

Healthy eating amongst university students

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1. Introduction

Poor lifestyle choices such as unhealthy eating and physical inactivity have become worldwide concerns due to their ever-lasting consequences, some of which include chronic illnesses, hypertension, hyperlipidemia and mental health deterioration. This has pushed governments to conduct research in increasing access to healthcare and promoting healthy lifestyles. Eating healthy means having a balanced diet with the proper amount of protein, carbohydrates, fat, water, vitamins and minerals.

There are a significant number of studies focusing on the impact of unhealthy eating on adults and children. However, there has been limited exploration on the causes and effects of unhealthy eating amongst university students, who make up a large percentage of the UK's youth population. This report presents a discussion of the current research available on the eating habits of undergraduate students in the UK. Following the literature review, we conducted a contextual inquiry through the means of semi-structured interviews. Thematic analysis of the gathered data was used to explore the influences that underpin the decisions made by students relating to their diet. A summary of the problem is presented and the obtained results are used to derive three potential product designs that will help students achieve healthier eating habits.

2. Related work

Existing research recognises that there is a high risk of weight gain and other nutritionally related problems during adolescence and the first year of university (Delisle and World Health Organization, 2005). Although there has been disagreement on the gravity of the situation, a general consensus among scholars is that a number of factors contribute to the formation of unhealthy eating habits in students. The surprising paucity of literature on solutions to this problem makes it difficult to find the right approach to tackle the issue, but qualitative studies, such as the one conducted by Deliens et al. (2014), provide some important insight.

In the literature, food choices and eating patterns have been associated with convenience and price (Deliens et al., 2014; Marquis, 2005). In particular, university and college students tend to prioritise other commitments over health, thereby opting for inexpensive, fast meals, such as the ones available at vending machines and local shops. A study by Deliens et al. (2014), using focus group discussions, concluded that the availability of more healthy on-campus options at a lower cost might represent an effective strategy of encouraging better food choices. It was also suggested that such an initiative should be introduced along with a price rise of highly processed foods.

Another intrinsic factor in eating behaviour is taste (Deliens et al., 2014; Poobalan et al., 2014). A previous research (Werle, Trendel and Ardito, 2013) disproved the widespread assumption that unhealthy food is more tasteful. Therefore, pleasure as well as mindful eating was proposed as a promising method of promoting an adequate nutrition (Landry et al., 2018). Direct interventions focusing on this idea could be made by universities or other public institutions. By way of illustration, the University of Sussex has printed a brief guide as part of Wellbeing Week, explaining the relationship between pleasure eating and health, and further linking this concept to a balanced lifestyle (University of Sussex, 2017).

An interesting aspect discussed by Landry et al. (Landry et al., 2018) is the existence of various levels, including social, personal, experiential and environmental, at which hedonistic eating and determinants of food choices interact with each other. In general terms, this means that each individual's food preferences are strongly influenced by a series of both extrinsic and intrinsic factors. The finding has implications on how nutrition promotion could be done effectively. For example, some of the participants of the study conducted by Deliens et al. (Deliens et al., 2014) suggested that direct and one-to-one communication should be used by universities to encourage and help students with their eating behaviours as a form of personalised advice.

3. Methodology

From the beginning of the research process, the topic of healthy eating amongst university students was deemed to be a complex one which would produce many different types of data. The approach to gathering data for such a nuanced topic was to triangulate the process by conducting a contextual inquiry through semi-structured interviews, followed by an online questionnaire. Due to the focus of the research question, full-time university students were sampled as participants.

In the first phase of the research, each group member conducted semi-structured interviews on two participants, based on a predetermined script that was written collaboratively after a careful analysis of the information obtained from the literature review. The purpose of utilising this technique was mainly to gather qualitative data to gain a more detailed insight on the varying opinions and motivations held by the target demographic. The interview contained a mix of closed and open-ended questions, with opportunities to allow the participants to talk about any other relevant points if they desired. All interviews were conducted ethically, after informing each participant of its purpose and obtaining verbal consent. Due to the personal and time-consuming nature of interviews, the sample mostly consisted of students in Southampton. However, to gain maximum utility of such limited resources, a purposive sampling method was used to select participants of varying gender, year of study and lifestyles to gain a breadth of data.

Following this, each group member transcribed their recorded interviews and individually performed thematic analysis on their data by highlighting and coding any prominent themes and annotating them. Once this was finished, all members gathered to discuss findings by reading over each other's transcripts and collated results. Through an overall thematic analysis performed as

a group (where a common colour code was used), relevant themes were picked out and were written on a whiteboard through a systematic discussion. An affinity diagram was then produced using pieces of papers and post-it notes to visually present the results in their natural thematic groups. These themes, along with themes found from the literature review were used to form a basis for the online questionnaire, which was utilised to gain quantitative data on a larger and more random sample of the target demographic. To make up for the disadvantages of the sample used in the contextual inquiry, the online questionnaire used a mix of snowball and random sampling to better represent the population of university students. However, the downside of using this technique is that participants may not be genuine in their answers and may rush the questionnaire, resulting in possibly unreliable data being obtained. Further results gained from the questionnaire were also collated and analysed as a group to derive three product designs.

4. Results

4.1. Analysis of interviews

Five main themes were identified upon analysing the interview transcripts. The themes discussed as a group are presented below, with supporting qualitative quotes to provide as evidence.

The way students eat are influenced by several factors. From the interviews, some of the motivating factors mentioned were to perform better in their studies or in sports, to maintain a certain body shape or to avoid getting sick. Some eating patterns were shaped by their upbringing or childhood habits. *'I stick to a few quick stomach-filling recipes that my mom taught me before coming into uni.'* *'My family used to have meat twice a day and the rest of the days used to be vegetables purely because it's healthier and good way to live life.'* Others try to be as sustainable as possible; for example, they avoid things that are not environment friendly. *'I'm trying to be as sustainable as possible, and that influences my diet as well. Like I'm trying to avoid things that have a huge environmental footprint, such as meat and other... and dairy that also makes me eat like locally produced vegetables, the ones that appear in the right season. You know seasonal food and stuff like that.'*

Additionally, lack of time, stress and other moods affect what they are eating or whether they are cooking or getting takeaways. Many also complain about the price of food; both on ready-made food as well as ingredients. *'Last year, apart from university term fees and halls fees, I think my biggest expenditure was on food.'* Having to deal with the responsibility of eating or cooking healthy alone was found to be challenging. *'It was my first time being alone; cooking was a new thing for me.'* *'I have to look at what I'm purchasing when I go grocery shopping.'* They felt restricted by the lack of variety in healthy meals options. A lack of knowledge on the benefits of healthy eating was also noticed. *'My idea of a healthy diet would probably be... Not really sure 'cause I'm not too knowledgeable about the science of such things.'*

The factors above resulted in specific eating patterns such as irregular eating timings, skipping meals and overeating/under-eating. *'I eat once a day, I usually end up skipping breakfast, and have only two meals- lunch and dinner.'* Dietary requirements created by health conditions,

religion or culture as well as a heavy involvement in social events resulted in irregular eating habits. *'I'm trying to find some food that can replace the proteins I'm not having from like not eating meat.'* *'I'm a huge nut eater probably because of culture.'* *'I have stopped eating cow's milk just to see what effect it will have on my skin because it will stop eczema.'* *'It (social life) interrupts any patterns I have, and it forces me to eat certain food or drink alcohol in late hours.'*

The availability of food and resources hindered students' efforts to eat healthy. *'I have to rely on frozen, premade chapattis, making curries from pulses takes time and a lot of ingredients.'* A few students criticised the food available both on campus and in catered accommodation. *'The university itself has limited options in terms of cheaper and healthier food, on-campus restaurants (which are expensive) and the SUSU shop is also available for quick snacks and sandwiches (which have limited options).'* Cheap, healthy ingredients are not easily accessible. Students also believe that those with disabilities are restricted to some extent.

When prompted to suggest possible solutions to our problem, a few talked about using specific mobile applications. *'One of my friends uses an app: myFitnessPal, which tracks what he is eating, and helps him plan meals to reach his target weight. These types of apps can be promoted and you can hold workshops to show how they work.'* Some mentioned that watching videos/tutorials or being provided cooking lessons/workshops help them prepare more healthy meals. *'Fitness videos on Youtube also motivate me, I follow these channels on YouTube and these healthy lifestyle trainers tend to put out kind of menu choices.'* Having access to cookbooks with healthy recipes or a good resource providing relevant information on healthy food will encourage students to plan and monitor what they eat. *'I think a good idea would be to have cookbooks at least in all the flats in halls which have quick and healthy breakfast, lunch, and dinner recipes.'* *'I also think that having access to easier and healthier recipes can be very useful.'* *'Being given good resources on what is considered to be healthy, with clear citations would be good.'* Students also asked to improve the quality and variety of meals available on campus in shops and restaurants or in catered accommodation to promote healthy eating habits. *'It would be nice to have less expensive, more filling meals.'* *'Give healthier options in the Students' Union shops or restaurants on campus.'*

4.2. Analysis of questionnaire

116 participants attempted the survey, among which 42 completed the survey.

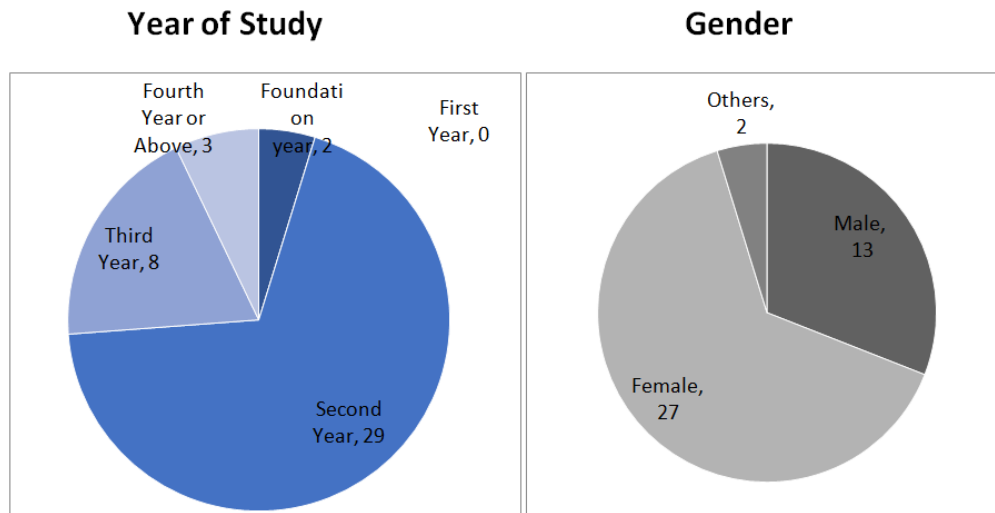


Figure 1 - Pie charts showing year of study and gender of participants

Patterns observed

Half of the participants (22) have 3 meals per day, 13 have 2 to 3 meals per day and the rest have 1 meal per day.

More than half of the participants (23) claim to not overeat or under-eat. However, 13 do overeat and 5 of them stated stress as a reason. 6 participants under-eat because of lack of time or disordered eating habits.

Among the participants, 8 had specific dietary requirements such as vegetarian, vegan, lactose intolerant and halal while 5 are allergic to foods such as peanuts, shellfish and strawberries.

29 participants preferred to cook their food, whereas the rest preferred to buy ready-made meals. Students' ability to cook had no correlation to them buying meals. 7 out of the 13 that preferred to buy meals stated that they can cook a decent number of meals and only 1 did not know how to cook.

