miscellaneous influences” discussed influences from the physical and nonphysical university environment that didn't fall under the other major themes, including how food and nutrition knowledge, family, location of residence, halls of residence, COVID-19 and social media all contributed towards the determination of student eating behaviours.

The findings of this research project highlighted that factors from the physical and nonphysical university environment had an influence on the eating behaviours of the students within the study sample. Sub-themes of the major themes all reflected levels of influence outlined in the theoretical framework of the research project, which furthermore supported the research hypotheses that the physical and nonphysical university environment influences the eating behaviours of students. Although the methodological and theoretical limitations of this research project limit the generalisability of the research findings to other student populations, this research project paves the way for further qualitative research into the investigation of student eating behaviours.

APPENDICES

Appendix 1 – Literature review summary tables

What are university students eating at university?

Author(s), year	Title	Origin	Research design	Purpose	Participants	Measures	Results
Dinger (1999)	Physical activity and dietary intake among college students	USA	Cross-sectional survey	Determine the dietary intake of college students	743 university students aged 18 and above living in resident halls, fraternities and sororities	Number of servings of juice, fruit and vegetables (FJV), Number of servings of high fat meats, snacks and desserts (HFF)	Average combined FJV 2.90. No difference between groups. Average combined HFF 2.41, Differences between males/females and resident hall wellness centre members. Average student failed to meet dietary intake recommendations.
Huang et al (1994)	What do college students eat? Food selection and meal pattern	USA	Cross-sectional survey	Determine the eating practices of college students	1921 students enrolled in an introductory nutrition course at Michigan State University	Most frequently consumed foods and snacks Frequency of skipped meals Differences in food selection (season and gender)	Approximately one in four students skipped breakfast About 80% of students snacked once per day Skimmed milk was consumed more frequently than whole milk, especially by women Single meat dishes such as low-fat turkey were most popular with females, while combination meat fast food style dishes (pizza, hamburgers) were more popular with men Tossed salad was the only frequently eaten non-starchy vegetable, and was consumed most frequently by females. Apples, bananas and oranges were the most frequently consumed fruits. Regular snack foods included regular and diet carbonated beverages, chips, apples, popcorn, candy bars, pizza, cookies and regular and lite beer.
Siliman et al (2004)	A survey of dietary and exercise habits and perceived barriers to following a healthy lifestyle in a college population	USA	Cross-sectional survey	Determine the dietary habits of college students	471 college students	Frequency of meals Types of snack foods Diet quality	Breakfast was the most commonly skipped meal Males consume larger quantities of sodas and alcoholic beverages. Men consumed higher fat dairy products, ate more lean and fatty meats, and ate fewer vegetables and whole/canned fruits than females. 58% of participants reported eating less than one vegetable per day.

Yahia et al (2016)	Assessment of weight status, dietary habits and beliefs, physical activity, and nutritional knowledge among university students	USA	Cross-sectional survey	Assess the dietary habits of university students	237 students (n = 173 females, n = 64 males) mean age 20 years from the Central Michigan University	Food preference and food frequency questionnaire	<p>Majority of students consumed milk daily. Almost half drank 1-2 glasses per day. More males than females consumed ≥ 3 cups milk/ yogurt per day.</p> <p>49% of students reported 1-2 portions per day of rice, pasta, bread or potatoes</p> <p>70% at fruits and vegetables daily, more than 1/3 1-2 portions per day. Females reported more frequent intake than males.</p> <p>Non-significant difference in amount of meat between males and females</p> <p>1/3 of students ate fish every two weeks / 1-2 eggs per day. Significant difference in fish intake between males and females, with males consuming more.</p> <p>1/3 students reported intake of ready to eat meat, sweets, fried potato, fast food at least 1-2 times per week. Ready to eat meat consumed more frequently by females, alongside sweets.</p> <p>1/3 of students reported pizza once every two weeks. Fast food more common among males.</p> <p>Females at breakfast more often than males. 39% of students had milk, coffee or yogurt at breakfast. 1/3 consumed fruit juice, more often by males.</p> <p>39% of students ate three meals per day.</p> <p>Males tended to consume wine/beer, SSBs and high protein foods more often than females.</p> <p>Males consumed 1-1.5L of water more often than females.</p>
Racette et al (2005)	Weight changes, exercise, and dietary patterns during freshman and sophomore years of college.	USA	Cross-sectional survey	Assess the dietary patterns of university students during freshman and sophomore years	764 students (n = 274 freshmen from 1999, n = 490 freshmen from 2000) attending Washington University	Intake of fruit and vegetables, fried food, high-fat fast foods and noncaffeinated, non-alcoholic beverages	<p>Fruit and vegetable consumption inversely correlated with both fried food and fast food intake. Positive correlation between fried food and fast food.</p> <p>Between the beginning of freshman and the end of sophomore year, consumption of high-fat fast food and fruit and vegetables did not increase, fried food consumption declined.</p>

Hilger et al (2017)	Eating behaviour of university students in Germany: dietary intake, barriers to healthy eating and changes in eating behaviour since the time of matriculation.	GER	Cross-sectional survey	Investigate baseline dietary behaviour and changes in dietary behaviour since beginning university	689 students (n = 210 males, n = 479 females) aged between 16-29 years from 40 universities across Germany	Intake of vegetables and salad, fruits, bread, grains and side dishes, dairy products, meat, eggs, fish, sausages, sweets and snacks	<p>Minority of students ate cooked vegetables, raw vegetables or salad multiple times per day. Fresh fruit consumed multiple times per day by 26.9% of students. Brown bread eaten by 10% less than once per week.</p> <p>18.0% never ate red meat, 12.6% ate red meat 4-7 times per week. More than half consumed poultry 1-3 times per week, 43.1% consumed fish 1-3 times per week. More than half consumed fast food less than once per week, only 1.9% consumed fast food 4-7 times per week.</p> <p>Gender differences: cooked vegetables, salad, raw vegetables, cream cheese/yogurt, chocolate and fresh fruit consumed more by females, red meat, poultry, sausages, fish, cheese, pasta/rice, fried potato/chips consumed more by males.</p> <p>13.8% of the study population were vegetarian, 2.0% vegan. Significantly more females than males were vegetarian.</p> <p>74.3% of students ate breakfast 4-5 times per week, 8.7% seldom/never ate breakfast. 73.6% ate lunch on weekdays, 51.8% ate lunch at the canteen.</p> <p>Majority of students eating behaviour changed since starting university (more males than females), those who moved away from their home town to attend university more than those who stayed in their home town.</p> <p>40.5% ate more vegetables, 38.2% ate more fruit. Students also reported eating less red meat, poultry and fish (53.5%, 43.4% and 37.3% respectively). Over half reported eating meals less frequently (55.2). Gender differences for changes in consumption were found in fast food, fish, poultry and sugar/sweets.</p>
Sprake et al (2018)	Dietary patterns of university students in the UK: a cross-sectional study	UK	Cross-sectional survey	Investigate the dietary behaviours of university students	1448 students (n = 1054 females, n = 384 men) from five universities across the UK	111-item food frequency questionnaire	<p>Weak negative correlation between vegetarianism and energy intake, weak positive for health conscious behaviour. Strongest correlations for energy intake were with red meat, convenience and alcohol, as well as snacking. Strong positive correlations between vegetarian pattern and fibre, thiamin, copper. Health conscious was most nutrient dense, with strong positive correlation with selenium, vitamin B12, biotin, vitamin D. Vegetarian pattern was mostly associated with female gender, middle age group, greatest self-reported cooking and low consumption of pre-packed foods.</p> <p>Snacking was associated with low-leisure physical activity time, full time student status, living in university accommodation, infrequently meals prepared with raw ingredients, frequent consumption of pre-prepared foods and takeaways/ready meals.</p>

							<p>Health conscious eating patterns were associated with very active physical activity levels, 'white other' ethnicity, third year of undergraduate study, ability to cook a wide range of meals from raw ingredients, great amounts of money spent on food, occasional consumption of animal products and infrequent skipping of breakfast.</p> <p>Convenience, red meat and alcohol were associated with male gender, low leisure-time physical activity, regular/social smoking, frequent consumption of pre-prepared meals, takeaways, skipping of breakfast, frequent consumption of animal products, and spending more money on food.</p>
Tanton et al (2015)	Eating Behaviours of British University Students: A Cluster Analysis on a Neglected Issue	UK	Cross-sectional survey	Assess the eating behaviours of university students	345 undergraduate students (n = 117 male, n = 228 female) from an English university	<p>Portions of fruit, vegetables and snacks</p> <p>Frequency of snacking, convenience and takeaway meals</p>	No significant difference was found for age, sex, BMI, ethnicity or year of study between risky eating, mixed eating, moderate eating and favourable eating behaviour clusters.

What was the impact of the COVID-19 pandemic on student's dietary intake?

Author(s), year	Title	Origin	Research design	Purpose	Participants	Dietary measure	Results
Bertrand et al (1997)	The impact of the coronavirus disease 2019 (COVID-19) pandemic on university student's dietary intake, physical activity, and sedentary behaviour	CAN	Cross-sectional survey	Determine the impact of COVID-19 on university student's dietary patterns	125 students from the Universities of Saskatchewan and Regina	Daily energy, macronutrient and micronutrient intake, as well as prevalence of inadequacy	<p>Frequency of consumption of food decreased across every food group during COVID-19.</p> <p>There were significant differences for most dietary variables, with the average intake of most nutrients decreasing during COVID-19, except for alcohol which increased significantly.</p> <p>Prevalence of inadequacy increased for all micronutrients and trace elements during COVID-19.</p>

Ammar et al (2020)	Effects of COVID-19 Home Confinement on Eating Behaviour and Physical Activity: Results of the ECLB-COVID19 International Online Survey	GER	Cross-sectional survey	To investigate the extent that eating behaviours changed during COVID-19 lockdowns and restrictions	1047 participants via a Google online survey platform	Short Diet Behaviour Questionnaire for Lockdowns (SDBQ-L)	<p>When comparing total score of diet prior to and during home confinement, total diet score was 4.4% higher during home confinement ($p < 0.001$).</p> <p>Scores for amount of unhealthy consumed, eating out of control, number of meals per day and number of main meals per day were all significantly higher during home confinement ($p < 0.001$).</p> <p>The score for binge drinking decrease significantly during home confinement ($p < 0.001$).</p>
Gallo et al (2020)	The Impact of Isolation Measures Due to COVID-19 on Energy Intake and Physical Activity Levels in Australian University Students	AUS	Cross-sectional survey	To investigate the impact of COVID-19 lockdowns and restrictions on dietary patterns in Australian undergraduate students	150 third year biomedical students (n = 84 females, n = 66 males) from the University of Queensland	Automated Self-Administered Dietary Assessment Tool (ASA24-Australia-2016) between 2018, 2019 and 2020	<p>Total 24 hour energy intake was not different between class years for males, however total 24 hour energy intake for females was significantly higher during the COVID-19 pandemic in 2020.</p> <p>No difference in amount of snacking occasions, energy density of consumed snacks or energy intake attributed to snacks for males between 2018/2019 and 2020. For females, there was a significant increase in snacking occasions as well as energy density of snacks and energy intake attributable to snacks between 2018/2019 and 2020.</p> <p>Proportion of participants that consumed alcohol was no different for males or females between 2018/2019 and 2020.</p> <p>Between 2018/2019 and 2020, the distribution of eating location was significantly different for both males and females. In the year of 2020, the 'home' location was significantly higher than all other locations.</p>

What is the "fresher Five" Phenomenon?

Author(s), year	Title	Origin	Research design	Purpose	Participants	Measures	Results
Vadeboncoeur et al (2015)	A meta-analysis of weight gain in first year university students: is freshman 15 a myth?	USA	Meta-analysis	Provide an update in the literature for the 'freshman 15' phenomenon	5549 students across 22 individual studies across the US, UK, Canada and Belgium	<p>Mean weight change</p> <p>Weight gain by gender</p>	<p>Mean weight change of 1.36kg (CI: 1.15–1.57) over six weeks to eight months.</p> <p>Mean weight change based on sample size of 1.21kg (CI: 1.12–1.30)</p> <p>Canada and the US had a higher weight gain than the UK and Belgium, however no inference can be made due to too smaller sample size of studies.</p>

						Weight in weight gainers	<p>Studies using measured weight were not significantly different to studies that used self-reported weight</p> <p>Longer studies reported greater weight gain</p> <p>Majority of students (60.9%) gained weight during freshman year. Students that did gain weight gained 3.38lg (CI: 2.84–3.92), significantly higher than the pooled mean average weight gain. 9.3% of freshmen gained 6.8kg (freshman 15).</p> <p>Females and males did not differ significantly in weight gain</p>
Vella-Zarb et al (2009)	The 'freshman 5': A meta-analysis of weight gain in the freshman year of college.	CAN	Meta analysis	Use the current literature to estimate the amount of weight gained by students in their first year of college	3401 students across 24 individual studies	<p>Mean weight gain</p> <p>Effect of study duration on weight gain</p> <p>Weight gain by gender</p> <p>Potential predictors of weight gain</p>	<p>Mean weight change based on sample size was 3.86 lbs (SD = 1.63, 95% CI 3.81–3.91) lbs, or 1.75 kg</p> <p>Moderate, positive significant relationship between weight and study duration, therefore suggesting that longer studies found greater weight gain, and that weight gain continually increases over the freshman year</p> <p>Because of the high proportion of female participants in the sample, the weak, but statistically significant association between female gender and weight is not indicative that females gain more weight than males.</p> <p>Predictors of weight gain: decreased physical activity throughout the year, high consumption of junk food, dieting, evening snacking, high baseline weight/ BMI, high perceived levels of stress, living in a residence. Positive relationship with parents and increased workload in females, intense and frequent exercise, poor relationship with parents and alcohol for males.</p>
Crombie et al (2008)	The freshman weight gain phenomenon revisited	USA	Review	Use the current literature to evaluate the extent of observed body weight and composition changes and factors associated with them in freshmen students.	2392 students across 17 individual studies	<p>Initial BMI</p> <p>Eating patterns</p> <p>Gender and ethnicity</p> <p>Residency</p> <p>Physical activity</p>	<p>Initial BMI: Men and women with higher initial BMI gained significantly more weight (5kg vs 2.8). Another study in only women found that students with a higher BMI gained on average 8.4kg compared to low BMI students who maintained their weight. Another study found that low baseline BMI gained more weight (1.5kg) than those with an equal to or greater 25 BMI at baseline (0.4kg). Another study did not find an effect from baseline BMI.</p> <p>Eating behaviours: Restrained eating on-campus was associated with weight gain, while restrained and unrestrained eating was associated with smaller weight gain off campus.</p> <p>Eating patterns: Decreased fruit consumption was the only significant predictor of weight gain from eating patterns (change in alcohol and snack consumption was not).</p>

							<p>Gender and ethnic differences: African American students were significantly more likely to gain weight during their college career as well as be overweight than Caucasians and Hispanics.</p> <p>Residency: There was only a significant increase in BMI in restrained eaters on-campus compared to non-restrained eaters on-campus. Almost a significant increase in BMI in restrained eaters off-campus.</p> <p>Decreases in all forms of physical activity was observed in conjunction with an increase in weight and a decrease in energy intake. Another study found that moderate-intense exercise decreased in men, increased in women, no association with weight gain. Overall college students fall short of physical activity recommendations, and downward trend in activity appears to mirror observed increases in body weight.</p>
Racette et al (2008)	Changes in weight and health behaviours from freshman through senior year of college.	USA	Prospective cohort study	Evaluate changes in weight, height and BMI in university students between freshman and senior year	204 students (n = 138 females, n = 66 males)	Change in weight Change in BMI	<p>Between freshman and senior year, the proportion of students that were overweight or obese increased significantly from 15% to 23%.</p> <p>Significant changes in weight, height and BMI for both males and females.</p>
Deforche et al (2015)	Changes in weight, physical activity, sedentary behaviour and dietary intake during the transition to higher education: a prospective study	BEL	Prospective cohort study	Determine changes in weight and dietary intake during the transition between high school and university	291 students followed up from the final year of high school until the end of their second year of university	Weight Dietary intake	<p>On average, students gained 2.7kg (boys 4.2kg, girls 1.9kg)</p> <p>Significant decrease in fruit and vegetable, fiber and calcium intake.</p> <p>Higher increase in alcohol consumption in boys.</p>
Lloyd-Richardson et al (2009)	A prospective study of weight gain during the college freshman and sophomore years	USA	Prospective cohort study	Investigate the prevalence of weight gain during freshman year in male and female students	904 students from a large public university and 382 students from a private university	Change in weight and BMI over freshman year Change in weight and BMI over sophomore year Distribution of weight change Prevalence of obesity	<p>Study 1: Mean weight increased by 3.5kg in both males and females in freshman year. Mean weight increased by 4.3kg and 4.2kg in males and females respectively between the beginning of freshman year to the end of sophomore year. 77% of participants gained weight in their freshman year, 40% of whom gained 4kg or more. By end of sophomore year, 83% gained weight from baseline, 46% of whom gained 4kg or more. Start of freshman year, 16.9% of participants were overweight, 4.7% obese, end of freshman year 28.5% were overweight, 7.5% obese ($p < 0.001$). Of those with complete data, 16% were overweight, 4.3% obese start of freshman year, with 25.9% overweight, 9.2% obese at the end of sophomore year.</p> <p>Study 2: Mean weight increased by 2.5kg in males and 1.6kg in females in the freshman year. Mean BMI increased from 22.9 ± 3.4 to 23.6 ± 3.3 in males</p>

							<p>and 21.9 ± 3.0 to 22.5 ± 3.0 in females in freshman year. During freshman year, 70% of students gained weight, 23% gained 4 kg or more. Start of freshman year 11% were overweight, 3.7% obese. End of freshman year, 13.5% overweight, 4.3% obese. Change to overweight/obese compared to change normal weight was significant ($p < 0.02$).</p> <p>82% of students gained weight first semester. Roughly half gained additional weight during the second semester, while the other half lost some of this weight during the second semester.</p> <p>8% of students lost weight during both semesters. This group was had a mean weight loss (-5.0 kg) over the year. Students that gained weight during both semesters had the largest weight gain ($+4.5$ kg).</p> <p>The Gain–Loss and Loss–Gain group both gained 1.2kg and 0.9kg respectively.</p> <p>Only 10% maintained their weight throughout freshman year (± 1kg). Groups that gained weight during both semesters and maintained their weight had a lower BMI at baseline than other groups.</p>
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What influences on-campus food purchasing decisions of university students?

Author(s), year	Title	Origin	Research design	Purpose	Participants	Measures	Results
Roy et al (2018)	Exploring university food environment and on-campus food purchasing behaviors, preferences and opinions	NZ	Cross-sectional survey	Determine the factors that influence food purchases by students on-campus	1954 students and staff purchasing food at 57 different food outlets across six campuses of one large urban university	<p>Availability, cost, accessibility and promotion of food/ beverages within food outlets</p> <p>Healthiness of food outlets</p> <p>Food purchasing determinants</p> <p>Opinions about the campus food environment</p>	<p>Majority of the food outlets were found to be intermediately healthy, with one food outlet and vending machine found to be unhealthy and five food outlets/ one vending machine found to be healthy.</p> <p>Majority of healthy foods available at food outlets were more expensive than reference prices</p> <p>Majority of respondents reported purchasing food on-campus, with 41% stating that they purchase food each time they are on-campus.</p> <p>Poor value for money followed by preference to bring food from home was the primary reason for no food purchase on-campus.</p>

Author(s), year	Title	Origin	Research design	Purpose	Participants	Measures	Results
Martinez-Perez et al (2021)	On-campus food environment, purchase behaviours, preferences and opinions in a Norwegian university community	NOR	Cross-sectional observational study	Observe the nutritional profile and processing levels of foods at OsloMet, while also determining food opinions, preferences and purchasing behaviours.	129 participants (n=71 students) from the Pilestredet and Kjeller campuses of OsloMet	Healthiness of food and drink items using the AECOSAN, United Kingdom NPM and MFA nutrition profiling models Survey on food purchasing, choice, behaviours and opinions.	<p>Most commonly sold foods were sweet snacks and sugar-sweetened carbonated drinks.</p> <p>Approximately half of foods did not meet the AECOSANs criteria and the UK NMP criteria. Almost two thirds did not meet the MFU criteria (unhealthy foods).</p> <p>39% of products were considered as “unhealthy”, while 87% and 82.4% of foods and drinks respectively were considered to be ‘ultra-processed’.</p> <p>Majority of the respondents had purchased food on-campus. Of these participants, 54.3% reported buying food and drink on at least half of the times that they were present on-campus. 1/3 reported spending between 100-200 NOK (around 15-30 NZD) per week.</p> <p>Purchases were mainly done in the canteen, coffee shops and vending machines.</p> <p>Foods and drinks were most commonly purchased at lunch and between meals (snacks).</p> <p>Purchase occasions were higher among students than staff.</p> <p>Cold foods and drinks were the most purchased foods, followed by hot foods and snacks.</p> <p>Taste was the most important food purchasing determinant, with nutritional value, availability and cost also being important determinants.</p> <p>‘2 for 1’ offers or larger portions for reduced prices were also reported to influence food choices, especially in students compared to staff.</p> <p>Implementation of a loyalty card with discounts on certain foods and drinks within the university would reportedly influence food choices.</p> <p>Other suggested changes about the campus food environment were healthier foods for lower costs, allergen labelling, cheaper foods, more discounts for healthier choices, fresh fruits, freshly cooked and prepared foods, greater capacity to recycle food and beverage packaging, sustainable products,</p>

Author(s), year	Title	Origin	Research design	Purpose	Participants	Measures	Results
							reward points for sustainable food choices and greater variety of foods and drinks.
Tam et al (2016)	University students' on-campus food purchasing behaviours, preferences, and opinions on food availability	AUS	Cross-sectional survey	Identify ways in which a healthier university food environment can be encouraged	653 students (n = 501 females) (n = 152 males) from a large urban Australian University	Survey containing closed (n = 41) and open (n = 3) questions relating to food choice, food purchasing and opinions of the university campus food environment	<p>Most respondents reported purchasing food on-campus sometimes, with most spending less than \$20 weekly. One third spent between \$20-40. Most respondents purchased foods and beverages less than half of the times they were on-campus, with only 6% buying food every time they were on-campus.</p> <p>Cost, preference to eat at home, poor value for money and were the main reasons for students not to purchase foods on-campus.</p> <p>Most respondents purchased food for lunch or snacks, while beverages were purchased most frequently as a snack and at similar frequencies for breakfast and lunch.</p> <p>Most commonly purchased hot foods were Asian and Mexican foods, followed by burgers and kebabs, hot chips and wedges.</p> <p>Sandwiches, bread rolls and wraps, followed by salads and sushi were the most commonly purchased cold foods.</p> <p>Cakes and muffins were the most commonly purchased snacks, followed by potato chips and crisps. Healthier snacks including fresh fruit, yogurt, muesli bars and nuts were less frequently purchased.</p> <p>Water was the most commonly consumed beverage. Hot beverages were frequently consumed, with more than half of the respondents buying these items once per week.</p>

