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Shaping the Typology of Modern Finnish Psychiatric Hospitals: Analyzing Design Briefs of Two Case Studies

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Abstract. The article aims to study the concepts, themes, and ideas behind the new typology of modern Finnish psychiatric hospitals by analyzing two recently built cases. Several new psychiatric hospitals were built in different regions of Finland in the last decade. They are built on the campuses of somatic central hospitals, they combine outpatient, inpatient, and day wards for many different age groups. They have public functions that serve the whole campus or the surrounding area. The vast gardens of previous facilities were replaced by balconies, enclosed yards, and roof terraces. In the absence of national guidelines on design, the new typology was formed, shaped by cooperation between the hospital administration, hospital staff, and the architects. The article analyzes the design briefs of two similar through inductive content analysis to derive the main themes mentioned in these documents. Then, it is analyzed how the themes were reflected in the final design of the buildings, highlighting the commonalities and differences of the two projects. Some of the most common themes were safety, functionality, centralization, cooperation, proximity, flexibility, renewing psychiatric care, isolation, changing patient demographics, family, privacy, stigma, therapeutic spaces, outdoor spaces, and working environment. They are reflected in the building design being more concerned with security, in more dense and compact floorplans, and in design solutions that make it possible to quickly adapt in crisis situations. The Case B, designed just few years later than Case A, is noticeably more focused on the security aspect. The article also provides an insight into how the typology of hospitals was influenced by societal and legislative changes as well as changes in psychiatric care.

Keywords. healing environment, psychiatric hospital design, typology, architecture

1. Introduction

In the last decade, Finland has seen a boom in the construction of new psychiatric hospitals. At least seven were constructed between the years 2014 and 2024, counting only stand-alone, specialized-care-level hospitals. All of them were constructed directly on the somatic hospital campuses to replace mostly 100-year-old facilities located in rural environments. At first glance, moving psychiatric hospitals to somatic campuses seems to contradict the principles of therapeutic design – today medical campuses can hardly be considered calming or mentally restorative environments. This study aims to shed some light on the ideas that have shaped the typology of modern Finnish psychiatric hospitals by studying the design briefs of two recently built facilities.

2. Background

2.1. The two case studies

The two hospitals discussed in this article are chosen due to their similarity in size and function. Both cases are multi-story structures that provide a variety of services, presented in Figure 1. Both were designed by the same architecture office. Case A was designed and built in the years 2017-2021 and Case B in 2019-2023. The design briefs date from 2016 (A) and 2018 (B).

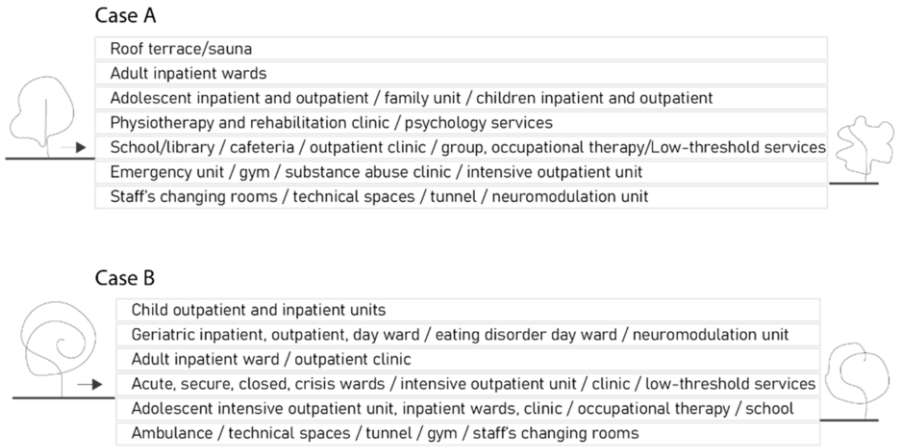

Figure 1. Section, showing functions within the building.

There are a lot of similarities in how both cases were designed, and they have common traits with other modern Finnish psychiatric hospitals, reflecting the new typology presented in Figure 2.

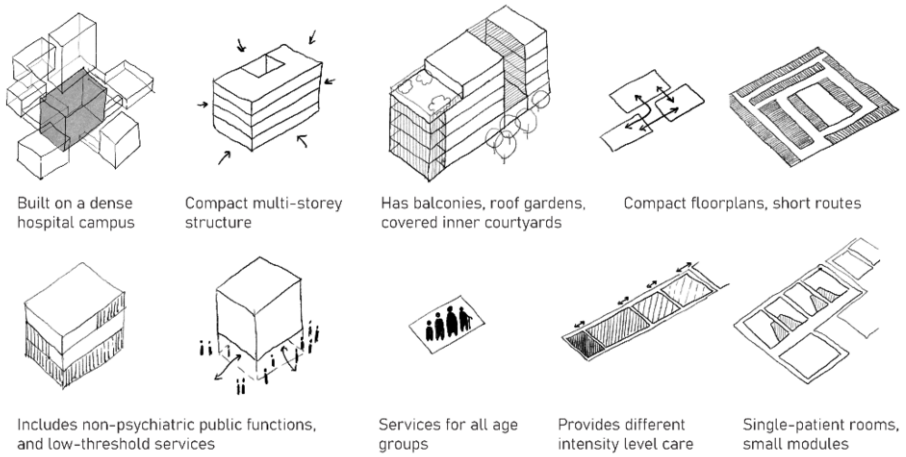

Figure 2. Common traits in the typology of modern Finnish psychiatric hospitals.

2.2. Guidelines and design briefs.

The new typology has appeared despite there not being any national guidelines or standards in Finland that would specify how healthcare buildings should be designed, except for the laws regarding patients' rights, infection prevention, fire safety and moisture control [1]. Instead, policy documents provide a valuable insight into general trends that affected the physical environment of psychiatric hospitals.

