

Phenomenology as a tool for students' mental well-being

AR3AD110 Dwelling Graduation Studio: Designing for Care in an Inclusive Environment 2024/25

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ABSTRACT

Following the COVID-19 pandemic, there has been a significant global increase in mental health disorders, predicted to rise even further. University students are particularly affected due to their high prevalence of and sensitivity to mental health-related problems. Specifically in the Netherlands, this is further exacerbated by the ongoing housing crisis, which forces many students into poor-quality, cramped accommodations. This research explores how phenomenological principles can inform student housing design to enhance mental well-being. Using a literature review, case studies, interviews, and participatory sketching, the study identifies key architectural elements that support mental well-being. Among these, the most important findings highlight the importance of accessible and visible greenery from the dwelling, ample direct sunlight, quiet bedrooms, communal spaces and the presence of a courtyard.

Keywords: Mental well-being, phenomenology, students, student housing.

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CHAPTER 1: INTRODUCTION

1.1 PROBLEM STATEMENT

Following the COVID-19 pandemic, there has been a significant global increase in mental health disorders, affecting individuals across various age groups and socioeconomic backgrounds (World Health Organization, 2022). In 2020, the pandemic contributed to an estimated 53 million additional cases of major depressive disorder and 76 million additional cases of anxiety disorders (Santomauro et al., 2021).

This issue is not only a pressing concern today but also a future one, as the World Health Organization predicts that by 2030, depression will become the leading cause of disease burden worldwide, surpassing other major illnesses (World Health Organization, 2018a).

Specifically amongst university students, research indicates a high prevalence of mental health issues, linked to a variety of stressors. Ibrahim et al. (2013) conducted a systematic review and found that university students worldwide experience higher rates of depression compared to the general population. These increased rates are often attributed to academic pressures such as intense coursework and examinations, as well as other stressors, including financial difficulties, adapting to a new environment, social isolation, and challenges in forming new relationships.

For instance, a global study found that 31% of college students screened positive for at least one common mental disorder (Auerbach et al., 2018). Furthermore, the transition to independent living in student accommodations often presents additional difficulties in adjusting to a new environment and the absence of familiar support networks, further impacting their mental well-being (Worsley et al., 2021).

In the Netherlands, mental health challenges among university students are becoming increasingly evident. According to the Monitor Mentale gezondheid en Middelengebruik Studenten hoger onderwijs 2023, 56% of university students reported experiencing high levels of stress, and 44% showed symptoms of anxiety or depression. Additionally, 59% reported feelings of emotional exhaustion (Trimbos Institute & RIVM, 2023).

Furthermore, Dutch student dropout rates have risen since the COVID-19 pandemic, with the dropout rate among first-year students at research universities increasing from 5% during the pandemic to 7% in the 2021/22 academic year. Similarly, universities of applied sciences saw their dropout rate climb from 12% to 15% (Ministerie van Onderwijs, Cultuur en Wetenschap, 2022).

In response, higher education institutions have allocated funds from the National Education Program to address student mental health, by hiring additional psychologists and offering more support services. However, the report notes that these institutions are not always equipped to manage severe cases, with waiting lists often preventing students from accessing mental health care in a timely manner (Ministerie van Onderwijs, Cultuur en Wetenschap, 2022).

Approximately 37% of students with significant mental health problems do not seek treatment due to stigma (Downs & Eisenberg, 2009). Given this reluctance, along with the challenges in accessing timely care for more severe cases, it is crucial to explore indirect methods for supporting student mental well-being.

The built environment plays a significant role in influencing mental health, providing opportunities to support mental well-being (World Health Organization, 2018b) without the barriers associated with traditional treatment.

Research indicates that housing quality has a substantial impact on student well-being. For example, a study conducted in Italy during the COVID-19 lockdown found that university students living in poor-quality or cramped accommodations experienced a higher prevalence of depressive symptoms. Issues such as inadequate natural light, limited space, and poor indoor air quality were linked to negative mental health outcomes (Morganti et al., 2022).

The graduation site is located within Tarwewijk, a neighbourhood of Rotterdam, in which the previously mentioned problems are of great relevance, firstly because of its demographics. 9% of the residents are students, higher than the citywide average of 7%, and a significant portion of the population is under 25 years old (Gemeente Rotterdam, n.d.). Additionally, nearly one in three residents stay for only a year or less (Veldacademie, n.d.).

Furthermore, mental health issues seem to be prevalent within the Tarwewijk

neighborhood, as 38% of residents aged 18 and older report psychological complaints, with 68% feeling lonely and 24% experiencing severe loneliness (AlleCijfers, n.d.).

Another point of relevance is the quality of student housing. Across the Netherlands, there is a substantial shortage of suitable and affordable student accommodations, with cities like Rotterdam facing particularly high demand. This shortage leaves many students struggling to secure adequate living conditions that meet their needs. This deficit often forces students into suboptimal accommodations that are both smaller and frequently shared, impacting their comfort and quality of life. Furthermore, limited affordable options add financial strain, as students must often settle for poorly maintained spaces that lack essential privacy and amenities, making daily life more stressful (Landelijke Monitor Studentenhuisvesting 2023).

Despite a significant recent increase, and an anticipated further increase in mental health issues, architectural practices have yet to adapt to address these challenges. Particularly in student housing, within Tarwewijk there is a gap in creating supportive living environments that can indirectly enhance students' mental well-being.

1.2 THEORETICAL FRAMEWORK

The theoretical framework for this research will draw from a selection of phenomenological theory books, which will guide the study's direction and analysis. Phenomenology, as a philosophical approach, focuses on the lived experience and perception of individuals within their environments. In architecture, this perspective examines how spaces are sensed and experienced. This is particularly relevant to mental well-being, as an individual's perception of their environment can significantly influence their psychological state. To explore this connection, the following paragraphs outline the selected phenomenological literature that will inform this study, which can also be seen in Figure 1.

Sensory Architecture: This category includes *The Eyes of the Skin* by Juhani Pallasmaa (1996) and *Atmospheres* by Peter Zumthor (2006), which explore the sensory experiences of architecture, emphasizing how elements like light, texture, and sound shape human perception. The literature is

Poetic Architecture: *The Poetics of Space* by Gaston Bachelard (1958) falls under this category, focusing on the psychological and poetic dimensions of spaces, examining how intimate environments influence mental states.

Practical Architecture: This category includes *Thinking Architecture* by Peter Zumthor (1998) and *Lessons for Students in Architecture* by Herman Hertzberger (1991), centering on design philosophy, practical considerations, and the creation of social spaces that foster interaction and a sense of community.

The choice of these specific books is not arbitrary; they were selected because they are seminal and representative works in the field of phenomenological architecture.

Authors like Bachelard, Pallasmaa, Zumthor, and Hertzberger have significantly shaped the understanding of how architectural spaces influence human perception and experience. Their writings directly explore the sensory and experiential aspects of architecture relevant to supporting mental well-being in residential environments. Additionally, my familiarity with these texts enables a comprehensive and efficient analysis within the research timeframe. Having already engaged extensively with their contents, I can effectively extract multiple relevant topics to inform this study within the allocated ten weeks.

The selection of books should also be perceived from a critical perspective; all books mention their perspective on phenomena in a positive light, they often lack critical self-reflection, failing to address the limitations or challenges of their ideas.

I hypothesise that applying principles from phenomenological theory to the design of residential living environments for students in Tarwewijk can significantly support and enhance their mental well-being. By integrating these architectural theories into student housing design, the living environments will foster social interaction, provide sensory engagement, and offer spaces for solitude and reflection, leading to improved mental well-being outcomes among student residents.

The goal of this research is to obtain a set of guidelines, through which an architectural project for students will be developed within the Tarwewijk, this architectural project will consist of student dormitories where design elements are implemented as preventive mechanisms to mitigate mental well-being-related challenges.

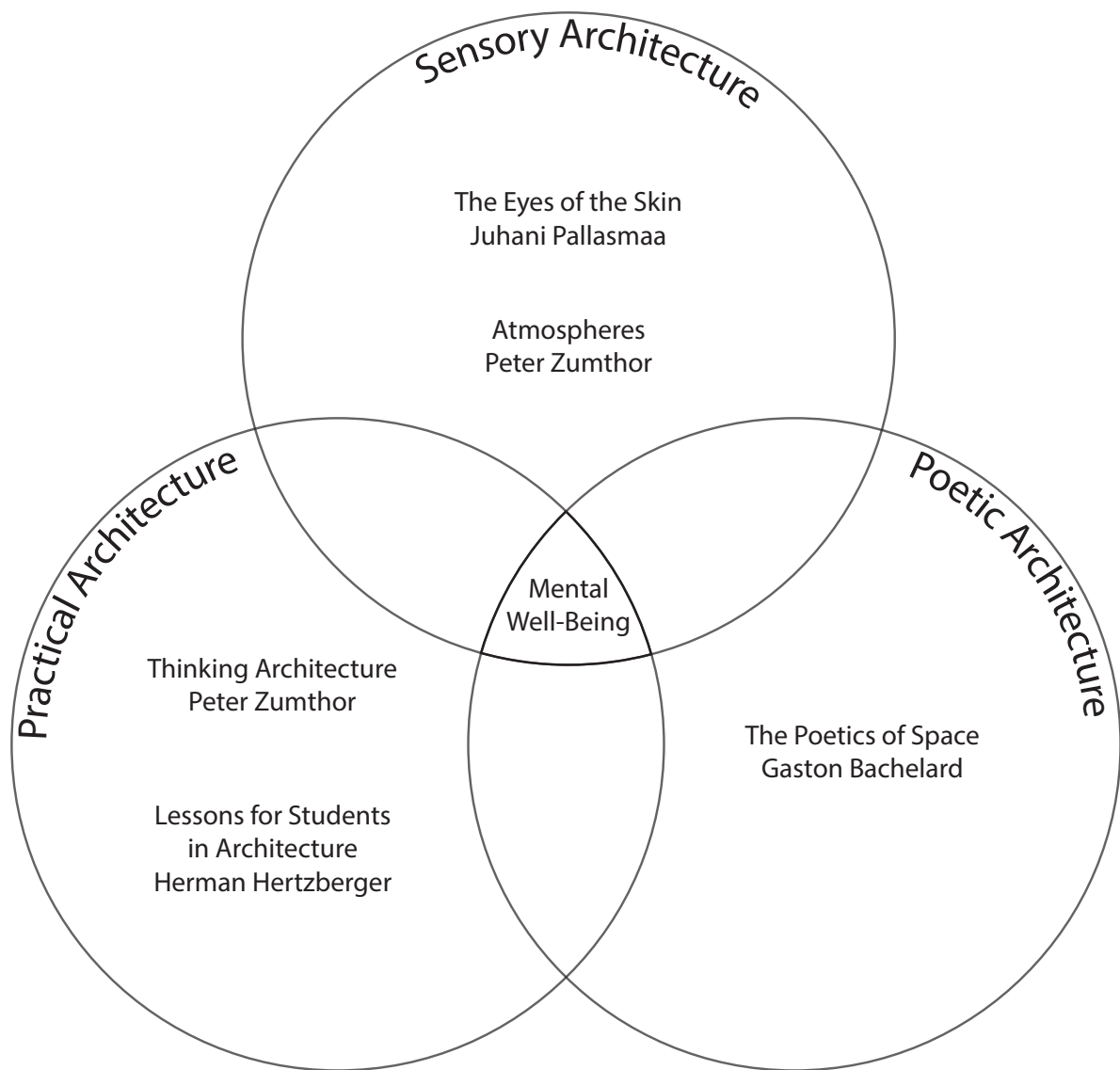


Figure 1:
Categorization of phenomenological theory books

1.3 RESEARCH QUESTIONS

How can the design of residential living environments, viewed through the prism of phenomenological theory, support and enhance the mental well-being of students? A Tarwewijk case study.

Sub Questions

What does phenomenological theory propose for the design of residential living environments in relation to mental well-being?

How do the ideas proposed by phenomenological theory regarding mental well-being align with the findings of empirical research on mental well-being?

What living environment features have already been implemented within architectural

projects in order to enhance well-being?

What living environment features are most desired by students within the Netherlands, for their mental well-being?

Mental well-being is a dynamic state in which an individual can develop their potential, work productively and creatively, build strong and positive relationships, and contribute to their community" (Foresight Mental Capital and Well-being Project, 2008, p. 10).

Living environment encompasses the physical and social settings in which people live, including the dwelling, its architectural characteristics, and the surrounding physical and social environment" (Evans, 2003, p. 573).

1.4 METHODOLOGY

As part of the research methodology, this study will begin with an exploration of phenomenological theory books, as can be seen in Figure 1, to identify recurring themes and concepts relevant to mental well-being.

These themes will then serve as a foundation for the next step, a literature review of empirical studies from psychology, sociology, and anthropology. By examining how these disciplines approach the same themes, this study aims to compare phenomenological insights with empirical findings, highlighting similarities and differences.

This research will also include case studies of architectural projects that have been designed with mental well-being in mind, namely three student dormitories, and one student welfare centre. By analysing these architectural projects, the study aims to identify already implemented architectural means that support mental well-being specifically within student related projects.

The final phase of the research involves conducting interviews with students residing and studying within the Netherlands. These interviews will focus on exploring what students wish they had within their living environments to better support their mental well-being. The interview process will be divided into two parts.

In the first part, a set of questions will be developed based on topics which were found to be relevant in the phenomenological theory review, the empirical research literature review and the case studies. These questions will be integrated

within a questionnaire and distributed.

In the second part, a small group of students will be provided with a printed floor plan of their current dwelling. They will be invited to draw or annotate directly on the floor plan to visually express their desires and ideas for an ideal living environment that supports their mental well-being. This creative exercise serves as an alternative means of expression, allowing students to communicate spatial and design-related preferences that might be difficult to communicate through words alone.

In accordance with TU Delft's Human Research Ethics Committee guidelines, all interviews with students and questionnaires will follow ethical protocols.

All the afore mentioned research methods will contribute to the creation of a set of guidelines, as can be seen in Figure 2, by extracting the most relevant findings from each method. The guidelines will consist primarily out of architectural means and architectural concepts that can be used as a point of departure for the designing phase within the graduation project.

The guidelines will be created throughout the entire research and recapitulated at the end to provide an overview of all the guidelines.

The specific research methods are chosen in order to create guidelines coming from diverse sources, phenomenological theory, empirical research, practice, and users, which can be seen in Figure 3.

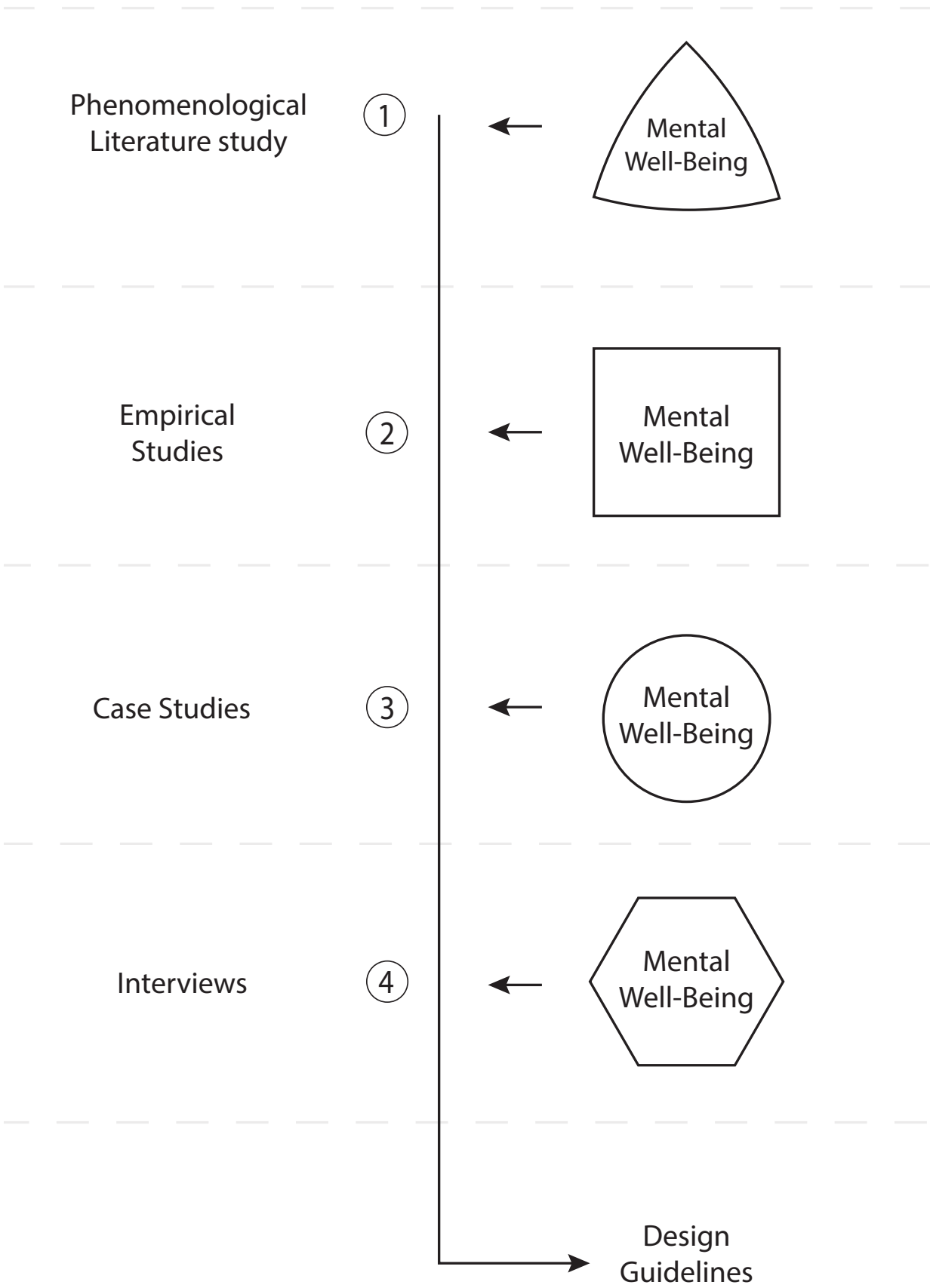


Figure 2:
Diagram of methodological approach

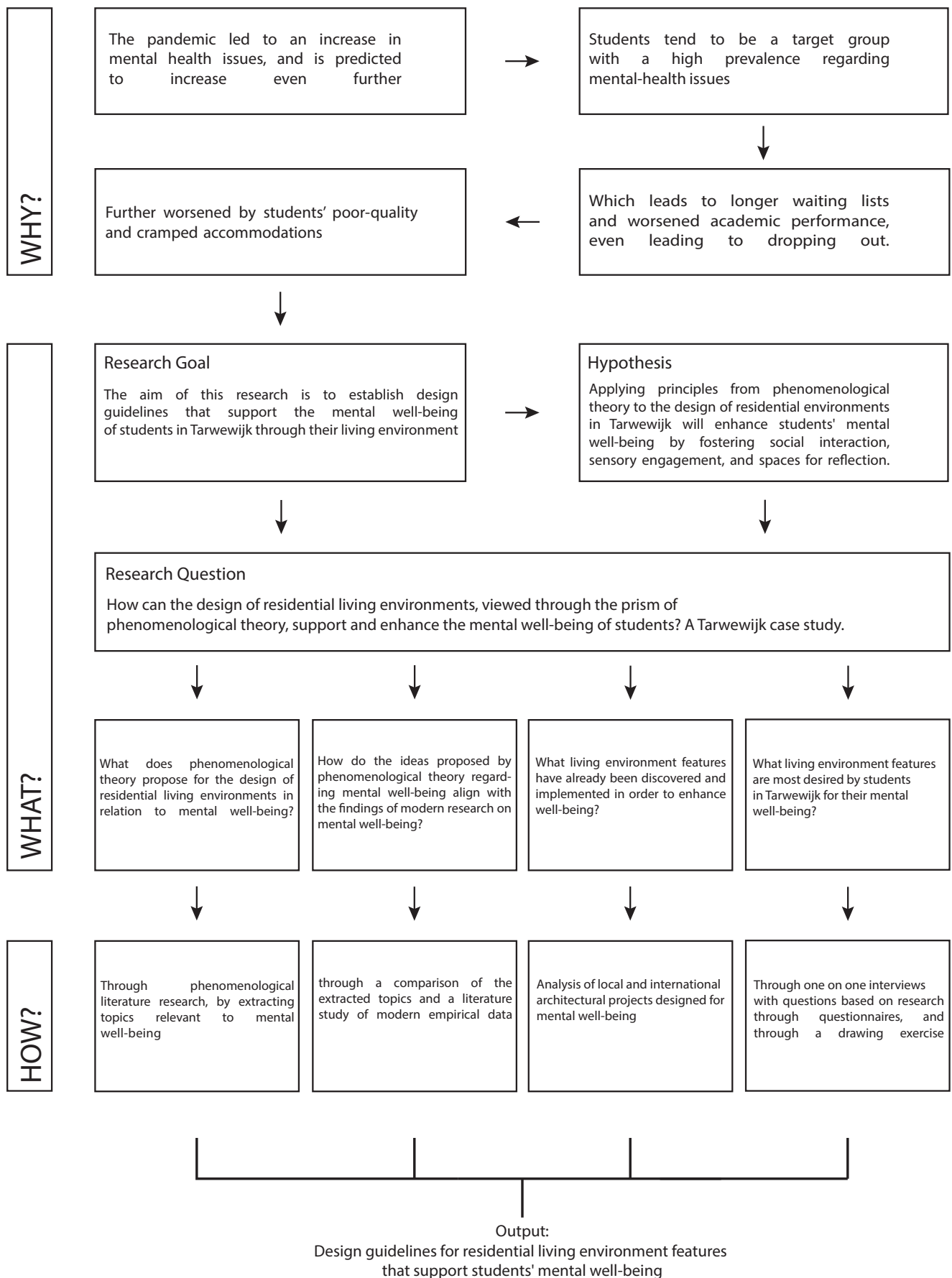


Figure 3:
Research Plan Diagram

CHAPTER 2: PHENOMENOLOGY

What does phenomenological theory propose for the design of residential living environments in relation to mental well-being?

The following part of the research is structured around five main topics, developed through an iterative process of reading and re-reading the phenomenological literature. These topics were identified by carefully coding and grouping recurring themes into coherent categories.

This process was followed by engaging in a textual dialogue with the authors, analysing their perspectives, and synthesizing the insights into a cohesive framework as can be seen in Appendix A. Quotes from the

phenomenological literature are represented by the colour black, whereas all that is written in green are thoughts, reflections, and comments on the quotes.

Through the explanations of their perceptions, the phenomenologists implicitly communicate their understanding of an ideal architecture. The extraction of these understandings, through textual dialogue serves as the foundation of this chapter, upon which this research builds.

2.1 ARCHITECTURE AS A BODY

The notion of architecture functioning as a body itself is mentioned multiple times within the works of phenomenologists, Pallasmaa initially elaborates on how any architecture can be measured and perceived through our own bodies, by defining it through bodily measures.

"I confront the city with my body, my legs measure the length of the arcade and the width of the square, my gaze unconsciously projects my body onto the facade of the cathedral where it roams over the mouldings and contours, sensing the size of recesses and projections; my body weight meets the mass of the cathedral door" (Pallasmaa, 1996, p. 43).

Through defining architecture in bodily measures he highlights how mouldings, contours and weights are, in his view, measurable. Within the same book, a few pages later he utilizes the term of mouldings as a verb, and introduces the idea that this is to be considered good architecture.

"Good architecture offers shapes and surfaces moulded for the pleasurable touch of the eye" (Pallasmaa, 1996, p. 48).

The notion of mouldings and moulded, which are measurable through one's body and pleasurable for the touch of the eye, indicates a certain architectural gentleness. The definition of a moulding implies the covering the intersection between a wall and a ceiling with a material made into a particular shape. This actively suggests the covering of an otherwise sharp geometrical shape, the corner.

"a piece of wood, plastic, stone, etc. that has been made into a particular shape to decorate the top or bottom of a wall, or a door, window, or piece of furniture" (Cambridge Dictionary, n.d.).

To further strengthen the notion that Pallasmaa hints at gentle shapes let us delve into the definition of the verb, to mould. It is the shaping of a soft substance into a particular form, which closely matches the task of a sculptor, one that sculpts. Pallasmaa seems to suggest that good architecture is one that is sculpted for the touch of the eye, round, organic, gentle.

"to shape a soft substance into a particular form or object by pressing it or by putting it into a mould" (Oxford University Press, n.d.)

Zumthor describes his understanding of architecture and how it functions as a covering silk, a touchable body, one referring to gentleness and the other to organicity, strengthening the previously mentioned notion that good architecture is round, organic, gentle.

"That is what architecture means to me and that's how I try to think about it. As a bodily mass, a membrane, a fabric, a kind of covering, cloth velvet, silk, all around me. The body! Not the idea of the body – the body itself! A body that can touch me." (Zumthor, 2006, p. 23)

Possibly, the integration of the architectural shapes of round, organic and gentle, can help towards creating its embrace more gentle for its users.

2.2 ARCHITECTURE AS A SPACE OF REFUGE

Zumthor's notion of a covering architecture, in its intimate sense, is subscribed to by Barragan, as he criticises the way architects integrate openings within their designs.

"Architects all over the world have been mistaken in the proportions which they have assigned to large plate windows or spaces opening to the outside... we have lost our sense of intimate life and have become forced to live public lives, essentially away from home." (Barragan, as cited in Pallasmaa, 1996, p. 51).

It is the lack of indoor intimacy, so impactful that it makes the users of architecture live public lives, away from home. Bachelard very closely mentions the idea of a public life through his definition of foreign commerce.

"Common-sense lives on the ground floor, always ready to engage in "foreign commerce" on the same level as the others, as the passers-by who are never dreamers. To go upstairs in the world house is to withdraw, step by step" (Bachelard, 1958, p. 166)

He states how indeed the ground floor is for interacting with passers-by, whilst the upper floor is a space for withdrawal, this notion that architecture can be designed such that it offers refuge to its user is further elaborated again by Bachelard.

"The house shelters daydreaming, the house protects the dreamer, the house allows one to dream in peace" (Bachelard, 1959, p. 28).

