Unravelling Mind-Space Interactions:

Design and Mental Health

in an Acute Psychiatric Ward at Mount Carmel Hospital

Kirsty Borg

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and to my parents, for everything, thank you.

I take full responsibility for any shortcomings in this dissertation.

Abstract

This dissertation seeks to explore the influence of 'healing' architecture on the mental states of its inhabitants, specifically focusing on how the design of spaces can act as a catalyst in the healing process of people with mental illnesses.

When evaluating the grand scheme of architecture for the recovery of service-users, it is a relatively new concept that the built environment is viewed as having a participatory role in being a catalyst during the healing process of those affected.

The notion of an institution, when considering this potential within architecture, is contradictory in nature. An institution is primarily designed to control and to contain individuals, whereas the notion of a home empowers the self. These notions will thus be challenged within the physical setting of Mount Carmel Hospital's Acute Ward 4. The research employs qualitative methods, primarily via conducting interviews and observations within the research location to explore the juxtaposition of institutional and domestic architectural elements and their impact on the service-users.

Analysis revealed that despite efforts to reduce institutional cues, the space retained an institutional quality. However, the residents' behaviour highlighted mixed reactions, with some positive experiences. The relationship between individuals and space was strained at times, with the concept of control (or a lack thereof) and the loss of self within the space being the main points of distress.

The findings illustrate that a change should occur within the architectural milieu, advocating for the empowerment of the self, whilst still maintaining a balance between safety and security within the space. This shift could potentially enhance therapeutic outcomes by alleviating distress related to spatial control; and fostering a reinstatement of the self.

Keywords: Mental Illness, Space and Architecture, Institution, Home, The Self

Terminology and General Structure

Terminology

Throughout this dissertation, various terms will be used to refer to people with mental illness; and the service-users residing within the research location. Certain terms will be introduced to decrease the stigma, changing the word 'patient' to 'resident' or 'service-user'.

However, the terms 'patient', and 'asylum', will only be used when relevant to a historical context, or within the context being observed.

General Structure

The general structure includes multiple references to *Alice in Wonderland* by Lewis Carroll. This approach was chosen primarily to instil a sense of playfulness within the research, and to provide the reader with a sense of familiarity amidst heavy content and concepts which may seem unfamiliar. This allows the reader to relate more closely to the arguments being put forward, as well as to the individuals the study concerns.

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Glossary

MCH	Mount Carmel Hospital
AGENCY	A sense of agency translates to the ability to accomplish something
SCP	**S**afety & Security; **C**ompetence, **P**ersonalisation & Choice

Chapter 1

Design and Self-Continuity

Grounding the research

This chapter introduces the research, discussing the intent and the main research questions

1.1 Introduction

When we speak of architecture, it is not only the structure that we are describing. When we speak about how the environment affects us, we are not merely evaluating whether we find it appealing or an eyesore. The environment is also the door that doesn't work, the view of nature from the apertures, or the coffee-stained countertops (Tuan, 1972).

As one would expect, run-down buildings pose a threat to the health of those living in them. If renovated, the occupants' health improves. However, it is less clear on what steps must be taken for the environment to positively impact individuals' well-being and mental health (Tuan, 1972). Thus, altering the physical isn't a solution on its own. However, there is one common occurrence within every psychiatric disorder: the reduced sense of self, resulting in feeling unsafe, misunderstood, and disoriented (Bader et. al, 2022). The first premise of this study is to explore what constitutes a healing environment - one that aims at *reinstating the self* and one that fosters a beneficial relationship between the individual and the environment, thus transcending the physical to incorporate the meaningful.

Cultural beliefs can greatly impact individuals with psychiatric disorders - affecting treatment dynamics, social inclusion, and even reluctance to seek help (Scerri et. al, 2023). The stigma related to mental illnesses deeply affects the self, exacerbating the individual's mental state (Scerri et. al, 2023). Derogatory connotations are fairly common, affecting the help-seeking attitude as well as self-perception (Scerri et. al, 2023). Locally, this stigma is further fuelled when individuals need hospitalisation, as the institution of Mount Carmel Hospital itself is frequently referred to by stigmatising terms. Online narratives from past residents of MCH have continuously highlighted its dire state. However, recent efforts have also been set out to refurbish a number of wards within the hospital, providing yet another transformation for the 18th century institution. This colossal architecture has now been envisioned to close down, relocating service-users to a mental health facility near Mater Dei Hospital in the years to come. In light of the emphasis in care being made towards the clinical and the institutional, the setting of a psychiatric environment within a larger entity will remain as a pertinent part in the architectural discourse as relating to the treatment of mental health for years to come.

Therefore, the second premise of this research will focus on the intersection of care and architecture within such environments, focusing on the newly refurbished acute psychiatric ward at MCH to investigate the mind-space interactions within this environment.

1.2 Research Objectives and Questions

The scope of this research is to better understand how space affects individuals with mental illnesses. Through qualitative methods, namely interviews and observations, the research will seek to identify how current psychiatric care settings can become more responsive to the needs of their residents. The study explores the implications of the environment on mental health, and how behaviour is shaped as a result of both the individual and their setting. This will then be utilised to examine the implications of the local institutional psychiatric care setting of an acute ward within Mount Carmel Hospital, through an observational method that explores the experience of the service-users within the space.

The research will pursue the following objectives:

a. to analyse the influence of architecture and design on user well-being at MCH within an acute ward; and

b. to identify and understand key features and spatial elements that impact the well-being of residents at an acute ward at MCH.

The study will also seek to address the following research questions:

a. How does the acute ward, in the context of MCH, communicate notions of the institution vs the domestic to its residents?

b. How does the architectural design of the new acute ward within MCH impact resident well-being?

c. What key features and spatial elements contribute to the therapeutic environment at the new acute ward at MCH, and how may they be enhanced?

1.3 Dissertation Structure

Chapter 2 establishes the narrative through a review of literature on the interplay between the environment and mental health. It explores theories related to the mind, the individual's perception of space, and notions of the institution and the domestic;

Chapter 3 outlines the research's methodology and describes the approaches which will be taken to conduct the research;

Chapter 4 describes the setting of Mount Carmel Hospital and Acute Ward 4;

Chapter 5 presents the data collected from the interviews, as well as the initial implications of the data collected from the fieldwork;

Chapter 6 includes an analysis of the data collected from the fieldwork, examining the relationship between the service-users and their environment, and exploring potential improvements to these experiences; and

Chapter 7 provides an overview of the findings and suggestions for future research.

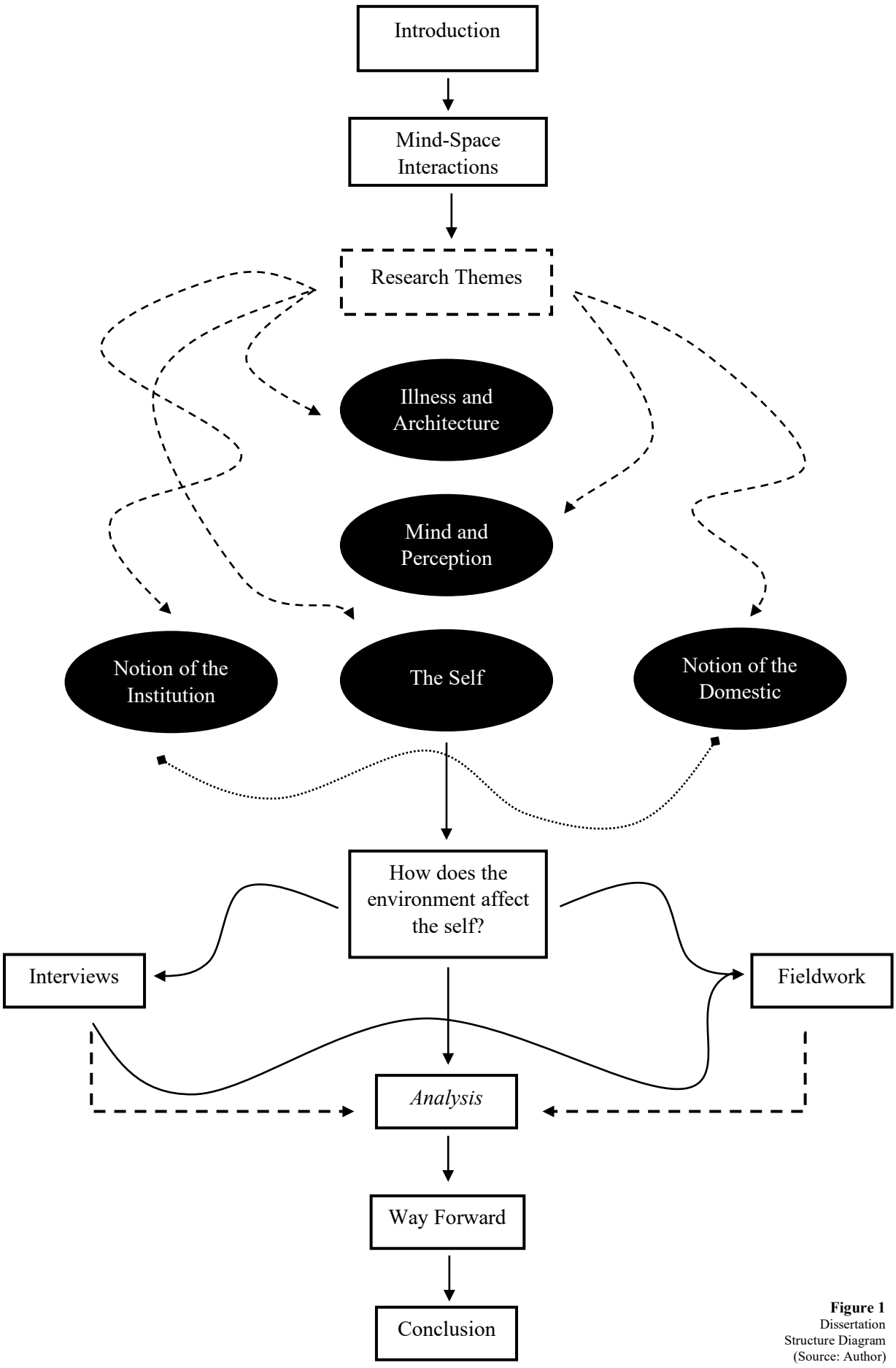


Figure 1
Dissertation Structure Diagram
(Source: Author)

Chapter 2

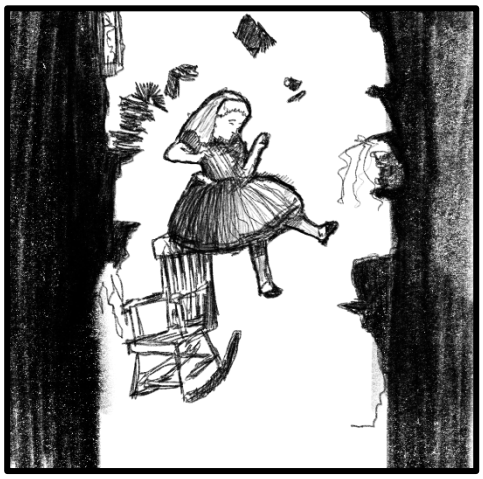
Exploring the Literature

This chapter outlines three main themes, highlighting the relationship between the individual, the environment, and well-being

2.1 Diagnostic Spaces

2.1.1 Illness and Architecture

exploring the intersection of body, disease, and architecture



Little Alice fell

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the h**O**le,

bumped her head and *bruised* her soul

(Carroll, 1865, p.2)

Architecture has, from the very beginning, affected our health and evolved in line with the degree to which we, as humans, *understand* health. It has, even if not as evident, slowly responded to the diseases prevalent throughout modern civilizations as our knowledge about medicine, our body, and its health, grew exponentially (Battisto and Wilhelm, 2019).

From addressing the respiratory repercussions of narrow streets (Bursa, 2022) - such as the streets within the Manderaggio area in Valletta (figure 2) - to sanatorium-inspired modernist designs of flat roofs and open spaces - such as Le Corbusier's Ville Savoye (figure 3) as a reaction to tuberculosis-dominated years[1] (Gross, 2020) - it is evident that architecture and our built environment have demonstrated their capacity to *heal*. While architecture has effectively addressed physical health concerns, its approach to mental health remains less developed

[1] Modernist architecture incorporated features included in clinical settings such as the sanatorium. Le Corbusier's Ville Savoy included elements such as a flat roof garden, white walls, sun parlours and even a sink right in the entrance hall (Bursa, 2022)

(Colomina, 2019)[2]. This may be due to the familiarity of physical sicknesses, whereas psychiatric disorders often introduce unfamiliar challenges. Just as Alice tumbles down the rabbit hole in '*Alice in Wonderland*' (Carroll, 1865), encountering various obstacles throughout her journey, individuals dealing with mental health issues appear to navigate a similarly distorted and unfamiliar inner landscape. This journey presents challenges not only for the individuals themselves but also influences how their experiences are perceived publicly.

There is a certain mystery that veils over the notion of mental illnesses. These ailments are often viewed as being hard to control and capricious, thus the resulting behaviour hard to comprehend (Sontag, 1978). Before the rise of psychiatry, people viewed the mind as something extra-ordinary, something we simply could not understand. This lack of understanding our own needs and inner workings brought about it an architecture that functioned as nothing more than quarantine and confinement spaces for people who were ''*criminally insane''* (Gallagher, 2013, p. 17).

Figure 2
Narrow Streets of the Manderaggio area, Valletta. (Source: Cardona on Pinterest, n.d.)

Figure 3
Sketch based on the open outdoor space of the Ville Savoye terrace. (Source: Adapted from ScarletGreen on Flickr, n.d.)

Figure 2

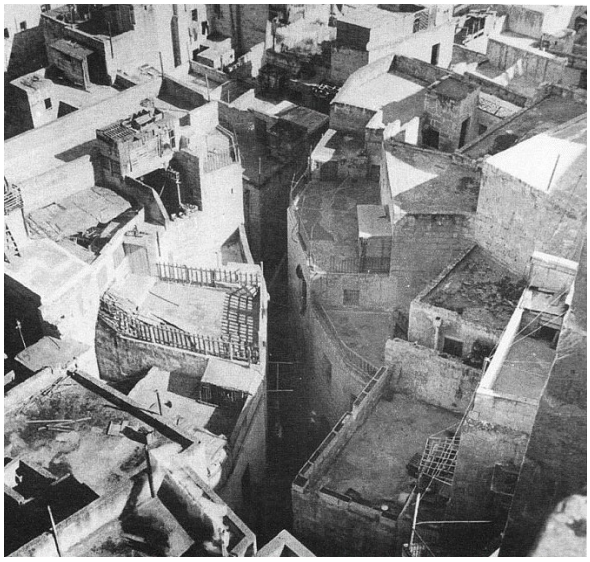
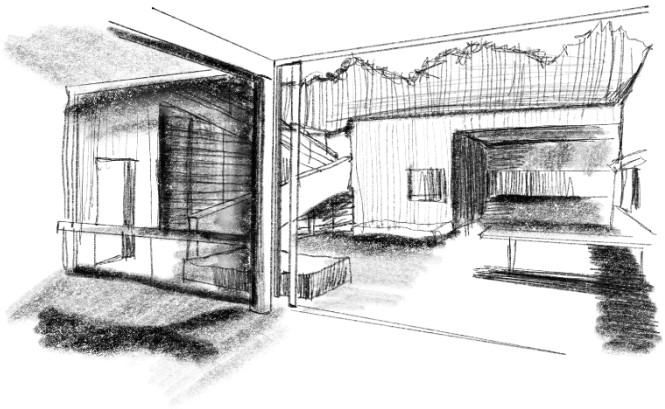


Figure 3



[2] This challenge lies locally, as '*healing'* architecture is still synonymous with the notion of an institution. Given what we are handed with, we must seek to understand how these spaces may be improved, after thoroughly understanding what works and what does not.

Sontag (1978) speaks of diseases, such as cancer and tuberculosis, as being mysterious - a characterisation that extends to mental illnesses as well. This mystery results in a fear, and hence a stigma, which surrounds those afflicted. Both internal and external catalysts can distort perceptions – internally by the illness itself and externally by the surrounding environment (Sontag, 1978). Much like how people with physical ailments require adaptation to new environments, individuals experiencing mental illnesses must adapt to the new circumstances. This is also the case when it comes to encountering new spaces throughout their journey of healing. The body and mind are expected to adapt to the space, never the other way round. Our physical environment is static, solid, and very much *just there.* However, good *architecture* and the design of space can also give so much more than what we tangibly encounter. According to Campbell (2005), architecture should strive to heal through the integration of scientific approaches with symbolic associations, merging the tangible and the intangible.

Architecture and the spaces we inhabit can become a powerful source of healing. They are an influential factor in the healing process of any disease. With a greater understanding of the mind and how it can succumb to illnesses come scientific approaches to *treat.* The first reaction is to primarily treat via psychoactive drugs and behavioural therapy (Gabbard, 2009). This should then be coupled with the environment's potential to *heal.*

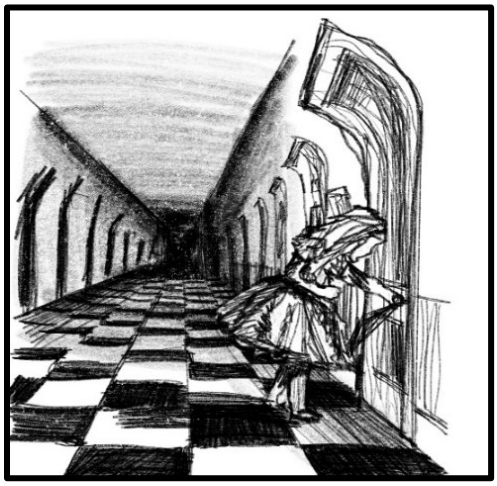
Another commonality may now be pointed out. Confinement runs parallel within the treatment of many diseases. A change in environment for the tuberculosis patient from the home to the sanatorium introduces the individual to an *unfamiliar* and *special* environment with special rules (Sontag, 1978). Similarly, people suffering from severe mental health problems are extracted from their environment and relocated to a special world. This so-called special world may very well be designed with good intentions. However, navigating unfamiliar and possibly hostile territory may have adverse effects when it comes to the individual's healing journey within (Golembiewski, 2015).

There is a psychological reaction to any architectural space, but this reaction is especially pronounced when encountering uniquely designed spaces. The experiential factor of this encounter significantly shapes the cognitive responses of the individual's mind (Gallagher, 2013). Internally, cognitive factors within the brain mould these experiences and the individual's perception of the environment at hand.

Internationally, this attempt to understand the effect of the environment on the mind was already apparent in the 19th century, attempting to utilise the building to cure *insanity* as well as to display a message of hope (Yanni, 2007). Running in parallel, up until mid-19th century, *to confine* was synonymous to treating mental illnesses of people in Malta. Architecture still served as a tool to *confine,* for *surveillance,* to send a *message,* and to *control* (Yanni, 2007).

2.1.2 An Institutional Past

tracing the history of the institution



‘‘There were doors all 'round the hall, but they were all *locked*; and when Alice had been all the way down one side and up the other, trying every door, she walked sadly down the

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wondering how she was ever to **get out again**.’’

(Carroll, 1865, p.6)

The 17th century marked the birth of *asylums* (Parry-Jones, 1988). It also marked the creation of a strong division in society, established on the disruptive practices of power shown through architecture (Eris and Kulac, 2014). Michel Foucault (1967) explored the relationship between power and subjectivity within institutional spaces such as psychiatric hospitals. He formulated the concept of the ‘*other space’* to describe spaces and structures that people did not traditionally encounter (Foucault, 1967).

These spaces were used as agents for creating the division: between the ill and the healthy, criminals and ‘good’ people, and between people with psychiatric disorders and those without. They often also acted as forms of control and surveillance, housed within colossal architecture (Gallagher, 2013). Foucault hence labelled psychiatric hospitals as being *spaces of confinement,* a

result of capitalism which uproot individuals who do not contribute within society (Eris and Kulac, 2014).

However, confinement doesn't have to be designed. The *sacra infermeria* in Valletta, after being utilised as a general hospital for the sick, was used as a space to 'care' for people with psychiatric disorders, with the 'manageable patients' being kept in secure rooms, and the less 'manageable' ones being kept in the basement (Muscat, 1994). The Floriana *Ospizio* (figure 4) was used in conjunction for patients who were deemed incurable (Ventura, 2004). The first asylum was then established in 1835 within Floriana after the Ospizio was deemed unsuitable (Ventura, 2004). The residence of Bali Fra Fabrizio Franconi, *Villa Franconi,* built in 1739, was reused for this purpose, and its name still carries a negative connotation within the Maltese vernacular when referring to mental health institutions (*Ta' Frankuni*). However, this facility also became unsuitable as the number of admissions started to rise. In 1853, construction for a purposefully built asylum began for the current hospital in Attard (Muscat, 1994). This was the first manifestation of care within a newly 'designed' fabric (Ventura, 2004).

Figure 4

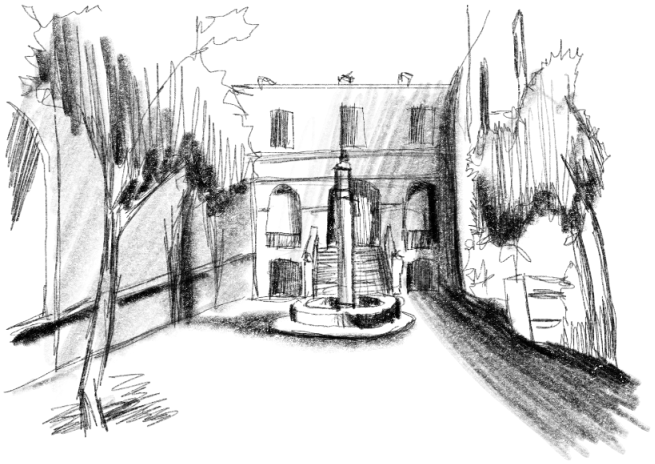


Figure 4
Sketch based on the Ospizio in Floriana. (Source: Adapted from Spiteri, n.d.)

''*Madness*'' (Eris and Kulac, 2014, p. 3) was designed as a physical structure. The history of such institutions reasserts this perception. For instance, the first asylum to be built, the *Bethlem Hospital* (figure 5), was created as a landmark within the city of London, veiling over the internal landscape with a luxurious and ostentatious façade, changing the public's perception of the 'asylum' (Akehurst, 2017). The question arises as to whether these *other spaces* were designed to as a way to divide society (addressing space), or designed with the focus to serve the individuals marginalised by society (addressing the client) – in other words, was the structure built to physically separate and confine the marginalised from the rest of society, or was it built for the benefit of those admitted? Yanni (2007), in her book titled *The Architecture of Madness,* states that *planning* was the most effective tool in treating individuals with psychiatric disorders, reinforcing the idea that the former way of designing (to divide)

was standard practice. Because of this, treatment for those who may harm themselves was always synonymous with a drastic change in environment.

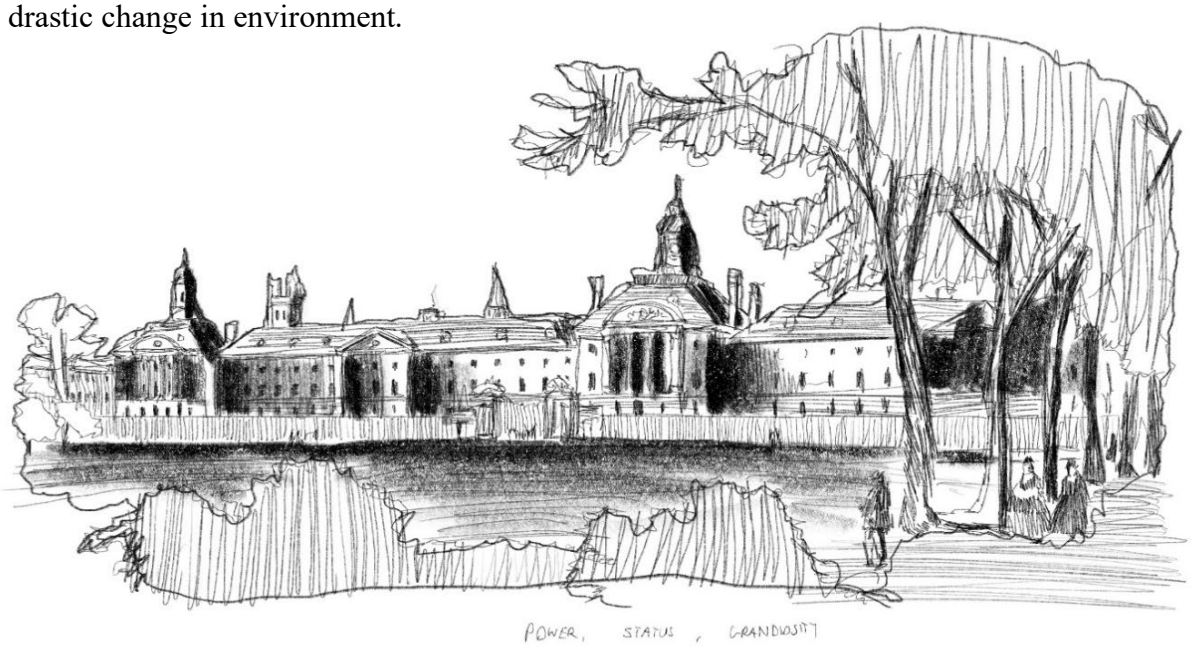


Figure 5
Sketch based on a view of Bedlam Hospital, London. (Source: Prior, n.d.)

It was believed that by separating the affected individual from the home, any associations with their previous life (which could have been the cause for their predicament) would decay, allowing *order* within the psychiatric hospital to induce *healthy* feelings (Yanni, 2007). With this ideology in mind, the asylums in the UK and US were represented as a contrasting entity; from small, dark, and cramped Victorian houses, to bright dayrooms and long corridors of the grand hospital. However, Thomas Story Kirkbride, an American alienist[3], described institutionalisation as an *unfortunate* requirement for treatment (Yanni, 2007). The colossal nature of such facilities went against therapeutic ideals that centred around family and home life. As the notion of the home grew in importance, the representation of the asylum was manipulated to align with this ideology. A paradox was presented: the grand exterior instilled hope of a well-established system of care as well as a civic identity, while the broken-down interiors echoed sizes of domestic spaces (Parry-Jones, 1988).

The societal norms at the time of the creation of this architecture have drastically changed throughout the years. The ideals and values which were embodied within society were and are reflected in the

[3] Psychiatrists were referred to as 'Alienists' in the 19th century. (Truong, 2018)

preceding and remaining architecture. However, within this historical architecture that is still functioning in the present, there remains what we shall term as the *undesigned* (Eris and Kulac, 2014). The architecture and the related spaces that were built in the past, within past social ideals, are still being experienced *outside* such social ideals – the present (Eris and Kulac, 2014). If these structures have retained their use, then the message that they represent does not correlate with *current* mental health care practices. Therefore, the sense of *division* still exists at the core of the structures that remain, despite attempts to fit within a new system of care. This may be the case in Malta, where the architecture of care speaks of a previous system, having spaces that were designed by the *other*[4] and by methods[5] to reassert societal norms within the built fabric.

The meaning of design should not be limited to the 'rules' imposed by society, but, like any other *architect-client* project, should relate to the individual's world directly (Edginton, 2010). Many philosophers have argued that scientific methods, through the manipulation of the physical realm, isolate people from their nature (Eris and Kulac, 2014). With this being said, the concept and the understanding of phenomenology[6] must be used as a tool to prioritise perception over the objective nature of science (Eris and Kulac, 2014). We must thus first attempt to understand the mind before we can understand how people perceive and *experience space.*

[4] Architects who practised during times governed by past social ideals.

[5] These methods describe how people used to design in accordance to physical and social guidelines: to separate society so that those affected by mental illness don't affect the rest of society (Eris and Kulac, 2014).

[6] Phenomenology is a term coined by Husserl, and is an exploration of how people experience things (Merleau-Ponty, Bannan, 1956)

2.2 Mapping Mind to Experience

2.2.1 The Affected Mind

understanding the inner workings of the mind

‘‘you see, a dog **growls** when it’s **angry**, and *wags* its tail when it’s *pleased.*

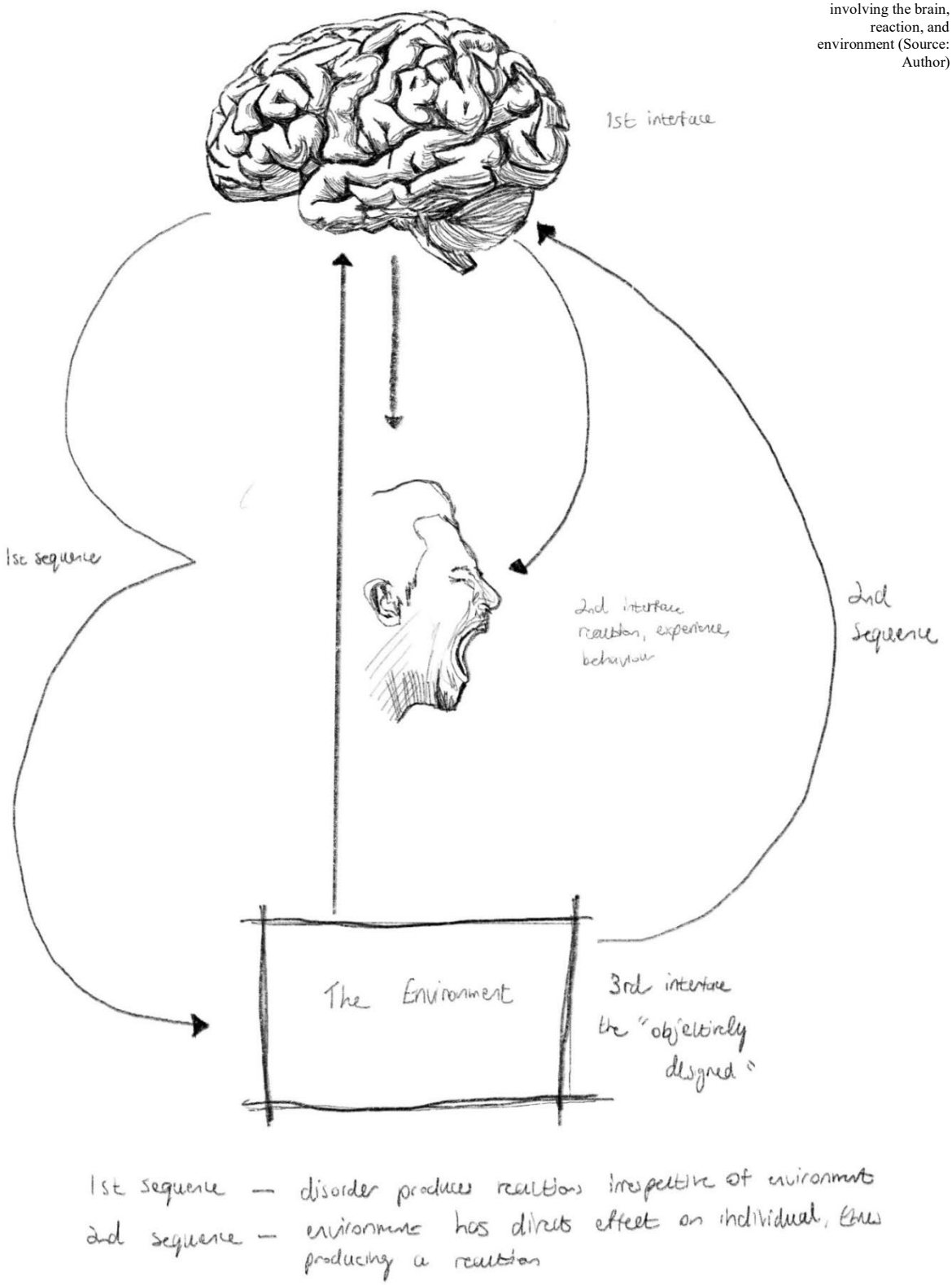
Now I **growl** when I’m *pleased*, and *wag* my tail when I’m **angry**. Therefore, I’m mad.’’

(Carroll, 1865, p. 34)

The question arises whether it is possible to derive objective design standards from the subjective experiences of the affected individuals. It is hence a step in the right direction to start to understand the first interface: the mind.

The second interface can be described as the *experiential*, encompassing behavioural patterns (subjective), while the third represents the ‘objectively’ designed environment. These three interfaces (mind, reaction, and environment) are interlinked, functioning in a sequence where influences can flow either from mind to space, or vice versa. The first sequence occurs when the mind, already altered by psychological disorders, reacts, irrespective of the environmental context. The second sequence aligns with the ecological model theory of perception, where the environment directly alters the mind, producing a specific reaction (figure 6) (Gibson, 1979).

Figure 6
Diagram showing the difference between the two sequences: involving the brain, reaction, and environment (Source: Author)



An example of the former sequence is how a child suffering from a mental disorder perceives physical space. According to a psychiatrist interviewed by Eris and Kulac (2014), initially, space means nothing for infants. Instead, it is created *through* people and through prior experiences. This interaction helps classify the environment as either positive or negative, based largely on the presence and caregiving behaviour of people within the environment (Eris and Kulac, 2014). Consequently, a bad experience is created via the absence of the caregivers within the environment.

We must keep in mind that our experiences are embedded within the environment we inhabit. As humans, we subconsciously always associate the meaning of things, whether people, objects, situations, etc. to a context. Observation, something that occurs naturally and frequently, can be termed to be a cognitive process, inseparable from the physical environment which is being observed. This essentially means that the workings of the mind are not only the product of the physical organ itself but also of the environment beyond the host of the brain (Gibson, 1979). The objects which the individual perceives within this environment can be described as having *affordances* (Gibson, 1979). These affordances are essentially *clues* to how an object may be *used* (Chong and Proctor, 2019). If, for example, an object is at the suitable height and has a flat surface, it *affords to be sat on* (Gibson, 1979). However, the individual may also choose to stand on it. This then reveals that the concept of *affordances* is both a subjective *and* an objective concept (Gibson, 1979). The object on its own encompasses *all the possibilities* for how it can be used (objective). The individual, on the other hand, may look at the object and choose a *use* for it, depending on how he or she perceives it (subjective). An affordance is hence ‘‘equally a fact of the environment and a fact of *behaviour.*’’ (Gibson, 1979, p. 129). Bronfenbrenner[7] (1979), describes the relationship between the individual and their environment as a set of *interacting subsystems* (figure 7). The immediate setting is represented by the first system (the Microsystem – e.g. the psychiatric ward), and contains the individual (Bronfenbrenner, 1979). The second system (the Mesosystem – e.g. the interaction between the ward and the individual’s home – a system of microsystems), comprises the relations and

[7] Urie Bronfenbrenner was a psychologist who studied the development of humans and human behaviour in relation to environmental systems (Guy-Evans, 2024).

interactions between the immediate setting and other settings within the individual's life (Bronfenbrenner, 1979). The third system (the Exosystem – e.g. the rules of the psychiatric hospital), includes settings where the individual is not present, yet the events occurring in this setting still affects the self (Bronfenbrenner, 1979). The fourth and final system (the Macrosystem – e.g. the broader cultural context surrounding beliefs about mental health), comprises so-called '*blueprints*' for what the setting should look like in any given culture (Bronfenbrenner, 1979). The blueprint can indeed be changed, but would render the setting unfamiliar and hence produce ''corresponding changes in behaviour and development.''(Bronfenbrenner,1979, p.4).

Therefore, it can be said that the reaction or behaviour of an individual within an environment or a designed setting is a combination and interplay between the *experience* within; and knowledge of; the mentioned systems, and of the direct *perception* of the design and setting. Edginton (2010), in his journal article discussing designing for schizophrenic 'patients', states that for the scholar to truly understand the effects of design, they must embody the user's perception. Edginton (2010) continues to describe psychiatrist Dr Humphry Osmond's belief that this is similar to trying to decipher the perceptions of someone from a different culture.

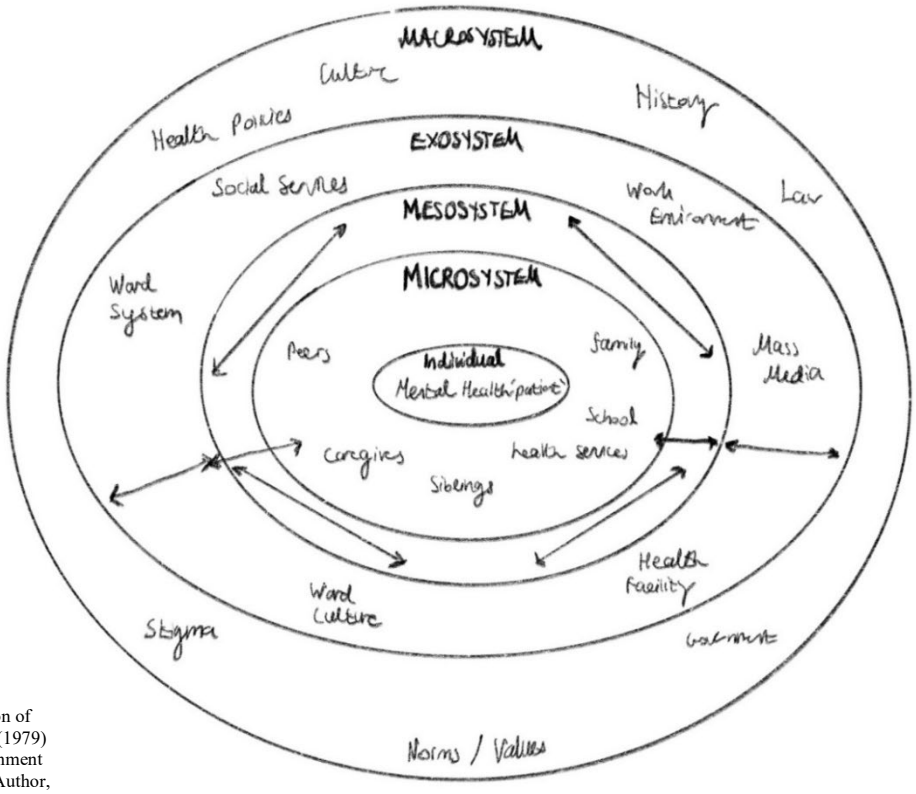


Figure 7
An Adapted version of Bronfenbrenner's (1979) Ecological Environment System. (Source: Author, Adopted from Bronfenbrenner, 1979)

Dr Osmond's strong phenomenological[8] methods, used to understand how people suffering from schizophrenia perceived their environment, led him and architect Kiyo Izumi to utilise LSD[9] to first-handedly capture the experiences of 'patients' and in so doing, being able to design a new environment for treatment (Donaldson, 2013). However, when looking at Bronfenbrenner's systems theory (1979), it is impossible to fully understand how an individual perceives their immediate environment, as this perception is intertwined with the other systems mentioned. Nevertheless, to some extent, space can still be manipulated to alter the immediate perception of it, aiming to improve the temporal context of the individual's experiences.

Following Osmond's (Edginton, 2010) and Izumi's (Donaldson, 2013) philosophy, as designers, we can influence the mind by designing its external experiences. The human-made world around us is purposefully designed as an environment of affordances, consisting of signs, symbols, and meanings that only humans can act upon and understand (Csikszentmihalyi and Halton, 1981). There are certain 'demands' which are required by the objects we encounter: food is to eat, a bench is to sit on, a handle is to open and a button is to push. These can easily transform: objects become weapons, pathways become ways to escape, and nooks become areas of shelter (Golembiewski, 2015). A certain *automatic* intelligence enables this instant transformation: *the fight or flight response* (Golembiewski, 2015).

This reaction is familiar to most people. However, to people suffering from mental illness, mainly having severe symptomatic conditions, this reaction occurs more frequently, regardless of whether the individual is responding to actual danger or not. Symptoms of many psychiatric disorders (e.g. Schizophrenia) exhibit 'excessive' behaviour, which can be described as a *spillover* of excess neural excitation (figure 8) (Golembiewski, 2015). These reactions are directly correlated to the anterior cingulate cortex and the right prefrontal cortex, responsible for emotional reactions and cognitive functions; decision-making and self-control (respectively) (Golembiewski, 2012).

Whenever the inhibitory reaction (the brain's natural restraint mechanism) of the prefrontal cortex is *weaker* than the strength of the initial excitatory impulse (the *push*

[8] ''Phenomenology is the study of structures of consciousness as experienced from the first-person point of view.'' (Woodruff, 2013, par.1)

[9] During the 1950s, research showed that the psychedelic drug LCD was thought to mimic the symptoms experienced by people suffering from schizophrenia (Edginton, 2010).

for neural activity), an excess of neural excitation results (Golembiewski, 2015). This leads to an *overly active* brain, which in turn may lead to implications as to how the brain makes decisions and regulates emotions. Other parts of the brain will feed on this surplus, and the type of reaction exerted will depend on the parts of the brain where this excess ends up. This surplus can be healthy when the stimuli are *positive.* However, if the surrounding environment exhibits certain negative features, those who suffer from mental illnesses cannot mitigate the effect of the environment itself, as most often they are aware and engaged with their fight or flight (Golembiewski, 2015). This surplus will in turn be used up and exerted in the forms of uninhibited behaviour and/or intrusive thoughts (Golembiewski, 2015). Disorganised reactions such as screaming, running, and lashing out are observed, since these automatic actions, associated with the fight or flight response, often bypass the individual's self-control (Golembiewski, 2015). Obviously, the difference between 'normal' reactions and reactions that are viewed as being 'abnormal' is all relative to the context. If there are genuine reasons to exert these reactions, then the behaviour is understandable (Freeman and Freeman, 2008). Hence, these automatic actions are direct responses to both the social and the physical environment, but are also affected by chemical reactions inside the brain (Bargh and Dijksterhuis, 2001).

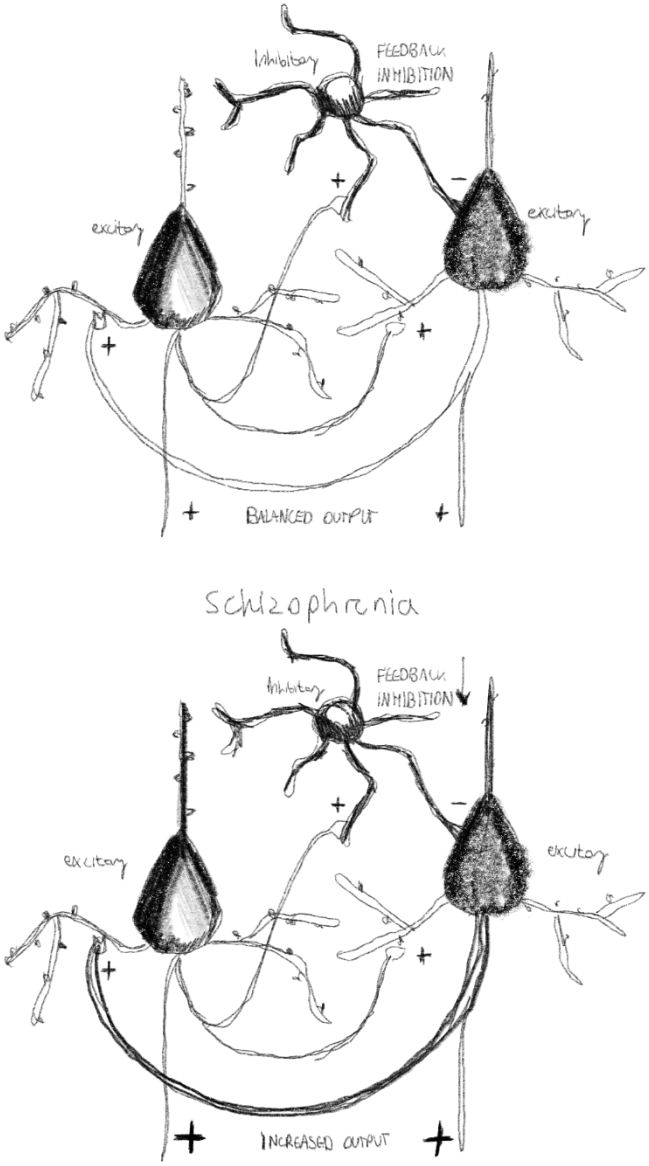


Figure 8
Sketch based on a depiction of a spillover of neural excitation (lack of inhibition). (Source: Adopted from Tatti et. al., 2017)

The link and interplay between these automatic actions and a conscious thought process is associated with dopamine activity in the brain, a neurotransmitter that is one of the main targets of many

antipsychotic medications (Ginovart and Kapur, 2010). Presenting an environment that has cues for conscious thought processes via what is called *declarative attention* consumes more dopamine, thereby producing an *antipsychotic effect* (Golembiewski, 2015). For example, an environment which is demanding, such as at the workplace or even an operating theatre, would require a lot of declarative attention since focus is necessary. However, a more familiar environment such as that in the *home* would mean that this very same attention may be directed towards thoughtful and more creative tasks, which in turn present an opportunity to rejuvenate parts of the brain associated with emotion and memory, further benefiting mental wellbeing (Gallagher, 2007).

Unstimulating spaces and strict routines which do not demand declarative attention are not problematic in themselves, provided that there is a degree of spaces or activities that require and trigger this type of attention. Mindless activities such as watching TV may result in a surplus of dopamine, which would eventually be released through symptomatic, automatic ways, thereby increasing mental strain (Fowler et al., 1998).

In this dissertation's context, the severity of the psychiatric disorder, most probably characterised by a state of psychosis, has placed the individual in an acute psychiatric ward. The individual, suffering from an acute episode, doesn't have the full ability to evaluate their perception and thoughts, in terms of the occurrences in reality (Esser and Lacey, 1989). A similar mental state is achieved when we dream. However, contrary to psychosis, we are able to wake up and *reality test,* realising that it was only a dream and return back to the real world (Esser and Lacey, 1989). Declarative attention can hence aid in this reality testing, allowing the space in which attention is required to cognitively *ground* the individual (Ulrich et. al., 2008).