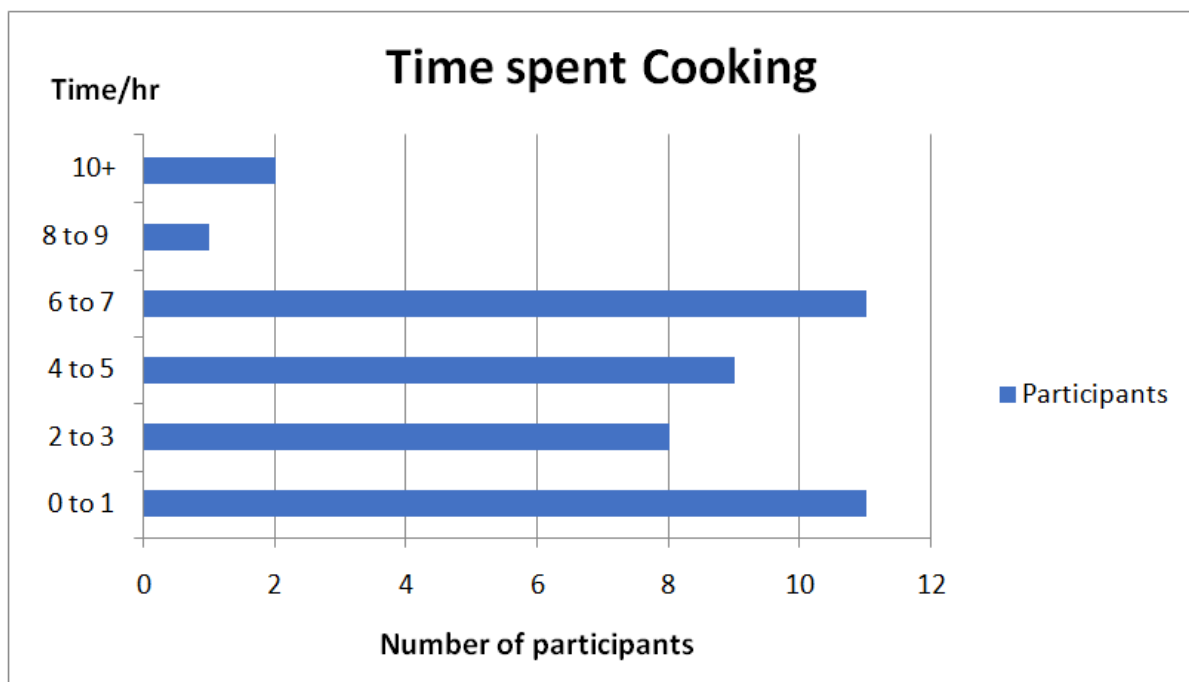


Figure 2 - Bar chart showing time spent cooking

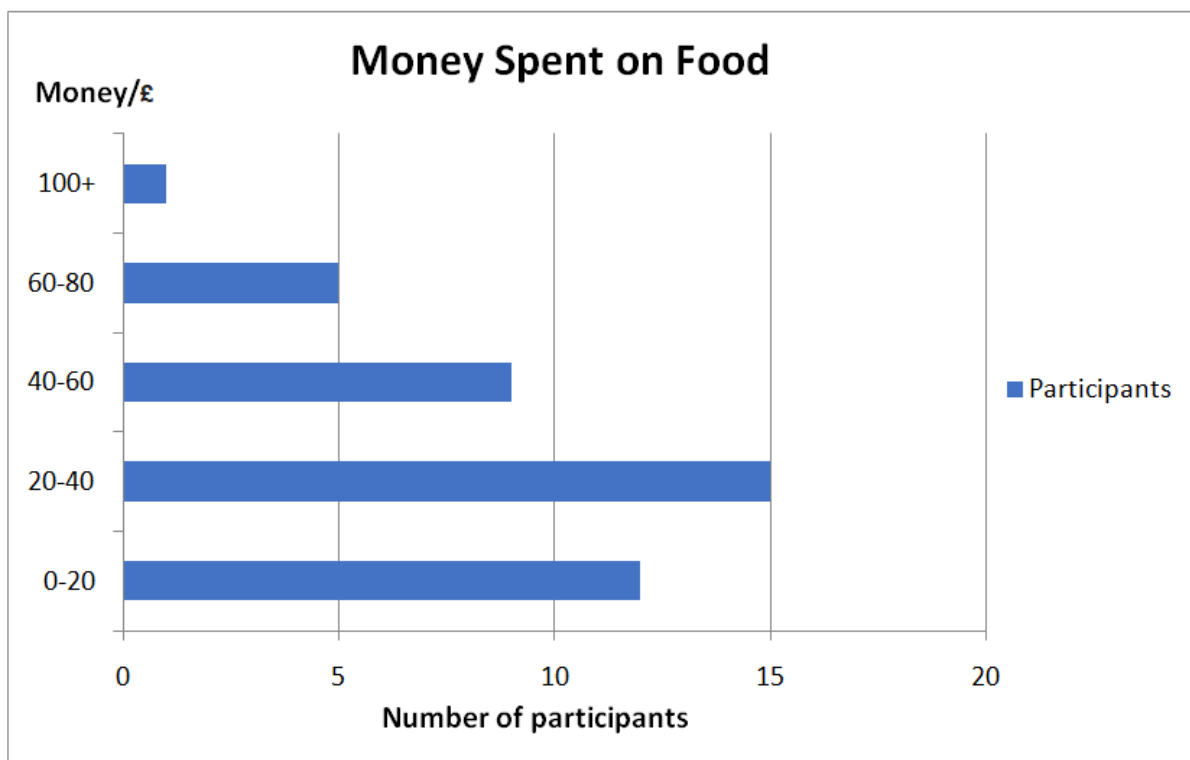


Figure 3 - Bar chart showing money spent on food per week

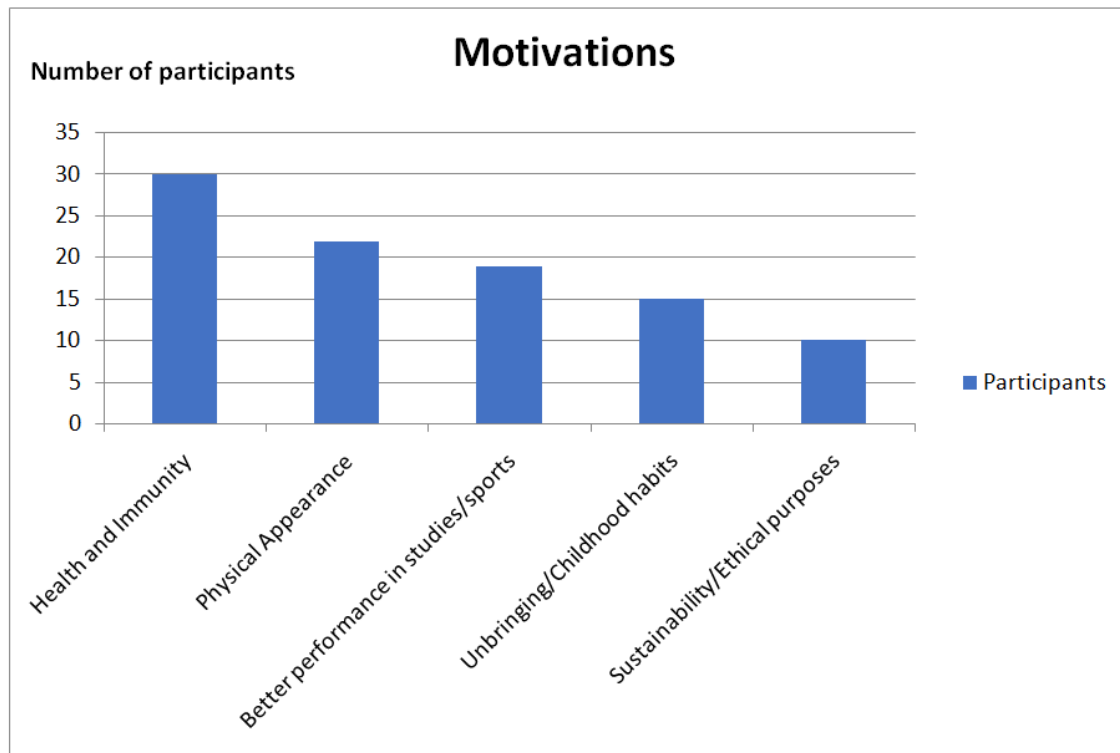


Figure 4 - Column bar chart showing the number of participants for each motivation

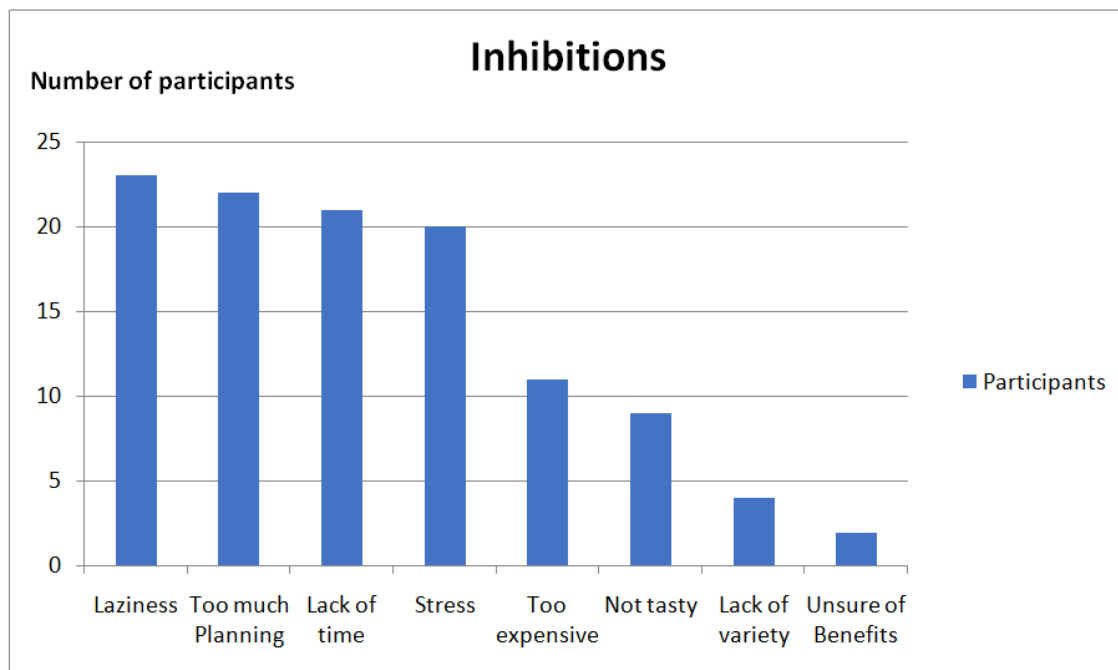


Figure 5 - Column bar chart showing the number of participants for each inhibition

Among the participants who do not have an eating schedule, 14 said it requires too much planning, 13 do not have enough time and 9 attribute unhealthy eating to stress.

Solutions

*Average Score is the weighted mean of how much the participants agree with the statements (1-5, 1 = Strongly Disagree 5 = Strongly Agree)

Statements	Average score
Access to recipes with nutritional information	3.833
Access to cheap healthier meals on campus	3.619
Free healthy cooking lessons	3.452
Healthy cooking videos/tutorials	3.330
Being informed about the benefits of healthy eating	2.976
Living in catered accommodation	2.786
Mobile/IoT device for planning or regulating meals	2.690

Figure 6 - Table showing average scores for statements

16 out of the 21 participants, who lack time to cook or say it requires too much planning, agree that having access to recipes will help them eat healthier.

7 out of the 15 participants, who believe catered accommodation makes it easier to eat healthy, live in catered halls.

Weak points

Despite the conclusions drawn from the research conducted, there are some limitations. 29 out of 42 (69.05%) participants are in second year and 27 out of 42 (64.29%) are female participants. The sample size is also limited as only 42 people have completed the questionnaire, which may not accurately represent the population of university students in the UK.

5. Affinity diagram

Pictures of individual themes close up can be found below the affinity diagram.