Architecture is more than a shelter for its user, its functions as a refuge for the mental

as well. An ideal breeding ground for dreams, an ideal place for contemplation. These quotes all point at how a certain amount of privacy is considered something to strive for, this notion of architecture as a healthy refuge is further supported by Hertzberger.

"A 'safe nest' - familiar surroundings where you know that your things are safe and where you can concentrate without being disturbed by others -. If you don't have a place that you can call your own you don't know where you stand. There 'on be no adventure without a home-base to return to: everyone needs some kind of nest to fall back on." (Hertzberger, 1991, p. 28)

Whilst contemporary architecture often supports the notion of a shared living condition, the opposite must be taken into consideration as well, Gaston's shelter to dreams and Hertzberger's safe nest to fall back on. However Hertzberger also strongly supports the notion of social interaction within his book lessons for students in architecture, contradicting with other phenomenologists

"We must grasp every opportunity of avoiding too rigid separation between dwellings, and of stimulating what is left of the feeling of belonging together. In the first place this feeling of belonging together revolves around everyday social interaction." (Hertzberger, 1991, p. 54).

Even within the subject of phenomenology the topic of interaction seems to twofold, and supported from both perspectives. There should be both refuge and interaction.

2.3 SOUNDS CREATING AFFILIATION

The quality of spaces are not only defined by their tangible elements, its sounds and noises also elaborate upon its meaning, to such an extent that they can become the binding agent in the definition of the space.

"Hearing creates a sense of connection and solidarity; our look wanders lonesomely in the dark depths of a cathedral, but the sound of the organ makes us immediately experience our affinity with the space." (Pallasmaa 1996, p. 54).

Moreover, this property of sound, as a definer of space, is even more profound. According to Zumthor, sound can also function as the creator of emotions within spaces. Depending on one's association and understanding of the sound, space, and the resulting emotion.

"The sounds we associate with certain rooms, speaking personally, what always comes first to my mind are the sounds when I was a boy, the noises my mother made in

the kitchen made me feel happy. If i was in the front room I always knew my mother was at home because I could hear her banging about with pots and pans" (Zumthor, 2006, p. 29).

Architecture can be designed such that it hones the creation of positive emotions through the user's association of space and sound. With careful surveying of future users, followed by architectural programming this can be achieved.

"There are buildings that have wonderful sounds, telling me I can feel at home, I'm not alone" (Zumthor, 2006, p. 33).

This sensation of home, being instigated solely through the associated sounds, is what architecture should indeed strive for. Understanding these sounds followed by their integration can elevate the healing capabilities of architecture to a new standard.

2.4 STIMULI CONTROLLED ARCHITECTURE

Zumthor and Pallasmaa clearly state how architecture should be more sensory, and with this integrate more sensory related aspects, however they also mention how this can be exaggerated to an extent where it influences the user negatively.

"An efficient method of mental torture is the use of a constantly high level of illumination that leaves no space for mental withdrawal or privacy" (Pallasmaa, 1996, p. 51).

Mental withdrawal in this case is not sustained by the level of illumination, suggesting the opposite is true, not necessarily a lower level of illumination, but rather a lower level of stimuli, one that does not constantly require attention and preoccupation.

"Good architecture should receive the human visitor, should enable him to experience it, and live in it, but it should not constantly talk at him" (Zumthor, 1998, p. 33).

A certain tranquility is suggested within this passage, it mentions the importance of architecture not constantly being in dialogue with the human visitor, which seems again to point at an architecture where stimuli are carefully considered.

"If we look at it intimately, the humblest dwelling has beauty... a primitiveness which belongs to all, rich and poor alike, if they are willing to dream." (Bachelard, 1958, p. 26).

The notion that a simple architecture has beauty and moreover, can offer mental withdrawal, is interesting to explore. It is clear that these words do not directly point at a minimalist architecture, because a dialogue with the user still has to be maintained, however the words within this dialogue have to be carefully taken into consideration. The implantation of stimuli within architecture must be done with precaution.

2.5 OBJECTS WITHIN ARCHITECTURE

This careful dialogue with the user can be achieved through their personal objects and items, by creating an architecture that can house it, and display it, such that it creates a sense of orderliness and forethought.

"Beautiful objects, beautiful books, all displayed, and instruments too... it all made a great impression on me ... And I got to wondering whether the job the architecture had set itself here was to create these receptacles to house objects." (Zumthor, 2006 p. 37).

The goal is to create an architecture that limits the stimuli such that they continue to offer mental refuge, while also offering its user a sense of beauty. Personal items and objects can offer both, as they can, unlike architectural elements, be positioned and moved constantly.

"In the wardrobe there exists a center of order that protects the entire house against uncurbed disorder. Here order reigns, or rather, this is the reign of order" (Bachelard, 1958, p. 101).

Architectural elements made for the storage of objects prevent disorder, but this does not

imply solely wardrobes and shelves, it goes much further than that.

"Containing capacity - the capacity everywhere - where you can put things - when you are cynical you can say everything where you get dust on it." (Hertzberger, 2024, see Appendix B).

The specific areas within architectural space, dedicated for the housing of objects, that can create a sense of beauty and have a great impression on the observer, suggests the mental might be improved with the integration of such architectural consideration

"Your computer, an external memory, a box that keeps the things that belong to you, that is in space, very important." (Hertzberger, 2024, see Appendix B).

Personal items that evoke a sense of belonging, create an impression, and are considered beautiful, are relevant in architectural discourse. If the designer of spaces takes this insight into consideration and integrates it within their work, it might assist in the improvement of its users mental well-being

CHAPTER 3: EMPIRICAL STUDIES

How do the ideas proposed by phenomenological theory regarding mental well-being align with the findings of empirical research on mental well-being?



Figure 4:
Chapter 3 and its representative titles

3.1 ORGANICNESS, ORGANISM, TEXTURE

In line with the notion of Pallasmaa's moulded surfaces and Zumthor's understanding of architecture as a bodily mass, a recent study conducted by psychologists Strachan-Regan & Baumann (2024) studied the impact of room shapes. 35 participants were placed in a virtual environment where they were exposed to two distinct rooms, a curved room and a rectangular room. The results showed a positive affect for the participants within the curved room, furthermore the curved room showed lower heart rate and, on average, the participants had a higher creative output, (Strachan-Regan & Baumann, 2024)

Continuing with the notion of architecture as a body, Zumthor also mentions it as "*a fabric, a kind of covering, cloth velvet, silk*" he also consider its skin, its texture. A study conducted by Wang, et al., (2020), involving researchers in architecture, environmental psychology, and building science, researched the influence of textures on perceptual spaciousness of indoor space. Interestingly enough, they discovered that each of the rooms with a textured wall was perceived to be significantly smaller than the control room, which had no texture whatsoever, only simple white walls. This research points at the possibility that a smooth texture might be preferred over any other in order to give rooms a more spacious feeling.

This same study also concluded that within a smaller room, the textures of walls have a stronger impact on the perception of space,

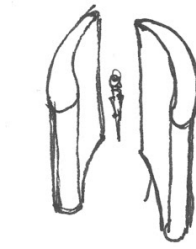
because the details can be seen better from close by. This is relevant for students, as a study conducted in Italy during the COVID-19 lockdown found that university students living in cramped accommodations experienced a higher prevalence of depressive symptoms.

Zumthor's understanding of architecture as the body itself, refers to the organic as well, the presence of an organism. From this perspective, a study in environmental and public health by (Zhang et al., 2022) has proven how indoor plants can lead to reduced blood pressure, and can even lead to increased academic achievement.

Furthermore, Zumthor also mentions how this body is all around him, something empirical studies suggested to have a positive impact. A study in environmental psychology and public health by Braçe et al. (2020) proved how people with a green window view from their home had a significantly lower risk for anxiety and depression, further supporting the idea of architecture as a body, an organic being, can be beneficial for one's well-being.

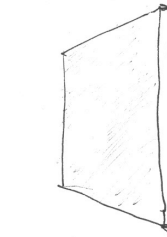
This is further supported by a study in psychology and environmental science by Repke et al. (2018) a study which found that exposure to nature from home, alongside accessibility to nature from home, improved well-being and health as well as lower depression and anxiety.

A curved room causes positive affect, lower heart rate and on average a higher creative output.



CURVED
INTERIOR
WALLS

Rooms with textureless walls are perceived as larger than rooms with walls with texture, smaller rooms accentuate this perception. Cramped student accommodations lead to higher prevalence of depressive symptoms.



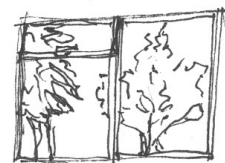
SMOOTH
INTERIOR
WALLS

Indoor plants can lead to reduced blood pressure and can lead to increased academic achievement.



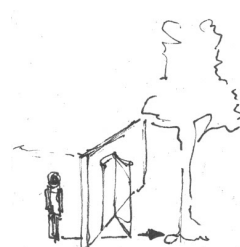
INDOOR
PLANTS

Green window views from home is correlated with a significantly lower risk for anxiety and depression.



GREEN VIEW
WINDOWS

Accessibility to nature from home leads to improved well-being, health and lower depression and anxiety.



ACCESSIBLE
GREENERY

3.2 PRIVACY & INTERACTION

Bachelard argues how the house shelters daydreaming, and how its ground floor is where “foreign commerce” happens with passers-by who are not dreamers. Suggesting non-dreamers affect the daydreamer.

Psychologists Reavey et al. (2019) examined how the design of psychiatric spaces affects patient experience, and found that single rooms allowed patients to withdraw from the social environment when needed, providing a sense of control over their interactions and contributing to feelings of safety.

Hertzberger supports this exact notion by stating everyone needs a “safe nest” to fall back on, a familiar and safe surrounding, where one can concentrate without being disturbed, because without one “you don’t know where you stand”

Psychologists Baum and Valins (1977) identified a number of factors that contributed to feelings of helplessness among students living in the corridor-design dormitories such as having to share communal areas such as bathrooms, study rooms and lounges with large numbers of students, inability to regulate social interaction on their floor, and failure to withdraw from unwanted interactions.

Important to note is that modern day student dormitories in the Netherlands nearly always have solely single rooms unlike psychiatric spaces. Furthermore, the paper of Baum and Valins (1977) measured student dormitories of 34 students which all share the same communal space.

Hertzberger’s notion of a place where one can concentrate without being disturbed seems to be supported by acoustics and environmental design researchers Torresin

et al. (2022). Their study investigated indoor soundscapes at home during Covid 19 and found that a lower number of people at home was correlated with increased comfort.

Hertzberger’s other statement, that architecture should avoid rigid separation between dwellings, and stimulate the feeling of belonging together can also be confirmed by empirical studies.

Psychologists Easterbrook and Vignoles (2015) examining UK university accommodations found that physical design features promoting the use of communal areas, such as the presence of shared common rooms and the absence of en-suite bathrooms, significantly increased the likelihood of coincidental encounters among students. These unplanned meetings were, in turn, associated with stronger interpersonal bonds and enhanced feelings of well-being.

Further supporting this notion, education and psychology researchers Brown et al. (2019) found that students living in communal, corridor-style accommodations, where shared spaces encourage social interaction and privacy barriers are minimized, tended to achieve higher academic outcomes than those residing in more isolated, apartment-style units featuring multiple locked doors and few common areas.

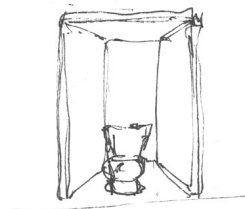
These studies seem to support both perspectives, architecture should offer both refuge and foster interaction, however it is important to note, that refuge is supported rather in its fundamental definition, it should offer privacy so one can feel comfortable and secure, by implementing single rooms and avoiding large student clusters in dormitories.

Communal spaces significantly increase the likelihood of coincidental encounters among students, associated with stronger interpersonal bonds and enhanced feelings of well-being.



COMMUNAL
ROOMS

Communal bathrooms significantly increase the likelihood of coincidental encounters among students, associated with stronger interpersonal bonds and enhanced feelings of well-being.



COMMUNAL
BATHROOMS

3.3 SOUND & NOISE

Pallasmaa and Zumthor both support the notion that sounds can make one feel an affinity with space. According to Zumthor it can even make one feel at home. This does not only have to apply at the scale of the dwelling, it can be within the immediate context as well.

Buxton et al. (2021), researchers in ecology and public health, highlight that bird sounds have notable benefits for mental health, stating that “bird sounds had the largest mean effect size for stress and annoyance” and contributed significantly to creating restorative acoustic environments (p. 3).

Additionally, the authors emphasize that bird songs “restore attention, enhance mood, decrease perceived stress, and increase the familiarity and pleasantness of a soundscape” (p. 3). These findings underscore the unique role of bird sounds in promoting psychological restoration and improving health outcomes.

The restorative properties of such sounds can be activated and utilised by fostering spaces

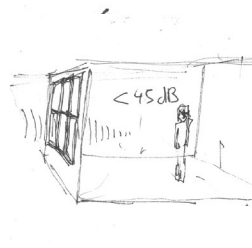
specifically for birds nearby architecture.

Zumthor explicitly states his memory of sounds that made him feel at home were solely from a personal perspective, likely the idea of affinity creating sounds, is to some extent also subjective. to an extent that people might consider sounds that do not make them feel at home, as Zumthor suggested.

In a study performed by Torresin et al. (2022) increased comfort was correlated to the availability of a quiet side within their dwelling, which is defined by Öhrström et al. the least exposed façade with an exposure level below 45 dB LAeq,24h

acoustics and environmental design researchers Torresin et al. (2022) also suggested how people that have access to a quiet side within their dwelling perceive the acoustic environment as more comfortable in relation to both relaxing and working at home.

Having access to a quiet side within one's dwelling leads to perceiving the acoustic environment as more comfortable in relation to both relaxing and working at home.



QUIET
SIDE

Bird songs restore attention, enhance mood, decrease perceived stress, and increase the familiarity and pleasantness of a soundscape.



BIRD
FRIENDLY
TREES

3.4 LIGHTS, COLOURS, TEXTURES

an architecture that offers mental withdrawal, as mentioned by Pallasmaa, and an architecture that does not constantly talk at its user, seem to suggest a certain calmness and serenity.

A study conducted by interior design and architecture researchers Yildirim et al. (2011) placed 290 undergraduate students from Turkish universities in a virtual environment in order to find the effects of interior colours on moods. The findings were that the use of cool colors such as blue and green, characterized by their shorter wavelengths, evoke feelings of calmness, spaciousness, and restfulness. Given the participants of this study were all students, the results are of great relevance.

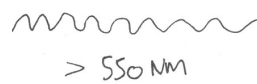
Pallasmaa considers the constant level of illumination so bad as to call it mental torture, but empirical studies seem to contradict with this statement. Landscape architecture researchers Morales-Bravo and Navarrete-Hernandez (2022) studied the relation

between natural daylight and perceived happiness, and sadness. Out of the living-dining room, kitchen, bathroom and bedroom all presented benefits when increasing its received direct sunlight, however the living-dining room had the strongest influence on perceived happiness.

Bachelard mentions how even the humblest dwelling has beauty, and how its primitiveness belongs to all of us. this primitiveness aligns with the same study conducted by Navarrete-Hernandez (2022)

This study suggested that stucco and wood wall finishes were beneficial to perceived happiness due to its reflection and absorption of daylight indoors. Connecting this with the previous mention of textures, where smooth walls gave the perception of the largest space, perhaps this primitiveness, reflected within design choices, does indeed belong to us all.

the indoor use of cool colors such as blue and green, evoke feelings of calmness, spaciousness, and restfulness.



COOL
INDOOR
COLOURS

Increased direct sunlight in living-dining room has strongest influence on perceived happiness.



LARGE
WINDOWS
LIVING
ROOM

3.5 OBJECTS & CLUTTERING

Hertzberger mentions a computer hard drive as box that keeps the things that belong to someone, and mentions the relevance of this in space. Places that keep things that belong to someone. Empirical research does support the notion that these personal items are of relevance.

A study conducted by industrial design researchers Li et al. (2020) Proved how mementos, such as photos, souvenirs, and heirlooms, act as effective memory triggers, facilitating personal reminiscence and storytelling. These objects help recall meaningful life events and connections, thereby supporting psychological well-being. Sharing mementos promotes social interaction and storytelling, fostering relational intimacy and strengthening bonds among individuals.

Bachelard mentions how the wardrobe protects against uncurbed disorder and is the centre of order, something also mentioned of great relevance by empirical studies, such as the study conducted by psychologists Dao & Ferrari (2020) which researched the notion of clutter; the overabundance of possessions can lead to disorderly living spaces. They proved that In workspaces, cluttering has a negative effect on health and performance

by interfering with task performance and contributing to emotional exhaustion and stress.

However, it is also important to mention how the perception of objects is ultimately subjective, like Zumthor mentions in his home visit where the all the books and objects made a great impression on him.

The idea that this impression is solely subjective is proven by a study conducted by environmental psychologists Rogers & Hart (2021), they state that when people perceive their homes as orderly and aligned with their personal identity, they experience heightened positive emotions, a sense of accomplishment, and greater freedom to focus on meaningful activities. Conversely, clutter that disrupts one's capacity to express self-identity within the home environment is linked to diminished well-being.

Zumthor refers to furniture for storing objects as receptacles, Perhaps architecture should integrate such "receptacles" such that these can offer the beneficial capabilities of objects, as opposed to the more general ledges and edges proposed by Hertzberger.

Cluttering has a negative effect on health and performance, contributing to emotional exhaustion and stress. Furniture might help avoid disorderly living spaces.



FURNITURE
FOR
OBJECTS

CHAPTER 4: CASE STUDIES

What living environment features have already been implemented within architectural projects in order to enhance well-being?

The following part of this research consists out of an analysis of four different architectural projects. Each of the projects were chosen due to their implemented architectural features regarding mental well-being, and because all of them are designed for students

The Tietgenkollegiet confronts the notion of architecture as a refuge, because of both its communal and private spaces.

Student housing 912 delves into the concept of a architecture as a body, in its organic sense, due to the implementation of greenery

Placidus student welfare spaces also bring forth the notion of architecture as a body, however this is more through its textural and geometric sense.

Variowohnen Wuppertal also discusses the notion of architecture as a refuge through the implementation of its communal spaces.

The projects' design choices are analysed through text and figures and connected to previously discussed notions and research findings.

4.1 TIETGEN DORMITORY

Student Residence, Copenhagen, 2006

The building volume of the Tietgen dormitory consists of a large circle with in its centre a courtyard. This courtyard can be accessed from the ground floor via open passages.

On each floor the student dwellings are grouped in groups of 12, each with their own communal area and kitchen which can be seen in Figure 5, an interesting implementation is that the student dwellings are placed facing outwards, whilst the communal kitchens face inwards to the courtyard, in order to be connected with the other students within the residence.

The testimony of a student named Nicholas goes as follows: "You feel a sense of community across the kitchens, not because you necessarily know them, but because you can see them across the circle. If I see a big party somewhere in the house, I can easily go over there. You feel welcome everywhere in the house."

This interaction from kitchen to kitchen across the courtyard is very closely related to the notion of "foreign commerce" as proposed by Bachelard, something which is engaged by the "common sense".

The corridor used to access the student dwellings functions as a threshold between the private dorms and the social kitchens, providing the students with the possibility of choosing between the two. Furthermore, this corridor does not have an end, due to the building's circular shape, therefore there is no hierarchy between the student dwellings.

The possibility to withdraw to the bedroom from the communal spaces. due to a clear corridor threshold, is what activates Hertzberger's notion of a "safe nest".

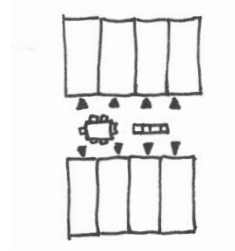
The floorplan of the individual dwelling as can be seen in Figure 6, also has a few interesting integrated design elements, firstly the dwelling has a core, consisting out of a bathroom with a shower, which functions as a dividing element, the extending shower cuts the dwelling into the entrance area and the living area. Another point to note is the rounded corners of the shower, and the high degree of flexibility when furnishing the interior space.

Using this project as a reference we can create a few design guidelines, firstly, the grouping of student dwellings alongside a communal kitchen, because these smaller groups allow for easier and more direct connections, and promotes the use of communal areas, this nudging of utilising communal spaces been proven to be beneficial by Easterbrook and Vignoles (2015)

Secondly, the different communal spaces should have some sort of visual connection between them, in order for the entire student residence to be perceived as a whole, as a community.

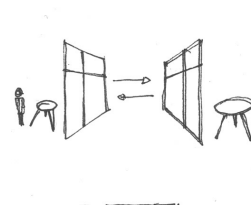
Lastly, avoiding hierarchies between the student residences, in order to avoid dorms that are "hidden" away from the communal spaces and functions.

Grouping allows for easier and more direct connections between students.



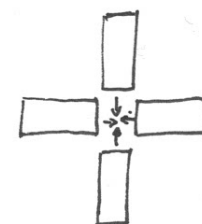
GROUPING
STUDENT
DWELLINGS

Visual connection between communal spaces can create a sense of community for the student residence.



VISUAL
CONNECTION
BETWEEN
COM. SPACES

Equal distances to communal spaces avoids the sensation of being hidden away compared to other students.



EQUAL
DISTANCES
TO
COMMUNAL
SPACES

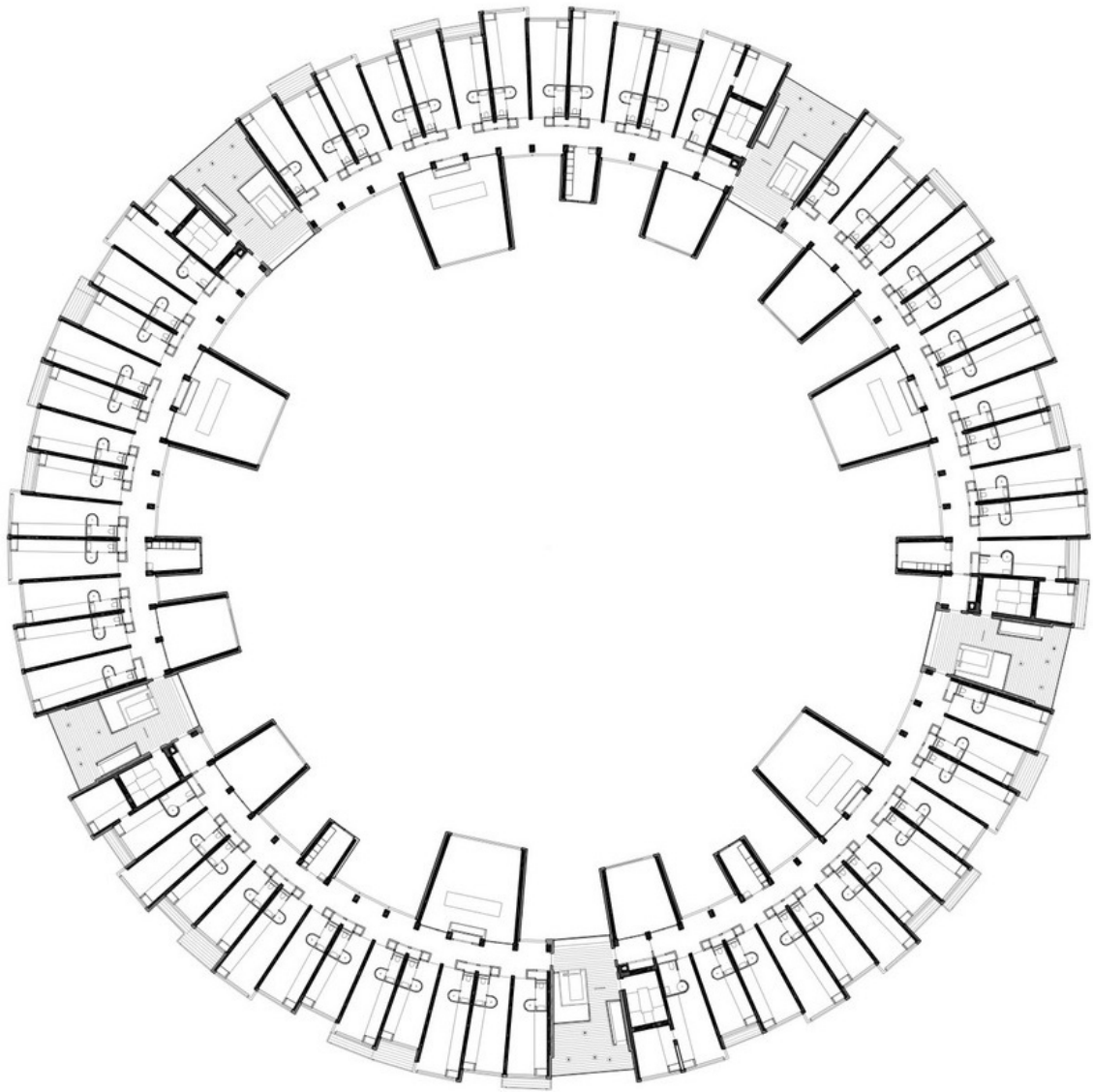


Figure 5:
Tietgen dormitory floorplan

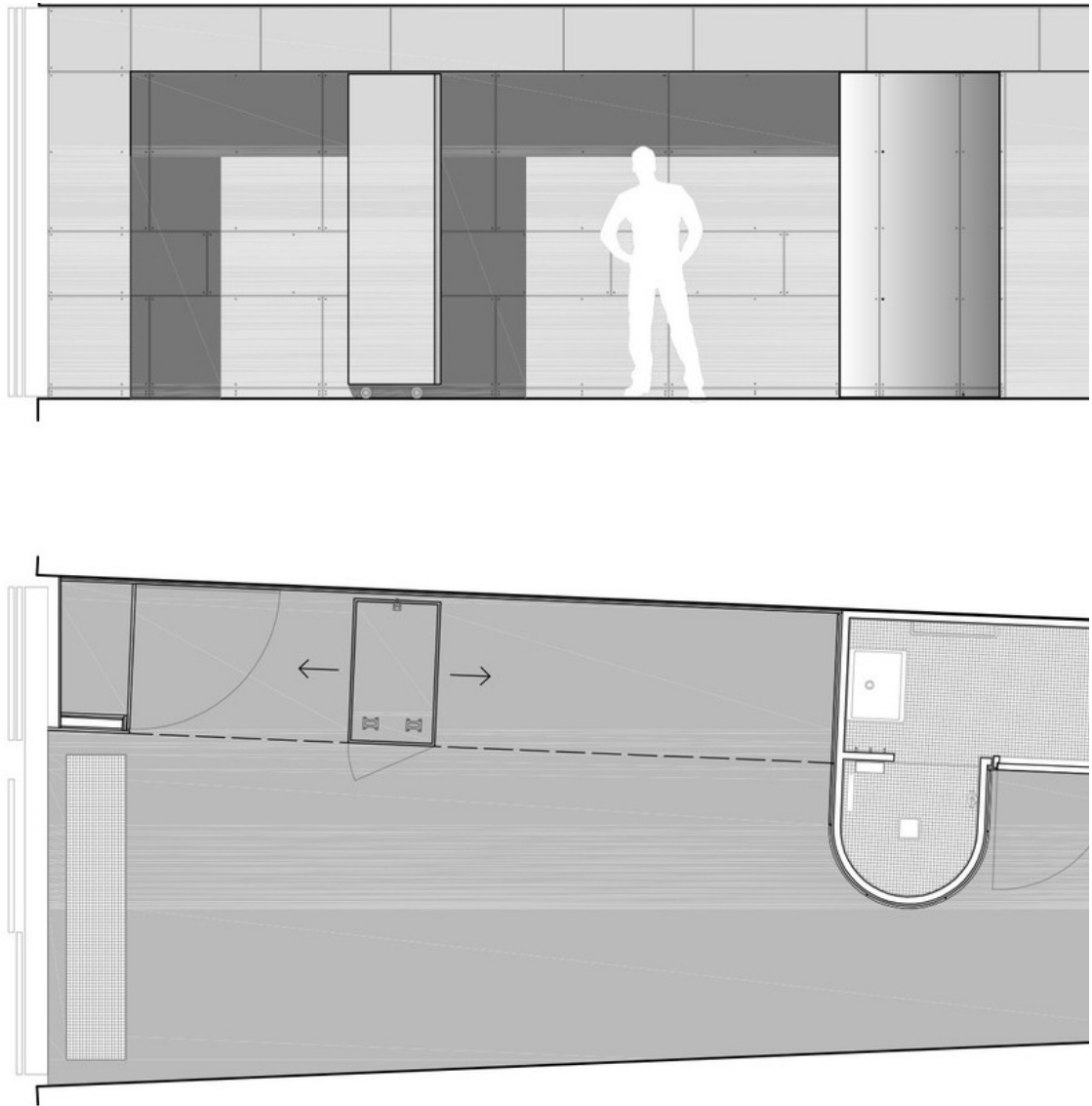


Figure 6:
Tietgen dormitory individual dwelling

4.2 STUDENT HOUSING 912

Student Residence, Barcelona, 2011

This project consists of student dorms designed for architecture students attending the Vallès School of Architecture. The building volume consists of two rows of dwellings with in between them a courtyard, as can be seen in Figure 7. Unlike the previous project this project does not group the studios together into a specific quantity. The ground floor also has some of the dwelling volumes dedicated specifically for communal functions.