A space for healing must hence make extra allowances for this *sensitivity* towards the environment. The '*patient'* now becomes the client, who perceives space as either safe or dangerous; stimulating or symptom triggering.

2.2.2 **Space Perception**
the meaning of space, the self and behavioural patterns

‘‘Before she had drunk half the bottle, she found her head pressing against the ceiling, and had to stoop to save her neck from being broken. She hastily put down the bottle, remarking, "That's quite enough—

I hope I shan't grow any more.’’

(Carroll, 1865, p. 22)

To fully understand how design affects the mind and its host, a complete re-interpretation of space is due. We must step outside the realm of the standard user-space relationship (Eris and Kulac, 2014), moving beyond standard physical needs and understand what ‘space’ means for the affected individual. Just as Alice’s actions change her perception of the environment, individuals’ interpretation of their environment shapes their spatial experience.

Spaces are not only based on our senses, which allow us to perceive the physical, but are also shaped intellectually via the formulation of imaginary montages within the mind (Franke, 2022) and the cultural baggage that the individual carries (Tuan, 1972). As humans, we have no *pure* perceptions of the world. Even when experiencing a new environment, it is still perceived in the form of a montage, having constituents that relate to past experiences (Franke, 2022). Paradoxically, space is designed by other people, but at the same time, is of *our own making*.

At around one year of age, infants go beyond focusing purely on people and

faces. They begin to become aware of the *context,* elevating their senses to *include the spatial* via gazing, pointing, and following cues (Fuchs, 2015). Their line of sight is limited to the horizontal as they start to crawl. Once they stand up, the vertical plane is discovered, perceiving newly found objects such as birds in flight and clouds. How others *interact* with space shifts into focus, learning the meaning of objects through others, and then adopting these very same meanings for themselves (Baldwin and Baird, 2001). This shift in perception is illustrated in figure 9. At 18 months, the child is accustomed to way-finding, running towards the mother or father. The task of manipulating objects, therefore altering spatial configurations, becomes inherent to the child's identity (Robinson, 2004). A personality then develops in line with the internalisation of experiences. As years go by, the child's behavioural pattern within certain environments starts to become increasingly predictable (Tuan., 1972). They learn how to act in a certain way at certain places. These behavioural patterns serve as a foundation for self-continuity[10], allowing humans to relate to space and to have a sense of stability.

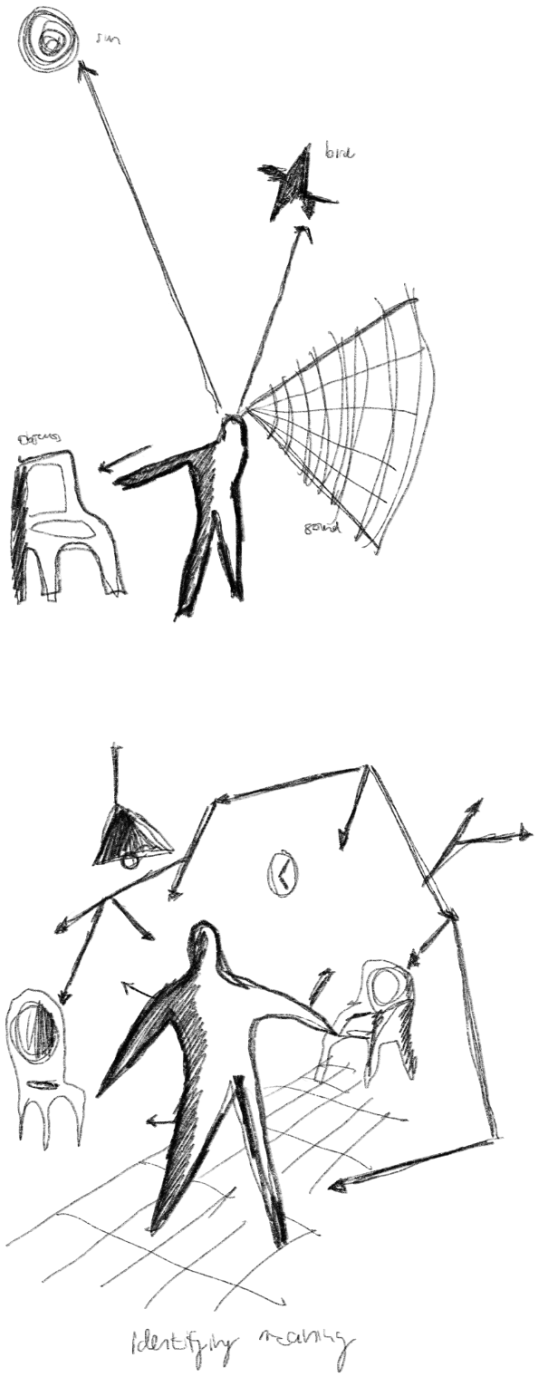


Figure 9
Direct, passive perception (top) vs identifying meanings in the environment (bottom). Sketch based on human perception studies. (Source: NewYork, ca. 1937-1941)

[10]Self-continuity can be defined as the sense of connection between the past, present and future selves (Sedikides et al., 2023) ''Research has also indicated that self-discontinuity can be a signature of mental illness. For example, individuals with psychiatric illness (i.e., schizophrenia, schizoaffective disorder, DSM-5bipolar I or II diagnosis)'' (Sedikides et al., 2023, p.339)

Behavioural patterns are specific to every typology of space. Looking at a multitude of places, even though the people visiting libraries, pharmacies and schools, change, the behaviour pattern remains essentially stable (Tuan, 1972). The cues within the physical environment dictate the behaviour to be expected. Familiar cues within a space create the sense of self-continuity, transforming space into a mnemonic device that is unconsciously used, and thus translating into familiarity.

This suggests that the constituents making up the physical environment cannot be neglected, since meanings are not only based on the previously mentioned *montages*, but also largely based on the space attributes themselves (Shamai and Ilatov, 2005).

Our living environment and past experiences can be described as the foundation for how we assign meaning to our surroundings, how we behave within those very same surroundings, and how we create the *self* (Golembiewski, 2017). When an individual is confronted with a change in their environment, such as from their everyday life to an institution, he or she must adapt and react accordingly. For example, a child attending a new school is similar to someone trying to learn a foreign language since it requires adjusting to unfamiliar territory (Tuan, 1972).

The *loss* of the self is a common experience for individuals with psychiatric disorders, specifically psychosis (Dr Scicluna, personal communication, 2024). This loss of self results in the individuals feeling detached, isolated, and unable to grasp the meanings of the everyday world. As a result, their behaviour may seem 'odd'.

''I think, therefore I am.''

(Descartes, 1637, p. 22).

I cannot think, therefore, *what am I*?

Apart from the self being threatened through an altercation of the mind, the notion of changing the individual's environment, may further threaten the sense of self, even if the change is for the better (Proshansky et al., 1983). For example, a community living within dilapidated housing does not necessarily approve of moving to a newly designed, sanitary estate, as such a transition would essentially imply the need to learn new values, social skills, and hence new behavioural patterns (Tuan, 1972). The previous context was perceived as home and as a familiar context therefore rendering the *new* context as unfamiliar territory.

The physiological sensations associated with entering an institution, whether it is a hospital or a cathedral – the feeling of the coldness from the walls and floors, the

echoes of footsteps, the contrast between the bright outdoors and the interior – all point to perceiving the architecture as being a different and special place (Robinson, 2004). The dominance of this *special type of architecture* often restricts self-agency[11] (figure 10). The individual has little room for control or manipulation within the space in question, diminishing their sense of familiarity and attachment. As a result, the notion of self-continuity is disrupted, decreasing predictability and thus the coherent sense of identity (Robinson, 2004).

Figure 10

There exists an emotional base with which we assert our self-identity. At its core, the very notion of the *home* describes the self. By adopting the symbolic associations of the physical environment of the home, an attempt can be made to reinstate identity. The environment in which the individual is being treated and its design can hence act as a secondary catalyst for *healing*.

Structures are static objects. Even so, our experience of these structures transcends the physical realm and penetrates our consciousness. Architecture cannot be solely described as a building, since it moves beyond physicality. It strives to impact human experience and emotional well-being via the manipulation of light, spaces, materiality, and forms. It becomes a part of who we are. These human-designed spaces speak of architectural symbolisms and imagery – symbols of safety or danger, openness, or enclosure, representing a full spectrum of emotions (Limbird, 2016). A shift should hence occur, moving away from the building and provide *architecture* which fosters the self.

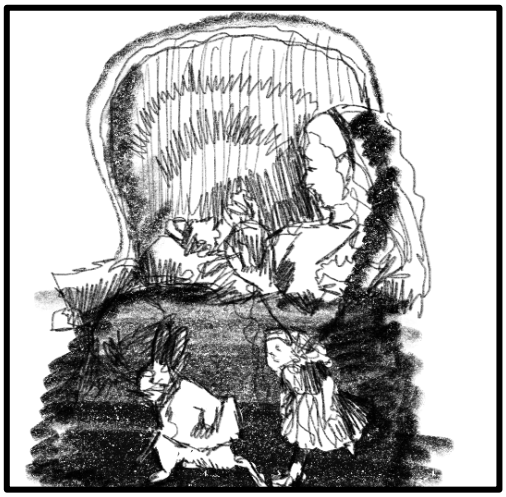
Figure 10
Sketch based on the Conceptualisation of Agency. (Source: Adopted from Code, 2020)

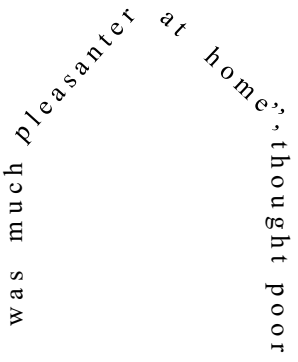
[11] ‘‘Sense of agency refers to the feeling of control over actions and their consequences.’’ (Moore, 2016, par.1)

2.3 A Therapeutic Landscape

2.3.1 Medical, Nurturing or both?

the notion of home vs the institution





''It Alice, ''when one wasn't always growing larger and smaller, and being ordered about by mice and rabbits. I almost wish I hadn't gone down that rabbit-hole—and yet—and yet—it's rather curious, you know, this sort of life!''

(Carroll, 1865, p. 23)

Design is least arbitrary when the individual is reduced to a 'patient'[12], thereby temporarily being viewed, by the able-bodied, as a passive person having no past or future (Tuan, 1972). The individual is simply characterised by his or her sickness or injury. For example, the design of a hospital room rests solely on functional considerations, leaving little room for the creation of *architecture* in the form of meaningful spaces (Tuan, 1972). This way of designing results in a *paradox*. On one hand, the hospital is the epitome of an architecture for healing; On the other hand, the vast difference between normal environments and those of a hospital strongly communicate disease (Robinson, 2004). The patient room looks very different from the ''normal *healthy* bedroom'' (figure 11) (Robinson, 2004, p. 18), its privacy is constantly being invaded, meals are unfamiliar and not what the individual would usually eat, and routines are far more different than those of ordinary life (Robinson, 2004). This represents the

[12] The term ''patient'' comes from the Latin present participle of *pati,* which means to suffer (Merriam-Webster, n.d).

medical model for designing *healing* architecture.

Service-users should not be regarded as patients. By adopting a salutogenic[13] perspective that views the relationship between environment and the individual as *transactional* rather than fixed, the architectural model of care shifts from focusing on the cause of the disease and the effects of the disease, to focusing on providing a holistic program for human well-being (Connellan et al., 2013).

The clinical, sterile way of designing is not questioned because we accept it - we accept the role of the patient through the architectural references of a hospital. The adoption of this architectural medical model for buildings treating individuals with psychiatric disorders has been frequently questioned (Chrysikou, 2014). Internationally, once the limitations of anti-psychotic drugs became apparent in the 1960s, institutionalisation of the 'patient' with a psychiatric disorder started to dissolve and shift towards community-based care, moving away from the institution (Chrysikou, 2014). In Malta, this transition seems to be lagging behind, as the primary architectural *caretaker* is still represented by the *institution* of Mount Carmel *Hospital*. This research may hence strive to provide an exploration of how to *improve* this 'medical' model and even *shift* it, by focusing solely on investigating the implications of the environment that we are presented with and how it can be improved, until we are able to shift acute care towards the community.

Let us envision the following configuration – bedrooms, a bathroom, a courtyard, and a main living space. Here I am describing a general psychiatric ward, a description which can also be applicable to a home. It can hence be said that this architectural typology is essentially domestic in nature (Golembiewski, 2012). Golembiewski (2010) states that a healing environment should echo feelings of a safe and cosy home, resulting in the manufacturing of object comprehension in the form of memory, culture, and familiarity. The environment would thus help in stabilising both ''*comprehension and delusions*.'' (Connellan et al, 2013, p.137). This is not to say that the new model of care should replicate the program of domestic life. An oversimplification to that extent would compromise the therapeutic role of the architecture itself (Chrysikou, 2014). The notion of '*domesticity*' in the context of mental health facilities differs

[13] ''Salutogenesis concept focuses on the factors responsible for well-being rather than the disease...'' (Bhattacharya et. al., 2020, par. 1)

from its meaning when applied to the ordinary home. This is what will be explored.

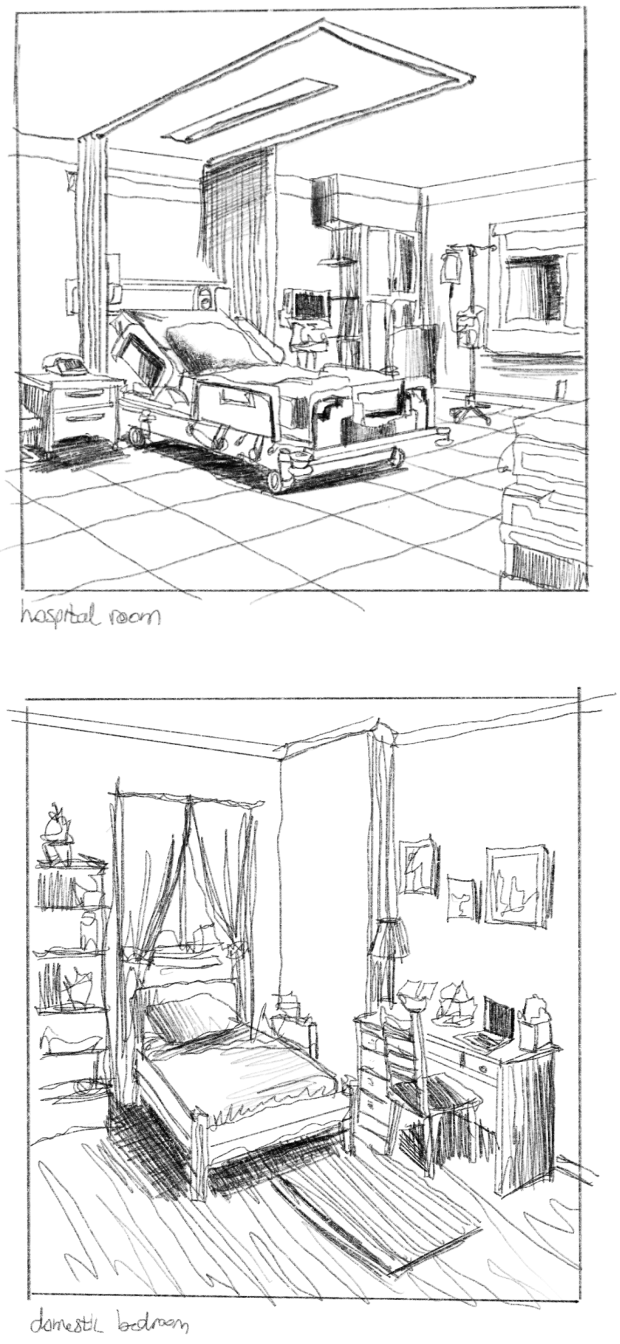


Figure 11
Hospital Bedroom (top) vs Domestic Bedroom (bottom). (Source: Author)

The *home*, is often viewed as an extension of the *self*, providing a sense of connectedness and security, as well as a feeling of belonging (Marcheschi et al., 2015). These feelings can be beneficial to the regulation of emotional distress in individuals suffering from mental illness, a crucial outcome for the psychiatric treatment of the individual (Marcheschi et al., 2015). The word ‘‘*home*’’ may conjure up an image of a typical house. When it comes to mental health facilities, various literature proposes to focus on the notion of *domesticity*, representative of the fundamental qualities and attributes of the home (Robinson, 2004). These fundamental qualities and the psychological feelings that they create aren’t rigidly expressed in the physical characteristics of the house, rather it is how the space is used that forms the emotional ties that individuals have with such physical spaces (Robinson, 2004). If we extract the basic parameters for the creation of a caring environment, we get:

a. safety and security;
b. competence; and
c. personalisation

and choice (Chrysikou, 2014).

When applied to the feeling of *home,* these parameters imply a feeling of safety, individuality, connectedness and belonging. The most basic difference

between what these parameters represent when applied to an institution vs the domestic is the ‘‘values that drive them’’ (Robinson, 2004, p. 77). The value typically synonymous with the institution is that of control. In architecture of this nature, the organisational and supervising values act as a mediator between inhabitant and space. On the other hand, this value in the domestic scene translates to control by the individual, branching off into more ‘‘fundamental values such as comfort, self-expression, dignity, and autonomy.’’ (Robinson, 2004, p. 77).

Applying these very same parameters to a spectrum ranging from completely institutional to completely domestic would result in the attitudes presented in table 1.

The international shift towards community-based care, within environments having the least possible resemblance to a hospital, hints at domesticity as the new model of care (Chrysikou, 2014). This allows us to explore the implications of domesticity, and what it represents, within the locally existing model of mental health care.

It goes without saying that the functional spatial aspects of treating people with psychiatric disorders shouldn’t be abandoned. For example, the inclusion of meaningful spaces for privacy should not override the need for safety and security within the ward environment (Chrysikou, 2014). However, existing studies do show a correlation between the notion of domesticity within a ward environment and increased service-user social interaction, as well as ‘‘improvements in well-being.’’ (Papoulias et al., 2014, p. 175).

A balance should therefore be sought, where service-user safety is not compromised in an attempt to create a meaningful environment that is able of reinstating the individual’s sense of *self.*

Parameter	Home	Institution
Safety & Security	*Feeling* safe in your private space	Maximum security enforced by authority figures
Competence	Complete Autonomy	Complete Dependence
Personalisation & Choice	Complete freedom of personalising your space	No spatial choices / personalisation

Table 1 The 3 parameters in terms of 'total' home and 'total' institution.
(Source: Adapted from Chrysikou, 2014)

2.3.2 Design Principles in Therapeutic Spaces

mental health facility design

"If there's no meaning in it," said the King, "that saves a world of trouble, you know, as we needn't try to find any. And yet I don't know," he went on, spreading out the verses on his knee, and looking at them with one eye;

"I seem to see some MEANING in them after all. ''

(Carroll, 1865, p.157)

For Paul Rudolph, an American architect, also termed as the ‘‘Carl Jung[14] of architects’’ (Ledford, 2014, p.2), architecture is essentially about the manipulation of ‘‘space, light, proportion, texture, and material to fulfil the psychological needs of the occupants.’’ (Ledford, 2014, p.2). There exist two dimensions to how the environment is perceived by the user (Ledford, 2014). *Formal features*, or the space's physical structure, define the space physically, whereas *functional features* define the space in terms of the task/s it is designed to fulfil (Ledford, 2014). The latter can also be described as the performance and the effect of the space, directly related to the behavioural and emotional reaction of the individual (Table 2).

Within this dissertation's context, the psychiatric ward is essentially a *rare* architectural form that must perform as a caretaker for bodies and minds that are not fully in control of their actions (Ledford, 2014). Design attempts at creating these

[14] Carl Jung was a Swiss psychologist who founded *analytic psychology,* which explores symbolic experiences of people (Fordham et. al., 2024).

Feature	Relationship	Details	Space Components
Formal	Cognitive	General perception to understand the physical attributes of space such as geometry.	Form
Functional	Behavioural	Does the space fulfil the user's needs	Function
	Emotional	Attachment to a space	Meaning

Table 2 Human interaction with the environment. (Source: Adapted from Hashemnezhad et al., 2013)

spaces without producing a sterile, hospital-like space do not always result in the creation of successful spaces (Ledford, 2014). Osmond, in his paper titled 'Function as the Basis of Psychiatric Ward Design' (1957), highlights how ward design must cater for individuals who are not able to relate to others and who are affected by difficulties in interpersonal relationships, thereby having difficulty in perception. For example, unnecessary large spaces are harmful to people with schizophrenia since they become uncertain about the integrity of the self within such an overwhelming space (Osmond, 1957). Ward design in this context should focus around providing more intimate, reassuring spaces (without compromising the safety of the service user).

With the knowledge of previous discussions at hand, the design of the ward should, by following various considerations and principles that balance both formal and functional features of the space, lean towards reinstating the *self*. The following considerations explore beliefs and guidelines as to how a space for *healing* within a ward environment can be designed. This is not to say that the space will *cure* the individual through the implementation of these guidelines - spaces only serve as a *catalyst for healing*. Golembiewski (2012) highlights how many mental disorders do not have treatments that are universally effective. No treatment *offers a cure* (Golembiewski, 2012). This essentially means that ''…a lot is left for the environment to do; a big responsibility, but

one that designers should embrace.'' (Golembiewski, 2012, p.75).

A ward designed with good design principles will *not* guarantee a positive response from the service user: given that we are generally unaware of the multitude of ''memories, feelings, values, and preferences that subsume and influence his or her responses to the physical world..'' (Proshanksy et al., 1983, p.63), we are simply unknowingly comfortable in different physical settings, giving preference to certain spaces, types of lighting, types of furniture and their arrangements, number of people, and so on. Of course, in a psychiatric ward setting, some of these factors such as the number/type of individuals within the space, do not lie within the realm of design, but still alter the experience for the individuals residing there. The architecture must hence account for this random but 'built-in' set of parameters.

The initial perceptions of the environment are crucial when it comes to whether a new ward will be accepted or not (Golembiewski, 2012). Positive first experiences will result in the users 'letting go' of a few mistakes, whereas a bad start would be detrimental for the effectiveness of the design – the ''…unit may never be *loved* – despite having brilliant vision and innovations.'' (Golembiewski, 2012, p. 76). If the most severe cases are considered, where individuals are experiencing paranoia (people having schizophrenia, bipolar disorder, psychosis, and dementia), then even very subtle negative cues within the environment will not go unnoticed (Golembiewski, 2012).

The physical cues within the environment must be carefully explored within every space of the unit. In general, the spaces within a psychiatric ward comprise bedrooms, a day room, and rooms that the residents use during normal activities of their daily lives, mainly including bathrooms, laundries, and kitchen spaces. We will now explore the factors which should be considered when designing such an organisation of spaces. The following classification came about from a compilation of *common* factors outlined in 3 main papers: Dr Osmond's paper titled 'Function as the Basis of Psychiatric Ward Design' (1957); Golembiewski's paper titled 'Psychiatric design: Using a salutogenic model for the development and management of mental health facilities' (2012); and Ulriches' paper titled 'Effects of interior design on wellness: Theory and recent scientific research' (1991). These three papers share a common focus on highlighting how the design of a space can facilitate and improve service-user experience. Despite being

published during different time periods, this literature remains relevant and present core concepts which may inform contemporary approaches to mental health facility design.

a. *Hierarchy*

The space within a psychiatric unit is essentially trying to balance the competing needs of the many users within it: the service users, the professionals, and the visitors (Golembiewski, 2012). All too often, the design of the unit eventually falls victim to focusing on how to make the space efficient for the staff, taking away power from the service users and diminishing their sense of meaning (Golembiewski, 2012). Golembiewski (2012) further highlights how such a clear hierarchical division within ward design works against what it aims to achieve: to allow service-users to handle "life on their own" (Golembiewski, 2012, p. 77). The management of service users should be shifted to allow for some room for them to manage their lives independently (Golembiewski, 2012). Spatially, this might translate into supervised kitchenette areas, ability to personalise space, and in so doing, to a certain extent, *control* of their environment (Golembiewski, 2012).

Furthermore, the layout of the ward in terms of the hierarchical division previously discussed, mainly centres around the placement of the nurse station (Chrysikou, 2014). A '*friendlier'* environment is said to be created by either omitting the nurse station or designing a bay without a glass screen (Chrysikou, 2014). On the other hand, it has also been noted that a nurse station located in the middle of the ward may act as a social hub, thus serving as a centre for engagement between staff and service users (Dr Taylor East, 2024, Personal Communication).

b. *Sense of Control*

The action of *choosing* is common to everyone (Osmond, 1957). Trying to make a choice between many alternatives, even if the options are pleasant, results in a certain tension in individuals, even those who do not have any psychiatric disorders (Osmond, 1957). Choice within a psychiatric environment is believed to occur rather infrequently. For instance, those with whom we closely interact (our family), are rarely chosen. The group of people within a ward is never a choice for the user. Within the home, we have the readily available means, via the environment (figure 12), to reduce the interactions we have with this group of people – for example, going into another room and closing the door. (Osmond,

1957). Osmond (1957) highlights how when these interactions cannot be controlled or reduced, such as in the case of a ward, we tend to ‘‘withdraw psychologically or to act out against our environment.’’ (Osmond, 1957, p. 27). Variations of spatial privacy and paths of retreat should be considered to mitigate such reactions (Chrysikou, 2012). This very need to retreat within a setting has been described as essential in the creation of a ‘‘therapeutic climate.’’ (Chrysikou, 2014, p. 54). Manoleas (1991) also discusses how this act of physical withdrawal may even prevent clinical regression.

Within the dayroom, control, or lack of, lies within many factors, such as: furniture arrangements which may prevent customisation and hinder social interactions, access (both visually and spatially) to outside views, ability to control certain activities such as watching TV, and ability to participate in activities pertaining to everyday life (making a cup of coffee, etc.) (Ulrich, 1991). A sense of competence must exist in balance with safety and security by allowing users to somewhat customise their environment, and allowing them a sense of agency.

c. *Maintaining the self*

An institutional ward can do very little to preserve users’ individuality if designing for ‘*mass living*’ is in the design brief. At any point in time, humans need their very own exclusive physical space (Proshansky et al., 1983). This personal space becomes an integral part of the individual’s self-identity and a way to assess any given setting (Proshansky et al., 1983).

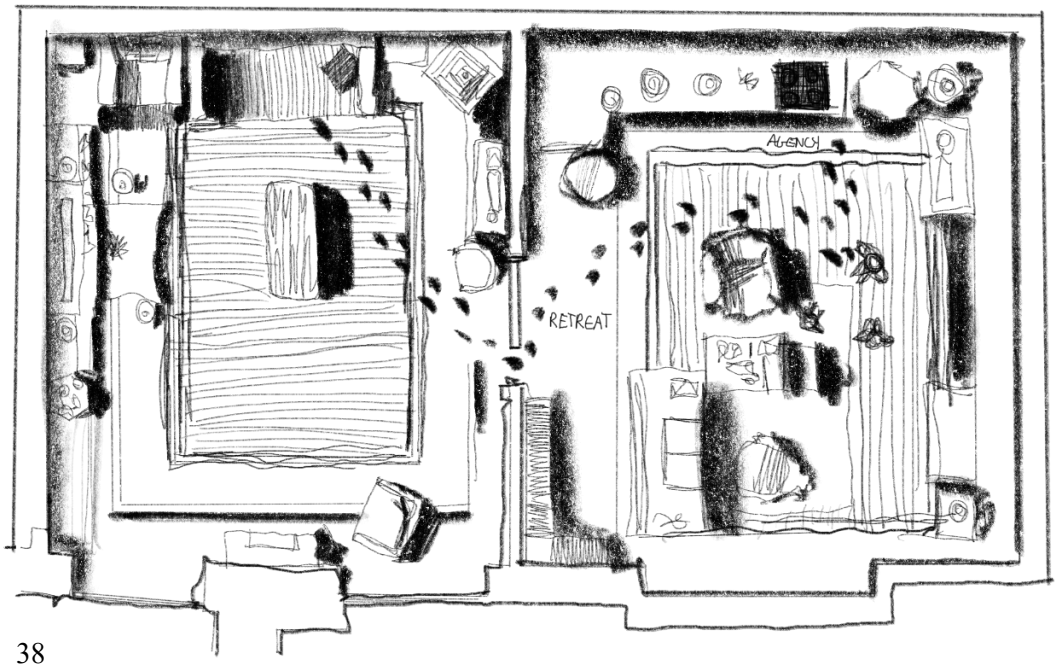


Figure 12
Individual’s ability to retreat; a sense of control within the home (Source: Author)

Assessment of the space involves how the surroundings relate to the self when standing or when moving through space, as well as the nature of the individual's response – feeling safe, uncomfortable, etc. (Etlin, 1998). For the reactions to be positive, and so for the environment to relate positively to the self, the design should employ familiarity, unambiguity within its attributes, consistent cues, and access to the individual's identity via mirrors, clocks, and calendars, amongst others (Good et al., 1965).

d. *Positive Cues*

As discussed in section 2.2, the environment has the capability of offering cues which foster positive distractions. Ulrich (1991) states that the most effective distractions that result in positive reactions are those that have been experienced by humans for millions of years:

a. happy or laughing faces;
b. animals; and,
c. nature.

Apart from these, Karlin and Zeiss (2006), in their article titled 'Best practices: environmental and therapeutic issues in psychiatric hospital design', emphasise the important role of architectural, ambient, and social features. They recommend implementing indirect sunlight, softly illuminating the space; fresh air and the use of natural smells (plants, etc.); large apertures with nature views; common areas; and limiting the use of corridors to mitigate echoes and prevent visual distortions to the users (Karlin and Zeiss, 2006).

Of course, these principles would be viewed as positive by any user, regardless of their mental state. Eris and Kulac (2014) state that there is no new thought within the architectural discourse pertaining to the design of psychiatric wards, as these views are often repeated with little to no differences. Considering this, even though the mentioned principles do produce positive effects, they do not guarantee the likeability of an environment. A phenomenological approach should hence be followed when studying the design of such spaces.

2.4 Concluding the Literature Review

The previous sections introduced the key concepts associated with mental illness and the environment. This included a historical perspective on *institutions* and how architecture addressed *health*; literature on the inner workings of the mind; literature which merged the spatial and the psychiatric, and finally, the notion of domesticity within the *mental health facility design*. These ensure that a theoretical foundation is laid down before a further exploration of the subject is carried out.

Chapter 3

Tools for Exploration

The Methodology

This chapter discusses the methodological framework adopted during the research phase. Multiple methods were employed, ranging from interviews to a checklist to behavioural mapping, all aiming to evaluate architecture and space in terms of mental health

3.1 Introducing the Framework

bridging literature to fieldwork

‘‘Such
a
trial,
dear sir,
with
no
jury
or
judge,
would
be
wasting
our
breath.’’ (Carroll, 1865, p. 31)

Considering the literature buildup towards advocating for a reinstatement of the *self* within a psychiatric institution, this study intends to explore how current local environments bridge the gap between two poles: the home and the institution, thereby aiming to question the medical model by looking at its *apparent* opposite. The notion of the institution will be critically explored in the context of the self, well-being of the individual, and the benefits traditionally associated with the home and domesticity, as described in the literature review.

The study will explore what constitutes ‘domestic’ or ‘homelike’ in the context of a psychiatric ward; examine the limitations of these concepts within an institutional environment, and analyse overall patterns within a selected context in this same environment. This will be carried out to investigate the implications of design on the behaviour of the service-users.

3.2 Process of Exploration

3.2.1 Framing Inspiration and Mindset

The framework of the methodology for this research was inspired by Dr Evangelia Chrysikou's[15] (2021) study titled 'Design for Psychiatric Patients: The Complexities of Therapeutic Architecture Decision-Making'. This research utilised a model (to be discussed later in this chapter) to ''classify all concepts related to the spatial programming of psychiatric facilities.'' (Chrysikou, 2021, p.276). The model created an opportunity to relate the physical quality of a space to the 'consequences' of the service-user's life within the space. It acknowledges that a positive environment *may be* created through the employment of domestic notions, yet it also recognises the fact that a *total* 'homelike' environment within the given context is not necessarily the final solution for the care of people with mental health issues (Chrysikou, 2013).

This method for analysing psychiatric environments, along with the application of behavioural mapping, was utilised to investigate the adequacy of a local institutional environment for the therapeutic means that it ought to be committed to.

By examining the experience within the selected context and analysing it using the previously mentioned model, a better understanding of whether an environment of care should communicate ideologies of the institution or a domestic setting; or a blend of both traits, is reached. The correlation of the service-users' experiences with the model deduced whether the combined parameters of the environment are suitable for the mental well-being and treatment of the individual resident within the setting.

[15] Dr Evangelia Chrysikou is an Architect Medical Planner, specialising in healthcare architecture.

3.2.2 Introducing the Qualitative Methodological Approach

For the purpose of this research, a qualitative multi-method approach (figure 13) was adopted. The approaches discussed in this chapter are based on the exploration of the perceived challenges that individuals with psychiatric disorders face within the environment of an acute ward.

The testing ground for the analysis and investigation of the concepts previously discussed was chosen to be Malta's mental health hospital: Mount Carmel Hospital. The selection of MCH was dictated by the fact that MCH ''coordinates the overall mental health provision.'' (Galea and Mifsud, 2018, p.12), while other entities only serve to provide rehabilitation for the individuals with psychiatric disorders. Following the negotiation of ethics and access inside the institution, the research location was limited to a renovated acute ward within the hospital: Acute Ward 4.

The steps undertaken for this research are summarised as follows:

a. acquiring access into the institution and ethics approval;

b. conducting the fieldwork; and

c. a post-fieldwork analysis and investigation by using adopted frameworks which were utilised in studies of a similar nature.

The approaches taken throughout the study are summarised as follows:

a. Elite interviews with psychiatrists and psychologists;

b. conducting the fieldwork inside the selected research location; and

c. analysis of the collected data via established frameworks.

3.3 Methodology Diagram

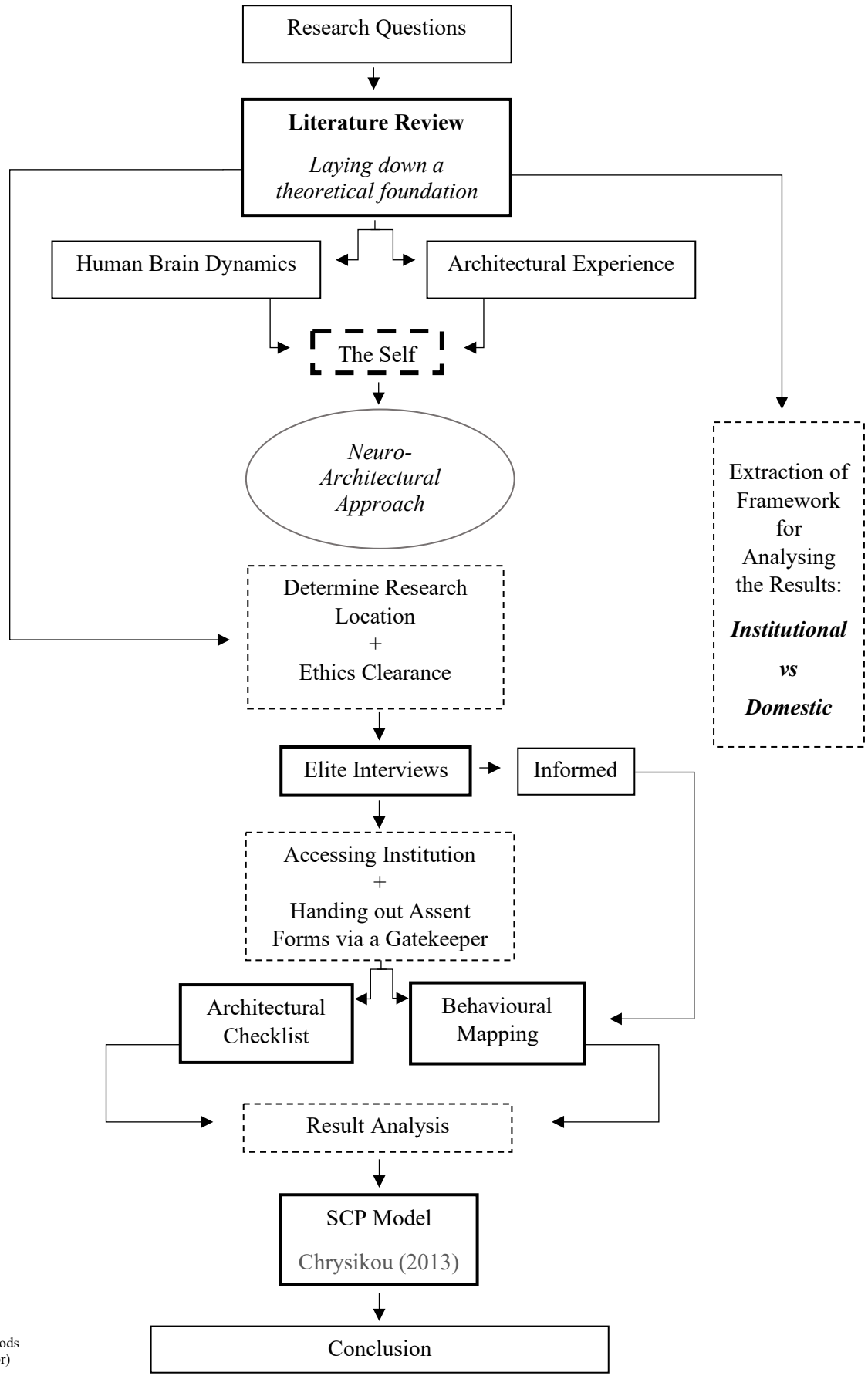


Figure 13
Methodology Diagram and Research Methods (Source: Author)

3.4 Ethics

The ethics negotiation involved (figure 16) ensured that the individuals and MCH service-users involved in this research were safeguarded and their rights protected.

3.4.1 Process and Requirements

Prior to entering the institution and commencing the research, ethical clearance was sought from the Faculty Research and Ethics Committee (FREC) of the Faculty for the Built Environment at the University of Malta, and subsequently from the FREC of the Faculty for Social Wellbeing (UM). A comprehensive research description of the study was submitted to multiple entities, including the aforementioned FREC of the Faculty for Social Wellbeing, the University Research Ethics Committee (UREC), and finally the governmental body of the Health Ethics Committee (HEC).

Research clearance was granted by each body upon agreeing to several conditions and submitting documents in line with the terms of these conditions. These included:

a. statements highlighting that no interactions will occur between the researcher and the service-users within MCH;
b. simplified assent forms for the service-users (anonymous);
c. simplified information letters for the service-users to read;
d. written approval and consent from multiple consultant psychiatrists within the selected ward which confirm that their clients can take part in the research;
e. written confirmation that access to the institution is granted; and
f. written approval from MCH's Data Protection Officer that the research is in line with hospital data regulations.

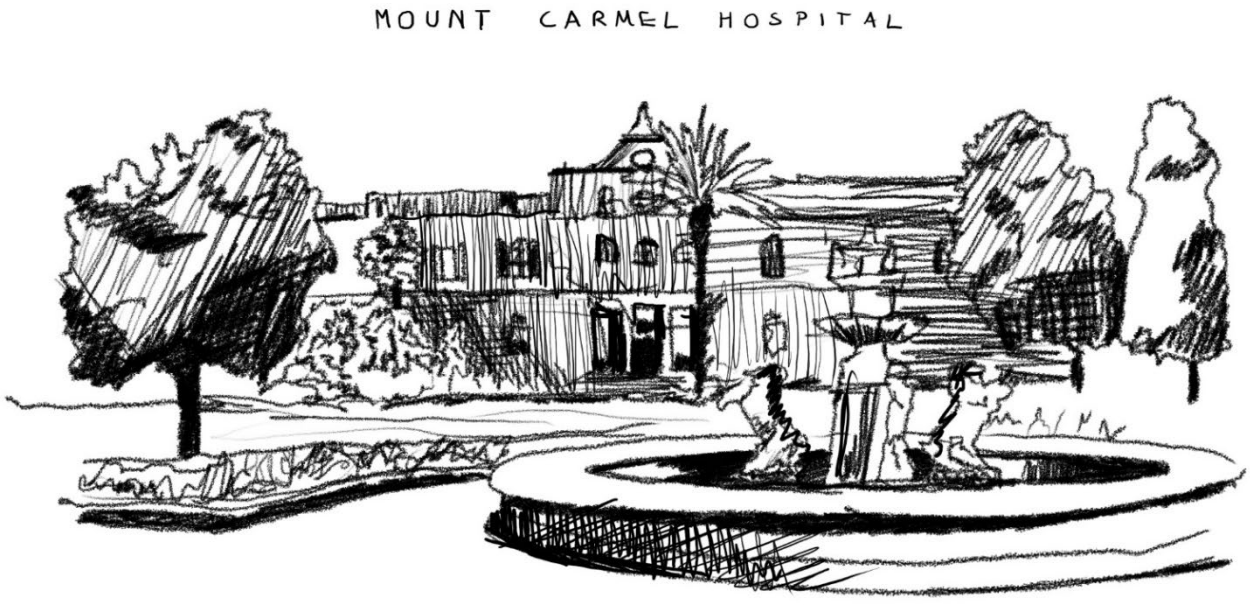
It is imperative to note that as a researcher, my priority lay with safeguarding the participants and service-users throughout the duration of the study. Despite the researcher's efforts to avoid interactions with the service-users within the ward, if they initiated conversation, it was deemed necessary to respond rather than disregard them.

3.4.2 Research Location and Access

Gaining access into the institution involved liaising with the CEO of MCH, Dr Stephanie Xuereb. In its early stages, the study was envisioned to involve MCH (figure 14) in its entirety, looking also at multiple psychiatric wards. However, given the limitations of the study (timeline) and the new design principles being set forth within MCH, the newly refurbished acute ward 4 was selected by Dr Xuereb as a research location.

This selection holds some significance, as any future refurbishments within the hospital, or elsewhere, are envisioned to echo the same design guidelines.

Figure 14
Front-facing View of MCH (Source: Author)



3.4.3 Paradox of Protection vs Empowerment in Research

The ethics procedures involved were of utmost importance for both the researcher and for the research to be carried out within the best interests of the participants. However, it has been made highly apparent through the ethics process that for this research to be ethically sound, the vulnerability (figure 15) of people with psychiatric disorders is prioritised.

Participatory research approaches, especially when involving vulnerable groups such as people with psychiatric disorders, present a unique set of ethical complexities. While these approaches aim to empower participants and also carefully consider the participants' vulnerability, rights and wellbeing, the ethics process can hinder the potential of the research by denying the participants the opportunity to take part in the research. While the process itself is well-intentioned, the prohibition of participation can hinder the participants' sense of agency and self-worth. Therefore, a balance should be sought for the ethical inclusion of vulnerable participants in research, ensuring that their voices are heard and their needs addressed without compromising their safety and well-being.

Figure 15
To consider individual as a patient is to take away their individuality
(Source: Author)

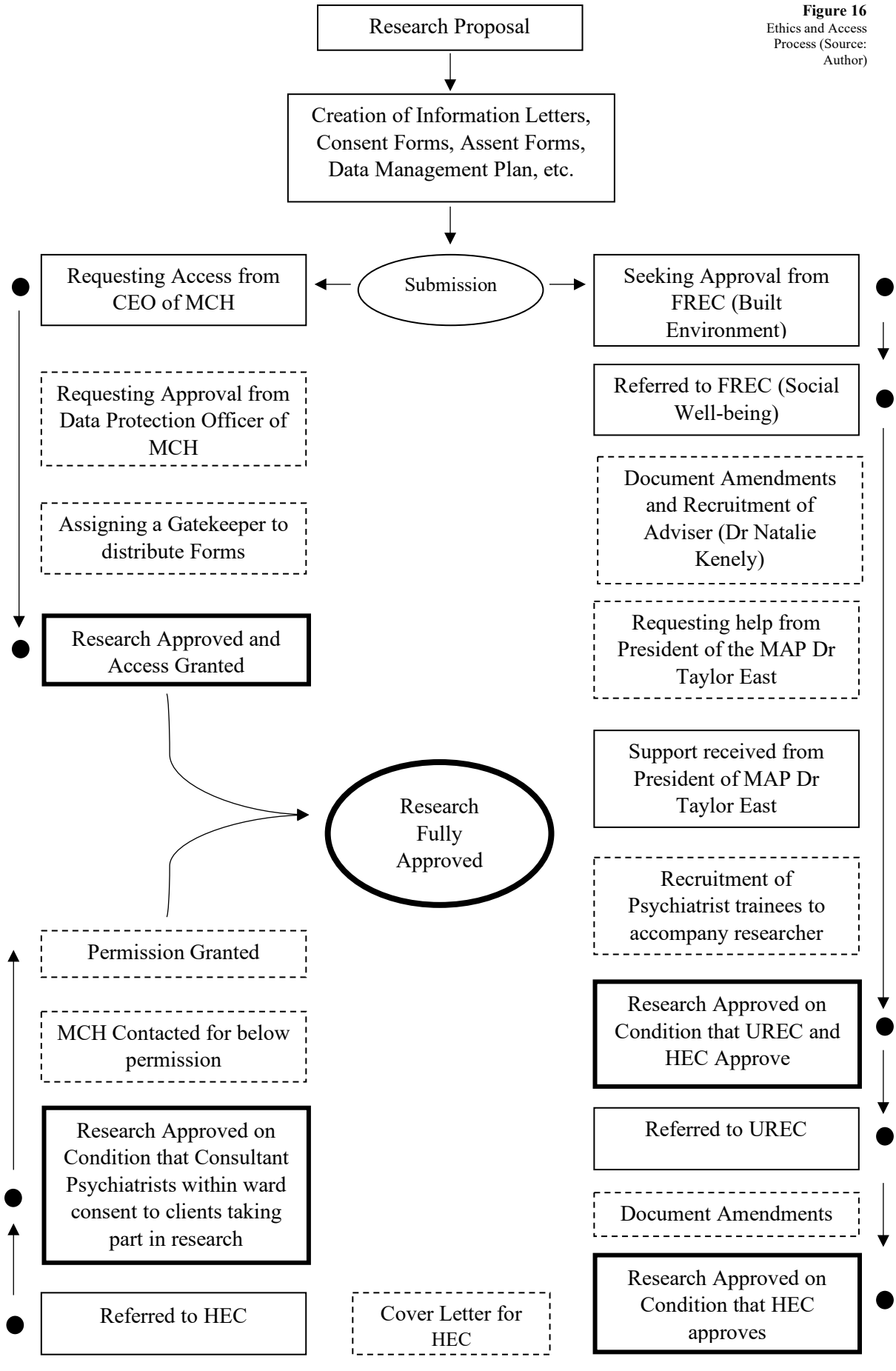


Figure 16
Ethics and Access Process (Source: Author)

3.5 Methods of Exploration

The main scope of the research lay with *observing* how the service-users at MCH interact with, relate to, and behave within their environment. This study can be categorised as a neuro-architectural study. The emerging field of neuro-architecture is described by Karakas and Yildiz (2020) as a combination of ‘‘neuroscience, environmental psychology, and architecture to focus on human brain dynamics resulting from action in and interaction with the built environment.’’ (Karakas and Yildiz, 2020, as cited in Wang et al., 2022, p. 2). By basing our understanding on how the brain perceives its surroundings, investigating the experience of individuals within a specific context can aid in the design of the space, with the aim of improving human wellbeing in the future (Wang et al., 2022). For an architectural analysis, it is imperative that the relationship between perception and use must be taken into consideration. The methodology thus centred around the observations which took place within MCH. The process can be categorised into 3 main stages:

3.5.1 Elite Interviews / Stage 1

Elite interviews can be described as discussions with individuals who are chosen due to the position they occupy. In this particular research and for the chosen context, it was imperative that people with a background or an ongoing interest within the field of mental health were chosen – namely psychiatrists and psychologists.