Author(s), year	Title	Origin	Research design	Purpose	Participants	Measures	Results
							<p>Males consumed more hot foods such as burgers, kebabs, hot chips, wedges, sugar-sweetened and alcoholic beverages than females, who consumed more sandwiches, salads and fresh fruits.</p> <p>Greatest determinants of food purchasing behaviour were taste, followed by value for money, convenience and cost.</p> <p>Majority of respondents reported bringing food from home or buying food off-campus, as well as bringing at least “some” of their food from home.</p> <p>Reasons for buying food off-campus were more variety, greater convenience, nutritional concern, better quality or more catering towards dietary restrictions or preferences.</p> <p>For out of hours purchasing, respondents reported below average food provision as well as restricted food options and availability.</p> <p>Most respondents wanted more freshly prepared foods, increased variety and increased availability of fresh fruit. Less than half wanted to see healthier food choices and more variety for special diets. Few students wanted greater availability of fast food, confectionary and alcohol.</p> <p>Most respondents wanted cheaper food as well as a rewards system or sustainable food selection.</p>
Pelletier et al (2013)	Campus food and beverage purchases are associated with indicators of diet quality in college students	USA	Cross-sectional survey	Examine the association between frequency of on-campus food and beverage purchasing and overall dietary patterns of college students	1059 students (n = 587 second-year students, n = 472 fourth-year students) mean (SD) age 22 (5) years that are living off-campus in the Twin Cities metropolitan area of Minnesota.	<p>Frequency of on-campus / fast foods</p> <p>Locations of purchasing</p> <p>Consumption of food groups, macronutrients, micronutrients</p> <p>Dietary patterns</p>	<p>Considerable number of students purchased food/beverages on or near campus frequently (>3x weekly). 20% bought foods from a la carte facilities and food/beverages from campus stores nearby.</p> <p>Vending machines were the least utilized source of food purchase, with 51% of students never purchasing from them.</p> <p>45% of students purchase food from a campus store >3x weekly, 46% of students bring food from home to consume on-campus >3x weekly, and only 22% of students purchase fast food >3x weekly.</p> <p>Part time students were less likely to purchase food on-campus than full time students, and older students were less likely to buy food on-campus and more likely to bring food from home to eat on-campus than second year students. Women were more likely to bring food from home.</p>

Author(s), year	Title	Origin	Research design	Purpose	Participants	Measures	Results
							<p>More people living at home with parents purchased food on-campus than those students who were renting</p> <p>Students receiving public assistance were nearly twice as likely to purchase fast food than those who weren't.</p> <p>Students that purchased food on-campus and ate fast food more frequently had a higher consumption of fat and added sugars, when compared to students that frequently brought food from home who had higher consumption of dairy, fruits and vegetables, calcium and fibre.</p> <p>Students that purchased food on-campus more often were more likely to skip meals than those who brought food from home.</p>
Naiara Martinez-Perez et al (2022)	On-campus food purchase behaviours, choice determinants, and opinions on food availability in a Spanish university community	ESP	Cross-sectional observational study	Investigate the opinions about foods available on-campus as well as food purchasing behaviours and choice determinants	1785 participants (n = 1089 students) from three campuses of the University of the Basque Country	<p>Food purchasing behaviours</p> <p>Choice determinants</p> <p>Opinions of on-campus food availability</p>	<p>Majority of students and staff had purchased food on-campus, while most reported buying food on at least half of the occasions that they were on-campus. One third reported spending 5-10 pounds (8-16 NZD) on-campus per week.</p> <p>Most meals purchased at lunch and as snacks between meals.</p> <p>Hot drinks and foods were the most commonly purchased items, followed by cold drinks and snacks.</p> <p>One third of the sample brought all of their food from home, either because they preferred to eat their own food or because of cost.</p> <p>Taste was the most important food purchasing determinant, followed by good value for money. More female students were concerned about how healthy a food item was than their male counterparts.</p> <p>42% of students reported that discounts such as 2 for 1 deals or large portions for reduced prices would influence their food choices.</p> <p>81% of students supported the idea of a loyalty card where you could get discounts on certain foods</p> <p>Overall satisfaction for food sold on-campus was 6.1 (SD 2.1) out of 10.</p>

Author(s), year	Title	Origin	Research design	Purpose	Participants	Measures	Results
							Majority agreed that healthy food should be offered, that the university has a responsibility to offer healthy food as an option, and that there should be clauses in food service contracts to ensure availability of healthy foods.
Habiba et al (2015)	Students' perspectives on promoting healthful food choices from campus vending machines: a qualitative interview study	UAE	Qualitative interviews	Investigate the factors that influence students food purchasing decisions from vending machines on-campus	44 participants (n = 33 female, n = 10 male) between the ages of 18-24 from the United Arab Emirates University	In-depth individual interviews using a semi-structured interview guide	Four main findings from themes: Vending machines are the most accessible source of food on-campus, food available in vending machines is low-nutritive, vending machines need to be improved, and nutrition education should be provided.
Whatnall et al (2021)	University Students Purchasing Food on-campus More Frequently Consume More Energy-Dense, Nutrient-Poor Foods: A Cross-Sectional survey	AUS	Cross-sectional survey	Investigate the associations between the dietary intake of a sample of university students and on-campus food purchasing behaviours	362 students (n = 99 males, n = 257 females, n = 6 nonbinary)	On-campus food purchasing behaviours Dietary intake (ARFS and EDNP) Associations between on-campus purchasing behaviours and dietary intake	Majority of students reported that they purchased food and beverages on-campus \geq once per week. Students spent on average between 10-25 AUD per week. ARFS was not significantly associated with frequency of purchase or expenditure of food purchasing on-campus (adjusted models) Higher percentage of ENDP foods was associated with greater purchase frequency and weekly expenditure through purchase of food on-campus.

Author(s), year	Title	Origin	Research design	Purpose	Participants	Measures	Results
Hutchesson et al (2021)	On-campus food purchasing behaviours and satisfaction of Australian university students	AUS	Cross-sectional survey	Observe the on-campus food purchasing decisions, food preferences and satisfaction related to cost and availability in a sample of university students	409 students (n = 294 female, n = 109 male) attending the University of Newcastle, Australia	Survey questions relating to on-campus food purchasing decisions, satisfaction relating to availability and cost of food, as well as preferences for the food environment on-campus.	<p>Most participants reported purchasing foods or beverages on-campus at least once per week</p> <p>Students that were domestic students, born in Australia, only English speaking at home and receiving financial support from their parents were significantly more likely to purchase foods on-campus</p> <p>Most food purchased on-campus was for lunch and snacks, and occasionally for breakfast. Food and beverages were not commonly purchased for dinner.</p> <p>The most commonly purchased foods and beverages (i.e., lowest proportion reported purchasing never) were coffee, tea or other hot beverages (78% purchased); sandwiches, rolls, wraps or crepes (66.6%); confectionary (eg, chocolate, lollies) (57.8%); cakes, slices, muffins, cookies, banana bread (53.1%) and meat pies, sausage rolls or vegetarian alternatives (50.3%). The least commonly purchased foods and beverages (i.e., highest proportion reported purchasing never) were ice-cream and ice-blocks (86.8%), muesli or cereal bars (86.8%), pizza (86.8%), yoghurt (85.2%) and nuts (82.6%).</p> <p>Predominantly satisfied with beverages but less satisfied with meals and snacks available to purchase</p> <p>Lower proportions of students satisfied with the cost of beverages, snacks and main meals</p> <p>Proposed changes: healthier options, higher quality food, cheaper food, discounts for healthy foods, freshly cooked and prepared foods, less vending machines and less fast food available.</p>

Author(s), year	Title	Origin	Research design	Purpose	Participants	Measures	Results
Roy et al (2016)	Dietary contribution of foods and beverages sold within a university campus and its effect on diet quality of young adults	AUS	Cross-sectional Survey	Describe the associations between consumptions of foods and beverages at university food outlets and diet quality of young adults	103 participants (n = 40 men, n = 63 women) aged 19-24 years old from a large urban Australian university	Diet quality Food and beverage consumed from university food outlets and their effect on diet quality	<p>28% of students consumed ≤ 2 university foods, 40% of students consumed 3-6 university foods and 32% consumed ≥ 6 university foods over 5 days.</p> <p>Most foods and beverages were consumed during the early or late afternoon.</p> <p>Students who ate more university foods had a higher mean total energy intake, as well as higher intakes of protein, total sugar, saturated fat, sodium and discretionary foods. Students who ate more university foods also had lower intakes of vegetables, meats, grains, and fruit.</p> <p>Median HEIFA scores showed a statistically significant difference between tertiles of university food consumption.</p> <p>Those in the lowest HEIFA tertile consumed more foods and beverages from the university as well as takeaways than those in the highest HEIFA tertile ($p < 0.001$).</p>
El-Said et al (2015)	Assessing university students' satisfaction with on-campus cafeteria services	EGY	Cross-sectional survey	To investigate the impact that service attributes of food services have towards students perceptions and satisfaction of food services available on-campus	543 participants (n = 303 female, n = 240 male) from the University of Alexandria, Egypt	Behavioral characteristics of students Students perceptions food and beverage quality, service quality, price and value, and overall satisfaction with university food services.	<p>4.1% of surveyed students visited the cafeteria daily, 36.7% visited the cafeteria either once or twice a week, and 20.3% of students visited the cafeteria less than once a week.</p> <p>Approximately half of the students (46%) reported that their monthly average expenditure was between 250 and 500(EGP). 15.8% stated that their monthly average expenditure was above 501(EGP), and 38.1% spent less than 250(EGP) monthly.</p> <p>8.2% of students stated that they spent between 10 and 20(EGP) every time they visited the cafeteria, 20.4% stated that they spent less than 10(EGP) on each visit, 15.1% spent between 21 and 30(EGP) every time, and only 6.3% of students spent more than 30(EGP) on every visit.</p> <p>Most students preferred to eat meals at the cafeteria with their friends, with few eating at the cafeteria on their own.</p> <p>High percentages of students were dissatisfied with the nutritional content and health and safety of food items offered. Students slightly satisfied with appropriate temperature and diversity of food displayed, slightly dissatisfied with freshness of food and beverage items as well as display of food.</p>

Author(s), year	Title	Origin	Research design	Purpose	Participants	Measures	Results
							<p>Overall students perceptions of the service quality was poor, with majority of students being strongly dissatisfied or dissatisfied with employee motivation, professionalism and service speed.</p> <p>Most students were dissatisfied with the quality and quantity of food that they received given the amount that they paid.</p>

What are the determinants of student eating behaviour?

Author(s), year	Title	Origin	Research design	Purpose	Participants	Factors influencing eating habits	Subthemes
Sogari et al (2018)	College students and eating habits: a study using an ecological model for healthy behavior.	USA	Qualitative	Identify the barriers and enablers of healthy eating behaviors in college students	35 students between the ages of 18 and 25 enrolled at Cornell University	<p>Individual level</p> <p>University environment and student life</p> <p>Social level</p>	<p>Individual level: Healthy eating (meaning, perception and consequences), eating habits (healthy and unhealthy), food preferences, healthy activities, food preparation and knowledge, time, price, state of mind</p> <p>Social level: parental feeding behavior, diet at home, school and eating out, friends and media pressure.</p> <p>University environment and student life:</p>
Deliens et al (2014)	Determinants of eating behavior in university students: a qualitative study using focus group discussions	BEL	Qualitative	Determine the factors that influence the eating behaviors of university students	35 students	<p>Individual factors</p> <p>Social networks</p> <p>Physical environment</p> <p>Macro environment</p> <p>University characteristics</p>	<p>Individual: Food preferences, self-discipline, values, normal and beliefs, state of mind (stress), body image and self-concept, dietary knowledge, time and convenience, daily/rhythmic structure, past eating habits. Physical activity level, metabolism, vitality.</p> <p>Social environment: parental control, home education, social support (friends and family), peer pressure.</p> <p>Physical environment: Accessibility and availability of healthy foods and cooking supplies, food appeal, price or cost.</p> <p>Macro environment: legislation and policy, values and norms (socio-cultural), advertising and media.</p> <p>University characteristics: Residency, student societies, exams, university lifestyle.</p>
Amore et al (2019)	Identifying perceived barriers and enablers of healthy eating in	USA	Qualitative	Determine the enablers and barriers to	44 full-time students between the ages of 18	<p>Individual</p> <p>Social environmental</p>	<p>Individual barriers: lack of knowledge, attitudes and beliefs, prioritization, procrastination, thriftiness, behaviors, taste preference.</p> <p>Social environmental barriers: peer pressure parental influence.</p>

	college students in Hawai'i: a qualitative study using focus groups			healthy eating for college students	and 24 enrolled at UHM.	Physical environmental Macrosystem	Physical environmental barriers: institutional environment, living situation, lack of facilities, location. Macrosystem barriers: cost, lack of education. Individual enablers: Knowledge, attitudes and beliefs, prioritization, thriftiness, dietary restrictions, behaviours. Social environmental enablers: parental influence, peer support. Physical environmental enablers: institutional environment, living situation. Macrosystem: social media, cost.
Murray et al (2016)	Culinary efficacy: an exploration study of skills, confidence, and health cooking competencies among university students.	USA	Qualitative	Determine whether university-aged students have the requisite knowledge, confidence and culinary skills to personally control meal preparation.	24 independently living university students that did not have a university meal plan	Health perceptions Life influences Barriers to cooking and healthy eating	Health perceptions: balance and moderation, cooking methods or ingredients being conducive or non-conductive to healthy eating, portion moderation, burden of cooking, dietary control regarding home cooking versus pre-prepared food, overreliance on processed food, insufficient fruit and vegetable intake, excessive carbohydrate intake. Life influences: Parental feeding behaviors, relative's nutrition-related chronic illness, Barriers to eating and cooking healthy: cost, transportation, availability, time, culturally relevant educational resources, knowledge, information.
Garcia et al (2010)	Perceived facilitators of and barriers to healthful eating among university students	CAN	Qualitative	Determine perceived barriers to and facilitators of healthy eating in university students	28 university students studying an introductory-level nutrition course at the University of Western Ontario	Environment Nutrition knowledge Time Convenience foods Food cost Media influence	Environment: transition from family home to student housing, cleanliness, availability of inexpensive unhealthy food, availability of fruits and vegetables, access to transportation. Nutrition knowledge: lack of knowledge on food procurement and preparation, Time: prioritizing studying and socializing over food preparation and grocery shopping Convenience foods: accessibility typical unhealthiness, inexpensiveness Food cost: unhealthful food being cheap, expensiveness of healthful foods, local produce being more cost effective, inexpensiveness of home cooked meals Media influence: misleading food labels, advertising of both healthful and unhealthful foods, readily available nutrition information, marketing of unhealthful foods.
Hilger-Kolb et al (2019)	Oh god, I have to eat something, but where can I get something quickly? A qualitative interview study on barriers to healthy eating among university students in Germany.	GER	Qualitative	Determine the barriers that prevent German university students from eating healthily	20 university students from different universities in the Rhine-Neckar region	Time Environment Social inclusion or support Motivation and attitude Knowledge and information Transition	Time: university commitment causing lack of time Environment: taste, quality and price of unhealthy food, price of healthy food, opening hours of university canteen Social inclusion or support: peer influences Motivation and attitude: temptation, resilience, taste of healthy meals, awareness of importance of healthy diet Knowledge and information: lack of knowledge regarding healthy eating, difficulty interpreting nutritional information of foods, cooking skills Transition: routine, lecture hours, value of eating

Hartman et al (2013)	Psychosocial determinants of fruit and vegetable consumption among students in a New Zealand university: results of focus group interviews.	NZ	Qualitative	Determine the psychosocial factors associated with consumption of fruits and vegetables in New Zealand university students	29 university students between the ages of 18 and 24 studying at Massey University	Attitude Social influences Self-efficacy Barriers and abilities Habits Misconception of risk behavior	Attitude: taste, health consequences, satiety Social influences: flat mates, partners, parents, sports coaches, friends. Self-efficacy: readily convenient fruits and vegetables versus fruits and vegetables that require preparation, lack of knowledge and practice preparing vegetables. Barriers and abilities: cost, seasonal influences, availability Habits: upbringing Misconception of risk behaviour: correlation between recommended intake knowledge and fruit and vegetable consumption.
Blitchfeldt et al (2013)	Lost in transition? Student food consumption	DEN	Qualitative	To gain an understanding of students experiences with food after transitioning from living at home to living independently	55 students between the ages of 18 and 25	Transition Rules, habits and self-regulations	Transition: participants did or did not see themselves being in a transition phase based on previously developed habits and practices. Participants who felt as though they were in transit were not competent with the responsibilities of grocery shopping, cooking and budgeting. Participants that grew up surrounded by good food habits and practices found managing food related issues easier. Rules, habits and self-regulations: budgeting, cooking small portions of food, knowing what's in the pantry, creating a shopping list, freezing expensive meal items, peer influence.

Appendix 2 – Study advertisement



THE UNIVERSITY OF
AUCKLAND
Te Whare Akaanga o Tāmaki Raukiri
NEW ZEALAND

**MEDICAL AND
HEALTH SCIENCES**

How Do They Eat? An Ethnographic Study of Student Eating Behaviour Studying in a New Zealand University

RESEARCH PARTICIPANTS WANTED

Department of Nutrition and Dietetics
Principal Investigator: Dr Rajshri Roy
Student Researcher: Nick Ariell



<https://bit.ly/3y51e35>

Are you a student currently studying at the University of Auckland who:

- Is over the age of 18
- Has access to a smartphone with iOS 10 and above (including iOS 14), or Android 5 and above (including Android 11)
- Is willing to record daily eating occasions using a mobile food diary application for a period of up to 3 months

Would you be interested in taking part in research that may be used to recommend or create improved student supports to facilitate health eating within the university environment?

The aim of the study is to gain an understanding of how the university environment influences the eating behaviours of students within the University of Auckland.

As a research participant, your role would be to

- Keep a daily diary of everything you eat from the moment you wake up to the moment you go to sleep using the Indeemo mobile food diary application
- Answer questions about eating occasions to add context to the occasion (where you are, who you are with, what you are doing, what you are thinking)
- **As compensation for your efforts, you will be rewarded with a \$100 supermarket voucher or fuel voucher at the end of the 3 month study period**

After completing 3 months of data collection, you will have the option to enter a draw for a chance to **win a Lenovo M7 Android tablet.**

For more information or to express interest in participation, please contact Nick Ariell (nari632@aucklanduni.ac.nz)

This study has been approved by the University of Auckland Human Participants Ethics Committee (UAHPEC) on 04/04/2022 for three years (ref: 23986)

Appendix 3 – Participant information sheet



**MEDICAL AND
HEALTH SCIENCES**

Department of Nutrition & Dietetics
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New Zealand

PARTICIPANT INFORMATION SHEET FOR PARTICIPANTS

Project title: How Do They Eat? An Ethnographic Study of Student Eating Behavior Studying in a New Zealand University.

Name of Principle Investigator/Supervisor: Dr Rajshri Roy

Name of Student Researcher: Nicholas Ariell

Researcher introduction

My name is Nicholas (Nick) Ariell. I am a Student Dietitian undertaking my Master's thesis in Health Sciences majoring in Nutrition and Dietetics under the supervision of Dr Rajshri Roy. I am undertaking a study on the factors that influence eating behaviors of university students within the University of Auckland.

Project description and invitation

University is a period where significant changes can be observed in the eating patterns and behaviours of students. Numerous factors contribute to or determine the eating behaviours of university students, many of which are created or influenced by studying within a university environment.

You are invited to take part in this study of how the university environment influences the eating behaviours of university students within the University of Auckland. If you are willing to participate, please return the attached consent form within 1 week.

Inclusion criteria

You are invited to take part in this study if you meet the inclusion criteria listed below:

- Participants must be students currently enrolled at the University of Auckland
- Participants must be over the age of 18
- Participants must have access to a mobile device that can run the Indeemo mobile ethnography. This requires a smartphone with iOS 10 and above (including iOS 14), or Android 5 and above (including Android 11)
- Participants must have the capacity to give their own informed consent/ be in an independent situation (needs to be able to operate the Indeemo application software independently).
- Participants must be willing and able to record daily eating moments/occasions using the Indeemo mobile food diary application over a period of 3 months in 2022.

Please note: if you are currently studying or have previously studied a Bachelor of Science in Nutrition or a Bachelor of Science in Food Science you will not be eligible for participation in this study

What happens in the study?

The study aims to identify how, where and when students research, and the impact of learning environments on eating behaviours. 10 students enrolled at the University of Auckland will be recruited into the study. As a research participant, you will be assigned tasks with questions to answer relating to consumption moments that you have throughout the day. These tasks will assist in contextualizing eating moments, and provide information such as where you are, who you are with, what you are doing, what the eating occasion is, as well as what you are thinking or how you are feeling during the consumption moment. You will complete tasks and answer these questions by



creating observations - these observations will be conducted by you. You will observe consumption moments by either taking a photograph, a video, writing a text description or a combination of all three relating to a consumption moment. Occasionally you may also be asked to answer additional retrospective questions relating to these consumption moments, which are set by the student researcher using the Indeemo application, and answered by you within the Indeemo application. These additional questions will be used to gather more information about your consumption moments.

You will be set a total of 8 tasks every day over a period of 3 months between the 11th of July and the 1st of November (Semester 2). Each task relates to a potential consumption moment that you may or may not have during the day. You are only expected to create observations for consumption moments that you had during that day. For example, on a given day you may only have breakfast, lunch and dinner, therefore they will only create observations for these three tasks. Observations will occur over a period of 3 months between the 11th of July and the 1st of November 2022. To encourage participation, after using the Indeemo application participants will receive a \$100 supermarket or petrol voucher at the end of the data collection. After completing 3 months of data collection, you will have the option to enter your contact details (name, email and address) for a chance to win a Lenovo M7 Android tablet.

Participation

Participation in the research is Voluntary. As a participant you have the right to:

- Refuse to complete any task/ answer any question
- Withdraw from the study at any time without giving reason.
- Withdraw your data up to two weeks after completing the study, in which case the data will be securely destroyed as per university policies and procedures. You will be given a copy of this document to keep.
- Withdrawal from the study will not affect your relationship with the University of Auckland, including but not limited to course marks, project supervision, or employment opportunity.
- Ask any questions about the study at any point of time during participation in the study.

Once the study is completed, participants have the option to ask for a summary of the research findings. To obtain a summary of the research findings once the study is completed, please circle/highlight "YES" to the statement "I wish to receive a summary of findings, which can be emailed or mailed to me at this email/postal address" on the Consent Form and fill out the email/postal address that you would like the research findings to be sent to.

What are the discomforts and risks?

The study aims to gather as much information from the participants related to your eating behaviours and the factors that influence these as possible. Because of this, we will be asking you to record as many of your eating occasions as possible, both on and off campus. You are free to log as many or as little of your eating occasions as you would like, and are free to choose when you do or do not log eating occasions. There are no expected harms associated with participating in this study.