The goal to reduce the dominating role of psychiatric hospitals in favor of improved primary level care was first reflected in the Mental Health Act of 1990 which spoke about "mental health work" instead of "mental hospital care" [2, p.78, 3]. This vision, however, was not fully realized due to the economic crisis in the 1990s, and the outpatient services were not developed at the same pace as the number of beds was being reduced [1, 4]. Coordination of services has been complicated also due to administrative division – until very recently primary-level outpatient care was governed by municipalities, and specialized care by regional health authority [2, p.73-81]. Physically and administratively, outpatient and inpatient psychiatric care was provided separately.

To make the development of services more coherent, the first strategy document called Mieli 2009 was published by the Finnish Institute for Health and Welfare [5]. It defined the main goals for the years 2009-2015: prioritizing primary and outpatient care, merging specialized-level outpatient psychiatric and substance abuse services, and partially replacing children inpatient hospital care with day wards. The need to transfer psychiatric inpatient services to general hospitals is mentioned, but without further explanation [5]. The doctoral dissertation by J. Kärkkänen, published a few years prior, suggests that merging with somatic campuses could improve the cooperation between psychiatric and somatic medical care, help to cut costs, reduce stigma and mysticism surrounding mental healthcare, improve the image of psychiatry, and lower the threshold to accessing the services. Kärkkäinen also warns that it could weaken psychiatry's own identity, worsen the patient's privacy, and lower the quality of the physical environment [1, 6, p.96-97].

Another important document was the decree of the Ministry of Social Affairs and Health that came into effect in 2015 [7], requiring psychiatric emergency services to be combined with somatic ones in central hospitals.

In both case studies, the above-mentioned documents were cited in the design briefs as the reason why the new psychiatric hospital buildings were to be built on the somatic campuses. The design briefs, developed by the working groups, also provided a vision of how the new hospital will function, how in it will bring together services that have never existed under one roof before. They served as a starting point for the planners and architects. During client meetings, the working groups could comment on the designs starting from the concept stage to the placement of furniture and color scheme. Therefore, the design briefs and minutes from the client meetings serve as a valuable resource to understand the design intentions behind the typology of modern Finnish psychiatric hospitals.

3. The analysis

3.1. The source material

The official name of the design briefs in Finnish is *toiminnallinen suunnitelma* - operational plan (Case A) and *toiminnallinen tarveselvitys* - operational need assessment report (Case B). The design briefs were analyzed through inductive content analysis. The content analysis has been used in other studies covering similar topics, described further in section 3.1.1.

Only the design briefs were compared since follow similar structure and contain similar information. Minutes of the client meetings and floorplans of the Case A and Case B were obtained from the architecture office that designed the buildings but were only used to comment on the themes in section 4.2. The author was a part of the design group in both cases and was present during the client meetings of Case B.

The design briefs of Case A and Case B are 70 pages and 44 pages long respectively. During the content analysis, statements from the source material were entered into a spreadsheet. The statements related to the study were chosen if they were about: 1) organization of functions, 2) physical environment, 3) goals for the new hospital. The source material is in Finnish, therefore original quotes were marked in the source material, and then simultaneously translated and simplified in the spreadsheet. Consequently, the main themes were derived from the statements, as demonstrated in Table 1.

Table 1. An example of content analysis.

Statement	Simplification	Theme
The school should be close to the yard and gym so that they can be used for physical education class and between breaks		Shared use, proximity
Care outcomes can be improved by spatial solutions. Big enough windows and providing enough natural light and views of surrounding nature acts as a supporting factor of recovery. Lighting that adjusts to the time of the day also helps to improve sleep schedule	Natural light, views of nature, circadian rhythm lighting can support recovery.	Improving care outcomes, therapeutic environment
Existing spaces are not flexible enough to allow for continuously changing needs.	Changing needs, possibility of modifications	Flexibility

3.1.1. The relevant studies

Content analysis was used in the 2021 study by E. Leinonen and R. Oinonen focused on psychiatric hospital's staff interviews about their hopes concerning working environment in the new building [8]. The main themes from the staff interviews were physical environment, functionality, safety, comfort, patient privacy, air quality, centralization, well-being at work. The staff were hopeful about bringing different services under one roof and saw in as an opportunity to improve their expertise, especially in relation to substance abuse. They expect that the length of stay, and the number of hospital beds will decrease further, and the focus will continue to shift to outpatient care. As for the patients, the members of staff predict that the number of patients with substance-abuse-related psychosis will grow. Their concerns related to the lack of resources, and the increasing workload on the nurses [8].

Another study, conducted in the same hospital and using the same method focused on staff's opinions on the latest changes in their work in the old facility, and their expectations of the new hospital [9]. The interviews mentioned rushed nature of work, shorter hospital stays, the wards being always full, growing number of patients with substance abuse problems, increasing episodes of violence in the ward, and increase in involuntary treatment. The staff noted that the patients are more knowledgeable about their rights. The fears in relation to the new psychiatric hospital building were: open offices and consequently worsening privacy of patients and staff, the number of hospital beds, and not having been heard during the design process. The hopes were: new, more functional, clean spaces, more closely connected units, close cooperation with the somatic side, being a part of other specialized medical care, and a sense of belonging. The study mentions that the staff view cost-cutting as one of the reasons for the concentration of services in a new building, and hope that the resulting savings would be redistributed to the development of outpatient, early childhood, and education care [9].