Following their consent, a number of psychiatrists and psychologists, who are actively working with individuals with mental illnesses, were asked to participate in an interview prior to the commencement of the observations at MCH. Each participant had the experience of working, or is actively involved within the research location. The interviews were carried out in the form of open-ended interviews, utilising the questions asked by the researcher as merely a guideline. The researcher also adapted questions in accordance with the participants’ answers and experience within the field. The interview was recorded with their consent.

The following are the main themes that were discussed:

a. the relationship between the environment (internal and external) and mental illness;
b. the notion of an institution and whether it should be questioned;
c. the mental wellbeing of the service-users within the research location; and,
d. the meaning of space within a psychiatric ward.

The results obtained from the interview were utilised to inform the second stage: the observations within MCH.

3.5.2 Observations within the Acute Ward / Fieldwork / Stage 2

It can be argued that reality cannot be captured directly – only a *representation* of reality can be observed (Denzin and Lincoln, 2017).

People's behaviour can be described as a representation of an experience - to themselves and to others (Denzin and Lincoln, 2017). In other words, Denzin and Lincoln (2017) describe this as a way of storytelling. Psychology itself emerged as a result of a ''medicalized gaze placed on detained subjects'' (Denzin and Lincoln, p.915). With these very same observations, medicine has advanced to seek cures for the subjects themselves.

Through this very same concept, by utilising observation as a qualitative tool to analyse the behaviours within a particular setting, a better understanding of how space influences behaviour, and to what extent, can be constructed.

a. Architectural Checklist

The first step after accessing the institution was to evaluate it and its spaces in terms of two previously discussed poles: the institution and the domestic. This was done by utilising an architectural checklist (figure 17) based on Robinson et al.'s checklist (1984). The inventory identifies architectural features relating to either the institution or the domestic.

By doing so, the research started off by exploring the physical aspect as relating to the institution vs the domestic. The checklist allows researchers to compare the perception of the setting with the effects of its physical traits (Robinson and Thompson, 1999).

Figure 17
Part of (6/115) Architectural Checklist: Institutional Characteristics vs Home-likeness (Source: Adopted from Robinson et al., 1984, as cited in Chrysikou, 2018)

Architectural Checklist: Institution vs. Home-likeness (The following checklist is based on Robinson/Emmons/Graff Architectural Checklist (1984), as cited by Robinson and Thompson, (1999), Adopted by Borg, 2024, University of Malta)				
		Feature		**Institutional (vs domestic)**
Context and Site features				
1		Residential area		Non residential
2		Immediate neighbours include housing		No
3		Shops		Non-walking distance
4		Public parks or recreation areas		Non-walking distance
5		Paved pedestrian paths		No
6		Size of lot of the building compared to adjacent lots		Different

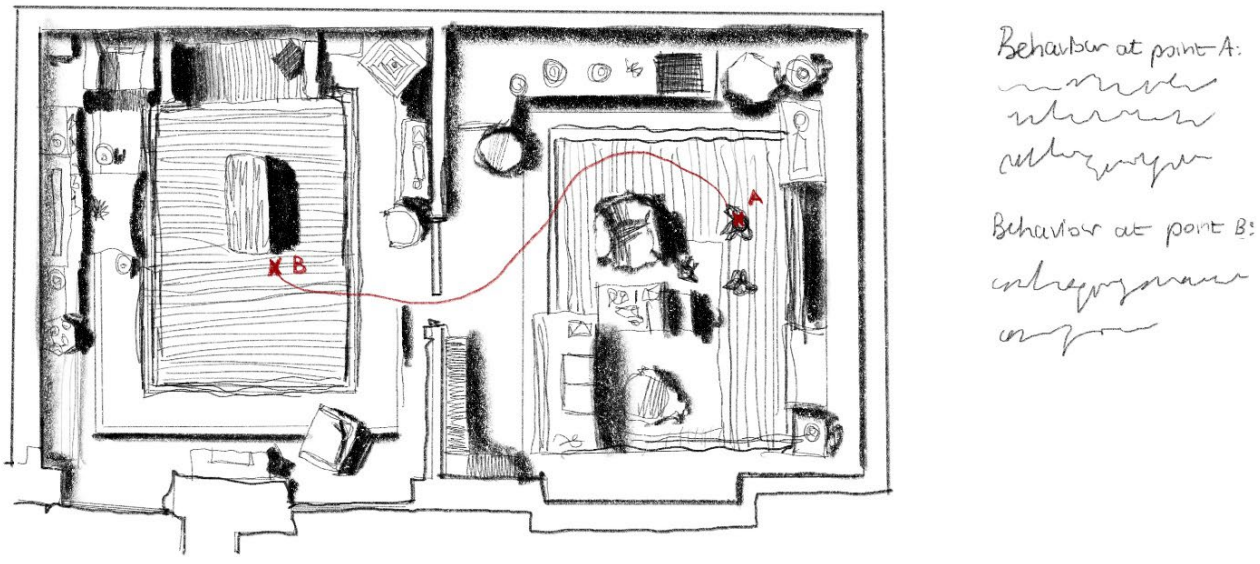
b. Behavioural Mapping and Space Evaluation

Wang et al. (2022) argue that one of the main limitations in neuro-architectural research is that most studies focus solely on the architectural aesthetics, instead of exploring implications of the environment's affordances or functionality. With the architectural checklist, this physicality will already be tackled. In addition, behavioural mapping[16] (figure 18) and an evaluation of the research location were carried out. This was done mainly to link the physical with the behavioural, emotional with the functional, thus providing fertile ground to speculate on the *phenomenological*.

With this method in place, and with the service-users' consent, the daily activities of the residents within acute ward 4 were observed by mapping out their movement within the space on a floor plan, and recording their behaviour in a journal at different points throughout the plan for the duration of the observations. The observations took place for 2 hours in the morning, and 2 hours in the afternoon for a total of 4 consecutive days.

The space and the uses within the space were further documented via hand-drawn sketches. The sketches were also used to categorise the spaces in terms of their features, character, and use.

Figure 18
A basic representation of behavioural mapping. Individual moves from point A to point B. The movement is recorded on plan, and the behaviour is written down on a journal (Source: Author)



[16] Behavioural mapping was first developed by Ittelson et al. (1970), in order to record behaviour within a designed setting (Marušić, 2012)

3.5.3 Analysis Tools / Stage 3

Once the data was collected, it was analysed in line with three parameters: *safety and security, competence,* and *personalisation and choice,* as outlined in the SCP model by Chrysikou (2013). The model is widely based on normalisation theory, a term coined in the 1990s and one which describes the optimal milieu of care as being normal life (Chrysikou, 2013). This implied domestic references within such an optimal model, moving away from the institution and favouring *home-likeness* (Chrysikou, 2013). Chrysikou (2013), in formulating this model, criticised this normalisation theory in that fully domestic environments might compromise the needs of people with psychiatric disorders receiving care. The model hence interjects the notion of domesticity with parameters that are embedded within mental healthcare architecture. This ensures that the model acknowledges that the domestic may not always be positive, and that a certain level of institutional features can be beneficial (Chrysikou, 2013).

The three parameters are used to evaluate and define a *therapeutic* environment and highlight the limitations when exploring the domestic character of such spaces (Figure 19B) (Chrysikou, 2013). A visual representation of the model lies within a three-dimensional graph (figure 19A), that looks at the domestic in the positive axes, and the institutional in the negative axes. The poles of the axes do not relate to whether something is good (positive) or bad (negative), yet it balances each of the 3 parameters between being institutional and being domestic.

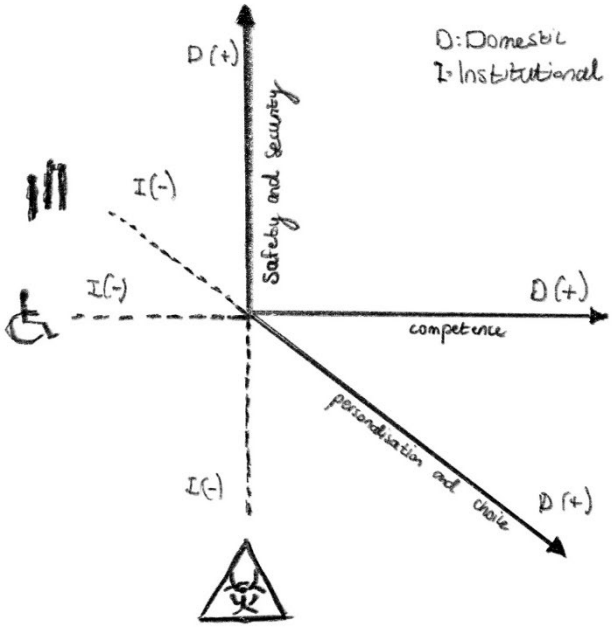


Figure 19A
SCP Model as a 3-d graph measuring safety and security (S), competence (C) and personalisation and choice (P) (Source: Adopted from Chrysikou, 2013)

		Model		
	Design elements	Safety & Security	Competence	Personalisation & Choice
Safety & security oriented design	Anti-ligature elements	+	0	-
	Medication storage	+	0	0
	Room Locks (operable by staff)	+	+	+
	Fixed heavy furniture	+	-	-
	Unbreakable glass	+	-	0
	Non-weight bearing fixtures	+	-	0
	Safe radiator surfaces	+	-	0
	Sacrificial design layers	+	-	+
	Seclusion room	+	-	-
	Observability	+	0	-
Competence oriented design	Flexibility	-	+	+
	Core & Cluster Model	+	+	+
	Physical accessibility means	+	+	0
	Activity Areas	0	+	+
Personalisation & choice oriented design	Privacy	-	0	+
	Single-room accommodation	0	+	+
	Soundproofing	0	+	+
	Private washing facilities	0	0	+
	Lockers (Private)	-	+	+
	Single gender	+	0	-
	Single gender ward parts	+	0	+
	Territoriality	+	+	+
	Socialisation opportunities	0	+	+
	Variety of common areas	0	+	+
	Visitors areas	0	+	+
	Telephones / internet	-	+	+
	Flexible, lightweight furniture	-	+	+

Figure 19B
SCP Model as a 'checklist' measuring safety and security (S), competence (C) and personalisation and choice (P) (Source: Chrysikou, 2013)

Table 1: Evaluation of design elements according to the SCP model as they derived from the literature review. A plus sign means that the element is significant for that particular parameter. Likewise, a minus sign shows a potential adverse impact from the element on that parameter. A zero sign suggests that the element has no impact on that parameter.

3.6 Limitations

The primary limitation of this research was the complexity of access to the service-user typology. Given the limited time spent within the research location, as well as ethical considerations, the research focuses on the behaviour and interactions of individuals residing within the ward during the time in which the research was conducted. The results are not representative of what the space means for *every* individual experiencing the environment outside the timeline of the research, however, it gives an indicative window of the environmental perception of the individuals residing therein.

The examination of the physical features of the institution via the Architectural Checklist also had its limitations. Each characteristic had been assigned the same weighting; however, the individual features have very different impacts on the users within MCH.

Additionally, the needs of the individuals within the ward varied significantly. The nature of an acute ward essentially means that it caters for severe, short-term episodes, within a wide range of mental illnesses. It would have been ideal if these spaces catered for individual mental illnesses, which would have led to a more comprehensive evaluation of the space in terms of one 'type' of psychiatric disorder.

Furthermore, the stigma related to MCH might have affected the users' use of the space, since a pre-conceived idea of the experience within would have already been set. Although not evident, it is also being acknowledged that the presence of the researcher may have affected the experience of the users within the space.

Chapter 4

The Context

Describing the Setting

This chapter describes the setting, highlighting its main features, layout, and spaces.

4.1 Wider Context

Since its conception, Mount Carmel hospital has witnessed multiple transformations through time. In the 19th century, it stood as a somewhat grand yet flawed creation. The necessities – bathrooms, water closets, a chapel, a kitchen, a laundry, and a mortuary room – were absent (Muscat, 1994). Additionally, Muscat (1994) discusses how the architectural plans were a replica of the Wakefield Asylum (figure 20) in England, rendering Mount Carmel a typical 19th century asylum, lacking contextual design decisions and planning. In fact, over time, the hospital has continuously witnessed itself being transformed into a more functional structure - facilities were added, spaces were refurbished, bathrooms installed, chapel retrofitted into the existing space – hinting that the architecture made its users aware of its flaws, prompting transformations for a spatially better standard of care. As outlined in section 2.1.2, The architectural modifications through time directly responded to new understandings about mental health and health in general, and to the needs of the residents within the hospital (Muscat, 1994).

The layout consists of a symmetrical plan (figure 21), typical of 19th century asylums. Two wings flank the main administration block, found right after the main entrance. Each wing is sectioned off into wards, consisting of dayrooms, bedrooms, therapy areas, bathrooms and so on. At present, the hospital has its own main kitchen, laundry, and chapel.

There also exist external amenities, such as a canteen, outdoor recreational areas, as well as workshops for the residents. Although the hospital is adorned with its expansive gardens, a walkthrough would bring about the realisation that they are scarcely used.

A sketch inventory (figures 22 and 23) of the spaces found throughout MCH can be found in the following pages.

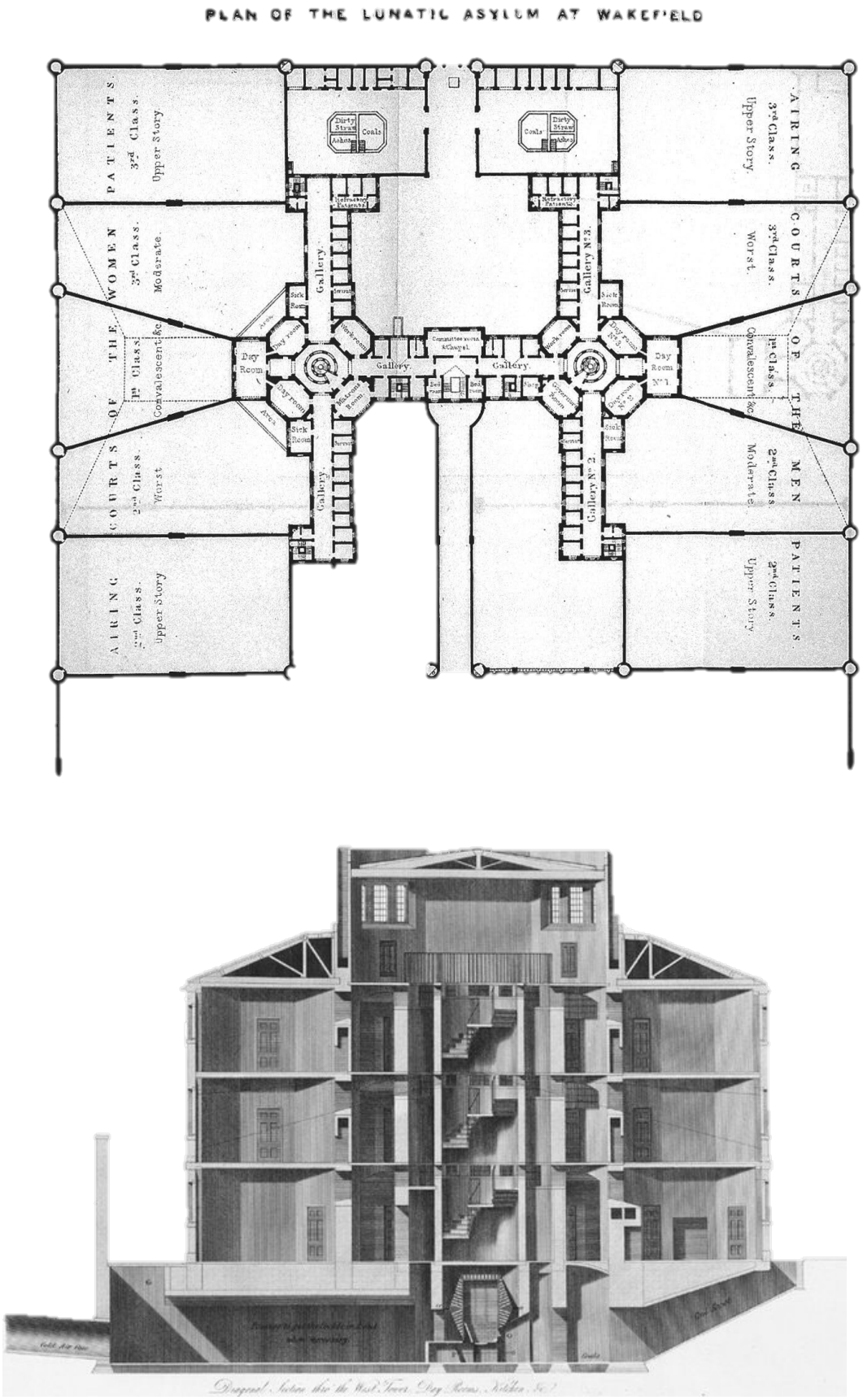
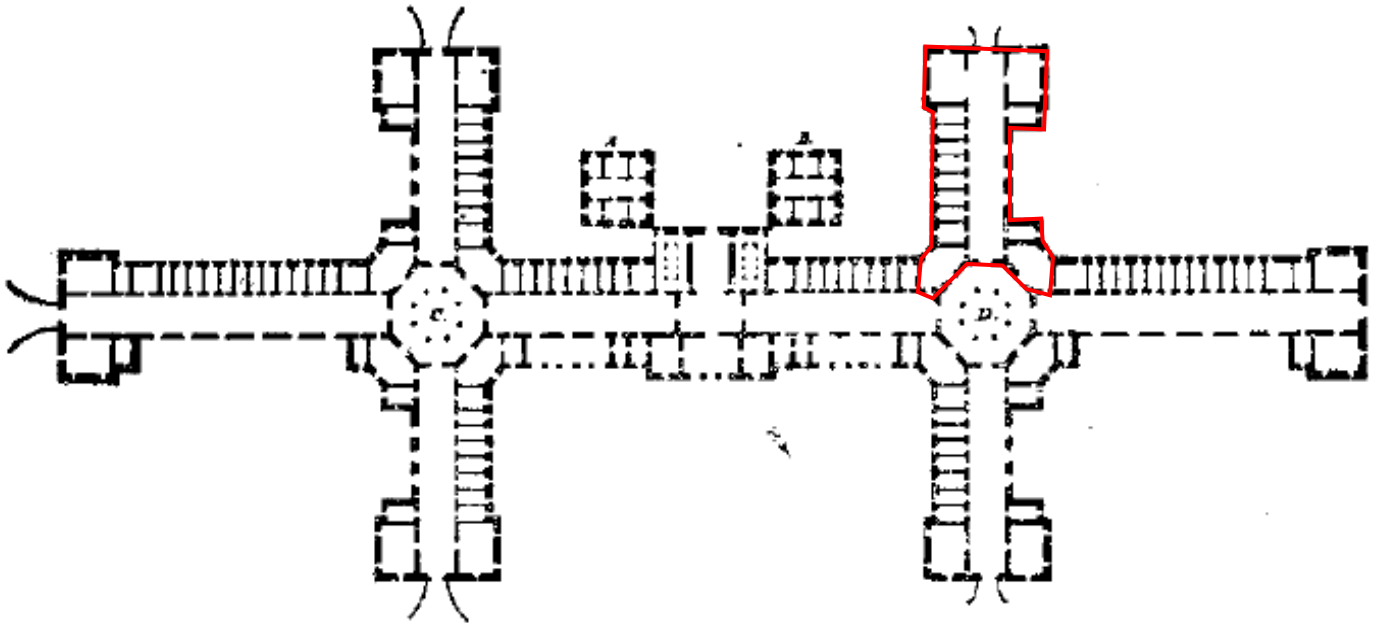


Figure 20
Cross-Section of Wakefield Asylum (Bottom) and Ground Floor Plan (Top) (Source: The British Library Board, 1819)

The New Lunatic Asylum – Malta
Ground Plan



A and B for newly admitted Patients, who were to be placed under close observation

These Blocks were done away with in 1861, and A was converted into a "Kitchen", and B into a "Wash-House"

C and D Day-Rooms or "Salles de Reunion"

Plans prepared by Mr. F. Cianciolo in 1852 and built between 1853 and 1861

The original plan of the hospital at **Attard.**

Figure 21
Original Plan of Mount Carmel Hospital, Attard; Research Location Marked in Red (Source: Savona-Ventura, 2004, Edited by Author)

4.1.1 Spatial Inventory of the Wider Context

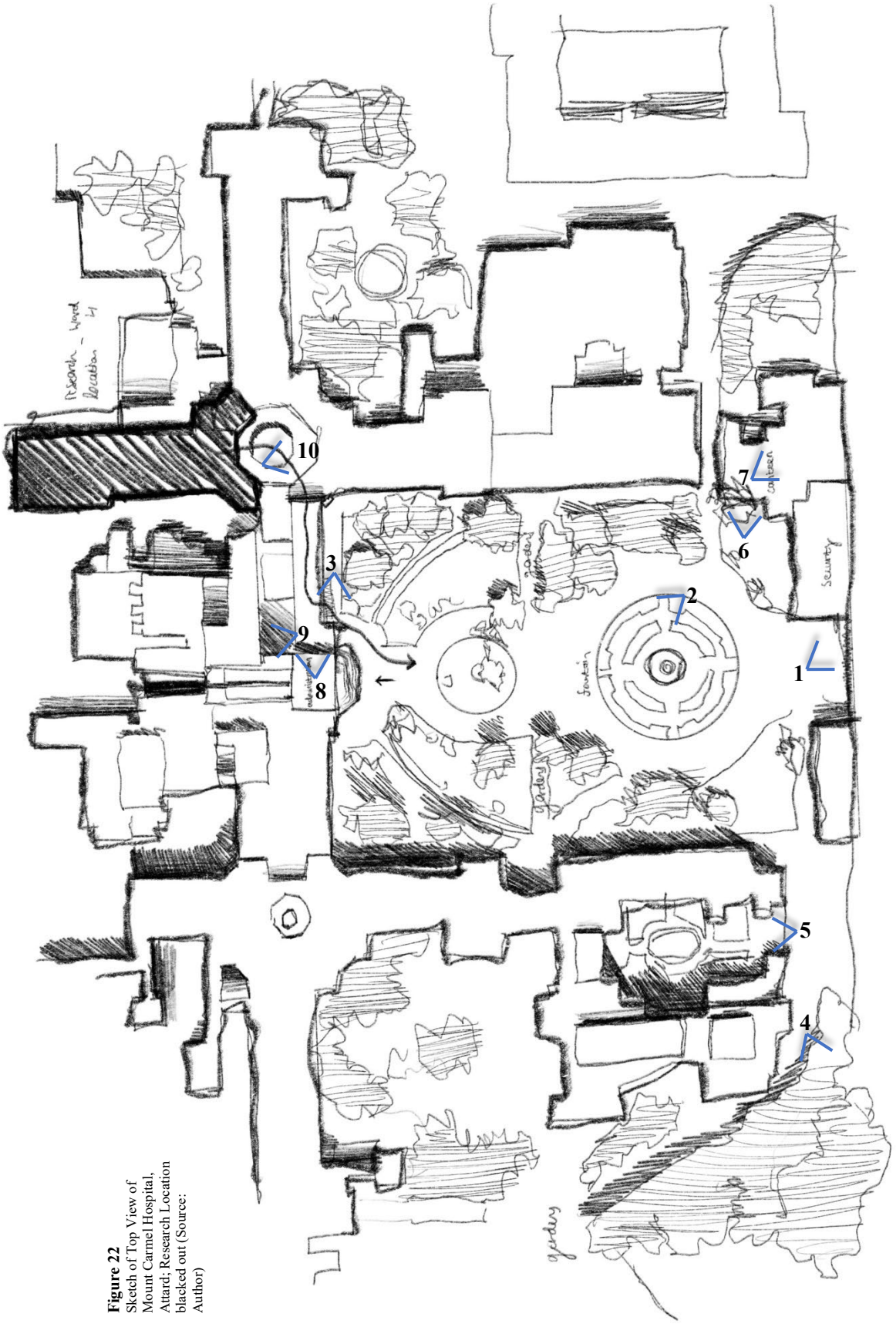
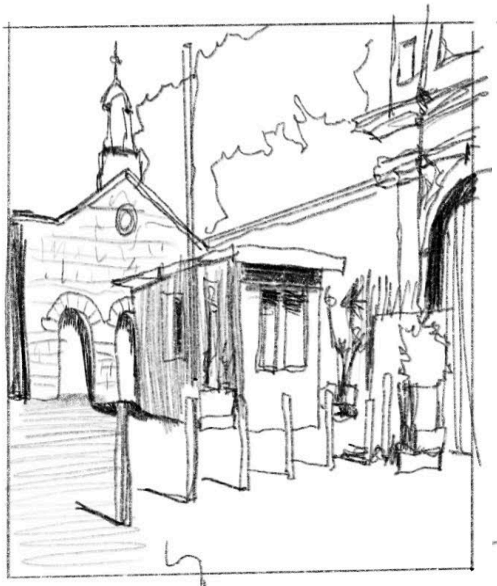


Figure 22
Sketch of Top View of Mount Carmel Hospital, Attard; Research Location blacked out (Source: Author)

1
entrance to MCH (gate and security office)

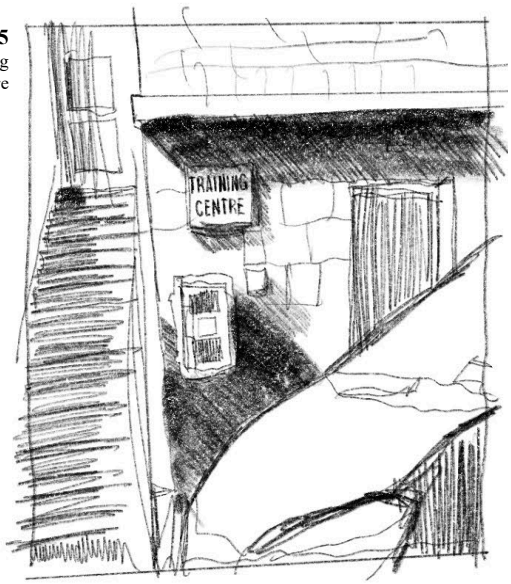


2
view of MCH and gardens from main fountain

3
view from gardens

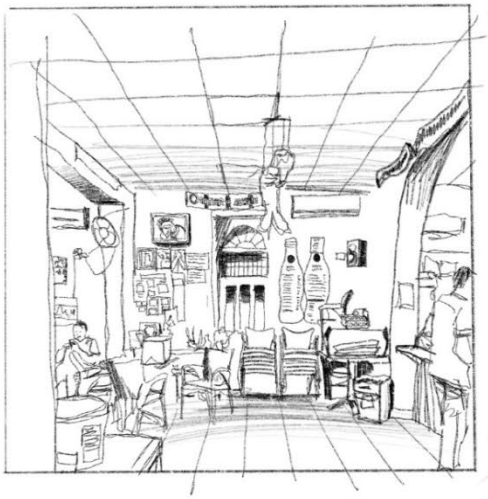
4
view of playground

5
training centre



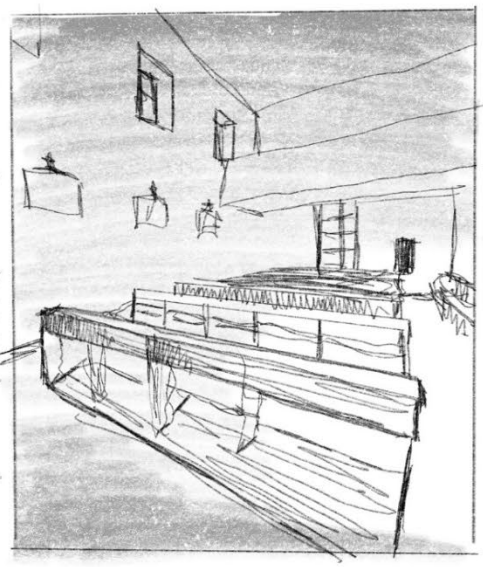
6
view of canteen's outdoor area

7
view of canteen's dining area (internal)



8
view from administration area, looking towards right wing

9
view of areas containing other amenities



10
view of chapel

11
view of foyer right before entering research location (ward 4)

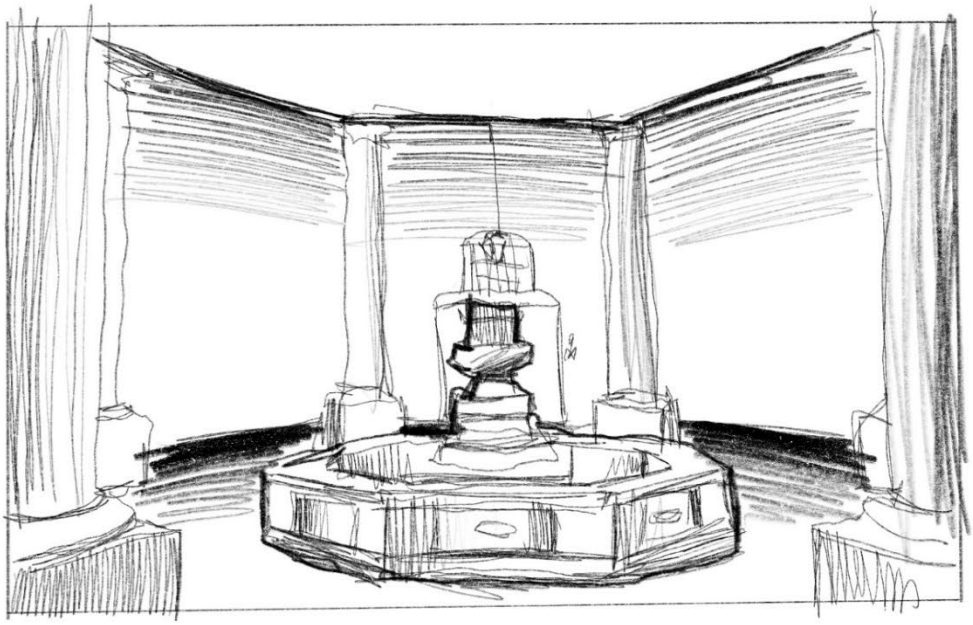


Figure 23
A compilation of sketches showing spaces throughout MCH (Source: Author)

4.2 Research Location – Acute Psychiatric Ward 4

The research location can be described as a newly renovated (mixed gender) acute psychiatric ward that can hold up to a maximum of 13 individuals, particularly those with schizophrenia or severe depression (personal communication, 2024).

Its layout (figure 24) consists of a rectangular double height main space – utilised as the dayroom and consisting of a lounge space, a nurse station, and a dining space. Additionally, the dayroom is flanked by the bedrooms on one side, and the nurses' room and outdoor space on the other side. The dormitory-style bedrooms and the bathrooms are placed on the far end of the ward.

The renovation of this ward brought with it a new dynamic. In older wards in the institution, the nurse station is housed within a room, rather than being stationed in the dayroom. Additionally, there is the inclusion of a quiet room, a family room, and an outdoor space which is solely used by those residing within the ward.

The main areas to be observed have been highlighted in the following sketch inventory.

Figure 24
Plan of Research Location – the station of the researcher's position during observations is marked in red. The numbers on plan correspond to the views of the spaces in the following pages (Source: Author)

4.2.1 Walkthrough

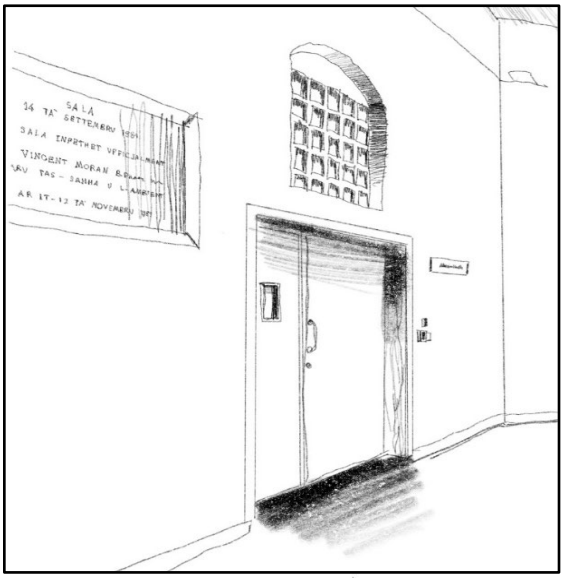


Figure 25
Ward 4 entrance door (Source: Author)

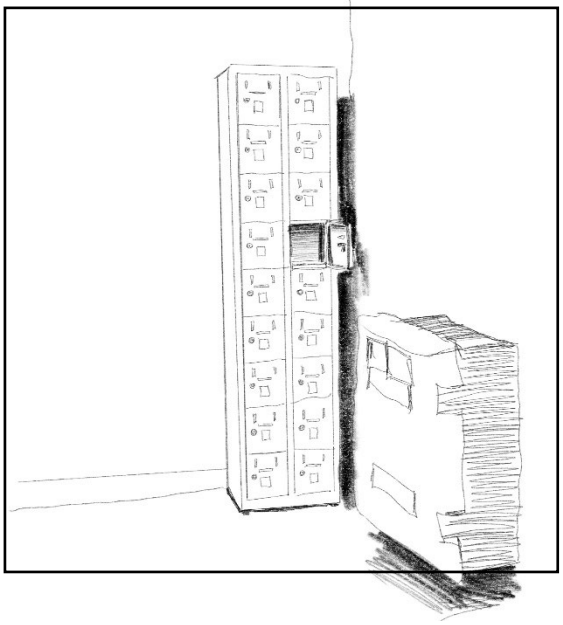


Figure 26
Locker area outside of ward (Source: Author)

Entrance

Before entering the ward, the resident is greeted with a locked blue door (figure 25). An intercom system next to the door has to be rung before anyone is allowed inside.

The user then enters a reception-like area, having a family room on one side, and a security desk and a corner containing lockers on the other side, where residents can store their personal belongings (phones, etc.) (figure 26).

Figure 27
Lounge area
(Source: Author)

First Experience

Upon entering, the user is greeted with a double-height space (figure 27) containing the lounge area - having blue sofas, wooden coffee tables, a TV, and some plants. Natural light veils over the lounge area, which also has a view to the yard from the door leading to it.

Figure 28
Nurses' station
(Source; Author)

The Nurses' Station

The nurses' station (figure 28) stands at the centre of the dayroom, exposed, and able to visually permeate every space in the vicinity.

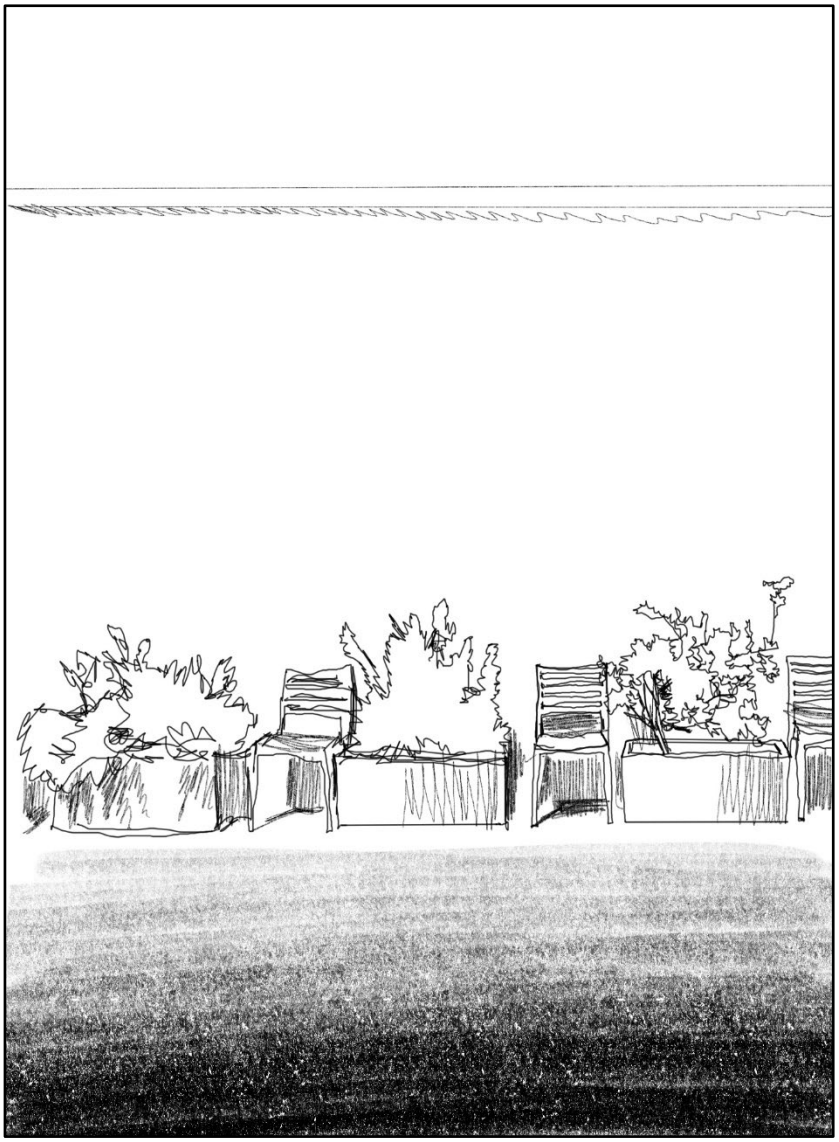


Figure 29
Outdoor area
(Source:
Author)

The Yard

In the enclosed yard (figure 29), one can find a few planters, chairs placed against the wall, a large table, as well as multiple ashtray bins.

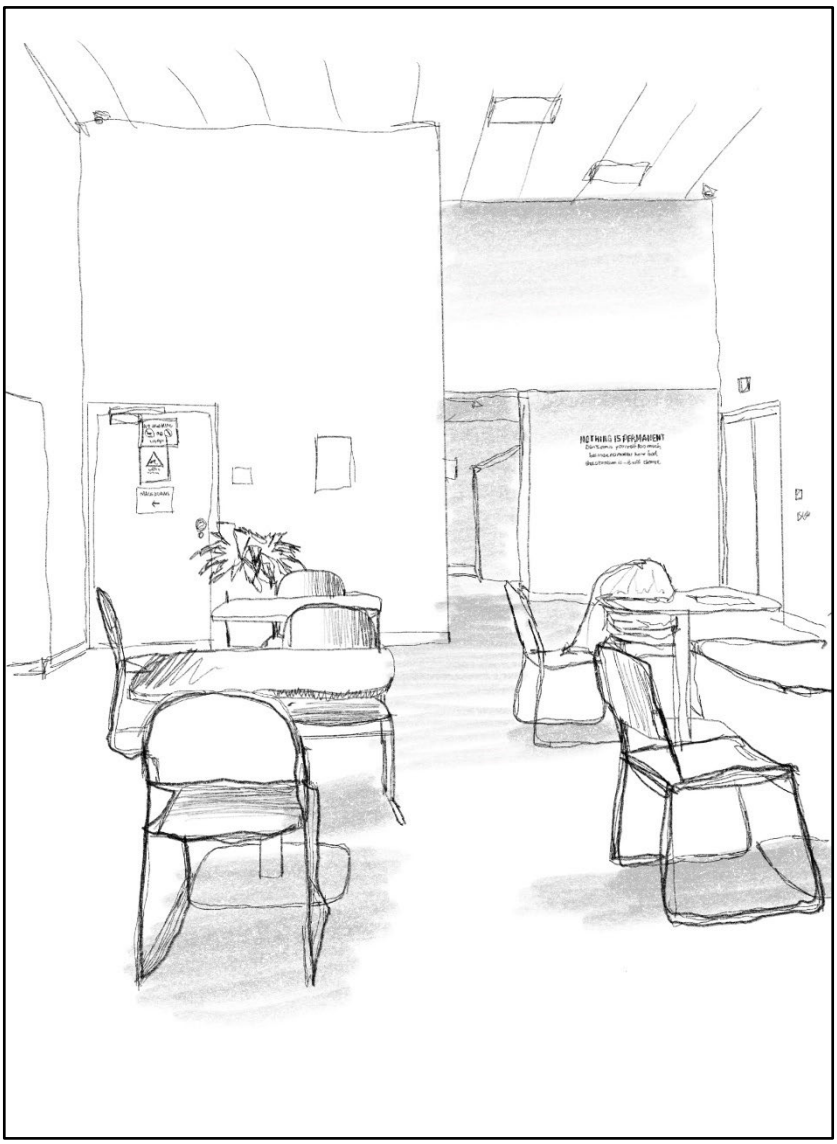


Figure 30
Dining area
(Source:
Author)

The Dining Space

In the dining area (figure 30), one can find dining tables, a TV, and a puzzle area. This space is adjacent to the pantry / kitchen, although residents aren't allowed to enter. The wall at the far end of the ward has a motivational quote written on it. Adjacent to this, one may find the corridor which leads the user to the dormitories and the bathrooms.

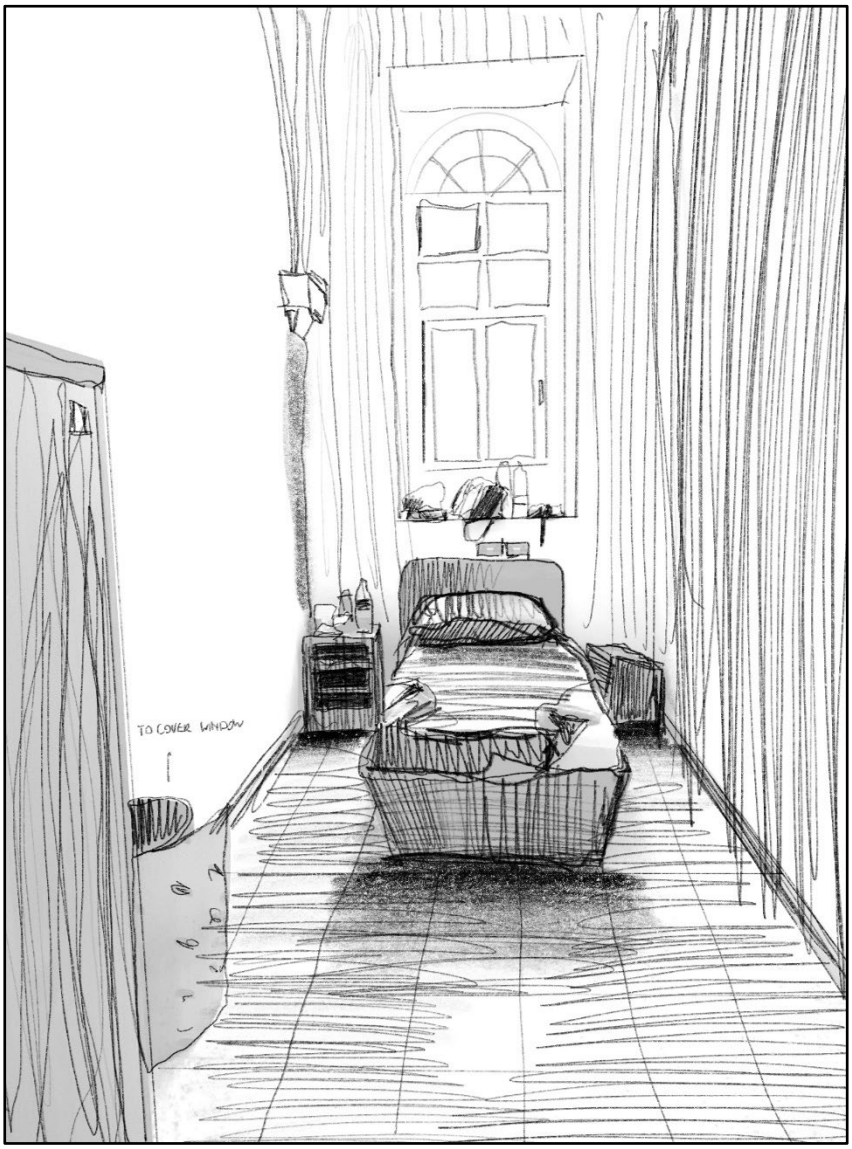


Figure 31
Individual Bedroom (Source: Author)

The Bedrooms

The bedrooms (figure 31), specifically the individual ones, are comprised of anti-ligature furniture items, including a closet, a bed, and a bedside table. The window above the bed allows for natural light to enter the space. Instead of curtains, a mat can be put in front of the window to block light while sleeping

Chapter 5

The Results

The setting's initial implications

This chapter looks at the initial stages and results of the fieldwork

> ‘‘A large rose-tree stood near the entrance of the garden; the roses growing on it were white, but there were three gardeners at it, busily painting them **red**. Suddenly their eyes chanced to fall upon Alice, as she stood watching them.’’ …. "Why, the fact is, you see, Miss, this here ought to have been a **red** rose-tree, and we put a white one in by *mistake;* and, if the Queen was to find it out, we should all have our heads cut off, you know.’’
>
> (Carroll, 1865, p.38)

5.1 Scope of Results and Analysis

The results will focus on how the physical attributes of the environment, and how the system of a multitude of these elements, affect the individual. The scope of the research and fieldwork is not to criticise MCH, but rather to evaluate how *the notion of institution vs home, objects*, *layouts*, *routine*, *people,* and other factors play a role in the experience and healing of the service-user.

