



Health and Well-Being in the Built Environment

POLICY RECOMMENDATION

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Health and Well-Being is an important topic which interests us. We think that the environment in which we work/study influences motivation and work productivity. Therefore, we investigated three topics: Water, nourishment and mind

I. WATER

Inadequate hydration is associated with higher BMI and nearly 60% greater odds of being obese. The European Food Safety Authority's Adequate Intake recommendation is 2-2.5 L. These amounts are appropriate to offset what leaves the body through respiration, perspiration and excretion, aiding in the removal of toxins, byproducts and other waste. Making plain water free and easily available by increasing the number of drinking fountains and promoting water consumption through information posters, consumption of plain water will increase. Additionally, water dispensers should be in a good state to keep encouragement high.

We investigated whether enough free water tap points are available at UNS40/50. In UNS40 the number of water taps is perceived as enough. Inside the UNS50 library, visitors have access to free drinking water, at each level, which is just below WELL standard (1 per 30m). UM plans to increase the number of water tap points with renovating UNS50, over the next 8 years. Eventually there will be 6 tap points per level in 2 pantries per lobe (north/mid/south), around 80m from each other. This is also just below WELL, but a nice improvement.

Since 8 years is longer than most (PhD-) students stick around, our recommendation goes towards 2 short-term improvements:

-A tap point near FFWD should be implemented, since it's a central point and water's already available there. Cost estimation about €2000 all in. WML has offered a tap already for free (Anja van Bogaert), so the cost would be reduced to about 500 euro for plumbing.

-For promotional purposes we designed informational posters to raise awareness (Appendix 1). The calculated costs for 30 posters are about 300 euro at myposter.nl.



II. NOURISHMENT

FACILITIES

According to the WELL standard, meals consumed away from home are often higher in calories, lower in nutrients and larger in portion size (Todd et al, 2010). Research has found an association between eating away from home and a higher BMI and lower fruit and vegetable consumption (Segui et al, 2016). Data also shows that individuals who bring food from home tend to have a better diet quality (Todd et al, 2010). Based on this scientific evidence we recommend introducing more spaces that allow individuals to reheat or assemble food prepared at home. An essential device that seemingly would encourage more students to bring along prepared meals is the microwave. Currently, there are two microwaves at UNS40 and one at UNS 50. As a short-term goal, we suggest implementing at least 4 additional microwaves.

LABELLING

To clarify the ingredients and the food composition we recommend a traffic light system. Several studies show the effectiveness of such a red – yellow – green labelling of food offers at public places (Thorndike et al, 2012; Mazocco et al, 2018). They show that consumption of red labelled food (poor nutritional quality) is reduced as green labelled food is preferred.

We recommend using a traffic light system for labelling food offered at the small shops at UNS 40/50 as well as meals available at the Mensa. Of course, close collaboration with the caterer is inevitable as the ingredients must be known exactly in order to enable a labelling of the meals.

As a first step, a labelling system is to be developed. We recommend duplicating the approach by Thorndike et al (2012). They assessed the fat and calorie content of all ingredients and calculated the total content per dish available. After categorizing all food available in 4 groups: food entrée, food item, food condiment or beverage, they rated each on three positive and two negative criteria which are as follows:

- Positive: being a fruit or vegetable, being a whole grain, having lean protein or low-fat dairy as main component
- Negative: saturated fat, caloric content exceeding a threshold (for the specifics thereof we refer to Thorndike et al (2012))



After the calculations of dishes/produce, they assigned red, yellow and green labels. Red labelled food and drinks had two negative criteria and no positive criteria. Yellow labelled food and drinks either had the same amount of positive and negative criteria or only one negative criterion. Finally, green labelled food has more positive criteria than negative criteria.

As the development of this labelling system and the categorization translates into a quite substantial amount of work, we thought about the possibility of offering it as a research project for a Master Thesis for students at Maastricht University. Veronique Vasseur mentioned the possibility of offering it to students at MSI. Other possibilities would be to approach supervisors in the fields of Nutrition, Global Health or Human Biology Studies. Ideally, a blend of students/supervisors of these fields would get the project to the best maximum output. However, one obstacle we face here is the time management and respective deadlines of master theses. For one-year master studies starting in September, topic suggestions are published in December and students would start working on their thesis in February, finishing it in August. Hence, detailed suggestions have to be finalized by a potential supervisor before the December deadline. Ultimately, the labelling system would be established around Summer 2021.

Having developed the traffic light system, we need adequate signage to provide the nutrition information to consumers, being students and staff. We designed a poster to be placed in front of the mensa as well as the food shops. This should provide an introduction and overview to the traffic light system. A poster sized 120x80cm would cost 29.99€ (myposter.nl). Please see Appendix II for our poster design suggestion. As an advertising tool, we wish the poster to be presented at a “Sustainable Food Week” regularly held at Maastricht Universities. This would also be a good way to spread the knowledge and awareness about the new labelling. We also recommend adding little stickers in the relative colour (green, yellow, red) to the item’s price tag as well as to mark it on the mensa’s menu list. This step is to be handled by the master thesis team.