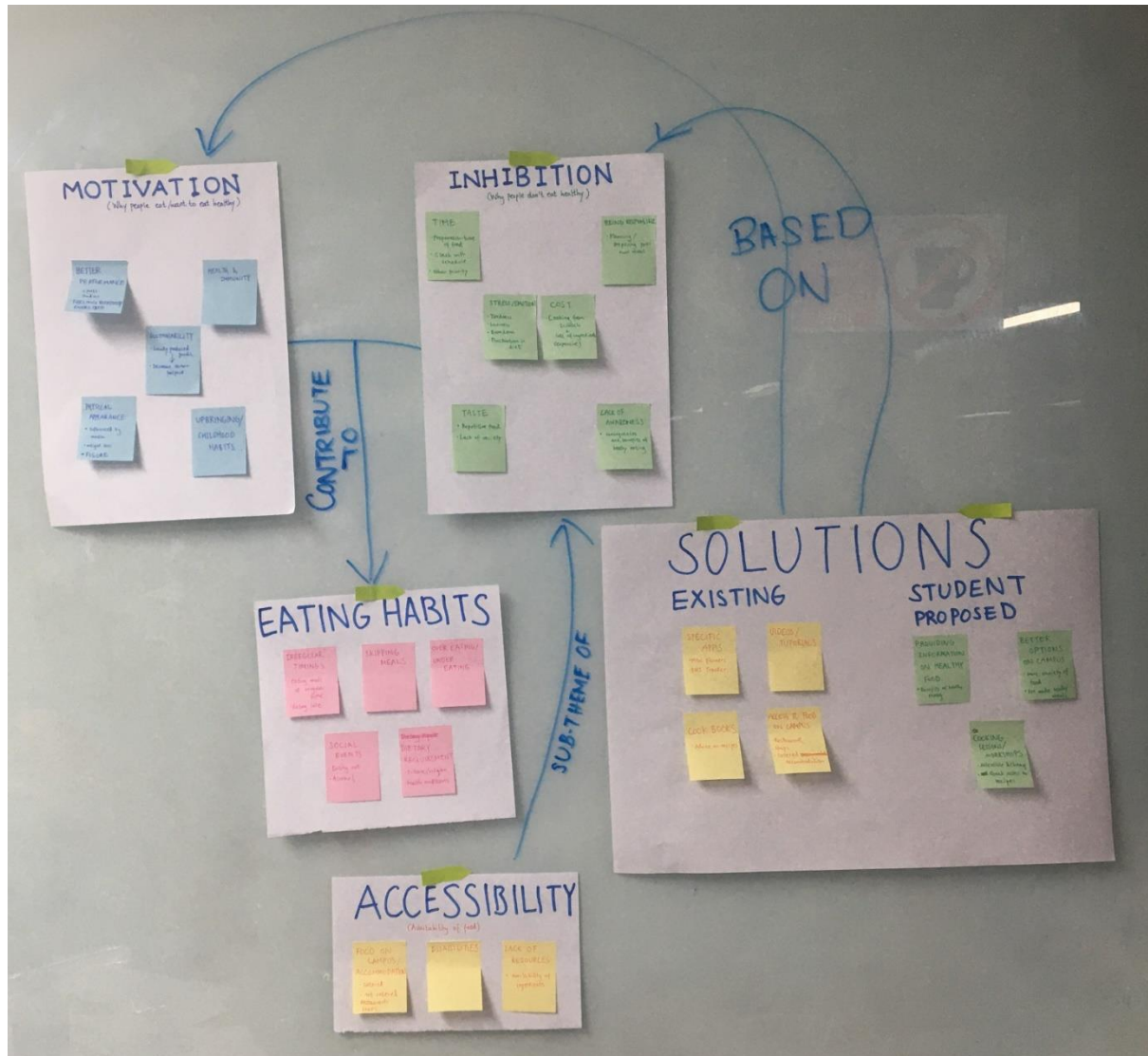


Figure 7 - Affinity Diagram

MOTIVATION

(Why people eat/want to eat healthy)

BETTER PERFORMANCE

- Sports
- Studies
- FEELING REFRESHED/
ENERGIZED

HEALTH & IMMUNITY

SUSTAINABILITY

- Locally produced goods.
↓
- Decrease carbon footprint.

PHYSICAL APPEARANCE

- Influenced by media
- weight loss
- FIGURE

UPBRINGING/ CHILDHOOD HABITS

Figure 8 - Motivations

INHIBITION

(Why people don't eat healthy)

TIME

- Preparation time of food
- Clash with schedule
- Other priority

BEING RESPONSIBLE

- Planning / preparing your own meal

STRESS/EMOTION

- Tiredness
- Laziness
- Boredom
- Fluctuation in diet

COST

- Cooking from scratch
↓
lots of ingredients
(expensive)

TASTE

- Repetitive food
- Lack of variety

LACK OF AWARENESS

- consequences and benefits of healthy eating

Figure 9 - Inhibitions

EATING HABITS

IRREGULAR TIMINGS

- Eating meals at irregular time
- Eating late

SKIPPING MEALS

OVER EATING/ UNDER EATING.

SOCIAL EVENTS

- Eating out
- Alcohol

~~Dietary require:~~

DIETARY REQUIREMENT

- culture/religion
- health conditions

Figure 10 - Eating Habits

ACCESSIBILITY

(Availability of food)

FOOD ON CAMPUS/ ACCOMMODATION

- catered
- not catered
- Restaurants
- Shops

DISABILITIES

LACK OF RESOURCES

- Availability of ingredients

Figure 11 - Accessibility

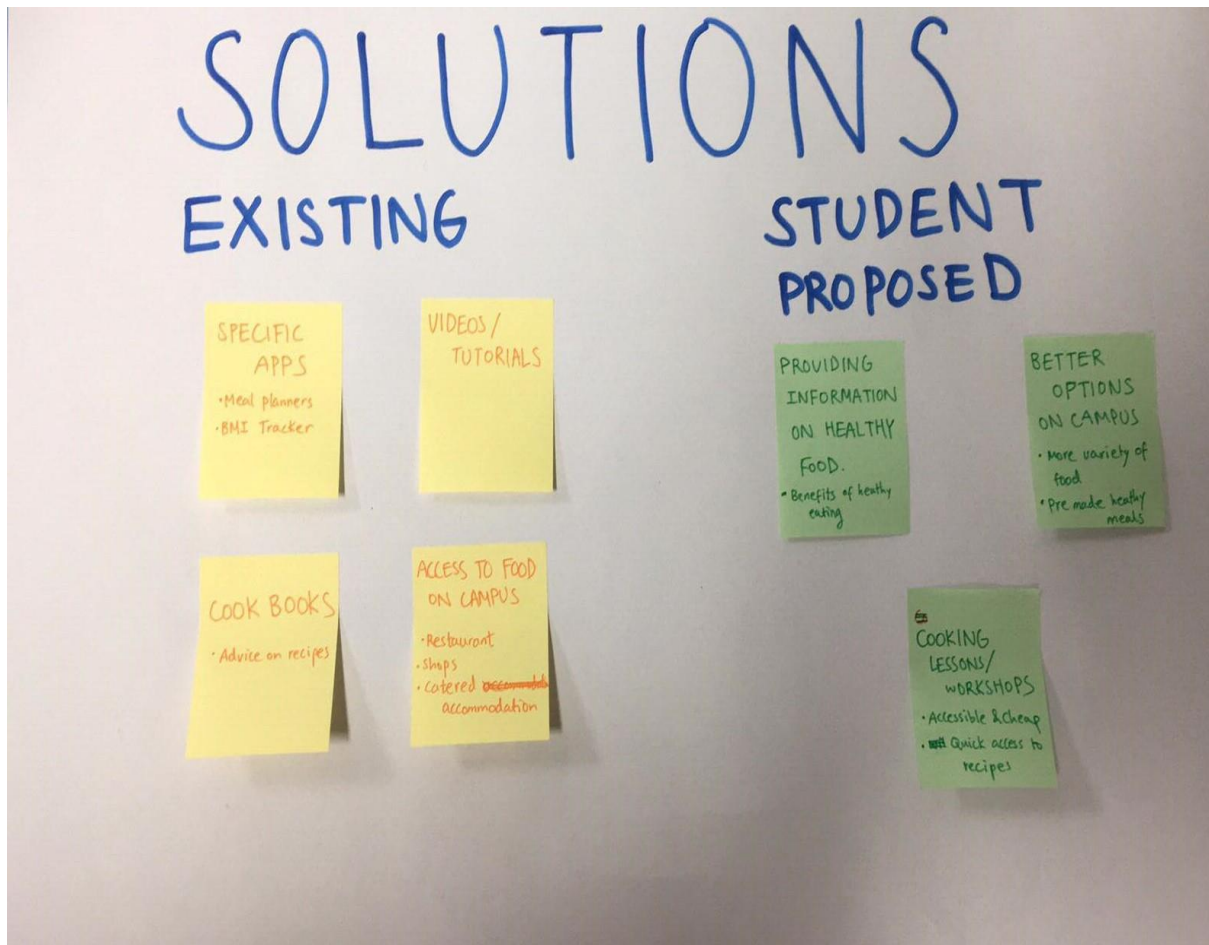


Figure 12 - Solutions

6. Summary of problem

Findings from the literature review suggest that university students do not prioritise healthy eating. This is supported by the results obtained from interviews and a questionnaire, as students have stated various factors that hinder them from maintaining healthy eating habits. Many mentioned having conflicting schedules with mealtimes which prevent them from having regular meals. Factors such as cost and effort put into planning and preparing meals were also brought up frequently. As a result, many have stated that they skip meals or opt for eating more convenient but unhealthy foods. It has been noticed that numerous students are not aware of the benefits of having a healthy diet. Several have expressed that the change in environment, from living with parental figures who prepared their meals to having an independent lifestyle, has hindered their ability to maintain a consistent diet, due to factors previously outlined. The problem defined, from the scope of the results obtained from both secondary and primary research, is that university students need better solutions to help them develop a healthy eating lifestyle to sustain their long periods of study. The solution must aim to either provide ways of overcoming the factors that prevent students from achieving a healthy diet or effectively act as a motivational tool in prompting students to place healthy eating at a higher priority.

7. Designing alternatives

Design 1 (HealthStop)

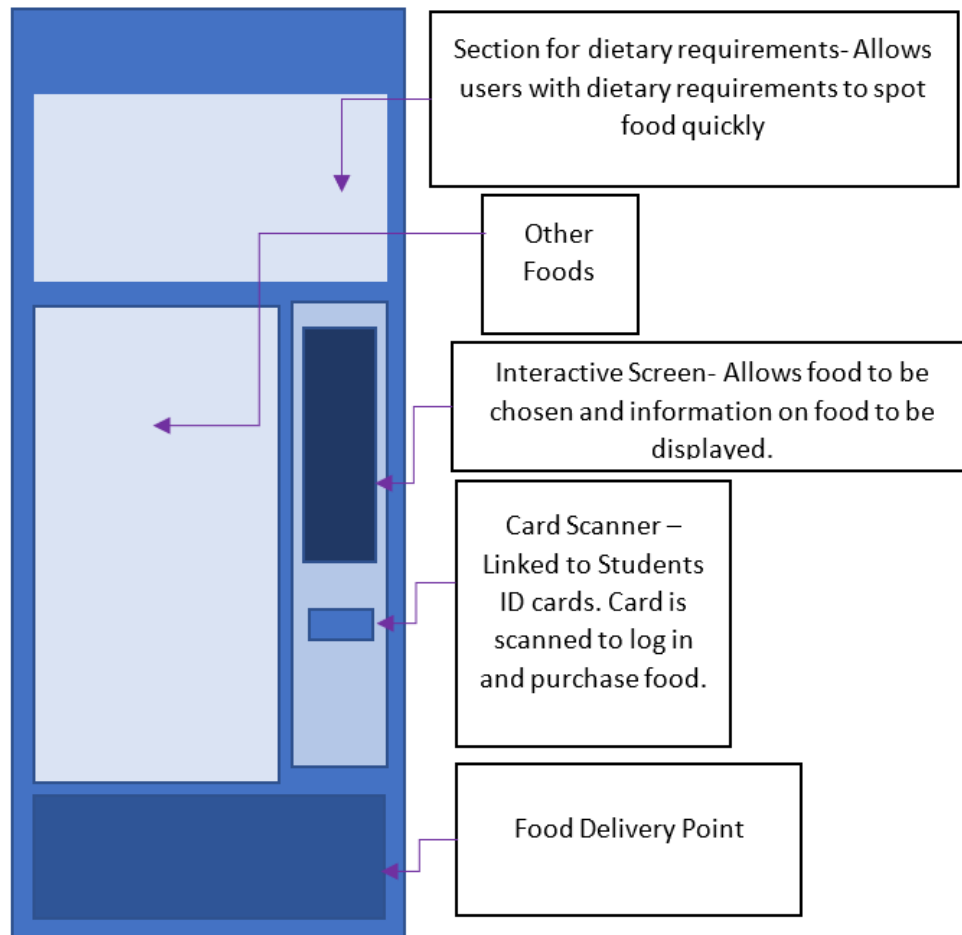


Figure 13 - Design 1 part 1

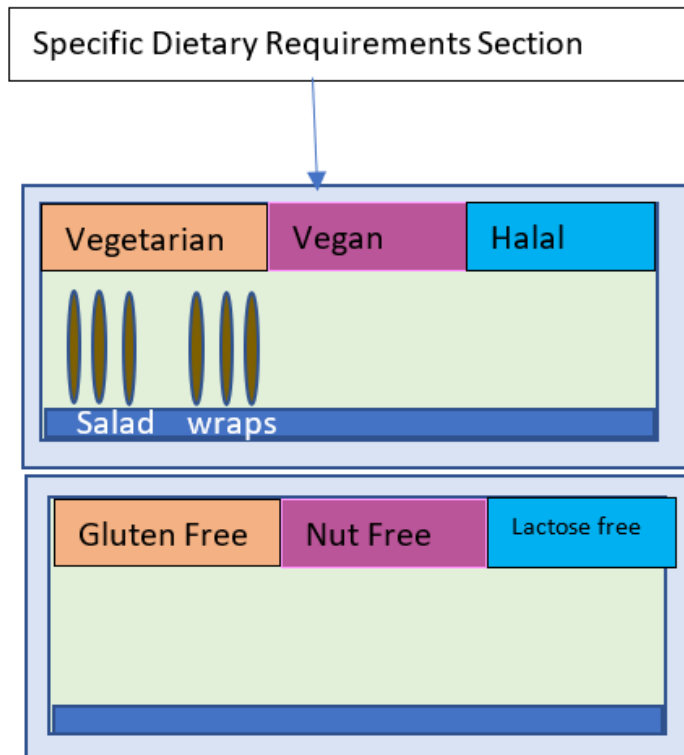


Figure 14 - Design 1 part 2

Laziness and meal planning were the two inhibitions of healthy eating that were mentioned the most by our survey. Having access to cheaper and healthier meals on campus was the second most preferred solution of the survey participants. As mentioned in the literature review, a study by Deliens et al. (2014) suggests that cheaper and healthier on-campus options would be an effective strategy. The study also suggests that personalised advice on eating behaviour would also be useful.