5.2 Elite Interviews

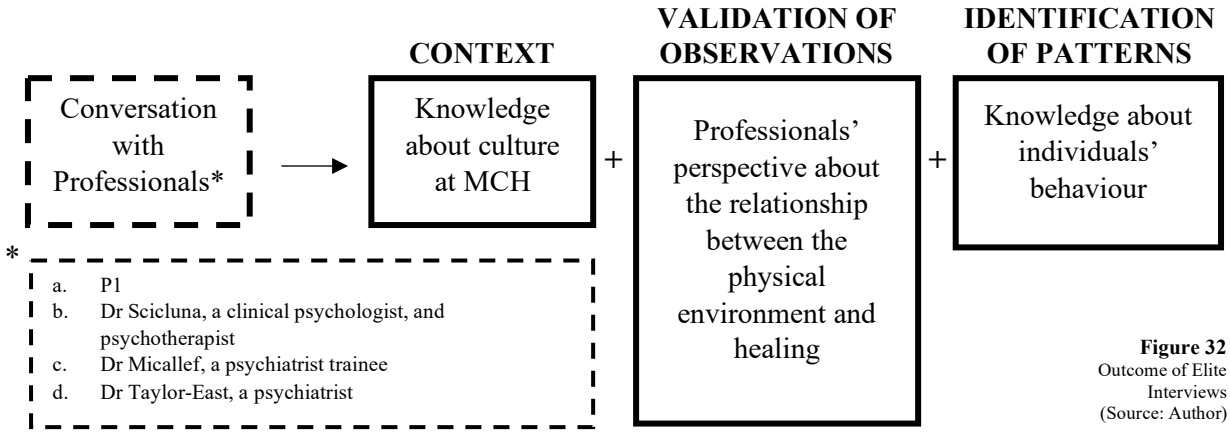


Figure 32
Outcome of Elite Interviews
(Source: Author)

The interviews served as the foundation for formulating an initial understanding of the local culture within an institutional psychiatric environment (figure 32). Furthermore, these conversations allowed for a better interpretation of the results attained within the research location, as well as acting as a form of guidance for the research's focus. The discussions led to the following two main themes to emerge:

5.2.1 Theme 1 / Importance of the Environment

There was an overarching consensus that the physical environment (both internally and externally) has a significant impact on the recovery of people with psychiatric disorders. The presence of the *outdoors* was especially noted. In the context of MCH, it was made apparent that the gardens of the hospital are very much underutilised (P1, 2024, personal communication).

Despite the favoured preference towards providing spaces of healing in a more *home-like environment*, the degree of emphasis varied. Some interviewees strongly favoured community-based care, while others emphasised that more severe cases must be treated in institutional settings. However, all interviewees agreed that there is a need to balance safety with a familiar and homely environment. In a particular case, Dr Micallef (2024, personal communication) stated that the research location is much better than older wards as it resembles a *hospital* rather than a *mental* hospital. This statement highlights how the notion of safety is more important for the staff, reducing the importance of providing

the comfort of a familiar environment, and favouring the resemblance to the conventional medical facility. The interviewees also highlighted general physical conditions that might aid in the healing of affected individuals – avoiding dark and gloomy spaces; designing spaces which promote stimulation but not too much stimulation as this can lead to ‘‘*mania*’’ (Taylor-East, 2024, personal communication), or abnormally excessive energy; introducing greenery; and utilising soothing colours (Scicluna, 2024, personal communication).

Dr Scicluna (2024, personal communication) discussed the restorative potential of changing environments, providing what are called ‘‘*corrective experiences*’’, diminishing negative feelings associated with a previous environment, which may have led the individual to being admitted to the institution (figure 33).

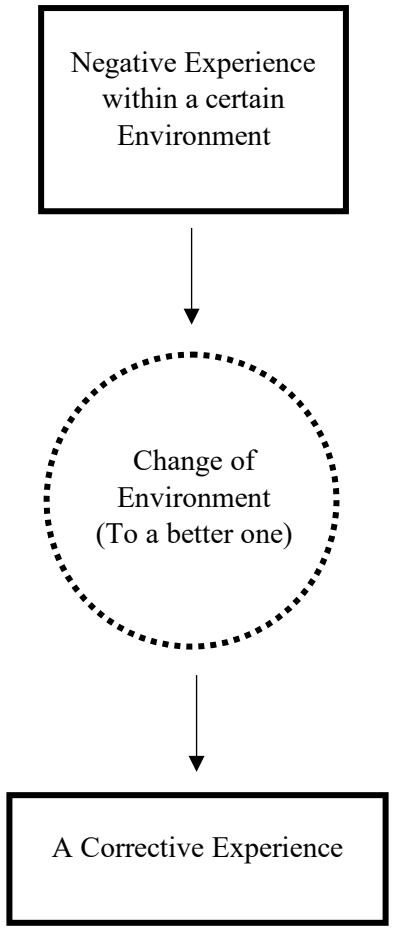


Figure 33
Corrective Experience (Source: Author as described by Scicluna, 2024, personal communication)

5.2.2 Theme 2 / Personalisation and the self

The degree to which service-users can control and personalise their environment was also given importance. This personalisation was viewed as a reflection of both the user’s personality *and* mental state. Dr Scicluna (2024, personal communication) describes the personalisation of space as a process (figure 34). Initially, the user would be somewhat overwhelmed by the new environment (Scicluna, 2024, personal communication). As time passes, and the user starts familiarising themselves with the physical space, the need to personalise starts to arise (Scicluna, 2024,

personal communication). However, this is very much determined by their mental state. For example, Scicluna (2024) goes on to describe how ‘‘depressed and lethargic’’ (Scicluna, 2024, extract from interview) individuals allow other people (usually the staff) to organise space for them. On the other hand, individuals who suffer with anxiety tend to over organise their space, and move things around (Scicluna, 2024, personal communication).

A sense of control within an environment also aids in fostering a sense of agency and providing a way to reinstate the self (Gallagher, 2000). Dr Scicluna (2024, personal communication) highlights how even a basic task such as making a cup of tea can promote self-agency and hence aid recovery. This further feeds into the notion of the institution vs domesticity, in that performing such tasks is linked to domesticity and would essentially mean that the individual would be able to function within the community (Scicluna, 2024, personal communication).

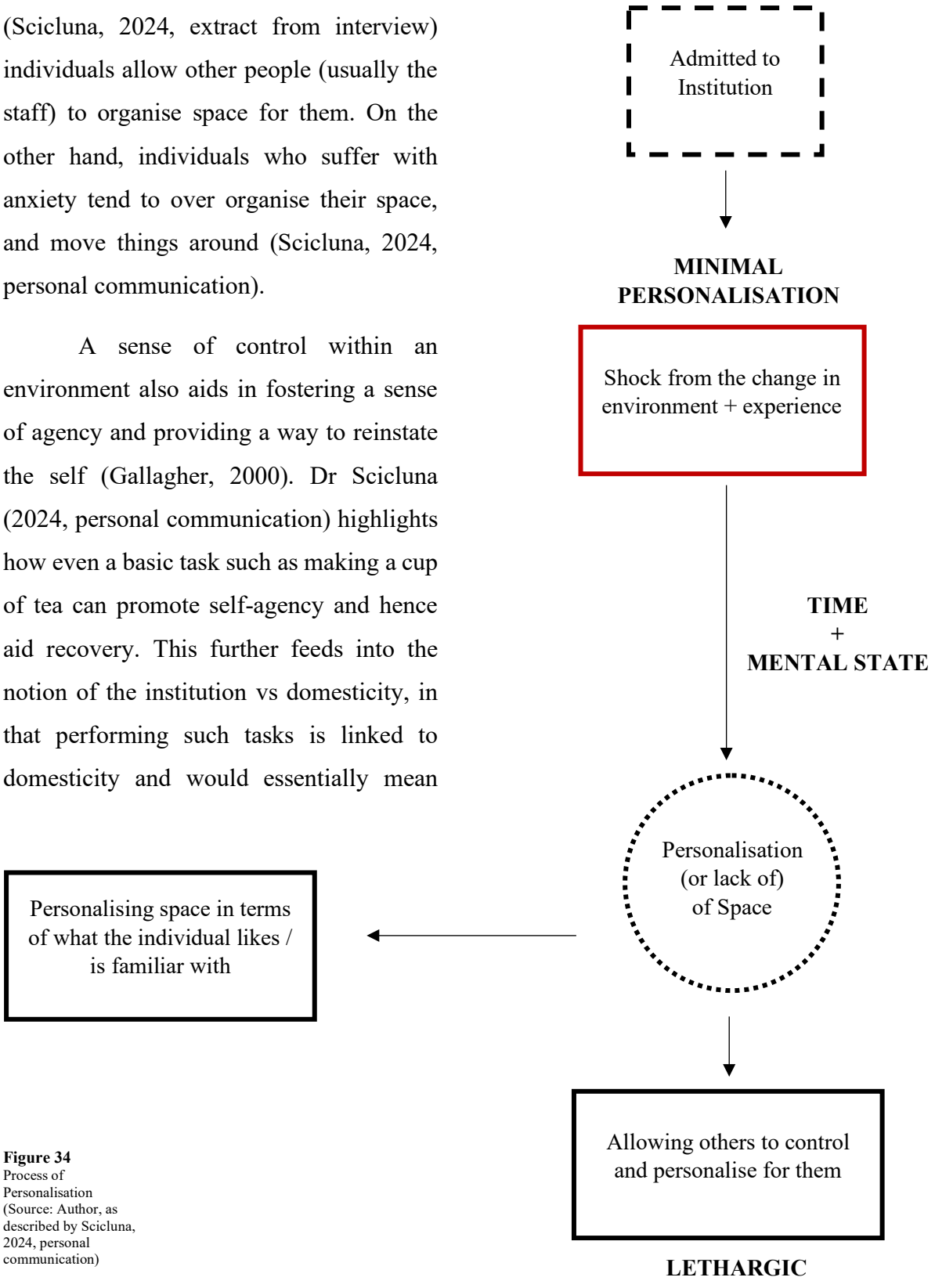


Figure 34
Process of Personalisation (Source: Author, as described by Scicluna, 2024, personal communication)

5.3 Architectural Checklist

Figure 35
Ground floor plan of Research Location (Acute Ward 4) with Legend of Spaces (Source: Author)

The number of institutional traits identified when investigating the characteristics of both the general scheme of the common areas that are open to visitors, and the acute ward to be researched was 76 out of 112 architectural features. As discussed previously, the features included in the architectural checklist explore institutional characteristics vs those which are domestic, as outlined by Robinson et al. (1984) and cited in Robinson (1983). This essentially means that, overall, the program and its physical features lean towards the institutional. However, as it has been

outlined in section 3.5.3, this doesn't necessarily correlate to a negative experience within the environment in question.

When solely looking at the traits of acute psychiatric ward 4, the resultant number of institutional traits identified was **58 out of 90** total architectural features. These traits are sectioned off into groups – those associated with safety and security; competence; and personalisation and choice. The 'zone' which can be evaluated for most of the parameters mentioned previously lies within the common areas of the ward, comprising the lounge area and the dining area (light green zone in figure 35). This zone, which can also be described as the dayroom and the space where service-users spend most of their time in, scored a 7/8 in the safety and security section (almost fully institutional); a 7/9 in the competence section (almost fully institutional); and a 4/8 in the personalisation and choice section (half of the traits are of domestic nature).

Additionally, zones and features which scored highly in exhibiting institutional traits were the sleeping areas, the lobby, the kitchen, and the fact that service-users had a lack of access to certain zones within the ward.

The completed checklist is available in appendix 2. The implications of these results will be discussed further in the subsequent chapter. The following diagram illustrates the main characteristics at MCH and the research location, distinguishing between institutional and domestic attributes.

Figure 36
Catalogue of Internal Elements (Source: Author)
○ = Institutional

5.3.1 Dayroom Characteristics

5.4 Behavioural Mapping

The collective atmosphere within the ward, along with the outcomes of the behavioural mapping, reflects the diverse psychological profiles of the service users observed. Although their conditions vary, their admission to MCH was a shared experience. However, their stays were unique to each individual, shaped by the specific nature of their mental state as highlighted in figure 37.

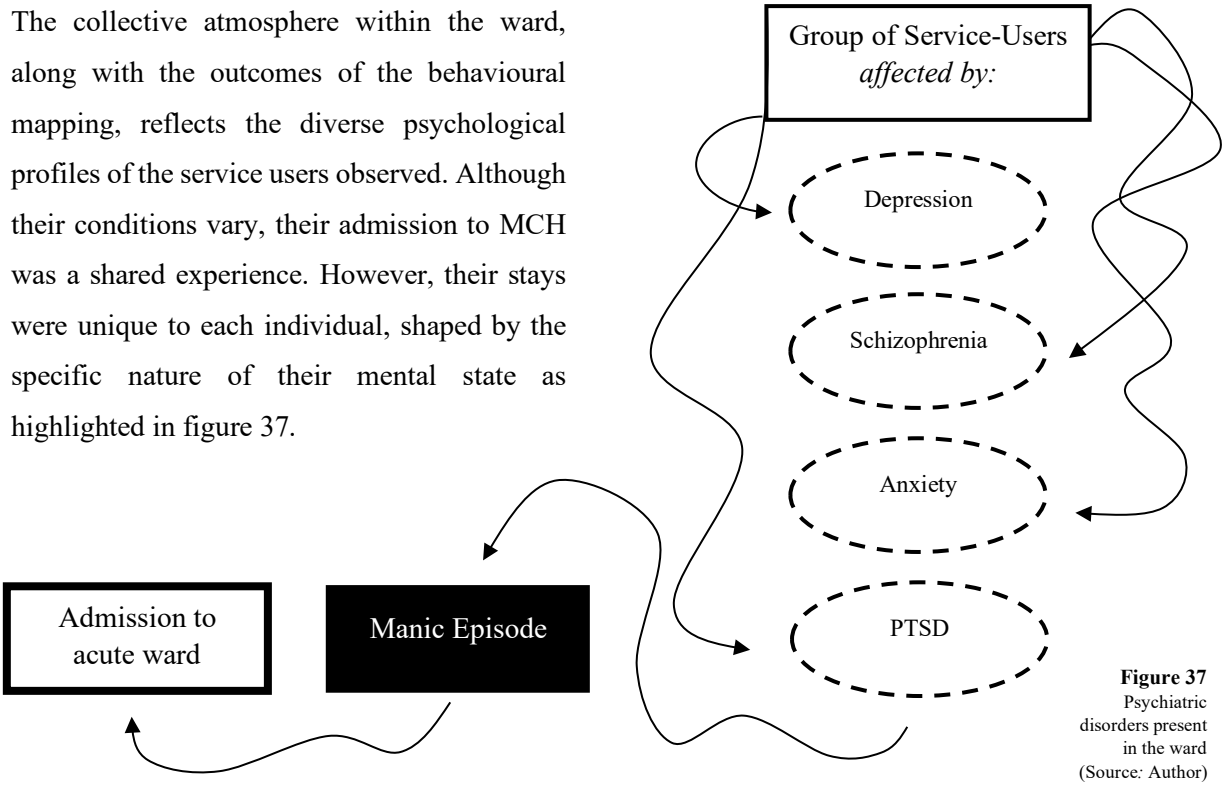


Figure 37
Psychiatric disorders present in the ward (Source: Author)

5.4.1 General Layout Implications

The movement patterns which were observed were heavily influenced by the layout of the ward itself. These can be observed in the following behavioural maps (figures 38-45). The different coloured movement paths on the maps represent the movements of different individuals residing inside the ward.

The main placement of the furniture on one side of the ward resulted in the creation of a corridor-like space, flanked by the bedrooms on one side and by the dayroom furniture on the other, resulting in heavier foot traffic in this 'leftover' zone. This also led the space to be influential on certain behaviours and hence dictated the activities occurring within such a space, such as frequent pacing, spontaneous dancing, peering inside the bedrooms through the observation windows, loitering in front of the nurses' station, and automatically wanting to exit the ward. This corridor-like space may indeed have institutional connotations; however, it also presents the opportunity for users to walk (Chrysikou, 2014).

The placement of the nurses' station, located centrally within the ward,

created a social hub that functioned, and was used by the residents, as an information centre, where they would stop by throughout the day and chat, ask about appointments, permission to make phone calls, and permission to go outside.

The layout must be considered beyond the two-dimensional plane. The unnecessarily large formulation and the double-height of the space produce a certain uncertainty within the environment, instilling the need to move and escape from the space itself (Osmond, 1957). The ward environment thus resembled more a grand hall rather than a familiar, reassuring, and intimate setting, lending itself to produce an almost dissociative effect on whoever experiences it.

Day 1

09:00 till 10:00 am

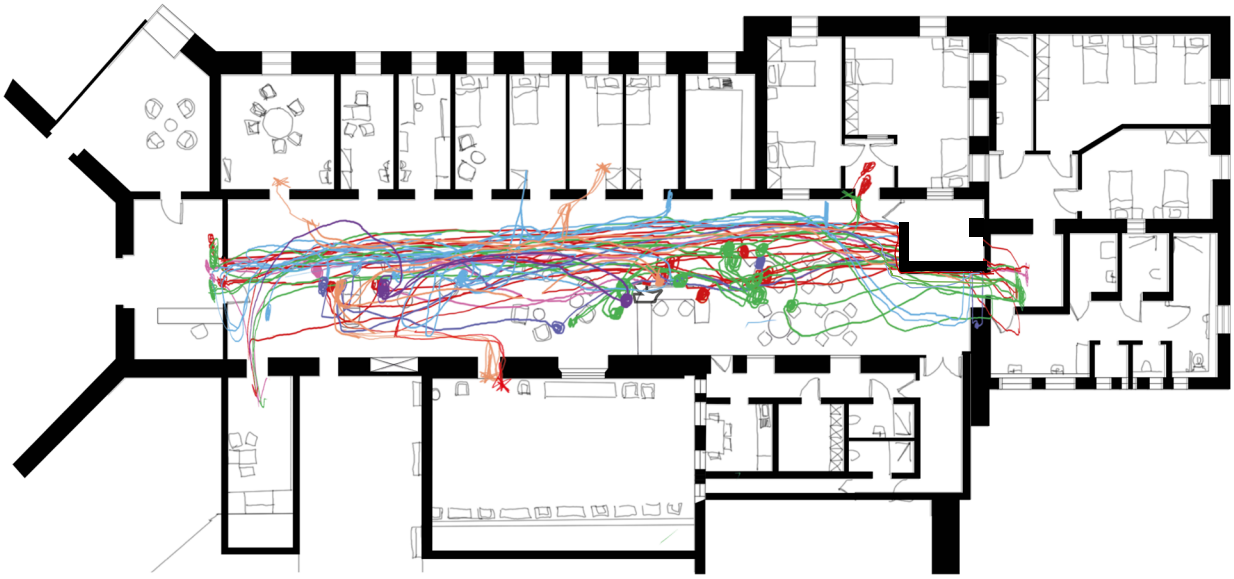


Figure 38
Behavioural Maps of Acute Ward / morning of day 1
(Source: Author)

10:00 till 11:00 am

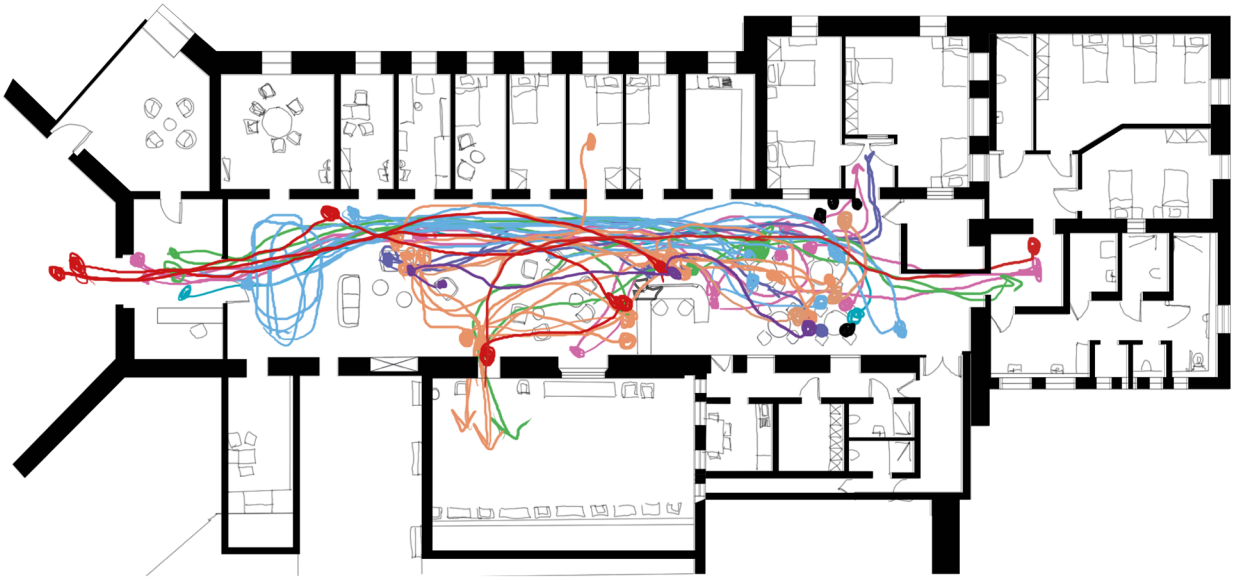
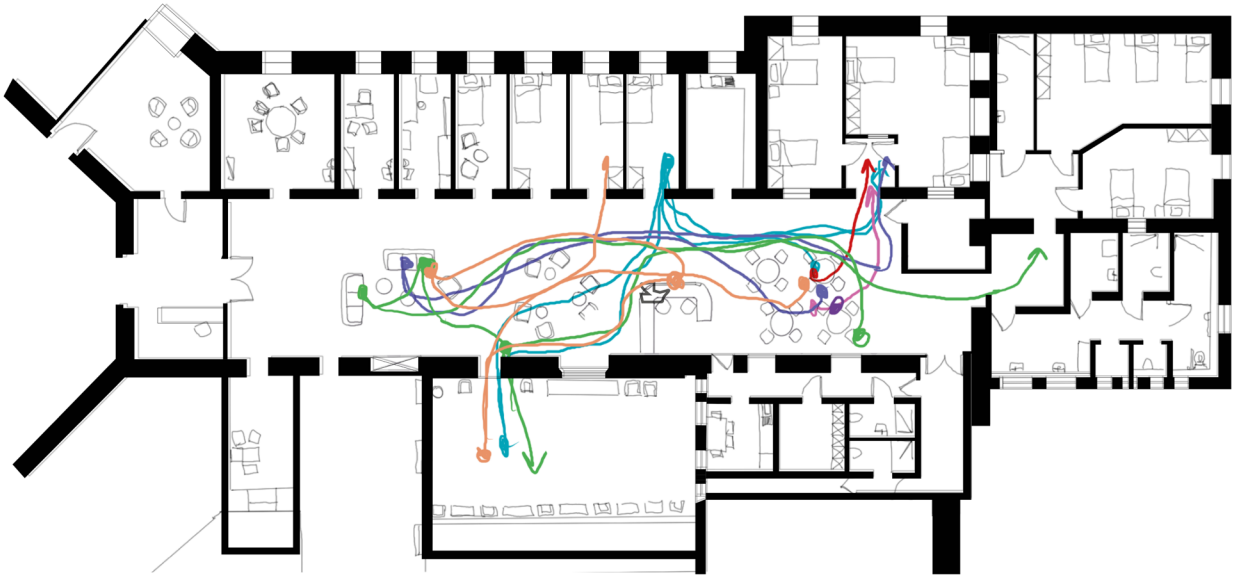
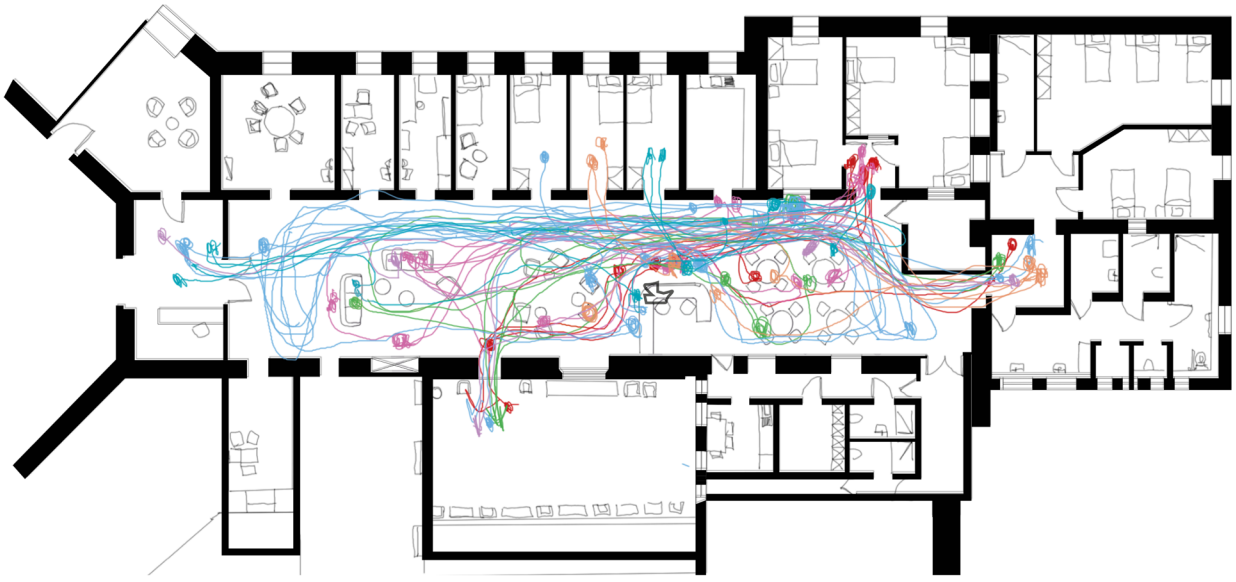


Figure 39
Behavioural Maps of Acute Ward / afternoon of day 1 (Source: Author)

12:30 till 13:30 pm



14:00 till 15:00 pm

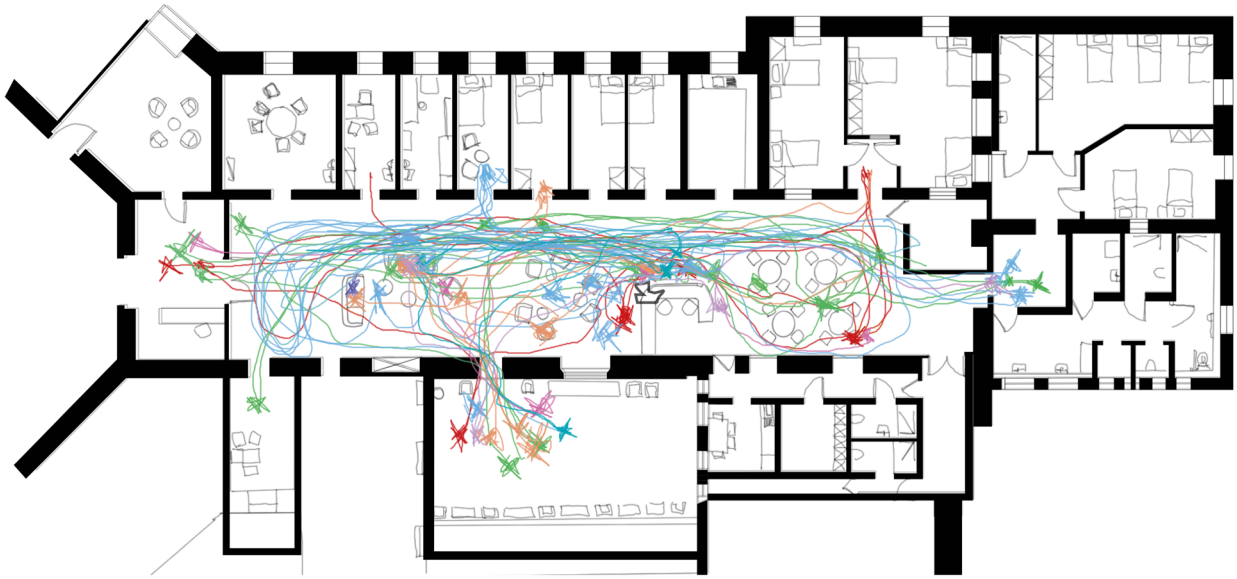


pacing, moving in circles, attempting to go to the yard, going back and forth between bedrooms and dayroom, stopping in front of nurses' station, exiting ward

Day 2

Figure 40
Behavioural Maps of Acute Ward / morning of day 2 (Source: Author)

08:30 till 09:30 am



09:30 till 10:30 am

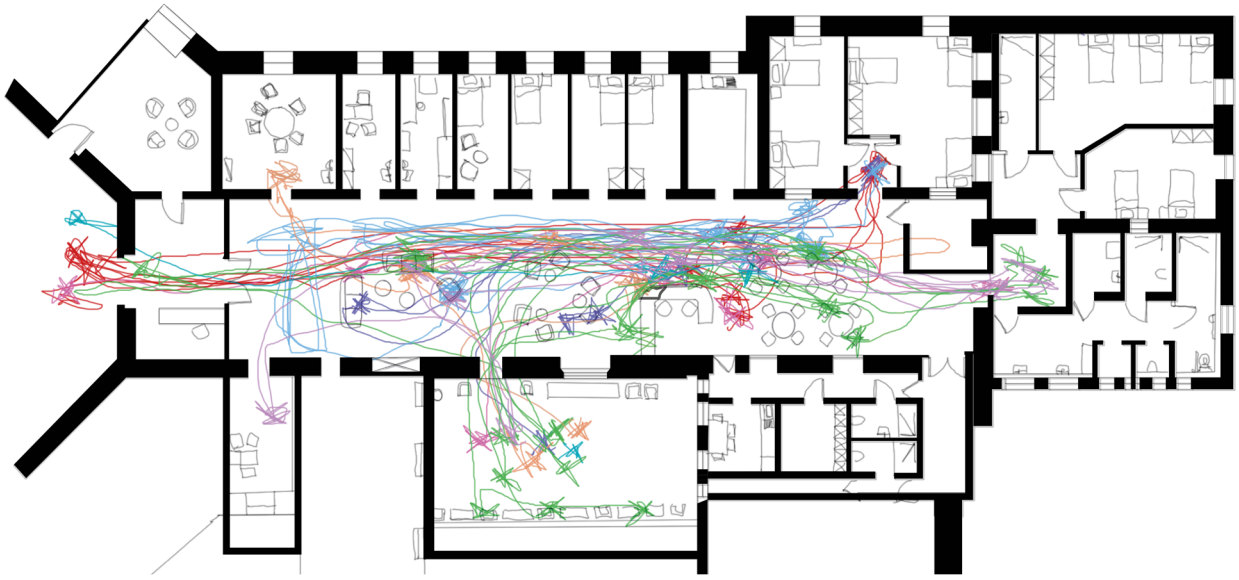
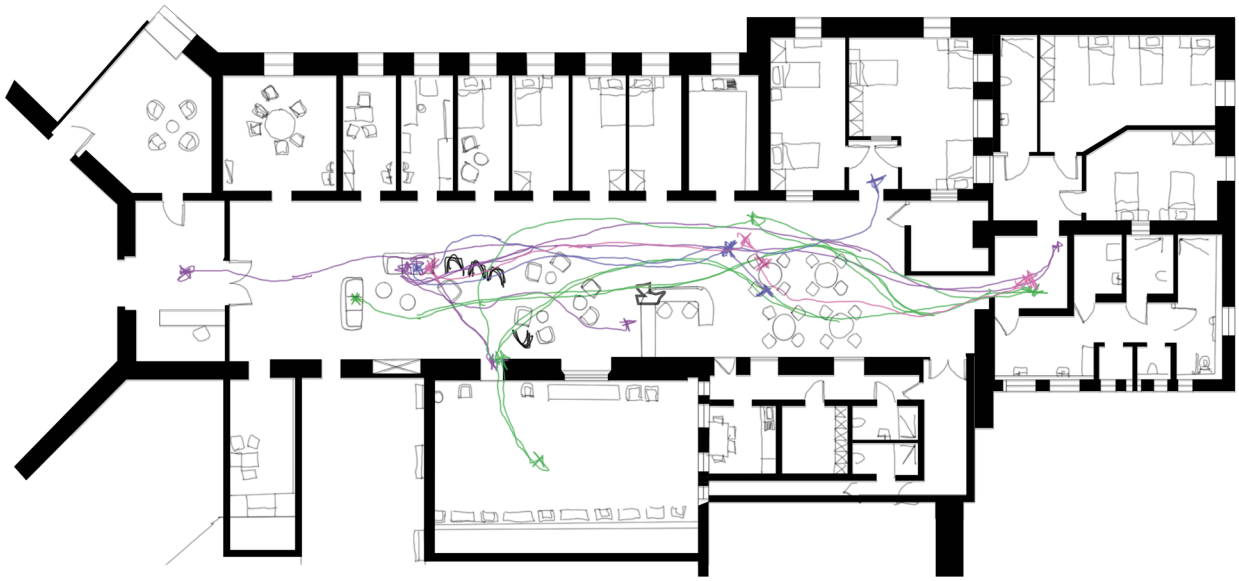
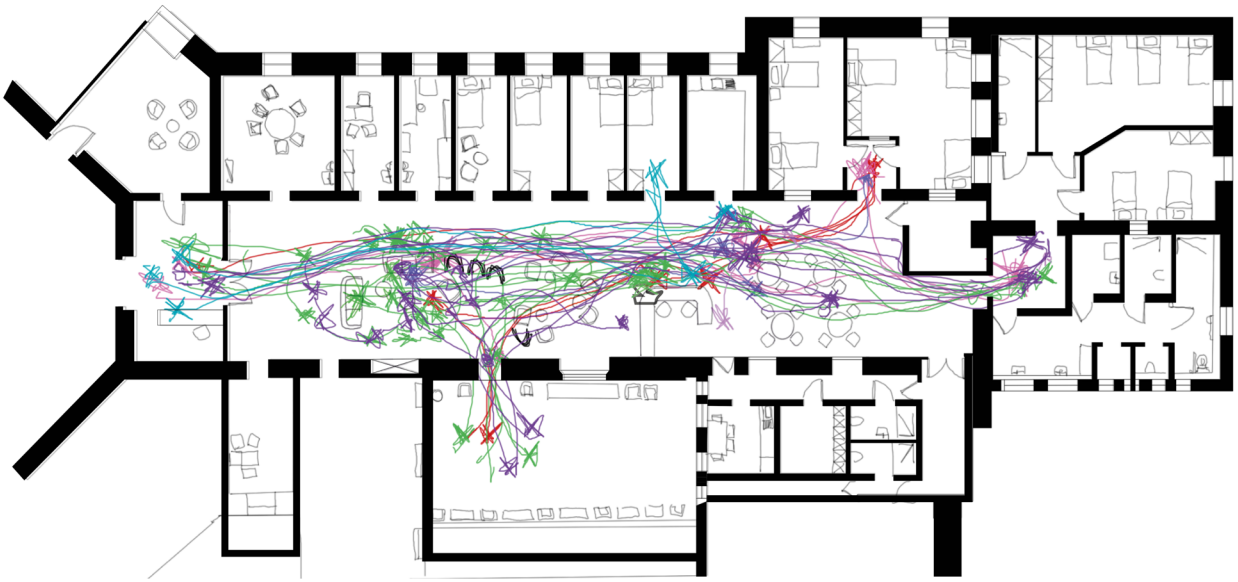


Figure 41
Behavioural Maps of Acute Ward / afternoon of day 2
(Source: Author)

14:00 till 15:00 pm



15:00 till 16:00 pm

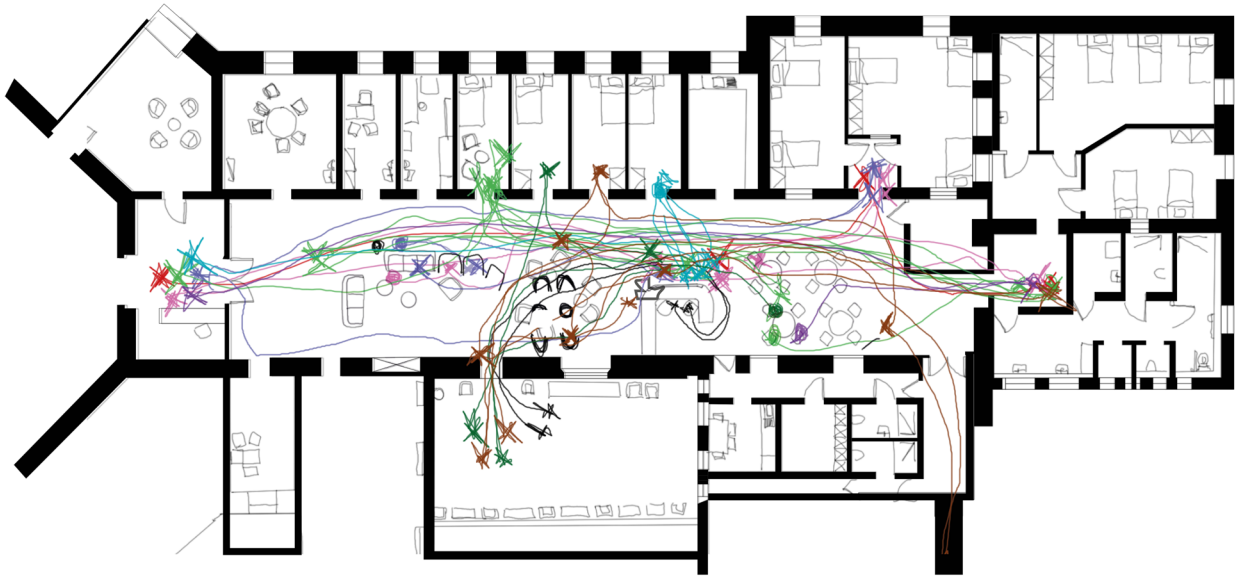


pacing, going outside more, moving from dining area to lounge area and back, spontaneous dancing, napping on sofa

Day 3

Figure 42
Behavioural Maps of Acute Ward / morning of day 3
(Source: Author)

08:30 till 09:30 am



09:30 till 10:30 am

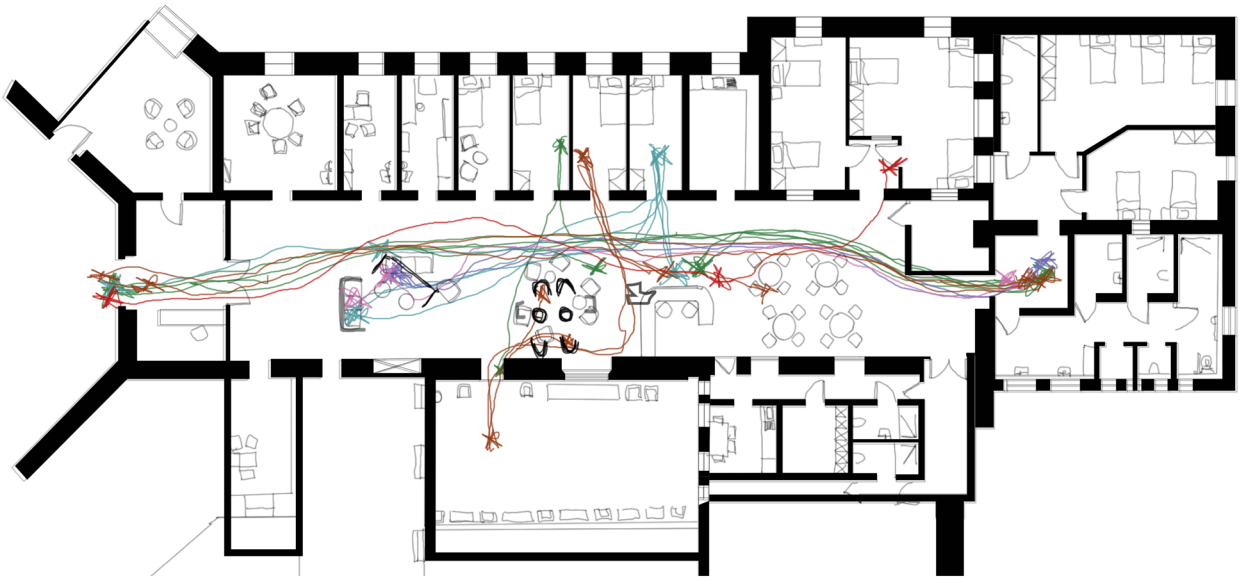
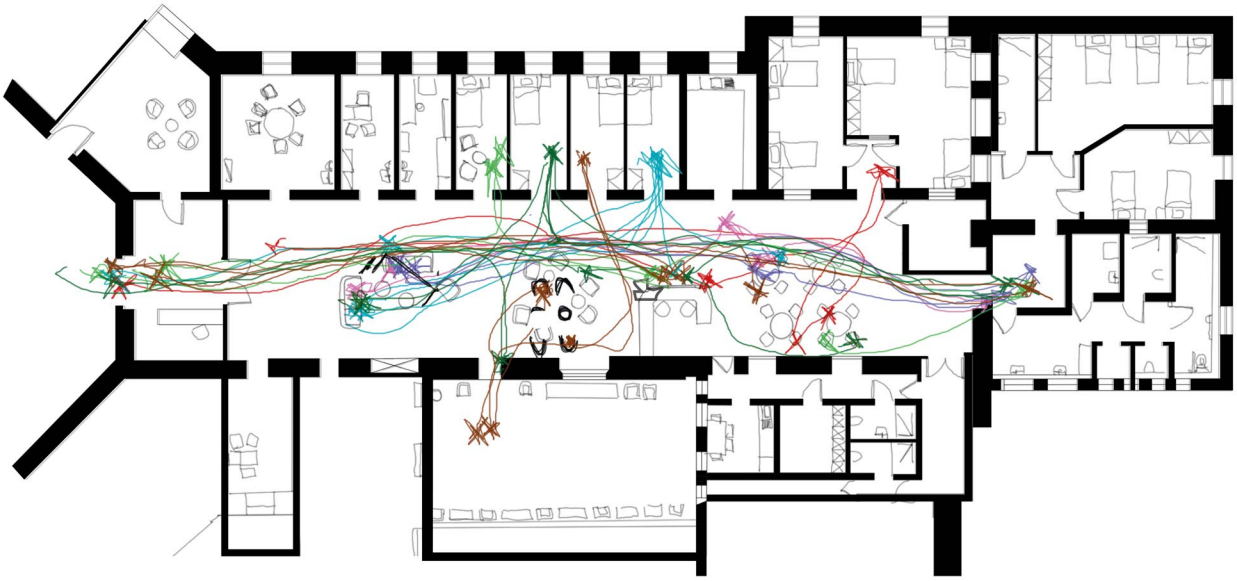


Figure 43
Behavioural Maps of Acute
Ward / morning of day 3
(Source: Author)

10:30 till 11:30 am



exiting ward, going into bedrooms, asking for information at nurses' station, going back and forth from bedroom to MCH gardens.

Being a public holiday, the ward was very inactive and void of activity in the afternoon. Most residents had visitors and so spent the afternoon outside the ward.