Furthermore, this project, instead of having communal kitchens, consists of studio spaces with integrated kitchens, where the interaction of students is supposed to take place within the courtyard.

The design of the individual dwelling and its relation to the courtyard is what makes this project relevant in terms of mental well-being, firstly all dwellings are accessed through the courtyard. The ground floor dwellings are accessed directly from the courtyard whereas the first floor dwellings are accessible through gallery walkways encompassing the courtyard. Because of the courtyard being densely populated with greenery it forces the dweller to promenade through or around it, essentially activating the previously found beneficial factors of greenery for mental well-being.

At the level of the individual dwelling, it is clear how, like the Tietgenkollegiet, there is a core with the bathroom and in this case a kitchen as can be seen in Figure 8. This core seems to be the only element that is fixed in place, aside from this the entire dwelling is flexible to be designed however the user wishes to. The architecture firm of this project seems to insist on this design aspect stating that “the residency program

for architecture students allows to imagine deep relationships between users, both individual, due to the housing unit flexibility, and collective”

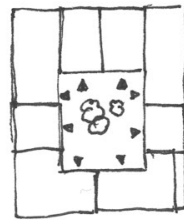
The dwelling itself also has plenty of sunlight, the courtyard facing window spans from the floor to the ceiling. There are two outwards facing windows which can each be opened to access the brise soleil keeping the vertical greenery fence in place, where potted plants can be placed. Even if the choice of these design elements likely were put in place due to the climate of the project's location, they are relevant for mental well-being as well. As the vertical greenery fence ensures the presence of greenery when looking out the window, shown previously in this research as being beneficial.

From this project a few design guidelines can be created, firstly, the presence of a courtyard, with greenery, which can also serve as a space for social activities, as seen also in the Tietgenkollegiet, this implementation can turn a student residence into a student community. if easily accessible and visible from the individual dwelling, it can lead to improved well-being as suggested by Repke et al. (2018)

Secondly, designing dwellings that are accessible only through the courtyard, in order to have to walk through the greenery, ensures it is indeed easily accessible.

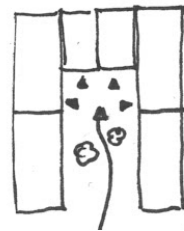
Lastly, the design of dwellings should permit students to express themselves and create spaces comfortable to their interpretation. This can be done by solely providing them with a predefined core of bathroom and shower, as also present within the Tietgenkollegiet.

A courtyard with greenery can function as a space for social activity and restoration for students.



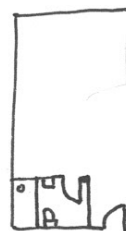
PRESENCE
OF
COURTYARD

An access system starting by walking through the courtyard stimulates interaction with greenery.



ACCESS
FROM
COURTYARD

Student rooms should be flexible for individual interpretation and design as this can make the space more comfortable for the student.



FLEXIBLE
INTERIOR
SPACES



Figure 7:
Student housing 912 floorplan

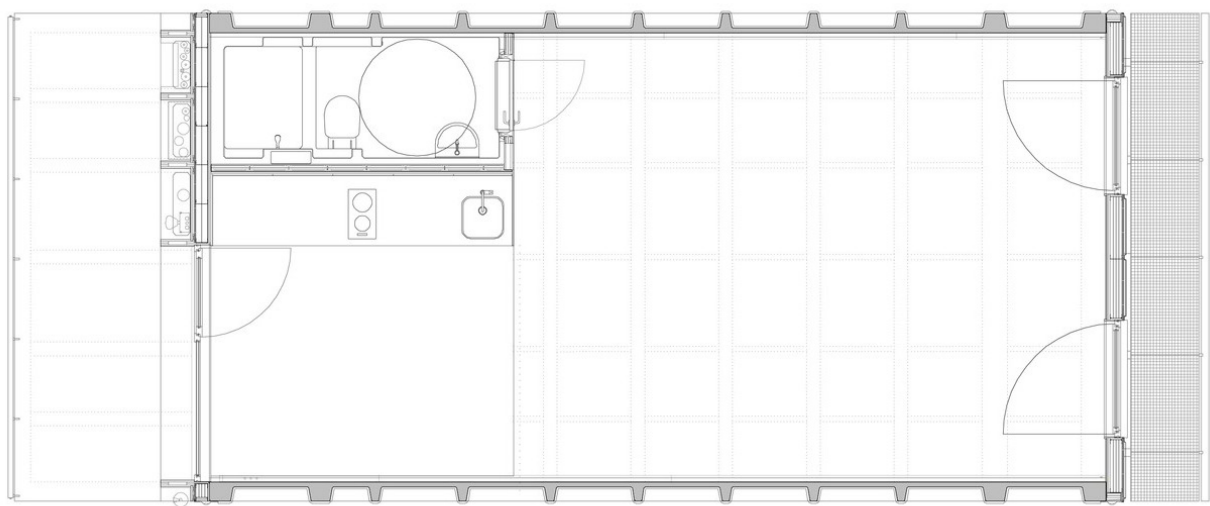


Figure 8:
Student housing 912 individual dwelling

4.3 PLACIDUS STUDENT WELFARE SPACES

Student Welfare Spaces, Melbourne, 2023

This project is a transformation of a building on campus into student welfare spaces, as a response to the increase in mental health issues post-pandemic in Australia. The resulting project consists of office spaces for university counsellors, meeting spaces, and a large communal space for students to relax and contemplate.

The floorplan of this project can be seen in Figure 9, where it becomes evident how the office spaces and meeting spaces are positioned on the edges, whilst the communal space is carefully positioned in the centre, functioning as a core.

The architecture firm implemented some design features to create a relaxing environment and make students feel more comfortable to chat to a staff member, the communal space for example has a kitchenette and a kitchen island bench, to provide a visual association with how students may relate to their homes. The architecture firm wanted to create a “home away from home”

Another interesting feature is how even the communal space provides the students with the possibility to withdraw from the larger space, in Figure 9, number 16 and 17 are both

slightly hidden away, which is interesting, they provide refuge within a socially intended space.

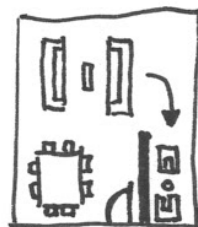
The entire project also uses smooth corners and textures throughout all the spaces, it seems to be a fundamental aspect of its design. The firm itself, elaborates upon this idea and states how this softens the space and creates moments of physical softness.

The project also makes use of a single tone of colours through the spaces. In order to create a sense of material cohesion.

From the discussed aspects of the student welfare spaces, there are a few elements that can be used and transformed into design guidelines, firstly the possibility to withdraw from communal spaces into slightly more intimate subspaces, as shown in this project, providing the students with a sense of control over their interactions and feelings of safety, which was proven beneficial in the context of psychiatric wards before by Reavey et al. (2019)

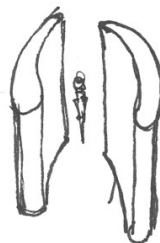
Secondly the usage of curved interior spaces to achieve this physical softness, strengthens the existing guideline of curved interior walls, the implementation of it in this project, highlights how the architecture firm supports this same notion.

the possibility to withdraw from communal spaces likely provides students with a sense of control over their interactions and contributing to feelings of safety.



WITHDRAWAL
POSSIBILITY
COMMUNAL
SPACES

Interior curved shapes and forms create a softness, a sense of physical softness.



INTERIOR
CURVED
SHAPES

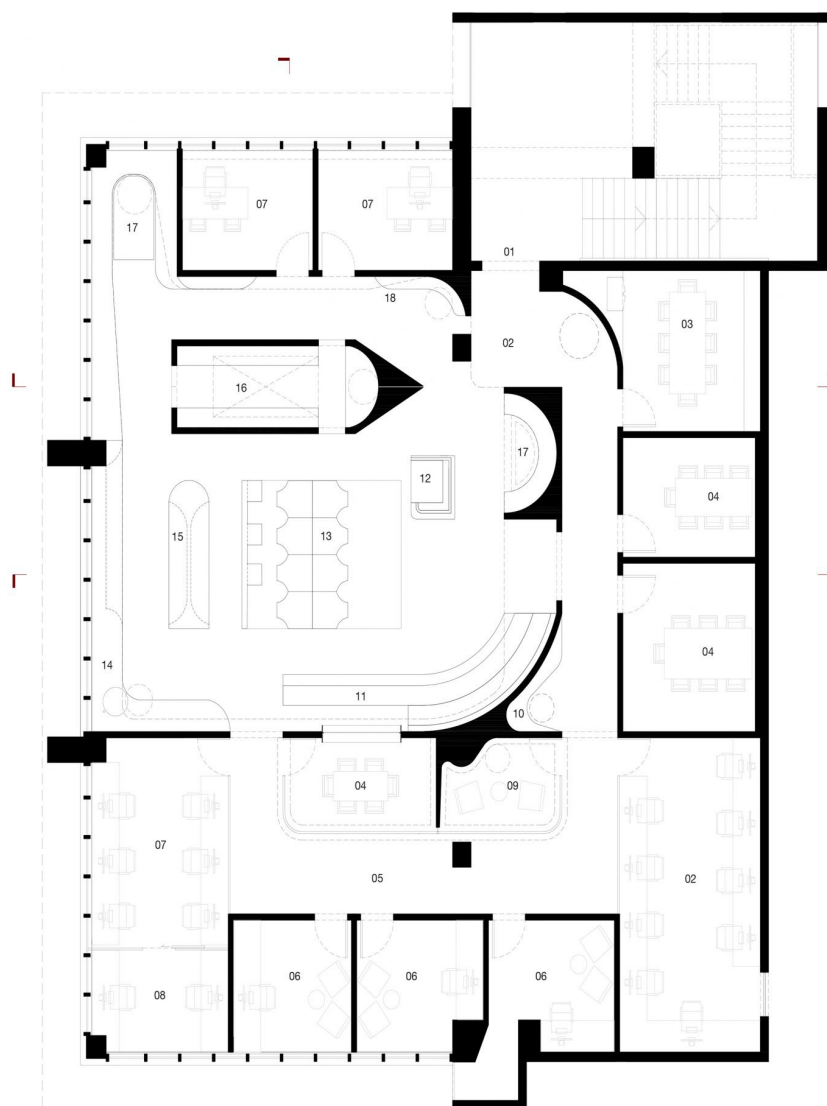


Figure 9:
Student welfare spaces floorplan



Figure 10:
Interior of communal space

4.4 VARIOWOHNEN WUPPERTAL

Student Residences, Wuppertal, 2020

This project consists of five buildings each made to house students, the total student dormitories add up to 132. Four of the building volumes are rectangles, with the fifth and biggest volume being a square. These volumes are connected by means of walkways, which are bordered by greenery. In front of each of the volumes is a garden which the students are responsible for taking care of.

The project was made such to fit the “Zukunft Bau” research initiative launched in 2015 by the Bundesministerium für Umwelt, Naturschutz, Bau und Reaktorsicherheit (BMUB). With its goal being the easing of the housing market and offering of affordable housing. Their standards state a dwelling should be at least 14m² and not exceed 20m², with each dwelling having access to a communal space of 30m².

It is this communal space and its implementation that is interesting within this project. In Figure 11 the floorplan of rectangular volume can be seen and how the dwellings within it have access to the communal kitchen. The kitchen is essentially the corridor which is used to access the apartments, unlike the Tietgenkollegiet, where the corridor is a separating element between the kitchen and apartments. What also can be seen is how the dwellings are once again grouped, in this case in groups of 4 and 2 in plan.

Figure 12 shows the floorplan of the square volume and how this is subdivided. Most likely

the dwellings are clustered in groups of 3 when referring to the communal kitchen, it is interesting to note how in this case however, some corridors are solely corridors and do not function as a communal space as well.

Whilst this project was not necessarily designed for mental well-being purposes, it does implement design elements that function as such, and can therefore be translated into design guidelines. Firstly the presence of greenery that not only statically stays in one place, but requires active maintenance or supervision from students, could be beneficial for the students' mental well-being, especially if easily accessible and visible from their dorms as proven by Repke et al. (2018).

Secondly, the grouping of student dwellings together in a smaller quantities might be recommended as well, unlike the Tietgen dormitory, this project limits its grouping to 4 dwellings per communal kitchen, much more manageable as compared to 12, in order to avoid the same sensation of helplessness as research by Baum and Valins (1977)

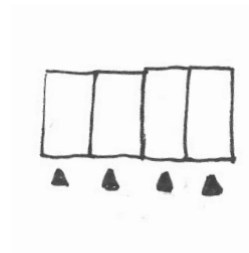
Lastly, the guideline of each dwelling having access to a communal space of approximately 30m² proposed by the BMUB seems a realistic standard, which likely maintains the proportion of between private and collective. Offering the students plenty of space to interact with each other and providing them with the possibility to improve their interpersonal bonds (Easterbrook and Vignoles 2015)

The presence of a community garden can nudge the students into communal maintenance and increases the presence of overall greenery.



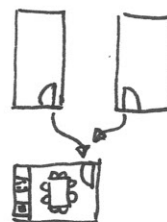
COMMUNITY
GARDEN

Smaller groupings of around 4 student dwellings avoids sensations of helplessness as compared to larger ones.



DWELLING
GROUPING
OF 4

Increases the chance of interpersonal bonds between students and enhanced feeling of well-being.



30 M2
COMMUNAL
SPACE

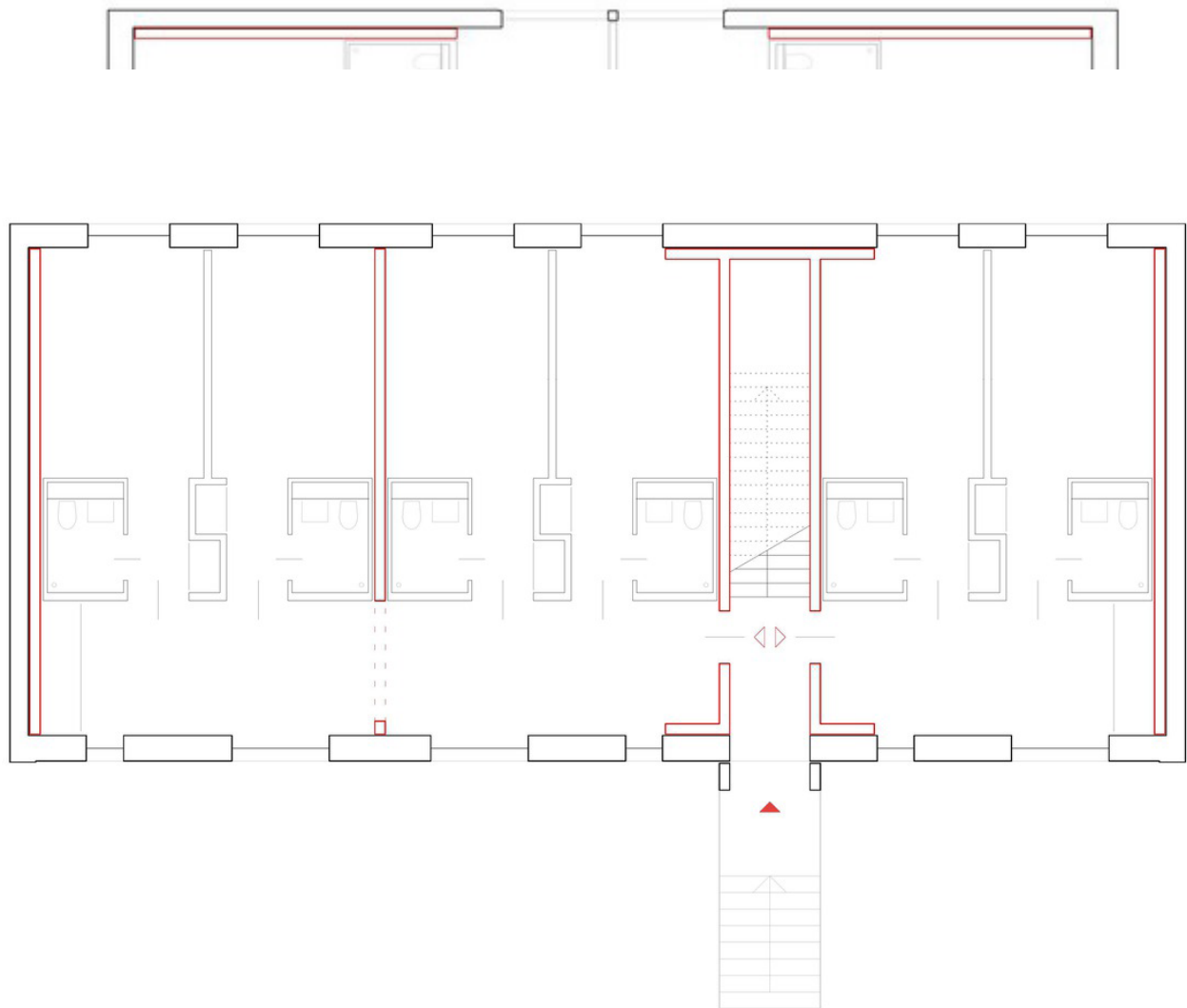


Figure 11:
Variowohnen Wuppertal floorplan square building

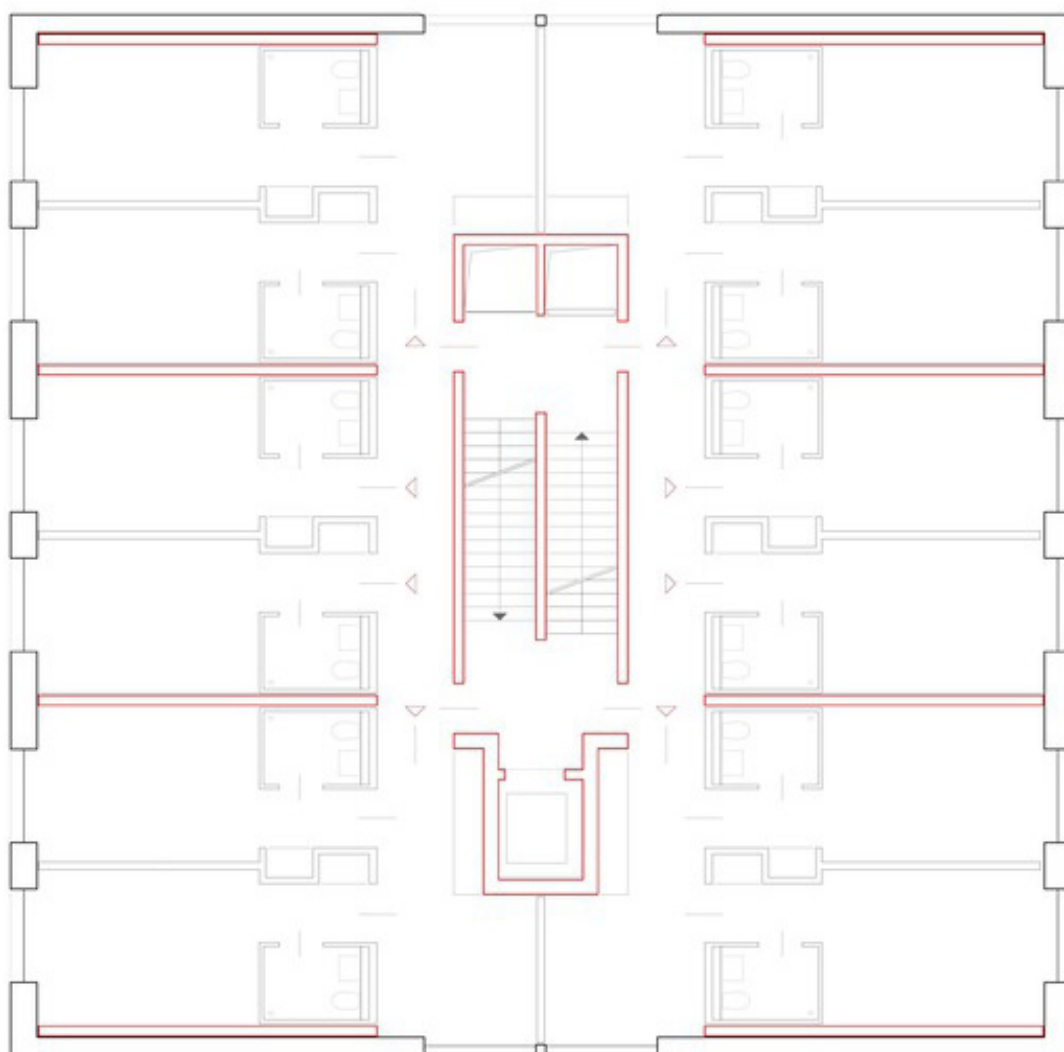


Figure 12:
Variowohnen Wuppertal floorplan rectangular building

CHAPTER 5: STUDENTS

What living environment features are most desired by students within the Netherlands, for their mental well-being?

5.1 INTERVIEWS

The interview part of this research was distributed as a questionnaire through digital means, to students within the Netherlands. 20 students in total answered the questionnaire. All of the questions and answers can be seen within Appendix C. For this chapter of the research, the answers from the open questions are grouped into themes, and discussed.

Students were initially asked what aspects of their living space they think contribute positively to their mental well-being. There was one theme that was mentioned multiple times, namely the notion of privacy, and interaction, some of the responses were:

“Privacy and Independence”, “People around”, “Having a private space (your own room that you don’t share that you can close off) but as well the social aspect is great”, “Socializing”

With one of the respondents suggesting how these two opposing elements could potentially coexist: “I enjoy that i can have my own privacy (my bedroom) while having the chance to socialize as well (in the common space)”

The students’ preferences for mental well-being seem to align with the concepts of phenomenologists. Hertzberger’s idea of stimulating what is left of the feeling of belonging together, whilst at the same time protecting the dreamer as proposed by Bachelard.

The students were also asked what they would improve or change in their bedroom to better support their mental well-being. For this question the respondents again hinted at the notion of architecture as a refuge, with some of the responses being:

“the most important thing would be to make it soundproof (no sounds from the rest of the apartment should be heard)”, “The walls are poorly isolated and let through sound”, “quieter walls”, “Soundproof walls”, “the sound insulation”

The respondents talk about wanting a quieter room, something that not only aligns with the phenomenological theory of refuge but also the previously mentioned study Torresin et al. (2022), discussing the increase in comfort in regards to the availability of a “quiet side”.

For the same question students also mentioned the importance of light, with some of the answers being: “Big windows with natural light”, three mentions of “Light”, “natural light”, “More windows”

Even though these responses contradict with phenomenological theory, they do sustain the previously mentioned study of Morales-Bravo and Navarrete-Hernandez (2022) where an increase in indoor natural daylight was associated with perceived happiness. Meaning the existing guideline of “large windows living room” should be adjusted to also take into consideration the same for bedrooms.

For the following question students were asked what they would improve or change in their communal spaces to better support their mental well-being, some of the responses were: “Make them more Spacious”, “More space”, “but a bigger and more visually pleasing place would be nicer.”, “Size”

These responses display how students appreciate larger communal spaces such as the ones implemented within the Tietgenkollegiet project, strengthening the guideline of a 30m² communal space.