Another similar study from 2019 by L. Kaikko focused on staff's views on potential participation in the design process of the new psychiatric hospital building and their priorities in this process. When asked what the crucial elements in the design process of the new building should be, safety was overwhelmingly the most important one, followed by privacy, family participation, and comfort. The staff were worried about the lack of personal offices in the new building, as it will result in working time being lost on managing the use of shared rooms. Functionality, potential lack of space, accessibility, and access to the outdoor spaces were also mentioned as concerns, as well as organizational changes stemming from healthcare reforms [10].

The data gathered from design briefs was used in the recent study on Slagelse psychiatric hospital in Denmark, examining the tensions between design intentions and actual operational processes of the new hospital. Also, fieldwork in the form of interviews and observations was conducted. The study points out that the design of psychiatric spaces is usually not able to fully reflect and predict the complex interactions, despite trying to optimize and streamline the processes and ways of working [11,12].

4. The results

4.1. The content analysis: the results

The statements reflecting design intention in the design briefs of Case A and Case B were first separately categorized, ranked by frequency, and then grouped into larger themes. In Table 2, the themes are listed together with sub-themes to give a quick overview of their contents.

Table 2. The main themes derived from the analysis of the design briefs of Case A and Case B.

The main themes	The sub-themes
Safety	● Staff and patient safety ● Physical environment's role in reducing aggression. ● Short and clear routes between units ● Safety of outdoor areas ● Safety of fixtures and materials
Functionality	● Suitability for modern psychiatric care ● Spatial demands of the new functions

Proximity	● Centralizing emergency services ● Proximity to somatic care ● Connections between outpatient, day wards, inpatient units ● Proximity to diverse services - diversification of psychiatric care ● Shared resources
Cooperation	● Cooperation between different units/specialties/ disciplines ● Cooperation between different levels of care: prevention, primary and specialized care
Centralization	● Regional strategy to centralize services ● Previously scattered services are brought under one roof ● Better use of staff's expertise
Efficiency	● Efficient use of space through shared use ● Efficient logistics on campus and within the building ● Efficient use of staff's resources during night shifts ● Provision of care in a cost-effective way
Flexibility	● Flexibility of staff resources and staff spaces ● Flexibility to adapt to future changes (in population, in legislation, in needs) ● Ability to modify spaces in a crisis situation ● Preparedness for overcapacity in the wards ● Flexible use of shared multi-purpose spaces
Renewing care	● Focus on outpatient care and prevention ● Developing new type of intensive care units ● Hope to improve physical health of psychiatric patients ● Stronger position of the patient
Isolation and separation	● Location of the hospital ● Ability to split spaces/patient groups to guarantee a calm and safe environment ● Separation to provide more focused/intensive care
Changing patients	● Growing need of mental healthcare services ● Aging population ● Patients with more severe conditions in inpatient care ● More patients with both substance abuse and a psychiatric diagnosis ● More patients in involuntary care ● A shorter length of stay
Family	● Services for all ages under one roof ● Possibility to treat multiple family members together ● Spaces for family visits in the inpatient wards ● Size of spaces to allow for family's presence during consultations ● Planning of safe routes and entrances that visitors take
Privacy	● Single patient rooms ● Good sound insulation
Stigma	● Location of the hospital influences stigma ● Equal treatment with patients of somatic hospital ● Modern design as a factor of status
Therapeutic spaces	● Therapeutic function of space, not just appearance ● Motivating, empowering spaces ● Acoustic qualities of spaces
Outdoor spaces	● Access to outdoor space ● Different types and functions of outdoor spaces ● What constitutes an outdoor space
Working environment	● A safe working environment ● Acoustic quality of office spaces ● Shared use of consultation and office spaces

4.2. The themes derived from the analysis and how they were reflected in the design

The section describes in more details how the themes appeared in the designed briefs and were reflected in the final design of Case A and Case B. The beginning of each sections describes the design briefs, and end paragraphs, comments are given using the data from client meetings, finished floorplans and author's own recollections of design process.

4.2.1. Safety

One of the most frequently mentioned themes was safety. In both cases, safety of staff and patients was a priority, and there was hope that safety will be improved by building a new facility. The role of physical design in reducing aggression is highlighted, for example, carefully planning the location of the units and the routes between them and ensuring smooth and fast transitions. It would also guarantee that help can be provided to neighboring units quickly. Both design briefs mention that it should be possible to split hospital's areas into more manageable and easily observable parts.

In the design brief of Case A, it is also mentioned that spaces should feel safe for the patients, and that safety can be improved by using evidence-based design. Single-patient rooms with ensuite bathrooms are expected to improve safety from infections. Proximity to the existing somatic campus and its emergency services is expected to contribute to safety of patients and staff.

The design brief of Case B states that the old wards are hindering safety since they cannot be split into smaller modules, making it more difficult for the staff to de-escalate crisis situations. Safety of the outdoor areas is raised as a separate concern. The existing hospital is in a park-like area, that are now more of a safety concern than a therapeutic space. There was no safe enclosed outdoor space where the patients could go independently.

> *"The new hospital will help to improve the control over the hospital's operations. Current hospital's extensive grounds do not serve the needs of current care provision, but instead pose a clear safety risk. Because of the increased use of drugs by the patients, the drugs are also being circulated in the hospital area. Closed outdoor yards and a clear entrance would help with monitoring."*
>
> *(quote from Case B's design brief)*

> *"The use of drugs and an aging population bring their own challenges. The influence of societal changes on psychiatry cannot be denied. In the future, patients in need of more intensive care will be more present in hospitals, and the spaces should provide the ability to modify them to calm the patients down and ensure safety. According to present knowledge, aggression can be substantially reduced by well-designed spaces."*
>
> *(quote from Case B's design brief)*

To comment on how the theme of safety has influenced the design, the client meeting notes were read through. In both cases, safety concerns were raised when routes, entrances, materials, locks, details like fixtures and furniture were discussed. It has influenced how outdoor spaces, wards and consultation rooms were designed (see sections 4.2.6, 4.2.5 and 4.2.9). In Case B client meetings, safety of the outdoor spaces

was discussed (see section 4.2.6), as well as different levels of security in the wards' care modules (see Figure 3). For example, it was negotiated that the patient room doors would have observation windows only in the more intensive care modules, while others would be allowed more privacy.