There are few risks to collecting and storing this information as it will be held only on the Indeemo application and secure university servers.

What are the benefits?

Understanding how the university environment influences the eating behaviours of students may be used to inform further research on student eating behaviour and help to inform immediate changes in the university food supply such as prices of food items or the types of foods available to students on campus.

How will my confidentiality be protected?

The data and information collected using the Indeemo mobile food diary application will be confidential. Statistical analyses will be performed using the data, the results of which will then be discussed in research reports. Research publications and presentations from the study will not contain any information that could personally identify you; only averages will be presented. None of the information collected that could be used to personally identify participants will be used in any reports created from the study. During the study, only the student researcher – Nicholas Ariell – who handles the information and data gathered using the Indeemo application, and the principal investigator Dr Rajshri Roy will know who you are, and this information will be de-identified or kept physically separate from the data collected.

How will data be stored, retained, and destroyed?

Digital data will be permanently deleted from the Indeemo application 1 year after the study completion. Data collected during the study will be electronically stored at the University of Auckland for a minimum of three years and a maximum of 6 years. During this period, it is expected that this data will be used for research purposes similar to what is described above, and in publications (subject to the Anonymity and Confidentiality conditions described below). At the end of the maximum period collected data will be destroyed, unless further approvals to retain the records have been sought and granted. Access to the participant consent forms will be restricted to the principal investigator.

What will happen to the results?

The results will be published as part of the student researcher’s thesis project. The findings of the thesis project may then be further published in other academic journals or used at conferences. None of your personal information will be used in any research outputs. A summary of the research’s findings can be emailed to you upon request. If you would like a summary of the results, please provide your email and circle/ highlight ‘YES’ to “I wish to receive a summary of findings” on the Consent Form. As it takes some time to analyze the study results; it may be more than one year after your participation to receive this summary.

Contact details and approval

Principal researcher	Dr Rajshri Roy Department of Nutrition and Dietetics, University of Auckland Email Address: r.roy@auckland.ac.nz Phone: +64 9 923 5910
Student researcher	Nicholas Ariell Email address: nari632@aucklanduni.ac.nz



Head of Department	Professor Clare Wall Department of Nutrition and Dietetics, University of Auckland Email address: c.wall@auckland.ac.nz
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UAHPEC Chair contact details

For any queries regarding ethical concerns, you may contact the Chair, The University of Auckland Human Participants Ethics Committee, Office of Research Strategy and Integrity, The University of Auckland, Private Bag 92019, Auckland 1142. Telephone 09 373-7599 ext. 83711. Email: humanethics@auckland.ac.nz

Approved by the University of Auckland Human Participants Ethics Committee on 04/04/2022 for three years, Reference Number 23986.

Appendix 4 – Consent form



**MEDICAL AND
HEALTH SCIENCES**

Department of Nutrition & Dietetics
85 Park Road
Grafton
W fmhs@auckland.ac.nz
The University of Auckland
Private Bag 92019
Auckland 1142
New Zealand

CONSENT FORM FOR PARTICIPANTS

THIS FORM WILL BE HELD FOR A DURATION OF SIX YEARS

Project title: How Do They Eat? An Ethnographic Study of Student Eating Behavior Studying in a New Zealand University.

Name of Principle Investigator/Supervisor: Dr Rajshri Roy

Name of Student Researcher: Nicholas Ariell

I have read the Participant Information Sheet for Participants, and have a good understanding of both the nature of the research and my involvement in the research as a participant. I have had the opportunity to ask questions about the research/ my involvement in the research as a participant and have had my questions answered by the researcher.

- I agree to take part in this research
- I understand that I am free to withdraw from the research without giving a reason at any time during the study
- I understand that I can withdraw any data traceable to me up to the first date of every new month that I am involved in the study.
- I agree to provide information to the researcher on the understanding that my personal information will remain confidential and that any information published that could be used to identify me will be de-identified in order to prevent this.
- I understand that my consumption moments will be recorded at my own discretion using the Indeemo mobile food diary software using either photography, videography, text descriptions or a combination of all three.
- I agree that data will remain on the Indeemo application for one year following study completion, after which it will be permanently deleted.
- I agree that data will remain on the university servers for six years following study completion, after which it will be permanently deleted.
- I agree that any physical documentation will also be destroyed after six years.
 - o I wish to receive a summary of findings, which can be emailed or mailed to me at this email/postal address: _____ YES / NO
 - o Following 3 months of data collection, I wish to enter the draw to win a Lenovo M7 tablet: YES / NO

Name: _____
Signature: _____
Email Address: _____
Date of Birth: _____
Date: _____

Approved by the University of Auckland Human Participants Ethics Committee on 04/04/2022 for three years, Reference Number 23986.

Appendix 5 – Participant information questionnaire

Participant Information Questionnaire

Student ID number

Field of Study / Degree

Study Career (years)

Age (years)

Student Type (select all that apply)

- Undergraduate
- Postgraduate
- Part-time
- Full-time
- Domestic
- International

Living Circumstance

- Flating
- Boarding
- Living with parents
- Halls of residence
- Student accomodation
- Own household

Gender

- Male
- Female
- Non-binary
- Other
- Would prefer not to specify

Ethnicity

- New Zealand European
- Māori
- Samoan
- Cook Island Māori
- Tongan
- Niuean
- Chinese
- Indian
- Other

If other, please specify:

If other, please specify:

Appendix 6 – Indeemo task list

Welcome to our research project! Thank you for taking part.

The aim of the project is to identify how, where and when students study, research and learn, and the ways in which these learning environments have an influence on students eating behaviours. Over the next **3 months** we would like you to use the **Indeemo** application to complete a **daily diary** related to your food consumption. Using Indeemo, you will be assigned tasks with questions to answer relating to consumption moments that you have throughout the day. These **tasks** will assist in contextualizing eating moments, and provide information such as where you are, who you are with, what you are doing, what the eating occasion is, as well as what you are thinking or how you are feeling during the consumption moment.

You will answer **questions** and complete **tasks** by making observations called "**Responses**". These **Responses** will be carried out by you. You will complete Responses by either taking a **photograph**, a **video**, writing a **text** description or a combination of all three in order to observe a specific consumption moment.

You will be set a total of **4 tasks** every day over a period of 3 months (15 weeks) between the 18th of July and the 2nd of November. Each **task** relates to a specific consumption moment that you may or may not have during the day. The tasks that you will be assigned each day will be **Breakfast, Lunch, Dinner and Snacks**

Please note that you only need to create **responses** for **tasks** that you complete that day. For example, if you only eat **breakfast, lunch, and dinner**, you only need to create a response for **breakfast, lunch, dinner** that day. Any other meals or food items that you eat throughout the day will be documented by creating responses for the **Snacks** task. Multiple responses can be created each day for each task.

When creating a **response** to a **task**, it is up to you how you answer the questions for any given tasks. Each task will consist of four main questions:

- What are you eating?
- Who, what, where, and how?
 - o Who are you with? What are you eating? Where are you? How are you feeling?
- Make or purchase?
 - o Are you buying the food item/ meal premade or are you cooking it yourself?
 - o If you are making the meal yourself, what ingredients/ cooking processes are you using to create the meal?
- Why are you eating this?
 - o This question is open to your interpretation. Many factors can influence the choices that we make in relation to what we eat, so answer this question in whatever way that feels appropriate at the time.

While it is up to you how you answer the **questions** for each **task**, certain mediums act as more effective ways of providing answers for questions. For example:

- A **photograph** is a great way to show what you ate during a consumption moment/ the ingredients that you are using to cook a meal.
- A **Video** is also a great way to show what you ate during a consumption moment, however you can answer other questions such as where you are, what you are doing or who you are with by explaining this while you are recording what you are about to eat.
- **Photographs** and **Videos** are also great for providing a visual representation of your food portions, as this is harder to explain using a caption.

- **Text descriptions** otherwise known as “**notes**” are a great way to answer questions that are difficult to answer using a **photograph** or a **video**. Examples of these questions would be what you were thinking or how you were feeling during a consumption moment.

When completing **tasks**, it is recommended that you use a variety of the different mediums to answer questions. For example, a **photograph** of what you are eating during a consumption moment does not provide detail about who you are with, where you are, how you are feeling etc. Trying to answer every question using one **video** would be difficult as you may forget to answer some questions, therefore adding a **note** would allow you to provide more information about a specific task.

When creating **responses** for **tasks**, it is important that you do not do anything that you are not comfortable doing. For example, if you are eating lunch at a busy restaurant and do not want to take a photograph or a video for that task, then a text description to answer the **questions** for that task is adequate. It is also important to note that you should only answer questions for each task that you are comfortable asking. For example, if you are not comfortable sharing what you were thinking or how you were feeling during a specific task, please do not answer these questions. The aim of the project is to gather as much information as possible about student eating behaviour, however this should not be at the expense of your comfort or wellbeing.

Occasionally you may also be asked to answer additional questions relating to specific tasks. These questions will be asked by the student researcher in order to gather more information about specific consumption moments. When the student researcher asks questions about a task response, you will get a notification that will come up on your device. By clicking onto the notification, this will bring up the question with a text entry box below. Questions will vary as the researcher gathers a better understanding of the different ways in which the university environment has an influence on student eating behaviours, however some examples of additional questions that the student researcher may ask are:

- How often do you eat on campus?
- Do you think that the food sold on campus is healthy/nutritious?
- Is buying food on campus convenient for you?
- Is the food that you buy on campus a formal meal (Breakfast, lunch, dinner) or is it a snack?
- Where do you usually eat on campus?
- Portion size questions (what portion of food did you eat, how do your portion sizes compare to what you ate before you started university?)
- Do you usually eat _____ at this time of day?
- Do you have a meal plan?

If you are not happy with an observation that you have made, click onto **My Responses**, click **More** on the relevant response, click **Edit** in the top right hand corner and press **Delete Response**. You will then have the ability to recreate your response by following the instructions outlined above.

Tips

Once you have read and understood each task and are ready to respond, simply tap on the + button on this screen, choose the type of response you wish (Video, Photo, Screen Recording and/or Note) and follow the prompts on each screen.

- Videos can be around 3 minutes, if its longer just upload another one!

1. Introduction video (NOTE: ONE OFF)

In order to get to know you a bit better/ practice creating a response to a task, it would be great if you could upload a short video letting me know a little bit about yourself! To complete this task, please record a quick selfie video and let me know

- Your name
- What you are currently studying at university and what year you are in
- Your living situation (halls of residence, flatting, living at home etc)
- Two of your hobbies/ things that you like to do
- Your favourite food!

To respond to this task, tap on the + button on your screen, choose video and follow the prompts on screen. Not happy with the video that you made? Click onto **My Responses**, click **More** on the video uploaded, click **Edit** in the top right hand corner and press **Delete Response**. You will then have the ability to recreate your response by repeating the instructions outlined above.

Required responses: 1 video

2. Breakfast (NOTE: DAILY TASK)

- What are you eating for breakfast?
- Who, what, where, and how?
- Make or purchase?
- Why are you eating this for breakfast?

Required responses: ANY (video, photo, note)

3. Lunch (NOTE: DAILY TASK)

- What are you eating for lunch?
- Who, what, where, and how?
- Make or purchase?
- Why are you eating this for Lunch?

Required responses: ANY (video, photo, note)

4. Dinner (NOTE: DAILY TASK)

- What are you eating for dinner?
- Who, what, where, and how?
- Make or purchase?
- Why are you eating this for dinner?

Required responses: ANY (video, photo, note)

5. Snacks (NOTE: DAILY TASK)

- What are you eating for a snack?
- Who, what, where, and how?
- Make or purchase?
- Why are you eating this for a snack?

Required responses: ANY (video, photo, note)

Appendix 7 – Interviews

Student 1

Date	Questions	Answer
August 15th	This is very interesting as there is not much out there in the literature regarding the ways in which participating in research can have an influence on what students are eating. Would you be able to elaborate more about the research and why you weren't able to eat before?	I participated in research about chemo receptors in the body and how trained and untrained individuals vary so the first visit was me running on a treadmill and the second visit was me put under Low oxygen and high CO2 conditions and they require you to not eat two hours prior no caffeine and all that because they want to reduce as many variables as possible I guess
August 15th	Do you often bring a packed lunch to university? If so, what are some of the main reasons as to why you do or don't bring a packed lunch	I usually like to bring a packed lunch as it's cheaper and healthier than what I would've gotten on-campus or near campus. The times that I wouldn't bring a lunch or the ones where I don't have enough time in the morning to pack it so if I have an 8 AM because I hate to wake up early. And make food when I'm not necessarily hungry yet
August 15th	Do you often find that treat foods act as a means to help yourself stay motivated throughout the day?	I do find that treat foods do make me feel better and motivated but I also often regret them if I haven't done exercise that same day or feel like I haven't moved enough or if I realise I'm eating them too often
August 23rd	Do you typically find that nervousness has effect on what you eat or how you eat, and if so, how?	Yes nervousness definitely does have an effect on how much I eat! whenever I get nervous or anxious for something I eat significantly less and it gives me kind of the shakes and light-headedness after a while of not eating
August 30th	What are some of the challenges that you face as a student when trying to eat a healthy diet?	I try to eat a normal diet but some challenges I face is lacking the time or energy to make something
August 30th	Do you follow any specific dietary pattern or have any dietary requirements?	I don't have any dietary restrictions but I do have trouble getting enough protein in my diet alone to build muscle so I have bought whey protein
September 1st	Do you think that social media has an influence on what you or other students eat? If so, in what ways?	I don't use social media that much but I have went to on Italian place because I saw it on Instagram and ended up being really good so I think it does factor in where students would eat. I also see lots of healthy recipes on Instagram as well. But also see a lot of bullshit on Instagram as well in regards to dieting.
September 4th	In what ways do you think that social interactions with peers has an influence on what you eat?	I find that social interactions don't usually affect the way I eat I eat what I want to eat and from what's available. For example if I feel like eating junk food I will eat junk food not just because my friends are going to eat junk food. But that's also because I'm pretty confident in that i can treat myself to something that I usually wouldn't eat from time to time since I have an active lifestyle
September 4th	When you are feeling stressed or overwhelmed by university tasks or deadlines, do you find that preparing food items or meals becomes less of a priority to allow more time to study?	Yes exactly! I have an exam coming up on Monday and I find taking the time to prep and make food almost every other day a waste of time and so I tend to buy something from a restaurant and eat that for a couple of days and add my own vegetables But I also find cooking something nice to be a nice chance to decompress
September 6th	When you were growing up, did your parents emphasise getting you to help out in the kitchen? If so or if not, how has this impacted your cooking abilities, self-efficacy to prepare your own meals etc	My parents never forced me to cook anything. My dad will usually make food or he would bring back some lunch from his work. I used to actually hate cooking because I thought it was something that women were expected to do and so I rebelled against that but at some point I started to like cooking since I enjoy making my own food that I knew was nutritious. I feel a lot better making and eating my own food than I do eating at restaurant at cafe.
September 7th	Do you often find it difficult to balance university commitments with other aspects of living, and if so where does grocery shopping and preparing food fall on the priority list?	If I have an exam coming up I'm going to put that first. if it's during the semester where we just have classes then prepping my own food is more important and I'll make time to go to the grocery store. Having that good breakfast is more important than going to my 8 AM since there are recordings
September 6th	Do you often find that you purchase foods that are cheap, easy and convenient as these are best suited to a university schedule?	I do find that I like foods that are cheaper and convenient to make and can last long in the freezer or the fridge that can be warmed up later. And since I live in apartment with only a kitchenette it's very difficult to make more intricate recipes like I usually would like to make as it takes up a lot of space
September 22nd	How often do you purchase food as opposed to preparing food to bring to university? And when you do purchase food at university, do you tend to buy food from the stores on-campus or the stores surrounding campus, and why?	I don't like the food near Grafton-campus so I tend to bring my own lunch or eat before walking to class. I only eat near campus if I'm in dire need of food before wards or have nothing at home
September 14th	When you are busy with university, do you find that you tend to purchase more food out than you normally would?	Yes I do go out to buy food then I usually would when I have other university responsibilities. Not only that but even once I finish the exam or finish the assignment I can get stuck in the habit of buying food instead of making it because it is easier and I have to put myself back in the old habit of making nutritious food
September 22nd	Do you think that your friends or peers have an influence on your eating behaviours? If so, in what ways?	I don't Believe they have an impact on my eating behaviours as my eating choices are quite ingrained in my habit and are really only effected by stress. I eat what I choose to eat and it's no one else's decision

September 14th	Is healthy eating a priority for you? What are some of the enablers or barriers of healthy eating as a university student?	Eating healthy is a priority to me but sometimes school interferes with my habit of making healthy foods due to time constraints and stress from studying for like exams and completing assignments
September 18th	Do you try to avoid being wasteful as often as possible? If so, how are some of the ways that you avoid wasting food and what are some of the benefits of avoiding food waste?	I try to avoid wasting food but sometimes I just don't like the way things taste reheated and I tossed it away. If I buy food from somewhere I often try to keep it for more than one meal to save money and I like to add my own things to it to make it more nutritious cause often things that you buy from cafés and restaurants don't have a lot of vegetables
September 25th	Because of your field of study, do you believe that you have a better understanding of nutrition than university students that are in non-health related fields?	I sometimes believe that I have a slightly better understanding as to why having a nutritious diet matters but not exactly like what foods are terribly deleterious to one's health and what's good for it since it is often difficult to find good nutritious food with low salt, added sugar and all that unless you cook everything yourself
September 26th	What are some of your reasons for meal prepping to last throughout the week?	I meal prep pancakes for the week so I can save time in the morning and get ready for an early class or get a head start to studying. It's just for the sake of being time efficient
September 26th	Is snacking often a behaviour associated with studying for you?	Yes! I do like to snack when I'm studying, it's like a lil treat to hold my attention and keep me seated
September 14th	Do you cook meals independently or with flatmates? What are some of the benefits and drawbacks of this?	I often cook alone when I'm at my apartment but I also sometimes go over to a classmates flat to cook food in their kitchen since it's larger and they have more ingredients to mess with. It's often nice to have more than one person attribute to the things needed to cook something but since I'm cooking in their kitchen I can't take too much back with me
September 24th	Who is responsible for purchasing your weekly groceries? Are there any challenges to this as a student?	I'm responsible for buying the groceries and the only challenge that there is for me is that the closest countdown takes me walking down and up a big hill
September 22nd	Do you find that your diet changes at all while placed on the wards? If so, in what ways?	I don't think my diet changes too much? It's just really hot in there so I drink lots of water and I often eat fattier and more carb-based food before going into them so it's easier to sustain energy and I also sometimes have a small energy bar
October 3rd	Do you find that your eating behaviours change during exam season/ when studying for exams? If so, in what ways do they change?	I feel like I've answered this question before but I think my eating behaviour changes to want to eat something that's more convenient or fast to make or that can be reheated easily
October 4th	Do you spend more time studying on-campus or off campus? Does this have an influence on your eating behaviours or food purchasing decisions, and if so, in what ways?	I used to spend more time on-campus in the beginning of the semester which made me have to pack a lunch or buy food near campus but since halfway through the semester I just study at home and watch recordings when I can which lets me have more time to cook something at home and I can eat it warm.
October 4th	On the days where you have to come into university for lectures or other university related commitments, does this have an influence on your eating behaviours or food purchasing decisions? If so, in what ways?	When I have commitments on-campus I'd typically have a quick breakfast so maybe quick oats or protein pancakes that I've made and depending on how long I'm there I may have to buy something near campus or if I know that I will have time to eat a lunch or expect a long day I try to bring my own lunch which usually is just a wrap of some sort with a snack
October 3rd	Are there any differences in your eating behaviours when you're studying at university versus studying at home? If so, in what ways?	Back home my dad makes a lot of our food so I don't have to worry about making it back at home or sometimes I would make stuff for them. I also don't order fast food as much when I'm home cause I know they wouldn't want me eating it but sometimes we do have pizza and things like that once in a while. I feel like I have a little less judgment when I live alone and have my snacks cause my parents do have a habit of commenting on how much I eat
October 3rd	Does the travel associated with food procurement have an influence on your eating behaviours or food purchasing decisions? If so, in what ways?	DNA
September 30th	Do particular environments associated with being a university student have an influence on your eating behaviours or food purchasing decisions? If so, in what ways?	I don't really understand the question but I do notice that in student accommodation lot of the free events have food like pizza for free which is quite a turn on healthy option and a lot of events like seminars also have pizza I think I've been to only one event that had actual fruit and like a charcuterie board before we actually went in to the seminar. And it kinda temps see you when it's unhealthy because hey it's free
September 30th	Are there any particular things about being a student or studying at university that you can identify which have an impact on your eating behaviours?	I said this before but just overall a lot of students encouraging peoples attendance by having foods like pizza usually like Domino's and that's always kind of tempting to go to and eat because it's free. Vending machines also are a temptation because it's easy to get chips from those machines
September 30th	Do you find that particular university tasks or responsibilities have an influence on your eating behaviours? If so, in what ways?	Responsibilities have impacted the times that I eat and I find that I have to be pretty flexible when I do eat because if I go into class for an 8 AM then I have to speed make breakfast and also worry about a lunch that I would pack for later
September 30th	Does your living situation (e.g. where you live, who you live with) have an influence on your eating behaviours or food purchasing decisions? If so, in what ways?	I live alone so no one else is influencing when or what I'm eating