For the same question students also answered: "more plants", "More house plant would be nice", "Connection to the garden (or nature)"

The idea that the communal spaces should have indoor plants, or some connection to nature, both strengthens the existing guideline of indoor plants, and accessibility to nature.

Students were also asked what they would improve or change within their immediate surroundings, to better support their mental well-being. Some of the responses were as follows:

"More green spaces.", "Greeny but organized, make sure it is taken care of, and people actually enjoy sitting there - we have a green court yard but it's so wild and dirty nobody goes there.", "I would add more plants", "Greenery", "more greenery", "A garden, maybe a park as well"

These responses alongside the previous responses of having greenery within the communal spaces, hint at the phenomenologists' theories of architecture as a body, and how its organicity is indeed appreciated. Furthermore these answers strengthen the existing guidelines of a communal garden and courtyard.

The students were also asked about their ideal student room size in m², with 50% of the respondents stating 20-25 m².

Furthermore, the students were also asked about their preferences regarding

sharing amenities, specifically the amount of students they would ideally share with, a single bathroom, a kitchen and a living room.

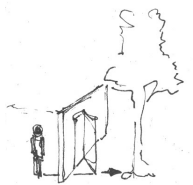
Students most commonly preferred sharing their living room with 3-4 people, the kitchen with 2-3 people, and the bathroom with 1-2 people.

The students were also asked to rank the already created guidelines within this research. The students were asked to rate each design feature on a scale of 1 to 5 based on how it would impact their mental well-being if implemented in their living environment. With 1 being not helpful at all and 5 being extremely helpful.

The following page contains all of the existing guidelines ranked based on perceived impactfulness on mental well-being, as stated by the students.

The communal bathrooms had an extremely low score of 1.35, and because of this, will be removed from this research as a guideline from this point onwards.

Using all the previously mentioned data, the ideal student residence would on average, contain all of the following: a bedroom of 20-25m², a kitchen shared with 2-3 people, a living room shared with 3-4 people, a residence where the bedroom offers privacy and the communal space offers ground for interaction, quiet bedrooms with more direct sunlight, a communal space that is large enough, has plants, and an immediate context with greenery.



ACCESSIBLE
GREENERY
(4.30)



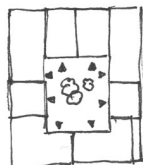
GREEN VIEW
WINDOWS
(4.20)



LARGE
WINDOWS
LIVING
ROOM
(4.15)



QUIET
SIDE
(4.05)



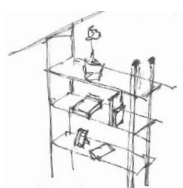
PRESENCE
OF
COURTYARD
(3.85)



COMMUNAL
ROOMS
(3.85)



INDOOR
PLANTS
(3.80)



FURNITURE
FOR
OBJECTS
(3.80)



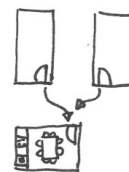
FLEXIBLE
INTERIOR
SPACES
(3.65)



BIRD
FRIENDLY
TREES
(3.65)



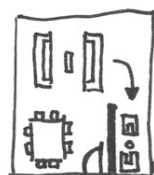
COMMUNITY
GARDEN
(3.40)



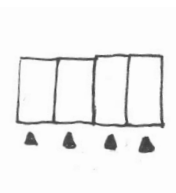
30 M2
COMMUNAL
SPACE
(3.30)



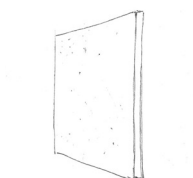
ACCESS
FROM
COURTYARD
(3.30)



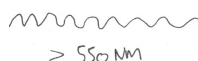
WITHDRAWAL
POSSIBILITY
COMMUNAL
SPACES
(3.15)



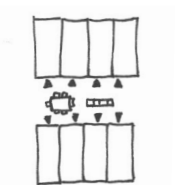
DWELLING
GROUPING
OF 4
(2.95)



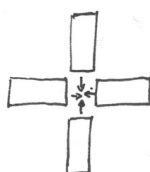
INDOOR
SMOOTH
WALLS
(2.70)



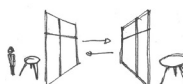
COOL
INDOOR
COLOURS
(2.70)



GROUPING
STUDENT
DWELLINGS
(2.60)



EQUAL
DISTANCES
TO
COMMUNAL
SPACES
(2.45)

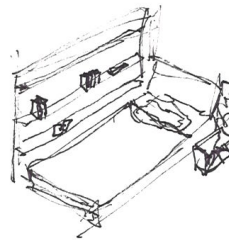


VISUAL
CONNECTION
BETWEEN
COM. SPACES
(2.35)



CURVED
INTERIOR
WALLS
(1.95)

50% of student respondents consider 20-25 m² to be the ideal student bedroom size



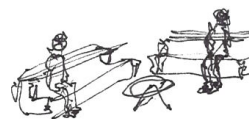
BEDROOM
20-25 m²

65% of student respondents would ideally share a kitchen with 2-3 people



SHARING
KITCHEN
2-3 PEOPLE
(N/A)

60% of student respondents would ideally share a living room with 3-4 people



SHARING
LIVING
ROOM
3-4 PEOPLE
(N/A)

5.2 SKETCHES

The sketching part of this research was conducted with four students, each of which studies and resided in the Netherlands, and did not complete questionnaire. They were interviewed at separate instances, in person. These interviews are transcribed and present within Appendixes D-G.

Firstly, they were asked three questions identical to the ones in the questionnaire: What would you improve or change in your bedroom/ communal spaces/ immediate surroundings to better support your mental well-being?

The questions were followed by a drawing exercise where they were provided with a floorplan of the bedroom of their current residence, and asked specifically what they would change to better support their mental well-being, and explain it through sketching and annotating on the floorplan. The participants were all provided with a 0.4 black fineliner and a black permanent multimarker. The results of which can be seen in Figures 13-16

The first interviewee, mentioned they wished a softer colour on their walls and to remove the window within their bedroom door, as the light from the hallway bothered him when trying to sleep. Furthermore he mentioned the radiator under the window limiting his options of positioning the furniture within his room, specifically his desk, as he preferred this to be facing the window.

When sketching and annotating on the drawing, the interviewee highlighted the same door, but annotated "insulate door + windows for sound", something he did not mention in the interview. Furthermore he drew a nightstand and an outlet, once again, different from the verbal interview.

The second interviewee mentioned she wished to have a larger room so she can craft and draw, which is currently not possible.

During the sketching exercise she was much more expressive, she indeed drew a larger room, however there were many aspects she did not communicate verbally, but through sketches and annotations. She added a desk, a nightstand like area, a herb garden, a carpet, and a potted plant. Furthermore she removed the corner of her room in order to make space for the closet.

The third interviewee mentioned he would improve the poorly insulated walls of his bedroom, the quality of the balcony and the overall layout of the room, in order to move easier through it. Later on in the interview he also mentioned how the view from his window is ugly, because it is facing his neighbors' houses which are grey, and he would prefer to see some greenery.

With the sketching exercise all of these elements can be seen annotated, however he also added how he would prefer his desk to face the window, and how he liked the corners of his room, as it gives a cosy and homey feeling. Furthermore he added how the door does not look directly at the bed which makes him feel "safe & nice"

The fourth interviewee mentioned she would prefer to change her curtains to be shorter, she would like indoor plants, and have a bedroom with a single colour palette as opposed to multiple colours

During the drawing exercise she drew an arrow facing outside with the annotation of "view with greens" furthermore she also drew a nightstand like two other participants.

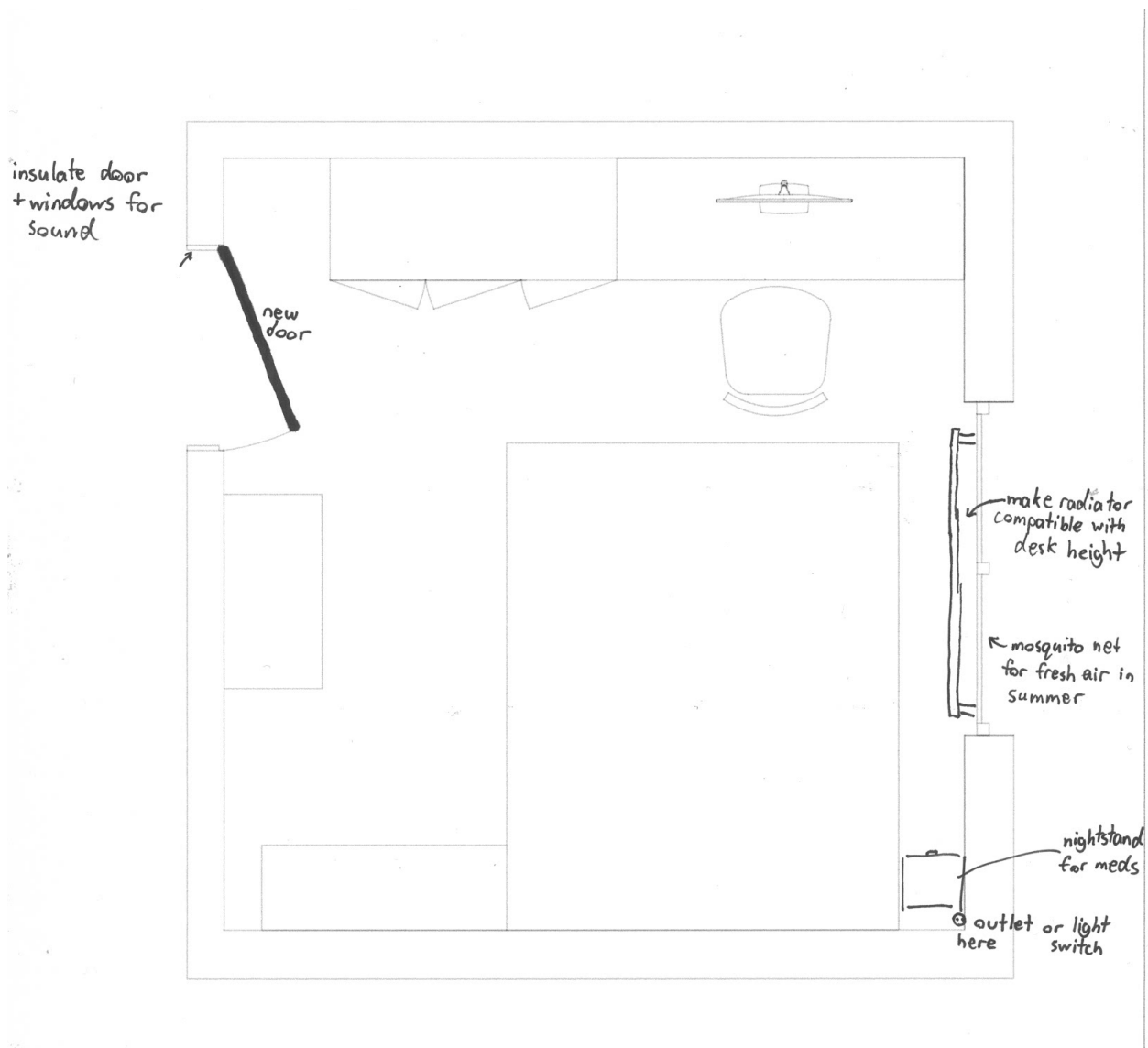


Figure 13:
Floorplan of the first participant, with their annotations and sketches

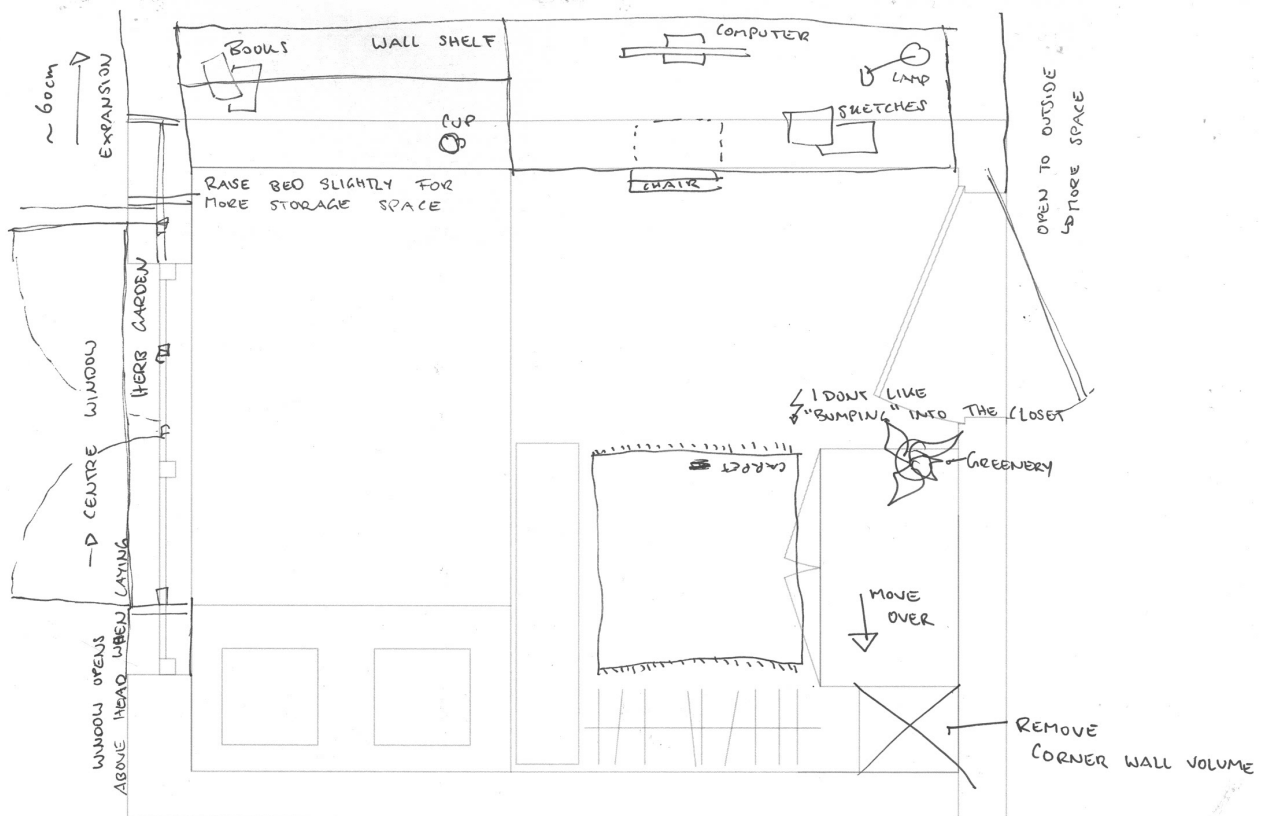


Figure 14:
Floorplan of the fourth participant, with their annotations and sketches

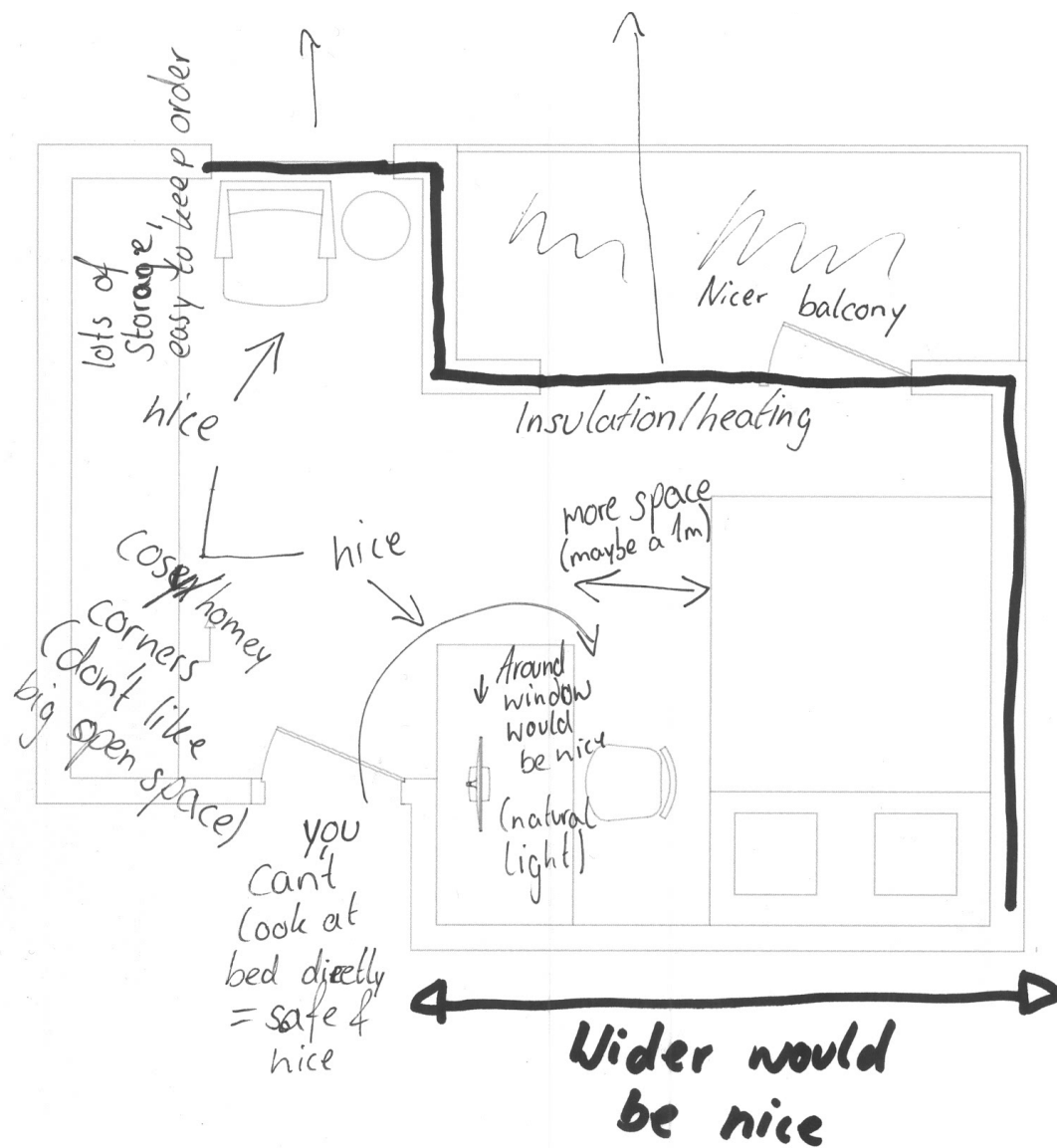


Figure 15:
Floorplan of the third participant, with their annotations and sketches

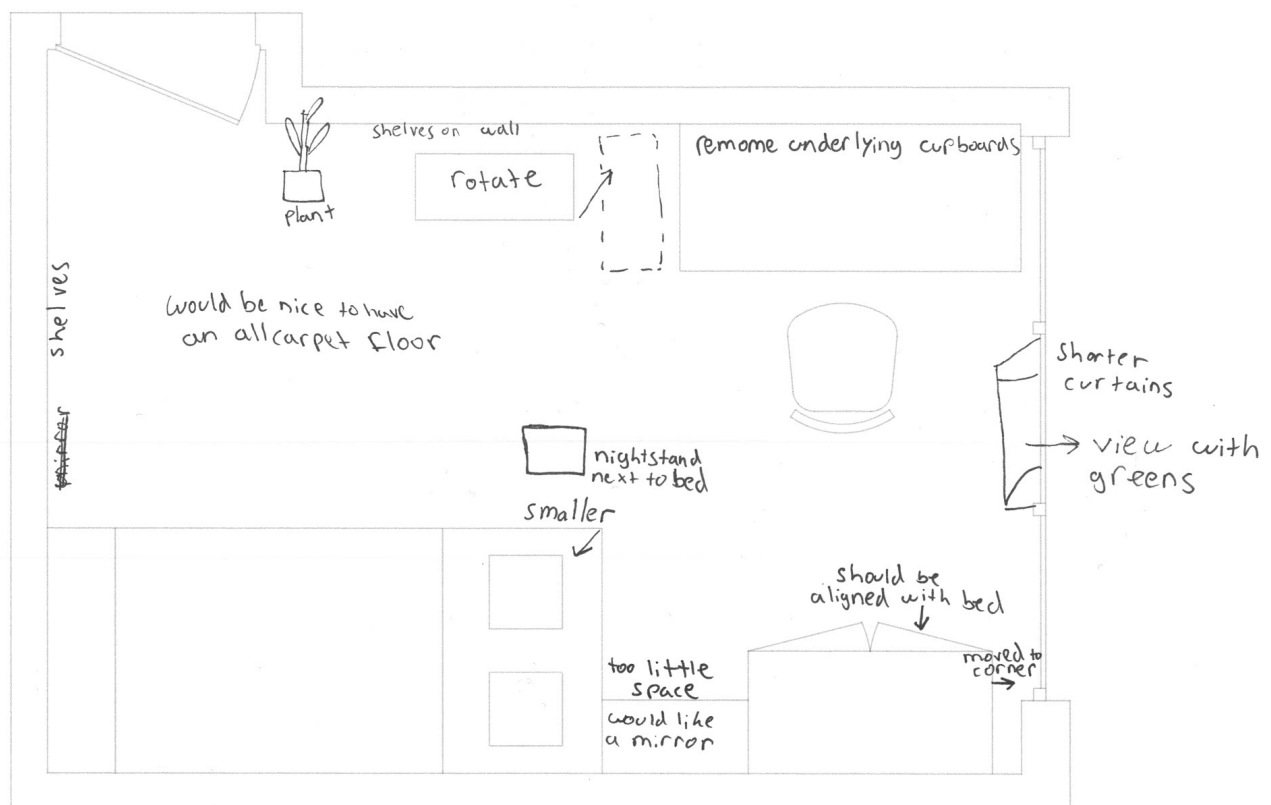


Figure 16:
Floorplan of the fourth participant, with their annotations and sketches

the sketching exercise seems to display and prove one of the most fundamental aspects of phenomenological theory, the importance of the implication of the senses, even at the methodological level.

The students saw their floorplan, felt the texture of the paper, held their fineliner, and heard it etch the paper while sketching. This might have been a factor in helping the students express their preferences, as many of the sketched and annotated preferences were never even mentioned verbally within the interview.

By analysing the sketches it can be seen how the nightstand is drawn on three different occasions, and the preference of a desk facing the window is annotated twice. Furthermore the altering of an indoor element to make space for the maneuvering of furniture is also annotated twice. And the presence of indoor plants is drawn twice.

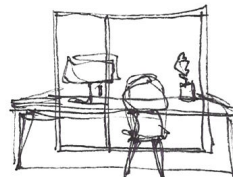
The guideline of a flexible indoor space and indoor plants already exists therefore these results only strengthen it. However the guideline of a nightstand and a desk facing the window are not yet mentioned before.

A nightstand allows for the students to easily store and access items before sleeping.



NIGHTSTAND
IN
BEDROOM

A desk facing window allows for students to have a nicer view with more daylight.



DESK
FACING
WINDOW

CHAPTER 6: CONCLUSION

6.0 CONCLUSION

The problem of rising mental health related issues within the target group of students could be ameliorated through the use of design guidelines created through the perspective of phenomenological theories. Even if some of the phenomenological theories discussed in this research, contradicted with empirical studies, they still directed the research in a manner that was relevant. This was proven by the student interviews, in which many, nearly all of the mentioned preferred improvements were already mentioned within this research.

The combination of methodologies, lead to the creation of a set of design guidelines which are not only relevant, but also realistically implementable within the student dormitory

architectural project.

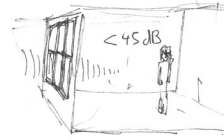
As a designer, I am of the opinion that research, which has the end goal of resolving a problem through architectural means, should seriously take into consideration architectural methods and opinions. This is what the phenomenological theory, case studies and sketching exercise represented within this research.

The following pages contain all of the resulting design guidelines, categorised by their scales; dwelling, building, and context, and sorted based on their perceived impactfulness on mental well-being score annotated in brackets.