4.2.2. Functionality

Functionality of spaces was mentioned often in both design briefs since significant parts of the documents focus on explaining how the previous buildings were not functional for the modern needs of psychiatry. It is mentioned that the spaces should be well designed to suit various activities, be adaptable for multi-purpose use, and their size should be appropriate to allow both individual and family consultations. Since in both cases the new hospital buildings centralize diverse services, functional and diverse spaces are described as essential for successful cooperation.

The design brief of Case A provides detailed descriptions of how the new functions should be planned within the new facility. It also mentions the importance of functional spaces for maintenance tasks such as cleaning, laundry and waste management. Spaces should allow for digital technologies to be utilized fully. Functional spaces are expected to reduce costs, as well as contribute to synergy between different departments.

In the design brief of Case B, it is said that diverse therapeutic spaces such as outdoor areas, occupational therapy rooms, gyms etc. and adaptability of the spaces to the changing needs of patients, are important for the functioning of modern psychiatric care as the importance of the outpatient functions grows.

In both cases, when the client meetings started, the site, the budget, and the maximum number of square meters were strictly defined already at the investment decision stage of the project. Due to this constraint, the functionality of some spaces had to be compromised, resulting in, for instance, a greater reliance on shared use, smaller waiting rooms, and a lack of natural light in some staff spaces. Ensuring smooth running of the maintenance functions was important during the design process.

4.2.3. Proximity, cooperation, centralization, efficiency.

Proximity to the emergency department of central somatic hospitals has been cited as one of the main reasons for constructing new psychiatric buildings on hospital campuses in the design briefs of both Case A and B, referring to the decree that requires merging of somatic and psychiatric emergency services [7].

Both design briefs reference the Mieli 2009 [5] strategy when explaining why the proximity to somatic central hospitals is needed. It is expected to benefit psychiatric patients - by ensuring that they are treated holistically, and somatic departments - by allowing them to get consultation from the psychiatric specialists. It is expected to diversify provided psychiatric care by for example moving ECT neuromodulation unit from the somatic unit. The design brief of Case B mentions that proximity to laboratory services and the central hospital's pharmacy will be beneficial for developing the pharmacological side of psychiatric care. According to Case B's design brief, proximity will help to improve the physical health of psychiatric patients.

Both design brief mention that good connections between different departments are expected to benefit patients and make service provision smoother. The units are expected to cooperate better in terms of sharing spaces and staff resources, for instance during night shifts or crisis situations. The design brief of Case B highlights how

proximity between departments will help to reduce transportation costs and travel times for both staff and patients.

Both design briefs mention that combining outpatient and inpatient care in one building is expected to increase **cooperation** between departments, and therefore make it easier for the patients to move between different levels of care. Cooperation between preventive, primary, and specialized level care is expected to improve. The design brief of Case A points out that cooperation between different specialists should be considered when designing consultation rooms, they should be spacious enough to fit multi-specialist teams. Case A's design brief mentions how for example, the users of substance abuse services will benefit from low-threshold psychiatric and social services in the new hospital.

The regions' drive to **centralize** specialized level healthcare services is evident in the design briefs of both cases: services previously scattered between different locations are to be brought under one roof. It is mentioned that centralization will help to utilize the expertise of staff better: for instance, psychologists and social workers can consult multiple departments. The design brief of Case A points out that centralized services are more customer-oriented and are necessary for the evolution of psychiatric care. It also mentions how centralization potentially brings new challenges, since it will mean increased density and a bigger flow of people, potentially leading to more collisions between different user groups, which will need to be balanced by improved safety measures. In the design brief of Case B, it is mentioned that the new eating disorder unit will benefit from proximity to both psychiatric and somatic services.

In both cases, **efficiency** is expected to improve through standardization of spaces and practices. The new buildings are seen as a possibility to reorganize care provision in a more cost-effective way. For example, the design brief of Case B states that all the consultation rooms are to be shared use, replacing previous "inefficient" system, where one practitioner could have several offices in different scattered locations.

During the design process, both cases tried to solve the challenges of combining different functions and patient groups, keeping the routes between units as short as possible and ensuring the efficiency of all operations. The need to create the shortest routes from the ambulance to the isolation units in the wards was often the starting point that determined the locations of elevators, staircases and unit entrances. In Case B, it was crucial that this route does not intersect with the visitor's route and would not go through any public areas. In both cases, the priority to have certain units close to each other (occupational therapy unit and inpatient wards, wards and corresponding day clinic with outpatient facilities) has led to very compact floor plans, the downside of which was the lack of natural light in the corridors and some of the staff spaces. Combining different patient age groups in one building also posed a challenge, and, in Case B, there are separate entrances for each group.

4.2.4. Flexibility

In the design brief of Case A, the theme of flexibility is almost absent, while, in Case B, it is the second most common one, where it is mentioned that the spaces should be flexible enough to accommodate changing needs and evolutions of psychiatric care practices, as well as prepared for rising occurrences of violent episodes. The wards should be prepared for overcapacity, and common spaces should allow quick reorganization. Case B mentions that the upcoming changes in legislation should be considered in the design as they are likely to influence spatial solutions.

"The new building will enable the staff to work more flexibly than before and will also create better conditions for cooperation."