Day 4

08:30 till 09:30 am

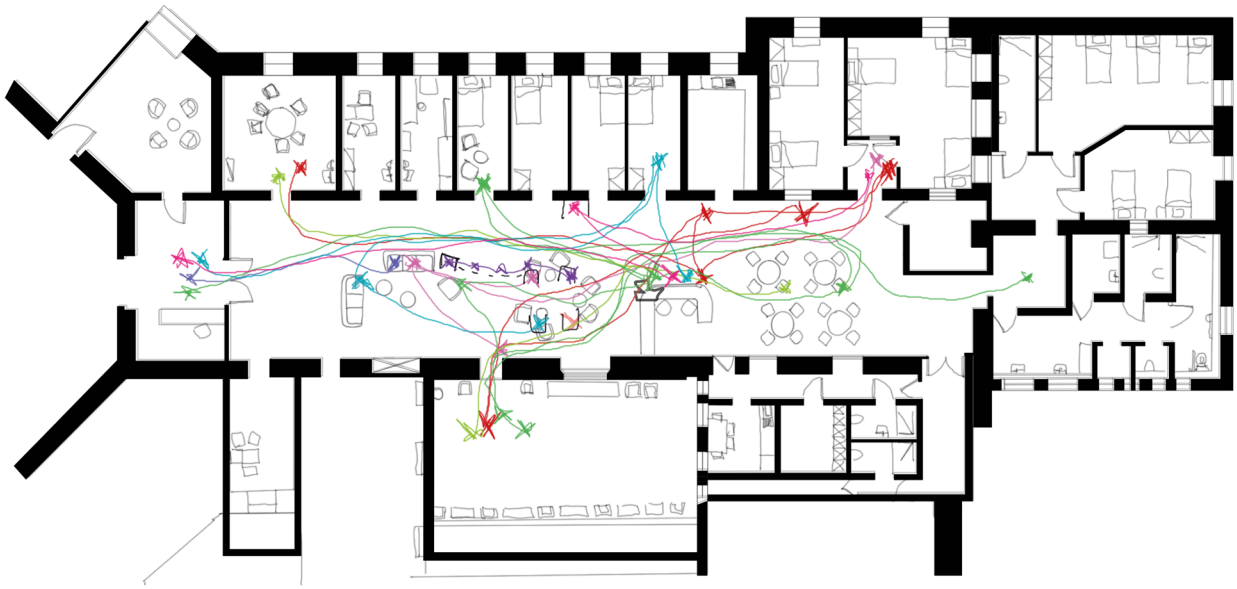
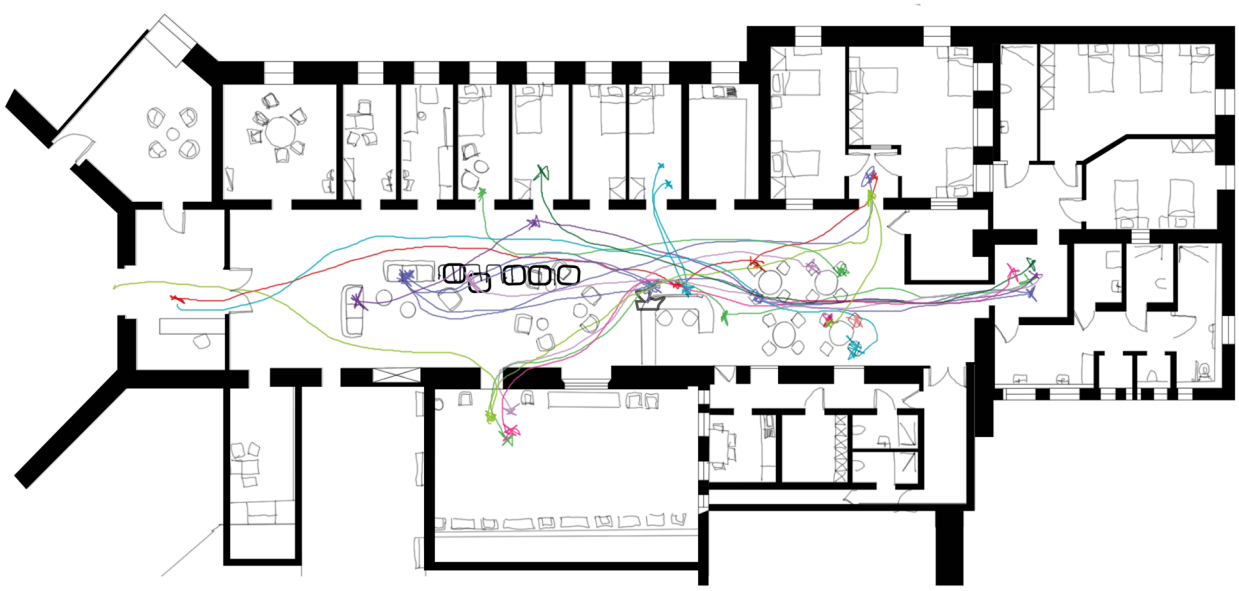


Figure 44
Behavioural Maps of Acute Ward / morning of day 4
(Source: Author)

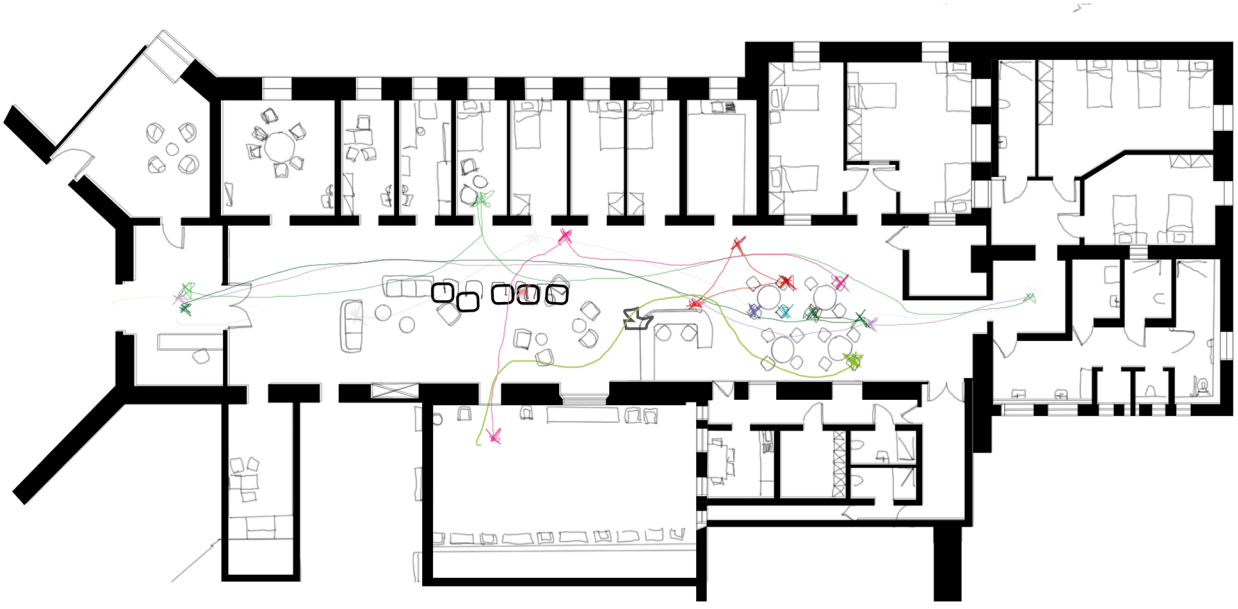
10:30 till 11:30 am

Figure 45
Behavioural Maps of Acute Ward / afternoon of day 4
(Source: Author)

13:30 till 14:30 pm



14:30 till 15:30 pm



using the lounge space more, sitting in dining area, moving back and forth between bedrooms and nurses' station

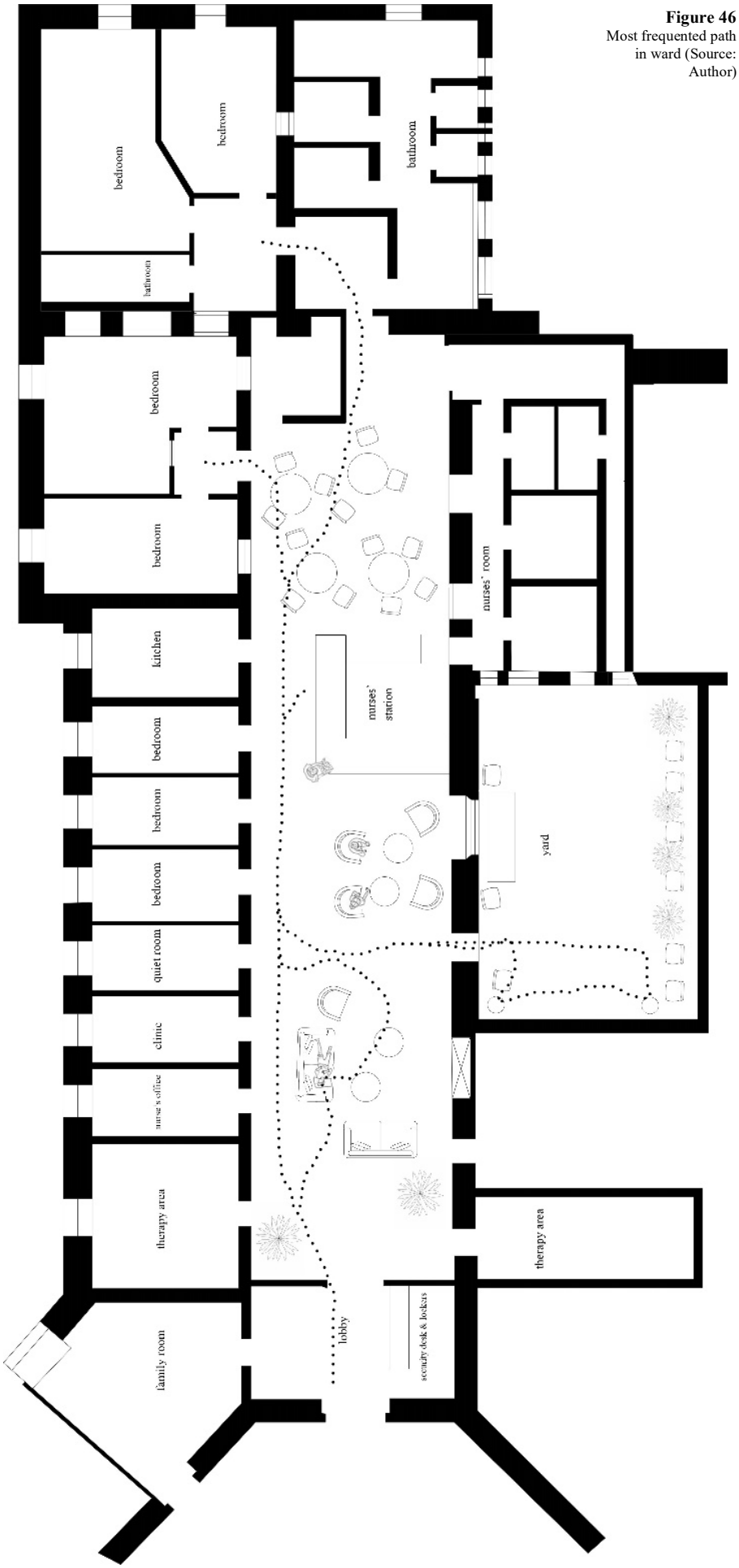


Figure 46
Most frequented path in ward (Source: Author)

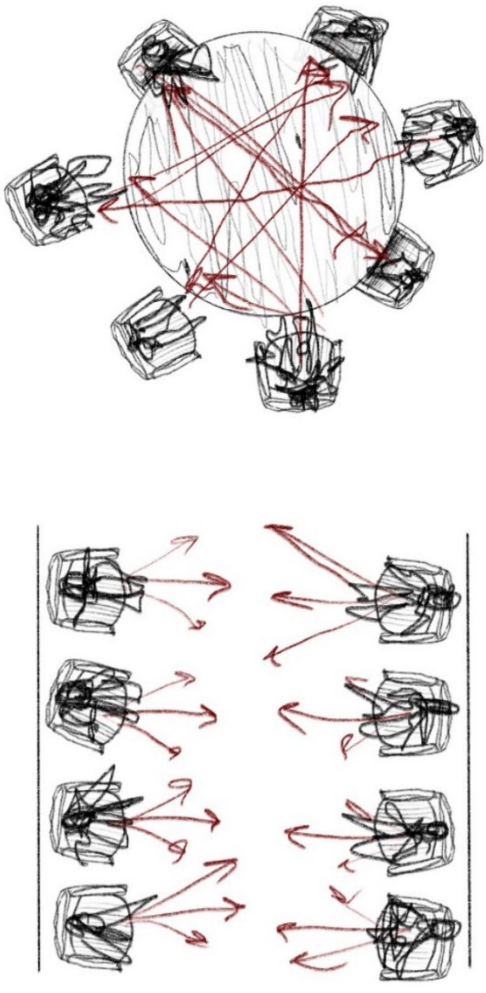
5.4.2 Furniture Configurations

Even though a rectangular layout on its own dictates the flow of movement from one end to another, the furniture found within the research location also had an influence on how the residents navigated the space. It is imperative to also add that the effects that layouts have also depend on the user's perception of said layout.

Osmond describes what are called *sociopetal* and *sociofugal* spaces (figure 47) (Holahan 1971). Sociopetal settings can be described as those which foster social interaction (round tables with chairs, sofas arranged to face each other), while sociofugal spaces hinder social interaction (chairs places side-by-side against a wall) (Holahan, 1971). Sociopetal spaces do not necessarily mean good spaces. The most desirable type of space is that which is flexible and can be easily arranged (Hall, 1969). This flexibility creates a sense of agency, allowing the individual to customise both space and the interactions within space.

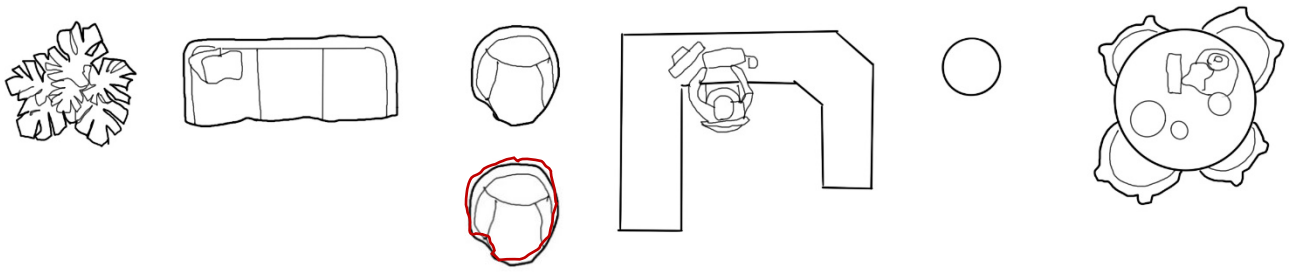
The majority of the furniture (figure 48) inside ward 4 was lightweight and not anchored, allowing for a flexible arrangement of the space. The configuration of the dining area was rarely altered, apart from the instances where certain residents displaced some chairs to sit next to each other on the same table. It was noted that whenever the configuration of the lounge area was changed by the residents, it was done for the purpose of social interaction (sociopetal), such as in the instances of **2**,**4**, and **5** (figure 49). Additionally, in instance **1**, the armchairs were moved for the purpose of

Figure 47
Sociopetal (top) vs. Sociofugal (Bottom) spaces (Source: Author)



making phone calls at the nurses' station. In instance**s** **3** and **6** (figure 49), the lounge area furniture was arranged in a sociofugal arrangement by staff members after cleaning. These instances were recorded on multiple occasions. The residents' reactions were either to arrange the furniture back to accommodate interactions whilst watching TV, or to not change this configuration at all. The latter occurred during times when quieter residents were utilising the dayroom, leading to the use of the furniture irrespective of its position and location. The majority of the reconfiguration was carried out by more active residents who were frequent users of these spaces and so had, in their mind, some sort of authority over *their space*. However, the arrangement of the chairs in the yard was never changed, even though they were arranged in a sociofugal manner, placed in a line against the wall and separated by planters. This suggests that the outdoors was sought after for isolation during smoking sessions, resulting in the chairs being left untouched. On the other hand, the dayroom was a place to socialise, thus being the subject, in multiple instances, of spatial arrangements by the users to satisfy their social needs and control interactions.

Figure 48
Furniture Items Key (Source: Author)



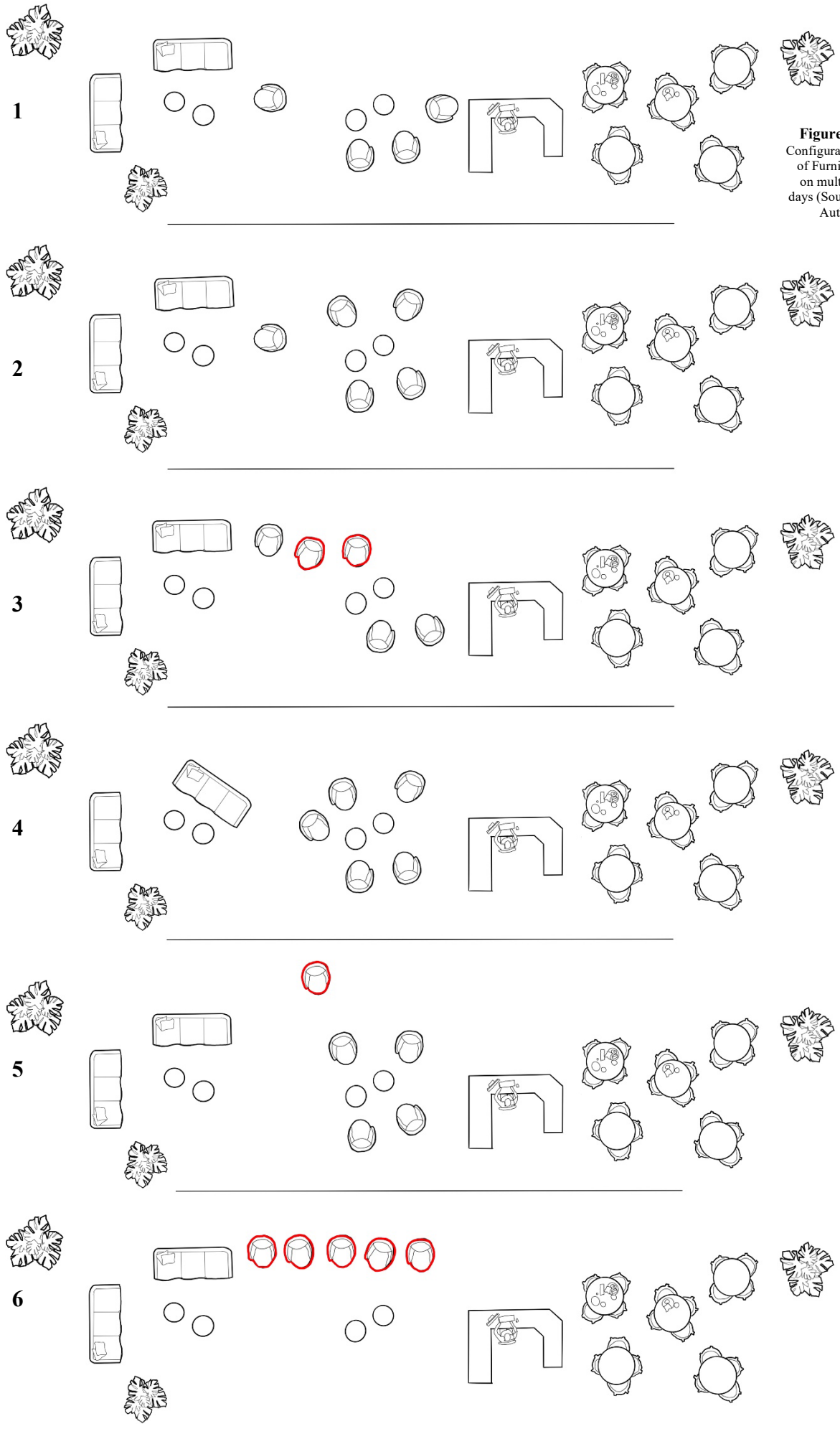


Figure 49
Configuration of Furniture on multiple days (Source: Author)

5.4.3 Use of Space

The elements within the spaces determine what the spaces are used for (figure 50). The lounge area is for lounging and watching TV, the dining area is for eating and chatting, the outdoor area is to smoke, and the bedrooms are for sleeping. Additionally, the corners of the areas became what could only be described as *strategic view points* for newcomers. During their initial time residing in the ward, new residents preferred sitting in corners with their backs to the walls, observing what was happening in their surroundings, possibly attempting to identify any threats and scope out whether their environment was safe.

The daily routine (figure 51) also served as an indirect way to guide, and in some cases, instruct the users on which spaces to use during the day. For instance, after mealtime, the staff would inform the users that they should go to rest until 2:30 pm, while the dayroom was being cleaned. During this time, the residents were all expected to return to their rooms, the chairs in the dayroom were placed on the tables, and the sofas were rearranged for ease of cleaning, rendering the dayroom unusable in the process.

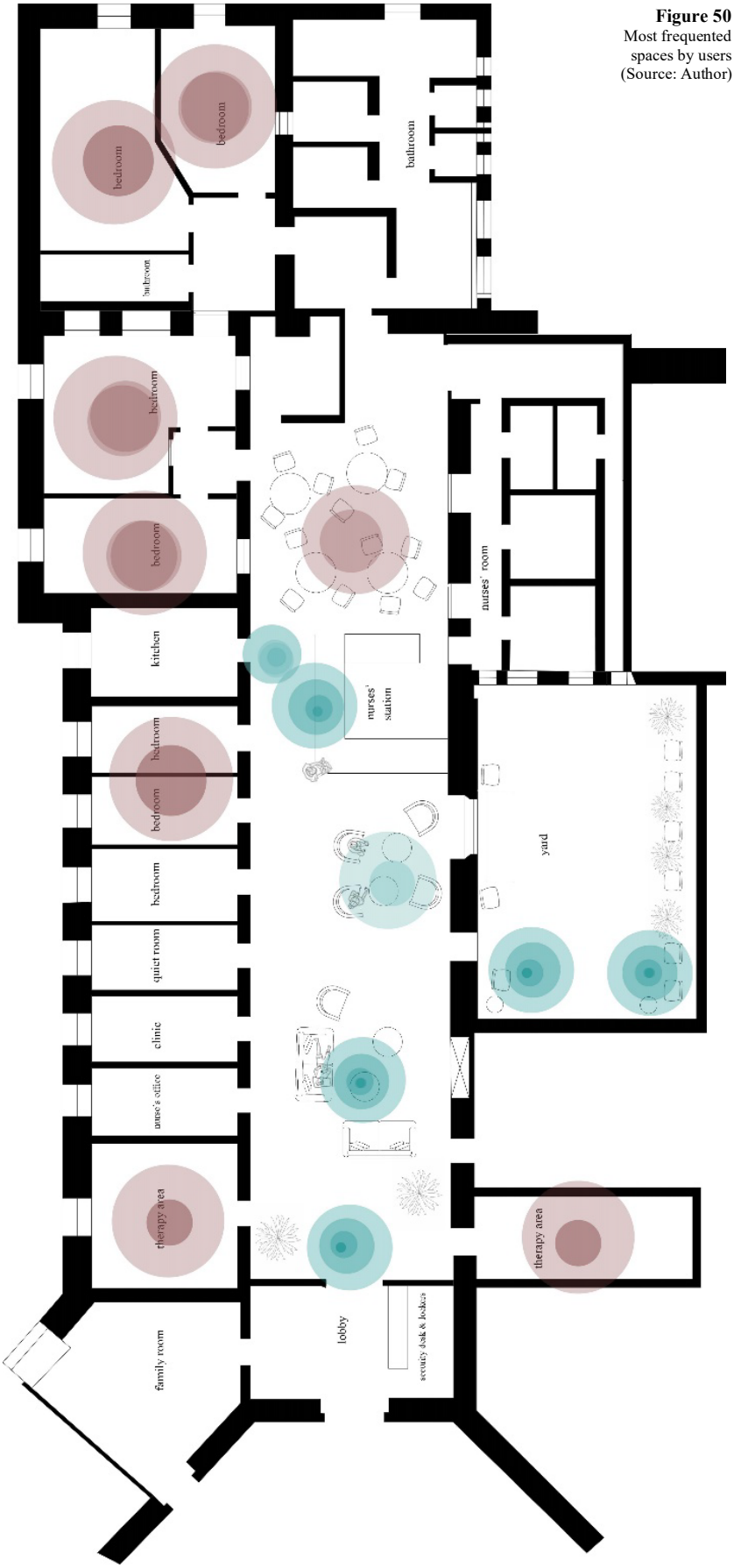
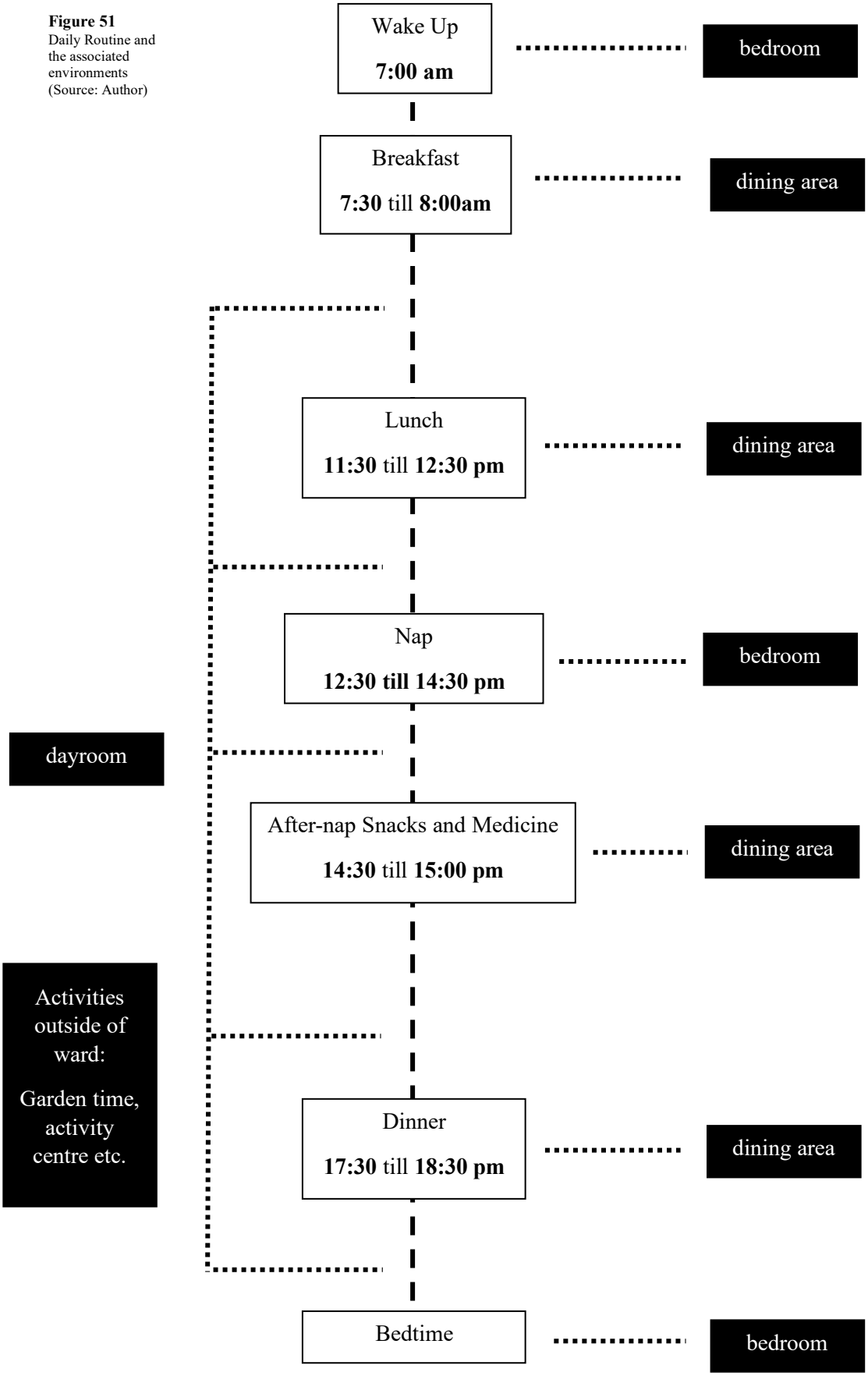


Figure 50
Most frequented spaces by users (Source: Author)

Figure 51
Daily Routine and the associated environments (Source: Author)



Chapter 6

The Analysis

Deciphering the setting's initial implications

This chapter focuses on analysing the results of the fieldwork, analysing the individuals' behaviour and their interactions with the ward's environment

6.1 Analysing Behaviour within the Setting

The ward's culture during the time of observation was dictated by the individuals residing there at the time. As was previously discussed, the interactions between the residents and the environment are a result of the residents' mental state and how they perceive the environment in that situation. To further understand these interactions, the users residing within the ward at the time can be categorised into two groups: the agitated and active; and the quiet and withdrawn (Chrysikou, 2014).

While the architectural checklist indicated a more institutional climate inside the ward, it is imperative to also analyse how the individuals interact with such an environment in order to truly gauge its meaning to the users.

The themes which emerged from the observations will be discussed in the following pages in terms of the three parameters outlined in the methodology section.

6.1.1 Space and Control

Competence

In acute psychiatric wards, two aspects related to control become apparent – certain control within individuals' lives is lost when they become 'patients'; and through this loss, individuals become more dependent on their immediate environment (Müller, 2021).

Such institutional places are often synonymous to closed spaces that prevent individuals from departing the space (Goffman, 1961). Paradoxically, this confinement doesn't always translate into feelings associated with such restrictions for the residents within a psychiatric ward.

For example, some residents found comfort inside the ward, specifically the dayroom, despite being aware that departure from the situation wasn't possible at the time. A certain amount of control was still exhibited, through the decisions taken via objects and use of spaces - which TV programme or movie they wanted to watch, and where they chose to spend their day. Even though some individuals spent their days watching TV, they never complained, nor showed signs of boredom, suggesting

that the residents were actively engaged in the activity itself.

This engagement resulted in the fast adaptation to both the environment and the routine. The use of the lounge area for watching TV instilled within this mundane space a certain sense of *everydayness*. The television set allowed the users to recalibrate their relationship with ordinary life by engaging in conversations about what was being broadcast on TV, discussing likes, interests, and past movie-watching experiences, thus fostering a sense of 'normalcy' (figure 52[17]).

However, not all individuals participated in this daily occurrence, leading them to feel a lack of control within other restrictions of the ward. When the residents had no other commitments, such as therapy sessions, the only other activities that the ward environment afforded were either going outside in the yard to smoke, staying inside the dayroom, or going to their bedrooms or dormitories until called out for mealtimes.

Safety & Security

The outdoor area, or the enclosed yard, comes short of providing an attractive space for the residents to enjoy. Its appeal is mainly due to it being characterised as a smoking area and the isolation and distance it offers from the other users. In fact, non-smokers rarely ever used the outdoor area. Even so, the access to the yard was often limited. On the first day of observations, the yard door remained locked throughout the day, requiring staff to open it for the residents. When this was the case, the residents preferred to ask to go to the gardens found on Mount Carmel Hospital's grounds, instead of asking for the key to the ward yard. The MCH gardens provided a more engaging environment than the walled-off bleak yard within the ward, evident from the number of times the residents chose to visit, remarking that they would like to go for a walk to the gardens.

On some occasions, particularly on the second day of observations (figure 40), the yard door was left ajar. This resulted in the usage of the space to significantly increase, as the residents did not require staff for access. In other words, the residents' use of the outdoor space was

[17]These figures will include descriptions based on real events. The names assigned to the characters in the sketches are fictitious.

minimal since assistance for accessing the space was required.

The main point for asking for assistance was at the nursing station. Golembiewski (2012), explains how individuals with psychiatric disorders have a difficult time comprehending why things are the way they are. By incorporating this central point of information, individuals were able to quickly gather information, and use this point as a landmark for clear wayfinding throughout the ward. This provided an unambiguous setting that was transparent in both the mode of care being carried out and in the decisions being made, proving to be beneficial for the service-users.

Personalisation & Choice

The individuals' perceptions of the dayroom and the yard were translated into the manipulation of objects found within these spaces. For instance, there was no hesitation to move some of the armchairs within the lounge area for better social interactions during a movie. However, the arrangement of the chairs outside remained unchanged and in a row-like manner, intentionally decreasing opportunities for socialising since the space was viewed as a space to 'escape' and be alone.

This need to *escape* also resulted in some individuals spending time in their bedrooms. However, not every user had their personal bedroom - the dormitory-style sleeping arrangements offered little privacy, which is not generally regarded as positive (Tuan, 1972). In ordinary life, the private bedroom is a personal sanctuary, and its absence for certain residents led individuals to seek privacy elsewhere.

The common areas of the modern house intend for the family to gather and form strong bonds; however, these spaces have also been the source for irritation (Tuan, 1972). Similarly, the dayroom itself exhibits no spaces for privacy, except for the personal bedrooms and the *quiet room*, so when the only space for respite is absent, a change in behaviour occurs. Whilst the common spaces afforded spatial autonomy, a refuge to a more intimate, more private space wasn't possible for some.

There were instances where this lack of having a private space led to residents reacting through the *creation of personal spaces*. This establishment of privacy and territoriality is often associated with ''withdrawal behaviour in patients.'' (Groenendijk et. al, 2022, p.9), however, one must also consider that this may be a direct reaction to the quality of the environment available.

One resident, who was assigned to sleep in a dormitory, resorted to claiming a common space as their own. They began moving their personal belongings inside this quiet room (figure 53), ultimately converting this space into their own personal bedroom. This decision was carried out even after the staff informed them that it might be needed at a certain point in time. The risk of having to move everything back to the dormitory was outweighed by the need for their own private space.

Often, in an institutional environment, control during the day in the life of the resident is at stake – where to go, where to sleep, and when to sleep. Even though having too many choices – or control – may be overwhelming for service-users, lack of control produces feelings of helplessness (Seligman, 1975). By introducing the possibility of *small choices* during their temporary stay – for example choosing and personalising their bedroom decorations – positive feelings may be introduced to the experience (Groenendijk et. al, 2022).

Figure 52
What are you watching? (Source: Author)

Anna sat down on the sofa in the lounge area. A movie was playing on the TV. She asked Sarah whether she has ever seen this movie before. They continue discussing throughout the duration of the movie.

Figure 53
I need my own space (Source: Author)

Throughout the day, Alice wanted to be by herself. She asked the nurses whether she can use the quiet room. They gave her permission, as long as the room isn't needed. At first, she went in with just a book and her bag in her hand.

After lunch, when everyone was sent to their bedrooms to rest, Alice decided to pack her things up and take a nap in the quiet room instead. Inside, she put her books next to the bed, her clothes on the bed, and her bag right next to the door. This became her space for the next few days.

6.1.2 Routine and Temporary-ness

Everyday life is experienced through activities that are synonymous with the mundane; usual habits; and routine. These routines are associated with feelings of both comfort and boredom (Molin et. al, 2017). Life inside a psychiatric ward represents an unfamiliar environment that has a set routine which ensures safety and a sense of *predictability* within the environment, reproducing the sense of comfort associated with a structured day. However, whereas daily life can include activities which strive away from routine, and which are associated with the freedom of simply *living*, the life inside a psychiatric ward is somewhat limited in that aspect.

Additionally, everyday life inside this environment can also be characterised by *waiting*, by both the individual and the collective – waiting for mealtimes, to have visitors, to go to therapy, for a doctor's appointment, and to go to sleep – a feeling which is especially heightened when the environment isn't engaging enough for the individual to be distracted throughout the day. After all, the notion of the setting itself represents a temporary state of residency, resulting in most individuals never truly settling in.

Competence

There were multiple instances when the individuals exhibited this sense of waiting through their behaviour. Apart from the frequent pacing observed, the use of certain personal objects emphasised the ward's similarity to a waiting room and a liminal space[18]. For instance, one service-user carried a clock with them throughout the days, glancing at it frequently. This resident spent most of their time staring blankly into space and checking the clock (figure 55). The individuals thus became dependent on the routine for engagement, akin to constantly anticipating something to happen (Reavey et. al, 2019). In one instance, the first time a resident used the lounge area during their stay was to wait for a barber to cut their hair (figure 56), a monthly occurrence within the ward. The lounge area ultimately became a waiting area, and was only used as such by this resident. This suggests that the environment is being viewed by the residents as a *transition space* (Papoulias, 2014) (figure 54), a common occurrence within such medical environments. The role of a 'patient' within a ward is synonymous with being in a ''liminal phase and place with a

[18] Liminality can be termed as being an in-between space, where the individual is neither here nor there, exist in positions that are set by law, custom or convention, and where he or she exhibits a loss of identity (Piazza, 2019).

weakened sense of personhood.'' (Hagen et. al, 2020, p.4). The ward environment thus loses its potential as a meaningful environment and is perceived as merely a waiting room (Hagen et. al, 2020).

This aspect of liminality within the ward can heighten the sense of dissociation within individuals. Additionally, a lack of stimulating activities and spaces may further enhance this, whereas their inclusion may allow the individual to focus on the activity and reinstate their identity through positive stimulation, thereby transforming the space from solely a structure of confinement and waiting, to a meaningful place which allows for a *healing transformation*.

Personalisation & Choice

The concept of retaining personhood was also evident in the practice of 'hoarding' plastic shopping bags as well as carrying personal handbags inside the ward. Two residents would always carry bags with them, frequently reaching in to grab personal belongings such as makeup and scrap paper for note-taking. Stein (1993), after carrying out observations within a psychiatric ward, noticed this same occurrence in the service-users, highlighting that this may have been a result of the users' needs to retain the self, personal autonomy, and a certain tie with the outside world. Additionally, Stein (1993) also highlights how the institutional cues within the ward may be the cause of the creation of ''*bag people*'' (Stein, 1993, p.1047). Goffman (1961) also discusses how the structure of the ward culture, with all its rules and regulations, may also lead to users carrying a compilation of items that somewhat resembles a *survival pack*, evoking comfort, familiarity (Buse et. al, 2014) and a way to informally adjust what they cannot achieve within a strict environment (Goffman, 1961).

On the other hand, the routine and structure embedded in the ward's culture could be observed as having a calming and reassuring effect on certain users, who engaged with the spaces inside the ward and treated them as their own personal space. However, the lack of activities (other than watching TV) to punctuate the day resulted in the residents moving around the dayroom with no apparent purpose. The user was thus confronted with an ambiguous, undefined situation, which can be harmful for people with schizophrenia (Osmond, 1957).

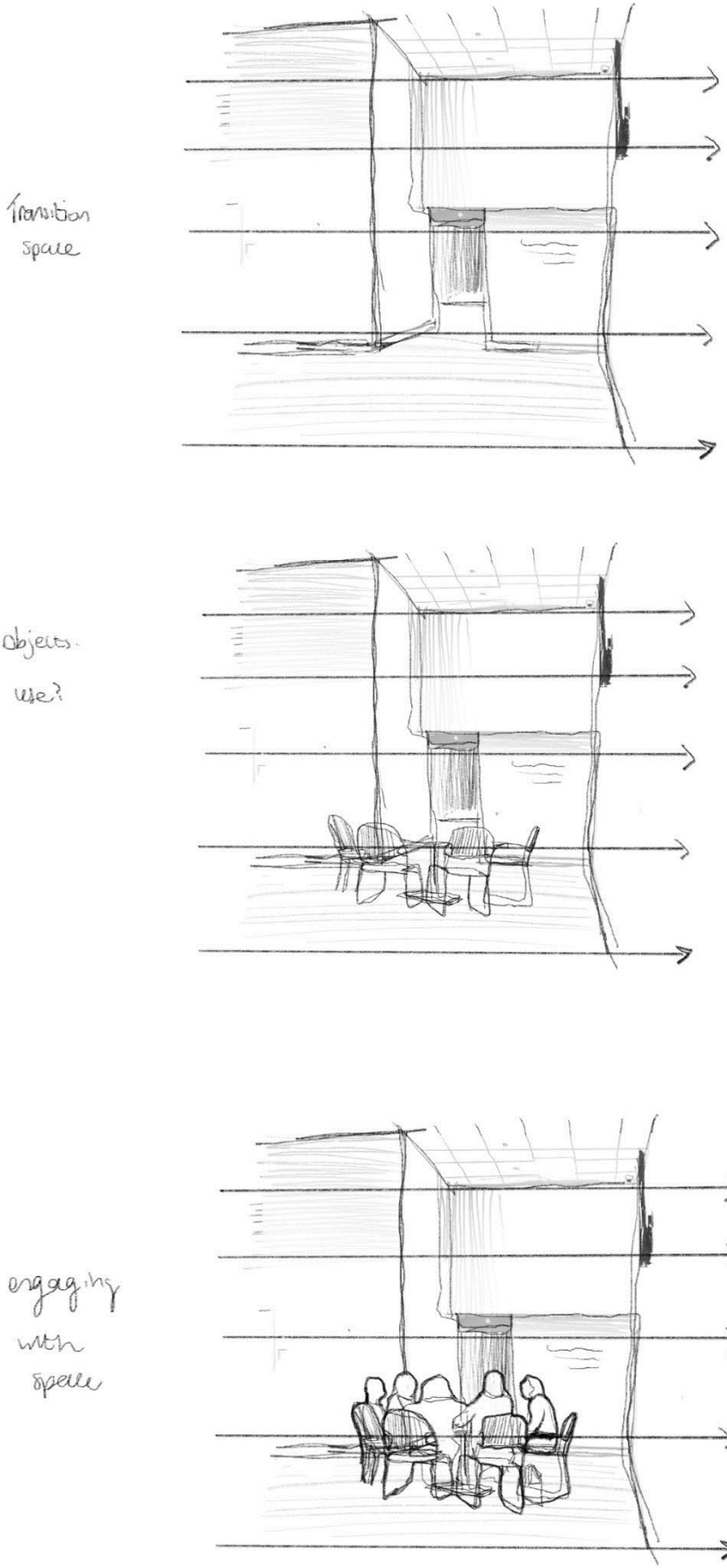


Figure 54
Perception of space in the transition stage vs when the individual starts to engage with space (Source: Author)

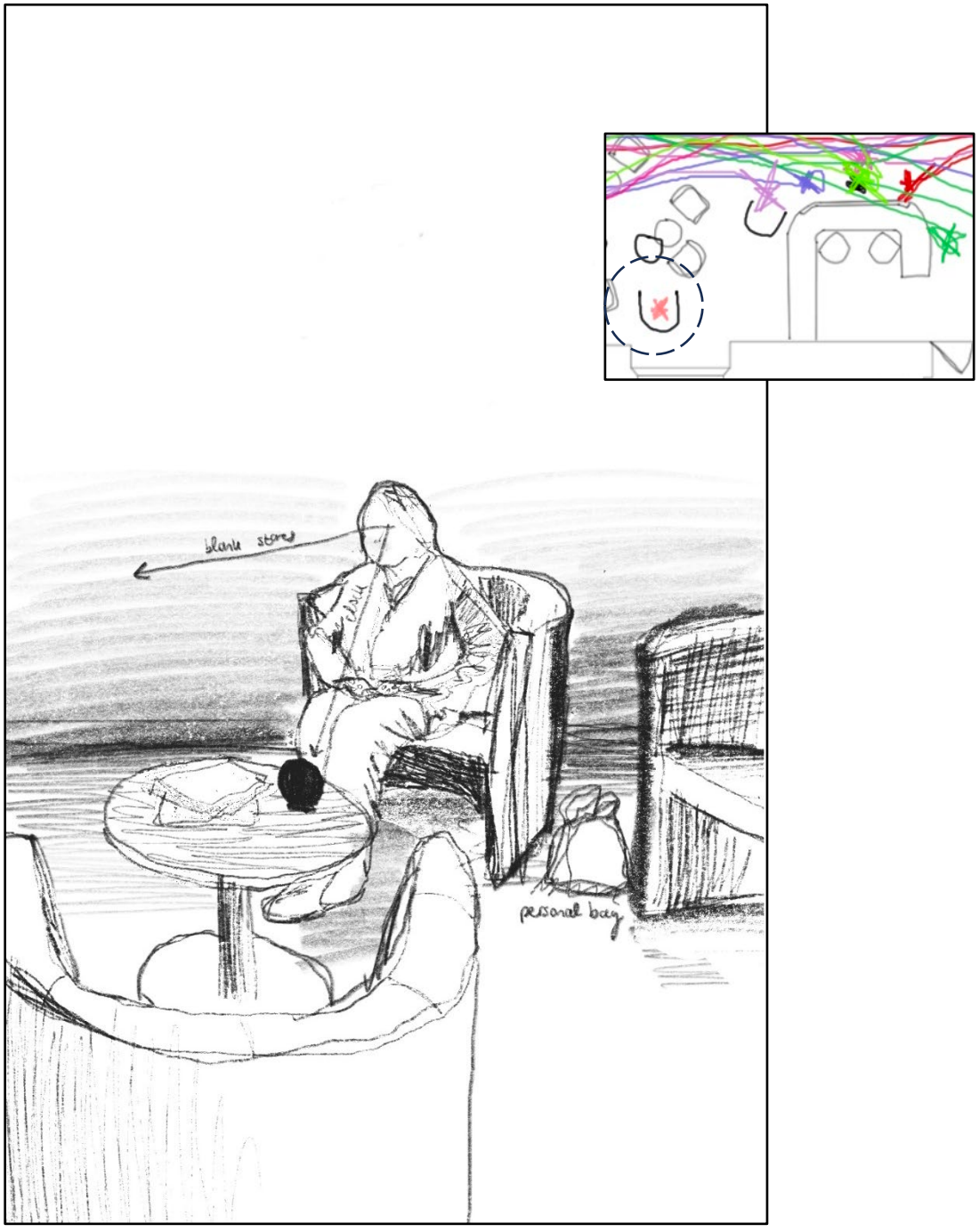


Figure 55
what time is it?
(Source: Author)

Lewis sits down on the armchair, places his clock on the table and his bag on the floor next to him. From time to time, he glances at the clock, then back at the walls of the ward. Unsure of what to do, he waits for half past eleven - lunch time.