October 5th	Do you think that your parents have had an influence on your eating behaviours as an adult? has being a university student changed these behaviours in any ways?	I do think my parents eating behaviours have influenced me and they haven't changed as much except that I may indulge in more fast food living by myself than I would at home but I still feel guilty after eating it for example
October 5th	Did you notice a change in your eating behaviours when you transitioned from living at home with your parents or caregivers into a university environment?	There is a small change to how I eat as in I feel more comfortable eating fast food since they won't see me eating it but I still do prefer to make my own food but the kitchen I have in accommodations is quite small
October 5th	Do you think that there are any social pressures which influence your eating behaviours that are specific to being a university student?	I guess The fact that people believe that eating fast food is cheaper than making your own food is something I can fall victim to. Like a lot of people who are my age like to go to fast food places because it's easier for them it taste good and they think it's cheaper
September 29th	Do your flatmates have an influence on your eating behaviours? If so, in what ways?	I don't have any flatmates I live alone in a single bed apartment from school accommodation
September 28th	Does the location of where you live or where you carry out your study have an influence on your food purchasing decisions? If so, in what ways?	I think it's hard for me to take trips to the grocery store since I do live on top of the hill and so I usually take weekly trips to the grocery store and I try to get food that I would use within the week. I don't have a car so I can only get what I can carry and I don't have the convenience of the grocery store being right next to me so if I feel like getting something usually does take quite a long trip
October 9th	If and when you go home from wherever you live during university, do you find that your eating behaviours change in any ways?	Going to university definitely affects the way I eat and the food and make because if I have to go in the morning then I focus on making a quick breakfast and packing a lunch and if I don't feel like eating in the morning right away because I don't have an appetite yet it does get easier to just buy something on the way to class or to wards. I don't have the ability to eat when I'd like
October 8th	does the location of grocery stores or food retailers relative to where you live and study have an influence on your food purchasing decisions? If so, in what ways?	The closest store I have to meet a convenient store which is more pricier than the countdown but the countdown is a little far for me and I always have to care of the groceries up the hill so I can't buy too much food when I'm going to the grocery store so I try to buy foods that I can see lasting for a week or two instead of one off snacks I guess
October 8th	When you purchase food at university as opposed to bringing food into university with you, do you tend to purchase food from the stores on-campus or the stores surrounding campus?	
October 8th	What are your thoughts on the food sold at the stores on university campus? Is there anything that you would change?	I don't go to city campus that often and I've only seen there kind of café style or this pasta place the one on Grafton-campus is also like a coffee café which is quite pricey and the food I've been told is very bland and bad so if I could change it I'd probably make it more affordable and more basic buffet style as they prep something new every day like an assortment of food and you just pay by entrée with sides so it's easy to prepare and can be sold cheaply
October 7th	Do time constraints secondary to university mean that you have to resort to purchasing food either on-campus or in the shops surrounding campus? And how often does this happen?	It happens less often since I stopped attending a lot of my classes so when I'm starting at home I can just cook up something when I'm hungry instead of having to pre-emptively plan a lunch to take with me
October 7th	Do you think that the university environment has had an influence on your alcohol intake? If so, in what ways?	I find it so bizarre that the superfino cafe in the Grafton building sells alcohol!?! Not only that but there is a special on Friday where you can get a cheaper wine glass and beer. I find it highly inappropriate. I do not drink alcohol and I hate being surrounded by things that promote the consumption of alcohol as I believe that it's not a good habit to endorse
October 7th	Do you think that your peers have an influence on your alcohol intake? If so, in what ways?	My peers try to influence my alcohol intake but I'm pretty headstrong in saying no as I don't like drinking alcohol and the way it makes me feel after. I'm not easily swayed to drink but that's just me
October 7th	Is there anything about your cooking space in your place of residence that limits your ability to prepare food or influences your food purchasing decisions? Do you think that this would be different if you weren't a university student?	The Kitchenette Space is minimal and there is no drying rack so I have no place to put dishes pots or pans after I'm done washing them if I didn't live in student accommodation I would definitely look for a place that had a proper size kitchen and fridge
September 29th	Does the cleanliness of your flatmates ever have an influence on your ability to prepare food? Do you think that this would be different if you weren't a university student?	I live alone but the cleanliness of flatmates would affect my cooking ability because I dislike when people keep their dishes in for more than a day. I can't wash my dishes if there's something in the sink. Just put your dirty dishes into the washing machine
September 29th	Do you believe that there are certain types of foods that are more or less accessible to you as a university student? How does this influence your food purchasing decisions?	I think alcohol is a lot more accessible as a student and less available would be more nutritious options as I think vegetables take time to prep and they don't have a long shelf life so it's difficult for places to make dishes that have a good amount of vegetables
September 28th	Do you believe that your place of residence is well equipped for cooking? Please elaborate.	The place I live I do not believe is well equipped for cooking as I make oatmeal in the morning my sink is filled to the brim already and there's crumbs everywhere and it's just agony cleaning it every five seconds just so I can have a

		clean countertop space. They provide everything we need for cooking pretty much except a blender but there's also no drying rack for dishes. Only two stove tops.
September 27th	Does the easy access of foods provided on-campus or in nearby stores have an influence on your eating behaviours? If so, in what ways?	Whenever I walk to campus there's always these little cafés and there's even this American style dessert place that I love and so it's always a little tempting to walk past those and be like mmm maybe I can have a little treat
September 27th	Would you say that the food sold at the stores on-campus is healthy? Please elaborate.	Majority of the food that I see sold near my campus which is Grafton is that a lot of them are just pastry-based or carbs and nothing really nutritious besides this one poke bowl place that I have not tried
October 30th	Are your food behaviours or food purchasing decisions limited by the types of foods that you can bring to university or the types of foods that you can make/ cook at university? How so?	It is as the kitchen in my apartment is only a kitchenette so I can make only something that can fit on the countertop space and also the fridge is pretty small so I can't store much food in it anyway and I'm limited to only bringing foods to school that either can be eaten cold or something microwavable so I can't eat anything warm really if I pack a lunch to a school
October 27th	Based on your experience at university, have there been any specific times throughout the year where your eating behaviours have changed secondary to university assignments, tests, examinations etc? Please elaborate.	So whenever there was an exam or a test coming I would tend to want to take away food as it relieves some of the stress of making food going to the grocery store and all that. I'd also validate my snacking habits and saying that I'm doing a good job by studying so I would eat kind of more liberally and maybe something more junk foody
October 30th	What is the significance of food to you as a person? Is this in any way affected, influenced or changed by being a student?	Sometimes I love to eat food I love food and then other times I literally wish that we didn't have to eat as a student I think that diet isn't really cared about as I see a lot of other students eating crappy food really I mean some do cook but it's a minority I think as a lot don't know how to cook or don't have the time to
October 27th	Do you find that when you eat a healthier diet you are able to better carry out your university related tasks?	Yes! Whenever I eat a healthier diet I overall feel so much better and when I do cave-in and have some sort of fast food or bad sort of takeout I feel awful after it
October 27th	When you're tired, fatigued or stressed secondary to university, do your eating behaviours change in any way? Please elaborate.	When I'm fatigued or stressed I do like comfort foods or little snacks to kind of relief the burden of stress and make the situation a little better. But also if I just got over a test and I'm fatigued after that I like to cook my own food
October 27th	What are your perceptions of healthy and unhealthy foods? Do you prefer to eat foods that you deem to be healthy or foods that you deem to be unhealthy? What are some of your reasons for this?	I prefer to eat foods that I deem healthy as they overall make me feel better and I don't have the guilt attributed to them as I do with things I deem unhealthy. I also don't like the connotation of healthy and unhealthy foods as I just see vegetables and meat and things like that as food and not necessarily healthy and I hate how as a society we tend to now categorize as food being one or the other instead of being like this is nutritious for me and this is not so nutritious for me if that makes sense
October 26th	Would you classify yourself as a motivated food preparer or an unmotivated food preparer? How does this influence your eating behaviours at university?	I've never actually heard of that term before and I'm curious to know what that means.
October 22nd	Do you participate in any extracurricular activities e.g. sports, hobbies, that have an influence on your eating behaviours?	I go to the gym often and I am part of a taekwondo dojo and I'd like to try at least reaching protein goals but I don't think I ever reach that so I do like to drink beverages with added protein to it to make it a little bit easier
October 21st	How does your self-efficacy to cook or prepare food influence your eating behaviours? Has studying at university had any influence on your ability to cook and prepare food?	DNA
October 22nd	Would you say that you are a disciplined eater? Has university influenced this in any way?	I'd say I'm a disciplined eater and university definitely has challenge that since I don't have a large enough kitchen to support the way I used to eat. During my undergrad I had a very good diet but that was only because I had a nice kitchen and I had a nice small locally owned grocery store nearby that I was able to get fresh vegetables and ingredients from I was very fortunate to have that and I miss it a lot
October 22nd	How does time influence your eating behaviours and food purchasing decisions? Elaborate.	Whether I have enough time to make food does affect what I eat I actually stop going to my 8 AM classes because I wasn't able to make food for myself beforehand so I would be buying lunch on-campus or near campus because I couldn't have time to pack a lunch either
October 21st	How do time constraints secondary to university have an influence on your eating behaviours and food purchasing decisions?	DNA
October 17th	Has COVID at any point of your university career had an influence on your eating behaviours? If so, in what ways?	Covid was actually kind to my diet because I was able to live with my parents who had a house in a nice kitchen and we would be able to drive to grocery store and stuff like that and my dad actually cooked a lot as well so I didn't have to do anything
October 17th	How does the cost of food influence your eating behaviours and food purchasing decisions as a university student? Do you think that these factors will still influence you when you are no longer studying?	Of course I think about cost when I am going to the grocery store because I pay a lot of money for tuition as an international student so I like to get things that are on sale I don't think I'll be as stingy outside of University
October 19th	As a university student, do you prioritise time over cost or cost over time when it comes to your food purchasing decisions?	Time over cost I think and I can't really say why I'm just more willing to pay money for food that's quick so I can do something else if I have something else that needs to be done if I have the time then I would make my own

October 19th	Are there any strategies that you have learned during your time at university that help you to ameliorate the cost food?	No none, I would say the only thing is that I buy lunch and then I save half of it for dinner
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Student 2

Date	Questions	Answer
August 22nd	How well do you rate your cooking abilities? And how did you learn to cook?	I would rate myself a pretty self-sufficient home cook. I learned to cook from age 9 when my mum saw I was learning baking at school and suggested if I wanted to make food I should learn to cook meals for the family because that was more useful. I've been cooking since then and have a mental library of meals I can rely on, and I like trying new recipes to try different flavours and cooking techniques. Basically I first learnt from my mum but then about age 14/15 onwards I started doing my own thing and learning off recipes/friends etc
August 21st	Do you follow any specific dietary pattern or have any dietary requirements?	I usually practice intermittent fasting with my eating window about 12pm - 8pm ish but I will eat earlier if i exercise that day. Other than that I tend to avoid drinking too much milk because I'm lactose intolerant and also find it makes my sinus congestion worse. I drink oat milk as an alternative.
August 22nd	Do you cook meals as a flat or individually more often? What are some of the reasons for this?	With me and my older sister I tend to be the person who cooks for the both of us. She works a very high stress busy job and often works late, and I am the more experienced cook out of the two of us so it's easier/faster for me to put meals together
August 22nd	Do you ever skip meals because of university commitments?	Frequently - I often forget to eat meals when I have busy days ahead. In part I started intermittent fasting to help me adapt to this - I just started eating later in the day after classes and labs etc and it actually helped with the hunger/focus. If I get really hungry I'll have an up n go or a sandwich or snack while on the move
August 21st	How often do you purchase food as opposed to preparing food to bring to university? And when you do purchase food at university, do you tend to buy food from the stores on-campus or the stores surrounding campus, and why?	I buy lunch about 2 days in the week, other times i make sandwiches or leftovers. But usually if I've brought my lunch about 50% of the time I'll buy a snack or a coffee. I usually buy my food from the shops around Grafton Superfino is quite expensive so I'll only buy from there if I'm in a rush for convenience

Student 3

Date	Questions	Answer
August 15th	Do you try to avoid being wasteful as often as possible? If so, how are some of the ways that you avoid wasting food and what are some of the benefits of avoiding food waste?	Yes I do try to reduce food waste. I tend to finish off the leftover from dinner next day for lunch. Also plan the grocery shopping for the week ahead to only grab things we need for the upcoming week, especially for fresh veges and fruits that doesn't last long. However we do stock on frozen products such as pizza and dumplings. My parents grew up in an environment that was lack of food and people starving, so they always tell me not to waste food. I think some benefit is that it make the most out of the resources, reduce environmental damage and saves our money too.
August 17th	Do you think that social interactions with peers have an influence on what you eat throughout the day? If so, do you think that this is a positive or a negative influence?	I think interaction with peers definitely affect the diet. And it's a positive effect for me as I tend not to eat regularly but now my flatmate and I normally cook and eat together so its healthier for me. Also I find it better to grocery shopping for multiple people compared to single person as we get to have a wider categories of food.
August 15th	How well do you rate your cooking abilities? How did you learn to cook?	maybe 4 out of 10, can follow the recipe but not talented. Learnt cooking when moved out from home for uni! I learnt it with my flatmates that knows how to cook, as a kid I always watch my parents cooking too.
August 15th	Do you find it difficult to achieve a well-balanced diet as a student? If so, what are some of the challenges?	Yes especially when it's a busy year and don't have much time for cooking, quick food preparation and balance diet can be hard to compensate at the same time. But I found planning ahead can make the cooking more efficient.
August 23rd	Are there any things that you would change about the food outlets on-campus?	On Grafton-campus it would be good to have more food and drink choices, for example having a bubble tea shop as the one in city campus.
August 23rd	How often do you drink alcohol? Do you think that studying at university has an influence on your alcohol intake, and if yes/no why?	Around 2 nights per week but small quantity. Studying at uni doesn't have much impact on my alcohol consumption. For me it's flatting with friend or going to friend gathering that we would sometimes drink together.
August 30th	What are some of the challenges that you face as a student when trying to eat a healthy diet?	First is time for cooking, I find 1 hour every day for cooking is a good balance, but when I'm busy with university tasks I would take faster processed food which can be less healthy. Second is budget which is a challenge I find as a student, food selection would be more limited and therefore may result in a less balanced diet.
August 30th	Do you ever skip meals because of university commitments?	Yes, lunch break for uni clinic is 12-12:45. sometimes if I cannot finish my appointment in time in the morning I would skip my lunch. But I still try eat a bit because I find myself couldn't concentrate well in the afternoon if I skipped lunch.

August 31st	When you are feeling stressed or overwhelmed by university tasks or deadlines, do you find that preparing food items or meals becomes less of a priority to allow more time to study?	Yes! So when in busy exam weeks or when uni tasks are heavy I would generally get takeaways or eat something with short prep time
September 2nd	How often do you meal prep meals? Is healthy eating a priority for you?	I meal prep for dinner for 5 days in the week prior, and I find planning ahead makes cooking easier and more healthy. Healthy eating is a priority but sometimes when it's too busy it becomes less of a priority. I would still try to eat as balanced and healthy as possible.
September 7th	When you were growing up, did your parents emphasise getting you to help out in the kitchen? If so or if not, how has this impacted your cooking abilities, self-efficacy to prepare your own meals etc	Yes my parents often ask me to help wash the vege, or cut the ingredients. I think it gives me an idea of preparation of meals and also how much ingredient would be required, therefore applied into my cooking ability.
September 6th	Do you often find that you purchase foods that are cheap, easy and convenient as these are best suited to a university schedule?	Yes, especially for lunch. If I need to cook for lunch at home, frozen food or noodle would be the first choice as they are fast to make. As I would prefer to take longer to prepare for dinner rather than lunch.
September 6th	Do you cook meals as a flat or individually more often? What are some of the reasons for this?	I normally cook meal as a flat because we have similar eating pattern and diet preferences. And by cooking meal together it saves up preparation time, more efficient. It also saves up the cost of grocery as we get to buy food in larger portions and cheaper price. Sometimes when one of us is busy, one of us will cook and the other will clean the dishes.
September 2nd	Do you think that social media has an influence on what you or other students eat? If so, in what ways?	Yes! If a restaurant has high rating/ popular/ food looks nice or get recommended by friends on social media, it makes us wanting to go and try the food out.
September 10th	Do you find that your eating behaviours change at social events? If so, in what ways?	Yes, I would normally focus on talking and would eat less than I normally would.
September 11th	If and when you purchase food throughout the day, do you tend to purchase food from stores on the university campus or surrounding stores? and why?	Yes, if I didn't bring my lunch from home I would normally have lunch at cafe inside Grafton-campus, the one on the ground floor. because it's a convenient location and I can get back to clinic in 3 minutes, the environment is also comfortable. Sometimes I would also go to stores opposite the road if the lunch break is long enough.
September 11th	When you are busy with university, do you find that you tend to purchase more food out than you normally would?	Yes, when it's busy and I didn't have time to cook a decent meal, I would normally get takeaways. As it saves time and also ensures the quality of meal.
September 14th	Is healthy eating a priority for you? What are some of the enablers or barriers of healthy eating as a university student?	Yes, I think healthy eating is important as it can affect the whole wellbeing and mood. I find healthy eating challenging when university is busy and when have to cope with stress. As uni students we don't have as much time for food preparation and therefore sometimes would only go with easy preparation and not as healthy food.
September 20th	Do you often purchase/ make easy or convenient foods as these are best suited to a university schedule?	Yes I think convenient is an essential for uni students!
September 26th	Because of your field of study, do you believe that you have a better understanding of nutrition than university students that are in non-health related fields?	Yes I do think I understand the importance of nutrition and diet by learning the associated complications in a health related major
September 22nd	Do you think that eating at home with your parents relieves some of the financial pressure of purchasing food as a university student?	Yes, every time when I go back home they cook for me or take me out for food; also buys grocery for me to take back to apartment. Which I think definitely relieve some of the financial burden on food and groceries.
September 20th	Is snacking often a behaviour associated with studying for you?	Yes I tend to get hungry easily when I'm under pressure and also would crave for snacks that is high in sugar
September 20th	When your university schedule is less busy, do you find that you have more time to prepare meals?	Yes, I would be happy to spend more time on cooking and baking. But I would still prepare dinner only and have leftover for lunch, it's becoming a habit for me.
September 22nd	Since you live in a flatting environment and cook meals with your flatmates, who purchases the food that you eat? What are some of the benefits and drawbacks to group cooking as a flat?	We grocery shopping together and share the cost. Good side is that it's cheaper than cooking by myself and also gives better food quality, shorter food prep time. Downside is that sometimes I would have to compensate for each other's eating habit too, for example she can't have lamb, and I can't have spicy food.
September 18th	As a university student, what are some of the advantages to ordering HelloFresh meals?	1. Convenient as don't need to worry about meal planning anymore 2. the veges are packed in suitable portions for the meal which reduces waste 3. I think hello fresh is the best meal plan so far, as other meal plans can include lots of premade food and sauces, which is less fresh and healthy 4. Easy instruction to follow, same amount of time spend for food prep but better outcome
September 26th	Do you think that your family has an influence on your eating behaviours? If so, in what ways?	Growing up with my family, I adapted similar pattern and habit of eating with them on both eating at home and eat out. My parents and grandparents had beliefs about eating healthy in a traditional Chinese view too. For example, seasonal fruit and veggies are important. There are also some beliefs without scientific evidence, such as drinking cold water is not beneficial for digestive system and overall health. I don't think that's the case, but since I rarely drink cold water as a kid, it becomes a habit of me now.

September 14th	Do you think that your friends or peers have an influence on your eating behaviours? If so, in what ways?	Haha sorry I thought I replied to this one! Yes because I would love to try the restaurants or food that they recommend and for my close friends or flatmate, because we eat together often, we start to develop similar eating pattern
October 1st	Do you spend more time studying on-campus or off campus? Does this have an influence on your eating behaviours or food purchasing decisions, and if so, in what ways?	I have clinic works on-campus but we rarely have lecture this year, so I normally study off campus. I think that gives me more flexibility on when and what to eat if I have a whole day studying at home. I could choose to cook or heat up leftovers for lunch, but at uni the time for lunch would be less
October 1st	On the days where you have to come into university for lectures or other university related commitments, does this have an influence on your eating behaviours or food purchasing decisions? If so, in what ways?	Coming to uni i normally have shorter lunch breaks, so more toward faster and convenient food. I normally bring by lunchbox over and heat it up, sometimes go to cafe as well
October 1st	Are there any differences in your eating behaviours when you're studying at university versus studying at home? If so, in what ways?	Eating at home would be more flexible so I can sometimes cook, instead of just heating up leftovers. I can take longer to eat at home too, while at uni I normally finish lunch quicker
October 1st	Does the travel associated with food procurement have an influence on your eating behaviours or food purchasing decisions? If so, in what ways?	I prefer to go to places that are closer to my place and those that have lots of parking's. I normally go to countdown and Taiping in Westfield mall, they doesn't affect my eating behaviour as much as they have most of the ingredients that I need, but sometimes the veges there will be more expensive than other places, I will choose cheaper veges to compensate for that
October 1st	Do particular environments associated with being a university student have an influence on your eating behaviours or food purchasing decisions? If so, in what ways?	When I'm stressed or busy I would tend to order more takeaways, both for meal or snack as I don't want to cook as much and get hungry more easily. Also I tend to purchase food that are fast to make instead of what I want to eat, like complicated dishes that takes long to cook. As uni student we don't have much income so we have limited budget on grocery
October 1st	Do you find that particular university tasks or responsibilities have an influence on your eating behaviours? If so, in what ways?	As mentioned before, Uni tasks such as assignments or tests leads to me having less time to cook and also since I concentrate more, I get hungry more easily. So I will order more takeaways. I also make coffee every morning during exam times to help me focus better, but I don't have coffee everyday normally. After the exam finished I tend to eat outs to 'treat' myself. Responsibilities such as clinic shifts normally has no morning tea breaks or afternoon breaks, so I'm very hungry after each shift, I think I tend to have more food for lunch than I normally does. And will need coffee if it's a full day clinic.
September 26th	Does your living situation (e.g. where you live, who you live with) have an influence on your eating behaviours or food purchasing decisions? If so, in what ways?	When spending holiday at my parents place, my food quality will be much better. The ingredients and snacks they purchase is normally better standard than what I buy. Also my parents like to cook and they will cook several dishes for dinner.
October 6th	Do you think that your parents have had an influence on your eating behaviours as an adult? has being a university student changed these behaviours in any ways?	I think I've answered the first part before. As a uni student living by myself I have to think about the budget more, and prefer convenient dishes, but eating behaviour generally the same. Also at Auckland I eat out at different restaurants more and become more open minded for different cultural food.
October 6th	Did you notice a change in your eating behaviours when you transitioned from living at home with your parents or caregivers into a university environment?	Not much change in eating behaviour, just more on a budget
October 6th	Do you think that there are any social pressures which influence your eating behaviours that are specific to being a university student?	Not really- I can normally eat together with my friends well, and I'm happy to compensate for others requirement
October 6th	Do your flatmates have an influence on your eating behaviours? If so, in what ways?	Dietary requirements- she can't have lamb so I also don't purchase lamb Eating preferences- we compensate for each other's preferences, for example I will try more spicy food when she cooks
October 6th	Does the location of where you live or where you carry out your study have an influence on your food purchasing decisions? If so, in what ways?	Yes, I live at Newmarket so I normally only go grocery shopping and go to restaurants nearby, I seldom go to north shore just for food because of the transport.
October 8th	does the location of grocery stores or food retailers relative to where you live and study have an influence on your food purchasing decisions? If so, in what ways?	Yes, we would have to give up groceries that are not available in supermarkets nearby, for example for one type of drink it's only available from an online supermarket, and we will only get it if we do grocery shopping online that week.
October 8th	When you purchase food at university as opposed to bringing food into university with you, do you tend to purchase food from the stores on-campus or the stores surrounding campus?	On-campus normally, as lunch break is short and can't bother walk across the road
October 8th	What are your thoughts on the food sold at the stores on university campus? Is there anything that you would change?	On Grafton-campus can have more drink stores such as tank or bubble tea, sometimes just want to have something lighter