(quote from Case A's design brief)

"Flexibility and adaptability are crucial in planning spaces since they will probably have to be modified with time due to operational changes. They are anticipated due to strong demographic changes alone"

(quote from Case B's design brief)

During the client meetings, overcapacity was discussed in both cases, and it was negotiated that each ward would have a double-patient room where an extra patient could be placed. In case A, the room program was developed with the assumption that the number of hospital beds will further decrease in the future or at least remain the same. In Case B many spaces are standardized, both for efficiency and flexibility. In both cases, the possibility of building extensions in case of need for more services was not discussed.

4.2.5. Renewing care: separation, changing patients, role of family, privacy

"Due to societal changes, legislation, and the inflexibility of the current spaces, psychiatric care urgently needs new spaces. Psychiatric services must be moved to the spaces that meet today's requirements, and at the same time renew care processes to match modern needs." *(quote from Case B's design brief)*

According to both design briefs, the outpatient care should be prioritized, and the reduction of beds in inpatient units should be made possible by introducing outpatient intensive care units meant for quick interventions.

The design brief of Case A references Mieli 2009 in saying that the new ideology of care should focus on prevention, empowering the patient and caring for them in their home environment as much as possible [5]. Combining preventative, outpatient, inpatient, and rehabilitation services in one building is expected to help guide clients through the whole process of care more smoothly. As mentioned in section 4.2.1, both design briefs emphasize the need to split the units into smaller, calmer parts, thus making it possible to provide more focused care for those who need it. New spatial solutions aimed at de-escalating situations of distress include: modules in the inpatient wards, relaxation rooms, separate waiting rooms in emergency and intensive outpatient unit (Case A), separate "studios" in the wards, where more focused care can be provided (Case A), separate modules for the patients in involuntary care (Case B) and a new type of High-Intensity Care unit HIC (Case B).

Figures 3 and 4 illustrate how those solutions were implemented in both cases. The approach to modules was different – Case A's module size varies a lot, from 2 to 11 patients, while case B's modules are more uniform, each having its own living room, relaxation room and a kitchenette.

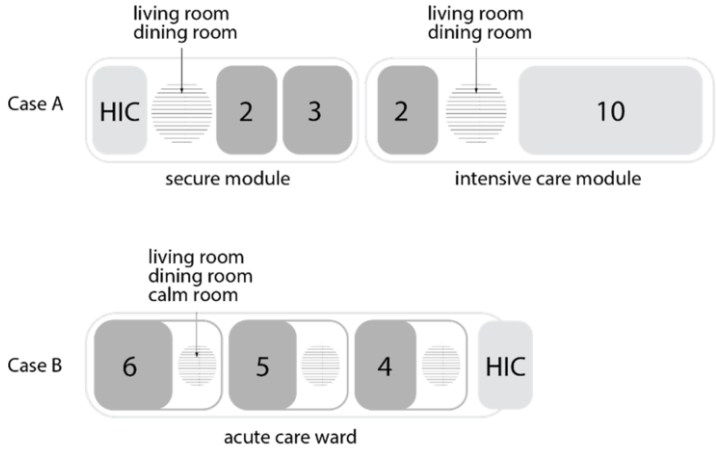

Figure 3. The typology of modules in inpatient wards, the number indicates the amount of patient rooms per module.

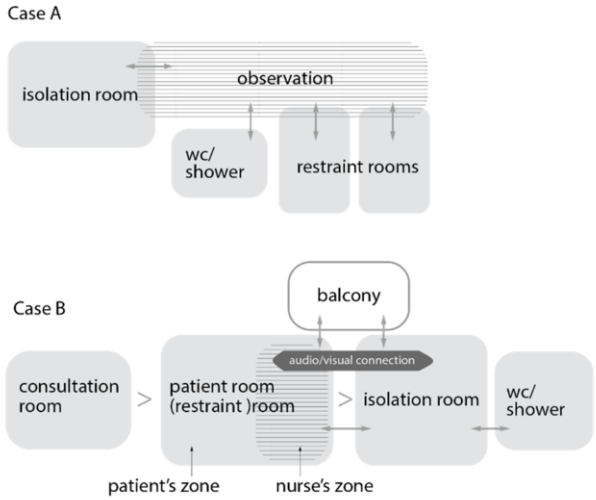

Figure 4. The typology of HIC unit**.**

The design brief of Case B emphasizes that the **nature of care** in the wards is expected to change due to several reasons, mainly since the number of patients undergoing involuntary treatment is growing. With more patients with milder symptoms shifting to outpatient care, the inpatient wards are going to become a place for even more acute care. It is mentioned that violence is already a growing occurrence in the wards, due to the growing number of patients with both substance abuse and a psychiatric diagnosis. Shorter lengths of stay and aging population are expected to have an effect as well. Those issues are not mentioned in the Case A design brief, but it highlights the growing need among children and youth for psychiatric services, as outpatient visits have doubled between the years 2001 and 2016, which will probably be reflected later in adult psychiatry services.

The Case B was designed a few years after Case A and the growing demand for safety in the wards was reflected in the design – there is more possibility to separate

patients from one another, and the modules are more self-sufficient. HIC unit is designed to gradually de-escalate aggressive episode by having spaces with gradually increasing security level. Aging population is also considered, and Case B has a separate clinic and inpatient unit for geriatric psychiatry with larger patient rooms suitable for those with limited mobility. Case A instead has several accessible patient rooms per each adult ward, but no separate geriatric psychiatry unit.

While comparing the two design briefs, it was evident, that the role of **family** is more emphasized in Case A. Its' design brief mentions the ability for family members to stay overnight in the wards, need for visitation rooms, separate units for parents with newborns. Close cooperation between children and adolescent psychiatry is mentioned, because many clients either transfer between those two units, or because members of the same family are treated in both units. In both cases, it is mentioned that the potential presence of family members should be considered when designing spaces in the new buildings – including larger consultation rooms and safe, clear entrances to the wards.