HealthStop provides greater access to healthy food on campus and as meals are premade and designed to be nutritious, there are no preparation or planning required by the students to get the food. HealthStop will be linked to the student's profile and they can pay by scanning their student ID, allowing for quick purchase. Any deals and discounts will be applied automatically when products are chosen, saving money.

The student's profile can be viewed on the machine's mobile application, where they can track their purchases and nutrient intake. The user can update relevant details on their profile such as allergies. This means that the machine can warn the user if the meal they choose contains allergens relevant to them. Warnings will be displayed on the interactive screen. The machine can also recommend food based on previous purchases and the student's nutrient intake. When choosing a meal on the screen, the details of the meal, including ingredients and benefits, would be displayed. This is important as students stated that they didn't understand the effects of the food they eat in their interviews.

Design 2 (KitchenHelper)

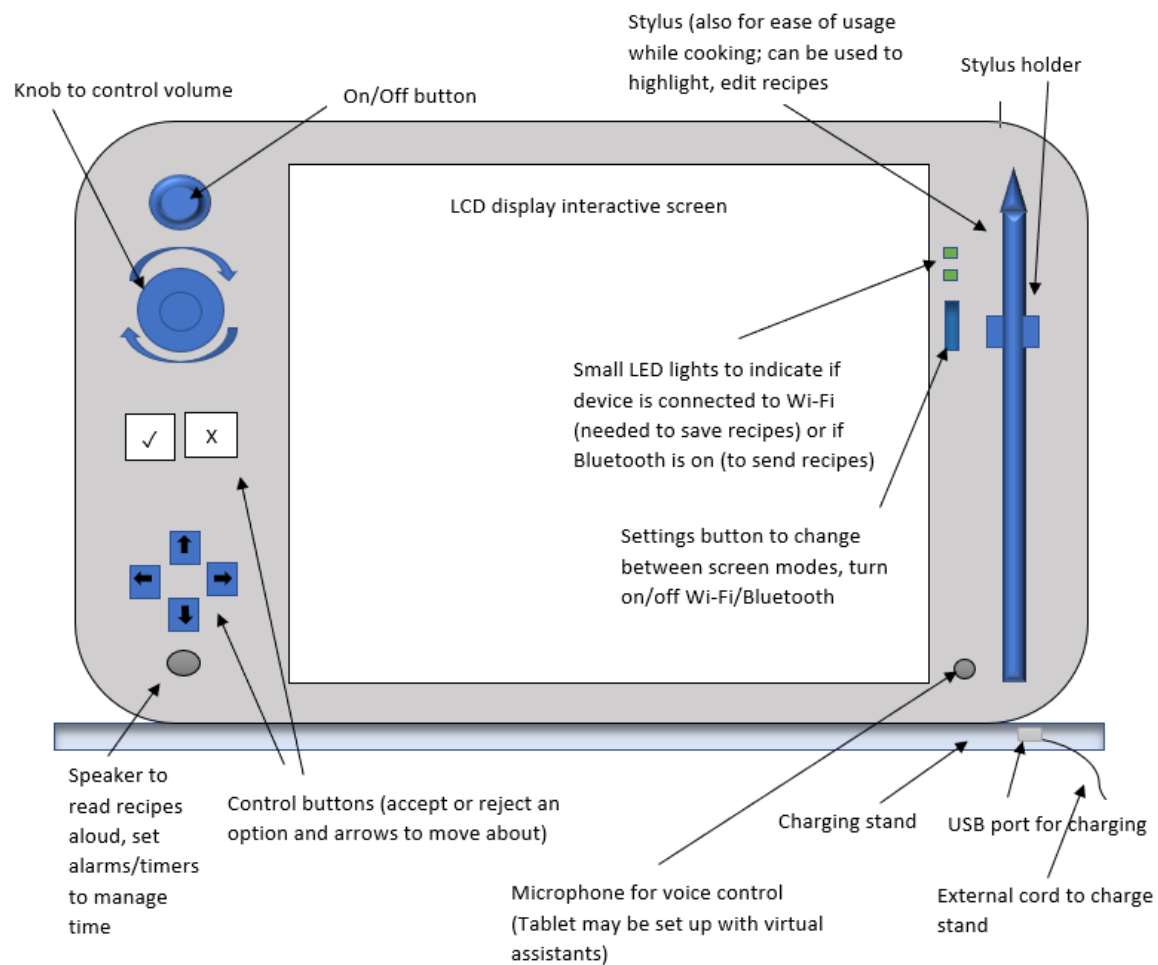


Figure 15 - Design 2

According to the surveys, many people prefer to cook over buying ready-made meals. Having access to recipes with nutritional information was the most preferred solution among survey participants. This device is a tablet-like interface with console features which would be used by students sharing a common kitchen in university halls. It has a database of a variety of healthy recipes. Each recipe comes with detailed nutritional information as well as a short summary of the benefits of having the meal.

Each student's food choices are determined by a number of inherent and external factors (culture, religion, upbringing, etc.). Primary research too, shows that dietary requirements, allergies, factors such as cost, time and access to resources, all play a significant role in our food choices. To accommodate for this, students may edit recipes for their convenience and may also add their own recipe(s) to the database/ a local folder. Moreover, KitchenHelper will allow students to apply filters to the recipes they want. Students can filter out recipes according to the ingredients they currently have, and by price range or setting an upper limit on time taken to prepare the meal.

Design 3 (HealthHeart)

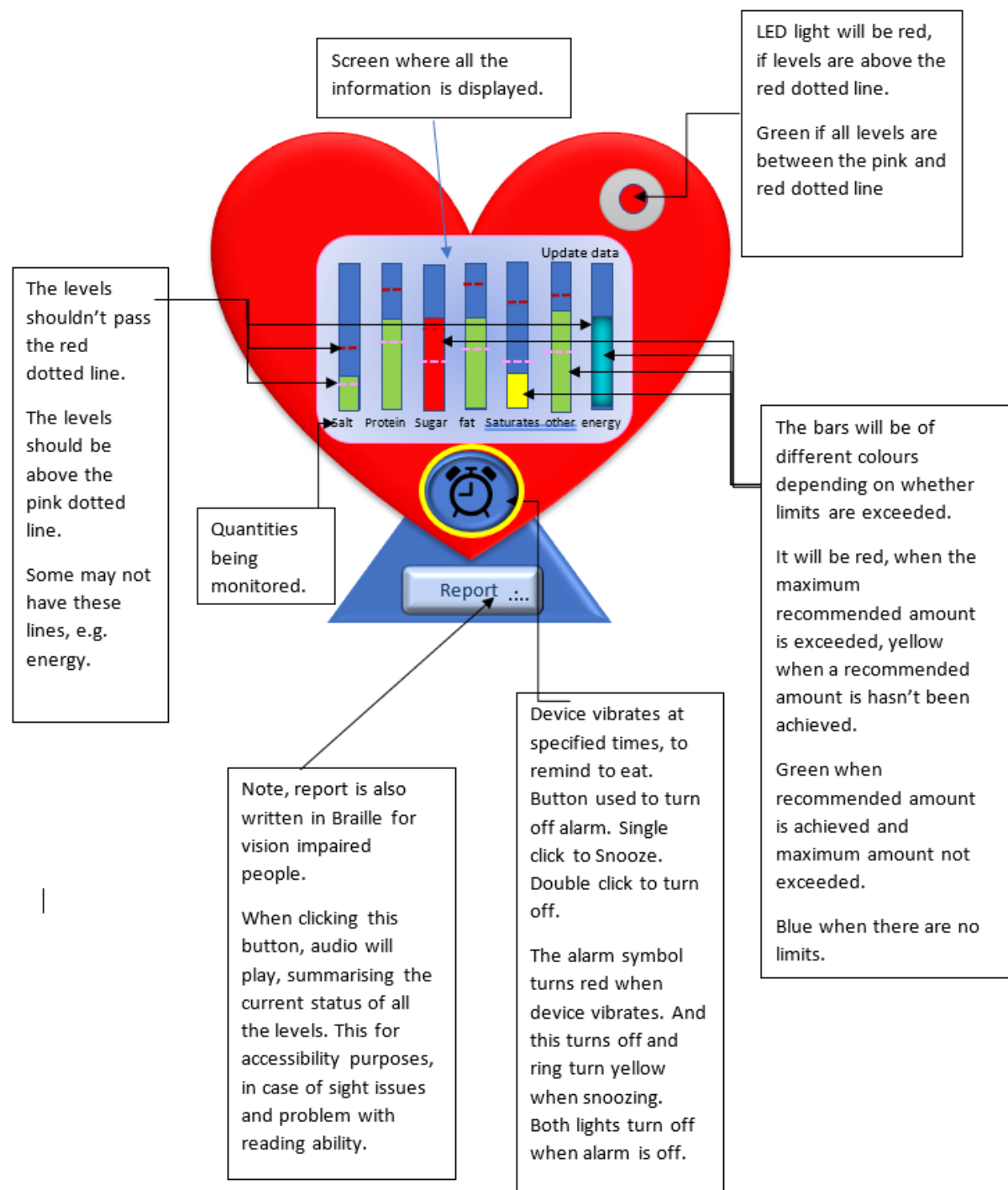


Figure 16 - Design 3

Secondary research suggests that there is a high risk of weight gain and other nutrition related problems in the first year of university. (Delisle and World Health Organization, 2005). Personalised feedback was also suggested to encourage eating behaviours in a study conducted by Deliens et al. (Deliens *et al.*, 2014).

Health and immunity, physical appearance and better performance in sports and studies were the top three motivations chosen by students, whereas planning meals was ranked as the second most inhibiting factor according to survey results.

Users can input the food they eat and its quantity or specify the nutritional contents themselves (for example, by checking values on food packaging or the device). This allows for personalised feedback. HealthHeart can be used to monitor calorie intake, which affects physical characteristics such as weight. Additionally, it will notify user of any deficiencies helping them maintain their health. The device allows the data to be shown visually and gives an audio report. The target settings can be changed to tailor to the user's current physical state and activities, for example, if they are currently fighting a fever, want to lose weight, or are having an active day (e.g. doing sports). The device can also vibrate if the user chooses to set reminders to eat.

8. References

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9. Appendices

The appendices contain two sections: the first one includes the transcripts of our interviews, and the second one includes the questions of our questionnaire.

Interview transcripts

The following colour code is used in the interviews:

- Healthy eating motivations = YELLOW;
- Healthy eating inhibitions = GREEN;
- Idea of a healthy diet = TURQUOISE;
- Eating habits/factors that influence eating habits = PINK;
- Suggested solutions for eating healthier = LIGHT GREY.

3rd year philosophy student (Male) – catered

Do you agree with the following statements?

I understand that information collected during my participation in this study is completely anonymous / will be stored on a password protected computer/secure University server and that this information will only be used in accordance with the Data Protection Act (1998). The DPA (1998) requires data to be processed fairly and lawfully in accordance with the rights of participants and protected by appropriate security.

Yup.

I have read and understood the Participant Information (version 3.0 dated 13/09/2019) and have had the opportunity to ask questions about the study.

Yes.

I agree to take part in this study.

Yup.

I understand my participation is voluntary and I may withdraw at any time and for any reason.

Yup.

Can you state your gender, year of study course studying, and if you're catered?

Male, third year, philosophy, catered.

Do you associate university students with a healthy lifestyle?

No.

Can you expand on why?