DWELLING



GREEN VIEW
WINDOWS
(4.20)



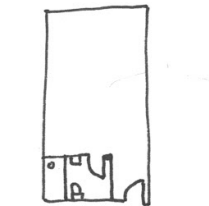
QUIET
SIDE
(4.05)



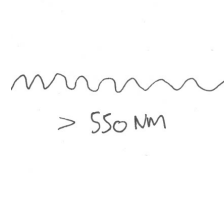
INDOOR
PLANTS
(3.80)



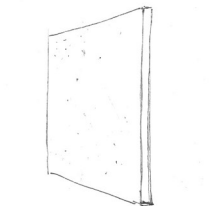
FURNITURE
FOR
OBJECTS
(3.80)



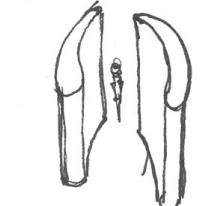
FLEXIBLE
INTERIOR
SPACES
(3.65)



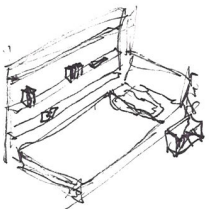
COOL
INDOOR
COLOURS
(2.70)



SMOOTH
WALL
FINISHES
(2.70)



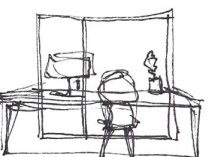
CURVED
INTERIOR
WALLS
(1.95)



20-25m²
BEDROOM
(N/A)



NIGHTSTAND
(N/A)



DESK
FACING
WINDOW
(N/A)

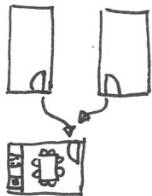
BUILDING



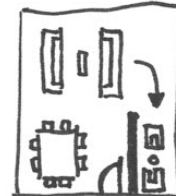
LARGE
WINDOWS
LIVING
ROOM
(4.15)



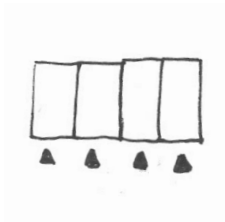
COMMUNAL
ROOMS
(3.85)



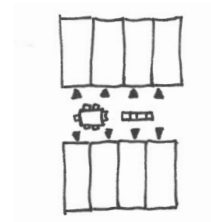
30 M2
COMMUNAL
SPACE
(3.30)



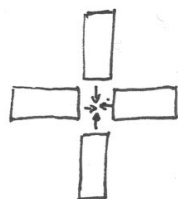
WITHDRAWAL
POSSIBILITY
COMMUNAL
SPACES
(3.15)



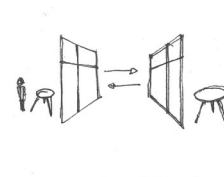
DWELLING
GROUPING
OF 4
(2.95)



GROUPING
STUDENT
DWELLINGS
(2.60)



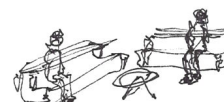
EQUAL
DISTANCES
TO
COMMUNAL
SPACES
(2.45)



VISUAL
CONNECTION
BETWEEN
COM. SPACES
(2.35)



SHARING
KITCHEN
2-3 PEOPLE
(N/A)

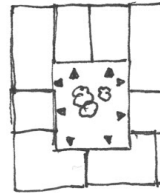


SHARING
LIVING
ROOM
3-4 PEOPLE
(N/A)

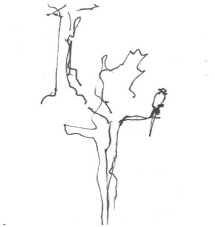
CONTEXT



ACCESSIBLE
GREENERY
(4.30)



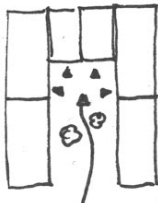
PRESENCE
OF
COURTYARD
(3.85)



BIRD
FRIENDLY
TREES
(3.65)



COMMUNITY
GARDEN
(3.40)



ACCESS
FROM
COURTYARD
(3.30)

CHAPTER 7: DISCUSSION

7.0 DISCUSSION

While the research is indeed conducted through the prism of phenomenology, it can be considered somewhat subjective at times, as the passages extracted from the phenomenological literature have been chosen in order to sustain certain perspectives and form an argument, but this could be done essentially with any argument and any perspective, as long as it is mentioned within the phenomenological literature.

Furthermore, the translation from phenomenological concepts to empirical research also contains some degree of subjectiveness, as the concepts can be interpreted differently from individual to individual.

Additionally, it would have been more practical to first conduct the sketching exercise before distributing the questionnaire. This way, the guidelines created from the questionnaire could have also been graded on perceived

impactfulness on mental well-being by other students.

Another interesting point of remark is the students' responses in the questionnaire, as many of them closely aligned with the chapters on phenomenological theory. This, in itself, could serve as preliminary evidence that phenomenological theory is a relevant prism through which to analyze students' mental well-being.

Lastly, for the sketching exercise there is an interesting observation. Namely the students' willingness to participate, all of them thought it was an interesting topic and viewed it as something positive. Even to the extent that other students wanted to also participate within the sketching exercise, after hearing about it. This potentially further highlights the relevance of the topic and therefore also this study.

CHAPTER 8:

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8.0 BIBLIOGRAPHY

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CHAPTER 9: APPENDIX

APPENDIX A CODING PHENOMENOLOGICAL LITERATURE

Good Architecture offers SHAPES AND SURFACES moulded for the PLEASURABLE touch of the eye^① (PALLASMAA P48)
PERHAPS ROUND SPACES, SHAPES that feel organic, that feel PLEASANT to touch,

THE CURRENT INDUSTRIAL MASS PRODUCTION of VISUAL IMAGERY tends to ALIENATE VISION from EMOTIONAL INVOLVEMENT AND IDENTIFICATION, AND TURN IMAGERY INTO A MESMERISING flow without focus OR PARTICIPATION.^① (PALLASMAA P25)

Even if Architecture is not SPECIFICALLY mentioned it IS still relevant emotional implication in Architecture? What does it mean? ↓

THE CONCERNING SPREAD of SUPERFICIAL ARCHITECTURAL IMAGERY today, devoid of TECTONIC LOGIC and a sense of MATERIALITY and EMPATHY,^② IS CLEARLY PART of THIS PROCESS. (PALLASMAA P25)

ARCHITECTURAL materials should together with ITS techniques create a sense of empathy? What is empathy in ITS architectural use?

PERHAPS refers to Herzog & de Meuron's mentions of APPROPRIABLE SPACE? A SPACE that CAN be SERVED, A SPACE that HAS A "CONTAINING CAPACITY" [Herzog & de Meuron interview 2024] can instigate a sense of "focus and participation",^① a sense of empathy^② like Neels corners and edges which can hold items? [delia mazzoni]

IN Heightened EMOTIONAL STATES AND deep thought, VISION IS USUALLY REPRESSED (PALLASMAA P30).

IS THIS A good thing? Should VISION Be REPRESSED? Should Architecture ALLOW Heightened emotional states OR IS THIS Bad for Well-being. Should VISION Perhaps Be ENLIVENED TO REPRESS Heightened emotional states instead?

IN Heightened NATURAL MATERIALS - Stone, BRICK And wood - Allow our VISION to PENETRATE their SURFACES and enable us to become of the VERACITY of matter (PALLASMAA P31.)

VERNACULAR Architecture seems to Adhere to these words, what I understand is that older, traditional DESIGN for example leads to a VERACITY of matter, its truthfulness, tactile materials exhibit truthfulness.

NATURAL MATERIALS express their AGE, as well as the story of their origins AND their HISTORY of human use.

(PALLASMAA P34) MATERIALS should show its use by humans? A dark handle of COPPER with its colour changed due to usage?

the RETINAL IMAGES of CONTEMPORARY Architecture certainly appear sterile and lifeless when compared with the emotional AND ASSOCIATIVE Power of the POET'S direct imagery. the Poet Releases the scent and taste concealed IN words. through his words a great writer is capable of constructing AN entire city with all the colours of life. (PALLASMAA P39)

Take ... the use of enormous plate windows ... they deprive our buildings of intimacy, the effect of shadow and atmosphere. Architects all over the world have been mistaken in the proportions ^③ which they have assigned to large plate windows or spaces opening to the outside ... we have lost our sense of intimate life, and have become forced to live public lives, essentially away from home. (quote from BARRAGIN, PALLASMAA 51)

[BARRAGIN] claims smaller windows = more intimate spaces, more private, large windows = public lives which is mentioned in [on double windows, HERNANDEZ] Perhaps a building with small windows is therefore also better for well-being → as it provides privacy?

the use of public space by residents as if were 'private' strengthens the user's claim to that area in the eyes of others (Hertzberger p17) Hertzberger talks about spaces that offer this possibility, "public space" that offers the possibility to be used as private, so perhaps a hallway with space for plants? where each person can place their own pot? or railings that can be used for drying clothes as students always need? appropriate public space.

the influence of users can be stimulated, at least if this is done in the right places, i.e. where sufficient involvement may be expected.... (Hertzberger 2SP)

Such as nooks and corners on flat surfaces where focus and participation ^① can become a thing (monessori school delft) and [Hertzberger interview 2024]

Even a minor adjustment by the way of spatial articulation of the entrance can be enough to encourage expansion of the personal sphere of influence, and thus the quality of public space will be considerably increased in the common interest (Hertzberger 49)

He is mentioning the "in between spaces", mostly around entrances which he mentions, increases quality of public space, so some sort of decoratable or editable space around the entrance might increase well-being? improved public space → improved life quality → improved

A street area with which the inhabitants themselves are involved and where individual marks are put down for themselves and for each other is appropriated jointly, and is thus turned into a communal space. (Hertzberger 143). He states this idea of a street as ideal which improves the quality of the traditional "corridor" or street

Where the involvement of residents, their implication is crucial for improvement of space. Appropriation of space = Empathy ^② in its Architectural sense?

The point is to give Public spaces form in such a way that the local community will feel personally responsible ^② for them, so that each member of the community will contribute in his or her own way to an environment that he or she can relate to and can identify with.

to further prove my point EMPATHY + RESPONSIBILITY + PARTICIPATION = good architectural spaces → good for wellbeing

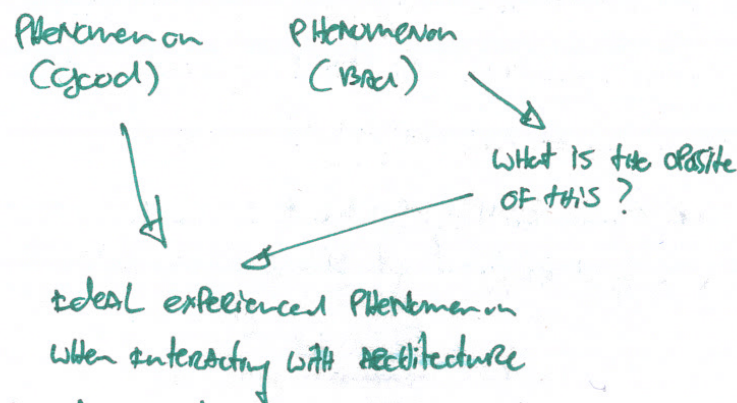
Things start to go wrong when the scale becomes too big, when the upkeep and management of a communal area can no longer be left to those directly involved (Hertzberger p47)

Hertzberger mentions small scale = good in this case the notion of proportions is there ^③

The world that is controlled and managed by everyone as well as for everyone will have to be built up of small-scale ^③, workable entities, no longer than what one person can cope with and look after on his own terms. (Hertzberger p47)

Once again mention of scale/proportions, but I like the fact that he states it is copable and very able to look after

All of the mentioned books approach the topic of architecture and the phenomena of experiencing architecture, through a personal lens, but they all have a simple categorisation, either the described phenomenon is what architects should strive for, or it is something they should avoid.



It is this ideal phenomenon that is what I am to extract from these books, whereas it should be noted that there, therefore, is a major assumption. Namely that ideal phenomenon = good for mental well-being. Another assumption is that this ideal phenomenon is universally considered as ideal, it transcends cultures and preconceptions.

these are my assumptions as of now from what myself understand
 ideal phenomenon → good for mental well-being
 ideal phenomenon → universally considered ideal

I think they both should be carefully argued for at the introduction of the research, it's possible, these ideal phenomena should evoke a general sense of good or correctness.

that is what Architecture means to me and that's how
I try to think about it. As a Bodily mass, A membrane
A fabric, A kind of covering, clotha velvet, silk, all
around me. the Body! Not the idea of the Body - the
Body itself! A Body that can touch me. ④

(Zemlin, Atmospheres, p 23)

the notion of a "touchable" space, but not in its literal
sense rather more abstract, in its literal sense I think about
[Bernini's Chiesa di San Carlo alle Quattro Fontane] ⑤ as well as
[Hector's and Norman Hotels in Brussels] ⑥ I consider these areas of
Architecture that are touchable by the eye and serve as a Body
that can touch.

But unfortunately many people are not aware of the same
a room moves. The sounds we associate with certain rooms:
Speaking personally, what always comes first to my mind are
the sounds when I was a boy, the noises my mother made
in the kitchen. They made me feel happy. IF I WAS IN THE
Parent Room I always knew my mother was at home because
I could hear her Banging about with pots and pans and what
Helle van (Zemlin Atmospheres p 29). He talks about how noises
within spaces that make an feel happy → Presumably Pollakman also
talks about sound in a similar way → leads back!

I confront the city with my Body; my legs measure the length of the arcade and the width of the square; my gaze unconsciously projects my Body onto the facade of the cathedral, where it roams over the mouldings and contours, sensing the size of recesses and projections; my Body weight meets the mass of the cathedral door. (PALLASMAA P43). He talks about experiencing Architecture through the "Body" but thereby also frames Architecture in terms of Bodies, the arcade is explained through legs and the door is explained through Body weight, thereby also defining the Architecture as a Body itself ④

Another weakness of this research is the limited selection of writers and thereby a refer to their demographics, which is only not white men. Perhaps the integration of alternative demographics would add on more diverse perspectives?

Another point is that most of the phenomenological texts define these local phenomena from a purely personal perspective. With my mention of users confirming this idea also being from the writer's perspective. Sight is the sense of the solitary observer, whereas hearing creates a sense of connection and solidarity; one who wanders lonesomely in the dark depths of a cathedral, but the sound of the organ makes us immediately experience our affinities with the space. (PALLASMAA SEP)

Sound - space and the relationship between them. Pollock makes how specific sounds can make us instantly associated/affiliated with a space, like the organ within a church, and Zumbare essentially argues for the same perspective, and builds upon it; it can even make us feel a certain way, happy. ③

Why are the "ideal phenomena" specifically good for students?

She said (I disagree entirely, these things are nothing but a burden. I carry my world in a rucksack. I want to stay on the road. All that stuff - the sheer burden of it... Not everyone wants to carry such a bourgeois weight of objects around them, you know.) I looked at her and said: (And that coffee-table you wanted?) She didn't say a thing. That seems to confirm something we all know about ourselves anyway. (Zumbare Atmospheres P39) I think Zumbare here tries to prove that one of the assumptions in this research is in his eyes, correct. This passage is about a lady from Cyprus, who essentially disagrees with his statement regarding surrounding objects, but seems to be unable to combat when confronted with a coffee-table she wished to have. I think he wants to prove here how "ideal phenomena" are indeed universal, regardless of background or demographic.

Our perception of the whole is not distracted by
inessential details. Every touch, every join, every joint is
there in order to reinforce the idea of the quiet
presence of work. (Zurbrugg, Thinking Arch, P15)

Details, when they are successful, are not mere decoration.
They do not distract or entertain. They lead to an
understanding of the whole of which they are an inherent
part (Zurbrugg, Thinking Arch, P15) He talks about the impact
of well integrated details, that they make is understood
"the whole" Herzberger talks about "right places" and minor
adjustments, but this doesn't yet show that strong of a
correlation let's keep looking!

Details express what the basic idea of the design
requires at the relevant point in the object: Belonging ②+①?
OR separation, tension or lightness, friction, solidity, fragility...
(Zurbrugg, Thinking Arch, P15) This sense of belonging through
details is much closer to Herzberger's "right places" and
"minor adjustments" for intellectual and common interest
good architecture should receive the human visitor, should
enable him to experience it and live in it, but it should not
constantly talk at him (Zurbrugg, Thinking Arch, P23)
good architecture should be able to receive and experience

Heidegger: "The Relationship of Man to Places and through Places to Spaces is based on his dwelling in them."

(Zemke, Thinking about P37). Heidegger states how people have relationship to spaces is defined by their own behaviour within them. It is their "dwelling" that shapes the space, so how can we induce healthy "dwelling" of inhabitants through architecture?

The strength of a good design lies in ourselves and in our ability to perceive the world with both emotion² and reason. A good architectural design is sensuous.³⁺³

(Barnette, Thinking Arch, P65) mention of "emotional" and "Sensuous Architecture" as being good architecture

The house we were born in is more than an embodiment of home, it is also an embodiment of dreams. Each one of its nooks and corners was a resting-place for the day-dreaming. (Gaston Bachelard, P37)

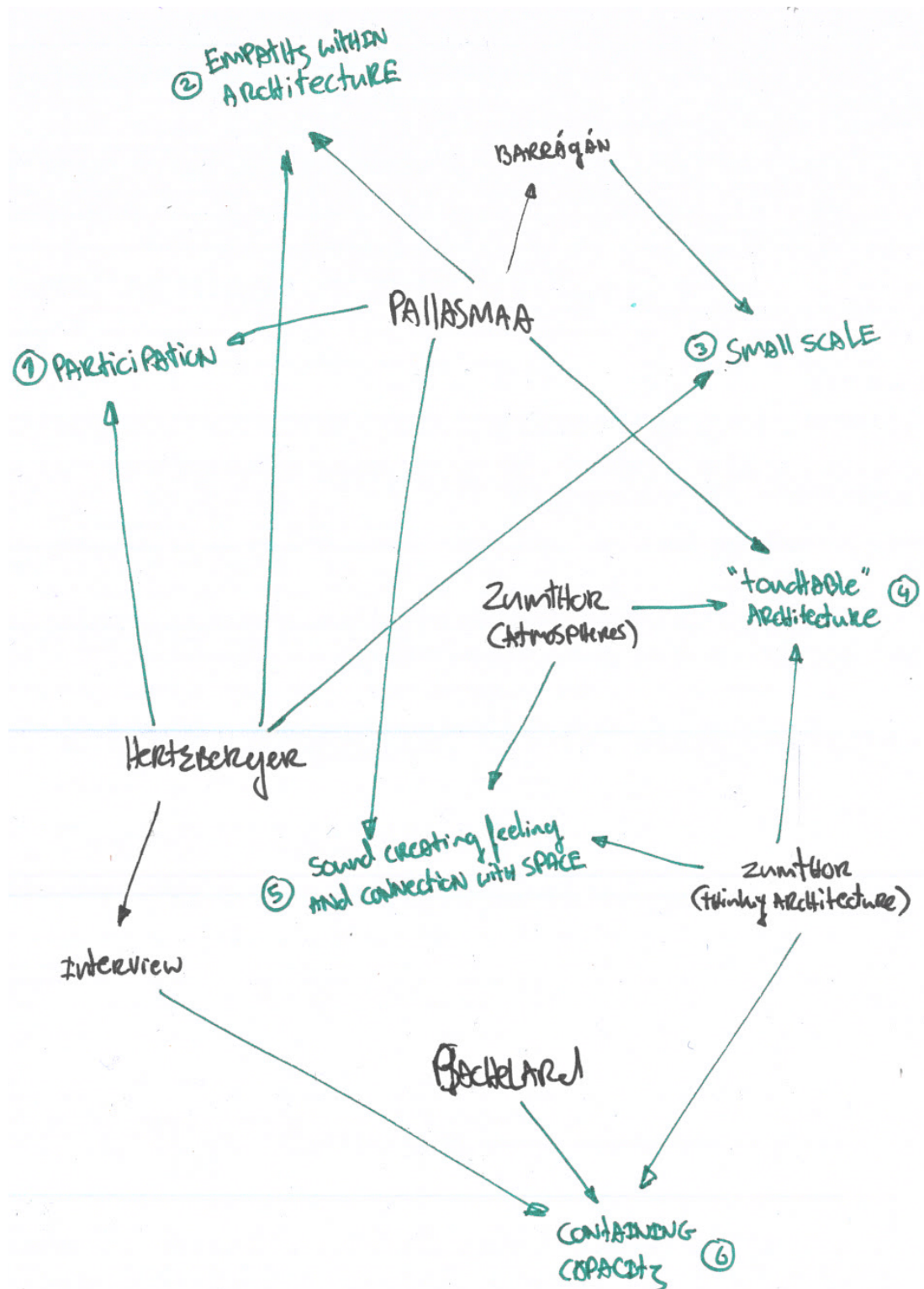
The house shelters daydreaming, the house protects the dreamer, the house allows one to dream in peace. (Bachelard, P28)

The home, the childhood experience of a house, offers space for daydreaming, it offers space for dreams in its nooks and corners. Something closely related to Heidegger's "dwelling ability" which were more nooks and corners where physical things can be stored as opposed to dreams, but it comes close. ↑ Remember

I'm IMPRESSED by the ways that people keep around them, in their Plats or where they work. And sometimes... you find things come together in a very careful, long way, and that there's this deep ^⑥ relationship. (Zundick, Thinking Arch P35)
this goes hand in hand with Herzog's data exhibited in for example [monks' school life]

ASSETS to be either justified by further literature or BE assumed

- do all of the chosen books attempt at describing the "ideal phenomena" within architectural context?
- is this set of "ideal phenomena" good for mental well-being?
- Is the set of "ideal phenomena" universally considered ideal?
- Why are the proposed ideal phenomena good for specifically students?
- Almost all proposed ideal phenomena are based on subjective opinions
- the set of books are all written by men within the same demographic group.



Dwellings should be as accessible as possible directly from the street, and preferably not too far removed from it, as it often the case in multi-story buildings (Herzberger p59) Access systems is mentioned within this passage

In residential neighborhoods we must give the street a living room quality not only for day-to-day interaction but also for more special occasions, (Herzberger p59) to make the street to some extent personal, to make it have the atmosphere of a living room.

We must grasp every opportunity of avoiding too rapid separation between dwellings, and of stimulating what is left of the feeling of belonging together. Relatives around everyday social interaction. (Herzberger p59)

Stimulate interaction with one another, and avoid separation between dwellings

②
Common-sense lives on the ground floor, always ready to engage in "foreign commerce" on the same level as the others, as the passers-by, who are never dreamers. To go upstairs in the word house is to withdraw, step by step, while to go down to the cellar is to dream (Backlund p966)
different levels on which to live indicate different levels of privateness and publicness.

thus the PATH that leads to the house is often a climbing one. At times, even, it is inviting. IN ANY CASE, IT ALWAYS POSSESSES CERTAIN KINESTHETIC FEATURES. (Bachelard, P. 92)
Mention of entrances and their general features and attributes

Om te proberen zo veel mogelijk scheiding te maken
in je kamer - niet in bed te gaan studeren -
anderszeker te maken tussen werk en niet werk
(studie Psychologie 99-2024)

Als je al een kamerscherm bijvoorbeeld kan neerzetten
of een beetje een scheiding kan maken in je ruimte,
dan kan dat ook al wel wat helpen (studie Psychologie)

dat ik het een lastig woord om een soort van scheiding tussen
werk en studeren te maken - toen woonde ik in een
APARTAMENT belandoel gelijkvloers ² - Halverwege (Vrijd Ben
in verhuurd naar een huis met een TRAP (even en ik
merkte van mij al dat die TRAP soort van een grote
scheiding was tussen werk en rust ² (studie Psychologie)

APPENDIX B HERMAN HERTZBERGER INTERVIEW SEGMENT

00:34:51 Hertzberger

Containing capacity.

00:34:53 Hertzberger

Yeah.

00:34:55 Hertzberger

The capacity everywhere, you know, you see this this latch over there where you can put things in.

00:35:05 Hertzberger

Is everywhere I try to make.

00:35:09 Hertzberger

Containing capacity.

00:35:11 Interviewer

Mm-hmm. Yes.

00:35:12 Interviewer

So this is an example of containing capacity but also inviting architecture?

00:35:18 Interviewer

All the ledges and edges and.

00:35:20 Hertzberger

Yeah.

00:35:23 Hertzberger

When you are cynical, you can say everything where you get. When you get dust on it. Yeah. But except dust.

00:35:35 Hertzberger

You know your your body doesn't finish your body. You have an extended

00:35:45 Hertzberger

you know where you have the things you like your, your, your, your dog or your cat or or your or your Barbie doll or things you know.

00:36:04 Hertzberger

Where you feel safe, where you feel.

00:36:11 Hertzberger

Oke. Yeah.

00:36:14 Hertzberger

It's very, very important.

00:36:26 Interviewer

So an extension of your body and how your body reacts to it.

00:36:29 Interviewer

Becomes really important?

00:36:31 Hertzberger

Yeah, it's. It's also like, what? What do you have with your computer an external memory ?

00:36:39 Interviewer

Hmm.

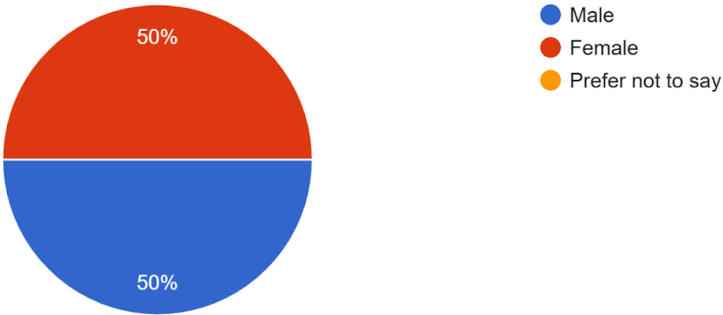
00:36:40 Hertzberger

A box that keeps the things that that belong to you. Yeah. And that is in space very important.

APPENDIX C QUESTIONNAIRE

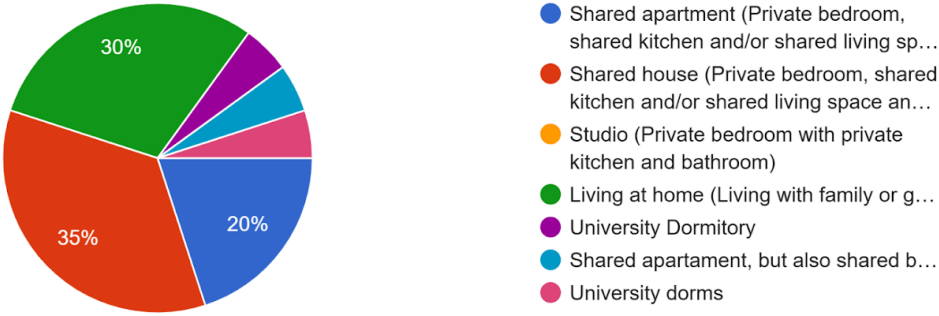
What is your gender?

20 responses



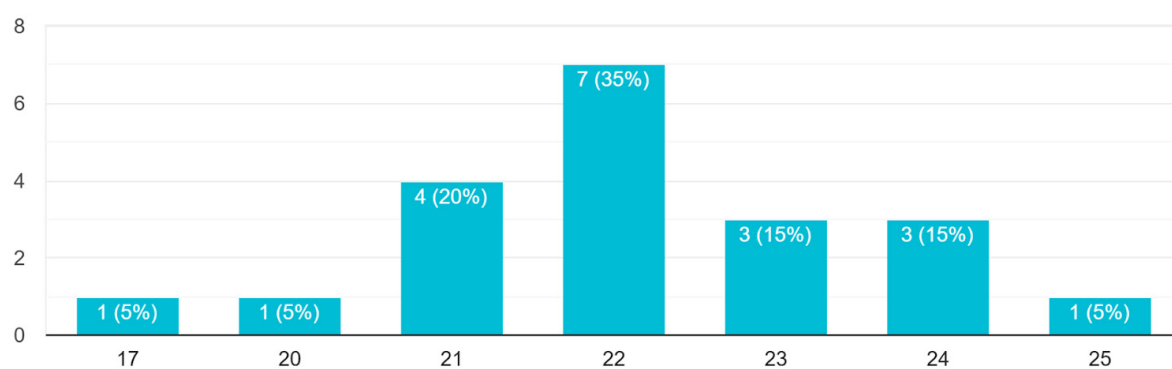
Which of the following best describes your current living situation?