In the implemented design, the wards in both cases have a few larger patient rooms that can also be used for family stays or in case of overcapacity. Both cases have a family unit which is schematically presented in Figure 5. In case B no family rooms in adult wards and no visitation rooms were designed, as it was decided that consultation rooms can be used for that purpose.

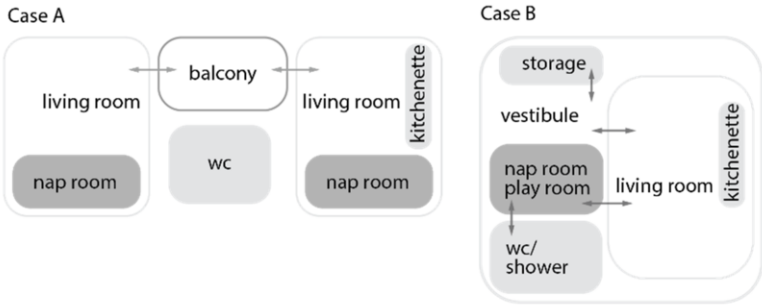

Figure 5. The typology of family units**.**

Both design briefs mention the importance of **privacy**. Case A's brief mentions that the inpatient wards should be located on the upper floors, as it will help protect patients' identity. It is also mentioned that the outdoor yards, especially the one for children, should not be visible from the wards. The new facility will make it possible to switch to single-patient rooms with ensuite bathrooms, which will improve privacy and care, as mentioned in the design brief of Case A:

> *"I have been in inpatient care for years. One thing has always been a problem: it is important for the patients to talk with the nurse. But there is always an obstacle, that there is no place where they can talk - the visiting room is booked, the neighbor is in the room, and the negotiation room is occupied. Small conversation rooms are needed! Or single-patient rooms."*
>
> *(expert by experience, quote from Case A's design brief)*

Privacy concerns have influenced placement of the units in the final design of Case B. Child psychiatry units were placed on the top floor, separate from all other units,

to ensure that the patients are not seen by others. The children's yard is placed so that it could not be seen from the patient rooms. Still, sometimes privacy was outweighed by the need for easy observation. For example, as seen in Figure 6, the patient rooms in both cases are quite similar, but the bed is places behind the ensuite bathroom in Case A, giving the patient more privacy, but in client meeting of Case B it was more important not to creating any blind spots in the room.

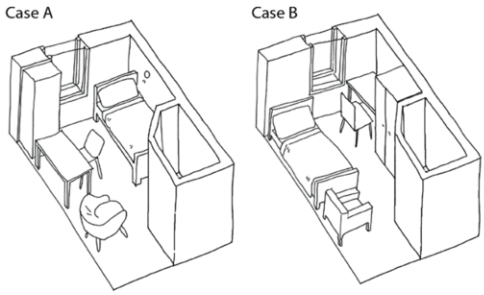

Figure 6. A single-patient room**.**

4.2.6. Outdoor space

Both design briefs state that the outdoor spaces should be designed in a way that promotes play and exercise, motivates patients to use the spaces and be active. Their therapeutic role, and a role in fostering community, is highlighted in the design brief of Case A.

> *"With rehabilitative work being one of the therapeutic approaches to inpatient care, the courtyards become a key therapeutic element. In a therapeutic sense, there should be, for example, a garden where raking leafy trees, caring for fruit trees and garden beds and sanding the park area [in winter] is possible. The courtyards are therapeutic and support patients' psychological recovery."*
>
> *(quote from Case A's design brief)*

The design brief of Case A discusses the need for a variety of outdoor spaces to cater to patients in different conditions. The design brief of Case B highlights the importance of patients having independent access to outdoor spaces, especially for those in involuntary treatment. Security aspect of courtyards is also raised.

One of the topics of client meetings was how to provide daily outdoor access for those patients who are temporarily barred from leaving the ward, as it is their legal right to spend some time outdoors every day. The discussions tried to determine what constitutes an outdoor space: the law did not give a clear definition. The placement of new psychiatric hospital buildings in the densely built hospital campuses provided little opportunity to create enclosed outdoor gardens. It was discussed whether outdoor space means the ability to see the open sky, or the feeling of the wind or temperature change in the unheated space; or is it the feeling of sun on the skin or is it being surrounded by plants; is it the ability to be in the rain or snow. In the end, it was agreed in both cases that at least the feeling of wind and outside air is required, which is the reason why the balconies and terraces are not fully glazed, allowing the air to pass through.

Finished Case A hospital has the balcony, inner courtyards, and a roof terrace that patients can access independently or while accompanied by a nurse. The roof terrace

has a smoking zone, and adult inpatient yards have indoor smoking rooms. Since the Case A hospital is surrounded by the forest, there was a possibility to create outdoor ground-level yards. The yard is split into zones, providing separate areas for patients of different ages, and is surrounded by hedges. The inner courtyards have a glass roof since it was agreed with the clients that it would be too difficult to maintain enclosed outdoor courtyards during winter.

For Case B, easy and direct access from every ward to an outdoor space was a priority. Each inpatient unit has access either to a yard, terrace or a balcony. It was important that the patients could access the yard independently but would not be able to move from one unit to another, and, therefore, the adults' yard was split by fences. The fences are very high to prohibit absconding and illicit substances being thrown over the fence. The balconies have privacy screens to protect patients' identity.

4.2.7. Therapeutic space

The need for new hospital environment to be therapeutic is mentioned more often in Case A's design brief than in Case B. It is said that the therapeutic nature should not only be reflected in the aesthetic qualities of design, but also in terms of functionality. In the design brief, a therapeutic space is described as a space to practice social skills, a space to be away from the wards' atmosphere. It should promote well-being, motivate, and empower patients. Nature views, art, use of color, light, modernity of the design are all described as the aspects of therapeutic space. In the design brief of Case B, the needed variety of therapeutic spaces is mentioned: spaces for music therapy, exercise, etc. Calm and quiet environment, views of nature, access to outdoor spaces, patient-oriented and age-appropriate design are mentioned in both documents.