It seems the stuff that university students cook is not the healthiest stuff or at least that's how it's portrayed in media.

What do you think university students cook?

Stuff that's not difficult to prepare, like ready meal. And stuff like that which generally isn't the most healthy thing. It's not that they're unhealthy, it's just that they're not especially healthy

So a lot of premade foods?

Yes

Can you describe a healthy diet or your idea of a healthy diet?

My idea of a healthy diet would probably be... Not really sure cause I'm not too knowledgeable about the science of such things, but probably well over 5,6,7 vegetables or fruit a day. Balanced such that you aren't just eating one type of food such that you're getting all the nutrients you need and not over indulging in stuff like sugar and fat.

Would you say that you are well informed about what a healthy diet is?

Not really, I haven't done any particular research into the scientific areas of such things, but I don't consider myself well informed in anything and I have quite a high bar of what it would be to be considered well informed.

What are some of the reasons that you may not place importance in having a healthy diet?

The main reason is that I'm lazy and it takes effort to eat healthy and that's not effort that I'm willing to put in.

So if it was easy to eat healthy you would do it?

Probably.

So what would motivate you to eat healthy?

Not sure, probably some way of easily eating healthy without too much cost to myself and being given good resources on what is considered to be healthy, with clear citations.

So you want reliable information that what you are eating is actually beneficial to you?

Yes, and that it is easily accessible.

In what ways do you have a healthy diet?

I don't eat all that much so, in that way I have some level of healthy diet cause I'm not over eating, but then I might be considered to be undereating a bit. The only way in which I have a healthy diet is, in so far as I have catered food, so it's not the unhealthiest, I do still get some greens and some variety in my meals.

What are some of the factors that are preventing you in having a healthy diet?

My own laziness and my lack of knowledge that stems from my laziness.

So, if you were more well informed you would eat healthier?

Probably, but I also have a lot of other stuff that I need to be doing in terms of research cause... third year. So it's not necessarily that easy, it's just being told there's somewhere where it's quite easy to find the information.

So time is a factor when it comes to finding out about healthy diets?

As it is with everything, yeah.

So what are some of the factors that influenced your eating habits?

I'm not sure there is any factors, at least not that I'm aware of, sort of... eat whatever.

So basically, you eat what's accessible to you?

Something like that.

Is there something in your eating habits that you would say have the biggest influence on your health?

I'm not sure, I'm not sure what the different things I eat, do. But probably the fact that I like getting a packet of doughnuts once a week and eating it all in one day.

Have you previously made any changes to your eating habits. If so, what factors prompted this change?

I haven't really made any changes to my eating habits, the only major thing that has happened in the past few years is I swapped out eating packets of crisp for lunch for plain wraps and that's because I got bored of the taste of the crisps.

So, if there was tasty food and if there was a variety of food, and if it was easily accessible you would eat it?

Not necessarily.

Have you lost or gained weight since coming to university?

I don't really know since I don't tend to weigh myself all that much.

Have your eating habits changed since you came to university?

Slightly, I have slightly more for breakfast these days, cause at home I just have cereal, and at uni, I have a fry up but other than that not a great deal.

Do you think being catered helped you in maintain a healthy diet?

Yeah, my diet would be far worse otherwise.

We want to promote students in making healthier choices, can you give us advice on how to do so?

I'm not sure the easiest way to do such a thing, maybe more accessibility, and getting more information about how unhealthy certain things are and what quick and easy practices are for eating healthy and maybe something about monetary value or cheap ways to eat healthy, it's not really a factor for me but I know it is for a lot of other students.

Is there anything relevant that you would like to add that we may not have covered?

Not that I can think of.

Okay, thank you for your time.

3rd year Law student (Female) – catered

Do you agree to the following statements?

I understand that information collected during my participation in this study is completely anonymous / will be stored on a password protected computer/secure University server and that this information will only be used in accordance with the Data Protection Act (1998). The DPA (1998) requires data to be processed fairly and lawfully in accordance with the rights of participants and protected by appropriate security.

Yes.

I have read and understood the Participant Information (version 3.0 dated 13/09/2019) and have had the opportunity to ask questions about the study.

Yes.

I agree to take part in this study.

Yup.

I understand my participation is voluntary and I may withdraw at any time and for any reason.

Yup.

Can you please state, your gender, year of study, if you're catered or non-catered?

I identify as female, I'm in my third year of studying an undergraduate course and I am catered.

Do you associate university students with a healthy lifestyle?

Sometimes, I feel like there are two types of university students, you're either really fit going to the gym and eat really healthy or you just survive, on pasta and cup noodles.

Can you describe a healthy diet?

Probably be about portion control, so having different classes of foods in your diet, as in a balanced meal but in controlled portions.

Would you say you usually aim to have a healthy diet?

Depends on what a healthy diet would be, but generally no.

Can you expand on why you think your diet is isn't healthy?

Based on what I've seen is a healthy meal, I eat too much, and the wrong food, too much carbs, not enough vegetables and snacking on junk food etc.

What are some of the reasons you don't or may not place importance in having a healthy diet?

First of all, healthy foods are expensive and apart from that it usually involves some type of cooking, more than I'm used to so, it's just too much effort. Preparation time for sure and having to actually, probably having to look at what I'm purchasing when I go grocery shopping.

What motivates you or would motivate you to eat healthy?

I'm not really afraid of death because I feel like it happens in the end. It's probably more toward, maintaining my figure, or at least trying to achieve a certain image that I have in my mind.

Please describe the ways in which you have been successful in achieving a healthy diet.

I haven't.

Why do you think you haven't?

Because usually I might go a day where I think I'm eating healthy foods, or controlling my portions well, but it only lasts for a maximum of two days.

So you find it difficult to maintain a healthy diet.

Yes.

What other habits have influenced your eating habits?

Definitely stress, I tend to overeat, when I feel stressed or if I'm feeling emotional but sometimes it might be about body image where I suddenly find motivation to be healthy or look fit.

Out of these factors, which impacts you the most?

I would say definitely emotions.

What are some of the primary factors that may be preventing you from achieving a healthy diet?

Probably a lack of motivation, while I would like to be as fit as other people I think part of the reason why I haven't really pushed myself, is because I give myself excuses like I'm really busy at university, or I'm not willing to spend that money on it when really I don't necessarily have to.

Have you previously made changes to your eating habits?

So over the summer for about a month or two, I tried to do one. I don't know what the diet is called, basically you eat within an 8-hour time frame each day so, and the rest of the day you wouldn't eat anything. So I would skip breakfast and then eat only starting from 12pm, and I can eat as much as I want but I tend to limit it to two meals. Which is like lunch and dinner, between 12 to 8.

Have you gained or lost weight, since you entered university?

Yes, I have definitely gained weight, especially during my first year, and I think it's mostly due to stress.

We would like to promote students in making healthier choices, can you give us some advice on how to do so?

Well I think a huge, part of healthier life choices is being able to stick to it, so maybe, creating some sort of structure, I find that if you have things like I follow these channels on YouTube and these healthy lifestyle trainers tend to put out kind of menu choices, so for each month and each meal per day they would give you some kind of variation of what kind of food you should eat and the ingredients and prep that goes into it so I think that could be useful, but it hasn't really affected how I, my diet hasn't really changed according to that.

Would you say living in catered accommodation has helped you in eating healthy?

Somewhat, for sure because otherwise I'd probably be eating whatever.

Is there anything relevant that you would like to add that I may not have covered?

No, I don't think so, but maybe body type might affect people's choices. I personally feel like I don't have a lot of control over my body in the sense, one of the things that motivate me to eat healthy is I guess my figure, but also because I feel like no matter how much I tried to go on a diet. It hasn't really changed much. Whereas some people can see the changes more easily when they go on a diet. So they might be more motivated to stick to it.

2nd year Ecological and Environmental Sciences student (Female) – non catered

Do you agree to the following statements?

I understand that information collected during my participation in this study is completely anonymous / will be stored on a password protected computer/secure University server and that this information will only be used in accordance with the Data Protection Act (1998). The DPA (1998) requires data to be processed fairly and lawfully in accordance with the rights of participants and protected by appropriate security.

Yes.

I have read and understood the Participant Information (version 3.0 dated 13/09/2019) and have had the opportunity to ask questions about the study.

Yes.

I agree to take part in this study.

Yup.

I understand my participation is voluntary and I may withdraw at any time and for any reason.

Yup.

Could you tell me your gender, year of study, course you're studying and whether you are catered or not catered at your accommodation?

Ok, so I'm female. I'm second year. I'm doing Ecological and Environmental Sciences. I'm staying in a private flat, so yeah, I'm not catered basically.

Ok, so let's start with the topic. We want to create a product helping students to adopt a healthy lifestyle. So, our first question is thinking of the topic of healthy diet amongst university students, what comes to your mind?

Umm, you said healthy lifestyle, right?

Yeah.

It is just, I guess, eating a lot of vegetables and fruit and stuff like that. Making your own food basically and not using takeaway that much, trying to go to gym or do yoga, some kind of sports. And yeah, trying to have regular sleep hours and stuff. That kind of stuff, I guess.

Ok, thanks. Could you describe a healthy diet or what is your idea of a healthy diet?

I'm not exactly the right person to ask this because I eat once a day. And I feel healthy. My diet is fine but it's just good for me basically. Because I eat once a day. I don't eat meat, milk, eggs, or any kind of carbs, like bread and stuff like that. Or pasta, or rice. So I'm basically eating vegetables, fruits, cheese, that's one thing that I really need, and chocolate, I guess. So, yeah, I would describe it as a healthy diet because not eating eggs and other things I may need to eat more vegetables, I guess. And I'm trying to find some food that can replace the proteins I'm not having from like not eating meat for example. So it's kind of more diverse.

Basically, it's mostly a plant-based diet.

Yeah, in a way. So I'm almost vegan, I guess. And I would say that would be a healthy diet. But that's just applying to me. There are different people with different needs. I guess it would be good if the food, the diet is very diverse in a way or another, not eating the same thing.

Ok. Would you say that you usually aim to have a healthy diet?

Yes, yes, I do.

Ok. And what are some reasons that you may or may not place importance on having a healthy diet?

Umm, I'm actually like... I think a healthy diet is very important and kind of dictates my whole life.

So a part of your life is focused on being healthy and taking care of your body?

Yeah. I mean, for example for me, if I don't eat healthy, or if I eat the things that I'm not supposed to eat, I'm just gonna get sick. So, I mean, I need to eat healthily basically.

So that would be one of things that motivates you to take care of your body and your diet and what you eat in general?

Yeah. For me it's more of a direct cause, you know. Because usually people just try to be healthy, but for me like if I'm not, I can really feel the consequences, you know. I have a weak body basically.

And thinking of a healthy diet again, could you describe how you are successful at maintaining it?

How I'm successful? Umm, well, to be fair, I just cook every day basically. You know, usually people make a list and buy a lot of foods in one go for the whole week or something. But I just can't do

that, so I just think of what I want to eat every day and I just buy before cooking and I think that's helping me a lot because I can only... I can always come up with a new idea, a new recipe, something new, you know. So like I wouldn't just eat this one vegetable all the time. I can have more diversity, it's more interesting. Because I'm lacking certain things, like meat and stuff, I need to be more ingenious when it comes to cooking, I guess.

Let's say, I suppose that you have some reasons for having this healthy diet as you mentioned, like the thing that you get sick or you don't feel well if you eat junk food or anything like that. Is there any other factor that has influenced your eating habits, right now or at some point in time?

Umm... oh, I mean, yeah.

Like health conditions, or your physical condition, like going to the gym, or stress, or such things.

I mean, yeah. For example, I love hiking so I feel like I would need to eat healthily and stuff, still have a good body, to be able to go in the mountains and not, like... survive hiking for more than five hours and stuff. So that motivates me. Also, you know, I'm doing Ecological and Environmental Sciences, I'm trying to be as sustainable as possible, and that influences my diet as well. Like I'm trying to avoid things that have a huge environmental footprint, such as meat and other... and dairy, for example, and stuff like that. And, umm, yeah, that also makes me eat like locally produced vegetables, the ones that appear in the right season. You know, seasonal food and stuff like that. And yeah, that's a good motivation for having a healthy diet basically, trying to be sustainable.

Just reduce your carbon footprint and...

Yeah, like, environmental footprint, not just carbon.

Ok, so let's move on. Have you previously made any changes to your eating habits? And if so, what factors have prompted this change?

I mean... as I said, it was my health problems and also my beliefs in trying to be more sustainable. And that's what changed me a bit.

And now we'll move a little bit to the university-focused theme of our interview. Have you lost or gained weight since you entered university or has your body changed in any way?