October 6th	Do time constraints secondary to university mean that you have to resort to purchasing food either on-campus or in the shops surrounding campus? And how often does this happen?	Yes, if I'm full day on clinic this will be the case, about 2 times a week in average
October 6th	Do you think that the university environment has had an influence on your alcohol intake? If so, in what ways?	Personally I won't have much alcohol, only when meeting up friends
September 18th	Is there anything about your cooking space in your place of residence that limits your ability to prepare food or influences your food purchasing decisions? Do you think that this would be different if you weren't a university student?	Yes, the cooking space is small but I'm happy that it has all the basics that is needed, stove, oven and dishwasher. So it's generally okay but because of the size it only allows me to cook one dish at a time. Back home we have larger kitchen bench and can cook multiple dishes at the same time, which saves more time
September 18th	Does the cleanliness of your flatmates ever have an influence on your ability to prepare food? Do you think that this would be different if you weren't a university student?	Yes, sometimes if she didn't clean her dishes after finish eating, I would have to wash the pot again before I cook. But normally we cook dinner together so most of the time it's fine
September 14th	Do you believe that there are certain types of foods that are more or less accessible to you as a university student? How does this influence your food purchasing decisions?	As uni student I think for takeaways or restaurants the foods are all accessible. But if I cook by myself, I don't buy food that need complicated prep process such as seafood and whole fish.
September 18th	Do you believe that your place of residence is well equipped for cooking? Please elaborate.	Yes, stove, oven, microwave, large fridge and dishwasher, I'm pretty happy with the equipment compared to the uni accommodation I lived in a few years ago, where fridge is small and can't freeze up food, and no dishwasher, had to hand wash everything:(
September 10th	Does the easy access of foods provided on-campus or in nearby stores have an influence on your eating behaviours? If so, in what ways?	Yes, so if I don't have leftover or don't feel like to bring lunch, I can simply get lunch from cafe on-campus
September 10th	Would you say that the food sold at the stores on-campus is healthy? Please elaborate.	I think it's healthy, just a bit pricey. Not sure about city campus but the cafe on Grafton-campus had a decent variety of food, and the dishes had a good combination of meat and vege

Student 4

Date	Questions	Answer
August 15th	Are you often in a situation where social interactions have an impact on what you eat throughout the day? and if so, how?	Yes, I'd say regularly. Not influencing how I feel about what I eat but more influencing me to deviate from what I'd normally bring myself. For example, I'll always take food offered to me over what I've got because it's "free", and I'm easily swayed to buy food items out on-campus etc with friends especially if other people have something that looks nice. Usually nothing too expensive but still something I otherwise wouldn't have bought
August 15th	Do you always do shared cooking as a flat? If so, what are some of the reasons for doing this?	Yes, we have a cooking roster where we each cook a night with one person getting the week off and meals cooked for them each week. We do this because it makes the kitchen a lot easier to use rather than everyone trying to cook, it's cheaper, and we really like sharing a meal together as we are a very close flat
August 15th	Do you ever use snacking as a means of procrastinating study? Or do snacks more act as a way to motivate yourself to get through university tasks?	Not really either, when I'm studying with friends we like to have something nice to eat when we stop studying, we'd probably have that either way. When I'm studying on my own I won't actively buy particular snacks
August 16th	Do you try to avoid wasting food often? If so, what are some of your motivating factors to avoid food waste?	Yes, that is one of my key factors in any food decisions. I was brought up very conscious of food waste and waste in general so I always try use things up and really enjoy figuring out how to use things up and use them well.
September 3rd	Do you find that your state of mind has an influence on what you eat? If so, in what ways?	Probably, if I'm feeling down or tired I easily could not feel like cooking or putting much effort in, but on the other hand it could just as easily make me feel like a good meal to cheer up or feel well fed
2nd September	Do you ever skip meals because of university commitments?	Similar to my other answer no, a good meal (however I choose to define good that day) is something I love and I'm in my final semester and pretty onto things at this point. The reason I would've just had a muffin is cause having a muffin for breakfast makes me feel like I'm at a hotel buffet overseas for breakfast
4th September	Do you think that social media has an influence on what you or other students eat? If so, in what ways?	Maybe? Often I'll see places that people will post about as being really good and think to keep it in mind, but very rarely will I actually follow through and try it out
September 5th	When you are feeling stressed or overwhelmed by university tasks or deadlines, do you find that preparing food items or meals becomes less of a priority to allow more time to study?	Probably not, eating things I like and making nice meals is consistently a focus of mine. I am a big fan of a good dinner or good lunch, so the things that stop me doing that are that I simply haven't made it to the supermarket or haven't finished up food I've already got so don't have a need to go. I am also a student who likes to do things early, enjoys writing assignments and really gets into the process of it so I'm usually pretty sorted in that area

5th September	Do you cook meals individually or as a flat more often? What are some of the reasons for this?	We cook meals as a flat four nights a week, and cook individually the rest. I like cooking my own meals but for the sake of a bargain I usually try get a couple of meals at my parents, though I'm really happy to cook for them there. We cook as a flat cause it saves chaos in the kitchen and we really enjoy sharing a mask together
September 6th	When you were growing up, did your parents emphasise getting you to help out in the kitchen? If so or if not, how has this impacted your cooking abilities, self-efficacy to prepare your own meals etc	In a limited way, I feel like I knew the basis of cooking and one recipe off by heart when I moved out and picked up the rest pretty quickly through independence generally. My parents cook a lot and I spend a decent bit of time showing an interest in what they cooked and how, more so than them making me do things with cooking
September 6th	Do you often miss breakfast because of waking up late? and is this ever secondary to university commitments?	If I wake up late I'll often try to just wait till lunch and eat a proper meal then, because it's like two for one deal. Or that's the rationale I give myself. I'm not sure what is meant to be secondary to uni
September 13th	When you are busy with university, do you find that you tend to purchase more food out than you normally would?	It's not uni specifically, but when I am disorganised I rely on buying food
September 13th	Is healthy eating a priority for you? What are some of the enablers or barriers of healthy eating as a university student?	Healthy eating is somewhat of a priority, but I'm not particularly good at it and not super focused on it. I'd like it to be a priority but in action it's not really. The barriers to this are being able to buy fresh fruit and veges regularly, and with buying food out, there's not many options that feel healthy but are reasonably priced. The rice bowl is the closest I can get because it does have some salad and it's fairly cheap
September 13th	Do you think that your friends or peers have an influence on your eating behaviours? If so, in what ways?	Definitely, mostly in that if they are having something that looks nice I immediately want some also or want to be included
September 26th	Do you find that your eating behaviours change during exam season/ when studying for exams? If so, in what ways do they change?	I feel like more treats or more special foods as something nice amongst extra stress
September 26th	Because of your field of study, do you believe that you have a better understanding of nutrition than university students that are in non-health related fields?	I think so, I've mostly avoided nutrition related papers cause I think it's really boring. I think it's more that I would have a better idea of how good consumption patterns have affected health
September 20th	Who is responsible for purchasing your weekly groceries? Are there any challenges to this as a student?	I'm responsible for my own groceries, and I would say finances are the biggest barrier to me buying groceries often. I have time to do it and groceries stores near by
September 16th	When you're on placement, have you noticed that your diet has changed at all? If so, in what ways?	Not at all, it's more of an extra assignment that a proper placement
September 26th	If and when you purchase food throughout the day, do you tend to purchase food from stores on the university campus or surrounding stores? and why?	Food on the surrounding stores, because I'm at Grafton and there's no on-campus meals except for an overpriced cafe
September 25th	Do you think that eating at home with your parents relieves some of the financial pressure of purchasing food as a university student?	Yes definitely. I eat a lot of meals at my parents' home and particularly when I know I would have to make a single meal for myself at home, and I'm very lucky my parents like having me over and that I'm in the same city to visit so often.
September 18th	Do you often find that you purchase foods that are cheap, easy and convenient as these are best suited to a university schedule?	Yes definitely, university is the biggest factor in lord of things.
October 4th	Do you spend more time studying on-campus or off campus? Does this have an influence on your eating behaviours or food purchasing decisions, and if so, in what ways?	Off campus, if I go on-campus I'm more likely to buy food and also it's often less filling or satisfying. I also have spent a lot of my degree online so I'm more content at home
September 24th	On the days where you have to come into university for lectures or other university related commitments, does this have an influence on your eating behaviours or food purchasing decisions? If so, in what ways?	Yes definitely, as much as I try bring lunch I often buy something on-campus cause it's more convenient or there's something particularly I want that I can't make at home. I try not to spend full days at campus cause I would rather I eat food at home and won't when I'm there
September 23rd	Are there any differences in your eating behaviours when you're studying at university versus studying at home? If so, in what ways?	I usually avoid studying at uni because I like to be at home where I can make food or cups of tea easily. And because my degree has been in covid it works better for me and I'm used to it
September 22nd	Does the travel associated with food procurement have an influence on your eating behaviours or food purchasing decisions? If so, in what ways?	It probably increases the options and makes me more likely to pick from things I wouldn't otherwise eat
September 21st	Do particular environments associated with being a university student have an influence on your eating behaviours or food purchasing decisions? If so, in what ways?	I don't really notice particular environments except when I'm on-campus and am inclined to buy food if I wasn't able to bring some
September 20th	Are there any particular things about being a student or studying at university that you can identify which have an impact on your eating behaviours?	Going in and off campus affects my eating habits or access to eating home cooked foods, as well as shaping my schedule etc

September 24th	Do you find that particular university tasks or responsibilities have an influence on your eating behaviours? If so, in what ways?	No I haven't noticed any crossovers between certain habits and certain foods
September 22nd	Does your living situation (e.g. where you live, who you live with) have an influence on your eating behaviours or food purchasing decisions? If so, in what ways?	Definitely, flatting has limited my access to lots of foods considerably because of the financial strain
October 6th	Do you think that your parents have had an influence on your eating behaviours as an adult? has being a university student changed these behaviours in any ways?	Yes I would say so, I've learnt a lot of recipes from my dad and still eat very similarly to them. I think the financial pressures of being a university student causes the biggest change
October 6th	Did you notice a change in your eating behaviours when you transitioned from living at home with your parents or caregivers into a university environment?	Definitely. I got a whole lot more frugal, a lot less options of stuff and just generally ate less varied food and lots less meat. I do also have more freedom with what I cook and more of things I learnt outside of my home though
October 6th	Do you think that there are any social pressures which influence your eating behaviours that are specific to being a university student?	I think there probably are, but I don't really notice them. My University experience has been quite fragmented and with a tight knit group of people and not a lot of connect to wider University cultures
October 6th	Do your flatmates have an influence on your eating behaviours? If so, in what ways?	Not really, if anything I have judgement on their eating behaviours. For example, one of my flatmate opens a packet of pasta, uses half and throws the rest out and it shocks me. The time I'm influenced by them is when they have something nice and I want to try it, but don't want to get some myself
October 10th	If and when you go home from wherever you live during university, do you find that your eating behaviours change in any ways?	I go home to my parents often cause we all live in Auckland, so I feel like those changes in what I eat have been documented a lot here. It changes in that they have more meat, more options etc
October 10th	does the location of grocery stores or food retailers relative to where you live and study have an influence on your food purchasing decisions? If so, in what ways?	It has an effect on how often I buy food, for example at my last flat I didn't have my car cause it had no parking so I waited much longer between going to the supermarket
October 9th	When you purchase food at university as opposed to bringing food into university with you, do you tend to purchase food from the stores on-campus or the stores surrounding campus?	Stores surrounding campus. There are not really any options on Grafton-campus
October 9th	What are your thoughts on the food sold at the stores on university campus? Is there anything that you would change?	I would want a better range, and cheaper. But I know cheaper isn't really achievable and neither is a wider range cause the businesses in Grafton seem like they're struggling and it isn't a big enough campus to have more stuff joining
October 8th	Do you think that the university environment has had an influence on your alcohol intake? If so, in what ways?	In theory it should've, but a range of factors means I have not had a party degree at all. First was covid I. My first year and online uni right from the start killed any party opportunity, I never go to o week or anything cause I don't care for it, my cohort are really med student styles and there's not a lot of events on or anything. Being in a flat with friends does more for my drinking but I don't drink much anyway
October 8th	Do you think that your peers have an influence on your alcohol intake? If so, in what ways?	No, they have an influence on each other's but I'm not a big partier or drinker and I'm often happy to sober drive. If I drink it's because it's the one off where I feel like it. My friends can't convince me to drink
October 5th	Is there anything about your cooking space in your place of residence that limits your ability to prepare food or influences your food purchasing decisions? Do you think that this would be different if you weren't a university student?	If I wasn't a university student I'd be working a lot more so I'd probably have a nicer place, more room or less flatmates and be able to buy better food. So probably makes a big difference. Nothing specific in the cooking space
September 22nd	Does the cleanliness of your flatmates ever have an influence on your ability to prepare food? Do you think that this would be different if you weren't a university student?	Yes!!! I have a couple of flatmates who are absolute menaces about doing their jobs, are generally lazy and messy and make the whole flat a mess. If the kitchen is messy and it was meant to be done, it defeats any interest I have in cooking and makes it so frustrating to prepare anything cause I don't want to be around it. This doesn't have much to do with uni cause my other flatmates are great it's just these two
September 18th	Do you believe that there are certain types of foods that are more or less accessible to you as a university student? How does this influence your food purchasing decisions?	Food that is obviously healthy like marketed that way or mostly with fresh ingredients is just so much more expensive and hard to buy out, which is frustrating cause it's what I'd like to be having but kind of end up at the bakery instead
September 15th	Do you believe that your place of residence is well equipped for cooking? Please elaborate.	It is, it has a stove, oven, everything you need to cook and space for it too. The oven is somewhat broken but we don't use an oven too often anyway
September 16th	Does the easy access of foods provided on-campus or in nearby stores have an influence on your eating behaviours? If so, in what ways?	Yes it does, knowing I can still get lunch on-campus if I don't bring stuff makes me more likely not try figure out a way to bring lunch
September 15th	Would you say that the food sold at the stores on-campus is healthy? Please elaborate.	Somewhat, at Grafton-campus there is a healthy food vending machine but it's a massive joke cause it's so so expensive no one ever uses ir and it's never stocked. Then the closest stores we have a cafes, a fish and chip shop,

		and a bakery. There's a poke bowl place that seems healthy but again it's so expensive. The subway closed down also
October 28th	Do you follow any specific dietary pattern or have any dietary requirements/restrictions?	No not at all, I am entirely unrestricted in what I eat and when. I've never really been one to follow diets or commit to that sort of thing, although I sometimes I feel I should
October 28th	Are your food behaviours or food purchasing decisions limited by the types of foods that you can bring to university or the types of foods that you can make/ cook at university? How so?	I think somewhat? There's only a handful of things I can reasonably bring to uni, there's a microwave on-campus that helps but I really just bring easy leftovers or snacks cause bigger meals or more complicated prep isn't feasible at uni I had a friend in arts who had access to the staff kitchen and his friends would all make themselves tea etc during uni and that's wild to me
October 26th	Based on your experience at university, have there been any specific times throughout the year where your eating behaviours have changed secondary to university assignments, tests, examinations etc? Please elaborate.	At the moment I'm in exams and in an extremely busy patch of uni, and it has really messed my normal eating habits because we don't have a flat cooking roster while it's so busy, so my normal meals are chaos and I'm in too much of a hectic state to deal with these simple things properly
October 26th	What is the significance of food to you as a person? Is this in any way affected, influenced or changed by being a student?	I think it's that I am always looking forward to a good meal, enjoy cooking especially for others, enjoy knowing where food comes from and gardening etc. so I really enjoy all the processes that comes with food. I think being a student has amplified this considerably cause living out of home as an adult has given me lots of freedom to explore cooking and gardening etc
October 25th	Do you find that when you eat a healthier diet you are able to better carry out your university related tasks?	Probably, cause I have more time to work, focus on simple activities, and have room to plan our things like healthy meals (something I need to think about actively to do)
October 25th	When you're tired, fatigued or stressed secondary to university, do your eating behaviours change in any way? Please elaborate.	Yes, I'm more likely to order takeaways or go to my parents, or cook a simpler probably healthier meal. On the other hand, it can also make me really crave good wholesome food
October 21st	What are your perceptions of healthy and unhealthy foods? Do you prefer to eat foods that you deem to be healthy or foods that you deem to be unhealthy? What are some of your reasons for this?	I think I have an average concept of what's healthy and what's not, however i also feel quite conscious of thinking too strongly either way. I would like to eat healthier than I do, and somethings feel quite bad that I enjoy unhealthy or sweet food so much and have little concern for how much I indulge. For example, my flatmate and I were eating doughnuts the other day that we'd been given and our other flatmate told us we were going to get diabetes in a somewhat joking manner but I definitely still felt bad about it
October 18th	Would you classify yourself as a motivated food preparer or an unmotivated food preparer? How does this influence your eating behaviours at university?	More motivated than people I'm around, but less motivated generally. I use leftovers better than my flatmates and think often about what dinners I can make, but I don't effectively plan lunches or things in advance
October 18th	Do you participate in any extracurricular activities e.g. sports, hobbies, that have an influence on your eating behaviours?	No I don't. I used to do a lot more sport, like outdoor activities 5x a week but I haven't for years
October 18th	How does your self-efficacy to cook or prepare food influence your eating behaviours? Has studying at university had any influence on your ability to cook and prepare food?	It influences ir a lot, I often cook for lunch and make more elaborate dinners than my flatmates would be inclined to. I feel like I can quite easily whip up a decent dinner quickly with limited actual skill etc. I think being a student caused me moving out and having to practise these things
October 15th	Would you say that you are a disciplined eater? Has university influenced this in any way?	Definitely not, and no despite doing a health degree. Based on all that I know, I should be way way more disciplined
October 12th	How does time influence your eating behaviours and food purchasing decisions? Elaborate.	On busy days, I often plan to buy lunch cause I simply don't have time to prepare something I'm advance or make something. Instead of trying to figure out how I can, I will just buy something
October 12th	How do time constraints secondary to university have an influence on your eating behaviours and food purchasing decisions?	University really is my key time constraint. I don't think I work enough for that to affect it
October 15th	Has COVID at any point of your university career had an influence on your eating behaviours? If so, in what ways?	In the first covid, I was at home with much better ingredients and fixated more than I ever have (so basically for the first time) on what I ate and how much I was eating and keeping it constrained. But that really didn't last. When I was in isolation with my flat, I wanted nice things as a treat to counteract having to be in isolation
October 15th	How does the cost of food influence your eating behaviours and food purchasing decisions as a university student? Do you think that these factors will still influence you when you are no longer studying?	It has affected it considerably, firstly I am very stingy and my working is my only income (not student loan etc) so I have to work a certain amount non-stop to afford groceries etc and I'm quite cautious about what I buy, I buy the cheapest I can. If I'm not at University I can work much more and have more money for groceries
October 15th	As a university student, do you prioritise time over cost or cost over time when it comes to your food purchasing decisions?	Often both, depending on the circumstance. If I have time I'll prioritise cost and make something, if I don't have time I'll prioritise that and buy something
October 12th	Are there any strategies that you have learned during your time at university that help you to ameliorate the cost food?	Yes, but I kind of had them already. Which is just to look for what's cheap and in season, the cheaper versions of thing and use everything as well as I can. The only other thing is to engage in studies like this for grocery vouchers

Student 5

Date	Questions	Answer
August 15th	After a busy day of university - or in this instance tutoring - do you feel motivated to prepare meals? If so or if not, why?	No I don't feel motivated. Just because University has taken all my steam and I just want to relax, and preparing a meal means dishes, which is a bit stressful. Snacks like this or something I can grab from the fridge is best :)
August 15th	In what ways do you think that social interactions with peers has an influence on what you eat?	It influences what I eat in terms of me spending more money on food because I wanna enjoy my time with them. I also try to choose stuff that's easy to eat so I'm not making a mess in front of them
August 16th	How well do you rate your cooking abilities? And how did you learn to cook?	My cooking abilities are very good and I can easily cook anything out of a recipe book or through improv. But mostly I'm just lazy and throw stuff together. I learned to cook when I was a teenager living with my Mum, she taught me.
August 17th	Do you follow any specific dietary pattern or have any dietary requirements?	Yes, I'm vegan. I also try to loosely follow the low FODMAP diet because I have IBS.
August 17th	Do you cook meals as a flat or individually more often? What are some of the reasons for this?	Mostly individually because we all have different schedules and preferences. Quite often one of us will make something and share it with the rest of the flat though, because we like sharing 😊
August 23rd	Does access to facilities in your office / at university influence what you eat on a daily basis?	Yes. Even though I live very close to campus I like to go there and spend the whole day there. So often I'll grab something quick to take for when I get hungry and need to eat.
August 23rd	What are some of your reasons for meal prepping?	Because I like having convenient and easy access to cheap and healthy food. Also during the week I often don't feel like cooking dinner so it's nice to have pre-prepared meals for a whole week.
August 23rd	Is there any particular reason as to why you consumed the same meal in one day?	Because I was too lazy to make anything else. Also this was fresh, cheap, easy, and healthy.
August 29th	Do you find that your state of mind has an influence on what you eat? If so, in what ways?	Yes definitely, I eat food that is more basic when I'm not feeling great. Hence why this meal was basically just rice.
August 29th	Do you ever skip meals because of university commitments?	Yes, sometimes I have no appetite because of coffee so don't have breakfast or lunch and just eat snacky things til later in the day. Also because of University I have to be careful not to flare up my IBS as I can't work in pain, so that's why I never eat breakfast, it's too risky
September 5th	Do you think that social media has an influence on what you or other students eat? If so, in what ways?	Personally no. My flatmates are all vegan and health-conscious so I'm often inspired by what they're eating. I used to be influenced by social media very heavily when I had an eating disorder as a teenager though. As for other students, yeah possibly? I don't really know.
September 4th	When you are feeling stressed or overwhelmed by university tasks or deadlines, do you find that preparing food items or meals becomes less of a priority to allow more time to study?	Yes definitely! I gravitate towards things that are easier to prepare
September 7th	When you were growing up, did your parents emphasise getting you to help out in the kitchen? If so or if not, how has this impacted your cooking abilities, self-efficacy to prepare your own meals etc	Yes, as a teenager they encouraged me to cook and taught me things about it. I'm very grateful they did because now I know how to cook and it's a very useful skill
September 6th	Do you ever use snacking as a means of procrastinating study? Or do snacks more act as a way to motivate yourself to get through university tasks?	I never snack to procrastinate or get through uni tasks - I probably would if my stomach wasn't so sensitive. Whenever I eat at uni it's purely out of hunger.
September 7th	Do you often purchase/ make easy or convenient foods as these are best suited to a university schedule?	Yes definitely. Most of my meals are easy and quick
September 14th	Do you think that your friends or peers have an influence on your eating behaviours? If so, in what ways?	Yes, drinking especially. I drink socially because it's fun. I wouldn't really drink otherwise. Food-wise I'll eat different and more expensive things when out with friends
September 14th	When you are busy with university, do you find that you tend to purchase more food out than you normally would?	Yes definitely, because I run out of food at home and then I don't have time to go shopping or prepare anything
September 14th	Is healthy eating a priority for you? What are some of the enablers or barriers of healthy eating as a university student?	Yes it's definitely a priority because it makes me feel much better. There are definitely barriers as a University student. The biggest barrier is not having the time or energy to make healthy food (especially vegetables) when I'm busy and stressed. It's so much easier to buy lunch or snacks but that's never very healthy
September 26th	Do you think that people who study in health-related fields have better nutrition literacy than people in non-health related study fields? How would you perceive your nutrition literacy compared to the typical university student?	I would think so yes, because apparently most people don't know much, if anything, about nutrition literacy. I used to want to study nutrition and I had an eating disorder as a teenager so I'm quite well-versed in it personally.
September 29th	Do you find that your eating behaviours change during exam season/ when studying for exams? If so, in what ways do they change?	I don't really do exams since I'm a PhD student. Thinking back to undergrad they definitely changed. I ate stuff that was easier to prepare than usual. Also ate lots of healthy stuff to keep my brain working