In both cases, wood and calm, nature-inspired colors were used in the interior, and works of art are present throughout the entire facility. The important part of Case A's design is a welcoming entrance and lobby that provide a variety of low-threshold services. In both cases the goal to provide good views from the patient rooms and to provide as much natural light as possible for consultation rooms and patient spaces, has shaped the layout of the buildings.

4.2.8. Stigma

According to the design brief of Case A, treating psychiatric patients in the same context as somatic hospital patients is expected to reduce stigma. The design brief of Case B points out that it will reduce the labeling of psychiatric patients, especially for young people, and instead will highlight their equal access to somatic medical care and their treatment as a "psycho-physiological whole".

The design brief of Case B mentions how the modernity of the new facility and its proximity and visual similarity to a somatic hospital is a factor of status that can destigmatize psychiatry in the eyes of other medical professionals and attract more specialists to the field.

> *"That current hospital environment reminds a lot of those same hospitals that are fed to us by the movies – starting from the radiators, all the same things are there."*
> *(expert by experience, quote from Case A's design brief)*

In both cases, during the client meetings it was discussed that the location and appearance of the new psychiatric buildings are important tools to reduce stigma. Public functions and "living rooms" – welcoming spaces managed by experts-by-experience, where low-threshold help is provided for both patients and their family members, - were

designed near the main entrance. In Case A, the main lobby opens to an inner courtyard, a cafeteria and a public library - an attempt to invite the public to the new building and demystify the subject of mental health. In Case B, the lobby has a common lecture hall and a convenience store. It is directly connected to the main entrance of the whole hospital campus. The hope was that the people in the lobby will not be automatically labeled as patients of a psychiatric hospital, since anyone can access this space. For Case B, it was discussed that the new psychiatric building could not have been built in a more central and visible location, which was seen as a source of pride and highlighted the valuable role of psychiatric care. In both cases, creating a well-designed space was also seen important to make psychiatry more attractive as a profession.

4.2.9. Quality of the working environment

Working environment is rarely mentioned in the design briefs. Instead, specific solutions are described, such as having a second doors in every consultation room for staff's safety. Shared office spaces in combination with back-offices for data entry are mentioned, and Case A's design brief mentions that private offices are to be reserved only for the specialists whose main daily task is to provide consultations. Case B's design brief mentions the importance of monitoring for work safety and the need for more efficient, shared use of office spaces.

In contrast to the design briefs, working spaces were discussed extensively in the client meetings. Case B has only shared consultation rooms in the final design, while in the back offices small sound-isolated cubicles were provided for the staff to conduct calls and remote consultations while maintaining the privacy of the patients. Similar solutions were present in some intensive outpatient care units and substance abuse clinics of Case A but not universally. Within the ward, both new hospitals have moved away from the traditional solution of a nurse station being the focal point of the ward. Instead, smaller staff offices were designed with the idea that the staff should spend time among the patients. In case A the staff offices are shared between two wards to help with the nighttime monitoring.

4.2.10. The conclusion of the analysis

In general, Case A's document focuses more on envisioning how the care processes and new units will work together once they are brought under the same roof. How the units will cooperate and share spaces, as well as specific designs solutions are mentioned. More attention is paid to therapeutic nature of spaces, presence of family than in Case B. The overarching theme of Case B's document was safety, flexibility and the need for the hospital spaces to adapt to future changes. Cost reduction, functionality, changing types of patients, streamlining care processes and the need for the new building to reflect changes in society and psychiatry were mentioned throughout the text.

Both hospitals were designed in the similar circumstances, and with the similar design intentions. Still, some key differences in their architecture can be observed. For example, the outdoor areas in Case B are more enclosed, and the module are more self-sufficient, reflecting a higher demand for safety. More attention was paid to separating different groups of patients. In Case B the wards' dining areas are only used for their primary purpose and are closed otherwise, while in Case A they are part of the ward, not even separated by the wall. In Case A, there are more public functions and open-for-all areas on the ground floor, and more attention was paid to designing spaces for family members.

5. Discussion

The legislation, policy documents and changing care ideology are influencing the typology of hospitals. Current Finland is undergoing major administrative reforms in social and medical care, which will inevitably shape how the recently built hospitals will function. In this section we look at the upcoming changes.

Planning of both Cases A and B was influenced by the previously mentioned policy document Mieli 2009 [5]. Their functioning, however, will be guided by the following documents, first of which outlines strategies for the years 2020-30: development of positive mental health, increasing the mental health expertise among other healthcare professionals, reducing suicide rates and fighting stigma in the social and healthcare sector [13]. According to this document, the main changes are expected to be: the rise of hospitalization and outpatient visits among young people, growing prevalence of substance abuse, right to mental health among older population and budget cuts. The document mentions that the sector's funding is 40% lower than what would be expected from the economy like Finland's, explained by persisting stigma and discrimination towards more serious psychiatric conditions, despite the active public discussion and continuing efforts to integrate psychiatric and somatic care. The cooperation between specialized level care (hospitals) and primary level care (healthcare centers) will continue to grow, as healthcare centers are set to become the main providers of mental healthcare [13].