Ha... I, I think I gained weight last year and then I just lost it, I don't know. Yeah, I think that in the first semester it was a bit, yeah... I didn't have like the best diet. Like in the first year, first semester basically, cause it was a new beginning, you know. And everything was a bit unorganised. It was my first time being alone, I guess, so cooking was a new thing for me. But overall, it was fine. It just felt like I ate more, and more junk food and stuff, but then I went back on my own pace, and in the second semester it was fine and I lost weight again, I guess. And now I have a steady weight that's good for me, I guess.

So, as I've told you, we want to encourage students to make healthy choices. Could you give us any piece of advice on how to do so?

Umm... any piece of advice. This one is hard.

Take your time.

I mean, I would just say, maybe talk a bit about sustainability, to be fair. And the environmental footprint that certain food has... because that might influence some people. And you know, like, even though they know they should be fit because it's like how society wants us to look basically, they know that it's good for their health. So that's not a good motivation right now cause they hear that from everywhere, so maybe just talking about other issues might influence them a bit more, or have a bigger impact right now. But that's just my opinion as an environmental student as well, so yeah.

And if there's anything relevant to our topic that you would like to add that I may not have covered so far?

Umm... I don't think so, I think we're fine.

2nd year Maths with Actuarial Sciences student (Male) – non catered

Do you agree to the following statements?

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Yes.

I have read and understood the Participant Information (version 3.0 dated 13/09/2019) and have had the opportunity to ask questions about the study.

Yes.

I agree to take part in this study.

Yup.

I understand my participation is voluntary and I may withdraw at any time and for any reason.

Yup.

How do you associate university students with healthy lifestyles?

They seem like opposite poles to me; healthy lifestyles and university students, because I rarely see university students maintain a healthy lifestyle.

Why do you think so, what prevents university students from maintaining a healthy lifestyle?

Most uni students are away from home when they are here at uni, so it's kind of like a different experience. They are away from parents and for a lot of households, parents would be responsible for cooking food and that's why many of them don't know how to cook. It's like putting them into an arena with no training, so they wouldn't know how to work on it. There's recipes and tutorials

online, but thinking about preparing certain foods and getting all the ingredients takes time, which is something we don't have enough of.

Can you describe a healthy diet/your idea of a healthy diet?

From a young age, I have learnt that we should have our 5 a day, so we need to have a right balance of fruits, vegetables, proteins, carbohydrates, all of that.

Do you follow your idea of a healthy diet?

I wouldn't say I always follow my idea of a healthy diet because it depends on the kind of food I eat and it's not necessarily the right balance for a healthy diet. I eat out 3-4 times a week as well, and I usually don't focus much on what I eat when I am eating out. There are times when I think or feel I have been eating unhealthy for a while and so I make sure I have something healthier like eggs/salad for my next meal.

How do you choose the food you eat?

Before coming to university, I didn't really know how to cook, because my mom used to cook for me everyday. I did minimal cooking; it's just that I have to learn a lot if it at uni., I stick to a few quick stomach-filling recipes that my mom taught me before coming into uni, and I am learning more bit by bit about what meals to prepare. Sometimes I cook in bulk so that I have enough food to last me for a few days.

Would you say that you usually aim to have a healthy diet? If not, what are some reasons that you don't/may not be able to place importance in having a healthy diet?

In my case, I think having to attend lectures and workload from coursework and exams and then hanging out with friends in my free-time, all of it makes it much more difficult to focus on healthy eating compared to A-level and GCSEs, when I stayed at home. It takes up a lot of your time to cook something good from scratch. And just in order to manage your workload during stressful times, you don't really have the time to think about a healthy diet.

How do you think you can make time for cooking healthier meals?

I could use an application or a planner, once I have my meals planned out, it will make me consume much less time. But I would have to make sure I stick to my plan, which I am really bad at. I also think that having access to easier and healthier recipes can be very useful for university students and especially me.

Please describe the ways in which you have been successful in achieving a healthy diet.

I have tried for the last few weeks, to increase my intake of protein as I have recently joined the gym to go and work out with friends. I realise that if I do more exercise, I would need more protein because that would stimulate muscle growth. So I started having protein in the form of eggs and meat. I guess that's one way in which I have tried.

What are some of the primary factors that are/may be preventing you from achieving a healthy diet?

Time is the main factor. It all secondarily links to time; the stress for example during exam periods.

If it's the time, why didn't you go for catered accommodation?

I wanted to give myself a challenge and actually be in a situation where I had to cook for myself. I have to learn it at some point, and I thought uni would be the best place to start. If I were catered, I would **just be lazy** and not learn anything. If I'm used to food being provided to me all the time, I will have difficulties in the future when I am staying alone, and working, considering that work can be even more stressful and can go overtime. There might also be times when I have to eat food I don't like. **Cooking for myself gives me the freedom to choose what I want to eat.**

Do your eating patterns change, or do you tend to skip meals when you are stressed?

Yes definitely, especially where coursework deadlines or exams are approaching very soon. **I sleep very late, around 3 am**, as I work better at night. But because of that I usually **end up skipping breakfast**, and have only two meals, lunch and dinner. There are also some times, usually when multiple assessment deadlines are approaching, when I don't even feel like I am hungry anymore because all I think about is finishing up my work on time, and **studies take priority over eating**. I also **keep bags of crisps or cookies** especially during my busy periods to make sure I have a few snacks I can open and eat anytime when I don't feel like cooking.

You've mentioned that you have been eating more protein now that you go to the gym. Were there any other periods of time where you changed your eating habits?

I've been eating more protein recently and started becoming a bit more careful about what I eat but in the first year, I actually lost a lot of weight. When I first came to uni, I didn't eat much, I had **a loss of appetite**. It then became very hard for me to maintain my weight; **it went down by 6/7 kilograms**, a ridiculous amount. I then figured that when I go back home I would learn how to cook a variety of dishes from my mom, and I ended up eating a lot over summer intentionally, to increase my weight, and BMI from being underweight to reaching the correct amount. Now I have reached my original weight, but I am beginning to **see some patterns in my routine similar** to last year's that made me lose a lot of weight as coursework deadlines and exams are approaching.

We want to promote students in making healthier choices. Can you give us some advice on how to do so?

I think that the **university itself has limited options in terms of cheaper and healthier food**. There are **on-campus restaurants (which are expensive)** and the SUSU shop is also available for quick snacks and sandwiches (**which have limited options**) so I personally prefer to carry my own food. It would be nice to have **less expensive, more filling meals**. In addition, I think a good idea would be to have **cookbooks at least in all the flats in halls** which have **quick and healthy breakfast, lunch, dinner recipes that one can easily follow**.

Is there anything relevant that you would like to add, that I may not have covered?

Nothing much really, I just think that the **primary focus should be in promoting students to cook faster and healthier meals themselves**. It is very difficult for students to maintain a healthy lifestyle. It's been a pattern that a lot of students **don't have accessibility in terms of cooking**. There's definitely room for improvement in terms of helping students to learn to cook.

2nd year Business Entrepreneurship student (Female) – non catered

Do you agree to the following statements?

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Yes.

I have read and understood the Participant Information (version 3.0 dated 13/09/2019) and have had the opportunity to ask questions about the study.

Yes.

I agree to take part in this study.

Yup.

I understand my participation is voluntary and I may withdraw at any time and for any reason.

Yup.

How do you associate university students with healthy lifestyles?

I think that students really try to put effort into their health and fitness. I certainly try. The **problem though is always having access to healthy food**, rather than eating potatoes and fried items all the time. I think there needs to be **more options for nice healthy and quick-to-make foods.**

Have you always eaten healthy while growing up?

Yes, mostly. Not healthy all the time, but I would definitely say I've had a balanced diet because of which I didn't really gain weight, but I have after coming here and that's because I find **that being a university student makes you reliant on quick unhealthy meals**, like cheese, fried items. I have always had the habit of eating fruits and because everyone in my family is vegetarian, a lot of our food at home is based on vegetables and lentils.

Can you describe a healthy diet / your idea of a healthy diet?

My idea of a healthy diet is **not leaving out carbohydrate rich meals** such as rice and potatoes, but **balancing them in a way** where you get rice once a day, with maybe **high protein vegetables** so that it **balances your nutrition level** and because of which your health and fitness is maintained. **I would not leave out anything but definitely add more vegetables.**

Do you follow this idea of a healthy diet?

I would say I used to follow a relatively balanced and healthy diet but after coming here, I have lost track.

What are the reasons you don't/may not place importance in maintaining a healthy diet?

I think it's mostly **the time constraints** of making better, healthier food, compared to for example fried items, which **don't take much time at all and taste good too.** For example, my diet at home

was heavily based on having freshly made chapatis from fresh dough but making chapatis on my own here takes at least one hour and so I only manage to make them sometimes. The rest of the time, I have to rely on frozen, premade chapatis. Because I am a vegetarian, I would have protein in the form of pulses. But making curries from pulses takes time and a lot of ingredients. Even then, I make sure to have balanced meals on the weekends but on weekdays it's not always possible.

What other factors prevent you from maintaining a healthy diet?

Grocery shopping; carrying a lot of groceries multiple times during the week is tedious, so I go bulk shopping once a week, and let's say I forget to buy something or if my stock of a specific item runs out, then I wait until the end of the week again to go shopping. Then towards the end of the week, I start relying on more frozen food, instant noodles, ready-to-eat meals or sandwiches.

Main grocery stores nowadays deliver groceries to your doorstep. Are you aware of these options?

I do know about these options but as I am an international student, I have to look into my costs as well. I wouldn't want to pay 5-pound delivery fee for something I can get for free, just by giving in time and patience. There are times when you are lazy and you really don't want to cook, but then I just order pizza or something, I wouldn't want to waste money on delivery, it takes planning and you have to wait anyway to receive your groceries.

Have you previously made changes to your eating habits?

I was in catered accommodation last year, and there are very limited options for vegetarians there. I felt like I was only eating potatoes and cheese products. There were several times when only salad was available, in which case I would go back to my room and eat instant noodles or have soup. There have also been several times where I've had just buns and cheese with ketchup. I felt myself become unfit. I can definitely say that living in a house this year and cooking myself has allowed me to plan my meals and cut down on carbs and fats, to maintain my health.

You mentioned earlier that you gained weight because of your eating patterns. Do you think this will continue to happen?

I have not stopped but certainly reduced eating fatty items, my weight has remained as it was before the start of the second year, hopefully it will remain the same.

We want to promote students on making healthier choices. Can you give us advice on how to do so?

Give healthier options in the Students' Union shops or restaurants on campus. Provide more of vegetables; not fried but just sautéed or something, so the nutrients are still there. Make sure that the quantity is stomach-filling. Food in catered accommodation is definitely something that should be improved.

How do you associate university students with healthy lifestyles?

I don't associate university students with healthy lifestyles. One of my friends, he is very diet-focused. He makes sure he has the right amount and variety of nutrients but not many university students are like that. Most university students though, I think, eat out or rely on instant food. Last year, apart from university term fees and halls fees, I think my biggest expenditure was on food. I spent a lot of money ordering food and most of the times it would be unplanned, especially when friends were around. I think this was mostly because it was the first year and eating out or eating together with friends was a good bonding experience. Sometimes **with workload as well**, you don't want to cook and you end up ordering food.

If so, why did you not choose catered accommodation?

Because catered is expensive. If I am unable to cook sometimes, my mom sends me some food anyway every week. I can keep it in the fridge/ freezer and defrost it when needed. And if I had chosen catered accommodation, I wouldn't learn how to cook.

Can you describe a healthy diet?

To me, a **healthy diet must have everything**; vegetables, fruits, **everything that's shown in the food pyramid, in the right quantities**. I don't like to specifically look into my calorie intake because I think we should eat in good quantities but we should make sure to burn what we eat through exercise. I personally do Indian classical dancing.

How do you follow your idea of this healthy diet?

When I'm with my mom, I eat everything, it's easy. But for me when I am alone, it's difficult to cook. I am still learning how to cook. Fruits are great as healthy snacks, I buy fruits from time to time. But I do remember that last year, I didn't have the time to eat them. It was always either that I was out, or if I was carrying them in my bag, and I forgot to eat them, my bag would start smelling. **If I buy lots of it and keep it, some of it also ends up rotting.**

Have your parents always guided you in having a balanced/healthy diet?

Yeah defo. Not just my parents but my grandma as well. When I used to live in Sri Lanka, she and my mom would take turns to cook, and there would be a variety of curries to eat. There are several times when my mom puts healthy vegetables in curries like spinach and broccoli, which I don't mind, but my brother hates! I am not very choosy with the food I eat. **I don't necessarily think it's because of my upbringing, I generally like to eat healthy.**

You mentioned that you do dancing, does that motivate you to eat healthy?