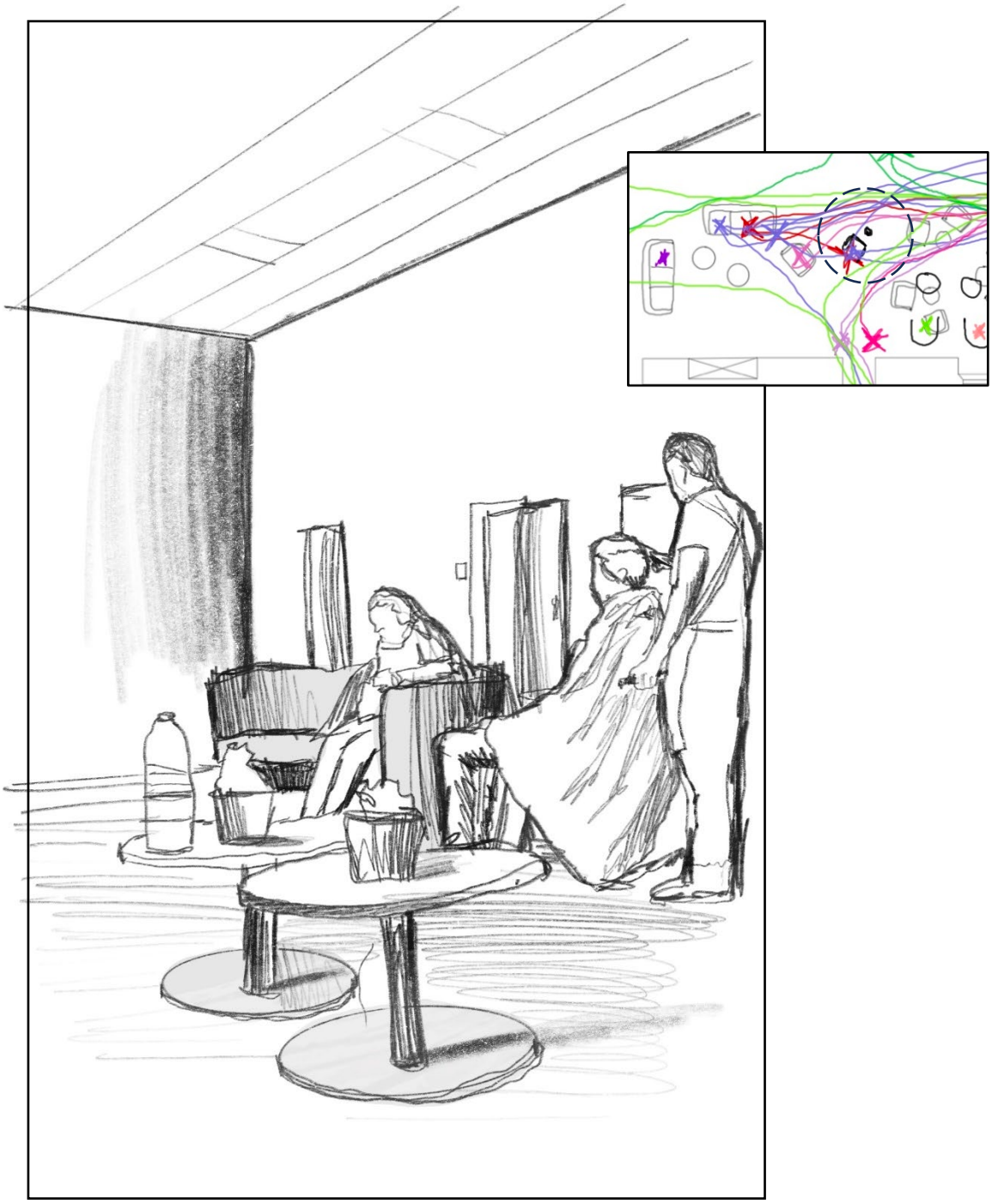


Figure 56
when's my next appointment? (Source: Author)

John was informed that a barber will be coming in to cut the residents' hair. Waiting for his turn, he sat down in the lounge area until he was called to the chair.

6.1.3 Domestic vs Institutional

Even though acute psychiatric settings cannot, in terms of domesticity, resemble the so-called 'normal' home, normalisation includes within it notions of the domestic (Groenendijk et. al, 2022). The implementation of domestic elements within a psychiatric environment supports destigmatisation as well as the overall therapeutic potential of the space (Groenendijk et. al, 2022).

There were a few instances when some residents showed behavioural tendencies which would be exhibited in a domestic setting. On the other hand, others exhibited a lack of attachment to the place through their reactions towards institutional cues.

Signs of domesticity

Personalisation & Choice

Chrysikou (2014) highlights that the most obvious way one might feel 'at home' is through the personalisation of a domestic space. These changes to the environment may not come easily in an institutional setting, however, appropriating space through other means is possible. Through space appropriation, an initially unknown environment is 'claimed' as a temporary habitat for the user (Steg et al., 2012, as cited in Groenendijk et. al, 2022). The activity of 'decorating' a space was limited inside the ward, leading individuals to find other means (via objects) to appropriate the spaces they occupied.

For instance, there were multiple occurrences when individuals would claim their space in the lounge area by placing their personal pillows and blankets on the sofa (figure 57). Objects thus became ''*ownership markers*'' (Groenendijk et. al, 2022), used to foster a sense of place attachment. Additionally, these same residents would take their shoes off, place them near the yard door, move chairs around, and move around in their socks. This indicates that the individuals started to form an attachment to the space by mimicking behaviour that is generally associated with their private homes.

The dining area acted as a natural focal point for socialisation before, after and during mealtimes (figure 58). Residents, via a centripetal arrangement, were encouraged to converse, thereby establishing new relationships, and growing accustomed to the environment. The universal purpose of eating allowed newcomers to harbour a sense of community and thus provided the users with a stable environment in that point in

time. In many instances, newcomers would engage for the first time with others on the dining table, further emphasising its importance and notion inside the ward culture.

As was in this case, by clustering activities and closely positioning the furniture within the ward, spatial closeness was encouraged. This allowed for the spaces to closely resemble domestic spaces. The lounge area thus became the living room, and the eating area - the dining room. Users felt comfortable in the more domestic spaces, exhibiting also spurs of activity throughout the day such as dancing and singing, sometimes having other people join along.

Safety & Security

The nursing station, although institutional in nature, resulted in a family-like structure within the ward. Due to its central location, staff would actively engage with the residents throughout the day, dissolving the barrier between nurse and service-user, and enter the service-users' social sphere. Additionally, particularly for the men, it served as an almost bar-like setting, evident in their posture when resting their elbows on the high desk surface and engage in *people watching*. This was further emphasised through verbal cues such as: ''ser iġġibli birra jew?'' (a service-user jokingly asking a nurse to bring him a beer) (figure 59).

The use of the nurse station as an information desk by the users somewhat concealed its true institutional nature. It was viewed as a place to seek help, rather than as a surveillance post.

Competence

This family-like structure also existed between the residents, particularly between two individuals who spent every day together, forming a grandparent-grandson/daughter bond. There were many instances when valorisation was communicated - offering personal food items; and offering money for another resident to be able to buy from MCH's canteen. Through asking, and having the ability to accomplish a good deed, individuals practised a sense of self-agency. However, this may also mean that the users weren't presented with the opportunity to practise self-agency through other means, and hence resorted to helping others – opening doors for staff and carrying other people's heavy bags for them.

A sense of agency was also achieved by taking care of the plants found throughout the ward (figure 60). Although limited in number, the residents frequently

cared for the plants by watering them, and offering tips to the staff on how to maintain them. The residents also had the choice to partake in activities outside the ward area – they could participate in garden time and attend the activity centre, amongst others. The users' internal locus of control could be strengthened through these simple activities, and would have been strengthened further if other objects were introduced to promote agency and choice within the ward itself as their main place of residency.

Domesticity was also present in the replication of the context of community life through the mixed-sex scheme of the ward (Jovanovic et. al, 2020). This allowed users to participate in casual interactions and encounters which occur in daily life. Additionally, by allowing users to practise self-care through participating in activities such as hair appointments, the users could be seen to exhibit a happier attitude. Some users, perhaps as an attempt to reinstate the self, would, in many instances focus on their appearance through the application of makeup, sometimes even in the dayroom. In another instance, a resident asked the staff whether they had acne cream since a blemish popped up. After the staff informed them that they didn't have any, the resident went about their day covering their face with their hand. This behaviour highlights the importance of physical appearance in maintaining a certain individuality, especially in an environment created for mass living.

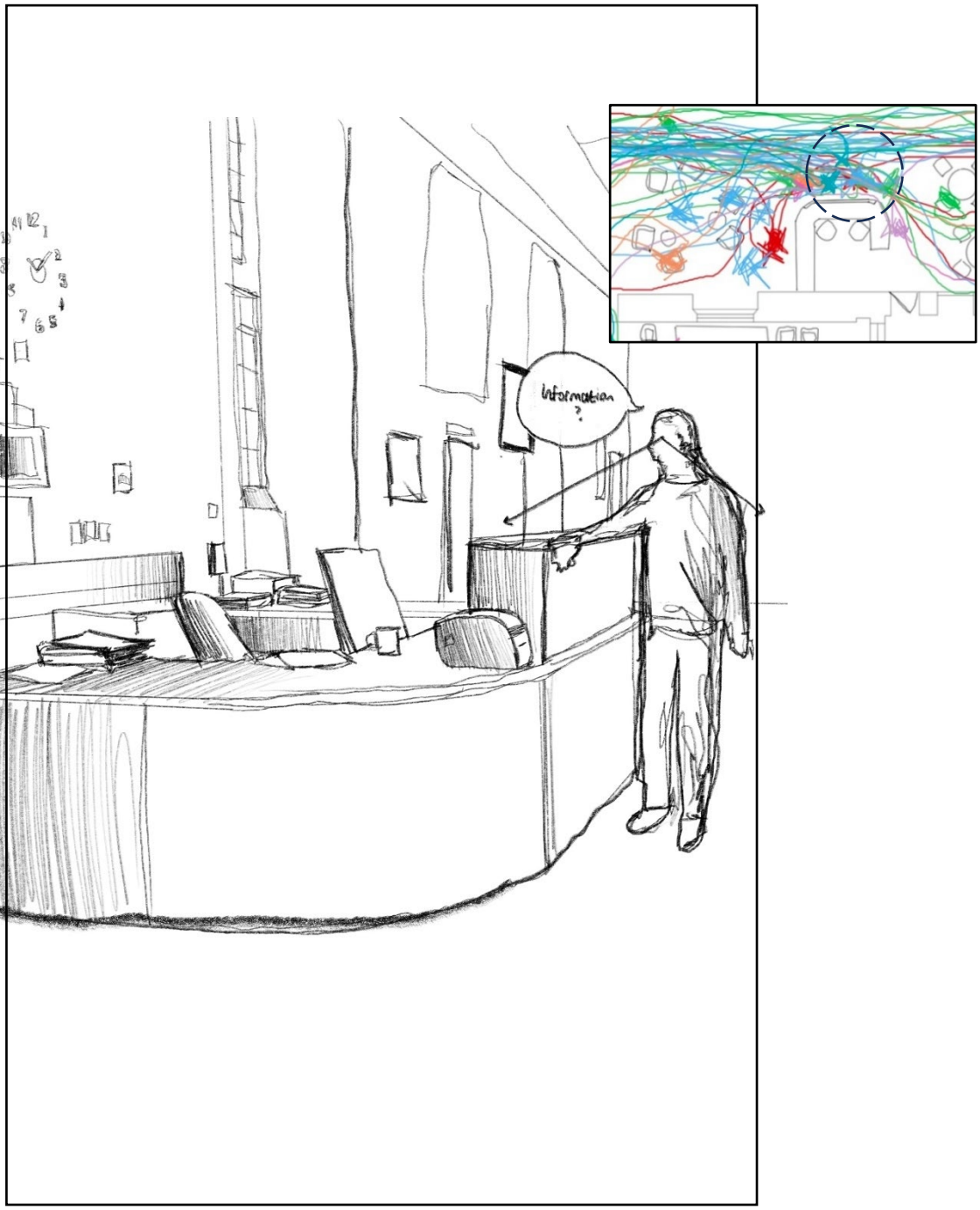
It could be observed that in some instances, the tendency to domesticate a living space overrode the institutional nature of the ward. Additionally, the social opportunities present within the ward fostered a sense of community between some users, which allowed for the experience to be a meaningful one.

Figure 57
appropriating space
(Source: Author)

Martha removed her shoes, as she always did when she entered the lounge area, and put them near the yard door for her to use when she goes out. James went to get his pillow from his room to set on his place on the sofa in the lounge area. They both started watching a movie, putting their feet up on the sofa.

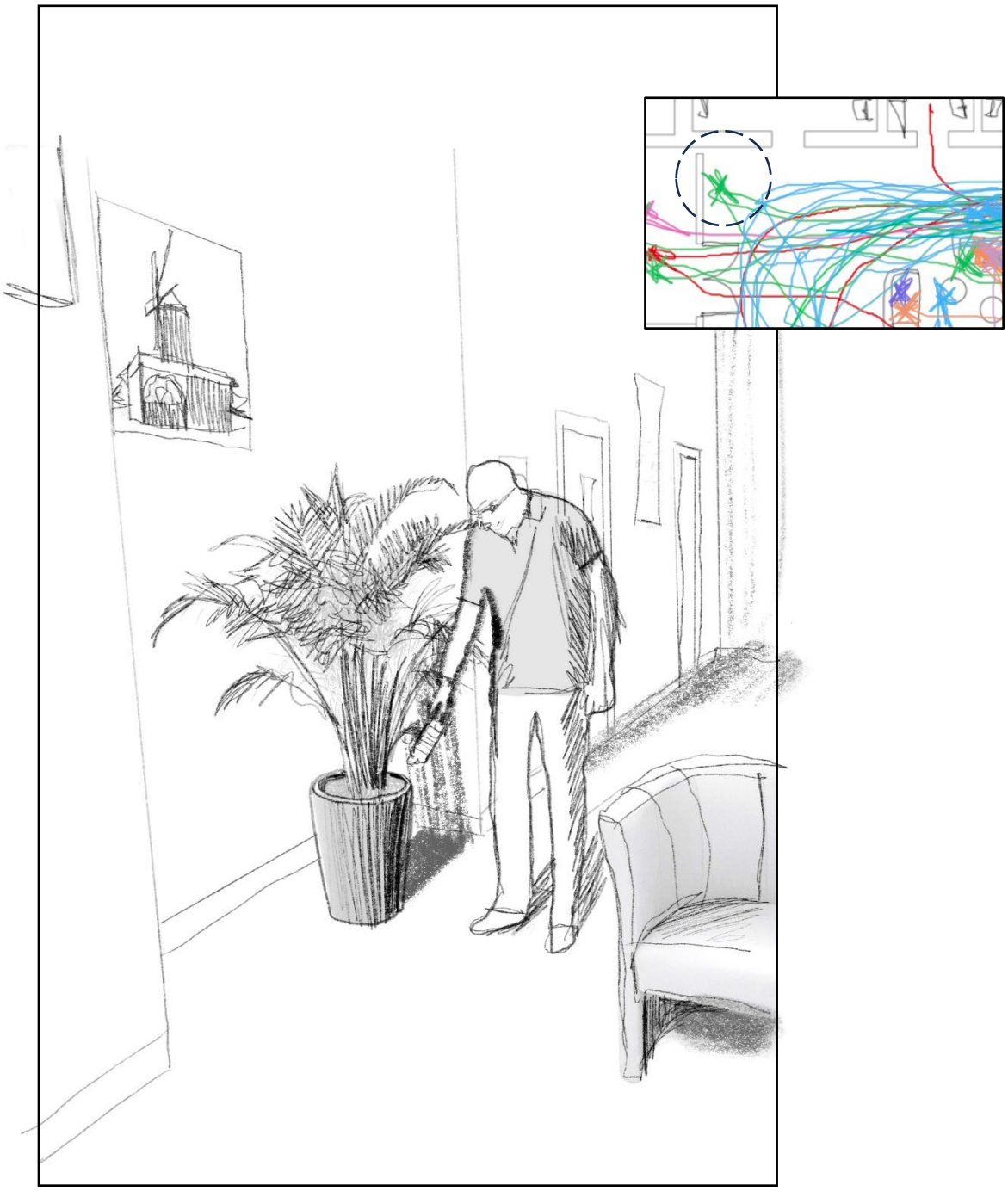
Sam was new. He sat down on one of the tables before snack time. After a while, he started conversing with the other residents at the table.

Figure 58
dining as a social opportunity
(Source: Author)



Luca went to ask for his locker key at the nurses' station. He then stood there, chatting with the nurses and watching the other residents use the ward's dayroom.

Figure 59
central nursing station (Source: Author)



Martin was carrying around his water bottle. He caught a glimpse of the dayroom's plants, and went to water them with his drinking water.

Figure 60
practicing agency (Source: Author)

Institutional cues

Safety & Security

The initial experience of the ward is a highly institutional one, setting the tone for the rest of the spaces found within. Upon entering, the double height walls and false ceiling fitted with large commercial ceiling lights and CCTV cameras presents an almost intimidating atmosphere. The lounge area, fitted with water-resistant blue upholstery, is centred around a TV that is far too high for normal viewing. The linoleum flooring throughout the ward radiates the scent of cleaning products, and the predominant sounds are those of the telephone ringing at the nursing station and the 2 TVs playing, found in the lounge area and the dining area. The environment speaks highly of a non-individualised one, void of everyday objects which echo personalisation and choice.

Competence

The individual bedrooms are numbered via signs placed next to the doors which also have observation windows. The kitchen is located at the far end of this wall, having a sign taped to the wall: ‘‘*No Patients allowed in the pantry*’’. A food menu is taped below, listing the food items which are served during mealtimes. Outside in the yard, the chairs, separated by planters, are placed with their backs against the high white walls. The concrete floor is littered with cigarette butts, even though there are two ash tray bins in the yard. There are no environmental cues that signal the concept that the individual is being welcomed and cared for.

In some instances, the security and safety pretext within the ward reduced the individual’s sense of control, regarding them solely as patients and diminishing their individuality. On multiple occasions, residents wanted to place food items in the fridge inside the pantry, but were stopped before they could enter (figure 61). Feeling frustrated, they handed the items to the staff and went back to their spot in the lounge area. The user’s independence and sense of self were constantly being threatened in accomplishing the simplest of tasks through the limited access to certain spaces – having to ask staff to get a cup of tea, to store food, and to go outside.

During mealtimes, a trolley with heated food, supposedly prepared in the main kitchen at MCH, was brought inside the ward. The residents, after claiming their space on one of the tables, would line up in front of the trolley for the staff to serve

them their meal. Unlike a domestic kitchen, the kitchen in this context has been stripped of its potential in fostering relationships and a sense of agency. After mealtime, the residents were sent to their rooms, the ceiling lights were switched off, and the staff commenced cleaning the dayroom, thereby indirectly communicating that the space can no longer be used. The ward's routine was being communicated through the manipulation of objects – putting chairs on the tables and switching off the ceiling lights. Through exerting control and limitation in the environment regarding regular occurrences that are controlled by the individual in everyday life outside of MCH, the user loses touch with *normality* and assigns an institutional nature to the space.

The central nursing station resulted in all the spaces within the dayroom to lie within the surveillance radar of the staff. The area in front of the nurse station was the point of highest interactions, lying directly in the field of vision of the nurses. Chrysikou (2021), in a study of a similar nature, highlights how ''It remains uncertain whether that [gathering in front of the nurse station] was a demonstration of an institutional behaviour or a human need of meeting people at the point that spatially provided the highest chance of social encounters.'' (Chrysikou, 2021, p.284). In the context of ward 4, the results indicated both reasons. It was observed that this point was indeed the spot of highest chance encounters, given that it was in the main path of movement within the ward. Additionally, being the main point for gathering information, being administered medication, and asking permission to make phone calls at the desk itself (figure 62), the area lent itself to being the spot where every user *had to*, at some point during the day, visit.

Personalisation & Choice

In the instance of bedroom maintenance, while it is viewed as a luxury to have staff make your *hotel* bed, inside the ward, the residents residing in the individual bedrooms exhibited a certain discomfort when staff would make their bed, as they invaded their only private space within the ward. In one instance, the resident supervised one of the staff members as he was making their bed.

The decision and preference to retreat to the MCH gardens instead of the ward's yard confirms its institutional nature. Additionally, visitors weren't allowed to use the ward's outdoor area, evident from the instance when a service-user's request for their sibling to come smoke with them was rejected. Even though

the yard lacked the attributes needed to make it an attractive outdoor space, the apertures served to bring in an element of natural light inside the ward, as well as producing a sense of orientation for the residents and a certain link to the external world. This was especially evident on multiple occasions, when service-users would gather in front of the yard door to check on the weather.

Instances of frustration were correlated with a lack of social interactions when service-users were discharged, as well as when requests were ignored. These instances were followed up by a frustration towards the environment, via fast pacing and abruptly leaving the ward, as well as verbal cues such as: ‘‘ser ittini rasi hawn ġew!’’ (I am going to lose my mind here); ‘‘qisni ħabs’’ (it’s like I’m in prison) and ‘‘noħrog minn hawn irrid’’ (All I want is to get out of here).

It can be concluded that without an appropriate amount of engagement and stimulation (whether it’s conversation or participating in an activity), there were many instances when the environment on its own was not sufficient enough to produce a therapeutic effect, or to satisfy the needs of the individual relating to the parameters of competence and personalisation and choice. The majority of the residents spent most of their time watching TV while the other users who weren’t occupied, resorted to pacing or lashing out, reflecting the lack of an adequate level of stimulation within the ward. In fact, the only instances when the users explored and engaged with the environmental cues within the ward (photos hanging on the walls, quotes, colour of walls, etc.) was when they were at the stage of being discharged from MCH.

Figure 61
''patients not allowed''
(Source: Author)

Mary wanted to put a chocolate in the fridge. She was stopped in her steps, as she isn't allowed in the pantry.

Figure 62
''Can I make a phone call?'' (Source: Author)

Ben wanted to make a phone call, so he went up to the nurses' station and asked. No one heard him, so he abruptly stood up and walked away.

6.2 Balancing Safety & Security, Competence, and Personalisation & Choice

The narratives outlined in this chapter offered an understanding of how the space and programme inside ward 4 balanced the three parameters outlined above.

Safety and Security

The ward culture could be observed to favour safety and security over competence, personalisation, and choice. While an effort was made in the redesign of the new ward to include familiar *domestically configured* spaces such as a living space and a dining space, the experience of certain users was lacking feelings related to domesticity. The environment was observed to constitute a trigger during vulnerable times, especially with regards to personalisation and choice. These instances were primarily observed when residents sought private spaces within the ward. On the other hand, with regards to personalisation and choice, the possibility for the ward to be 'reconfigured' to suit the users' needs to some extent, such as changing the furniture layouts in the lounge area, was observed to satisfy the spatial requirements at that time and allow the residents to engage in; and personalise their social interactions.

Competence

Although safety and security are a requirement in this stage of the individual's life, certain features that are related to this parameter somewhat overwhelmed the ward environment, which posed a threat to the independence and individuality of the user. A lack of opportunities to practice agency were observed, leading the user to depend on staff for simple tasks and to access certain spaces within the ward. Additionally, in ensuring the safety of the users in their sleeping quarters, the furniture and layout of the bedroom are void of any chances to personalise or to make use of the space in privacy. In certain cases, this caused the individual to appropriate spaces for privacy means.

Personalisation & Choice

Personal belongings such as the users' phones were kept in a locker outside the ward behind a security desk. Each resident was assigned a number corresponding to a key that opened their respective locker. This further dehumanised the experience of being a resident inside the ward, and increased the dependency on staff members. However, having their own personal locker translated into an element

of privacy when it comes to their personal items.

It should also be noted that the balancing of these parameters depends on the mental state of the individual. More lethargic individuals will not personalise a space at first, and are dependent on others during the initial stages. A shift in importance must hence occur between the three parameters. This does not mean that a space should be void of opportunities for personalisation, rather they should already be present at different levels of competence, to support the individual as they progress across different mental states.

When independent individuals had to depend on others to accomplish simple tasks, they resorted to social means to feel accomplished. Having said this, socialisation opportunities were abundant throughout the ward, with the main space for social interactions being the dining area - its use was however limited at times (figure 63) – and the nurse station.

To conclude, in an ideal scenario, acute psychiatric wards would host a group of individuals experiencing a similar mental state. This would allow for the ward design to cater towards the individuals residing there. The previous findings have shown that the ward's balance of the three parameters have a direct effect on the behaviour of its users. ''There is a fine line between a therapeutic space and a homelike space.'' (Chrysikou, 2014, p.182).

Within the ward environment, service-users should be made aware that their admission is merely a checkpoint within their healing journey, thereby acknowledging that the temporary-ness of a ward might be a positive aspect, as it reminds the user that the situation is only temporary. Home represents the final checkpoint in their healing journey, so an environment which is too 'homelike' might instil confusion in those experiencing it (Chrysikou, 2014).

A Catalogue of observed behaviours with respect to the three parameters can be viewed in table 3. Additionally, a compilation of the experiences observed can be viewed in figure 64.

Figure 63
limited use
(Source:
Author)

Kim went to sit down in the lounge area after eating. However, after some time, the lights were turned off and the staff sent her to her room as they needed to clean the dayroom.

Plus sign: element is significant for parameter Minus sign: adverse impact from element Zero sign: no impact on parameter

	Design Elements	Safety & Security	Competence	Personalisation & Choice	Reaction	Episodes
Safety & Security Oriented Design	Anti-ligature elements	+	0	-	Engagement	Making furniture more comfortable with personal blankets and pillows
	Locked Areas	+	-	0	Communication	Asking Staff to open door for them
					Frustration	Abruptly walking away when door is found locked
	Central Nurse Station	+	0	-	Communication	Chatting with nurses; Gathering in front of the desk
					Response to Element	Regarding it as an information desk
Competence Oriented Design	Choice of Activities	0	+	+	Engagement	Engagement in Activities such as watching TV
					Communication	Chatting with others whilst participating in activity
					Frustration	Wanting to go to the yard to smoke but can't given that the door is locked
	Variety of Activities	0	+	+	Engagement	Residents sometimes signed up for the activities taking place on MCH grounds
					Frustration	Frustration due to lack of anything to do when friends were discharged
	Use of Space	+	+	+	Spontaneity	Spontaneous dancing and singing in spaces
					Engagement	Residents engaged in activities in different spaces
					Response to Element	Lounge area was considered as a living room; residents felt very comfortable there
	Routine	+	0	-	Engagement	All residents took part in routine activities
	Performing Daily Tasks	-	+	+	Frustration	Lack of Autonomy; Instances where residents weren't allowed to perform daily tasks themselves
					Communication	Residents chatted during routine tasks
					Engagement	Residents helped around such as holding doors open for people
	Social Opportunities	0	+	+	Communication	Residents frequently chatted with each other
					Frustration	Lack of social opportunities when friends were discharged (they became friends during their stay)
	Mixed-Sex Scheme	0	+	+	Communication	No hesitation to chat with opposite sex; recreation of daily life encounters
Personalisation & Choice Oriented Design	Flexible Furniture Arrangement	-	+	+	Response to Element	Residents moved lounge furniture around
					Communication	By rearranging the layout, better communication was achieved
	Dormitory-Style Bedroom	0	-	-	Frustration	Some residents were frustrated due to the lack of privacy
	Centripetal Arrangements	0	+	+	Communication	This arrangement facilitated communication
					Response to Element	When layout was in a centrifugal manner, residents changed it to a centripetal arrangement
	Clustering of Activities	+	+	+	Engagement	A better sense of everydayness was achieved
					Communication	Residents had more opportunities for communication
	Territoriality	+	+	+	Engagement	Residents appropriated spaces through the use of personal items
					Response to Element	Some residents decided to claim certain rooms as their own, given their lack of private space
	Nature	0	0	+	Response to Element	Residents took little notice of the plants since they were sparse; nature was also lacking outdoors
					Engagement	Some residents engaged with the plants found in the dayroom by watering them
					Communication	Some residents shared tips and tricks with the staff on how to care for the plants

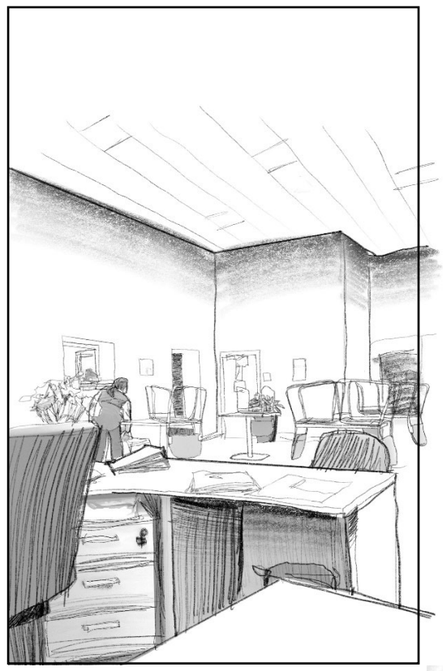
Table 3 Evaluation of Design Elements based on the three SCP model parameters and observed behaviours. (Source: Author, adapted from Chrysikou, 2013)

negative experiences

Lack of accessibility

asking to make phone calls

lack of stimulating activities



lack of use of space

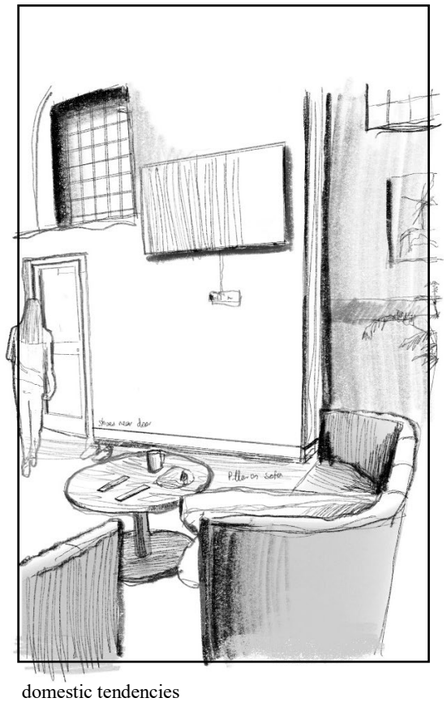
territorialisation

positive experiences

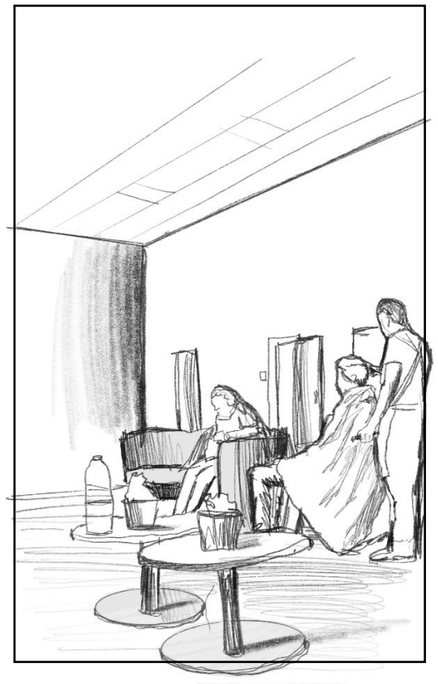
a somewhat domestic character

social opportunities

sense of agency via objects



domestic tendencies



sense of self

Figure 64
compilation of experiences (Source: Author)

6.3 Way Forward in Ward Design

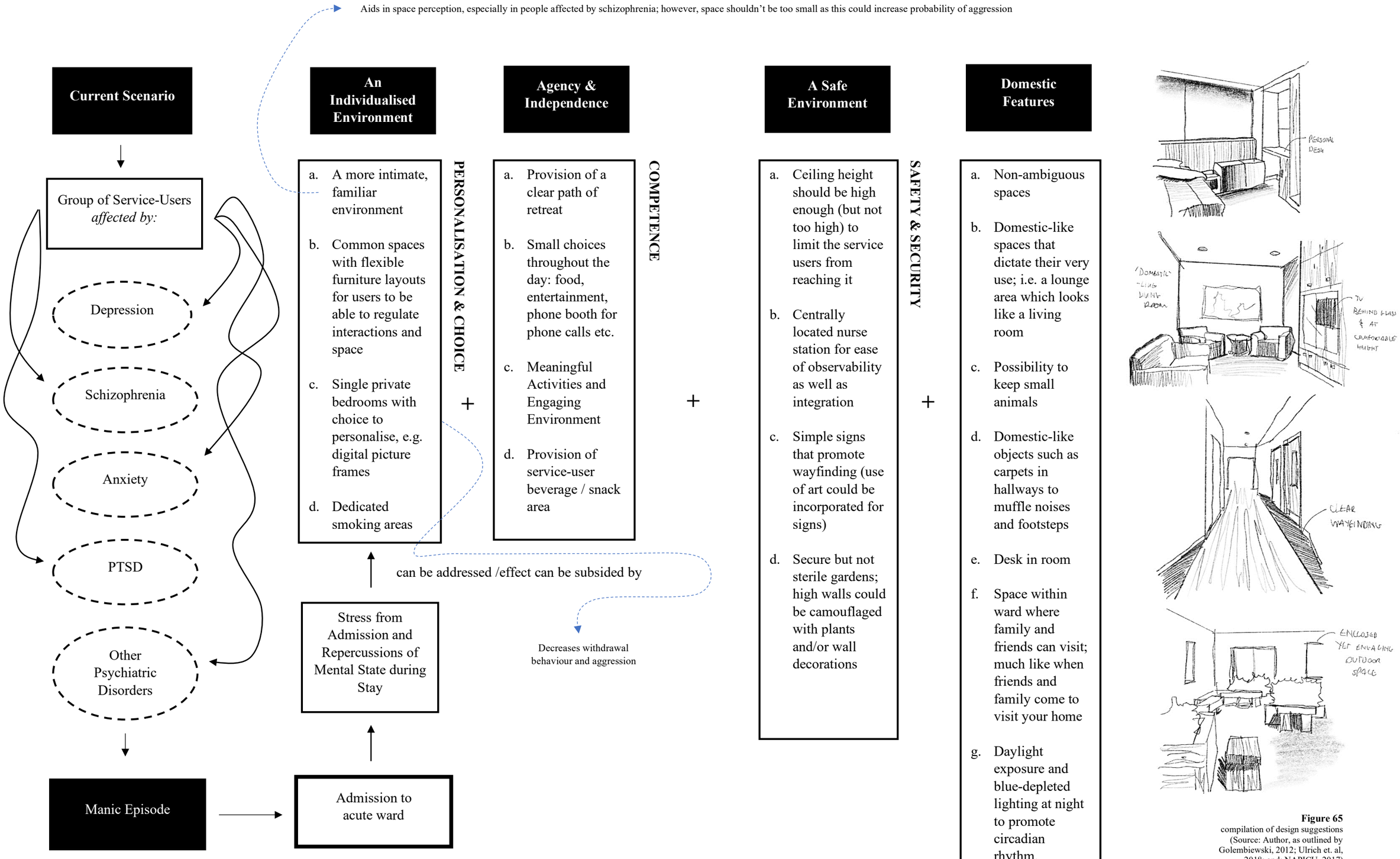


Figure 65
compilation of design suggestions (Source: Author, as outlined by Golembiewski, 2012; Ulrich et. al, 2018; and; NAPICU, 2017)

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The previous diagram (figure 65) outlines design considerations that aim at offering service-users small, yet significant choices throughout their stay. These considerations focus on communicating mental concepts and fostering feelings which lean towards the domestic within the care environment.

Ideally, this environment should be tailored according to the needs of a diverse range of residents. It should ensure that these guidelines extend beyond mere 'survival' during acute episodes to fostering meaningful and beneficial relationships within the system of care, both with the environment and with the people involved.

The independent individual

Safety and security regulations of an acute ward shouldn't compromise the potential of the environment to promote personhood. Within these necessary regulations, spaces can be designed to mimic the comfort of the home. Emphasis should be placed on *flexible* layouts, allowing users to customise their experience and regulate interactions. Additionally, clear paths of retreat to private spaces such as personal bedrooms should be included. These prevent aggressive or withdrawn behaviours by allowing the user to physically retreat rather than resorting to confrontational and behavioural alternatives.

The notion of the self may be further reinforced through simple personal touches such as name tags on bedroom doors and personal storage cabinets. The environment should also allow the service-user to make the sort of choices that we all make regarding matters of everyday life – ranging from entertainment options, where to spend their time, making phone calls, and deciding what to eat. Areas where the user can practise agency and exert some form of control will enhance their overall experience. For instance, a kitchenette may be included where users can prepare simple snacks from their food lockers, or even pour themselves a glass of water.

A safe yet meaningful environment

As the results indicate, beneficial relationships were formed when the ward culture was no longer characterised by a barrier between staff and service-users. This allowed for the formation of friendships, and for the transparency in care practises. Certain meaningful objects, such as artworks, can also be used within the realm of safety, introducing signs that promote wayfinding and steer away from the clinical ambiance.

Outdoor area design may lean more towards the natural environment – including wooden seating and flower patches instead of boxy planters. A

designated smoking area may be included, allowing the separated outdoor space to contribute to the users' experience solely through its characteristics.

Meaningful activities which demand declarative attention should be incorporated to the routine. While watching TV may still remain as a pertinent part of the ward culture, the uses related to the *living room* should branch out and include more mindful activities.

To conclude, fundamentally, acute psychiatric wards are temporary accommodation spaces that are used during therapeutic treatments. These may very well be compared to ‘‘rental apartments’’ (Groenendijk et. al, 2022), as even though they are transient, these spaces should be perceived as the user's own (Groenendijk et. al, 2022). Providing clear, non-ambiguous environments that avoid making residents question their purpose is crucial. Domestic-like spaces and objects may aid this – carpets in hallways, personal desks in bedrooms, family-visiting areas within the ward, and even the possibility to keep small pets or animals - all in an effort to prevent the loss of self.

Chapter 7

Conclusion

Summary of Findings and Recommendations

This chapter outlines the main findings of the fieldwork

7.1 Highlights of the Research

With the limitations of the research in mind, this study offered the opportunity to appreciate and understand the nature of a person's psychiatric disorder and the experiences of the individuals enduring them. This allowed for an evaluation of the parameters associated with the design of a psychiatric setting; as well as their implications on the individuals' experience during their stay. The findings revealed a shift in the notion of the clinical psychiatric environment, from having total institutional connotations to somewhat incorporating psychologically supportive elements that lean towards the domestic. This design shift, which was evident in the studied refurbished ward, indicates that mental health facilities are no longer primarily focused on containing and controlling individuals; yet there exists an effort to create meaningful environments which promote wellbeing.

Although the environment still posed as a trigger in some instances, these efforts were still evident from the inclusion of a central nursing station and the overall layout of the furniture. It is still unclear whether the nursing station was placed in the centre as a means to be able to achieve optimal surveillance, or to aid in the creation of the relationships between nurse and service-user. However, the overall reaction to such a design choice was a positive one.

The paradigm shift towards a person-centred culture cannot be achieved through solely a change in environment. A holistic solution requires a *collaborative approach* between everyone involved. While this person-centred care culture is the main driving force behind the shift, the importance of a well-designed therapeutic space cannot be overstated. Therapeutic concepts such as a family-like social structure and a relationship with the staff (Groenendijk et. al, 2022) were evident, though the setting retained some institutional attributes, which may or may not be necessary. Additionally, the language used throughout the ward was very much clinical in nature. Residents were referred to as *patients*, and their names correlated to a specific number. Groenendijk et. al (2022) discuss how a facility may indicate institutional cues through its highly non-individualised and sterile environment, while everyday objects can foster personalisation and choice. The concept of place-attachment, that occurs when personalising and appropriating space, leads to a reduction of destructive behaviour (Brown et. al, 2004). Therefore,

the implementation of a domestic character in a psychiatric setting is proved to be beneficial.

The research suggests that individuals' internal locus of control was challenged when they experienced a lack of control within the environment, leading to reactions such as escaping the setting or territorialising it. By the end of the research, it was also evident that ultimately, other people's presence within the environment created a nurturing setting. The spaces became domestic through the residents' use, transforming the lounge area into a living room, and the eating space, into a dining room. It was also evident that the residents assume active or passive roles depending on both their environment, the hierarchical relationship between staff and service-user, and their mental state. Clearly, design approaches within such a setting need to be implemented in accordance with the requirements of the specific group of residents within the ward. Given that this group comprised individuals with very different requirements, this research allowed for a deeper understanding on how a ward designed for *mass living* affected this group.

This paper contributes to the understanding of the link between the physical environment and individuals' psychological outcomes, highlighting the complex relationship between users and the environment within an acute psychiatric setting. The predominant area for improvement in terms of the design of such a setting lies in the facet of control. When individuals experience a lack of control, they can either alter their behaviour or their physical surroundings to cope, thus becoming a powerful agent in his or her environment. However, those individuals who seem quieter and more timid, are not as collaborative in the customisation of their space, and thus depend on their immediate environment, in whatever form it exists. Everyday objects within the psychiatric environment serve as cues that refer to mental concepts within the mind – evaluating whether the environment is welcoming, threatening, and so on. The foundation for the ward's design must thus focus on initially providing this welcoming environment, with the opportunities for the individuals to personalise their space. Having certain control over their environment such as decorating their bedroom, aids in signalling the mental concept of domesticity – i.e. feeling welcome within a space (Groenendijk et. al, 2022).

To conclude, while efforts to provide a safe and secure environment are crucial to protect both the users and the staff, these efforts may threaten users'

individuality. Although certain institutional traits must be implemented to ensure safety and a certain containment, therapeutic elements should be integrated within the architectural milieu of healing environments. The balancing of safety with the need for a supportive and personalised environment is the key to enabling positive psychological outcomes in these settings.

Even though international standards of care are increasingly shifting towards being community-based, which, as research suggests, may provide a better therapeutic environment for those affected, MCH holds the potential for a beautiful setting in the peace and quiet that it provides, away from the hectic centres of Malta.

7.2 Future Research

Local studies that explore the relationship between mental health and mental health facility design are scarce. Further research in this field needs to be developed to gain a better understanding of this relationship within the local context. This dissertation serves as the foundation for future studies as related to ward design and its impact on individuals with psychiatric disorders. However, several opportunities for further research can be identified:

a. the methodology of observation is crucial when studying and designing spaces that greatly impact the lives of the individuals utilising them. With this, other psychiatric facilities both locally and internationally can be examined to provide deeper insights and a wider range of participants and behaviour in order to carefully evaluate the role of design in psychiatric care.

b. Beyond psychiatric care, this research can be further extended to examine other building and space typologies that are meant to be spaces for healing, focusing on the betterment of individuals. These spaces could potentially be hospitals, clinics, halfway houses, and rehabilitation centres.

c. If this research had to be further developed, the next steps would involve expanding the sample size, the involvement of service-users and a conceptual design scheme of an alternative to the existing acute psychiatric wards. For instance, given the importance of contact with loved ones and maintaining a sense of 'normalcy' during a stay in a ward, service users naturally prefer visits within their personal space, which in this case is the ward. Seeing that it was prohibited for visitors to enter the ward, to accommodate this, bedroom configurations could include an additional access point directly from outside the ward. This would allow visitors to meet the service user in their private bedroom rather than in a waiting room-like area, enhancing comfort and privacy. Moreover, this design would reduce the risk of visitors encountering other service users in the ward, preserving confidentiality and anonymity.

While international guidelines are advocating for community-based care, it is evident that locally, the treatment of people with acute mental illnesses is still synonymous with treatment within a

clinical setting (figure 66). As of recently, plans are being made to relocate '*patients*' from MCH to a new psychiatric facility near Mater Dei Hospital (Xuereb, 2023).

This research provides a better understanding on how ward design impacts behaviour in people with psychiatric disorders. However, even though rehabilitation within the community is common in Malta, it remains unclear how service-users in the acute stage would respond to being treated in a community setting, and will remain as such until this way of treatment becomes standard practice in Malta. Within a community setting, the shift would thus be envisioned to lean more towards the domestic, and as was discussed in this research, this might prove to be a better system of care for those affected.

Having said this, the research remains relevant even if and when MCH closes, as any ward design will follow the design guidelines set within the newly refurbished ward that was studied. However, due to the timeline and word limit, the research wasn't exhaustive of the discussions which came up during the analysis. Further research should also consider the participation of service-users as this would surely prove to be invaluable.

TIMES OF MALTA

Mount Carmel starts closing down: first 100 patients relocated 'within weeks'

Health Minister plans to close down psychiatric hospital within four years

National | Health | Mental health | Government

20 May 2024 | Mark Laurence Zammit | 30

2 min read

Jo Etienne Abela said staff will move with clients and there will not be changes to their salaries or working conditions. Photo: Jonathan Borg.

Some 100 patients will be relocated from Mount Carmel to other psychiatric homes and services in the community within the next few weeks, Health Minister Jo Etienne Abela said on Monday.

The move is the first in a three-part plan to phase out and close down Mount Carmel as a mental health hospital within the next four years, in what is expected to be one of the boldest and most significant moves in Malta's modern healthcare.

Abela first announced plans to close the hospital last week.

He told parliament the 19th-century building was not fit for purpose and that every government in history has some blame to shoulder for not investing in the mental health infrastructure, which has led to the current reality.

He said that a committee of experts had recommended that mental health services should be provided in the same place where physical health services were provided.

The often controversial hospital periodically makes headlines for housing patients in run-down wards, and former prime minister Joseph Muscat admitted on television a few weeks ago that he regrets never visiting it as prime minister.

Home to around 230 people

Figure 66
News Article discussing MCH closing
(Source: Time of Malta)

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Appendices

Appendix 1

Elite Interviews

A.1.1 Interview with Participant 1 / P1

Researcher: how important do you think an environment is in healing mental illnesses?

P1: I think that in the case of mental health, a lot of patients that are admitted into MCH, they need rest, they need a containing space, so the environment makes more difference than maybe any physical ailment. In the case of MCH for example, there are positives and negatives that are associated with the environment. The fact that there is a lot of trees, there are areas where you can go for a walk etc.. Using outdoor space is a means of therapy. This brings us to the main issue. There is a lot of outdoor space at MCH but it is not being used. there are a lot of areas which can be used in a nice way. A lot of wards sometimes have their own outdoor space, but since these are older wards, the gardens would be in a derelict state, or they would be so overgrown that they're not safe for the patients. This situation is much like when we're at home. a green space uplifts your mood, allows you to relax. A lot of people, even those who live in an apartment, fill their space with plants. We have seen this even during the pandemic, where people attempted to bring nature into the home when they were confined inside. There is this facility at MCH. On the other hand, there are wards, that are much older. When I used to work there would also be construction going on, so it all factors into the soundscape. Construction sounds in a place such as MCH, when a person has been through certain traumas, we know that noises can be triggering. It is important that when we fix the state of a space, we are aware that the fixing itself has an effect on the residents. They don't have a way out, unlike us, who can 'escape' when there are construction noises near our home. Many people don't have the facility to leave the place.

Researcher: The acute ward is configured as a redesigned ward, having an open floor space, bedrooms, and a quiet room on one side, and a door on the other side, leading to an 'outdoor' space. Is this configuration common in therapeutic spaces? Do you think this model can be improved?