20 responses



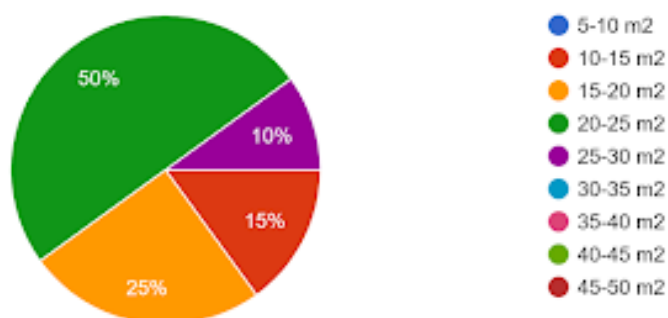
What is your age?

20 responses



What would you consider the ideal size for your student room (in square meters)?

20 responses



What aspects of your living space do you think contribute positively to your mental well-being?

the size (36m²) and the fast&efficient heating system+good insulation

Big windows, plants, cozy furniture

Having a private space (your own room that you don't share that you can close off) but aswell the social aspect is great having neighbor's you always can talk to

Not having to travel for 2+ hours every day

Actually sharing the space, living alone would be more freeing but rather more harsh on me (lack of socialising, more responsibilities). But also it matters WHO you share the space with. I had two rented places, both of them with 2 other people, but the experiences were polar opposites. Living with someone you don't resonate with can make you feel lonelier than if you actually lived alone.

I know my family very well and there are known rules

- having multiple people in the house so you see at least one person every day
- the possibility of sharing tasks as cleaning and cooking
- having a landlord who fixes everything that needs to happen, no need to worry

or pay for it myself

That you can communicate and interact with the people, in an unexpected way.

Clean environment, calm and some nice equipment like a tv and couch

Own room, windows, greenery, pets, light!

Privacy and Independence

people around and hobbies

People around

Balcony

I enjoy that i can have my own privacy (my bedroom) while having the chance to socialize as well (in the common space)

Im sleeping on the sofa in the living room. Its bigger than my bedroom. I dont know why but feels safer

We have an outdoor terrace. That can be very relaxing in summer

Presence of windows, a living room, and terrace/garden

Socializing

Being in close proximity to fellows, colleagues, homies, you name it.

What would you improve/change in your bedroom to better support your mental well-being? (Consider aspects like light, sound, temperature, furniture, walls or any other feature.)

the most important thing would be to make it soundproof (no sounds from the rest of the apartment should be heard)

I would change the furniture with something more minimalistic

Big windows with natural light and a great view, that's what makes my room great right now.

More space (currently 8m2)

Light, furniture and walls mostly

more colors, plants and a couch

better isolation of windows for a warmer room, having an insect screen at the windows, better stairs to my room

Light, interior

More decorated walls and soft colors

Size and natural light

More storage space, better insulation

Walls, furniture, room decoration

Bigger room and more shelves

Soundproof walls

The heat insulation and the sound insulation

I can change the color of lights. Brighter curtains. Less furniture . More paintings.

The walls are poorly isolated and let through sound and light. The floor are very poorly isolated. So that can definitely improve.

More windows, better heating, quieter walls

Bigger desk

light, furniture layout, a huge desk where I can install my huge setup, a bad ass sound system, smart home ecosystem, a videoprojector (check out Travis Scott's mobile backstage studio designed by Rick Owens)

What would you improve/change in your communal spaces (e.g., living room, kitchen) to better support your mental well-being? (Think about the layout, privacy, interaction, or any amenities you'd like.)

More space

the apartment itself is not a problem in any sense; the people who live here are very dirty, noisy and annoying; but since i'm a person in a high need of privacy, i would prefer a place in which i just don't share anything unless i'm with people i know well/am friends with

I would add less furniture and less objects in general

Make them more Spacious, and easy to clean

Have a communal living room

Me and the other 2 persons I live with made our communal space (though it's pretty small) quite interesting by decorating it not also with bought things, but also meaningful ones, such as funny messages that we wrote on paper, plants, trinkets that we collect (pine cones, books, crystals), little memories from the places we travel to... We get along very well so privacy is not a problem, but a bigger and more visually pleasing place

would be nicer.

fixing the air conditioning in the bathroom & remove mold. also the kitchen cabinet/ walls downstairs are humid so solve that. the front door also has windows that can be broken and someone could open the lock from inside

Connection to the garden (or nature)

Not so close to the bedrooms because that is quite noisy

Size and more plants

I'd add more carpets and decorations, as it feels very empty

more privacy, light

Private bathroom and hot water all the time

Nothing

More house plant would be nice. Less furniture in the saloon. Hmm maybe throw away a sofa and get a puff chair ? I want a huge mirror. And light behind tv

Dishwasher

A private washing machine for our dorm room bathroom rather than a communal laundry room

What would you improve/change in your immediate surroundings, to better support your mental well-being? (This could include greenery, social spaces, safety, or accessibility.)

outside seating space in the back yard, trashcans, no more strangers in the back yard

More green spaces. More outside spaces where people can meet and socialise.

Greeny but organized, make sure it is taken care of, and people actually enjoy sitting there in the sun or picknick when good weather. Because we have a green court yard but it's so wild and dirty nobody goes there.

Love the location :)

I would add more plants, ofc :) maybe a bigger balcony where I could set up a coffee&reading space. Also, what could help A LOT with my mental state would be a pet, preferably a cat. Growing up in the countryside with animals, nature and lots of space makes it quite hard now to adapt to a small apartment and the noisy city life. And I miss a lot my cats from home.

a close shared social space

Classification of the spaces in the large room (area for eating, for reading, drinking coffee, gardening, sunbathing etc)

More camera's in the building, a lot of stuff gets stolen

Social spaces, greenery, private quarters

No cars in the bike lane. (My street is a large bike lane with cars driving through, sometimes at high speeds.)

more greenery, cozy atmosphere and privacy

Buy more shelves

Safety

I want a fluffier , longer sofa so i can use heater as a leg rest . I need more plants. White(not like hospitals) light. Because yellow light is weirdly dark and makes your eyes tired very easily. Little so many decor lights

Accessibility, the house doesn't have a front door. We also have no living room, this would also really help mental well-being.

A garden, maybe a park as well. And closer to where my friends live maybe?

Have the student dorms located somewhere within the campus where they are not in the absolute closest proximity to a high traffic road/street. A gym within the building would be hella fire tho. Social spaces are honestly just hotspots for drug dealers if they outside and lack 24h security

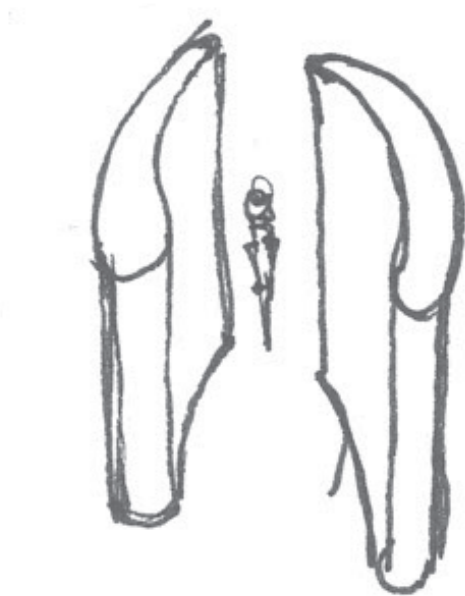
Rate each design feature on a scale of 1 to 5 based on how it would impact your mental well-being if implemented in your living environment.



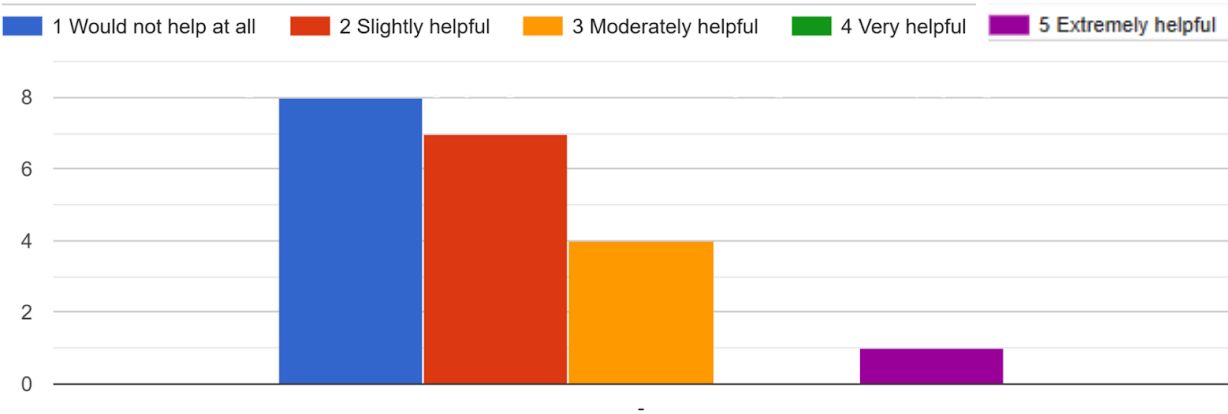
FURNITURE FOR OBJECTS (Consider furniture designed to help organize and reduce clutter, such as shelves, drawers, or storage units.)



Rate each design feature on a scale of 1 to 5 based on how it would impact your mental well-being if implemented in your living environment.



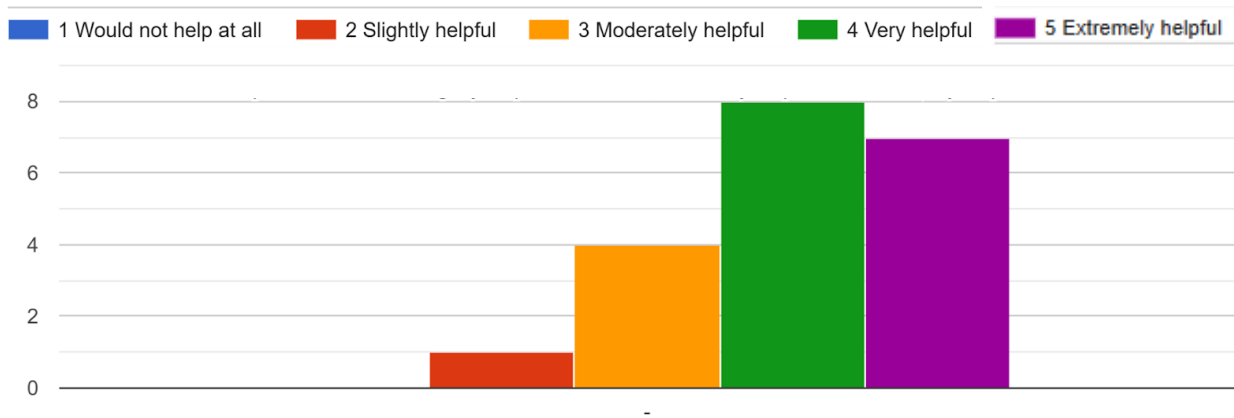
CURVED INTERIOR WALLS (Soft, rounded walls designed to create a more welcoming and less rigid environment.)



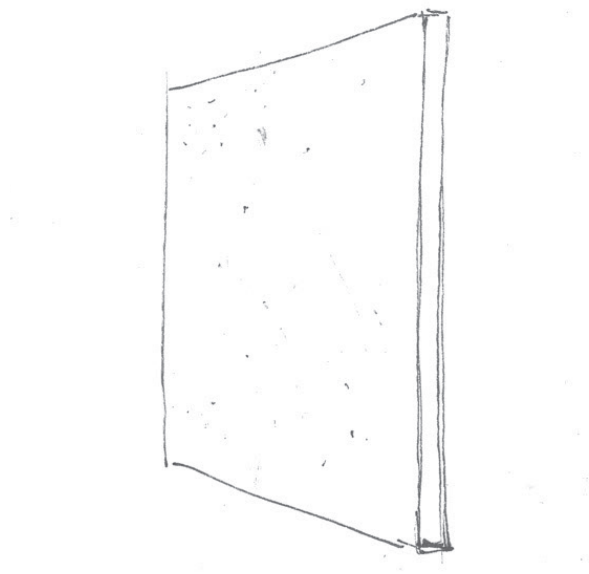
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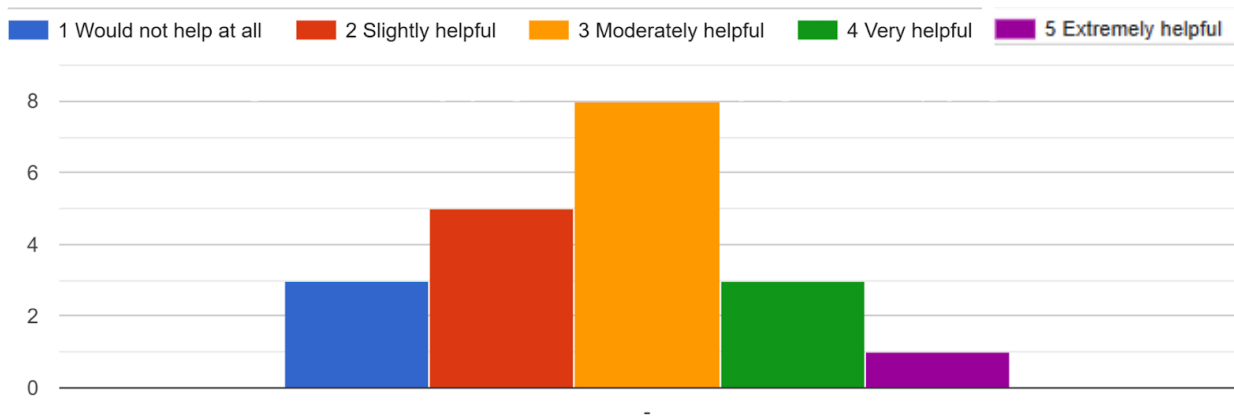
A QUIET SIDE (Designated quiet areas or spaces for study, relaxation, or personal time away from noise.)



Rate each design feature on a scale of 1 to 5 based on how it would impact your mental well-being if implemented in your living environment.



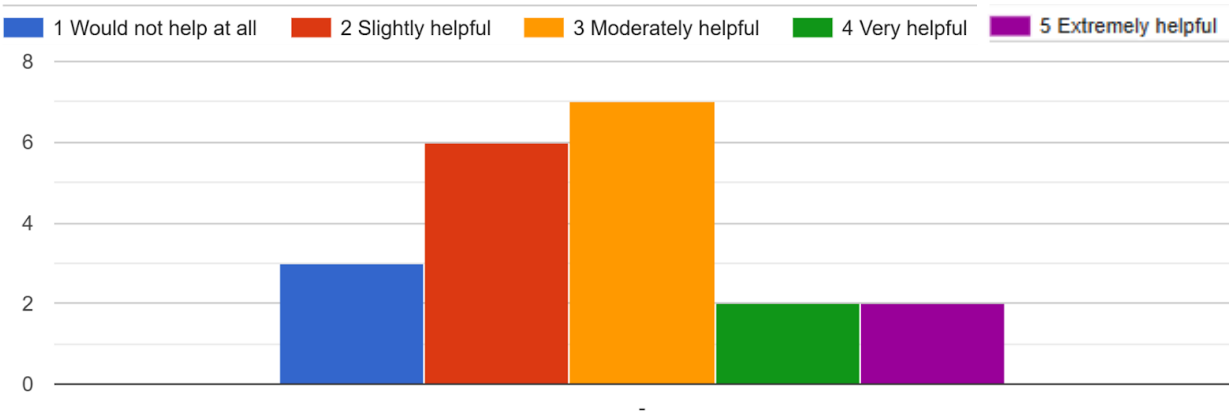
INDOOR SMOOTH WALL FINISHES (Smooth and clean wall textures.)