Yes, it does. I have been doing Bharatanatyam for 10 years now, and have been told several times to become vegetarian. One moment, I also proposed to my mom to be vegetarian, but she was worried about how I would adapt to the change so she told me to drop the idea. **Fitness videos on YouTube also motivate me.** I always say to myself eating something will shape my body the way. But, again, it takes a lot of effort to cook and think about preparing different healthy meals all the time.

Are there any other factors that come to your mind, that limit you from eating healthy?

It's mostly learning, I think. You can eat anywhere, in restaurants but even there, **there are usually additives / preservatives which make the food taste better or last longer**, and that's not good for health as well. **If you know how to cook properly, you can manage your time and plan your meals accordingly.**

Do you think that fast food meals are tastier than healthier meals?

It just feels refreshing to eat healthy food over fast food. Even when you go to restaurants, the food is tasty and nice, but I don't get that **refreshing feeling** afterwards. Home-cooked food tastes good and is healthy as well. **Healthy food is tasty**, but **eating out in a restaurant gives you a unique taste.**

Have you previously made changes to your eating habits?

No, I don't think I have made any big changes to my eating habits.

Have you lost/gained weight after coming to university?

During exam periods **when I get stressed, I usually stop dancing for a bit**; I continue eating just as much but because I don't burn what I eat, I just gain weight.

We want to promote students in making healthier choices. Do you have any advice for us on how we can do that?

There are a number of apps for example, if you don't want to work out in the gym but at home, they can help you plan your fitness exercises. Or they can be personalised to whatever the user wants to focus on. So, for example, **one of my friends uses an app: myFitnessPal, which tracks what he is eating, and helps him plan meals to reach his target weight.** These types of apps can be promoted and you can hold workshops to show how they work.

1st year student (Female) – non catered

Can you tell me your gender, year of study, and if you're catered or not catered?

Female, first year, not catered.

How do you associate university students with healthy lifestyles?

I think it's an important topic amongst all university students, but something you can't really accomplish?

What things do you think of when you think about this topic?

Umm... having a healthy diet, **exercising** and **not drinking alcohol**.

Can you describe a healthy diet or your idea of a healthy diet?

Having a good balance of nutrients... um... what else is there?

Maybe describe how you might go about having a healthy diet.

For me, I'd say, **having all my meals** and **having a lot of vegetables and fruits**.

Would you say that you usually aim to have a healthy diet?

Ideally, I do always aim to have a healthy diet as a wishful thinking but I don't think I'm good at putting it into practice.

What are some reasons that you don't/may not place importance in having a healthy diet?

Since I came to university, the first reason is the time of my lectures. Some lectures take time during lunch hours and dinner hours so it's hard to have a proper meal. The second reason is, I get tired of washing dishes and cooking. It's too much effort.

Can you be bothered to go out to buy food/ingredients then?

The thing is, there aren't any supermarkets near my accommodation so I can't be bothered to go out to buy things.

When you do have time between lectures, do you manage to eat?

I manage to have breakfast, but the timing isn't right to have lunch. And usually, my lectures finish at 6pm so it's quite late to make dinner. I don't even have the strength to make dinner.

How do you feel about eating out?

It's too expensive.

What would motivate you to eat healthy?

When I'm too hungry and I feel like my body is too unhealthy/weak, I become a bit more conscious of my health. If the **time I spend cooking** or washing dishes is reduced, and I feel like I'm being efficient with time in eating healthy, I would probably eat every meal and try to be healthy. If it doesn't take as much time to prepare meals and **I still feel full**. Can you think of anything else? Hmm... I know for a fact that my body feels lighter and **more refreshed** when I eat something healthy. I get **better sleep** when I do. So if there's a way to remind me to remember and recreate this feeling, I might be pushed to make healthier food choices.

Please describe the ways in which you have been successful in achieving a healthy diet.

When I'm with my family.

Can you elaborate on that?

It's because there's someone to prepare food for me so I don't have to make any plans about meals. That, and when I have a regular schedule. I can fit meals in when I need to so it's easier to stick to diets.

What are some of the primary factors that are preventing you from achieving a healthy diet?

As I mentioned before, it's mostly the timings and the effort put into the preparation process that puts me off.

What factors have influenced your eating habits the most? For example, health conditions, heavy exercise, stress, time, family, etc.

I don't think stress plays any part for me. It's mostly just the **time, that's the issue**.

Do you have any dietary requirements?

No, I eat everything, and I don't have any health conditions either.

Have you previously made changes to your eating habits? If so, what factors have prompted this change?

I used to have all my meals when I was at home. The biggest reasons were the change in environment. I moved from a fully catered system to where I have to make my own meals. I'm not experienced with cooking so I don't know what I can make, and I don't make very tasty food.

Have you lost or gained weight since you entered university? If so, what do you think caused this change?

I think I have lost weight but since I'm having unhealthy food instead of proper meals, my body feels unhealthier despite losing weight. I think it's because unhealthy food is the easiest kind of food to access.

Can you describe what kinds of food you mainly eat?

Like, doughnuts, instant ramen; I eat lots of premade wraps and sandwiches, cold food and microwavable food.

We want to promote students in making healthier choices. Can you give us some advice on how to do so?

I think if there were more convenient ways to help people like me to organise my meals. For example, having cooking lists that describe what simple meals I can eat every day and that just repeats. Hopefully in the process, I can gain cooking skills at the same time.

Is there anything relevant that you would like to add, that I may not have covered?

No, I can't think of anything.

Okay, thank you for taking part in this interview.

3rd year student (Male) – non catered

Can you tell me your gender, year of study, and if you're catered or not catered?

I'm male, I'm a third year student, and I'm not catered.

How do you associate university students with healthy lifestyles?

Maybe... having regular workouts, taking 3 meals a day and sleeping a good amount.

Can you describe a healthy diet or your idea of a healthy diet?

To be honest, I don't really have any specific idea but maybe... eating a lot of vegetables, not eating too much meat or greasy/oily food.

Would you say that you usually aim to have a healthy diet?

I don't think so. Because I usually order a lot of pizzas or burgers.

Is there any reason for this?

Because they're easier to get on the go. It's much faster and more convenient to eat.

What are some reasons that you don't/may not place importance in having a healthy diet?

It's because even though I don't eat healthy food, I don't think it really harms my body. I think I can improve my health just by working out, sleeping, and resting. I think diet doesn't really affect me a lot. It can make me fatter, but I don't think it can harm my health. So, you don't consider healthy food as an important factor in your health? Yes, that's right.

What would motivate you to eat healthy?

Maybe if I had my parents around? I'm living far away from my parents and they always push me to eat healthy food. My parents were strict about my body weight and they consider eating healthy to be something important. My father is a doctor, so he encourages me to eat healthy.

To explain the question a bit, what kind of incentives do you think would work effectively in getting people to make healthier food choices?

Ah, for me, I love playing football. So, if eating healthy food would improve my performance, I would do it. Sometimes, I think it helps me study better. When I eat too much greasy food, it can negatively affect my studying. It's sometimes hard to concentrate on studying when I eat too much unhealthy food.

Please describe the ways in which you have been successful in achieving a healthy diet.

Sometimes, I become a bit conscious of my food choices and try to eat less pizza and burgers and more beans or vegetables.

When do you reach this point where you are conscious of your food choices?

It's mostly when I'm trying to lose weight. Because I think the food that are described to be healthy to our body help me to lose weight.

What are some of the primary factors that are preventing you from achieving a healthy diet?

As I mentioned, pizzas or burgers take less time to eat. I also think that healthy ingredients, such as vitamins or vegetables can be really expensive. And you must buy a lot of things to prepare one meal. I also think healthy food isn't very filling compared to meat or burgers. So, I feel I need to eat more healthy food to compensate.

Do you think you have enough time to eat?

I think I have enough to take my meals because I don't have lectures at meal time. I just can't be bothered. But when I have a lot of assignments, I don't have time to go back to my dorm.

What factors have influenced your eating habits/patterns the most? For example, health conditions, heavy exercise, stress, time, family, etc.

I mentioned my parents before... Football also influences my eating. I have some competitions and during those times, I try not to eat greasy or oily food. Also, body image also influences me; I

try to keep my weight under a certain threshold. When I get stressed, I try to relieve my stress by eating a lot. I eat a lot of spicy things although I know they're quite bad for my body.

Would you say you eat a lot at night?

Yes, I do eat a lot at night. It's because I sleep late. And sometimes, I think eating late can cause the food to be more delicious. I try not to eat late because it's hard to sleep when I'm full. But when I spend the night awake because of exams, I tend to eat late at night. Things like chocolates and noodles.

Have you previously made changes to your eating habits? If so, what factors have prompted this change?

I think my eating habits are always changed because I moved countries a lot due to my studies. When I was in China, I had to eat a lot of spicy things and oily things. But when I'm here, I eat more meat – chicken or pork.

Have you lost or gained weight since you entered university? If so, what do you think caused this change?

I think I lost my weight here. But I think I'm starting to gain more now. But when I came here, I couldn't find any restaurants that fit my taste so I lost weight but these days I'm finding good restaurants. After entering university, I had to live apart from my family. When I was at home, my mother cooked for me regularly at specific times but after coming to university, I have to cook and eat outside so I think the timing is more irregular.

Do you think social life affects your diet?

Yes, it also affects what I eat. It interrupts any patterns I have, and it forces me to eat certain food or drink alcohol in late hours.

We want to promote students in making healthier choices. Can you give us some advice on how to do so?

Maybe, you shouldn't just suggest specific food but explain why people need to eat certain things. Everyone says eating less fatty food is much better for our health but not many people talk about the reason or effect of eating healthy. Maybe if you showed before and after.

Is there anything relevant that you would like to add, that I may not have covered?

Since I was an elementary student, people talked about the importance of eating breakfast, but I still don't know the actual reason. Maybe you should talk about the effects of eating three meals and why we should do it.

Okay, thank you for taking part in the interview.

2nd year History student (Female) – non catered

How do you associate university students with healthy lifestyles?

I think it's mixed. I think you'll find two ends of the spectrum. There are some who are super healthy and go to the gym every day and then there's people that eat like **takeaways and processed food every day**. Very rarely do you find people in the middle. All you'll find is that they will have a good diet but then they will crash so they like binge and then they go back to a good diet.

Mental health is mixed as well. Some people are aware of their mental health and some realise that they suffer from mental health when they come to university. And general health, I think people living outside of home are more aware. I heard a lot of people going to the GP now because of little things. They don't live at home and cannot ask their mom; does this look normal?

So, I think it's mixed. I think people have their peaks and bottoms. If I was to give a scale I would say moderately healthy.

What interest us are the eating habits of university students. So, what is your idea of a healthy diet?

The basic rule of five a day. So, **five pieces of fruit and vegetable a day. Having enough carbohydrates and sugar as well.** Realistically speaking university people eat a lot of fatty food; pizza, chicken wings, ice cream and what not. Especially when you are working late, you'll find people actually snack **junk food** like crisps. It's very important to be healthy because those food make you tired, you know, when you binge eat you're like oh god... I also find that at university, it's really weird, **everybody drinks a lot of green tea** they are like I need to like **detox** and green tea will do the job. I think at university it's very important to have a balanced diet especially with fresher's flu. So, you'll find everybody going around especially last year, people were taking **vitamin boosters** to make sure if they are feeling fatigue or tired. I think some people I would say the people I am friends with gets sick quite often so there are half of us that look after themselves very well to make sure we **don't get sick** and the other half that don't care. I'm saying this because honestly fresher's flu is all year long and it's very important to be healthy and I think part of a healthy diet is important. I eat a very well-balanced diet so I get sick once a year at university.

So you do aim to have a healthy diet?

Yeah. I like to have my fun in there too. I do think people need to be careful and what happens is a lot of people **rely on coffee at university** but it's often with sugar or they have nothing but coffee on empty stomach or they have **Red Bull and coke** and when they go out they have **alcohol and have sugary stuff.** **It's nice to treat yourself once in a while** but you'll find that everybody when it comes to snacking is very unhealthy eating as well people tend to stick to microwavable things and it's one of the reason why at university people have I think people tend to have poor diet so it is important to have a healthy diet all around. It is okay to have your **chicken nuggets** if you wish but have fresh fruits and vegetables. You can have all the unhealthy stuff and even if you have an apple instead of a packet of skittles will do your body good. And it's sweet.

Why do you think university students may not give importance to eating healthy?