September 28th	Is snacking often a behaviour associated with studying for you?	Yes. I don't want to snack because eating gets in the way of what I'm trying to concentrate on, but I have to eat because I get hungry which is even more distracting!
September 28th	So you think that having COVID has changed your eating behaviours? If so, in what ways?	Yes, definitely. I was home all the time so it was actually easy to fit in at least 3 healthy meals. I made sure basically everything I ate was healthy in order to fight covid too.
September 29th	Who is responsible for purchasing your weekly groceries? Are there any challenges to this as a student?	Me, I get all my own groceries. As a student this is challenging bc it takes time to go to the supermarket (time I'd rather spend studying) and also it's annoying how expensive it is which is challenging
September 28th	Do you try to avoid being wasteful as often as possible? If so, how are some of the ways that you avoid wasting food and what are some of the benefits of avoiding food waste?	Yes I'm always trying to use things up, waste makes me really sad. To avoid waste I often cook or prepare meals with whatever I have left from the weekly groceries or whatever is going off first. Avoiding food waste is beneficial because it saves money and it reduces demand
September 24th	Are there any particular things about being a student or studying at university that you can identify which have an impact on your eating behaviours?	Definitely makes me value convenience. I often don't have energy to cook bc I'm too tired from uni stuff. So having convenient food is important. Also makes me try to eat as healthy as possible bc my brain needs good fuel
September 28th	Do you find it cheaper to buy food on-campus or cook at home? Are there any things that you would change about the food outlets on-campus?	Definitely preparing food at home is heaps cheaper! I'd love if the food on-campus is more vegan friendly
September 26th	Do you cook meals independently or with flatmates? What are some of the benefits and drawbacks of this?	Independently. Benefits are that I can choose exactly what and when I eat. Drawbacks are that I have to cook more often since I'm just cooking for myself.
September 23rd	Do you find that particular university tasks or responsibilities have an influence on your eating behaviours? If so, in what ways?	Yeah, when I'm marking for my psychology course I tutor I am stressed so I eat easy quick things and find I eat out more and my diet does suffer a bit. Otherwise University is generally just so tiring I go for healthy, easy, and cheap food when I cook
October 4th	Do you spend more time studying on-campus or off campus? Does this have an influence on your eating behaviours or food purchasing decisions, and if so, in what ways?	On-campus. Yes, i eat less because usually I don't have enough food with me at uni. Sometimes if I'm really hungry I have t buy stuff too
October 4th	On the days where you have to come into university for lectures or other university related commitments, does this have an influence on your eating behaviours or food purchasing decisions? If so, in what ways?	Yes, I eat less and maybe a little more unhealthy as I snack more and have a small lunch usually. Also I buy food if I didn't have anything from the house I could easily take
October 4th	Are there any differences in your eating behaviours when you're studying at university versus studying at home? If so, in what ways?	Yes - at home I eat stuff I've made since the pantry is accessible and easy. I tend to eat more and eat healthier. At uni I snack and buy food out more often and sometimes don't eat enough or eat well enough
September 30th	Does the travel associated with food procurement have an influence on your eating behaviours or food purchasing decisions? If so, in what ways?	Yes, I'll often buy lots of cheap food in bulk as travelling to get groceries is annoying most of the time
September 30th	Do particular environments associated with being a university student have an influence on your eating behaviours or food purchasing decisions? If so, in what ways?	Not really - I eat what I want to regardless of environment
September 29th	Does your living situation (e.g. where you live, who you live with) have an influence on your eating behaviours or food purchasing decisions? If so, in what ways?	Not really, I'd eat what I do regardless of my living situation. Although that being said, my flatmates often get new vegan products from the supermarket and sometimes that makes me go and buy the same thing if it looks good. My flatmates do inspire me to eat healthier stuff too as they're all very healthy.
October 6th	Do you think that your parents have had an influence on your eating behaviours as an adult? has being a university student changed these behaviours in any ways?	Yes they definitely did. They taught me how to cook. Being at University hasn't really changed these behaviours
October 6th	Do you think that there are any social pressures which influence your eating behaviours that are specific to being a university student?	No. I don't care what others think of what I eat
September 29th	Do your flatmates have an influence on your eating behaviours? If so, in what ways?	Yes, they inspire me to eat healthier as they're all very healthy
September 23rd	Does the location of where you live or where you carry out your study have an influence on your food purchasing decisions? If so, in what ways?	Yeah, there's an Asian supermarket on K road I'm not far away from. They do cheap produce and student discounts so I go there a lot. I also go to countdown a lot as that's the closest supermarket
October 10th	If and when you go home from wherever you live during university, do you find that your eating behaviours change in any ways?	I eat better and snack less at home.
October 10th	does the location of grocery stores or food retailers relative to where you live and study have an influence on your food purchasing decisions? If so, in what ways?	Yes, the supermarket is quite far so when I go I buy in bulk. When I don't have time to go and need food I will get takeout or buy cheap snacks from convenience stores near me

October 10th	When you purchase food at university as opposed to bringing food into university with you, do you tend to purchase food from the stores on-campus or the stores surrounding campus?	I purchase food at the stores surrounding campus because the one cafe on Grafton-campus doesn't have good vegan options.
October 6th	What are your thoughts on the food sold at the stores on university campus? Is there anything that you would change?	The city campus has Tart Bakery which is a vegan bakery which is awesome! However sadly I'm based on Grafton-campus so it's too far away for me. Superfino cafe on Grafton-campus does good coffee but the food is expensive and not very vegan-friendly so I don't go there. I'd love more vegan-friendly/cheap/healthy options on Grafton-campus
October 6th	Do time constraints secondary to university mean that you have to resort to purchasing food either on-campus or in the shops surrounding campus? And how often does this happen?	Yes that happens unfortunately. When I haven't had time to prepare food due to University commitments I have to buy food from surrounding shops. This doesn't happen often. Less than once a week. Maybe once or twice a fortnight depending on how busy I am
September 22nd	Do you think that the university environment has had an influence on your alcohol intake? If so, in what ways?	No, the only time I can think that it does is if my lab mates are going to happy hour on Friday eve but that doesn't happen often at all. My peers outside of uni influence my alcohol intake more
September 21st	Is there anything about your cooking space in your place of residence that limits your ability to prepare food or influences your food purchasing decisions? Do you think that this would be different if you weren't a university student?	No there isn't, I'm lucky to have a place that's easy to cook in and with clean flatmates
September 21st	Does the cleanliness of your flatmates ever have an influence on your ability to prepare food? Do you think that this would be different if you weren't a university student?	Yes. Luckily they're all really clean and tidy so it's easy to make food. If they were messy it would be a lot harder
September 22nd	Do you believe that there are certain types of foods that are more or less accessible to you as a university student? How does this influence your food purchasing decisions?	Yes, since I'm on a student budget I often buy cheap brands and foods. Expensive foods are far less accessible. Because of this I often end up eating similar meals week to week
September 21st	Do you believe that your place of residence is well equipped for cooking? Please elaborate.	Do you believe that your place of residence is well equipped for cooking? Please elaborate.
September 20th	Does the easy access of foods provided on-campus or in nearby stores have an influence on your eating behaviours? If so, in what ways?	Yes, if I can't be bothered cooking or have no food with me then I'll sometimes buy food to takeaway. I don't do this often though
September 19th	Would you say that the food sold at the stores on-campus is healthy? Please elaborate.	No it's not. It's mostly refined carbohydrates and fatty/saucy or sugary stuff
October 19th	Are your food behaviours or food purchasing decisions limited by the types of foods that you can bring to university or the types of foods that you can make/cook at university? How so?	Not really, anything I purchase and eat at home I can easily bring to uni.
October 19th	Based on your experience at university, have there been any specific times throughout the year where your eating behaviours have changed secondary to university assignments, tests, examinations etc? Please elaborate.	Yes, my eating schedule revolves around uni work. Especially when I have a long day of work and I can't eat much during the day bc I wanna avoid a stomach-ache
October 19th	What is the significance of food to you as a person? Is this in any way affected, influenced or changed by being a student?	Food is fuel/health but also something to be enjoyed. Being a student changes this as I usually can't eat stuff I enjoy as much bc it's too expensive or takes too long to prepare
October 19th	Do you find that when you eat a healthier diet you are able to better carry out your university related tasks?	Not necessarily. Sometimes healthy food gives me a sore stomach. If I eat healthy food and my stomach behaves then I feel a lot better though.
October 14th	When you're tired, fatigued or stressed secondary to university, do your eating behaviours change in any way? Please elaborate.	Definitely. I cook more basic stuff and I eat cheaper/easier to prepare stuff
October 14th	What are your perceptions of healthy and unhealthy foods? Do you prefer to eat foods that you deem to be healthy or foods that you deem to be unhealthy? What are some of your reasons for this?	I used to be really into what counts as healthy and what counts as healthy as a teenager with an ED so I have a good idea on what's healthy and what's not. I prefer to eat healthy of course because I want to look after my body, but sometimes this is inconvenient or unrealistic so I'm okay to eat unhealthy food sometimes.
October 12th	Would you classify yourself as a motivated food preparer or an unmotivated food preparer? How does this influence your eating behaviours at university?	Primarily a motivated food preparer because I know preparing food will save me time, energy, and money To add, I often bring my own food to uni because of this
October 10th	Do you participate in any extracurricular activities e.g. sports, hobbies, that have an influence on your eating behaviours?	Yes, I do advanced aerial silks classes at least once a week. I also workout regularly, between silks I try to workout at least three times a week, cardio and strength. I also walk lots of places

		To add, this means I'm sometimes hungrier than usual
September 20th	How does your self-efficacy to cook or prepare food influence your eating behaviours? Has studying at university had any influence on your ability to cook and prepare food?	Sometimes I'm so busy at uni I don't have time for grocery shopping or food prep but I try to make it a priority when I do have time
September 20th	Would you say that you are a disciplined eater? Has university influenced this in any way?	Mostly, yeah. I'm disciplined especially in not buying food out often as I'm aware of what a money sinkhole that is. It's good too because when I do get takeout it's a real treat. I'm pretty disciplined with eating healthy. I'm always trying to be conscious of getting a decent amount of fruits and veggies in.
September 20th	How does time influence your eating behaviours and food purchasing decisions? Elaborate.	Time means I don't have time to go grocery shopping nor prepare food at times, so on the odd occasion I have to buy takeout
September 19th	How do time constraints secondary to university have an influence on your eating behaviours and food purchasing decisions?	Work (tutoring)/exercise/sleep are all secondary to uni but also big priorities so sometimes I have to make time for these rather than food prep
September 19th	Has COVID at any point of your university career had an influence on your eating behaviours? If so, in what ways?	Yes, I've had covid once and unfortunately had to mark student papers that whole week. I was very bored so had a huge appetite and I was eating more. I was consciously eating healthier too since I wanted to recover
September 19th	How does the cost of food influence your eating behaviours and food purchasing decisions as a university student? Do you think that these factors will still influence you when you are no longer studying?	The cost of food means I end up buying the cheapest brands and in-season produce every time I go shopping. Once I'm earning more of an income it would be nice to buy some different and more expensive things like a \$5 capsicum.
September 15th	As a university student, do you prioritise time over cost or cost over time when it comes to your food purchasing decisions?	Definitely cost over time. Saving money is most important to me. I just have to juggle my time to make sure I'm eating well/enough which is hard
September 16th	Are there any strategies that you have learned during your time at university that help you to ameliorate the cost food?	Going to events with free food is a good one. Otherwise there's not heaps I can do.

Student 6

Date	Questions	Answer
August 16th	Do you think that social interactions with peers has an influence on what you eat? If so, is this in a positive or a negative manner?	Social interactions with peers help me positively somewhat when eating. I usually try to eat mindfully and chew everything slowly but when I get distracted or am in a rush, I tend to forget and start eating really quickly again. When I'm around others, I take breaks from chewing to talk and enjoy the food I'm eating more.
August 16th	How well do you rate your cooking abilities? and how did you learn to cook?	I think my cooking abilities are very terrible. I can only make things that do not require a stove, with an oven, microwave or toaster! I attempt to cook by following recipes but there is always some way to misinterpret a step or make a mistake and the result always tastes pretty terrible. I have just given up for now.
August 16th	If and when you purchase food throughout the day, do you tend to purchase food from stores on the university campus or surrounding stores? and why?	Most of the time when I decide to purchase food, it is based on two main factors - what I am craving and how convenient it is for me to buy that item. As a result, most of the time they are from stores near the campus.
August 17th	How do you rate the food at the halls of residence? If there was anything that you would change about the food, what would it be?	Not too bad. I am usually very picky if I had the choice of what I eat. When I am in a rush or am hungry then I eat whatever is given to me. I would change the options of protein available at each meal so there is a white meat, red meat and vegan/vegetarian. I rarely eat red meat and many times, the only 2 options are both red meats and the vegan/vegetarian protein options are usually very unappetising. As a result, I skip meals and have snacks instead.
August 17th	Do you find that you eat better when you're staying at home or when you're staying in your halls of residence?	I absolutely eat better when I am at home because mum always make sure that I am having a balanced diet and getting enough calcium, protein, vitamins, etc. When I'm at halls I just decide to grab whatever is the most convenient, whatever I feel like eating and will keep me full until I next have the time to eat.
August 23rd	Does limited access to cooking facilities in your hall of residence have an influence on what you eat?	It does influence what I eat. For example, I would usually have smoothies in the morning with protein powder and lots of fruit. However, as there are limited options of fruit available and equipment, I have a less healthy breakfast. I also try to save money from not buying lots of food when I am living in a catered hall.
August 23rd	Would you say that the availability of fruits and vegetables in your halls of residence is adequate?	There is a small array of fruits and vegetables available. There is usually only apples, mandarins, sometimes banana, oranges and pears. As a result, I see a lot of people going to the supermarket to buy fruits that they prefer to eat. The vegetable options are more comprehensive with salad bars for both lunch and dinner and boiled frozen veggies at dinner as well.
August 23rd	Are there often instances where you don't feel like eating the food served at your hall of residence? If so, why?	I don't eat much red meats and a lot of the time there are only red meat options for protein. The vegetarian/vegan options are very unappetising so I normally choose to have fruit/snacks instead.

August 24th	Do you think that your coworkers have a positive or a negative influence on your diet? If so, in what ways?	I think that my diet at work is more negative than positive. There are always sugary/unhealthy snacks available or foods that I am very tempted to eat. When I see all my co-workers eating them, I find it difficult to not grab a snack. Also, in general, most of my co-workers like to buy bubble tea or fast foods for break so seeing this has influenced me to sometimes do the same.
August 24th	How often do you meal prep meals? Is healthy eating a priority for you?	I do it some of the time when I am feeling motivated to eat healthily. It is somewhat a priority for me to eat healthily, if I have the time. However, most of the time, I end up eating less amounts of unhealthy food to counterbalance the fact that it is not good for me.
August 24th	Do you think that social media has an influence on what you or other students eat? If so, in what ways?	I definitely think that social media influences what I and other students eat. I think that most people feel more wary about the quantity of what a normal day of eating should look like. This is due to seeing what kinds of foods people post, beauty standards, etc.

Student 7

Date	Questions	Answer
August 15th	Do you often find that you purchase foods that are cheap, easy and convenient as these are best suited to a university schedule?	Generally, since I live at home, my mum buys the food but if I have to eat out, like at work or if I don't bring lunch to campus, I buy cheaper food most of the time. Just so I can save money for other things.
August 15th	When you were growing up, did your parents emphasise getting you to help out in the kitchen? If so or if not, how has this impacted your cooking abilities, self-efficacy to prepare your own meals etc	Yea definitely, my sibling and I used to cook once a week growing up. I think it really helped with my cooking abilities and gives me a bit of freedom now just in that I can kinda decide what I want to eat.
August 17th	Does time have an influence on the types of foods that you eat? And if so, in what ways?	Yup, usually for breakfast or lunch when I'm at work. Since I'm usually running late and don't have a lot of time in the mornings I try to eat things that I don't have to spend time making. Same with lunch when I'm at work, since I only have 30 mins lunch I generally try to make sure I have something from home or in my locker so I don't have to go out of my way to buy something. I think I tend to eat less healthy as well when I decide I don't wanna spend time on cooking.
August 23rd	Did food availability (e.g. what food there was available at the hall) have an influence on what you chose to eat? If so, how?	Yea definitely. If I'm able to eat free food I usually would. Using the example of eating at halls, I ate probably less than I normally would (since salads were all that I could eat cause I'm not a resident) and also healthier.
August 29th	Do you find that your state of mind has an influence on what you eat? And if so, in what ways?	I think so, I think I might tend to eat more if I'm feeling tired or just not very good. I think I tend to eat healthier if I have more energy as well because I have the energy to find a healthy option.
August 30th	What are some of the challenges that you face as a student when trying to eat a healthy diet?	The main issue is probably prices and availability. A lot of the time, there aren't a lot of very healthy options so I'll less likely like the look of it as there's only one option. It also usually more expensive to eat healthily.
August 29th	How well do you rate your cooking abilities? And how did you learn to cook?	Not too bad, I learnt from my mum and just following recipes that I find online. I'm the type of person to follow a recipe to a t though, I'm not very inventive in the kitchen.
September 5th	Do you think that social media has an influence on what you or other students eat? If so, in what ways?	Yea i think it does a little bit. If I see someone posts a recipe online, I'll be more likely to want to try and make it. Or if i get an ad for food, I'll be more likely to buy it.
September 5th	When you are feeling stressed or overwhelmed by university tasks or deadlines, do you find that preparing food items or meals becomes less of a priority to allow more time to study?	Yea definitely, if I have assignments due I'll probably value time over money so if i can buy something that I can eat while studying I will.
September 6th	Do you try to avoid being wasteful as often as possible? If so, how are some of the ways that you avoid wasting food and what are some of the benefits of avoiding food waste?	It's not really something that I'm hugely aware of. I think cause I'm living at home, I'm not super concerned about food waste and I know that if I don't eat leftovers someone else will so generally we don't waste food.
September 6th	Do you often prepare foods that are time-efficient as these are best suited to your university schedule?	Sometimes, but generally I think more like what is possible to bring to campus like practically. So more stuff that I can transport onto campus rather than how long it will take to make.
September 6th	Is cost a factor that influences your eating behaviours? If so, in what ways?	Not hugely as I live at home so most of the food that I'm eating has been bought by my mum. Though I do probably eat worse for like lunches and such because I tend to try but cheaper food which is probably more processed and just overall bad for you.
September 7th	Do you think that eating a healthy, well-balanced diet is achievable as a student? If so/ if not, why?	I think it's difficult as most of the cheapest options are generally not super healthy and cheap is usually what students go for. I also think that there don't seem to be many healthy options available on-campus which makes it harder to achieve.
September 14th	Is healthy eating a priority for you? What are some of the enablers or barriers of healthy eating as a university student?	It's not really a huge priority for me, I think one of the barriers though is that it's very expensive to buy healthy food to eat every day at uni, I tend to go for something cheaper that is usually not very healthy.

September 14th	Do you find that your eating behaviours change at social events? If so, in what ways?	Yea definitely, I tend to eat less healthy and I don't usually eat proper meals, more just a bunch of little things, like lollies, chips, fries, slice of pizza, like stuff like that.
September 14th	When you are busy with university, do you find that you tend to purchase more food out than you normally would?	Yea and I think this is generally because if I'm busy at uni, I don't have time at home to prepare lunches for myself because I'm studying.
September 12th	Does access to cooking facilities (e.g. fridges, microwaves, ovens etc) at university influence what you eat on a daily basis?	Yea, since there are microwaves I generally take things for lunch that I can heat up.
September 14th	After a busy day of university, do you feel motivated to prepare meals? If so or if not, why?	No I don't feel motivated because I often feel tired and like I want to relax so I don't feel like I have the energy to cook.
September 23rd	Since you live at home with your parents, who purchases the food that you eat? How does the availability of food in the house influence what you eat?	My mum buys all the food and plans all the meals, I pretty much just eat what we have. If I really want something, I'll ask her to buy but otherwise it's all her.
September 22nd	Is the majority of the food that you consume prepared by yourself or your parents?	The majority of food is prepared my mum, I don't cook often. I do pretty much always make my own lunch and dinner but most of the time I buy lunch out or have leftovers or something and I just have cereal for breakfast.
September 19th	Do you think that living at home with your parents relieves some of the financial pressure of purchasing food as a university student?	Yea definitely, living at homes means that I don't have to worry about buying food, like if I wanted to bring lunch from home every day and that's an option and I wouldn't have to pay for it. It also means I don't have to worry too much if I do buy lunch on-campus since I don't have to pay for food all the time.
September 20th	Do you find it cheaper to buy food on-campus or cook at home?	Definitely cooking at home, but a lot of the time I feel like I don't have the time to prepare food at home for the next day so it's easier to buy food out.
September 22nd	If and when you purchase food throughout the day, do you tend to purchase food from stores on the university campus or surrounding stores? and why?	Generally I buy food from stores on-campus just because it's close to me so I don't have to travel far.
September 22nd	Are there any things that you would change about the food outlets on-campus?	Maybe just some cheaper options that isn't like microwave pies. I do think that there are quite a few good options available.
September 23rd	Do you think that people who study in health-related fields have better nutrition literacy than people in non-health related study fields? How would you perceive your nutrition literacy compared to the typical university student?	I think that those students would have better nutrition literacy. I don't think I have great nutrition literacy, nutrition is not always something that I think of when getting food. It's hard to say about other students cause it's not something we would generally talk about.
September 19th	Do university commitments often influence your eating behaviours? If so, in what ways?	Yea they do, since I'm on-campus most days I generally buy food on-campus. When I'm at home, I don't eat out as much.
September 15th	When your university schedule is less busy, do you find that you have more time to prepare meals? and vice versa?	Yea definitely, generally if I don't have many assignments I will make food at home to bring the next day since I feel like I have time after uni.
September 18th	Do you think that your friends or peers have an influence on your eating behaviours? If so, in what ways?	Not really. Only in the sense that if a friend is going out to eat I'd be more likely to go out to eat as well. Or if a friend recommends a restaurant or something.
September 21st	Is snacking often a behaviour associated with studying for you?	Not really actually. I find it hard to study and eat at the same time. If there's any association it's more likely to be me snacking while taking a break from studying.
October 4th	Do you spend more time studying on-campus or off campus? Does this have an influence on your eating behaviours or food purchasing decisions, and if so, in what ways?	I spend more time studying on-campus, this probably affects my eating habits as it means I come home later and get hungrier so I'll be more likely to buy food on-campus.
October 4th	On the days where you have to come into university for lectures or other university related commitments, does this have an influence on your eating behaviours or food purchasing decisions? If so, in what ways?	Yea I'm more likely to buy food on-campus and it means I either don't eat anything in the morning for breakfast or I eat something quick and it means that I buy more food out.
October 3rd	Are there any differences in your eating behaviours when you're studying at university versus studying at home? If so, in what ways?	I probably eat more when I'm at home but maybe healthier when I'm at home as well.
October 3rd	Does the travel associated with food procurement have an influence on your eating behaviours or food purchasing decisions? If so, in what ways?	A little yea because I'm not likely to travel far to buy food so I'll only go to places that are near where I'm studying.
October 3rd	Do particular environments associated with being a university student have an influence on your eating behaviours or food purchasing decisions? If so, in what ways?	Maybe just in terms of like what's available to purchase around me, but I'll only buy something if i feel very hungry, like having cafés and places like that around don't make me buy more food.