Not only do we recommend having an easily acceptable poster with the traffic light system in front of the canteens and the food shops, but we also want to highlight the focus on sustainability. We recommend purchasing food locally. In addition, we recommend having more plant-based food options. According to Chai et al (2019) a vegan diet, compared to a vegetarian and omnivorous diet, is the optimal diet for the environment because, out of all the compared diets, its production results in the lowest level of GHG emissions. As above-mentioned, we also



recommend providing microwaves, so that students and employees can heat their pre-cooked food. Besides, less packaged food should always be the preferred option.

EDUCATION

According to the WELL standards, combined with access to nutritious foods, nutrition education is an effective strategy to encourage healthy eating behaviors. For UM we decided that we should aim for the provision of nutrition education by focusing on changing behaviors rather than only increasing knowledge.

One recommendation is the usage of social media channels. There could be weekly “health updates” regarding information about nutrients, different types of diets, or other related information. We also recommend that easy, cheap and vegan recipes are shared, preferably with a short video. We suggest that the authors of these posts are UM students in the fields of Nutrition. The authors could change weekly and each student who created a post gets a Mensa voucher in return as an extra encouragement. We asked Stef Kramer, an expert for health promotion, for feedback on this recommendation. He suggested expanding the marketing mix and using tools like posters, mHealth tools or blogs. The topic has been discussed with Green Office member Clementine Punti, who is one responsible for catering at UM.

NEXT STEPS:

- Get in contact with Veronique to list the labelling system as a master thesis topic for December 2020. In general, MSI master students start working on their thesis in February and hand it in August. In our case August 2021.
- Get in contact with professors of global health studies, health promotion, human biology and nutrition since this topic is related to their field. For instance, Stef Kramer is a contact person for health promotion.
- We recommend thinking about ideas such as charging more for menus with meat and use the meat premium as a subsidy for non-meat plates. For this you can contact Indra Gesink since she works on this topic.
- Use the labelling system from the master thesis to categories the traffic light system.
- Print the posters 120cm x 80 cm of the traffic light system. Costs per poster: circa 30 Euros (Information retrieved on myposter.nl).
- Present the poster at a “sustainable food week” to introduce the traffic light system.
- Place the posters at each shop and mensa.



- Use social media to provide “health updates” regarding information about nutrients, different types of diets, or other related information.
- We also recommend that easy, cheap and vegan recipes are shared, preferably with a short video.
- We suggest that the authors of these posts are UM students in the fields of nutrition. The authors could change weekly and each student who created a post gets a mensa voucher in return as an extra encouragement.
- Stef Kramer, an expert for health promotion, suggests expanding the marketing mix and using tools like posters, mHealth tools or blogs. The topic has been discussed with Green Office member Clementine Punt, who is one responsible for catering at UM.
- Elisa Marx works at the communication department and can help to implement this.



III. MIND

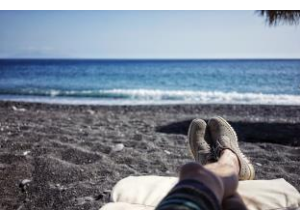
RESTORATIVE INDOOR SPACES

The building UNS40 and UNS50 at the Randwyck campus is a place where many students spend time to study, have lunch, or hang out in their breaks. However, it does barely offer a quiet space that encourages contemplation, relaxation and restoration. We, therefore, want to underline the importance of such a mindful space for people to have eased breaks away from their stress.

According to the WELL-Standards such restorative indoor spaces shall be only used for the reason for relaxation, contemplation and relaxation and not for work (Kant et al., 2003). The size should be a minimum of 7m² up to a maximum of 74m². The student's/employee's physical well-being standard shall be supported by an accessible design, appropriate lightning, intrusive noise and sound masking (e.g. such as natural sounds), thermal comfort, seating arrangements that accommodate a range of user preferences an activity, nature incorporation, calming colors and visual privacy. The WELL-Standard recommends maintaining the space minimum on a weekly basis and the provision of reading material in order to educate the people about the purpose of the space and how to make use of it (Furgeson, 2017).

In collaboration with the Health and Well-Being movement of UM, we aimed to provide a quiet integrative space at the soon renovated UNS40 level -1. Material that we aim to provide includes a fit ball, a yoga tutorial book, couches, meditation pillows, and reading material on stress coping methods. The space should only allow the entrance for a restricted number of students to ensure quietness. Further, posters with information should make students and staff aware of the relaxation space.

After talking to experts about the feasibility of our project, it became clear that UNS40 level -1 seemed not to be a suitable place to build up a quiet space. UNS40 level -1 can be compared to a traffic system since it is a place where students wait for entering the college rooms. Furthermore, more students are expected at Maastricht University in the future, so the pressure on public areas will rather increase. However, experts recommended a permanent relaxation room at the Randwick library (Banning et al., 2010). A room matching our expectations was already built up during the Health and Well-Being week in 2019 in the library and showed to be highly popular among students. The location, however, would rather exclude staff members and



would be more attractive to students. A space that will be provided for students and staff will be constructed in UNS40 level -1 soon. It is called the 'faculty bar', a place where students and staff can chill and have drinks. A relaxation room in the library would be still needed, though, with a focus on relaxation and contemplation only.