P1: I think a lot of wards have that spatial layout where the bedrooms are on one side, which are locked when it's during the day, so they don't have access to their rooms. Then there would be the common area, usually a large open space. There are very few wards that maybe have nooks where you can kind of retreat on your own. This is an important thing to have. Another important spatial factor to have is different

spaces, especially since every patient's needs are different. For example, if you have a patient that's screaming, in that moment, it can affect the other individual and the situation might also escalate. The open space is not necessarily beneficial. It is empty for safety, even outside. In the yard there might even be restrictions because of this safety. When the walls are all white and bleak, if gives off a very medical and hospital feel. An institutional feel. Ideally, clients, who are recovering from mental health issues have a space that replicates home as much as possible, replicates the feeling of safety.

Researcher: That leads me to my next question. I will be following the SCP model for analysing and evaluating therapeutic environments. It looks at safety and security, competence (how independent the individual is inside the environment) and personalisation & care; in terms of two different poles: the institution and the domestic space. This looks at to what extent the 3 different factors mentioned previously resemble the institution or the home. For example, looking under the section of competence, having a domestic kitchen within the ward would lean more towards home, whereas eating reheated food from a trolley would be more institutional. Do you think we should start moving away from the institution? Can spaces of treatment be less institutional?

P1: Definitely. Open kitchens again might trigger questions about safety. But it doesn't have to be open all the time. There are ways. Even making a coffee. I don't think patients need to wait and ask the nurses to provide coffee. In a way they are basic needs that when you go to hospital are taken away from you if you're independent at home. So, we should definitely look at independence. And maybe not all the wards. I'm sure there are wards where these things can be safe. There are wards where the service users do not self-harm, there is a lesser risk.

Researcher: Would you be able to characterise the mental state of service-users within the acute ward?

P1: It would probably be a mix. There are two types: acute and chronic. In the chronic ward, long-term, service users' treatment takes longer. They become much more dependent on the system. For some people it becomes almost impossible to re-integrate within society. The acute ward is usually the next step after the admissions ward. In the admission ward there are a lot of murals if you want to go take a look. There was a nurse who was very artistic. They make such a difference. The ward

isn't modern or anything like that. But these small things make all the difference. It even introduces a way for clients to make their own art. It also gives off a nurturing feeling. Even the quotes written on the wall in the wards, it may give the client some courage the moment they read it. So that ward is called the MAW. From there, when they're in a situation where what they're going through needs treatment, they are admitted to an acute ward. Doesn't have to be long term. Doesn't mean that for example people with chronic depression who spend ages inside MCH are admitted to the acute ward all the time. It could be for example, psychosis. Or someone with schizophrenia. Now schizophrenia is a chronic thing. Over a lifetime. But the person is going through a phase in her illness where they require care. Or for example, a person with bipolar disorder going through the manic stage. They need care in that moment. In an acute ward, safety tends to be of utmost importance. It's where they need the most support. If the nurses see that they're not safe to be left alone, they assign a nurse one-to-one. So the patients would have a nurse all the time with them, follow them around and help them with everything for the safety of the patient. If they go to the yard, the shower, etc.. it takes away their independence in some way but they're at a stage where they could really hurt themselves.

Researcher: Last question: What do you think I need to look out for (with respect to observing behavioural patterns within the space, what not to do, how to avoid interactions (due to ethics), whether I should stay within the gatekeeper's area/ in a corner of the ward, etc.?

P1: In terms of what to wear, the rules apply more to the clients rather than the staff. So for example in the seclusion areas, the clients are asked to remove their shoe laces since these can be used to harm themselves etc.. don't let what we hear about MCH put you off. It could be anyone who is in there. A person who is going through something and in that moment in time they felt like maybe suicide was their only option and they were admitted. A lot of times there would be people having high education, so don't be threatened by the people. If at any point you feel uncomfortable, do keep your distance. Don't stay in corners. You're closing yourself off. Position yourself nearest to the door. You're the first person who can leave the room if the situation escalates. There are nurses who are trained, they've been through it before. You're only there to observe to see how the situation can be improved. On another note, sustainability is another thing to keep in mind. Even if you bring plants inside, who's going to take care of them? What resources are there to actually take care of

them? For example, at Villa Chelsea, the clients have chores, they are trained to do certain things like take care of the garden. In certain wards there might be that probability. Acute ward probably not, since it's short term. There would be people who would be well enough to take care of plants but the focus at that moment is to get better rather than the chores themselves.

END OF INTERVIEW

A.1.2 Interview with Participant 2 / Dr Gertrude Micallef

Psychiatrist Trainee at MCH, Medical Doctor

Researcher: how important do you think an environment is in healing mental illnesses?

P2: I think it's very important, for example recently there's been a renovated ward, admission ward 4. Both from my end as staff and as a doctor, I look forward to being assigned that ward since it's the nicer one currently there. It's like you're in a hospital not in a mental hospital. It is much more welcoming even with the use of plants etc. even the patients. This ward is for newly admitted patients. They weren't admitted to MCH since the last year or 2, and they're not substance misusers. When there's someone who is being admitted to MCH they would be quite hesitant, sometimes they exclaim that they don't want to stay there. However, in this new ward I could really observe the difference. They were more at ease, there are family rooms, where they could easily meet with their kids, so it definitely does affect mental wellbeing.

Researcher: The acute ward is configured as a redesigned ward, having an open floor space, bedrooms, and a quiet room on one side, and a door on the other side, leading to an 'outdoor' space. Is this configuration common in therapeutic spaces? Do you think this model can be improved?

P2: I've never worked abroad so I can't compare to wards outside of Malta. If you were to compare to transit ward, there's a nurse office, and the patients are locked on the other side. There is no communication. There's a window and the patients are observed through there. They usually spend about 4-5 days there then are admitted to another ward. Since there's a problem with space, a lot of people spend days there. The admission wards, they have like an open common room. Same layout with a hall. There's a wall that divides the patient and the nurses/nurse station, except for ward 4. In ward 4 maybe the nurses can interact more with the patients. It would be an automatic interaction rather than through need.

Researcher: Do you think we should start moving away from the institution? Can spaces of treatment be less institutional?

P2: 100% that we're moving towards community-based care. The problem lies when there is someone who is very psychotic. You have to hospitalise at some point. It's an obvious decision that for someone with autism, for example, a lot of colours would be over-stimulating. So there

should be considerations like for example quiet areas. More outdoor space definitely. We have very beautiful gardens at MCH. Near admission ward 4 there's like a green corridor. Very beautiful gardens but they aren't used. it would be very therapeutic for patients. There's definitely potential. Mater Dei there are no gardens. MCH has. If you renovate it, it would help a lot.

Researcher: Last question: What do you think I need to look out for (with respect to observing behavioural patterns within the space, what not to do, how to avoid interactions (due to ethics), whether I should stay within the gatekeeper's area/ in a corner of the ward, etc.?

P2: Positioning at the nurses' station would be good. The only thing you can't see would obviously be the bedrooms. The outdoor area you can see. It might be difficult not to interact with them because they're going to talk to you.

Researcher: Would you be able to characterise the mental state of service-users within the acute ward?

P2: Ideally we do characterise patients, but there's only one ward that accepts acute patients. There are not a lot of wards that there are only acute patients. You have manic and depressed patients. A lot of different ones except for substance misusers. Ideally it would be like that but there's a limitation of space.

Researcher: How long would you say that service-users spend inside the acute ward?

P2: It would depend. Most admissions if they're very acute, a few days up to a week. If they spend longer there, they would be admitted somewhere else.

END OF INTERVIEW

A.1.3 Interview with Participant 3 / Dr Taylor-East

Consultant Psychiatrist, President of the Malta Association of Psychiatry

Researcher: how would you define normal behaviour as opposed to abnormal behaviour in your practice?

P3:. I mean, I am a psychiatrist. So we look at various kinds of behaviours and related stuff, that are manifesting out of mental disorder really, because it is society that that deems really what is normal. And, and, however, as a psychiatrist, we are trained to identify behaviours which occur, which may occur during the mental disorder. So for example, a person may seem to be acting, that they are afraid or whether they are feeling threatened, because they may be having paranoid delusions.

Researcher: do you think an individual's mental health condition affects their perception of their environment and personal space?

P3: absolutely, we shouldn't classify, we shouldn't think of only people with mental disorder, I think as human beings, our environment has an impact on our mental health. So stands to reason that a person with mental disorder may also be affected by their environment. And even more specifically, because if for example, you have a person who for example, is depressed and is is being isolated is feeling low, and they are in a dark and gloomy place, they are not being stimulated to improve for activation, which is needed in the treatment of depression. And on the other end of the spectrum, when we have for example, people with mania, if a place is highly stimulating is very noisy, is chaotic, is busy, that can worsen that person's condition. I think there is a question on interpretation. Mostly I can understand this in kind of interactions and interpersonal interactions rather than in behaviours in the structural environment. When I say obviously, you can have hallucinations which are an abnormal perception.

Researcher: do you think the temporary-ness of acute wards allow for the creation of meaningful connections, whether with the environment or other people?

P3: Yes, yes. And I think that therapeutic intervention can be extremely meaningful even if it is a 20 Minute one.

Researcher: Okay, so final question. Based on your expertise, what elements or design principles would you recommend incorporating into psychiatric space to

promote healing and well-being whether it's activities, types of spaces, etc.

P3: I think that there is no one size fits all. Module and we are when we are talking about mental health. It is so broad that I cannot say for example, you need that A place that is light and airy, you know, I mean, it's not necessarily the case, I think that when thinking about environments for the treatment of mental people, people with mental disorder, they need to be environments that are open and non-judgmental, non-threatening, and that, you know, people feel safe, and they must feel respected and dignified. And they are also autonomous, you know, and that they have agency and effect.

END OF INTERVIEW

A.1.4 Interview with Participant 4/ Dr Dorothy Scicluna

Clinical Psychologist, Psychotherapist and Supervisor in private practice

Researcher: Do you think an individual's mental health condition affects their perception of their environment and personal space?

P4:. Or rather the other way around? Yes, yes, absolutely. And where this is actually now backed by research, because we know that we are part of an environment. And we know that sometimes when we actually change environment, we get what are called corrective experiences. So let's imagine I have a horrible work experience, and I change work culture, and the new experience is actually welcoming of my skills, then I'm no longer going to feel anxious that different environment composed of people and structure has actually given me a corrective experience. So I am probably now no longer feeling anxious, because that's an agenda. I am very sensitive, and I can foresee what's going to happen. And I started off with mentioning anxiety, because it's very common, say, in the place of work and, and do have it around us. But then we also know there's also research about having green around us, you know, sort of, we actually say put green in your house or design clinics that at least you can put plants or have a little bit of outside space, because that actually helps us come down. Yes. especially, you know, sort of seeing the white only. And this is now all that sort of what I like to save and when I'm at clinic, or when I give training, I say so the what I say is going to be evidence based either because I've observed that here or through clinical experience, or because I'm quoting research. And we know that even few minutes of being in nature and listening to birds, actually makes us release endorphins and you're automatically feeling better. Yes. Something interesting that I observed and that people have started to bring recently as in you know, the past year or two is a sense of feeling like claustrophobic. And the meaning of it, because psychopathology reflects the times that we go through. So they're not fixed criteria would be kind of the same, but the psychopathology and the description of it changes with times, culture and places. That probably, I named it to the fact that we have higher buildings, and we're not used to it because we're Island people. So we're used to seeing the light, the sun, the space, and people are bringing a feeling of being closed in.

Researcher: Okay, so second question. Have you noticed any specific ways in which patients personalise their living or working spaces to cope with their mental

health challenges, even maybe in an acute wards or in an institutional environment?

P4: It depends very much on which aspect of mental health you're looking at. So I don't know whether you're looking at a specific group, because mental health is very fast. And although many, many have disorders, because we call them disorders are linked, then there will be comorbidities? I'm not sure the depressed would do it in one way. Maybe people going through an eating disorder would organise their room or their space in a different way. So I don't know if you have any group in mind.

Researcher: I'm doing these interviews before I'll do the observations in the acute world. So I'm not sure what type of disorders there's going to be.

P4: usually at the acute Ward, and we are looking at what then we would call, when the disorders we work with are psychiatric, and we call them psychiatric disorders, which are also psychological, you know, don't separate them, but if somebody needed to be hospitalised acutely, it's because of something severe. So they were either not in touch with reality exactly, like brief psychotic episodes or harm to self. So they need you know, like, specialised care, or cases of say, like anorexia, and they need to be admitted, they will go to the medical best. So your question is whether I have observed a specific way that patients customise their space. it very much depends on how alert they are. Because what I, during my times, at the hospital, and even during my times of training at the hospital, even abroad, and what I used to know, this is sort of how they organise their space reflects very much who they are in terms of personality, and what they're going through. Yes. However, at this stage of being admitted, and when it's acute, and they're doing very little sort of with their space, it is more, the people taking care of them that would be taking stuff for them. And later they start to organise their space. But my answer would be once they can do that, because initially, maybe they're sedated or you know, like they're traumatised by the fact of being there. And how they organise the space is very much reflects very much who they are in terms of personality and what they're going through. So if somebody says needs to have order, they start to organise it and move things around. But if someone is very depressed and lethargic, they know whether it's for them. If someone is very anxious because of the health condition, maybe there's heightened health anxiety, and then they don't they want to sanitise everything.

Researcher: The third question, okay. So basically, I will be following a model for analysing and evaluating therapeutic environments. It looks at safety and security competence. So how independent the individual is inside the environment, and personalisation and care in terms of two different polls, the institution and domestic space. This looked at looks at to what extent the three different factors mentioned previous years and building institution or the home. So for example, looking at the section of competence, having a domestic kitchen within a ward would lean more towards home, whereas the whereas eating reheated food from a trolley would obviously be more institutional. Do you think we should start moving away from this from the institution when it comes to Mount Carmel?

P4: So okay, absolutely. And because the way I was trained, and the way I love to work with patients is creating a sense of self agency. So when patients or clients because then adult patients become clients, and feel that they have a sense of self agency, because they know what they're going through. And they give them say, to say we're working together, and we're going to try doing these tasks, when you ask them to go and do them, and then they succeed in doing anything, even something basic cup of tea, because they were unable to because they were so depressed, that they actually walked there. They sourced the thing they find it, obviously with the level of safety, because safety is very sort of if someone has suicidal ideations, they're going to find anything. So obviously in any setting safety, I would put safety first. And so that could be monitoring, but not putting saying definitely and moving away from institutionalising because we need to see how they function in the community. So it has to resemble very much your Hear for respite, you're here to get better. But even mindset, there is research showing that when you tell someone, you can actually, you know, get better in two days, the healing is faster. If you say, this might take a few weeks, it will take a few weeks.

Researcher: Interesting. Okay, do you think the temporary ness of accurate words allow for the creation of meaningful connections, whether with the environment or other people?

P4: Normally, it happens over time. However there is, then that prolonged sort of if something is prolonged over time, and it's repetitive, then there's no meaning. So, ideally, the staff is equipped enough and knowledgeable enough to be able to build

rapport there and then, and reassuring the patient that they are here temporarily, because they don't need to be here for longer, then of course, if they need it, because some maybe do not have family or they need longer care, then we'll need to step that up.

Researcher: Final question, based on your expertise, what elements or design principles would you recommend incorporating in a psychiatric space to promote healing and well-being, whether it's activities, types of spaces, etc.

P4: I would start by looking at what we call brain health. And let me tell you, where actually this is coming from when I went for my training. And in clinical psychology, I trained at the Department of neurological sciences and psychiatry, and I couldn't understand why I had to spend two years studying the brain like, I came here to do emotions, not the brain. And eventually, I ended up understanding because if you're not going to take care of the order, this is the only sort of discipline and the medical field where we do not look at the organ that we're studying. Okay, so cardiologists look at the hearts respire three, they will look at your lungs, and the guy knee will do the ultrasound, they're looking at the organ, but here we go by criteria. And so finally, we are shifting to what I had been taught that you need to know what's happening at brain. Now, if we look at what the brain loves, the brain loves good nutrition. So we need nutritious food. And our Mediterranean diet is fantastic. But we tend to very often use processed food whereas we have readily available Mediterranean and light. because it's faster, it's cheaper. And but we could easily do with our Mediterranean diet because it's simple. It's not expensive, it's legumes. It's vegetable, it's olive oil is yes, you can include the past that stage, nothing that is not already available. No kidding. So definitely, we're looking at the brain so what does my brain loves, good nutritious food, foods, and we know the components of those foods. So I would definitely focus on eating well. And light, we need to be exposed to light because of the we have the sun most of us are witnessing deficient movement. Because studies and even looking at longevity, we know that we increase our lifespan for every hour of exercise that we do. So nothing intense, but this could be you know, like walking around and maybe doing a bit of movement and a bit of, you know, like medication. And so those three would be the pillars and good connection. Because obviously, we know that as human beings, we thrive on a feeling psychologically safe, and people who experience mental health issues, not all the time but very often will have it I've just

experienced trauma or have experienced trauma as a matter of fact that when we do the assessment today, we need to include the ACE. it's specific assessment for childhood trauma. And so I will then invest in educating staff on being with the patient. So I would make sure that they are not getting burnt out because they're upset or sold off or we know that stress is contagious. So patients are stressed and staff is stressed. They're pressing each other out. So I was also aware of this and the well-being of the staff. I would definitely think of safety. And even you know, like soothing colours, soothing music, and obviously the right therapies. **Researcher:** Okay, I think that's all very helpful. Very good. Thank you.

P4: Thank you for coming up with something like this because it's so necessary. So when your findings are ready, let me know.

END OF INTERVIEW

Appendix 2

Architectural Checklist

A.2.1 Layout of Acute Ward

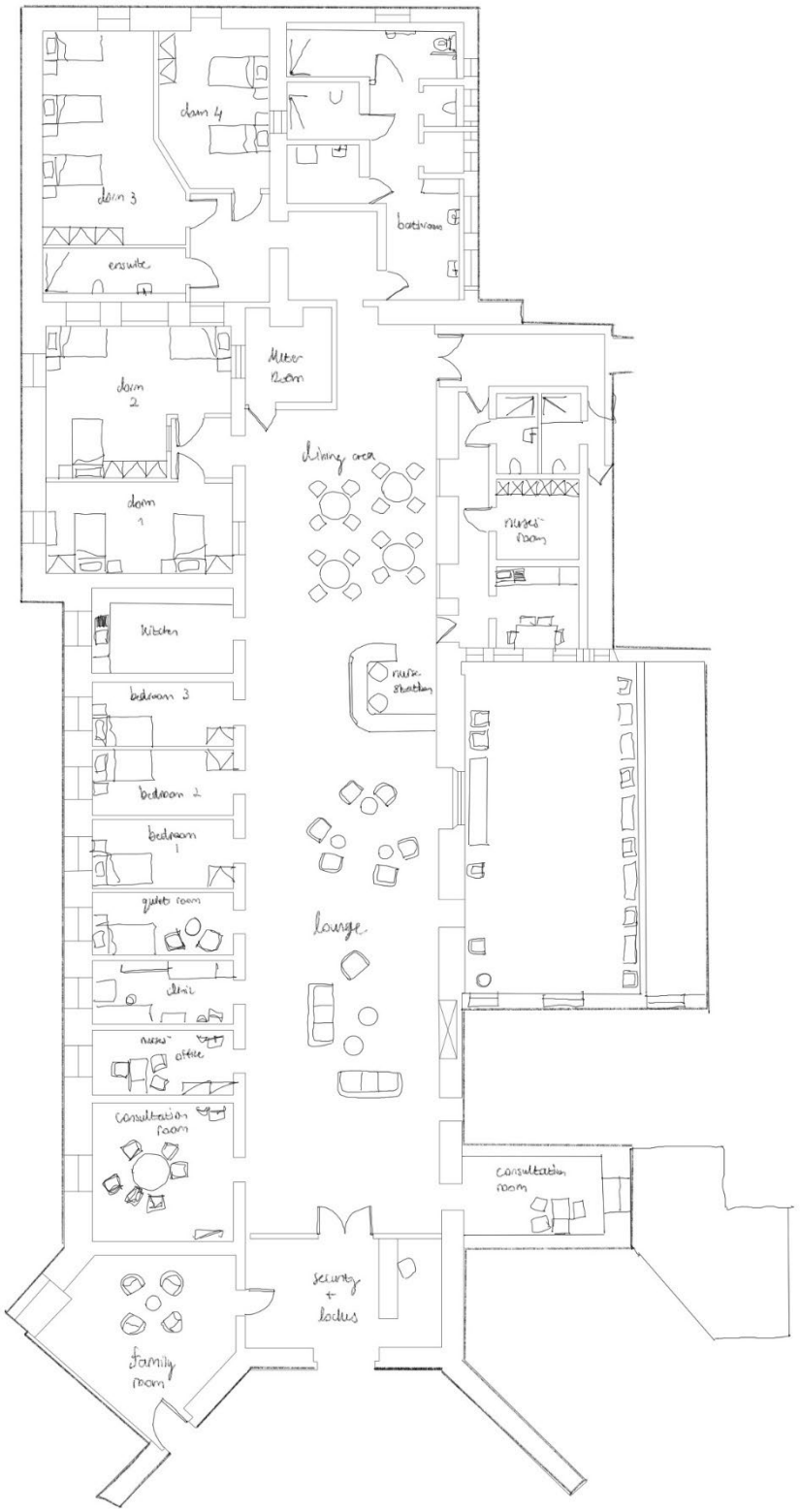
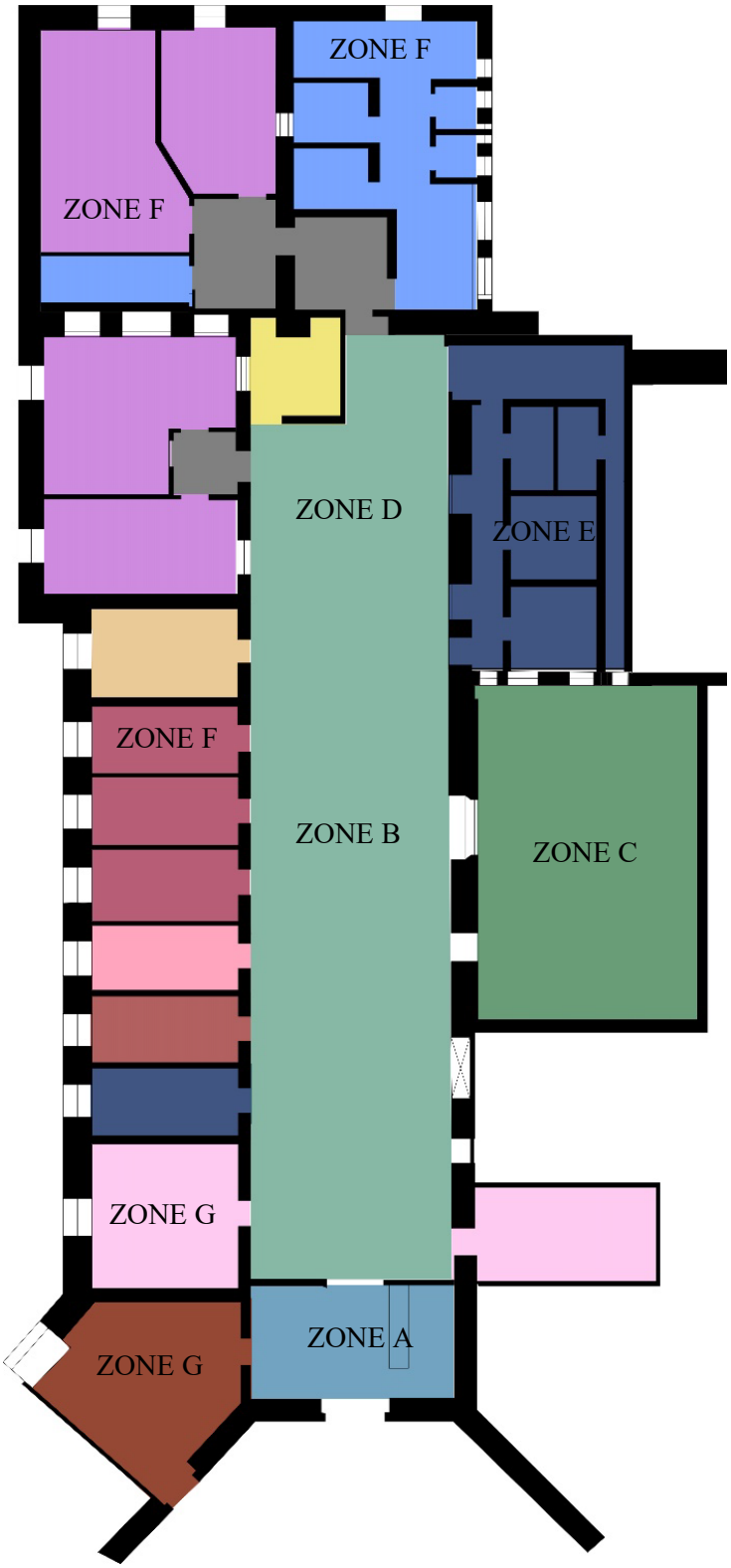


Figure 46
Layout of Acute Ward

A.2.2 Zones within Acute Ward

To be used for Architectural Checklist



ZONE A / Lobby

ZONE B / Dayroom

ZONE C / Yard

ZONE D / Dining and Kitchen

ZONE E / Nurses' Area

ZONE F / Bedrooms and Bathrooms

ZONE G / Multi-purpose Rooms

Figure 47
Zones Within
Acute Ward

A.2.3 Architectural Checklist

Architectural Checklist: Institution vs. Home-likeness (The following checklist is based on Robinson/Emmons/Graff Architectural Checklist, 1984, as cited by Robinson and Thompson, 1999, Adopted by Borg, 2024, University of Malta)				
	Feature			**Institutional (vs domestic)**
Context and Site features				
	Residential area		✓	Non residential
	Immediate neighbours include housing		✓	No
	Shops		✓	Non-walking distance
✓	Public parks or recreation areas			Non-walking distance
✓	Paved pedestrian paths			No
	Size of lot of the building compared to adjacent lots		✓	Different
	Distance from street compared to adjacent buildings		✓	Different
	Distance between building and those adjacent		✓	Different
	Relationship of front width to nearby buildings used for housing		✓	Different
	Relationship of height to nearby buildings used for housing (number of stories)		✓	Different
	Colour		✓	Different from nearby buildings
✓	Materials			Different from nearby buildings
	Access point is similar to nearby housing		✓	No
	Integrated to general housing scheme or stand alone		✓	Integrated to a health care scheme
	The unit parking		✓	Different from the adjacent buildings (availability, size, location etc)
	The front garden (if available)		✓	Different fencing and landscaping than adjacent gardens
	Building façade		✓	Plain (vs broken up with balconies, bay windows, porches, window boxes etc), unless it similar to local residential patterns
✓	Building materials, primarily			Concrete, concrete blocks, metal panels (vs stucco, brick, stone)
	Building windows		✓	Repeat a pattern (vs variety of sizes and shapes according to function
	Building windows		✓	Different sizes and variety than adjacent housing
	Existence of label or inscription before the entrance or by it		✓	Yes
	There is a designated waiting area (recess or portico) outside the unit entrance		✓	No, or it is a large portico
Building Features				
	Front entrance doors		✓	Similar size to public buildings
	Door at the entry		✓	More than one
✓	Front door			Different materials than local residential buildings
✓	Front door			Opens out or automatically

Figure 48
Architectural Checklist Part 1

Figure 49
Architectural
Checklist Part 2

GENERAL		✓	Front door		Sliding or revolving (vs hinged)	
			Front door	✓	Open to public (vs locked)	
			No Security desk or reception at entry point	✓	Yes	
			There is a closet or a coat hanging area near the entrance	✓	No	
			Ward entry	✓	Undifferentiated part of circulation area (opposed to designed for receiving or part of living room)	
			Ward entry	✓	Connected to a lobby or a waiting area	
		✓	Entrance located near public spaces and away from bedrooms and bathrooms		No	
		✓	Living room just by the ward entry		No	
			Entry somewhat integrated	✓	Exposed Entry	
			Decorative lighting fixtures in circulation areas and entrance	✓	No	
			Pieces of furniture like a table or a chair near the entrance	✓	No	
		✓	Wall decorations, wall-paper or pictures, on walls of circulation areas and entrance		No	
			Mailboxes for individual clients accessed directly by postman	✓	No	
			Social spaces (kitchen, dinning etc) grouped together	✓	No	
			Bedroom interiors opening to public corridor or public area	✓	Yes	
		✓	Bathrooms opening directly to social areas (instead of opening in corridors and bedrooms)		Yes	
			There are is at least a mirror at some corner to allow visibility at a corridor turning point or a room	✓	Yes	
			Circulation areas lighting	✓	Mostly artificial	
			Circulation areas (including stairs) lighting	✓	Fluorescent	
			All lighting fixtures in the building are fixed.	✓	Yes	
			Notices on circulation areas' walls or on doors	✓	Yes	
			Exit signs on circulation areas' walls	✓	Yes	
			Signs on staircases' walls (including exit signs)	✓	Yes	
		✓	There is direct access from social areas, like kitchen, dinning or lounge, to the out-of-doors areas (including balconies and terraces)		No	
			Access to outdoor areas	✓	Locked or partially locked	
		✓	Outdoor areas are visible from interior social areas		No	
			Stairs are located at the centre of the residence	✓	No (or absence of stairs)	
		Space and Room features				**Zone**
			Equipment is domestic (cooker, dishwasher, fridge)	✓	Equipment is professional	D
			Kitchen is accessible	✓	Locked or restricted access	D
			Kitchen includes eating area or is open to nearby dining area	✓	No	D

Figure 50
Architectural
Checklist Part 3

			Dining room has one table for eating	✓	Dining room has multiple tables for eating	D
		✓	Table sits less than eight people		Table sits more than eight people	D
			Eating area has external views	✓	No	D
		✓	Dining room is in the same space		Dining room is separated or in another unit	D
			Variety of decorative objects, vases, plants.	✓	No	B
		✓	Pictures on the lounge walls		No, or posters stuck with blue-tack	B
		✓	Dining room is relatively close to lounge, or to one of them		No	B
			Furniture includes couch	✓	No, or includes more than two	B
		✓	There is a TV in the lounge, or in one of the lounges or the social areas		No	B
		✓	There is a lounge with a TV set		There is a TV room instead of a lounge with a TV set	B
		✓	There is comfortable sitting in the tv area		There is no couch or comfortable sitting in the tv area	B
		✓	Seating arrangement in lounge		Seating placed against the walls	B
			Living room windows	✓	No curtains or shades	B
		✓	Coffee table in front of sofa, or armchairs		No	B
		✓	Shelves or side tables with objects or/and books in lounge		No	B
			No signs or notices on lounge walls	✓	Signs or notices on lounge walls	B
		✓	No stands with leaflets		Stands with leaflets	B
Safety and Security oriented design			There is a seclusion room	✓	Yes	F
			Enlarged corridors that create lounge or sitting areas with no windows to outside	✓	Yes	B
			Some doors have crash bars or kick-plates.	✓	Yes	B
		✓	Some doors have automatic door closers		Yes	B
			Windows or doors to the outside in the lounge can be fully opened by clients, unsupervised	✓	No, windows have restricted opening or do not open at all, or open under close staff supervision	B
			Lounge ceiling has	✓	Sprinklers, smoke detectors	B
			Window/external door of dining room is fully operable	✓	No	D
			Window of dining room has curtains	✓	No	D
			There are no smoke detectors, sprinkles, alarms in the dining room	✓	There are smoke detectors, sprinkles, alarms in the dining room	D
			Bedrooms are not visible	✓	There is a watch panel on bedroom door	F
			Bedrooms are private	✓	There is no curtain from inside on watch panel on bedroom door	F
ted design			No specialized activity rooms	✓	Some rooms have been especially designed or equipped to accommodate certain activities, like gym (size), crafts (sink) or music (accoustics)	F
		✓	Internal areas solely used by residents		There are internal areas used by external clients	B
			No dedicated rooms for staff	✓	Dedicated room for staff	E
			No consultation rooms	✓	There is psychiatric consultation room/interview room	F
			There is no separate dining room for staff	✓	There is a separate dining room for staff	C

Figure 51
Architectural
Checklist Part 4

Competence orier			Clients can get directly into kitchen from dining area	No	D
			There is only one kitchen	There is a kitchen for professional use and a kitchenette for client use	D
			Clients can prepare tea or coffee in a kitchen	No, or only certain clients	D
			Clients have access to a domestic cooker and a fridge and food can be prepared in there	no	D
			Food is not served through a designated passthrough	Food is served through a designated passthrough	D
			Clients can get directly to the dining area from kitchenette	No	D
			There are tea or coffee making equipment for clients	No	D
			Food is freshly prepared	Food comes frozen in the unit and gets reheated in a trolley	D
Personalisation / choice oriented design			Socialization opportunities	No socialization opportunities	B
			Private areas	No private areas	B
			Single room accomodation	Shared bedrooms	F
			Private washing facilities	Common washing facilities	F
			Private Lockers	No private lockers	A
			There are individual food lockers in the kitchen (or non accessible ones)	Yes	D
			There is equipment like a vending machine or water cooler	Yes	B
			There are decorative items in the dinning like flowers and plants, pictures	No	B
			Residents are free to choose what activity they want to partake in	There is a schedule and residents have to partake in activities depending on the schedule	B
			Variety of common areas	No	B
			flexible, lightweight furniture	No	B
				Number of institutional traits/total	76/112

Appendix 3

Behavioural Mapping

A.3.1 Behavioural Maps

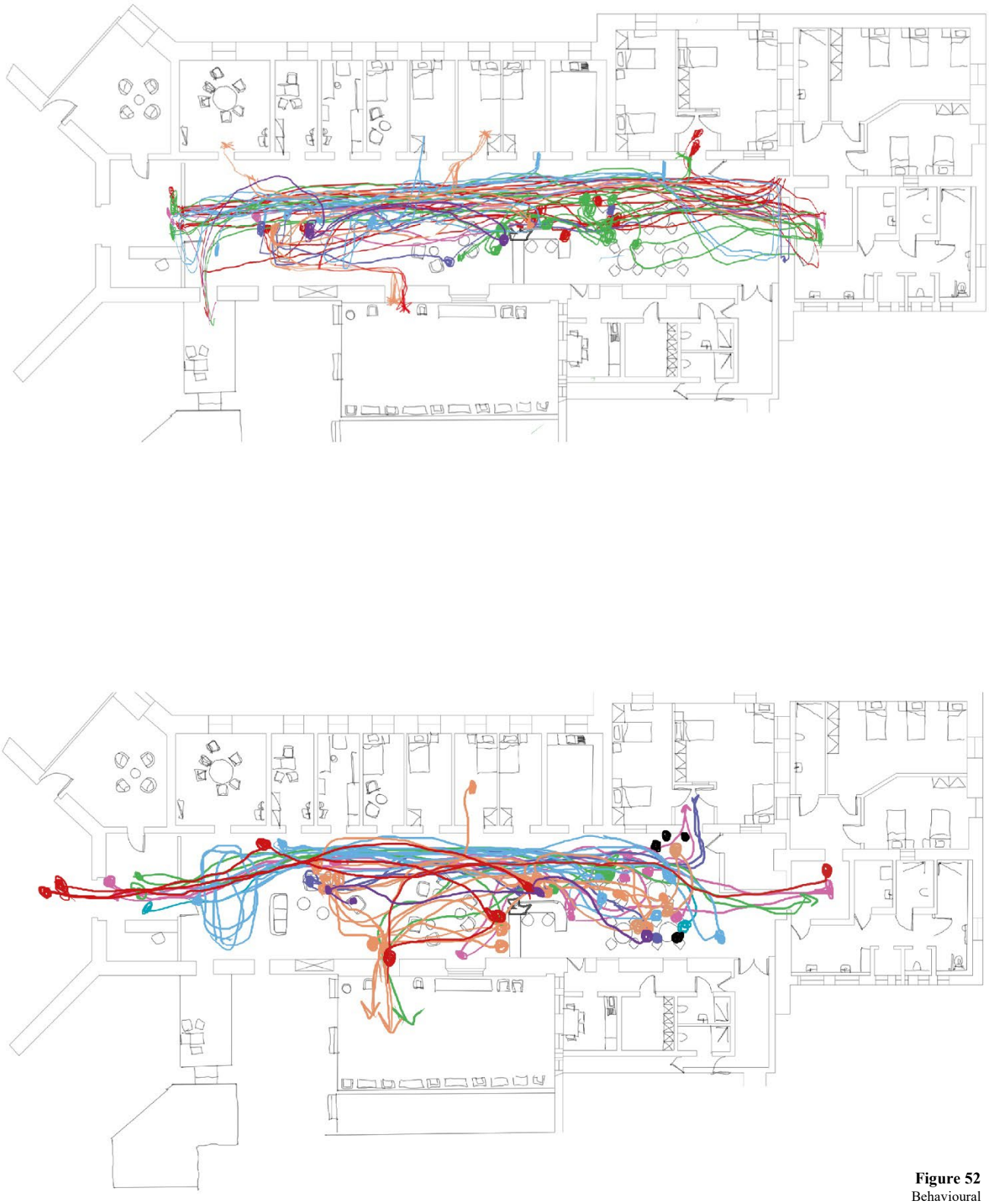


Figure 52
Behavioural Mapping. Morning of 29.04.24

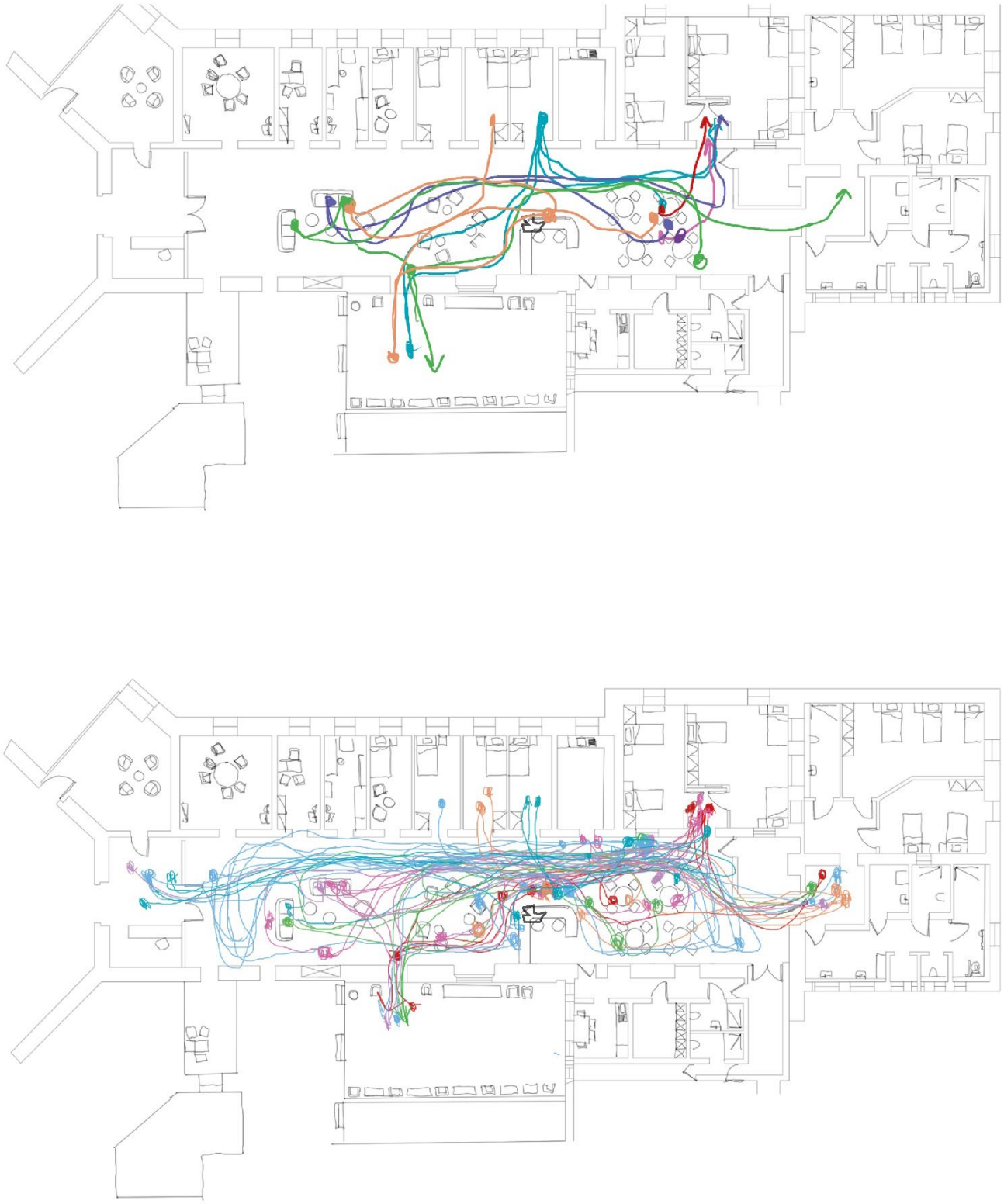


Figure 73
Behavioural Mapping. Afternoon of 29.04.24

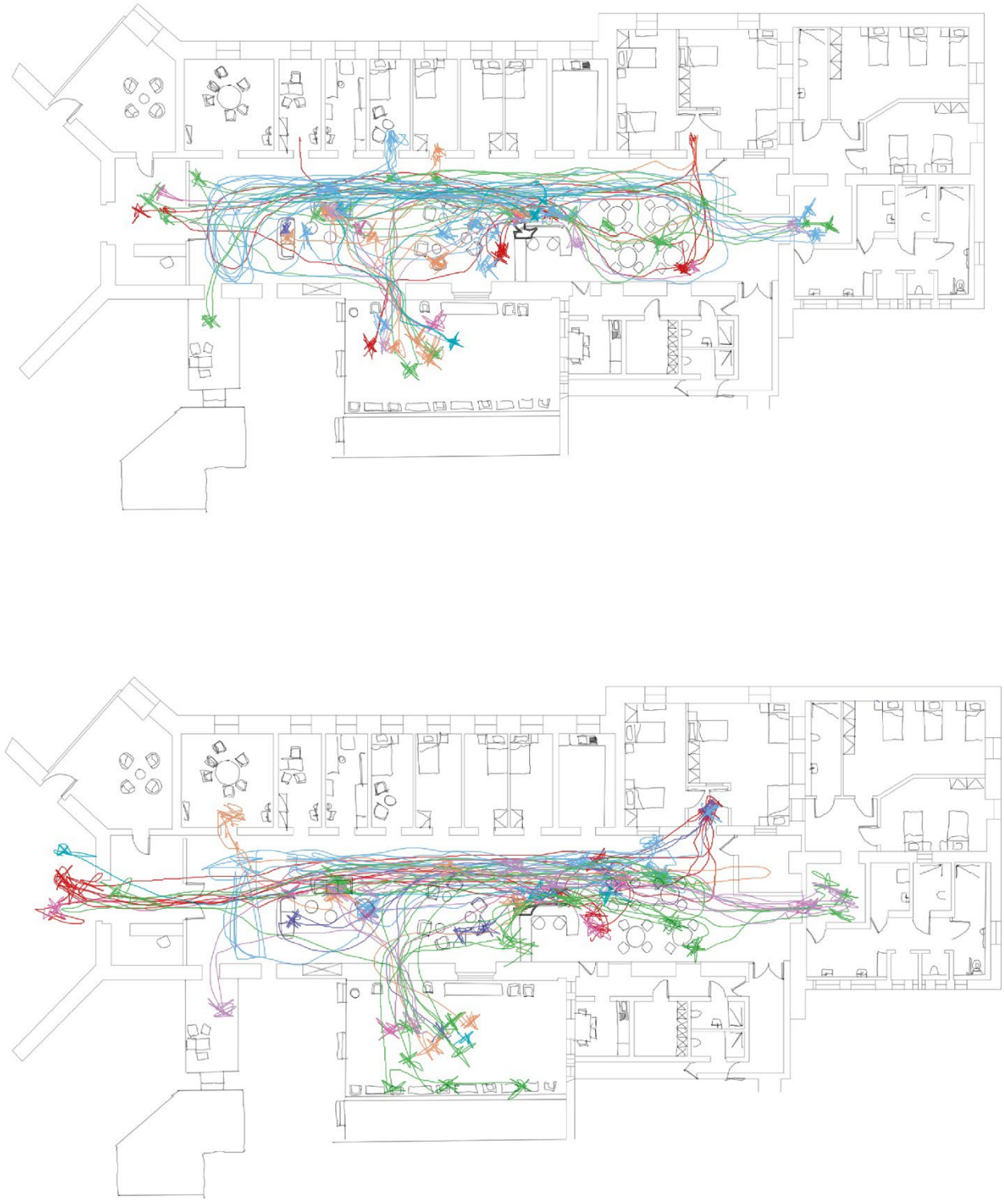


Figure 74
Behavioural Mapping. Morning of 30.04.24

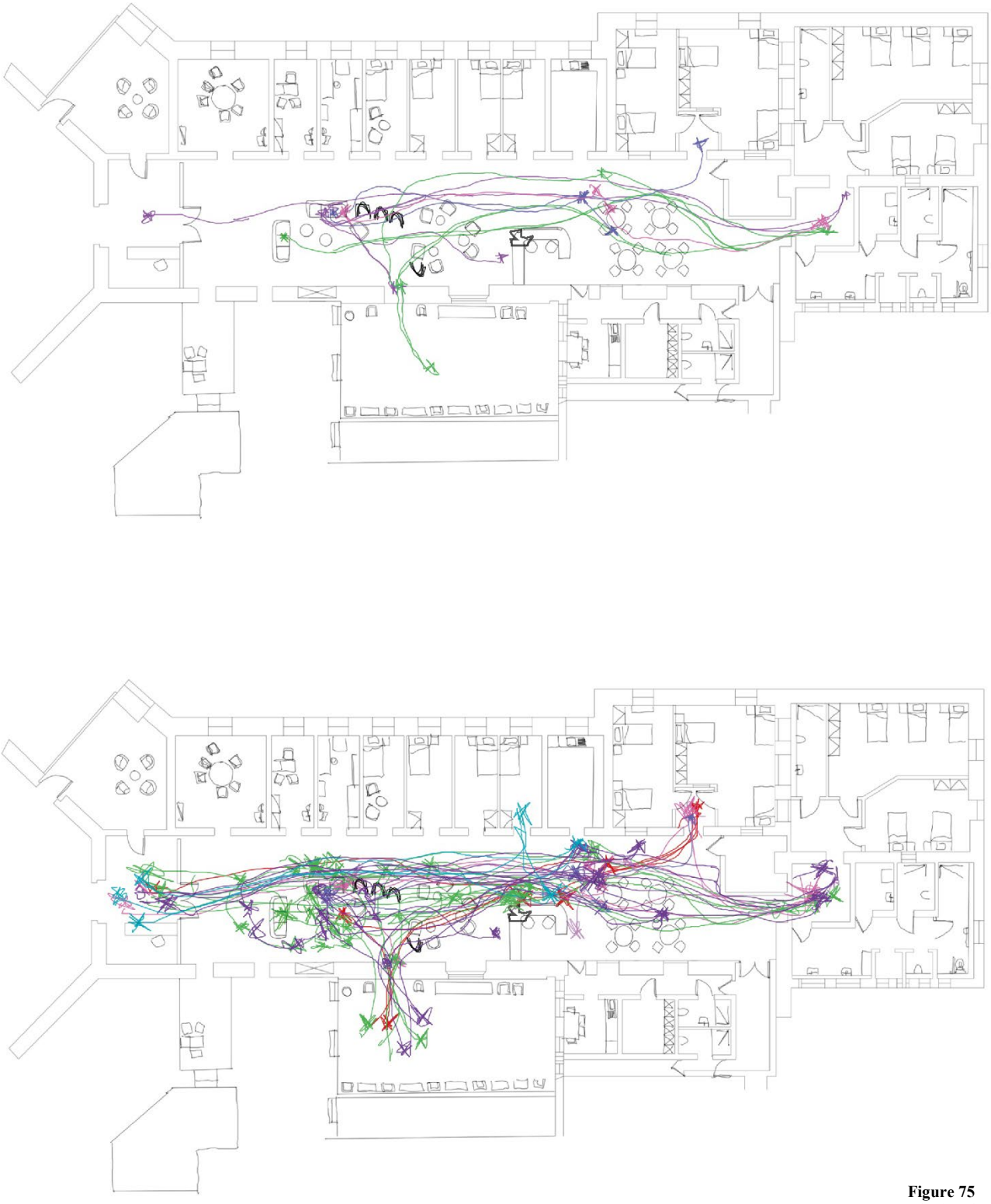


Figure 75
Behavioural Mapping. Afternoon of 30.04.24

Figure 76
Behavioural Mapping. Morning of 01.05.24

Figure 77
Behavioural Mapping. Afternoon of 01.05.24

Figure 78
Behavioural Mapping. Afternoon of 02.05.24

A.3.2 Observations

Day 1 *9:00 – 10:00*

- purple asked for cookies and went to watch TV
- red pacing from entrance door to dining area and to bathroom / bedroom
- blue checking something in window where the puzzles are. pink went to therapy
- red hurt his hand, came up to desk so nurses can give him a bandage
- green doing her makeup at table. One of the chief nurses, left. Everyone said goodbye
- snacks were handed out and green wore her sunglasses
- blue interacting with red – pat on the back – everyone seems to centre around the young one, fragile, maybe sense of nurture. red went to therapy
- peach went to pantry to ask for something, wanted to do it himself, but 'patients' cannot enter pantry
- blue claimed that this is the best ward in MCH. ''ma naħsibx li l-oħrajn hekk ukoll.''. purple is still watching TV and eating
- peach sat down and put clock on the table, carrying around plastic bags
- green went to bathroom again, decided to sit somewhere else, went back to initial table and started putting on makeup again
- blue falling asleep. Music in the background – famous tunes. It's like living in a simulation.
- red came back from therapy / workshop, set his glass on table where green was, then went to the bathroom / bedroom area. green went to her bedroom.
- purple went to throw wrapper away. Went to the bathroom with nurse. red asked the nurses to open outside for a cigarette break
- purple went to go get a sweater since he was cold. blue went into bedroom to get food for another service user. He then started offering food to everyone else.
- blue wanted to put chocolate in 'freezer' on his own. Decided to give it to the nurses since he accepted that he cannot go inside the pantry.
- indigo came for a phone call
- blue pacing around
- pink came back from therapy, greeted purple and went to the bathroom. indigo went back to sit on the sofa
- salmon came back from outside cigarette break, sat back down
- green came back and went to sit down on a different table
- salmon paced around for a bit, went into bedroom, still peeping out through observation window, and came out after a bit
- visitors came for salmon, went into quiet room
- green journalling and singing along background music. Stood up after a bit and started dancing

- purple put his feet up and hood up. indigo also put her feet up, could be sleeping on the sofa
- red came and asked for something from the desk and went into bedroom. Minions playing on the tv
- green came to make a phone call but didn't after no one answered her request to make one: they have to ask to make a phone call. Got up, asked for a key, grabbed her bag and exited the ward.
- red came for a blood test
- green came back and went into bedroom
- salmon came out of quiet room, went inside bedroom
- green came back and phoned someone. Put on her sunglasses. Claimed that the detergent is irritating her and that she needs someone to bring her her home detergent.