October 3rd	Are there any particular things about being a student or studying at university that you can identify which have an impact on your eating behaviours?	Maybe just costs of food around me and what's available but nothing else really.
September 29th	Does your living situation (e.g. where you live, who you live with) have an influence on your eating behaviours or food purchasing decisions? If so, in what ways?	Yea it does since I'm not the one that purchases the food or decides the meals so I don't really choose what I eat.
October 6th	Do you think that your parents have had an influence on your eating behaviours as an adult? Has being a university student changed these behaviours in any ways?	Yea definitely. If I'm looking to cook for myself I'll most likely cook things that my mum has made before so I tend to eat the same sort of things that she does or the same things that she made for us growing up.
October 6th	Did you notice a change in your eating behaviours when you transitioned from living at home with your parents or caregivers into a university environment?	Yea just in the fact that I buy food out more, before during high school I always packed my lunch but now a lot of the time I buy food on-campus.
October 6th	Do you think that there are any social pressures which influence your eating behaviours that are specific to being a university student?	I personally don't feel any social pressure to eat a certain way. I don't really talk about diet or things like that with people around me anyway.
October 6th	Does the location of where you live or where you carry out your study have an influence on your food purchasing decisions? If so, in what ways?	I don't think so. Since I don't really eat food out unless I'm on-campus, location doesn't really influence my diet.
October 11th	Does the location of grocery stores or food retailers relative to where you live and study have an influence on your food purchasing decisions? If so, in what ways?	Yea it does on-campus because when I have to buy food on-campus I tend to go to places that are really close.
October 10th	When you purchase food at university as opposed to bringing food into university with you, do you tend to purchase food from the stores on-campus or the stores surrounding campus?	I tend to purchase food that's on-campus.
October 10th	What are your thoughts on the food sold at the stores on university campus? Is there anything that you would change?	I'm pretty happy with the food on-campus, I think there's quite a lot of stuff that's available to us and quite a lot of different options. The only thing that can be a bit annoying is that there aren't a lot of super cheap options.
October 10th	Do time constraints secondary to university mean that you have to resort to purchasing food either on-campus or in the shops surrounding campus? And how often does this happen?	Yea just usually time constraints in leaving the house, sometimes I'm in a big rush and forgot to bring things. Also if I have a lot of assignments and stuff I feel like I don't have time to pack lunch the night before.
October 10th	Do you think that the university environment has had an influence on your alcohol intake? If so, in what ways?	Not really, maybe in terms of the people I'm around but generally when I drink it's not on-campus (I haven't been to shadows that many times) and often it's not with people that I met at uni.
October 9th	Do you think that your peers have an influence on your alcohol intake? If so, in what ways?	Not really, I mean I am more likely to go out and drink if a friend says that they're doing that but I don't feel influenced to drink by them.
October 9th	Is there anything about your cooking space in your place of residence that limits your ability to prepare food or influences your food purchasing decisions? Do you think that this would be different if you weren't a university student?	I don't think there are any limitations in the places that I cook at home and I don't think my eating habits would change a lot if I weren't at uni.
October 8th	Does the cleanliness of your flatmates ever have an influence on your ability to prepare food? Do you think that this would be different if you weren't a university student?	Since I live with my mum, and I'm a lot messier than her, she doesn't really influence my decision to cook.
October 8th	Do you believe that there are certain types of foods that are more or less accessible to you as a university student? How does this influence your food purchasing decisions?	I think junk food is more accessible as it's generally cheaper and there's more of it. This just means that I'm more likely to eat junk food.
October 8th	Do you believe that your place of residence is well equipped for cooking? Please elaborate.	Yes it is. As I live at home, I have everything I need to make myself food.
October 8th	Does the easy access of foods provided on-campus or in nearby stores have an influence on your eating behaviours? If so, in what ways?	Yea it does, since it's so accessible it means that I probably make less of an effort to make food since I know it's easy to buy.
October 8th	Would you say that the food sold at the stores on-campus is healthy? Please elaborate.	I think it depends on what you buy. I think there are a lot more unhealthy options from fast food places but I'm sure that it's possible to find places that have healthier options.
October 29th	Do you follow any specific dietary pattern or have any dietary requirements/restrictions?	Not really, I try eat vegetarian sometimes but I've been doing that less and less.

October 29th	Are your food behaviours or food purchasing decisions limited by the types of foods that you can bring to university or the types of foods that you can make/ cook at university? How so?	Kinda, but not really. Since there are like microwaves on-campus I'm not really restricted to specific foods that I can bring.
October 28th	Based on your experience at university, have there been any specific times throughout the year where your eating behaviours have changed secondary to university assignments, tests, examinations etc? Please elaborate.	No not that I've noticed.
October 28th	What is the significance of food to you as a person? Is this in any way affected, influenced or changed by being a student?	It's mainly just something that I need to survive, I feel like I tend to eat something if I'm feeling tired so that might have changed my relationship with food since I've started but I don't think it's changed significantly.
October 27th	Do you find that when you eat a healthier diet you are able to better carry out your university related tasks?	Not necessarily. I think just eating anything helps me do uni related things. I think eating healthier helps me feel better overall though.
October 27th	When you're tired, fatigued or stressed secondary to university, do your eating behaviours change in any way? Please elaborate.	I probably want to eat more like junk food when this happens but since most of my meals are prepared by my mum, my eating habits don't really change.
October 26th	What are your perceptions of healthy and unhealthy foods? Do you prefer to eat foods that you deem to be healthy or foods that you deem to be unhealthy? What are some of your reasons for this?	I think that it's a lot better to eat healthy foods but, when I'm preparing my own food it's usually not super healthy. This is because I feel like it's easier to prepare and a lot of the time it tastes better too.
October 26th	Would you classify yourself as a motivated food preparer or an unmotivated food preparer? How does this influence your eating behaviours at university?	I would say an unmotivated food preparer which just would lead me to buy more food on-campus that's probably processed and not very healthy.
October 25th	Do you participate in any extracurricular activities e.g. sports, hobbies, that have an influence on your eating behaviours?	No I don't actually.
October 24th	How does your self-efficacy to cook or prepare food influence your eating behaviours? Has studying at university had any influence on your ability to cook and prepare food?	I can cook but I don't tend to often. It just means that I know if I have to cook I can. Being at uni hasn't changed this.
October 26th	Would you say that you are a disciplined eater? Has university influenced this in any way?	No I'm definitely not a disciplined eater, I just eat what's available.
October 25th	How does time influence your eating behaviours and food purchasing decisions? Elaborate.	If I don't have a lot of time I will be more likely to buy food. Especially at night when thinking about preparing food for the next day but generally I get home quite late and don't have a lot of time.
October 25th	How do time constraints secondary to university have an influence on your eating behaviours and food purchasing decisions?	I think work changes my diet a bit. Generally I eat quite late at work and now I eat quite late every day. I also eat a lot of noodles because of work.
October 24th	Has COVID at any point of your university career had an influence on your eating behaviours? If so, in what ways?	I don't think covid has changed my eating behaviours no.
October 24th	How does the cost of food influence your eating behaviours and food purchasing decisions as a university student? Do you think that these factors will still influence you when you are no longer studying?	Yea I think it does because I'll tend to buy stuff that's cheaper. I think this will maybe change when I leave uni cause I'm at least hoping I'll have more money.
October 21st	As a university student, do you prioritise time over cost or cost over time when it comes to your food purchasing decisions?	I probably prioritise time over cost cause I also don't like spending a lot of time on making or looking for food so I will just buy what I can.
October 20th	Are there any strategies that you have learned during your time at university that help you to ameliorate the cost food?	The best way that I try to save money on food is by bringing leftovers but a lot of the time there might not be any leftovers or I just forget to bring them.

Student 8

Date	Questions	Answer
August 15th	When you are feeling stressed or overwhelmed by university tasks or deadlines, do you find that preparing food items or meals becomes less of a priority to allow more time to study?	Part of the reason I go for snacks rather than preparing meals is because of time efficiency, but I also feel like my appetite decreases when I'm stressed and I don't really feel like having a full meal.

August 17th	Is eating and meal preparation a major priority to you? If not, what are some things that take priority over eating and meal planning?	I'm used to doing shift work and studying until quite late so I definitely have a strange eating schedule - I don't usually eat at the 'regular' times for breakfast, lunch and dinner but just whenever I feel particularly hungry. Because of this, I wouldn't say that meal preparation and eating is a priority for me - I often get through a day at uni/work/placements with just a little bit of food, or can't find the time to eat, and just have proper meals when I'm home. Therefore, I used to often end up not eating/wasting the food that I've prepared. Things that take priority over eating and meal preparation is productiveness (I'd personally rather get through all my tasks for the day then eat later rather than eat in between) and not wanting to waste food and the time spent preparing food (if I were to not end up eating it) - (Sorry really long answer but hope that made sense!)
August 15th	As a busy university student, do you often find that you tend to purchase food items that are quick and easy to prepare?	Yes definitely! I definitely find myself buying a lot of premade/already prepared foods from the supermarket rather than individual ingredients, because they're a lot quicker and easier to prepare.
August 15th	Do you find it cheaper to buy food on-campus or cook at home?	It really depends on what I'm having. I find that buying relatively unhealthy and fast food is cheaper on-campus - buying a pie from the bakery or fries is quite cheap. But if I want to eat something healthier and more substantial, it's definitely cheaper to make at home rather than buy from campus.
August 30th	What are some of the challenges that you face as a student when trying to eat a healthy diet?	Cost is definitely a challenge in eating healthy as I find that healthy food is more expensive. Another challenge, personally, is that healthy food isn't satisfying compared to the unhealthy burger or fries, so I tend to crave and get tempted by other foods while trying to eat healthy
August 29th	Do you often eat convenience foods as a university student? If so, why?	I definitely have a lot of convenience foods as a student. It's very time efficient and takes minimal effort to get. I also snack a lot as a student, and convenience stores have an abundance of snacks.
August 30th	Do you follow any specific dietary pattern or have any dietary requirements?	I don't have a particular dietary pattern. I also don't have any dietary requirements
September 5th	In what ways do you think that social interactions with peers has an influence on what you eat?	Social interactions usually happen over food, so I definitely eat a lot more when I'm socialising with friends or family. The food I eat while socialising is usually varies depending on who I'm with, due to dietary requirements of others
September 7th	When you were growing up, did your parents emphasise getting you to help out in the kitchen? If so or if not, how has this impacted your cooking abilities, self-efficacy to prepare your own meals etc	Definitely! I grew up with two working parents, so I learned how to cook for myself and my other siblings from quite an early age. I was also always helping out in the kitchen from a young age. This is definitely impacted the way that I view cooking; it doesn't feel like a chore to me, but something very natural, that am very used to. So, when I'm home, I'm not usually reluctant to cook, and rarely ever order food in. I only purchase food when I'm already out (at work, university etc).
September 12th	If and when you purchase food throughout the day, do you tend to purchase food from stores on the university campus or surrounding stores? and why?	I usually buy from surrounding stores as they tend to be cheaper, and the distance isn't too far
September 13th	Is healthy eating a priority for you? What are some of the enablers or barriers of healthy eating as a university student?	Healthy eating is definitely a priority to me. As a student, barriers of this include money as healthier food tend to be more expensive, low motivation when you're stressed, and general dissatisfaction compared to unhealthy foods. Enablers are that there are a wide variety of healthy food options, including around campus, and a lot of information on healthy food ideas that are more pleasurable and fulling to eat.
September 12th	Do you think that your friends or peers have an influence on your eating behaviours? If so, in what ways?	I usually eat whatever/wherever they may suggest as I don't have any dietary requirements but a lot of my friends do. I also generally don't think too much about how I spend with friends, compared to buying food alone.
September 12th	Do you ever use snacking as a means of procrastinating study? Or do snacks more act as a way to motivate yourself to get through university tasks?	Yes, definitely to both. I tend to eat when I don't want to do anything productive yet and also tend to snack while studying, to keep me going.
September 12th	Do you think that social media has an influence on what you or other students eat? If so, in what ways?	Definitely! Food reviews on social media make foods look really appealing and makes me want to try it as well.
September 14th	Do you think that your family has an influence on your eating behaviours? If so, in what ways?	I definitely eat a lot more traditional food with family. In terms of my diet frequently and pattern though, I wouldn't say that it's influenced by family
September 13th	Do you find that your diet changes at all while on clinical placement? If so, in what ways?	I tend to eat less during placements as I still have part-time work commitments and University assignments, so my schedule can get a bit hectic
September 14th	Because of your field of study, do you believe that you have a better understanding of nutrition than university students that are in non-health related fields?	I would say that I know a bit of a better understanding than non-health students
September 16th	Since you live at home with your parents, who purchases the food that you eat? How does the availability of food in the house influence what you eat?	The availability of food is usually food that needs to be cooked/prepared, which influences how much I eat when I'm busy or stressed out. We all pay for the food for meals, but it's generally purchased by my mum. However, I purchase personal snacks and food to pack for university/work/placements.

September 23rd	Is the majority of the food that you consume prepared by yourself or your parents?	I'd say food is mostly evenly prepared by myself, my mum and sister. We don't have a schedule of who cooks, as my shift work makes it hard to have a set schedule, but generally my sister and I cook dinner on weekdays and mum cooks on weekends
September 23rd	Do you think that living at home with your parents relieves some of the financial pressure of purchasing food as a university student?	It definitely does. I pay my parents for board/food/bills etc but they are always happy to help out when I'm struggling
September 23rd	Do you try to avoid being wasteful as often as possible? If so, how are some of the ways that you avoid wasting food and what are some of the benefits of avoiding food waste?	Yes. To avoid being wasteful, we try to use leftover foods to make another meal (like leftover rice for fried rice in this case). If there's a lot of leftover food, we also might not cook dinner so that all the leftovers can be consumed. Benefits is definitely that it saves money and effort
September 23rd	Is snacking often a behaviour associated with studying for you?	Definitely! It can help concentrate and motivates me to keep studying
September 23rd	When your university schedule is less busy, do you find that you have more time to prepare meals?	Yes!
September 18th	Do you ever miss or skip meals because of university commitments?	I do, more than I think I should. But I try to make up for it by snacking a bit more that day
September 18th	Was the reason as to why you skipped dinner this evening because of university commitments?	Yes, it was. It was also because I generally don't have an appetite when I'm overwhelmed or stressed with university commitments
September 23rd	Is this an instance where social media had an influence on your eating behaviours?	Yes, definitely
October 4th	Do you spend more time studying on-campus or off campus? Does this have an influence on your eating behaviours or food purchasing decisions, and if so, in what ways?	Off-campus. I tend to spend less money on food off-campus
October 4th	On the days where you have to come into university for lectures or other university related commitments, does this have an influence on your eating behaviours or food purchasing decisions? If so, in what ways?	When I'm home, I'm much better at preparing food and having home cooked meals. At university, my motivation to prepare meals reduces as I know there will be more food options at home, so I tend to eat more store bought meals at uni
October 4th	Are there any differences in your eating behaviours when you're studying at university versus studying at home? If so, in what ways?	I would say that I have a more traditional diet at home and western diet at university. I generally have a smaller appetite at home due to all there being more tasks to get done (university work as well as cleaning and general housework)
October 4th	Does the travel associated with food procurement have an influence on your eating behaviours or food purchasing decisions? If so, in what ways?	I do travel quite far to get to and from university. So, after a long day at uni I'm usually tempted to purchase a snack for the journey home
October 4th	Do particular environments associated with being a university student have an influence on your eating behaviours or food purchasing decisions? If so, in what ways?	I wouldn't say so
October 4th	Are there any particular things about being a student or studying at university that you can identify which have an impact on your eating behaviours?	I do tend to have a low appetite when stressed with university commitments
October 1st	Do you find that particular university tasks or responsibilities have an influence on your eating behaviours? If so, in what ways?	I wouldn't say so
October 1st	Does your living situation (e.g. where you live, who you live with) have an influence on your eating behaviours or food purchasing decisions? If so, in what ways?	I wouldn't say so
October 10th	Do you think that your parents have had an influence on your eating behaviours as an adult? has being a university student changed these behaviours in any ways?	I had a lot of traditional foods growing up. Going to university, there are more of Western foods being sold on-campus so my eating behaviours have transitioned to having a more western diet
October 10th	Did you notice a change in your eating behaviours when you transitioned from living at home with your parents or caregivers into a university environment?	Not particularly
October 10th	Do you think that there are any social pressures which influence your eating behaviours that are specific to being a university student?	I wouldn't say there's social pressures, but there are social influences. For example, if I see something on social media, I may feel like wanting to try it but not necessarily pressured to
October 10th	Do your flatmates have an influence on your eating behaviours? If so, in what ways?	We do have different preferences so I do find myself eating less or snacking more when another family member is in charge of cooking

October 10th	Does the location of where you live or where you carry out your study have an influence on your food purchasing decisions? If so, in what ways?	I wouldn't say so
October 10th	If and when you go home from wherever you live during university, do you find that your eating behaviours change in any ways?	I'm usually quite hungry on my way home, so am tempted to purchase foods even though I'll be home soon
October 10th	does the location of grocery stores or food retailers relative to where you live and study have an influence on your food purchasing decisions? If so, in what ways?	I wouldn't say so. There's a couple supermarkets around my area with a wide range of foods so I always have many various options
October 10th	When you purchase food at university as opposed to bringing food into university with you, do you tend to purchase food from the stores on-campus or the stores surrounding campus?	Surrounding campus. They're usually cheaper and a larger range
October 10th	What are your thoughts on the food sold at the stores on university campus? Is there anything that you would change?	Overall, I think there's a diverse range of foods around campus which is great. I would prefer if they weren't so expensive though
October 10th	Do time constraints secondary to university mean that you have to resort to purchasing food either on-campus or in the shops surrounding campus? And how often does this happen?	Yes. It occurs about once or twice a week
October 1st	Do you think that the university environment has had an influence on your alcohol intake? If so, in what ways?	Alcohol is usually involved in university social events so I do tend to drink more when I'm out with friends
October 1st	Is there anything about your cooking space in your place of residence that limits your ability to prepare food or influences your food purchasing decisions? Do you think that this would be different if you weren't a university student?	No, I wouldn't say so
October 1st	Does the cleanliness of your flatmates ever have an influence on your ability to prepare food? Do you think that this would be different if you weren't a university student?	The people I live with are quite clean and tidy so there isn't much impact on my ability to prepare food. Though, no one usually washes dishes at night so cooking breakfast can sometimes be annoying when pans or items need to be washed first
October 1st	Do you believe that there are certain types of foods that are more or less accessible to you as a university student? How does this influence your food purchasing decisions?	I wouldn't say so
October 1st	Do you believe that your place of residence is well equipped for cooking? Please elaborate.	Yes, I would say so. We have the adequate equipment, and since there's a lot of people in our household, there's always someone available to go grocery shopping so we always have stock
October 1st	Does the easy access of foods provided on-campus or in nearby stores have an influence on your eating behaviours? If so, in what ways?	The easy access definitely makes it easier to purchase food instead of packing from home and saving money
October 1st	Would you say that the food sold at the stores on-campus is healthy? Please elaborate.	There are definitely healthy options, but I would say that there's not much range of healthy foods and they tend to be more expensive
October 28 th	Are your food behaviours or food purchasing decisions limited by the types of foods that you can bring to university or the types of foods that you can make/ cook at university? How so?	- Yes. Storage of food impacts my ability to bring certain foods. For example, when I want to have a salad, I'd have to pack the sauce and meat separately - this makes it quite hard as I travel via train so I try to minimise how much I carry. I also can't bring foods that I'd like to keep cool, such as drinks, yoghurt to fruit, which leads me to purchase them instead at times.
October 28th	Based on your experience at university, have there been any specific times throughout the year where your eating behaviours have changed secondary to university assignments, tests, examinations etc? Please elaborate.	- Yes. I tend to get less when my university commitments are high and the stress makes my appetite decrease. I also tend to have less time to prepare food so I end up purchasing foods, or eating ready-made foods which aren't so healthy.
October 28th	What is the significance of food to you as a person? Is this in any way affected, influenced or changed by being a student?	- I wouldn't say that food is significant to me in any cultural or spiritual way. But, I enjoy the social aspect of food, as it's always a part of social gatherings, and I enjoy trying new types of food or new restaurants. Being a student, I do tend to eat out less or try different foods less often to save money, so I don't tend to try a range of foods that are diverse as I'd like.
October 28th	Do you find that when you eat a healthier diet you are able to better carry out your university related tasks?	- Yes! When I eat healthier foods, it generally sustains me for longer without getting hungry again and, overall puts me in a more positive mindset.
October 26th	When you're tired, fatigued or stressed secondary to university, do your eating behaviours change in any way? Please elaborate.	- Yes, my appetite tends to decrease when I'm stressed so I don't eat so much. It also comes with time constraints, so I have less time to prepare food and I end up purchasing foods, or eating ready-made foods which aren't so healthy.