Rate each design feature on a scale of 1 to 5 based on how it would impact your mental well-being if implemented in your living environment.

~~~~~  
> 550 NM

COOL INDOOR COLOURS cool-toned colors like blues or greens to create a relaxing indoor environment.



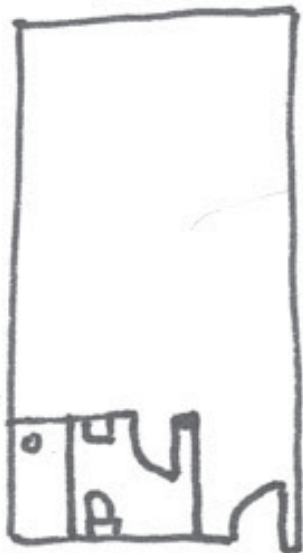
Rate each design feature on a scale of 1 to 5 based on how it would impact your mental well-being if implemented in your living environment.



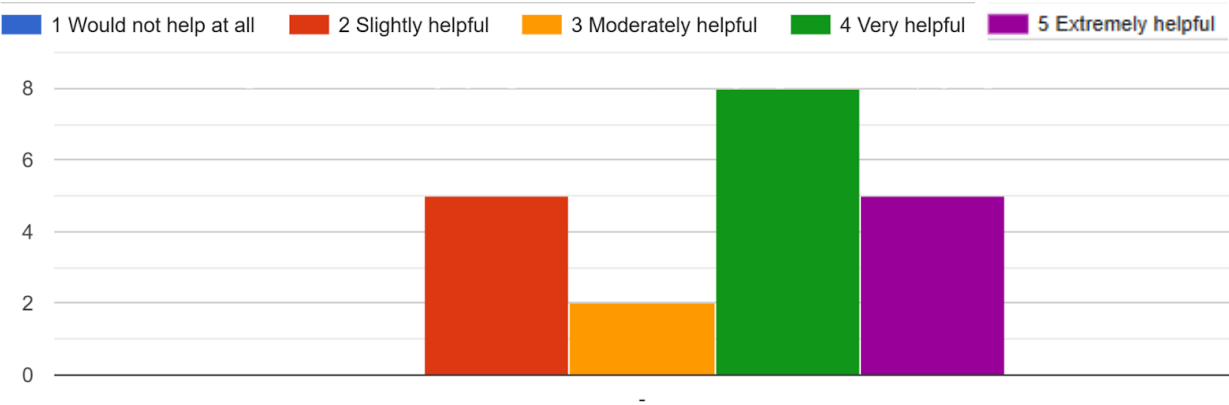
LARGE WINDOWS LIVING ROOM (Big windows in communal spaces to provide natural light)



Rate each design feature on a scale of 1 to 5 based on how it would impact your mental well-being if implemented in your living environment.



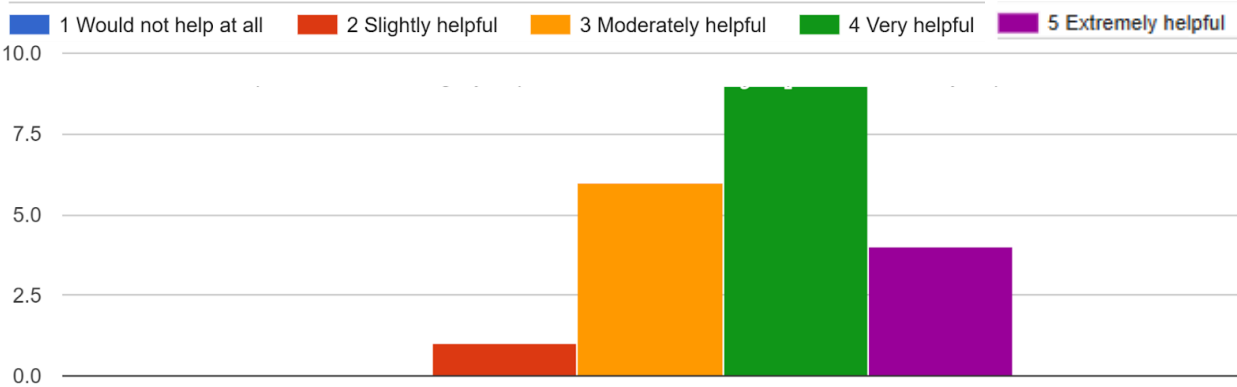
FLEXIBLE INTERIOR SPACES (student rooms where only essential elements, such as the bathroom, are fixed, allowing the rest of the interior to be de...nd furnished according to the student's preferences.)



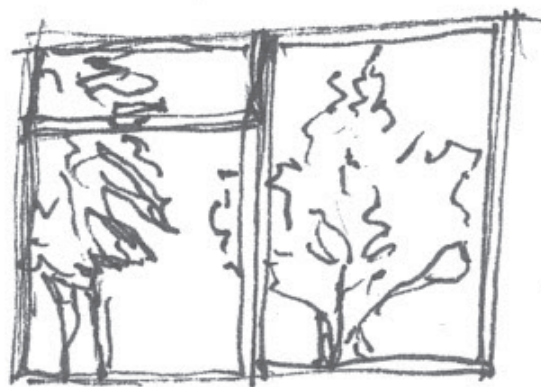
Rate each design feature on a scale of 1 to 5 based on how it would impact your mental well-being if implemented in your living environment.



INDOOR PLANTS ( Potted plants integrated into the living spaces)



Rate each design feature on a scale of 1 to 5 based on how it would impact your mental well-being if implemented in your living environment.



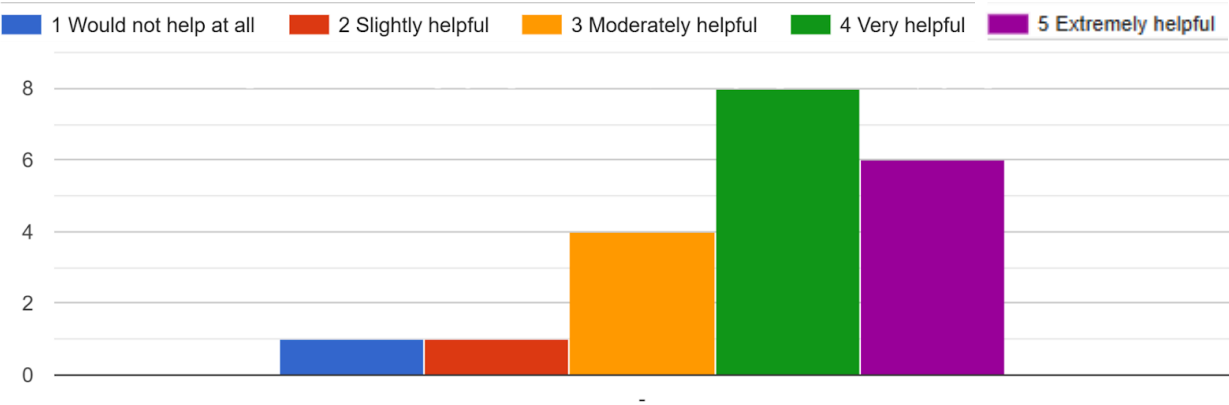
GREEN VIEW WINDOWS (Windows that offer views of greenery, such as trees, gardens, or plants.)



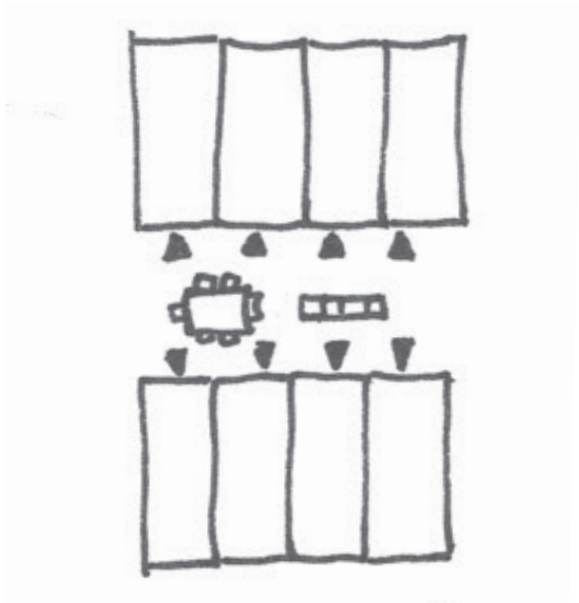
Rate each design feature on a scale of 1 to 5 based on how it would impact your mental well-being if implemented in your living environment.



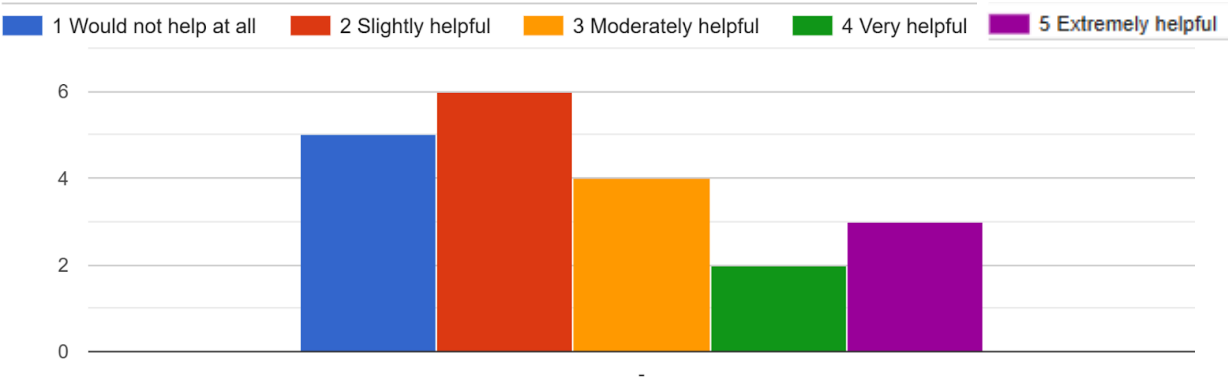
COMMUNAL ROOMS (Shared spaces like living rooms or lounges that encourage social interaction and group activities.)



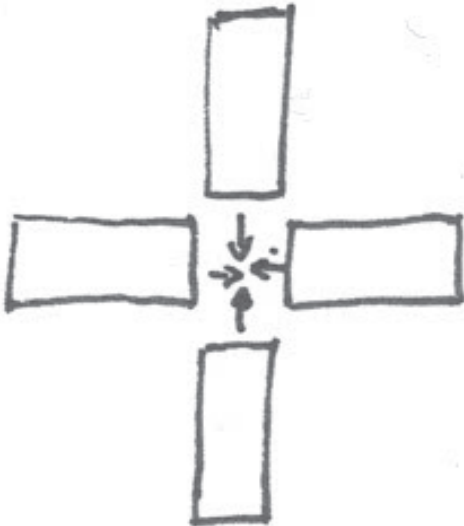
Rate each design feature on a scale of 1 to 5 based on how it would impact your mental well-being if implemented in your living environment.



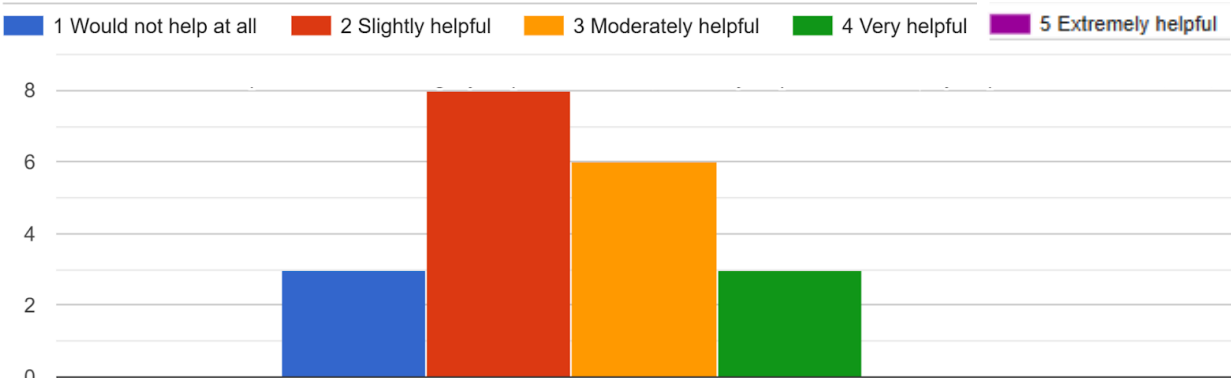
GROUPING STUDENT DWELLINGS (Clusters of student accommodations designed to share the same communal space.)



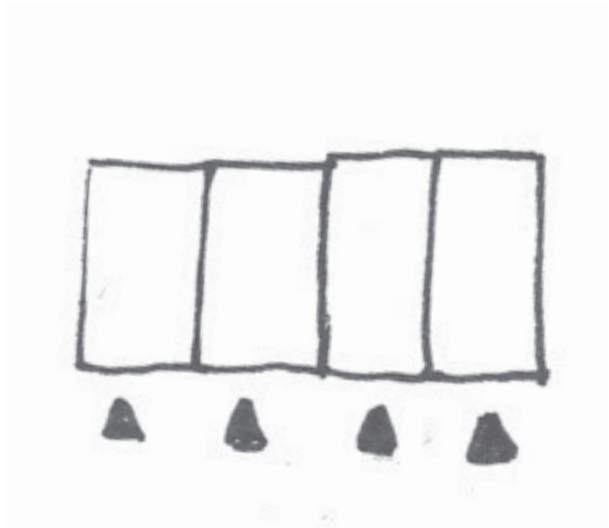
Rate each design feature on a scale of 1 to 5 based on how it would impact your mental well-being if implemented in your living environment.



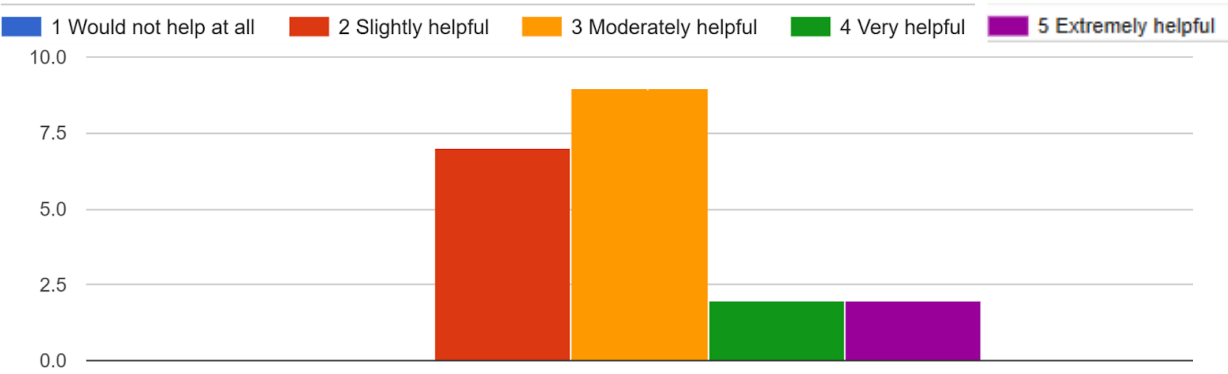
EQUAL DISTANCES TO COMMUNAL SPACES (Designing communal spaces so that they are equally accessible to all residents.)



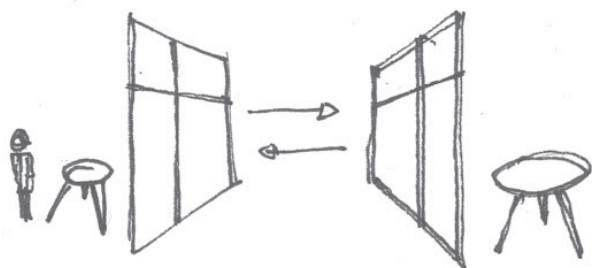
Rate each design feature on a scale of 1 to 5 based on how it would impact your mental well-being if implemented in your living environment.



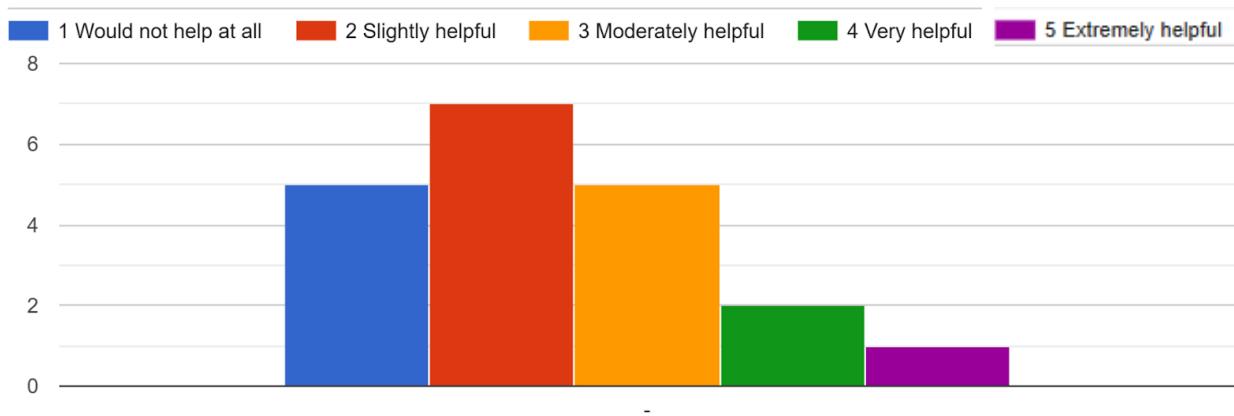
DWELLING GROUPING OF 4 (Living arrangements where up to 4 students share communal facilities, such as a kitchen or bathroom.)



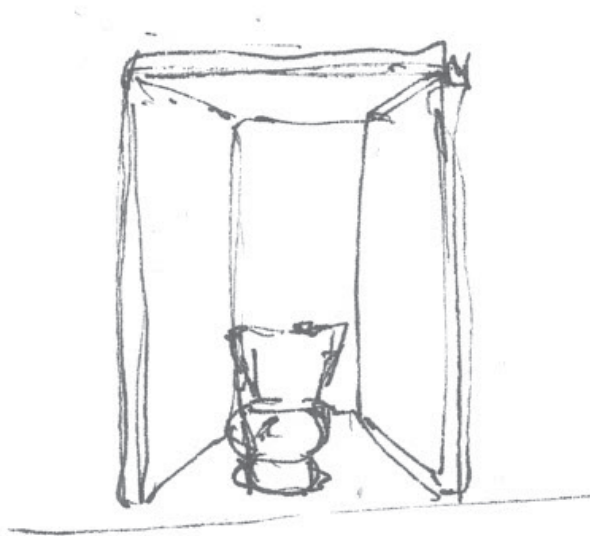
Rate each design feature on a scale of 1 to 5 based on how it would impact your mental well-being if implemented in your living environment.



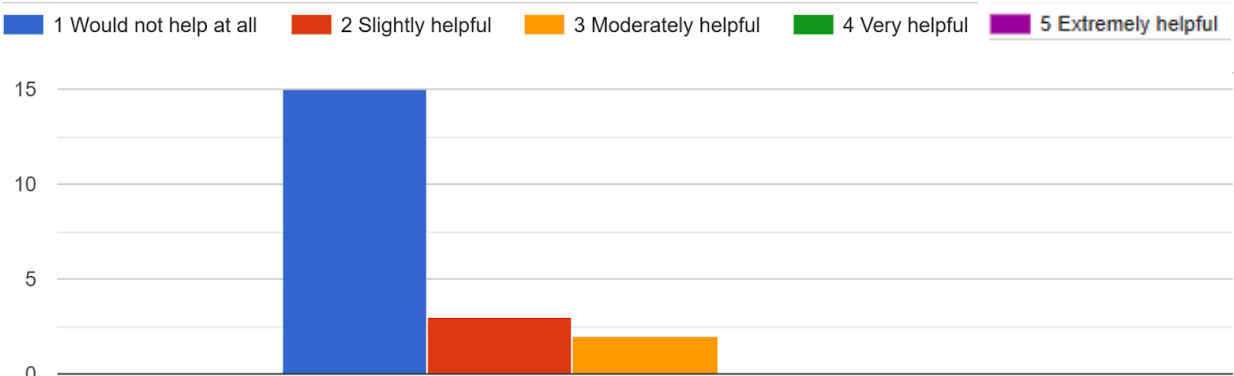
VISUAL CONNECTION BETWEEN COMMUNAL SPACES (Windows that allow residents to see and connect with other communal spaces.)



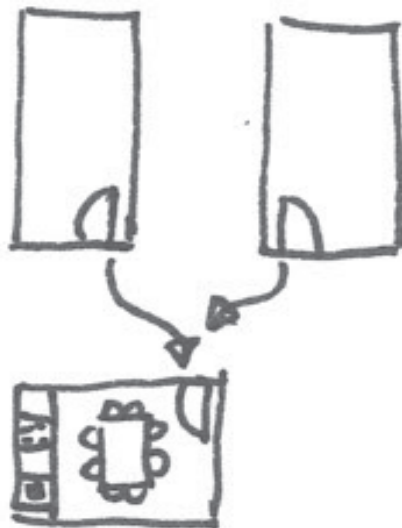
Rate each design feature on a scale of 1 to 5 based on how it would impact your mental well-being if implemented in your living environment.



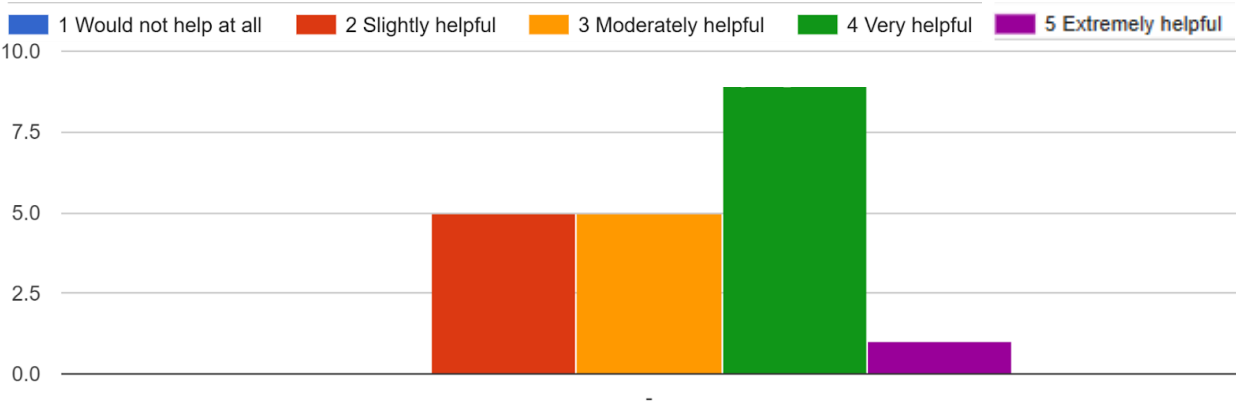
COMMUNAL BATHROOMS (Shared bathroom facilities designed for use by multiple residents.)



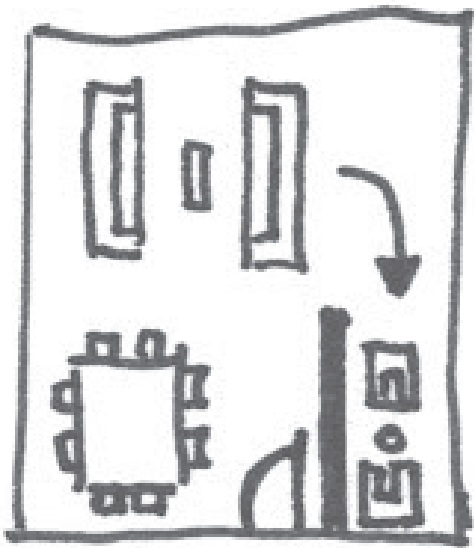
Rate each design feature on a scale of 1 to 5 based on how it would impact your mental well-being if implemented in your living environment.



30 M2 COMMUNAL SPACE (A recommended size for shared communal spaces.)



Rate each design feature on a scale of 1 to 5 based on how it would impact your mental well-being if implemented in your living environment.



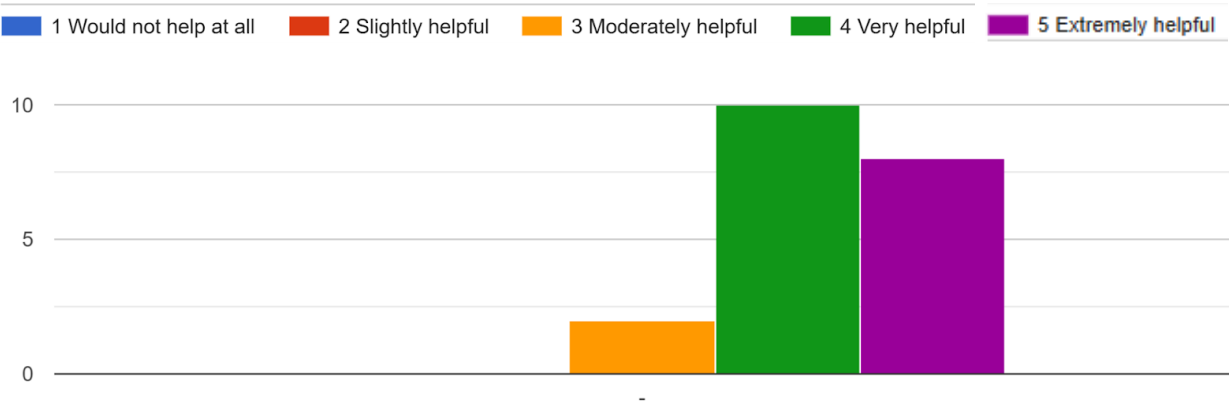
WITHDRAWAL POSSIBILITY COMMUNAL SPACES (Subspaces within communal areas where residents can retreat for privacy or personal time.)



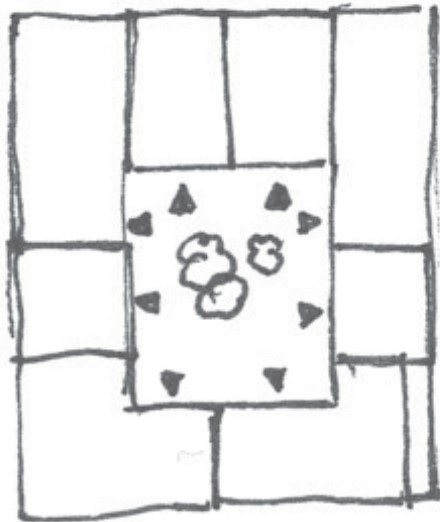
Rate each design feature on a scale of 1 to 5 based on how it would impact your mental well-being if implemented in your living environment.



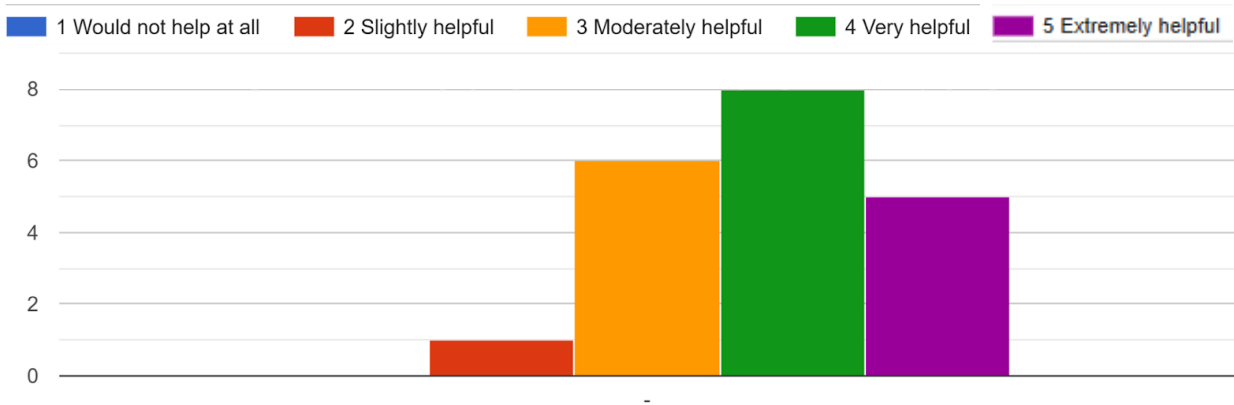
ACCESSIBLE GREENERY (Green areas that are easy to access and use from home)



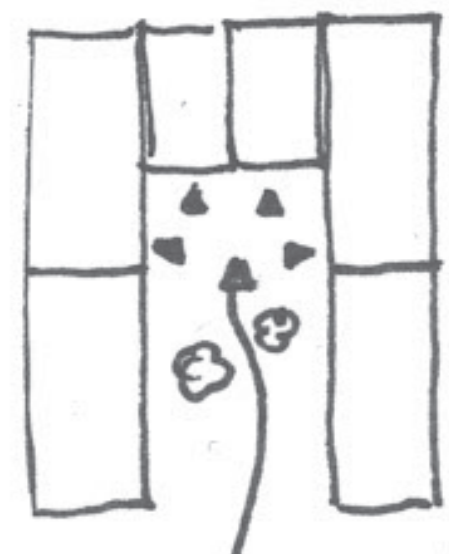
Rate each design feature on a scale of 1 to 5 based on how it would impact your mental well-being if implemented in your living environment.



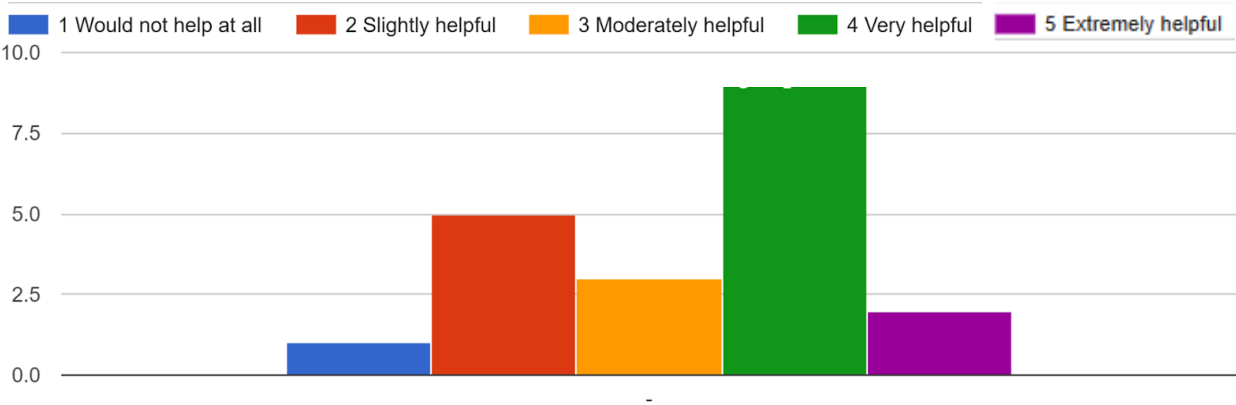
PRESENCE OF COURTYARD (A shared outdoor space within the residence.)



Rate each design feature on a scale of 1 to 5 based on how it would impact your mental well-being if implemented in your living environment.



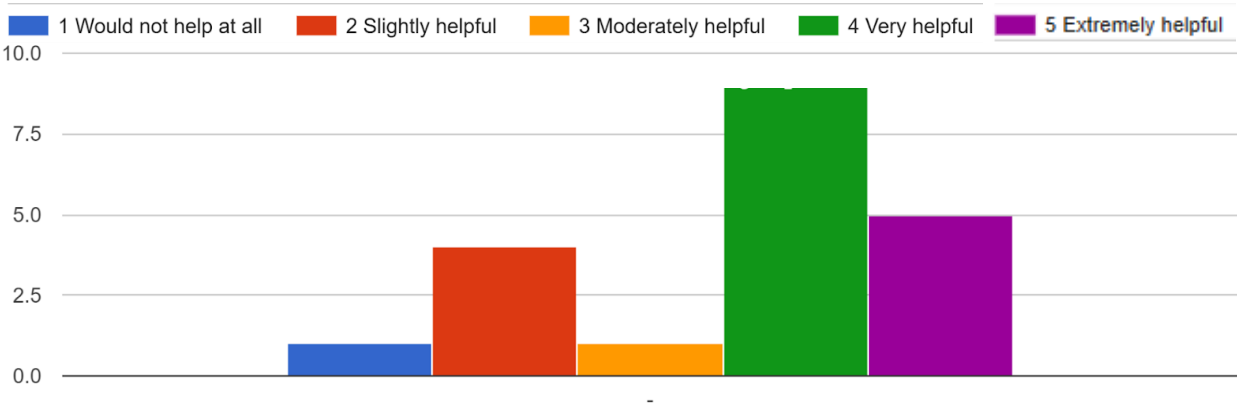
ACCESS FROM COURTYARD (Residential access that includes pathways or entries through a courtyard.)



Rate each design feature on a scale of 1 to 5 based on how it would impact your mental well-being if implemented in your living environment.



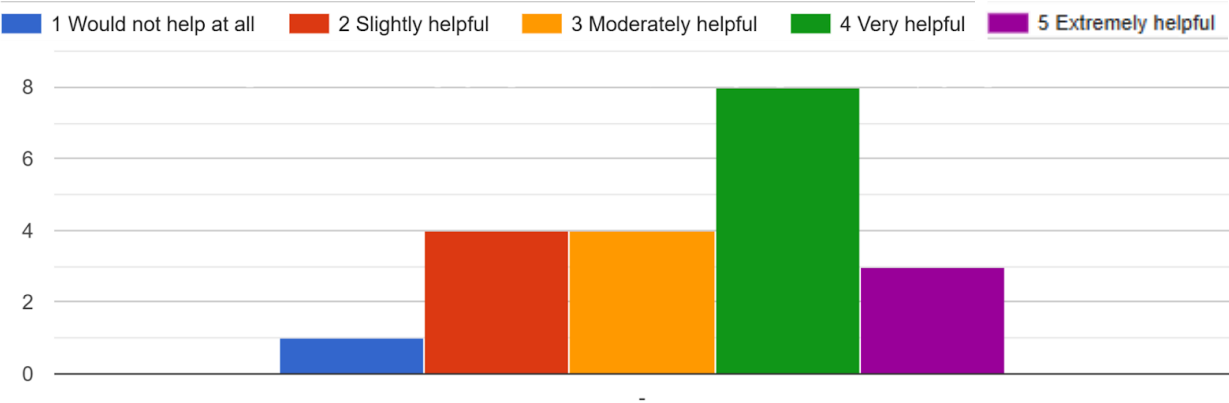
BIRD FRIENDLY TREES (Trees and landscaping designed to attract birds)



Rate each design feature on a scale of 1 to 5 based on how it would impact your mental well-being if implemented in your living environment.



COMMUNITY GARDEN (A shared garden space where residents can grow plants.)



## APPENDIX D STUDENT INTERVIEW 1

00:09:20 Student

The third where I currently am is another student house where it's split the top floor and the bottom floor have separate, like housing contracts.

00:09:26 Student

So we have a downstairs neighbor and I share it with one other person.

00:09:29 Interviewer

oke

00:09:30 Student

We got 2 separate bedrooms.

00:09:32 Student

We share the kitchen and the bathroom.

00:09:37 Student

This is also quite nice.

00:09:38 Student

My window overlooks the backyard and we have a nice balcony.

00:09:43 Student

There's a lovely view of a tree that.

00:09:49 Student

You know, gives me something pleasing to look at as opposed to empty parking lot.

00:09:57 Student

The greenery is nice.

00:09:59 Student

I hear birdsong

00:10:05 Student

Can you remind me the order of things, the circumstances of the room sharing?

00:10:15 Interviewer

Let's start with the room. So.

00:10:20 Interviewer

It was the communal spaces, and then the immediate context, yeah.

00:10:23 Student

This room is bigger.

00:10:25 Student

The communal spaces is just living room shared with my one housemate.

00:10:31 Student

It's very spacious which allows the host a variety of events.

00:10:35 Student

We have little parties

00:10:35 Student

People come over for board games, things like that.

00:10:41 Student

So the communal space is just like a living room in a house situation.

00:10:47 Student

The immediate surroundings are great.

00:10:50 Student

I ran down to the bakery and it took me two minutes to get back home just today.

00:10:56 Student

It's, really close to shopping.

00:11:01 Student

It's close to campus, but it's not on the main street.

00:11:06 Student

It's just off on a side street in like a suburban area, so I get sort of the best of both worlds where I'm

00:11:13 Student

On the way to where I want to go and not in the way of where other people want to go.

00:11:18 Student

So I don't get a ton of traffic.

00:11:20 Student

It's relatively quiet.

00:11:23 Student

At least on my side of the house, my house-mate being on the side of the street has a little more.

00:11:29 Student

Noise, but I found it to be much, much better.

00:11:35 Interviewer

OK. And then specifically this bedroom, if you could change some things that you think would be better or improve your mental health?

00:11:45 Interviewer

What would that be?

00:11:47 Student

I well, the walls are all painted landlord white.

00:11:51 Student

Yeah. And actually when I moved in, the windows were sealed shut by the paint that they used, so I couldn't even open these windows for a while.

00:12:01 Student

I fixed them now.

00:12:04 Student

When, yeah. So when I first moved in, that was annoying and the room being all white is.

00:12:13 Student

I mean, not inherently a negative, but growing up we had like a soft color that I found, you know, kind of comfort you come into a room and it has a vibe to it.

00:12:23 Student

One of my friends painted the walls of his bedroom a different color and that kind of stands out.

00:12:30 Student

I might paint a wall.

00:12:32 Student

That could, that could be interesting also.

00:12:36 Student

I guess it's just a very old building, so things like the doors and the windows are creaky and falling apart a little bit, but.

00:12:43 Interviewer

Yeah. So you would replace them with something.

00:12:45 Student

I might just. Yeah. Make sure that they're not

00:12:47 Interviewer

Ideally in an ideal scenario.

00:12:49 Student

It's just that the building is maybe fifty 100 years old.

00:12:53 Student

Something in that range. So I'd fix that up.

00:12:57 Student

I also did a bunch of little actually now that I'm thinking about it, I put because there was a window on the.

00:13:07 Student

Door this, which I wasn't used to.

00:13:10 Student

I put a cover over it and that's that.

00:13:14 Student

That didn't come that way.

00:13:16 Student

So I had to fix that and now it's not a concern.

00:13:19 Student

So I guess I would change the door to not have a window on it. I don't think bedroom windows need.

00:13:25 Student

Light coming through.

00:13:26 Interviewer

Yeah, yeah, because the window in the door opens up to the hallway, right?

00:13:30 Student

Yes. And through the hallway. If someone's coming home. I mean, it's a shared living situation if someone's coming home that keeps the light on.

00:13:39 Interviewer

But you cannot look through, it's only the light?

00:13:41 Student

No, no, no

00:13:48 Interviewer

So it like diffuses the light .

00:13:48 Student

I don't know what you call that.

00:13:49 Student

It's like a a glass, textured glass so that you can't see through.

00:13:53 Interviewer

Yeah. Yeah. OK.

00:13:55 Student

So it's not a privacy concern as much as it's just lighting when I'm trying to sleep.

00:14:04 Student

It's also, I guess, just couple of little things there's because of the way that the radiator and, the little indents in the wall are set up.

00:14:15 Student

There aren't a lot of options for where to move my furniture.

00:14:18 Student

I'm little bit boxed in with that.

00:14:24 Student

I've noticed this about myself.

00:14:26 Student

I like to rearrange my furniture about once a year just to keep things fresh in my room.

00:14:31 Student

Otherwise I start to feel like I'm stuck.

00:14:35 Student

When I try to move the furniture here, I really just have one option that is rotating my bed. So having like I can't put my desk up next to the window because the radiator is there just.

00:14:49 Student

Yeah, the wall space is a little bit limited, yeah.

00:14:54 Interviewer

So not a lot of options.

00:14:56 Student

No 'cause one side of the wall has the two doors on it, which only gives me space for a small night stand. The other side is full window with also the radiator.

00:15:08 Student

Which basically just means.

00:15:11 Student

Also, with this corner from an old chimney.

00:15:14 Student

So that's yeah, I might just be.

00:15:21 Student

Nitpicking at this point though, because it isn't too much of a concern.

00:15:26 Student

Yeah, I think the color of the walls and the state of the doors is kind of the main thing, just that it's a bit old and it's a bit.

00:15:37 Student

Like the maintenance is sort of bare minimum.

00:15:41 Student

How do we keep this in order as opposed to how can we make this very comfortable?

00:15:48 Interviewer

That's it, then thank you.

00:15:52 Interviewer

For, your time. Thank you.

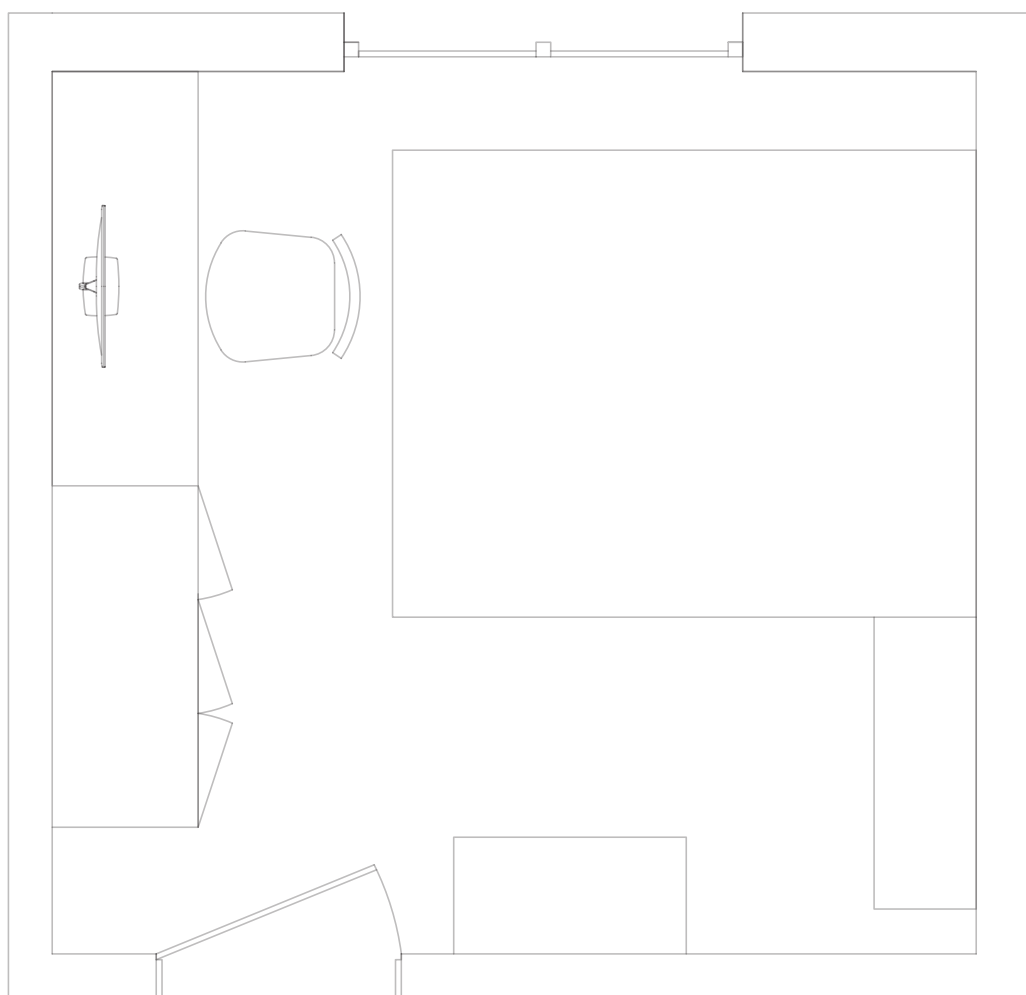


Figure A1  
Original floorplan of the first participant

## APPENDIX E STUDENT INTERVIEW 2

00:00:03 Interviewer

Alright, so hello.

00:00:04 Student

Hello.

00:00:06 Interviewer

Thank you for being here.

00:00:09 Interviewer

I'm going to start with the first question

00:00:11 Interviewer

What would you improve or change in your bedroom to better support your mental well-being?

00:00:18 Interviewer

And this can be things like light, sound, temperature, furniture, etcetera.

00:00:22 Interviewer

Maybe if we can start with this question.

00:00:24 Student

Yes, OK. So my bedroom is I think seven point five square meters. Ish, maybe.

00:00:31 Student

So it's super small and basically it's kind of like an elongated square.

00:00:39 Student

So when you walk in like half of the room is almost taken up by the bed. So I can only fit in a closet and like a clothing rack. But there's no space for a table or whatsoever.

00:00:54 Student

'Cause. Yeah. I mean, I study architecture. So I like to, you know, craft things, or draw and that is impossible in my room.

00:01:01 Student

so there's no space for any hobbies.

00:01:04 Student

So I think I would definitely make it bigger, so I would. Have space. For activities.

00:01:12 Student

Because, yeah, for now I would have to go into the communal room. But then that changes, you know, being alone and it's doing things that you enjoy.

00:01:22 Student

But I have to say that I thought the room would be way too small, but it's actually not like it's really OK.

00:01:29 Interviewer

OK.

00:01:30 Student

But yeah, I do wish that I could do something and it's.

00:01:34 Student

But also, I don't know, maybe this is irrelevant. Before the bed was turned around

00:01:39 Student

and it was a single bed and there I only had like a super long hallway in a way. And when I rotated, the bed was already made a bit better because I would have a square to like, walk like a circle. And like, you know, you can.

00:01:52 Student

Stack some things and then put them on the shelf.

00:01:57 Student

So yeah, that's already a lot better.

00:01:58 Interviewer

OK, nice.

00:02:02 Interviewer

For the next question, so basically the same.

00:02:05 Interviewer

What would you improve? Slash change?  
But in this case it's your communal kitchen.  
Communal space, so it can be the kitchen,  
the toilets, the balcony, everything that's  
shared with Your roommates.

00:02:16 Student

Yeah. So for us, we also it's a small house.

00:02:19 Student

So the kitchen and living room are com-  
bined.

00:02:23 Student

And which is actually quite nice.

00:02:26 Student

Because yeah, also before I thought it would  
be nice to have a living room.

00:02:30 Student

And I think it would be better to have one  