Furthermore, the usage of beneficial light settings will be one component of the restorative indoor space. The light protocol for the contemplation space can serve as a tool to facilitate relaxation. For example, the Philips HUE lighting system or the Philips LED wall washer can be used for the restorative indoor space. The Philips HUE lighting system has three light options, (1) relax, (2) read, and (3) concentrate, which can be chosen according to individual suitability.

Light protocol for contemplation space

Session duration = 30 min

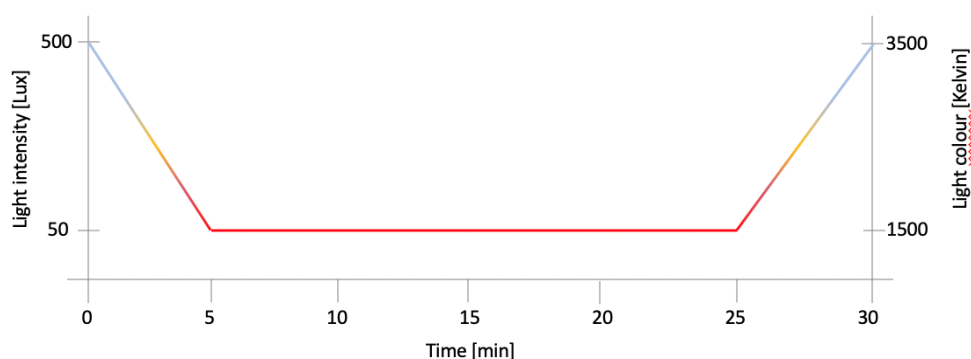


Figure 1: Light protocol for contemplation space

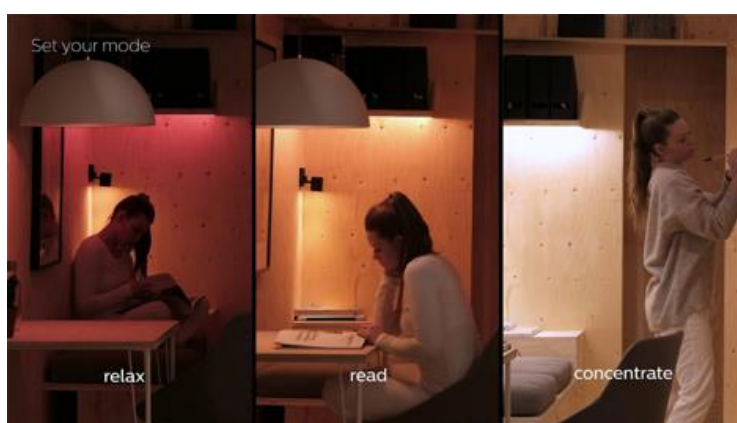
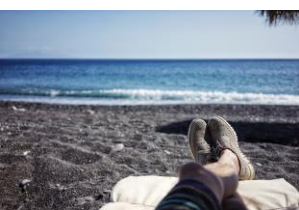


Figure 2: Philips HUE lighting system



This room intends to give students and university staff a break to relax. Therefore, the usage of phones will not be allowed to ensure that blue lights will not disturb any participants in the room. In order to use the room, a room reservation service will have to be set in place. Each participant can book one or two slots per day which should be no longer than 30 minutes. This ensures that the time is suitable for the Philips HUE lighting system, and participants do not have to worry about time management. Furthermore, university staff should have time slots available only for them, which are in line with their working schedule. If time slots are still free, it is possible to use the room without booking in advance. Another idea would be to provide screens which can be used to stream yoga, Pilates or meditation classes. Usually, Yoga and Pilates classes are around 30-60 minutes. Therefore, 1-2 time slots are enough to finish the classes.

The feasibility of a relaxation room in the Randwick library is not fully clear yet. Expert meetings are restricted and due to the Covid-19 pandemic, viewings of the possible rooms were not possible. It is of our interest to hand over the project to future students to work on it in collaboration with the Health and Well-Being movement team.



IV. Appendix

It is suggested to drink between **2** and **3** liters **per day**

Reduces stress and slows down the aging process



Boosts your energy and helps combat fatigue



Do YOU drink enough water?



Supports detoxification



Reduces high blood pressure

The best part:
it is **sustainable** and **free!**



Appendix I: Water poster

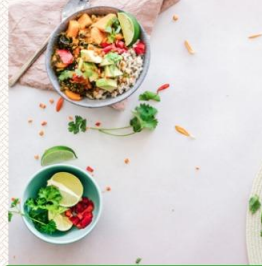
Your opportunity to be sustainable and eat healthy!



Low in nutrients and may be too high in energy, and/or saturated fat and/or sodium (salt)



Some valuable nutrients, but may also be high in energy, and/or saturated fat and/or sodium (salt)



High in nutrients, unprocessed fruit and vegetables



Let's be sustainable together!

- Buy local
- Eat more plant based food
- Heat your pre-cooked stuff up
- Buy less packaged food
- Bring your own bottle

Appendix II: Traffic Light System poster

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