October 25th	What are your perceptions of healthy and unhealthy foods? Do you prefer to eat foods that you deem to be healthy or foods that you deem to be unhealthy? What are some of your reasons for this?	- I do prefer to eat unhealthy foods because I enjoy the taste a lot more but I try to eat healthy as much as I can.
October 25th	Would you classify yourself as a motivated food preparer or an unmotivated food preparer? How does this influence your eating behaviours at university?	- Unmotivated food preparer. I will admit that I'm quite lazy when it comes to preparing food and tend to just pack what is left over from dinner. Because I tend to skip preparing meals, I purchase foods from campus more than I should and don't eat as healthily as I'd like to.
October 25th	Do you participate in any extracurricular activities e.g. sports, hobbies, that have an influence on your eating behaviours?	- I actively practice the piano and play in a casual band, however, I wouldn't say that this influences my eating.
October 25th	How does your self-efficacy to cook or prepare food influence your eating behaviours? Has studying at university had any influence on your ability to cook and prepare food?	- I find cooking really therapeutic so I enjoy doing so, and it helps me eat more healthily. Time constraints, with university commitments, however, has reduced my ability to do so, though.
October 25th	Would you say that you are a disciplined eater? Has university influenced this in any way?	- Definitely not. I've tried going on healthy diets a couple times, but have never been able to adhere to it. There's a wide range of foods, both unhealthy and healthy, sold at university, and that has often tempted me to purchase it and break my diets. Having limited time to prepare food within my attempted diets also impacts my ability to be a disciplined eater. I've also found that I do not eat quite enough some days, which relates to being stressed with university commitments, and that's had some negative impacts on my health.
October 24th	How does time influence your eating behaviours and food purchasing decisions? Elaborate.	When I have increased commitments, I tend to prioritize time over food so I eat more ready-made/easy to prepare meals, or purchase foods more often
October 25th	How do time constraints secondary to university have an influence on your eating behaviours and food purchasing decisions?	I do prioritise time over eating, so I tend to purchase more food as university commitments increase or get more ready-made meals/ ones that are quick to prepare
October 25th	Has COVID at any point of your university career had an influence on your eating behaviours? If so, in what ways?	I definitely had a loss of appetite whilst having COVID. During the pandemic, there was a reluctance to go supermarket shopping so I ate a lot more home prepared meals than snacks
October 25th	How does the cost of food influence your eating behaviours and food purchasing decisions as a university student? Do you think that these factors will still influence you when you are no longer studying?	Cost of food at university campus is generally more expensive so I tend to buy snacks, foods and instant meals from the supermarket, where it is cheaper, and bring to university. I see this continuing after study
October 25th	As a university student, do you prioritise time over cost or cost over time when it comes to your food purchasing decisions?	Yes, I do
October 25th	Are there any strategies that you have learned during your time at university that help you to ameliorate the cost food?	Being on-campus for a while, I've learned where cheaper options are to buy from, and that bringing in snacks, instant coffees/teas prevents me from spending money at university

Student 9

Date	Questions	Answer
August 15th	Are you often in a situation where social interactions have an impact on what you eat throughout the day? and if so, how?	yes it does. I would eat healthier hello fresh meals when my flatmates are home. and if I'm out with friends I want to eat nice food if they are too. I'm willing to spend more time and money on food when with other people.
August 15th	Do you ever find that you use eating as a means of procrastinating university tasks? Do you believe that it is achievable to eat a more diverse diet on a student budget?	I don't think I procrastinate by eating. I think of it as a way to relax or reward. I think I eat when I finish working or before working when I want to motivate myself to work. i think it is achievable to eat more diverse with student budget. but I think I'm also limited by willpower as well as money. a lot of the repetitive unhealthy meals I eat is because it's easy and I don't have to 'decide' to cook healthier. I just fall into what I know
August 17th	Does time pressure have an influence on what you eat? and if so, in what ways?	I think time has an effect on everything I do. If I'm cooking for myself I want it to be quick and efficient or I want to actively enjoy the cooking process. And that's the same with everything. But it's hard to set aside time to actively enjoy things when I know I have a lot to do. So instead I opt for the quick and easy option. I'll admit that in choosing this option, I often don't spend my 'saved' time in fulfilling and productive ways.. I still procrastinate. So I know it doesn't really work. But that mindset is still there.
August 17th	What are some of the challenges that you face as a student when trying to eat a healthy diet?	a lot of things in general are expensive.. but when it comes to vegetables and fruit that degrade in a shorter time period, it's harder to justify the cost. I know I will forget about the fruits and veges so I worry about buying them. I focus on studying and working and my own hobbies and my personal relationships. remembering the carrots in my cupboard isn't something I do on a day to day basis. I don't cook often, especially when I'm trying to be healthy in

		other ways (e.g going to uni instead of staying home.. I end up buying food instead of cooking and that leads me to forget what I have). I also don't have the time and energy to learn quick easy healthy meals. even if something is quick and easy, even making the decision to learn the recipe can feel like too much. Sometimes I can barely keep up with lectures and exercise -- it feels easier to prioritise the hard things when I can fall back on stability, even if it's a stable but unhealthy diet. Maybe that thinking is wrong, but that's how I feel when I continue my bad habits. In short: I worry about spending money on degradable food, my day to day lifestyle makes it hard to remember what I have, and dealing with the general difficulty of life makes me want to not put effort into non urgent tasks.
August 17th	Does time pressure have an influence on what you eat? and if so, in what ways?	I think time has an effect on everything I do. If I'm cooking for myself I want it to be quick and efficient or I want to actively enjoy the cooking process. And that's the same with everything. But it's hard to set aside time to actively enjoy things when I know I have a lot to do. So instead I opt for the quick and easy option. I'll admit that in choosing this option, I often don't spend my 'saved' time in fulfilling and productive ways.. I still procrastinate. So I know it doesn't really work. But that mindset is still there.
August 23rd	Do access to facilities (e.g. appliances, fridge and freezer space, access to a microwave) influence what you eat on a day to day basis? Do you notice a difference between what you eat at home and what you eat in your flat because of this?	I think so. now that we have an air fryer I cook more fish and fries and carrots rather than baking them in an oven. one main driver for my eating is the ease of cooking so the appliance would impact me.
August 30th	Do you think that social media has an influence on what you or other students eat? If so, in what ways?	I think it has an influence. For me at least, it gives me ideas on recipes to make or just general ways to make food. For other people who may post on social media, I think they would want their food to look really yummy and beautiful and healthy. But for the average person I think it's just giving us ideas.
September 1st	When you are feeling stressed or overwhelmed by university tasks or deadlines, do you find that preparing food items or meals becomes less of a priority to allow more time to study?	yes. I realised that some healthier meals don't have to take too much time but when I'm stressed I get worried about spending time and effort doing other things.
September 11th	When you were growing up, did your parents emphasise getting you to help out in the kitchen? If so or if not, how has this impacted your cooking abilities, self-efficacy to prepare your own meals etc	When you were growing up, did your parents emphasise getting you to help out in the kitchen? If so or if not, how has this impacted your cooking abilities, self-efficacy to prepare your own meals etc
8th September	When you are busy with university, do you find that you tend to purchase more food out than you normally would?	Yes
September 12th	After a busy day of university, do you feel motivated to prepare meals? If so or if not, why?	I don't feel as motivated when busy. Just start prioritising doing nothing and relaxing
September 13th	Do you think that your friends or peers have an influence on your eating behaviours? If so, in what ways?	Yes, when hanging out with friends I'm more happy to spend money to eat. Some friends I'll eat healthier with some I'll be more indulgent. It just depends.
September 13th	When you are feeling stressed or overwhelmed by university tasks or deadlines, do you find that preparing food items or meals becomes less of a priority to allow more time to study?	Yes
September 12th	Is healthy eating a priority for you? What are some of the enablers or barriers of healthy eating as a university student?	healthy eating is something I want to incorporate more but I wouldn't say it is a priority as I care more about how easy something is to cook. barriers I could how hard something is to cook, whether its new or not, and if it's expensive. enablers are the opposite of those. But I think if I was around people eating healthy I'd want to eat healthy too.
September 26th	Do you find that your eating behaviours change during exam season/ when studying for exams? If so, in what ways do they change?	I think I'm lazier in what I would cook and I slack off in terms of health because I view food as a treat that I deserve during exam season.
September 22nd	Who is responsible for purchasing your weekly groceries? Are there any challenges to this as a student?	I buy my own groceries. it's not as challenging anymore as I've been quite independent for years now. but at first it was hard and I had to learn a lot of lessons about health and my personal habits. for example I would buy bulk veges thinking this was cheaper but then they would go bad because the food I crave can change so often and I couldn't guarantee that I would what needed to be eaten. I don't have a car so I'm limited in how many things I can buy but I think this is good in a way because its more exercise to walk.
September 25th	How often do you purchase food as opposed to preparing food to bring to university? And when you do purchase food at university, do you tend to buy food from the stores on-campus or the stores surrounding campus, and why?	I think I buy food from uni rather than preparing because it takes time and foresight that I don't want to spend. also prepared food sitting in your bag for hours is never as good and enjoyable as when made fresh. I just avoid uni altogether because either option is not good for me. when I buy food I buy food on-campus so I can keep studying.

September 25th	Do you try to avoid being wasteful as often as possible? If so, how are some of the ways that you avoid wasting food and what are some of the benefits of avoiding food waste?	I dont think i avoid waste that often. I'm a picky eater and I wouldn't challenge that just to save waste. I think I just like yummy food and I don't want to sound more money on food than needed
September 26th	Do you cook meals independently or with flatmates? What are some of the benefits and drawbacks of this?	independently. Drawback is that I spend less time cooking as it becomes more of a chore than a hangout. things are also more expensive I think because I can't buy food in bulk. however, I continue this way because I have different eating habits that I don't want to change and also because all my male flatmates have bigger appetites, and thus I won't be able to get a fair share of food.
September 21st	Do you think that people who study in health-related fields have better nutrition literacy than people in non-health related study fields? How would you perceive your nutrition literacy compared to the typical university student?	I think that would be true, but I also think non health students can still be very interested in it as I think multiple factors contribute. I think I'm quite average in terms of health literacy.
September 19th	Do you often find that you purchase foods that are cheap, easy and convenient as these are best suited to a university schedule?	Yes
September 19th	Do you find it cheaper to buy food on-campus or cook at home? Are there any things that you would change about the food outlets on-campus?	cheaper to cook. I'd like uni food to be cheaper as I often skip uni because I don't want to spend money or spend time cooking food that won't be as good as it is when fresh at home.
September 22nd	Is snacking often a behaviour associated with studying for you?	mo. I just snack when I want to switch up what I'm doing. it just happens that I study usually
September 20th	Who is responsible for purchasing your weekly groceries? Are there any challenges to this as a student?	I buy my own groceries. it's not as challenging anymore as I've been quite independent for years now. but at first it was hard and I had to learn a lot of lessons about health and my personal habits. for example I would buy bulk veges thinking this was cheaper but then they would go bad because the food I crave can change so often and I couldn't guarantee that I would what needed to be eaten. I don't have a car so I'm limited in how many things I can buy but I think this is good in a way because its more exercise to walk.
October 4th	Do you spend more time studying on-campus or off-campus? Does this have an influence on your eating behaviours or food purchasing decisions, and if so, in what ways?	more time at home. I make nicer food and spend less money and it's just a nicer experience to cook and eat the food.
October 3rd	On the days where you have to come into university for lectures or other university related commitments, does this have an influence on your eating behaviours or food purchasing decisions? If so, in what ways?	yes I'm more willing to buy food when I go out.
October 3rd	Are there any differences in your eating behaviours when you're studying at university versus studying at home? If so, in what ways?	the types of food I eat are different and the cost. I think eating at home is more relaxing and pleasurable than eating at uni. I think I eat less at uni because its expensive or I don't want to prepare and carry around so much food
October 2nd	Does the travel associated with food procurement have an influence on your eating behaviours or food purchasing decisions? If so, in what ways?	I guess so. If I'm just hungry I won't want to travel far for a restaurant even if it's nice. I wont want to buy groceries even if it's cheaper. time and travel are an influence
October 2nd	Do particular environments associated with being a university student have an influence on your eating behaviours or food purchasing decisions? If so, in what ways?	I don't like going to uni because eating feels like a bigger investment there.. either with money or the time it takes to meal prep
October 1st	Are there any particular things about being a student or studying at university that you can identify which have an impact on your eating behaviours?	the price of food, how long it may take to make. and whether the food is pleasurable -- because I view food as a treat to enjoy so I won't eat something unless I like it
October 1st	Do you find that particular university tasks or responsibilities have an influence on your eating behaviours? If so, in what ways?	not specific tasks. just that if its busier I want to think less about what I eat
September 28th	Does your living situation (e.g. where you live, who you live with) have an influence on your eating behaviours or food purchasing decisions? If so, in what ways?	I live with people but we separate our food because they eat more than I do. it doesn't influence me too much I think.
September 30th	Do you find that your eating behaviours change during exam season/ when studying for exams? If so, in what ways do they change?	I think I'm lazier in what I would cook and I slack off in terms of health because I view food as a treat that I deserve during exam season.
October 6th	Do you think that your parents have had an influence on your eating behaviours as an adult? has being a university student changed these behaviours in any ways?	they would influence dinner because that's when they cooked. but throughout high school I would make my own lunch. I guess my family loves food (my dad loves cooking and my mom loved baking). and growing up they would often just make instant noodles or buy KFC because it was easy. but to me I was just happy the food was yummy. I guess those reasons may influence why I view food as more of a treat than nourishment. now that I'm in uni I'm more

		independent. so I can make what I want rather than someone controlling it. my meals are simpler now but as part of growing up I'm starting to take responsibility in my own health and trying to include healthy items even if I don't always do that.
October 5th	Did you notice a change in your eating behaviours when you transitioned from living at home with your parents or caregivers into a university environment?	my parents would cook Filipino food for us. and they would try to cook new meals. I'm relatively consistent and simple now. I would cook for myself back then, but over time I learned what simple meals I can make. back home food was more diverse
October 5th	Do you think that there are any social pressures which influence your eating behaviours that are specific to being a university student?	maybe for other people but I haven't been that social and I also barely go to uni.
September 30th	Do your flatmates have an influence on your eating behaviours? If so, in what ways?	not really. I get a little embarrassed making unhealthy food but I still eat and make it regardless
September 29th	Does the location of where you live or where you carry out your study have an influence on your food purchasing decisions? If so, in what ways?	yes, mostly just whether I buy food or not. I think the type of food I purchase is consistent. but I try to avoid buying food as much as I can
October 11th	If and when you go home from wherever you live during university, do you find that your eating behaviours change in any ways?	I enjoy the food more as home is relaxing, whereas at uni it's just something to eat to give you energy. I'm also more comfortable eating with my hands at home (we would do that in Philippines). Not dramatically. I enjoy food more because I can relax and I'm free to be kind of messy
October 11th	does the location of grocery stores or food retailers relative to where you live and study have an influence on your food purchasing decisions? If so, in what ways?	its decent. the grocery isn't too far and theres a good variety of food items. in everyday life I cook because I don't want to spend too much money. the grocery store isn't too far but I don't drive so I limit what I buy and that reduces the variety in my diet.
October 11th	When you purchase food at university as opposed to bringing food into university with you, do you tend to purchase food from the stores on-campus or the stores surrounding campus?	on-campus. if I leave campus I know I won't go back. I never go to uni so once I'm there I want to maximise whatever I can do
October 11th	What are your thoughts on the food sold at the stores on university campus? Is there anything that you would change?	its decent. theres some healthy is options and nice snacks too. I would just like things to be cheaper
October 10th	Do time constraints secondary to university mean that you have to resort to purchasing food either on-campus or in the shops surrounding campus? And how often does this happen?	yes I buy food on-campus when I'm at uni. but I barely go to uni so maybe once a week? I like staying home so I can work in my own schedule. so usually when I buy food it's not often an issue with time. I just want a treat
October 10th	Do you think that the university environment has had an influence on your alcohol intake? If so, in what ways?	not necessarily. I haven't been that social and involved in the university community or experience. but I still drink because of other people. but that's more so because I live with people that like having people over. I even went out for drinks a lot with ex co-workers. socialising in general influences my drinking but because I'm not that involved with uni I don't necessarily blame uni specifically
October 9th	Do you think that your peers have an influence on your alcohol intake? If so, in what ways?	yes. depends on whether it's a party or just usual dinner but I would want to let loose if I was at a party so I would drink. lately, my flatmates host parties and my friends come so I feel obliged to socialise even if I don't feel like it. so nowadays I drink even if I didn't really want to in tube first place
October 9th	Is there anything about your cooking space in your place of residence that limits your ability to prepare food or influences your food purchasing decisions? Do you think that this would be different if you weren't a university student?	I wish my freezer was bigger. I'm a picky eater and I can't guarantee I'll eat the things I buy before it goes bad. my diet is more limited I think because of this. it's not so much about being a student but just being young and needing to flat to get by. if I had the money to have my own space I would be free to cook and buy whatever
October 8th	Does the cleanliness of your flatmates ever have an influence on your ability to prepare food? Do you think that this would be different if you weren't a university student?	there decent. usually if they leave a mess someone cleans it by the time I want to cook. so in my experience no. if I wasn't a student and I had the money to have my own place I'm sure it wouldn't affect me at all. but it doesn't really affect me now
October 8th	Do you believe that there are certain types of foods that are more or less accessible to you as a university student? How does this influence your food purchasing decisions?	yes. accessibility to me refers to price (of meals or ingredients), ease of cooking, proximity to recusants or grocery stores, etc. I'll eat what's cheaper and easier to cook and ill limit my grocery list so I don't have to walk so far with heavy bags. this reduces my variety in my diet
October 8th	Do you believe that your place of residence is well equipped for cooking? Please elaborate.	yes. oven microwave and stovetop are good and very useful but because my flatmates also had their own appliances and tools, it's even better. (air fryer, wok, rice cooker, deep fryer..)
October 7th	Does the easy access of foods provided on-campus or in nearby stores have an influence on your eating behaviours? If so, in what ways?	yes, I'll eat whatever is easiest to access so long as its yum
October 7th	Would you say that the food sold at the stores on-campus is healthy? Please elaborate.	I don't think so. theres some healthy options out there (sushi, sandwiches at munchy mart..) but overall I think a lot of the food just aims to be yummy. I'll admit I haven't eaten from a variety of shops so maybe it's just my choices

October 30th	Do you follow any specific dietary pattern or have any dietary requirements/restrictions?	I don't have hard set restrictions but I don't often eat red meats and I try not to eat unless I'm hungry.
October 30th	Are your food behaviours or food purchasing decisions limited by the types of foods that you can bring to university or the types of foods that you can make/ cook at university? How so?	sort of but I think it's more the other way round. rather than uni influencing my food I think it's more likely that food (cooking and buying) influences my uni attendance. I do buy food when I'm at uni and I guess that differs from my usual food buying behaviours in the way that I want to eat something cheap and somewhat healthy. usually when I buy food I would want something indulgent.
October 30th	Based on your experience at university, have there been any specific times throughout the year where your eating behaviours have changed secondary to university assignments, tests, examinations etc? Please elaborate.	I lose my appetite when I have personal issues happening but that's aside from uni. I guess I would buy and eat more expensive and indulgent food if I'm spending time with people. I think I'm also willing to eat less healthy foods and eat comfort foods during these times of personal issues
October 29th	What is the significance of food to you as a person? Is this in any way affected, influenced or changed by being a student?	food is a comfort and a resource for me. I care about food providing me nutrients. and I'm also driven to eat by whether I want to relax. I would spend more money and time on healthier and yummy food if I wasn't a busy student but this mindset of food as a comfort and a resource would be consistent I think.
October 28th	Do you find that when you eat a healthier diet you are able to better carry out your university related tasks?	I guess theres a correlation between my motivation and productivity and my willingness to eat healthier. but I think it's my mindset that affects my studies and eating, not so much my eating affecting my studies.
October 27th	When you're tired, fatigued or stressed secondary to university, do your eating behaviours change in any way? Please elaborate.	I guess it does but in so many different ways. sometimes I eat less because I lose my appetite and sometimes I'm willing to eat healthier to have food as a comfort. So I think these do affect my eating but not in a perfectly predictable way
October 27th	What are your perceptions of healthy and unhealthy foods? Do you prefer to eat foods that you deem to be healthy or foods that you deem to be unhealthy? What are some of your reasons for this?	I prefer to eat foods I think are healthy. I'll admit that I think my definition of healthy could be quite slack. to me a healthy meal has proteins and veges. I do think that this meal wouldn't seem healthy to others but its healthy enough for me because of the eggs tomato paste and spinach. and I think healthy enough is ok with me. reasons: I want to take some care of my body. I say some care because I know I could do better. eat fresher foods and work out more etc. but I think the amount of effort I put into these things are good enough. if I revolve my life around being the physically healthiest I think the rest of my life would collapse as I don't have time to do uni stuff or I would hyper fixate on physical appearance and lose confidence. I want to be healthy 'enough'.
October 27th	Would you classify yourself as a motivated food preparer or an unmotivated food preparer? How does this influence your eating behaviours at university?	it's hard to say because I could interpret that in different ways. I'm a motivated food preparer in the way that I eat things with the intent to enjoy it, to fuel my body, and to relax. but I'm unmotivated in the sense that I don't want to give so much time and energy and money into the things that I eat this influences my eating behaviours at uni as I choose not to go to uni often so I don't have to prepare food.
October 27th	Do you participate in any extracurricular activities e.g. sports, hobbies, that have an influence on your eating behaviours?	I like to dance and sing. for singing I drink a lot more water to make my voice sound nicer. but for dancing I don't think my food choices affect it that much. I say this because I think I would be eating more and eating healthier but I'm not.
October 23rd	How does your self-efficacy to cook or prepare food influence your eating behaviours? Has studying at university had any influence on your ability to cook and prepare food?	if I was a good student and went to uni regularly I think it would have undoubtable effects om my abilities to cook. but uni doesn't affect my food so much as my food affecting my uni (attendance) I don't think my self-efficacy affects my eating that much. if were going by the definition that self-efficacy refer to a person's belief in their capacity to reach their goals. I know that to be a better student, dancer, etc. I could eat more and I should eat healthier. but rather than changing my behaviours to reach the best possible outcome of my goals and interests, I would rather just chill. do what's good enough.
October 26th	Would you say that you are a disciplined eater? Has university influenced this in any way?	I think I'm decently disciplined. I don't eat the healthiest but I think that's more so because I don't have the goal to be the healthiest, not because I have a goal that I'm not disciplined enough to reach. I guess my goal to eat healthier would be affected by uni, as if I wasn't a busy student I would have more time and energy to care about my physical health. but that would be a change of goal not discipline I think.
October 25th	How does time influence your eating behaviours and food purchasing decisions? Elaborate.	I know that theres all the time in the world to do things and if I care enough I could make more time to make healthier and yummier food. I guess time influences the way that I eat in the way that sometimes I don't have time to do things or if I do have time I would rather spend it doing something else.
October 24th	How do time constraints secondary to university have an influence on your eating behaviours and food purchasing decisions?	eat less and or eat more repetitive foods and or eat less healthy (so I don't have to think about what to eat) outside of uni I don't have much time constraints but I would rather spend that time relaxing that worrying about food

October 23rd	Has COVID at any point of your university career had an influence on your eating behaviours? If so, in what ways?	the pandemic in general - I guess so. I would eat more comfort foods at the start of it all when it was all very dramatic. when I got covid I ate less because I was so tired. I also lean towards soup when I'm sick
October 23rd	How does the cost of food influence your eating behaviours and food purchasing decisions as a university student? Do you think that these factors will still influence you when you are no longer studying?	I choose cheaper foods. I think I would still be worried about this but not as much as hopefully I'll have more money lol
October 23rd	As a university student, do you prioritise time over cost or cost over time when it comes to your food purchasing decisions?	hard to say because I value both. but I guess I care more about time than cost.
October 22nd	Are there any strategies that you have learned during your time at university that help you to ameliorate the cost food?	just because bulk buying is 'cheaper' doesn't mean it's not wasting money especially when it goes to waste if I don't eat it. -- actually know yourself and your eating habits so you won't waste food you buy. stay at home so I don't have as much of a need or temptation to buy food.

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