Okay. One reason most people are **living outside of home for the first time** which means that they have to **do their own grocery for the first time** which means you don't have our mom or dad or whoever looks after you saying should you really be eating that much or having someone say hey you need to stop now. **You are your own person** and you have your own place and those who live

at home your parents feel sorry for you and they buy you that kind of stuff so eat the way you like right? So what I'm saying is a part of it is just **not being self-controlled** is a huge part of it.

I'd say in America it's quite bad with the mac'n'cheese as in they don't have a kitchen in their dorms and have catering if they want to make something in their room it's like a kettle or a microwave thing so they have their mac'n'cheese. In Britain, it's **jacket potatoes and baked beans** and it's something in the oven, you know, cause everybody has a kitchen.

So I'm saying the main reason why when you get **too much freedom** is bad for you like if you're too healthy it's also not good for you. Healthy for u might be just eating kale salad everyday but you need your protein, carbohydrates, fibre. **You need sugar and fat like fatty acids. Avocados are a healthy fat.**

What factors have influenced your eating habits the most?

I'm a **stress** eater. Even if I'm not hungry or I'm full but I'm stressed, I need to chew or have something which is why sometimes I have chewing gum in my room. When I know that I'm stressed I end up eating so I **forget that chewing gum is not good** for you as well because it makes you hungrier you know. You heard about it. I'm saying stress, **sadness**. Personally when I'm sad I don't wanna eat but sometimes when you are sad you want **comfort food** like chocolate. When you are happy, you celebrate, your friends are like come on let's go out for a meal.

I think **lack of time**. So today I came home very late. I was **tired**. I was **in the library and university all day** and it's Friday so I ordered a takeaway right. With takeaway it's usually **noodles, pizza or burgers**, that kind of stuff. No one ever gets salad in takeaway cause one uni and you can make it yourself cheaper right. So I think **emotions** stress anger whatever. I also think people eat because they are bored. I know quite a few people. I have been there. When I'm bored, I'm like I'll have Pringles.

Have you previously made changes to your eating habits?

Yes. I would say that couple months ago when I went on holidays I was clean eating and I did not notice. That was great. That **collapsed as soon as literally two weeks into university and I'm back to once again**. The thing is small differences like having dark chocolate instead of milk or white chocolate, having **nuts** instead. I'm a huge nut eater probably because of culture and once again I love crisps so that's my snack. So the thing that **I usually snack on a re chocolate, crisps and ice cream**. Those are the three.

I went through a phase where I did not crave these things and did not eat them and it was a nice change and it felt like a detox of one year of university but at the same time I remember you're a human being you gonna have changes. It's normal like for example a friend saying that she did not have fizzy drinks for three months. It was not because she wasn't socializing. She would go out, she would have **sparkling water** instead because she liked the feeling similar to coke.

Did that have any effect on her?

She thinks that she felt better but the thing is now she only drinks coke when she purely craves it or if she goes out drinking with friends.

I've done a part where I have gone vegetarian for like a month and i was like ok to see any changes and felt like I would not feel sick after I ate like nice level of full after I eat where I can probably

go to sleep even if I would eat a lot it was not heavy. I've done a phase where I have stopped eating cow's milk just to see what effect it will have on my skin because it will stop eczema but it did not have a change on me. In fact, I sprained my ankles and the doctor told me to have calcium pill if I was not gonna drink cow's milk. I was drinking soy milk but I needed calcium. I've noticed that when I'm at home I don't really eat cheese but when I'm at university I eat a lot of cheese. It's probably I put cheese on everything depends on what your cooking. If you're cooking paste, you want cheese.

You said something about culture and what you eat. Do you think that affects the way students eat?

Definitely. So, I'm from an Asian heritage which means that we have I would say, I'm bias, a balanced diet. We have 'lagoon' like lentils, red kidney beans. We use to have more vegetables in our diet cause Asian heritage more agricultural farming. But if you look at African and Asian culture as well you will see that we are sweet tooth. I'll talk about Asian culture because I don't know about African culture. Because my friend cook everything in lard which is fat whereas Asian culture. I think the problem is that the main food is pretty healthy but the sweets that are dangerous like for example 'jalebi' which is fried and then coated in sugar. It's like actually a lot of vegetarian use ghee because its healthier and actually before people used to think it's healthy but it depends on what you're eating. If you are eating 'paratha' which is like Asian croissant every day, it's not good for you is it? I'm saying culture does have an impact. Mainly you will find that Asian culture is usually vegetarian and they are easy to make with or without the meat.

I don't wanna seem bias but it's because I've grown up eating 'dhal', red kidney beans, I like mixed vegetable dishes and like having meat. It was easier for me because my family use to have meat twice a day and the rest of the days used to be vegetables purely because its healthier and good way to live life. And once again when you are living back home I noticed its seasonal vegetables. So if you go during the summer 'ocra' is what is popular which means they are going to be making 'ocra' quite often. So I do think that culture is a huge part of it like in British culture you'll see lots of peas in everything like Sheppard pies and a lot of potatoes, a lot of pies like minced meat on top of it like sausages and mashed potatoes. It's not something I eat that I used to eat growing up. Something I did at school. If you think about it western culture is quite carby like garlic bread and pasta. My culture it's either rice which is also carbs but a different kind of carbs or it's like wheat grain bread 'roti'. So I think culture changes the way you eat.

So we want to promote students in making healthier choices. Can you give us some advice on how we can do that?

Teach people how to shop. Show them that it's cheap like you can buy frozen vegetables one kg for like one pounds right. So our flatmate last year did this, she will be making fish and chips but she will just boil like a handful of vegetables that was like a portion of vegetable.

And maybe providing like not recipe but printed recipes or sending them by email. Everybody has a phone.

Or maybe having workshops because I think people get very nervous when it comes to spending money on food. What I've noticed recently is everybody talking about how much money they are spending on groceries and they are like only spend 30 pounds a week but then they don't include how much they spend on takeaway they don't include how much they spend on sweets or

whatever right? You do a whole grounded shop for example I know how much I spend a week but that's purely based on like having fresh meats, fresh fruits and vegetables from an organic shop. And then usually like bulk buy pasta and rice and then eventually it builds up and you have enough anyway.

I think you know **telling people** to like even if it's something simple like you've had your dinner and walk in your living room if you are going to sleep straight away. But I think people don't know how to look after themselves only because nobody ever spoken about it like no one ever, when you're going to university everybody worries about, have bought pillow, furniture. No one ever says do you know how to cook or do you know how to boil rice.

I think if **you educate people**. I also think making **gym facilities cheaper and accessible will also promote**. I mean gym is good for mental health as well you can make friends even making sport society free. Not everybody will turn up but those who can't afford will like it.

Do you think there is anything I haven't covered that you want to add?

No, I don't think so.

2nd year student (Female) – non catered

How do you think university students relate to healthy lifestyles?

I think that not all university students know how to live healthily or even don't want to or don't think it's important to be healthy. Of course I'm not taking about everyone because I know some students who are very strict about what they eat or that they do regular exercises. But in general I think a majority of university students are not healthy. I mean, ordering takeaway is just so much easier and takeaway food is not exactly healthy. Just order online and it's delivered to you. I also don't think that they exercise enough. I mean with university work there is **not enough time** for all this. And also there is the **alcohol drinking at parties and smoking**. It maybe because I don't know a lot of disciplined people, which is why I'm saying this.

What do you think a balanced diet is?

I think a balanced diet is made up of carbohydrates, protein, vitamins and minerals. The **right amount of each** obviously. I think that many students don't know what consists of a healthy meal. **Daily fruits and vegetables** are important but I find that if I don't eat something consistent like bread or rice for lunch or dinner. I tend to eat snacks or sweets then. **Water** is also necessary. I think they say 2 liters per day or something.

Would you say that you usually aim to eat a healthy diet?

I would like to. But I always slip up. Like I would get **lazy to prepare a decent meal and just order pizza**. Or I would drink a **lot of fizzy drinks** mostly coke. I also don't always eat on time which apparently is not good for you because your body is confused and doesn't know why you are eating at 2 in the morning. But I do aim to eat healthy on the days that I do cook I make sure all the essentials are there. Like a salad with chicken and rice. And sometimes instead of crisps, I would eat an apple or any fruit.

What are the factors that you think are preventing you from having a healthy diet?

I think it's mostly **time**. I don't want to spend half the day cooking when I can make something in a few minutes like **nuggets and chips** in the oven. **Stress** also. When I'm stressed then I tend to eat junk food like **crisps, chocolate or ice cream** during weird times and also when I'm studying. It's also shopping for fresh vegetables and fruits. They need to be bought like each week **but I'm lazy or busy** most of the week so **I don't buy them as regularly as I should**.

What factors have influenced your eating habits the most?

It's mostly trying to be healthy so that I can maybe then **do better at university**. Also trying **to keep my weight in check**. I have been eating so badly like snacks and sweets and stuff.

Have you ever made any changes to your diet?

Yes, I have like having less sugar or not eating oily or fried food but they never lasted very long. I think that people need like real discipline and strong will to keep to a diet. I have never tried to be vegan or vegetarian because I like eating meat but I respect the people who can do that. I don't know how effective being vegan really is because they are still eating oily and sweet stuff just fat and sugar from plants. I think it is in the quantity that matters. Like eating too much of anything is not good.

We want to promote students in making healthier choices. Can you give us some advice on how to do so?

Sure. I think that **increasing awareness** of what students are eating or what they should eat. And maybe even **show that there are benefits or consequences to eating each thing**. Maybe because we are students trying to save as much money as we can it would be good to show **cheap alternatives to meals**. And maybe easy to prepare meals would encourage people to cook healthy more often. I don't know. Maybe offering like **free exercise sessions** once in a while. Or **organising events like hiking and running for all**. I would say **sensitize students against too much alcohol and cigarettes** but I think that has been done enough times before. Also, let student know the **importance of sleep**. Because sleeping at good times everyday has a huge impact on health.

Is there anything you would like to add that I did not cover?

No, I don't think so, if you don't have more questions.

Survey questions

Please select your gender.

- Male
- Female
- Other

Please select your year of study.

- Foundation year
- First year
- Second year
- Third year
- Fourth year or above

Do you have any allergies ?

- Yes : Please specify ____
- No

Do you have any dietary requirements ?

- Yes : Please specify ____
- No

How comfortable are you with cooking ?

- I can prepare a wide variety of meals
- I can prepare a decent number of meals
- I can prepare only a few selection of meals
- I don't know how to cook

Do you prefer to cook or buy your own meals?

- I prefer to buy meals
- I prefer to cook

Does your accommodation provide you with regular meals?

- Yes
- No

Approximately how many hours do you spend preparing meals every week?

- 0-1
- 2-3
- 4-5
- 6-7
- 8-9
- 10+

Roughly how many times do you eat out/ have ready-made meals in a week?

- 0-2
- 3-4
- 5-6
- 7-8
- 9+

Which factors prevent you from eating healthy? Please tick all that apply.

- Lack of time
- Stress
- Too expensive
- Not tasty
- Lack of variety
- Laziness
- Requires too much planning
- Unsure about the benefits of healthy eating
- Others _____

Which factors motivate you to eat healthy? Please tick all that apply.

- Better performance in studies/sports
- Health and immunity
- Physical appearance
- Upbringing/childhood habits
- Sustainability/Ethical purposes: If so, please specify
- Others ____

Do you tend to overeat/undereat frequently?

- Yes, I overeat frequently.
- Yes, I undereat frequently.
- Neither

If you do, please explain why.

On average, how much money do you spend on food every week ?

- 0-20 pounds
- 20-40 pounds
- 40-60 pounds
- 60-80 pounds
- 80-100 pounds
- 100 pounds +

How many meals do you have in a day?

How often do you skip meals?

- Multiple times a day
- Once a day
- Multiple times a week
- Once a week
- Once a month

- Never

Do you have an eating schedule ?

- Yes

- No

If yes, how often do you fail to follow your schedule ?

- Multiple times a day

- Once a day

- Multiple times a week

- Once a week

- Once a month

- Never

From a scale of 1 to 5, how strongly do you agree with the following statements? (5 = strongly agree)

Living in catered university accommodation makes it easier to eat healthy.

Having access to cheaper and healthier meals on campus will motivate me to buy them.

Mobile/IoT applications are useful for planning my meals or regulating my diet.

Cooking videos/tutorials would help me to cook healthier meals.

Attending free cooking lessons would help me cook healthier meals.

Being informed about the benefits of healthy eating would encourage me to eat healthy.

Having access to quick and easy recipes with nutritional information will help me cook healthier.