Day 1 *10:00 – 11:00*

- blue sat down and is reading a book
- green came to make a call then went outside to lobby
- salmon came out and went back on sofa near purple. Background music stopped
- pink came up to desk to greet visitor '' alright la qegħdin hawn''
- pink went to sofa to speak to purple and salmon, then went to bedroom
- red came back. blue went to speak to red
- salmon asked for nurses to open outside. red asked salmon if he wanted to go to the garden. salmon went outside instead. red came to ask if he can go to the garden. Went to the garden outside ward
- pink came back with an apple and sat down at table
- blue wanted to open the door for people (control?). he wasn't going to go out
- blue went to look at frame on wall. Pacing around a lot
- blue vaping and pacing around. purple went to get a pillow for the sofa
- salmon came back from outside and sat down on sofa. Went to sit down near pink – he is still eating an apple
- blue went to table where pink and salmon are. Went back to living area
- blue went to sit on another table, still speaking to pink
- pink went to throw away core of apple then went back near blue. blue removed his shoes and put his feet up on chair
- salmon went next to blue
- salmon came to desk to speak about therapy session
- salmon went to speak to purple
- pink, purple, blue, salmon group therapy session on dining table
- green got up and went outside with nurse

- indigo got up, picked up remote, chose movie then turned tv off. Came up to desk and went to join the others in group therapy.
- salmon went outside for a smoke break
- green came back in still wearing her sunglasses
- salmon came back in for a phone call
- salmon and red came back to ask for a key to outside. Jade came in and went to group therapy
- salmon came back in, grabbed remote and started watching TV
- salmon left tv on, walked towards group therapy session and stood near them. Nurse grabbed a chair for him and urged him to sit down
- crowded area in the dining area, maintenance works going on (internet, ladder, workers. Etc.)
- salmon went to speak to workers and went back to group therapy. purple walking around with socks.
- Pink went up to nurse station to ask about food, asked for a beer

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Day 1 *12:30 – 13:30*

- salmon wanted cig break. jade went after him
- jade went back inside into bedroom
- purple went on sofa and laid down + watched TV
- jade went to his personal bedroom
- salmon came back in, went inside personal bedroom
- green and indigo finished lunch but still stayed at table. green still with her sunglasses on
- green wants to go outside. Door is locked
- green came back in and sat on sofa
- cleaners cleaning dining area. Chairs are lifted onto tables. Area is essentially closed. green got up to lay down on adjacent sofa to purple. Glasses still on.
- green was told that they started to clean and she should go in her room. purple told the same. Lights switched off
- all service users in bedrooms. Cleaners throwing water on the floor to clean

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Day 1 *14:00 – 15:00*

- green and periwinkle woke up from nap, went outside
- jade came in from lobby with bags of fruit. Asked whether he can refrigerate them. Asked them to put a label on his fruit showing that it is his.
- green and periwinkle – went inside and sat at table
- peach: ‘‘tini biro ħa nikteb nota’’ – to nurses
- pink went to sit on sofa, grabbed remote and switched on TV

- pink got up to shut outside door which was left open. green and periwinkle having conversation at table, playing cards. Nurses were retelling a story where a patient locked everyone in the yard and was resisting to move.
- pink was whistling loudly along with TV.
- pink not looking at TV, scanning room and looking down at his hands
- pink starts walking towards his bedroom. Passes window with puzzles and gazes at it. Comes back and sits on sofa.
- jade comes back and sits on sofa next to pink, having conversation
- pink comes to desk and asks about purple. purple has been taken to hospital. Wanted to know if he is alright
- pink went to arrange placement of plant. He then continued to water the plant with his drinking water from plastic bottle.
- jade and pink gathered near doorway to have a conversation
- blue came up to desk to ask if he can have cream for a pimple. Nurses don't have so he tries to conceal it with his hand. He starts vaping and holding his chin – where the pimple is. Vaping is not allowed inside. Nurses point that out so he stops
- pink and jade moved to one side of the wall, singing along to background music and talking
- blue left ward in frustration
- pink peeking in bedrooms encouraging other people to wake up. Moved to small sofa, arranged it a bit and sat down.
- jade came up to desk to ask when he has to take his pills. Went back inside
- green walked to look at the puzzles. Bags in her hand as if she is leaving. Doesn't leave her personal belongings unattended. Sunglasses almost always on
- pink went to eat.
- salmon came to pick up pills from desk and went to eat
- blue came up to desk to ask for charger for his vape. ''mingħar dan ma nagħmlu xejn.''.
- red came to ask for lighter and went outside. blue followed.
- green went to sit on sofa and watch TV
- periwinkle reading book. Having a conversation with green. Laughing
- red came back inside to eat
- pink went in front of pantry to get more water. Nurses were walking towards pantry to change the water. pink advised them to cut a little bit to help it survive. pink seems to like gardening
- periwinkle and green falling asleep on sofa.
- red came up to desk to write himself up for garden time which is at 3-5pm
- red went up to outdoor door but it was locked. They always try anyways

- salmon came up to desk to ask about family meeting. Went back to bedroom
- red came up to desk asking where his friend can send a bank card
- blue came to pick up his cape and pace again. Stops at puzzle section
- blue helped another service user move the sofa to face salmon. Sofa was next to salmon before. Centrifugal vs centripetal. Could be because of light, or because she needed to speak to salmon. They have not spoken.

Day 2 *08:30 – 09:30*

Note:

CAT A	CAT B	CAT C
Nurse 1-1	carer 1-1	carer (within a grp of patients)

Nurse station at the centre vs the side (other wards). There's more engagement this way. A hub within the ward

- Patients within the ward are very helpful (want to accomplish something?)
- green brushing her hair
- pink,purple, and jade watching TV
- green is using observation window to check her hair
- red reading book, salmon came up to desk to ask about dr appointment
- salmon was asked whether he would like his sheets changed. He seemed as though he didn't care but still went inside the bedroom to check what the nurse was doing and supervised
- pink went up to red and started massaging him. He offered everyone in the dining area massages
- green went up to plant in corner to arrange it
- jade,pink, and salmon playing ball outside – therapy
- red went outside for a smoke break
- green wanted to buy cigs with card, doesn't want to use coins because of her coin collection
- blue pacing a lot
- pink went to get phone. Phones cannot be brought inside
- blue and jade walking and talking. jade trying to match pace of blue since he paces a lot
- red came to make a phone call, asked another user if he can borrow the chair
- blue went inside bedroom to get money for green for her cigarettes
- red asked if he can go for a walk
- blue still pacing
- blue went outside to play ball
- blue went up to nurse station to ask about dr appt
- salmon went outside. Outside remained open today, maybe by mistake. People seem to be going out more now that they don't have to ask for a key

- ‘‘ funtana qisek dieħel Versailles’’ – blue about MCH
- blue wants to help with opening doors (agency?)
- ward almost empty. People either outside or in intervention room.

Day 2 *09:30 – 10:30*

- Two patients were discharged on this day. salmon and pink. Both are taking the space in whilst waiting for someone to discharge them. Looking at frames, touching sofas, etc.
- everyone playing ball outside
- blue on sofa on his own
- purple went to change top and sat down on sofa. pink near purple – attachment
- red came back from his walk
- purple was watching a movie in living area. pink, out of respect, went in the dining area to watch something else on the other TV
- purple went to check up on pink to ask whether he wants to watch the movie on the other TV.
- blue went near pink to play cards with him
- red talking to blue on the side
- pink stopped to stretch in doorway and sat down on same table
- green started getting irritated because she was hungry but it wasn’t lunchtime yet.
- blue playing card game with others
- blue asked nurse to play cards with them
- pink slept on table
- salmon went in quiet room
- periwinkle pacing dragging feet and looking down
- pink came to ask for blood sugar test
- green came up to desk and asked if she can water the plants outside
- purple has multiple pillows on the sofa
- pink singing along to music
- pink went outside to play ball
- green went out for cig break, wore sunglasses
- group therapy session on table
- purple asked for chocolates for someone else, sat down near peach and offered the chocolates. They weren’t for him, he asked because peach wanted chocolate
- red wants to go for another walk
- green went outside to water the plants
- green came up to desk where plant is and checked if it needed watering
- green went to sit on sofa to sleep

Day 2 *14:00 – 15:00*

- pink noticed that it’s raining. Called indigo over to look at rain from door that leads to the outside. After cleaning, furniture was arranged in a straight line. To watch TV, the arrangement hasn’t changed yet.

- Some service users have decided to not take a nap in the living area. indigo removed shoes and is walking around in her socks. She is comfortable within the space. They still had to go to their room since staff had to clean
- green decided to nap on the couch instead of in her own bed. Listening to old songs. Dining area lights are switched off and chairs are on top of the table.
- indigo placed her shoes near courtyard door – maybe something she does out of habit? Purple woke up. Grandpa-grandson dynamic – ‘‘ejja l’hawn sabiħ.’’ purple went to sit in between indigo and pink. purple is also walking around in socks
- green also walking around without shoes. They have accepted that they will be here a while. The service users who desperately want to leave left their shoes on, resulting in a state of waiting

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Day 2 *15:00 – 16:00*

- green wore her sunglasses again
- green waiting near outside door. It is locked again. She wants to go for a cigarette break
- indigo started dancing to the music
- lights turned on in the dining area
- pink went to get coffee from snack trolley
- purple also went to get some snacks
- Dynamic now shifted to dining area
- green waits her turn and stays far from others while they are selecting their food
- green seems to be speaking to herself. She went to eat and have tea/coffee on the sofa instead of having it with the others. The others conform to the norm of eating on the table.
- green got up and started dancing, touching floor
- green wears sunglasses inside
- red came inside and claimed that it was raining
- jade came up to desk to ask whether he can go to the gardens. Nurse told him that it’s raining. He still wanted to go.
- red came to desk saying he still wants to go outside, even though it’s raining.
- indigo asks for a cup from pantry. If they have to ask for a key, they rather go to the garden than in the courtyard. Agitation – service user got up, walked 2 steps and then sat down again.

Day 3 *08:30 – 09:30*

- lights were switched on. Music on tv playing. dark green socialising with green and indigo

- purple and pink still speaking to emergency medical respondent.
- Sofa chairs still haven't changed from yesterday. Centrifugal arrangement
- jade assigned new room from dormitory. brown wants another cigarette after taking his blood.
- staff started cleaning floors after, had to tell indigo, green and dark green to go to their bedrooms. Everyone has to go to their rooms. Chairs on table. green went to quiet room.
- purple came to ask for phone (they have to get a key, go outside and can use it for 30 mins)
- staff also went to use outdoors to smoke
- chairs were arranged by cleaning staff to the way it was before.
- carer went inside with dark green
- jade came up to desk to ask for key to go outside of ward. Staff told him he has to wait until floor has dried.
- purple and pink waiting by doorway to see if they can come out since they cleaned. pink came to ask for key to go out ward.
- purple came out and went to sit on sofa turned volume up.
- brown got irritated that outdoor area was locked. peach always has a clock with her. She wants a radio as well. Always carries multiple plastic bags with her. Everywhere she goes. green always has her bag with her as well.
- green sleeps in a dorm. When she had to go inside because of cleaning, she decided to go to the quiet room instead.
- green asked to sign to go out.
- brown started looking around then sat down on sofa
- green going back and forth to quiet room. Putting her stuff there. Claiming it.
- red asked whether he can order something from bolt. He cannot
- Carers watching TV with users. – relationship
- Brown and peach sitting down and staring
- chairs were put down. pink came to table and sat down, waiting for lunch. Sleeping

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Day 3 *09:30 – 10:30*

- dark green wearing heels with socks. Public holiday – slow day. One patient never leaves the unit. brown hanging out at nurse station and looking around observing the environment.
- dark green wore her indoor slippers
- lunch is brought in trolley
- pink told purple to put his feet down from the table since there are guests.
- jade waited until guests left to come out – diminish interaction
- green asked if she can rest in quiet room instead. Went inside, wore her sunglasses, changed her shoes, and went into her bedroom.

Day 3 *10:30 – 11:30*

- pink went to check for lunch through window of pantry, he then went to sit down at dining table. ROUTINE. He always sits at the same spot.
- green ,dark green,red wanted to sit together. red was on table alone, stood up and went over to other table.
- periwinkle started out looking down, feet dragging, speaking very quietly. Within 2 days, she made friends within the ward, became accustomed to it. Now, her head is held up, not dragging her feet anymore and speaking at a normal volume.
- Lights are switched off after lunch
- purple went to get pillows for the sofa.
- Dark green outside, after finished smoking: ‘‘To the Cave’’
- Brown: ‘‘do you have a lighter?’’
- Doesn’t use bin, throws cigarette on the ground. Only uses corners, shade. Standing in doorway, seems as though he’s not sure if he wants to go out or not
- ‘‘close the door’’ – from inside
- purple moved sofa towards other one – to talk better?

Day 4 *08:30 – 09:30*

- indigo moved sofa next to main sofa
- pink went to close courtyard door
- green went to tell some good news to indigo and then to carer on table
- periwinkle, jade asked to go to garden
- red wanted to open pantry door for carer
- red went to look for magazines. He wants to cut his hair today
- green went inside quiet room. Seems as though she appropriated it as her bedroom now

Day 4 *10:30 – 11:30*

- purple went inside to get pillows
- Barber came
- purple wants to cut his hair - the only time red has sat on the couch – to wait for a haircut
- brown signaling for key
- periwinkle wanted to go outside
- Relatives cannot go outside in the yard with them. ‘‘oħti tista’ tiġi tpejjep hawn?’’
- pink went to sit down on table to wait for lunch. Favours habits and timetables. Didn’t want to go to social club since it was time to eat. Didn’t want to go after since it is nap time.
- green came back and went straight to quiet room
- green went shopping for the family since she is flying out to see them. Shopping has to be checked.
- purple feels like he is at home

- In other wards, the nurse station is inside a room
- Food depends on the day. They don't order it..
- red has indoor slippers on
- Turning off lights to clean – but really to signal people to go to sleep
- periwinkle left, dark green helped with her bags
- green went outside and then back to quiet room
- pink urging people to wake up, went outside

Day 4 *13:30 – 14:30*

- It would be better to clean in brighter lights, but to make the residents aware that they need to go in their rooms, they turn off the lights
- jade eating in the dark because he came in late to eat
- pink put down a chair to sit down next to jade, then went into pantry to ask for his food
- New people tend to stay in the corner to evaluate the space and be safer
- jade is feeling irritated that the others left ''qisni ħabs''. ''estru se jtini'' '' ħa ttini rasi'', ''Noħrog minn hawn irrid''
- green was sick and was getting very frustrated. Crying loudly. Going into quiet room. Back and forth. She smokes to calm down and to ground herself.

Day 4 *14:30 – 15:30*

Appendix 4

Access and Consent Forms

L-Università ta' Malta

Kirsty Borg <kirsty.borg.18@um.edu.mt>

Research Ethics Application - Approved following amendments requested by UREC-DP and submission of HEC permission

SWB FREC <research-ethics.fsw@um.edu.mt> 23 April 2024 at 15:24
To: Kirsty Borg <kirsty.borg.18@um.edu.mt>
Cc: Alexia Mercieca <alexia.mercieca@um.edu.mt>, Dr Natalie Kenely <natalie.kenely@um.edu.mt>, Shirley Cefai <shirley.cefai@um.edu.mt>

REDP Application ID: BEN-2023-00105

Dear Kirsty Borg,

Reference is made to the **submitted HEC permission following the amendments** which were **requested by UREC-DP** regarding your research titled *Unravelling Mind-Space Interactions: Design and Mental Health in the Acute Female Ward at Mount Carmel Hospital.*

Your ethics application has been **approved** and **you may now start your research**.

Regards,

L-Università ta' Malta

Faculty Research Ethics Committee

Faculty for Social Wellbeing
Room 113, Humanities A Building
+356 2340 2237 / 3220 / 3625

Website: www.um.edu.mt/socialwellbeing/students/researchethics

/KUMITAT
DWAR L-ETIKA FIS-SAĦĦA

Direttorat ta' l-Informazzjoni fuq is-Saħħa u Riċerka
95, Telgħet Guardmangia,
Pieta' PTA 1313
Malta

Our Ref: **HEC03/24**
Your Ref:

HEALTH
ETHICS COMMITTEE

Directorate for Health Information & Research
95, Guardamangia Hill,
Pieta' PTA 1313
Malta

Tel: (+356) 25599000
Email: hec@gov.mt

Dear Ms Kirsty Borg

The Health Ethics Committee has taken note of the approval by Faculty Research Ethics Committee and reviewed your proposal in line with the requirements of the Mental Health Act. The HEC considers your proposal to be in line with such requirements.

HEC Number	HEC03/24
Project Title	*'Unravelling Mind-Space Interactions: Design and Mental Health in the Acute Female Ward at Mount Carmel Hospital'*
Acceptance Date	18/04/2024
HEC Decision	Accepted- subject to applicant supplying the HEC with a list of participants (template provided) which form is to be approval by Specialists in Psychiatry, for participation of adults in the following research project.

Kind regards,

Profs. Neville Calleja
Secretary- Health Ethics Committee

Cc: Commissioner for Mental Health

L-Università ta' Malta

Kirsty Borg <kirsty.borg.18@um.edu.mt>

UoM Dissertation - Request for Meeting and Hospital Access

Xuereb Stephanie at Health-Mental Health Services <stephanie.xuereb@gov.mt> 1 November 2023 at 14:49
To: Kirsty Borg <kirsty.borg.18@um.edu.mt>
Cc: Alexia Mercieca <alexia.mercieca@um.edu.mt>

Dear Kirsty,

I am pleased to inform you that yes Mental Health Services will be approving your observational study in the new acute ward, pending that there is clearance from Ethics Committee and approval re Data Protection and Patient Confidentiality.

You would need to submit all your dissertation proposal etc and these will be reviewed by our Data Protection Officer, Mr Oswald Balzan (in copy).

Best regards,

Dr S Xuereb

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image001.jpg
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L-Università ta' Malta

Kirsty Borg <kirsty.borg.18@um.edu.mt>

Requesting Confirmation of Access

Balzan Oswald at Health-Mental Health Services <oswald.balzan@gov.mt> 2 January 2024 at 11:21
To: Kirsty Borg <kirsty.borg.18@um.edu.mt>
Cc: Alexia Mercieca <alexia.mercieca@um.edu.mt>, Taylor East Rachel at Health-Mental Health Services <rachel.taylor-east@gov.mt>

Dear Ms.K.Borg,

Permission to proceed with your research is APPROVED.

Oswald Balzan
Principal
Mount Carmel Hospital
Health-Mental Health Services

t +356 23304014 **e** oswald.balzan@gov.mt
https://health.gov.mt | www.publicservice.gov.mt | fb.com/servizzpubbliku

MINISTRY FOR HEALTH

MOUNT CARMEL HOSPITAL, TRIQ NOTABILE,
ATTARD, MALTA

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Date _____

Information letter

Dear Sir/Madam,

My name is Kirsty Borg and I am a student at the University of Malta, presently reading for a Master's in Architectural Design I am presently conducting a research study for my dissertation titled 'Unravelling Mind-Space Interactions: Design and Mental Health in the Acute Female Ward at Mount Carmel Hospital'. This is being supervised by Dr Alexia Mercieca, and advised by Dr Natalie Kenely. This letter is an invitation to participate in this study. Below you will find information about the study and about what your involvement would entail, should you decide to take part.

The aim of my study is to explore the impact and implications of architecture on mental health within Malta's Mount Carmel Hospital. By understanding the inner workings of the mind and how it responds to the environment, and by analysing the architecture of Mount Carmel Hospital, specifically the new acute ward, the dissertation seeks to uncover how the built environment affects mental well-being.

Your participation in this study would help contribute to a better understanding of the relationship between mental health and architecture. Any data collected from this research will be used solely for purposes of this study.

Should you choose to participate, you will be asked to answer questions relating to how to conduct observations in a clinical setting such as an acute ward within Mount Carmel Hospital. This will aid and inform the observations to take place after these interviews have been conducted, in order to ensure that the researcher (myself) has the necessary understanding and skills at hand in order to carry out the observations appropriately and ethically.

Participation in this study is entirely voluntary; in other words, you are free to accept or refuse to participate, without needing to give a reason. You will have a choice as to whether your identity is disclosed or not. You are also free to withdraw from the study at any time, without needing to provide any explanation and without any negative repercussions for you. Should you choose to withdraw, any data collected from your interview will be erased as long as this is technically possible (for example, before it is anonymised or published), unless erasure of data would render impossible or seriously impair achievement of the research objectives, in which case it shall be retained in an anonymised form.

In the case of a physical interview:

As a means to fully understand and internalize the suggestions being put forward (suggestions which will inform my observations), the interview will be audio recorded. After the interview, a copy of your answers will be sent to you, so that you may have the option to ask for any amendments, additions, or removal of any statements.

All data will be stored in encrypted, password-protected form. The personal data (voice recordings) will only be accessible by myself (the researcher), will be stored in an encrypted, password-protected form, separate from other data, and will be destroyed within 24 months of the completion of my dissertation.

In the case of an online question and answer form:

After the questions have been answered, a copy of your answers will be sent to you, so that you may have the option to ask for any amendments, additions, or removal of any statements.

All data will be stored in encrypted, password-protected form. The personal data (voice recordings) will only be accessible by myself (the researcher), will be stored in an encrypted, password-protected form, separate from other data, and will be destroyed within 24 months of the completion of my dissertation.

If you choose to participate, please note that there are no direct benefits to you. Your participation does not entail any known or anticipated risks.

Please note also that, as a participant, you have the right under the General Data Protection Regulation (GDPR) and national legislation to access, rectify and where applicable ask for the data concerning you to be erased. All data collected will be stored in an anonymised form on completion of the study.

A copy of this information sheet is being provided for you to keep and for future reference.

Thank you for your time and consideration. Should you have any questions or concerns, please do not hesitate to contact me by e-mail at kirsty.borg.18@um.edu.mt. You can also contact my supervisor over the phone: +356 2340 6242 or via email: alexia.mercieca@um.edu.mt.

Sincerely,

Kirsty Borg
kirsty.borg.18@um.edu.mt

Dr Alexia Mercieca
alexia.mercieca@um.edu.mt
+356 2340 6242

Participant's Consent Form

Unravelling Mind-Space Interactions: Design and Mental Health in the Acute Female Ward at Mount Carmel Hospital

I, the undersigned, give my consent to take part in the study conducted by Kirsty Borg. This consent form specifies the terms of my participation in this research study.

1. I have been given written and/or verbal information about the purpose of the study; I have had the opportunity to ask questions and any questions that I had were answered fully and to my satisfaction.

2. I also understand that I am free to accept to participate, or to refuse or stop participation at any time without giving any reason and without any penalty, before May 2024. Should I choose to participate, I may choose to decline to answer any questions asked. In the event that I choose to withdraw from the study, any data collected from me will be erased as long as this is technically possible (for example, before it is anonymised or published), unless erasure of data would render impossible or seriously impair achievement of the research objectives, in which case it shall be retained in an anonymised form.

3. I understand that I have been invited to participate in an elite interview in which the researcher will ask questions to *aid and inform the researcher on how to carry out observations* at Mount Carmel Hospital, specifically at the acute ward. I am aware that the interview will take approximately 1 hour. I understand that the interview is to be conducted in a place and at a time that is convenient for me.

4. I understand that my participation *does not entail any known or anticipated risks.*

5. I understand that *there are no direct benefits to me from participating in this study.* I also understand that this research may benefit others by helping in the increase of the body of knowledge as relating to architecture and mental health.

6. I understand that, under the General Data Protection Regulation (GDPR) and national legislation, I have the right to access, rectify, and where applicable, ask for the data concerning me to be erased.

7. I understand that all data collected will be *stored in an anonymised form on completion of the study (June 2024).* Any personal data will be destroyed within 24 months of the completion of the dissertation.

8. I have been provided with a copy of the information letter and understand that I will also be given a copy of this consent form.

9. I am aware that, by marking the first-tick box below, I am giving my consent for this interview to be audio recorded and converted to text as it has been recorded (transcribed). This only applies to a physical interview. I am aware that if the questions are answered over email/text, my answers will be kept. The document will be retained in an anonymous form, and may be amended as per no.11.

MARK ONLY IF AND AS APPLICABLE

☐ I agree to this interview being audio recorded

☐ I do not agree to this interview being audio recorded

☐ I agree to the document containing my answers which were sent via email to be kept on a device.

10. I am aware that extracts from my interview may be reproduced in these outputs, either in anonymous form or using a pseudonym [a made-up name or code – e.g. respondent A].

OR

11. I am aware that, by marking the first tick-box below, I am asking to review extracts from my interview transcript that the researcher would like to reproduce in research outputs, before these are published. I am also aware that I may ask for changes to be made, if I consider these to be necessary. The produced transcripts will be sent within a maximum of 2 weeks from the completion of the interview. I understand that I have a timeframe of two weeks, from receiving the transcript, to get back to the researcher with any suggested changes.

MARK ONLY IF AND AS APPLICABLE

☐ I would like to review extracts of my interview transcript that the researcher would like to reproduce in research outputs before these are published.

☐ I would **not** like to review my interview transcript extracts that the researcher would like to reproduce in research outputs before these are published.

12. I am aware that, by marking the first tick-box below, I am giving my consent for *my identity* to be revealed in publications, reports or presentations arising from this research, and responses I provide may be quoted directly or indirectly.

MARK ONLY IF AND AS APPLICABLE

☐ I agree that my identity may be disclosed in research outputs.

☐ I do not agree that my identity may be disclosed in research outputs.

I have read and understood the above statements and agree to participate in this study.

Name of participant: _____

Signature: _____

Date: _____

Kirsty Borg
kirsty.borg.18@um.edu.mt

Dr. Alexia Mercieca
alexia.mercieca@um.edu.mt
+356 2340 6242

Date 11/4/2024

Participant's Consent Form

Unravelling Mind-Space Interactions: Design and Mental Health in the Acute Female Ward at Mount Carmel Hospital

I, the undersigned, give my consent to take part in the study conducted by Kirsty Borg. This consent form specifies the terms of my participation in this research study.

1. I have been given written and/or verbal information about the purpose of the study; I have had the opportunity to ask questions and any questions that I had were answered fully and to my satisfaction.

2. I also understand that I am free to accept to participate, or to refuse or stop participation at any time without giving any reason and without any penalty, before May 2024. Should I choose to participate, I may choose to decline to answer any questions asked. In the event that I choose to withdraw from the study, any data collected from me will be erased as long as this is technically possible (for example, before it is anonymised or published), unless erasure of data would render impossible or seriously impair achievement of the research objectives, in which case it shall be retained in an anonymised form.

3. I understand that I have been invited to participate in an elite interview in which the researcher will ask questions to *aid and inform the researcher on how to carry out observations* at Mount Carmel Hospital, specifically at the acute ward. I am aware that the interview will take approximately 1 hour. I understand that the interview is to be conducted in a place and at a time that is convenient for me.

4. I understand that my participation *does not entail any known or anticipated risks.*

5. I understand that *there are no direct benefits to me from participating in this study.* I also understand that this research may benefit others by helping in the increase of the body of knowledge as relating to architecture and mental health.

6. I understand that, under the General Data Protection Regulation (GDPR) and national legislation, I have the right to access, rectify, and where applicable, ask for the data concerning me to be erased.

7. I understand that all data collected will be *stored in an anonymised form on completion of the study (June 2024).* Any personal data will be destroyed within 24 months of the completion of the dissertation.

8. I have been provided with a copy of the information letter and understand that I will also be given a copy of this consent form.

9. I am aware that, by marking the first-tick box below, I am giving my consent for this interview to be audio recorded and converted to text as it has been recorded (transcribed). This only applies to a physical interview. I am aware that if the questions are answered over email/text, my answers will be kept. The document will be retained in an anonymous form, and may be amended as per no.11.

MARK ONLY IF AND AS APPLICABLE

☑ I agree to this interview being audio recorded

☐ I do not agree to this interview being audio recorded

☑ I agree to the document containing my answers which were sent via email to be kept on a device.

10. I am aware that extracts from my interview may be reproduced in these outputs, either in anonymous form or using a pseudonym [a made-up name or code – e.g. respondent A].

OR

11. I am aware that, by marking the first tick-box below, I am asking to review extracts from my interview transcript that the researcher would like to reproduce in research outputs, before these are published. I am also aware that I may ask for changes to be made, if I consider these to be necessary. The produced transcripts will be sent within a maximum of 2 weeks from the completion of the interview. I understand that I have a timeframe of two weeks, from receiving the transcript, to get back to the researcher with any suggested changes.

MARK ONLY IF AND AS APPLICABLE

☐ I would like to review extracts of my interview transcript that the researcher would like to reproduce in research outputs before these are published.

☑ I would **not** like to review my interview transcript extracts that the researcher would like to reproduce in research outputs before these are published.

12. I am aware that, by marking the first tick-box below, I am giving my consent for *my identity* to be revealed in publications, reports or presentations arising from this research, and responses I provide may be quoted directly or indirectly.

MARK ONLY IF AND AS APPLICABLE

☐ I agree that my identity may be disclosed in research outputs.

☑ I do not agree that my identity may be disclosed in research outputs.

I have read and understood the above statements and agree to participate in this study.

Name of participant: _____

Signature: _____

Date: _____

Rachel Taylor-East
MD MSc MRCPsych
Consultant Psychiatrist
Mental Health Services
MC Reg: 2919
rachel.taylor-east@gov.mt

11/4/2024

Elite Consent Form

Unravelling Mind-Space Interactions: Design and Mental Health in the Acute Female Ward at Mount Carmel Hospital

Kirsty Borg

I, the undersigned, give my consent to take part in the study conducted by Kirsty Borg. This consent form specifies the terms of my participation in this research study.

1. I have been given written and/or verbal information about the purpose of the study; I have had the opportunity to ask questions and any questions that I had were answered fully and to my satisfaction.

2. I also understand that I am free to accept to participate, or to refuse or stop participation at any time without giving any reason and without any penalty, before May 2024. Should I choose to participate, I may choose to decline to answer any questions asked. In the event that I choose to withdraw from the study, any data collected from me will be erased as long as this is technically possible (for example, before it is anonymised or published), unless erasure of data would render impossible or seriously impair achievement of the research objectives, in which case it shall be retained in an anonymised form.

3. I understand that I have been invited to participate in an elite interview in which the researcher will ask questions to aid and inform the researcher on how to carry out observations at Mount Carmel Hospital, specifically at the acute ward. I am aware that the interview will take approximately 1 hour. I understand that the interview is to be conducted in a place and at a time that is convenient for me.

4. I understand that my participation does not entail any known or anticipated risks.

5. I understand that there are no direct benefits to me from participating in this study. I also understand that this research may benefit others by helping in the increase of the body of knowledge as relating to architecture and mental health.

6. I understand that, under the General Data Protection Regulation (GDPR) and national legislation, I have the right to access, rectify, and where applicable, ask for the data concerning me to be erased.

7. I understand that all data collected will be stored in an anonymised form on completion of the study (June 2024). Any personal data will be destroyed within 24 months of the completion of the dissertation.

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9. I am aware that, by marking the first-tick box below, I am giving my consent for this interview to be audio recorded and converted to text as it has been recorded (transcribed). This only applies to a physical interview. I am aware that if the questions are answered over email/text, my answers will be kept. The document will be retained in an anonymous form, and may be amended as per no.11.

1. **MARK ONLY IF AND AS APPLICABLE**

Tick all that apply.

- ☐ I agree to this interview being audio recorded
- ☐ I do not agree to this interview being audio recorded
- ☐ I agree to the document containing my answers which were sent online via email / online form to be kept on a device.

10. I am aware that extracts from my interview may be reproduced in these outputs, either in anonymous form or using a pseudonym [a made-up name or code – e.g. respondent A].

OR

11. I am aware that, by marking the first tick-box below, I am asking to review extracts from my interview transcript that the researcher would like to reproduce in research outputs, before these are published. I am also aware that I may ask for changes to be made, if I consider these to be necessary. The produced transcripts will be sent within a maximum of 2 weeks from the completion of the interview. I understand that I have a timeframe of two weeks, from receiving the transcript, to get back to the researcher with any suggested changes.

2. **MARK ONLY IF AND AS APPLICABLE**

Tick all that apply.

- ☐ I would like to review extracts of my interview transcript that the researcher would like to reproduce in research outputs before these are published.
- ☐ I would not like to review my interview transcript extracts that the researcher would like to reproduce in research outputs before these are published.

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3. **MARK ONLY IF AND AS APPLICABLE**

Tick all that apply.

- ☐ I agree that my identity may be disclosed in research outputs.
- ☐ I do not agree that my identity may be disclosed in research outputs.

4. I have read and understood the above statements and agree to participate in this study. **Please insert your name and surname below.**

Elite Consent Form

Unravelling Mind-Space Interactions: Design and Mental Health in the Acute Female Ward at Mount Carmel Hospital

Kirsty Borg

I, the undersigned, give my consent to take part in the study conducted by Kirsty Borg. This consent form specifies the terms of my participation in this research study.

1. I have been given written and/or verbal information about the purpose of the study; I have had the opportunity to ask questions and any questions that I had were answered fully and to my satisfaction.

2. I also understand that I am free to accept to participate, or to refuse or stop participation at any time without giving any reason and without any penalty, before May 2024. Should I choose to participate, I may choose to decline to answer any questions asked. In the event that I choose to withdraw from the study, any data collected from me will be erased as long as this is technically possible (for example, before it is anonymised or published), unless erasure of data would render impossible or seriously impair achievement of the research objectives, in which case it shall be retained in an anonymised form.

3. I understand that I have been invited to participate in an elite interview in which the researcher will ask questions to aid and inform the researcher on how to carry out observations at Mount Carmel Hospital, specifically at the acute ward. I am aware that the interview will take approximately 1 hour. I understand that the interview is to be conducted in a place and at a time that is convenient for me.

4. I understand that my participation does not entail any known or anticipated risks.

5. I understand that there are no direct benefits to me from participating in this study. I also understand that this research may benefit others by helping in the increase of the body of knowledge as relating to architecture and mental health.

6. I understand that, under the General Data Protection Regulation (GDPR) and national legislation, I have the right to access, rectify, and where applicable, ask for the data concerning me to be erased.

7. I understand that all data collected will be stored in an anonymised form on completion of the study (June 2024). Any personal data will be destroyed within 24 months of the completion of the dissertation.

8. I have been provided with a copy of the information letter and understand that I will also be given a copy of this consent form.

9. I am aware that, by marking the first-tick box below, I am giving my consent for this interview to be audio recorded and converted to text as it has been recorded (transcribed). This only applies to a physical interview. I am aware that if the questions are answered over email/text, my answers will be kept. The document will be retained in an anonymous form, and may be amended as per no.11.

MARK ONLY IF AND AS APPLICABLE

- [x] *I agree to this interview being audio recorded*
- [ ] *I do not agree to this interview being audio recorded*
- [ ] *I agree to the document containing my answers which were sent online via email / online form to be kept on a device.*

10. I am aware that extracts from my interview may be reproduced in these outputs, either in anonymous form or using a pseudonym [a made-up name or code – e.g. respondent A].

OR

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MARK ONLY IF AND AS APPLICABLE

- [x] *I agree that my identity may be disclosed in research outputs.*
- [ ] *I do not agree that my identity may be disclosed in research outputs.*

I have read and understood the above statements and agree to participate in this study. ***Please insert your name and surname below.***

Gertrude Micallef

Elite Consent Form

Unravelling Mind-Space Interactions: Design and Mental Health in the Acute Female Ward at Mount Carmel Hospital

Kirsty Borg

I, the undersigned, give my consent to take part in the study conducted by Kirsty Borg. This consent form specifies the terms of my participation in this research study.

1. I have been given written and/or verbal information about the purpose of the study; I have had the opportunity to ask questions and any questions that I had were answered fully and to my satisfaction.

2. I also understand that I am free to accept to participate, or to refuse or stop participation at any time without giving any reason and without any penalty, before May 2024. Should I choose to participate, I may choose to decline to answer any questions asked. In the event that I choose to withdraw from the study, any data collected from me will be erased as long as this is technically possible (for example, before it is anonymised or published), unless erasure of data would render impossible or seriously impair achievement of the research objectives, in which case it shall be retained in an anonymised form.

3. I understand that I have been invited to participate in an elite interview in which the researcher will ask questions to aid and inform the researcher on how to carry out observations at Mount Carmel Hospital, specifically at the acute ward. I am aware that the interview will take approximately 1 hour. I understand that the interview is to be conducted in a place and at a time that is convenient for me.

4. I understand that my participation does not entail any known or anticipated risks.

5. I understand that there are no direct benefits to me from participating in this study. I also understand that this research may benefit others by helping in the increase of the body of knowledge as relating to architecture and mental health.

6. I understand that, under the General Data Protection Regulation (GDPR) and national legislation, I have the right to access, rectify, and where applicable, ask for the data concerning me to be erased.

7. I understand that all data collected will be stored in an anonymised form on completion of the study (June 2024). Any personal data will be destroyed within 24 months of the completion of the dissertation.

8. I have been provided with a copy of the information letter and understand that I will also be given a copy of this consent form.

9. I am aware that, by marking the first-tick box below, I am giving my consent for this interview to be audio recorded and converted to text as it has been recorded (transcribed). This only applies to a physical interview. I am aware that if the questions are answered over email/text, my answers will be kept. The document will be retained in an anonymous form, and may be amended as per no.11.

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MARK ONLY IF AND AS APPLICABLE

- [ ] *I would like to review extracts of my interview transcript that the researcher would like to reproduce in research outputs before these are published.*
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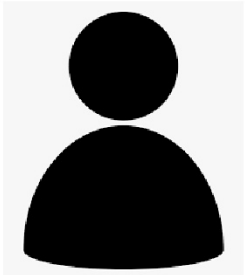
MARK ONLY IF AND AS APPLICABLE

- [x] *I agree that my identity may be disclosed in research outputs.*
- [ ] *I do not agree that my identity may be disclosed in research outputs.*

I have read and understood the above statements and agree to participate in this study. ***Please insert your name and surname below.***

Dorothy Scicluna

Information letter to take part in a study

	I am Kirsty Borg and I am a student at the University of Malta. I am writing to invite you to take part in a study that I am doing. In this letter, you will find all the information about the study.
A = mental health B = architecture 	The study is about the relationship between mental health (represented as letter A in the assent form) and Architecture (represented as letter B in the assent form). I am doing this study to learn more about the relationship between mental health and the environment. I would like to find out how the environment may affect mental wellness.
	To do this study, I would like to observe the residents residing in this ward and their environment, specifically in the common areas. No observations will take place in the private areas (bedrooms and bathroom). No photos will be taken of the individuals taking part in this research.
	When I write this study, there will be no way of identifying you in the research.

	The observations will take 2-3 hours in the morning and 2-3 hours in the afternoon, for a maximum of 5 days.
	You do not have to take part in this study if you don't want to. If you do not wish to take part, your presence in the current environment will not be observed. Any data collected will be deleted or retained in an anonymous form.
	You will also be helping others learn more about the relationship between mental health and the environment.
	There are no risks associated with the study or your participation in the study.
	This letter of information is for you to read. The head of the ward will have a copy of this information letter.

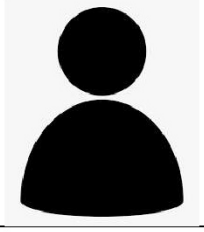
Best wishes,

Kirsty Borg

Assent Form

'Assent' means that you agree with everything that is written below.
If you agree with everything that is written, tick the box in the last part.

	I agree to take part in the project that Kirsty Borg, a student from the University of Malta, is doing.
	I have information about the study.
	I know that I will be observed in my current environment. I know that only the common areas will be observed, and that no observations will take place in the private areas (bedrooms and bathroom). I also know that no photos of myself will be taken.
	I know that the observations will take 2-3 hours in the morning and 2-3 hours in the afternoon, for a maximum of 5 days.
	I know that I do not have to take part in this project if I do not want to. If I do not wish to take part, my presence in the current environment will not be observed. I also know that any collected data will be deleted or retained in an anonymous form.

	I know that when Kirsty Borg writes about the study, I will not be identifiable in the observations.
	I know that any data collected may possibly be accessed by other people apart from the researcher for verification purposes. I know that even though this is the case, the data collected will be in an anonymous form and I will not be identifiable.
	I know that if I take part, I will also be helping others learn more about the relationship between A and B (refer to information sheet)
	I know, that as a participant, I have the right, under the General Data Protection Regulation (GDPR) and national legislation that implements and further specifies the relevant provisions of said regulation, to access, rectify, and where applicable ask for the data concerning me to be erased.
	I know that there are no risks associated with the study or my participation in the study.
	I have received and read the information letter about the study and the gatekeeper will have a copy of this assent form.

I have understood everything that is written here and if I had any questions they have been answered. I agree to be observed in my environment by the student.

☐ Tick to agree

Date: _____