'cause then could fit a TV or you know some  
extra things because now we can't have that.

00:02:38 Student

Otherwise, the TV would be in the middle  
of the kitchen and then you couldn't cook  
anymore.

00:02:43 Student

But I do find myself, like often, just laying on  
the couch.

00:02:46 Student

That's kind of the living room part of our  
kitchen.

00:02:50 Student

And then, you know, I've spent time there  
and then my roommates come in and out.

00:02:54 Student

And that's like a nice way to start talking,  
because otherwise, if I cook and I don't hang  
out there, I just cook, eat quickly, and then  
go back to my room.

00:03:05 Student

But then there's like no proper social inter-  
action, so it's nice to like have that place to  
linger a bit longer.

00:03:12 Student

And wait for people, or I don't know, drink a  
hot chocolate.

00:03:16 Student

And the balcony is a bit useless also, be-  
cause it's partially broken and the landlord  
doesn't do anything. But also there's nothing,  
like it's just a long strip.

00:03:26 Student

So you could fit like a single chair on there,  
but not a second one, because then the door  
wouldn't open anymore.

00:03:36 Student

I think it will be good for smokers, but that's  
about it.

00:03:38 Interviewer

OK. Because how many people do you share  
the house with?

00:03:41 Student

Also, we are 4 in total and I think the kitchen is like.

00:03:46 Student

12 square meter, maybe 15, but it's not that big.

00:03:52 Student

also for the bathroom, It's super nice because it's split, so we have the toilets and on the 1st floor and then shower on the 2nd floor which helps so much because.

00:04:05 Student

Yeah. Then if people go to, like, take a shower, you can still go to the toilet and don't have to wait half an hour, especially with four girls, you know, and getting ready in the morning.

00:04:14 Student

You're like, OK, I'll go into the kitchen and brush my teeth.

00:04:18 Interviewer

So the fact that they're split helps a lot.

00:04:19 Student

It helps a lot.

00:04:20 Student

It makes it a lot easier, so I like that

00:04:23 Interviewer

alright

00:04:26 Interviewer

And then for the next question.

00:04:29 Interviewer

So the same thing, what would you improve less change in your immediate surroundings?

00:04:36 Interviewer

But yeah, now is the immediate surrounding, basically the context right around.

00:04:40 Student

So our neighbourhood is super. I mean, they're all like all family houses, I think.

00:04:49 Student

But now it's like half student houses, half families, and it's a super safe neighborhood. Like, really

00:04:55 Student

No problem about it at any time of the day, It's very quiet.

00:05:00 Student

There's nothing to, we don't even have a shop. I think of anything.

00:05:04 Student

There is one vintage store.

00:05:07 Student

But that's it.

00:05:09 Student

But they recently added like a garden and then hosted the name of the party. I didn't go to.

00:05:16 Student

These 3 old ladies, but it seemed nice.

00:05:20 Student

But they like, I don't think there's a space where I would just hang out.

00:05:26 Student

I think I'd always go something else, but it's really safe, really quiet.

00:05:31 Student

Yes, just no events or anything, but I think might be nice to have like a small shop to go to.

00:05:38 Interviewer

so you wouldn't hang out simply because there is nothing to do.

00:05:41 Student

Yeah, there's just, there's no public spaces at all.

00:05:47 Interviewer

All right then that's it.

00:05:48 Interviewer

Thank you for your time.



Figure A2  
Original floorplan of the second participant

## APPENDIX F STUDENT INTERVIEW 3

00:00:01 Interviewer

All right. So thank you for being here.

00:00:05 Interviewer

I'll start with three questions, after which there is a small drawing exercise for which I will turn off the the recording. OK.

00:00:14 Interviewer

So the first question is, what would you improve slash change in your bedroom to better support your mental well-being and you can consider aspects like light, sound, temperature, furniture, wall.

00:00:26 Interviewer

Any of these elements or anything else is just an example to set your.

00:00:32 Student

Well, overall I feel like my room quite a lot and I put a lot of effort into making also space that I am happy with.

00:00:40 Student

I personally think that the biggest issue I have with the House I'm currently living in is overall the insulation.

00:00:45

So.

00:00:48 Student

Because during the night or on cold days, the house is losing quite a lot of warmth, relatively quick, and it's also heating up a lot during summer, which is not such a big problem for me.

00:00:59 Student

But like during winter, if it's cold, I'm not feeling well and it's also increasing the effect of my winter tip when I'm feeling cold.

00:01:09 Student

Besides, it could of course be a bit more.

00:01:12 Student

Maybe like the layout of my room is a bit unpractical, I would say so.

00:01:19 Student

It's if you're like, with someone else in that room. For instance, my boyfriend can already sometimes be quite a hassle to sit on the.

00:01:28 Student

Like desk and for example, move through the room with enough space.

00:01:34 Student

Besides.

00:01:37 Student

I think.

00:01:41 Student

Maybe like more like.

00:01:46 Student

Like the the balcony that I have.

00:01:49

Mm.

00:01:51 Student

Currently it's not really nice to sit on like the. It's generally nice to have, but I don't really use it just because the state of it is not really good.

00:02:01 Student

And during summer, it's like also directly in the sun.

00:02:04 Student

It's not really nice to sit.

00:02:05 Student

There or like.

00:02:08 Student

Enjoy. Enjoy the light there and also heating up the room a lot. So that's mostly my my issues in the room. But yeah, that's it I guess.

00:02:17 Interviewer

Alright then that's alright for the next question.

00:02:22 Interviewer

What would you improve slash change in your communal spaces?

00:02:26 Interviewer

So for example living.

00:02:28 Interviewer

Well, it's the living room, the kitchen and the bathrooms to better support your mental well-being. So you can think about the layout, privacy, interaction, maybe the ways.

00:02:38 Interviewer

It's organized and things like.

00:02:41

That.

00:02:42 Student

Um.

00:02:43 Student

Yeah. Overall, I'm actually quite happy with the house. I think as mentioned before, the installation is my main problem because

during winter I'm freezing a lot and now recently I've with my housemates. Unlike hitting a bit differently, which makes it way better, but I still think it's overall.

00:02:59 Student

Cold.

00:03:01 Student

And if I'm having a bad day like mentally then that like has kind of an effect and I'm not really in the mood to, like, leave the room or the bed or whatever.

00:03:12 Student

In the.

00:03:14 Student

Bathroom. I think there's a lack of natural light, which sometimes it's a bit annoying because yeah, it's always. It's quite dark in there.

00:03:22 Student

Always have to put the light on, especially in the morning when you're showering and you're trying to wake up.

00:03:27 Student

It would be just nice to see a bit of the sky or something.

00:03:32 Student

Besides, I think the layout is good.

00:03:37 Student

The kitchen. I think there's not enough space for storage like generally food storage, but also like fresh vegetables and such like we have enough in the fridge. But if you're like trying to store food or like if you want to have like little stash of groceries for.

00:03:53 Student

I think quite limited and I think it would be nice if I don't have to go out and buy like everyday groceries if I have to, like cook something almost, you know, like everyday when I want something fresh I need to go.

00:04:07 Student

To the supermarket and buy stuff.

00:04:11 Student

But yeah, that's like more luxury problems than actual like having a big negative impact on my mental well-being.

00:04:19 Student

It's rather good, yeah.

00:04:20 Interviewer

Yeah, so you're.

00:04:21 Interviewer

Satisfied with the way it is.

00:04:22 Student

Yeah. And what I really appreciate is, for example, like the yeah, amount of like space for interaction.

00:04:31 Interviewer

Yeah, yeah, yeah, alright.

00:04:34 Interviewer

And then for the last question.

00:04:37 Interviewer

What would you improve slash change in your immediate surroundings to better support your mental well-being? So this can be the greenery, the social spaces, spaces, maybe the safety of of the neighborhood or the streets right around.

00:04:51 Interviewer

Maybe accessibility to the house.

00:04:56 Student

Yeah. I overall think that it's rather well situated like we have a good connection to the train station and also to the tram and to like the bus stop and such.

00:05:04 Student

Public transportation is good.

00:05:06 Student

It's also relatively close to the city centre, so that's also nice.

00:05:11 Student

The we are also close to a supermarket, which I think is a big plus. So it's like a one minute walk to the to the closest supermarket.

00:05:20 Student

Like the neighborhood, I would say overall I feel safe.

00:05:24 Student

But there are certain occasions where I don't be.

00:05:27 Student

For example, New Year's, I think it's not nice to walk around here and I know that there's also relatively speaking a lot happening here.

00:05:34 Student

It's not a good neighborhood, but it's also not particularly bad.

00:05:38 Student

So of course, if I could live in a better neighborhood, I probably would pick that.

00:05:41 Student

It's not having a drastic impact on my well.

00:05:44 Student

It's just maybe that I go maybe like less outside, you know, like if you're.

00:05:51 Student

I know, like around New Years I would rather not go outside at night or something.

00:05:57 Student

Besides, we're also close to a park, so that's also nice.

00:06:00 Student

The only thing that I think is that the neighborhood is actually quite ugly, like my bedroom window goes right away on our neighbors, like on the other side of the street. And the houses are quite grey, like very concrete colored.

00:06:12 Student

Then with the Dutch.

00:06:13 Student

Weather of like clouds and fog. I think if you wake up in the first thing is like grey and grey.

00:06:20 Student

It's quite depressing.

00:06:22 Student

So I would of course rather look on a free space like some green.

00:06:27 Student

I don't.

00:06:27 Student

Or maybe like a slope, because for instance, on the other side of the house is a slope and then you can like, look right on it. And I think that's such a nice view and comparison to the one I have.

00:06:39 Student

Which I actually think has like the biggest impact on my hand mental health. When you wake up in the morning.

00:06:44 Student

And then you're opening your.

00:06:47 Student

Your curtains and then you're like realizing, oh, it's a grey day. Yay. Yeah.

00:06:53 Interviewer

All right, that's it then.

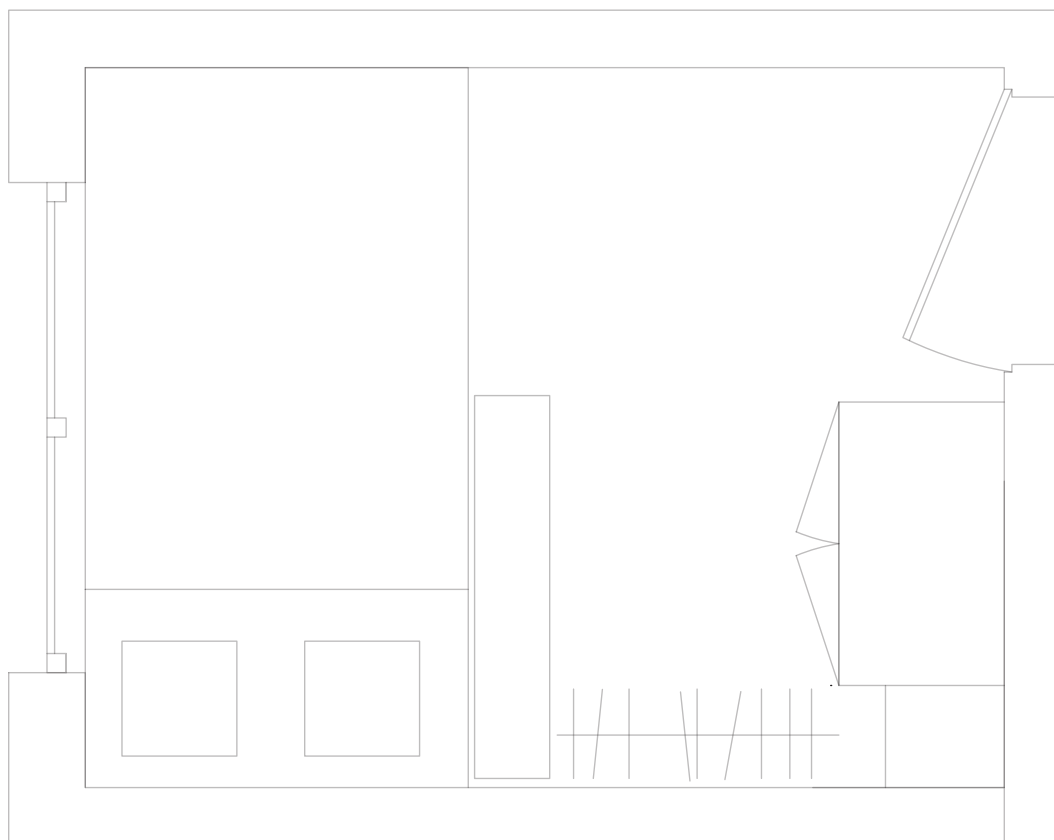


Figure A3  
Original floorplan of the third participant

## APPENDIX G STUDENT INTERVIEW 4

00:00:03 Interviewer

Alright so.

00:00:04 Interviewer

Thank you for being here.

00:00:06 Student

Yeah.

00:00:08 Interviewer

So the first question first, there is three questions which will be followed by a small drawing exercise which I won't record.

00:00:19 Interviewer

So let's start with the 1st.

00:00:21 Interviewer

What would you improve slash change in your bedroom to better support your mental well-being and you can consider aspects.

00:00:28 Interviewer

Like light, sound, temperature, furniture, walls or any other feature.

00:00:34 Student

I would.

00:00:36 Student

Change my curtains because they are too long.

00:00:44 Student

and I would like the curtains to be the same length as my windows.

00:00:57 Student

I would.

00:00:59 Student

Want my room to have a one color theme

Because that would be cool.

00:01:05 Student

Very OCD for me.

00:01:08 Student

And I like some plants.

00:01:12 Student

Favorably some flowers, because I like flowers.

00:01:17 Interviewer

And the color theme when you have a specific preference for a color.

00:01:21 Student

Maybe not the color, but a color palette like two or three colors.

00:01:25 Interviewer

Because currently what is it like?

00:01:27 Student

multiple colors.

00:01:28

The room.

00:01:29 Student

Yeah.

00:01:31 Interviewer

Alright. Anything else you would like to change about your bedroom?

00:01:37 Student

No.

00:01:38 Interviewer

Alright then, let's move on to the next question.

00:01:41 Interviewer

What would you improve change in your communal spaces?

00:01:46 Interviewer

In order to better support your mental well-being so.

00:01:49 Interviewer

The communal.

00:01:50 Interviewer

Think about the kitchen, the living room, maybe the bathroom. Everything that's shared with the other people in your house.

00:01:57 Student

I don't like the mold.

00:02:00 Student

Especially in the bathroom.

00:02:05 Student

And maybe a place for.

00:02:09 Student

Stuff like my makeup.

00:02:12 Student

To put on the on the the bathroom stand.

00:02:20 Interviewer

Yeah. you would like more storage in the in the bathroom.

00:02:23 Interviewer

In the shared bathroom.

00:02:25 Student

Yeah, but storage that you can look at

00:02:30 Student

not in a closet type.

00:02:31 Interviewer

so not like a cupboard.

00:02:34 Interviewer

Alright.

00:02:37 Interviewer

That makes sense.

00:02:38 Interviewer

Anything else? Maybe about the living room. For example, the living space. Would you want to change anything there?

00:02:45 Student

No, I like the living room because the color of the curtain is yellowish.

00:02:51 Student

And when light goes through the curtains, it gives a kind of nostalgic feeling, really warm.

00:02:59 Student

Environment.

00:03:01 Interviewer

OK.

00:03:02 Interviewer

Uh, that's clear.

00:03:04 Interviewer

And then for the the next question, what would you improve slash change in your immediate surroundings to better support your?

00:03:13 Interviewer

So right around the house, for example.

00:03:16 Student

I would like to have some greens in the back of the House because when I lookout the window, I only see the backyard.

00:03:24

Mm hmm.

00:03:26 Student

To be honest, I don't like the buildings I'm surrounded with.

00:03:29 Student

Really boring, boring and ugly.

00:03:35 Student

Yeah, too much concrete and bricks.

00:03:39

Mm hmm.

00:03:41 Interviewer

Alright then that's it.

00:03:42 Student

Yeah.

00:03:43 Interviewer

Thank you for your time.



Figure A4  
Original floorplan of the fourth participant