The document raises concerns over the continuous decline in the number of hospital beds. The reduction is explained by ethical reasons, deinstitutionalization, pharmacological advances, development of outpatient care but also by the need to reduce costs. There is evidence that there are already too few hospital beds, reflected in long waiting times in the emergency department, in patients being discharged too fast as well as in the increase of involuntary treatment. The hospital staff and patients' family members also believe that there are currently not enough hospital beds, especially in acute care units [14,15]. In both Case A and B, the number of beds was reduced in the new buildings, from 104 to 88 (A) and from 118 to 100 (B). There is no consensus on the optimal number of beds in Finnish psychiatric hospitals, and Figure 7 shows the number of hospital beds in Case A and B compared to international recommendations [13].

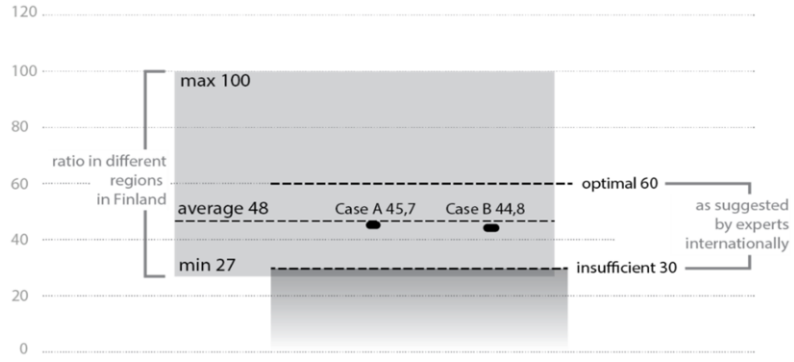

Figure 7. Number of hospital beds per 100,000 people in Finland, compared to Case A, Case B and international recommendations [13].

Both Case A and B were designed under the assumption that the number of beds will not need to be increased. Experts suggest that the reduction of hospital beds can be compensated by providing long-term patients with a combination of intensive outpatient care and assisted living services [13,14,15]. Still, hospital inpatient care cannot be replaced completely, since assisted living services are more suitable for those who have a support network, good housing conditions and good access to healthcare [13]. Assisted living facilities already constitute a very significant, but invisible part of mental healthcare in Finland. They are mostly operated by private actors, including not-for-profit organizations, and are not located near hospitals [16].

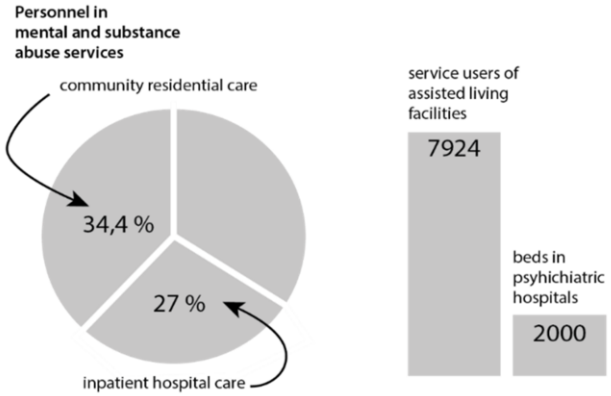

Figure 8. Total personnel resources working in mental health and substance abuse services in the region of Southern Finland as of [16]; The number of beds in assisted living facilities compared to inpatient hospital care in Finland in 2021 [13].

What would be the role of inpatient psychiatric hospital care in the future, and how they will cooperate with other forms of care? Major reform further integrating health and social care sector was finalized in 2023, bringing primary care, specialized care, emergency services, social welfare services and services for people with disabilities under administration of 21 regional counties [17].

The new law that regulates patients' right to self-determination is expected to be developed in this decade, and lock in the definition of the outdoor space, which was previously vague and gave room for interpretation [18]. The law's working group suggested that sufficiently safe outdoor area is to be defined as a safe outdoor yard area that would prevent absconding, in practice, most likely a fenced area [20] It is said that the law must state that insufficient spatial design should not be a reason to limit clients' rights to self-determination, for example the right to sufficient outdoor exercise during involuntary treatment. Spatial solutions must promote rehabilitation and that hospital care should be organized in the units that are prepared for caring for the patients, meaning that there should be enough staff in the hospital as well as a safe space for outdoor recreation and activities [19, 20]. Studies show that the lack of staff can significantly limit the patient's access to outdoor spaces, even if the design allows it [21]. The right to meet and stay in contact with the family is another right that should be realized [20]. Since the latest version of this law is from 1992, all those aspects were open questions during the client meetings.

We can observe that the typology of the new generation of psychiatric hospitals in Finland was and will probably continue to be influenced by changes in psychiatric care, administrative and legal changes, changes in funding and in patient demographics. The

present study has documented some of the hopes and goals that the planners had for the two examples of the latest generations of psychiatric hospitals, and studying if those hopes were realized in the operation of these hospitals would be a valuable continuation of this research.

References

[1] Narvio, K., 2017. Mielenterveystyön toimintaympäristömuutoksen vaikutukset aikuisten vuodeosaston tilasuunnitteluun: Kuvaileva kirjallisuuskatsaus. Bachelor's thesis, Laurea University of Applied Sciences.

[2] Rissanen, A., 2022. Suomalaisen laitospsykiatrian historiaa. *Suomalaisen Kirjallisuuden Seuran toimituksia*.

[3] Mielenterveyslaki 1116/1990, [Accessed 10.02.2024] Available at: 1116/1990 - Säädösmuutosten hakemisto - FINLEX ®

[4] Hintsanen P., 2009. Sosiaalityön pro gradu-tutkielma. Laitosvaltaisesta mielisairaanhoidosta hajautuneisiin mielenterveyspalveluihin. Työntekijöiden kokemuksia muutosprosessin keskellä. MS thesis, Tampere University.

[5] Moring, J., Martins, A., Partanen, A., Bergman, V., Nordling, E. and Nevalainen, V., 2011. Kansallinen mielenterveys-ja päihdesuunnitelma 2009-2015: Toimeenpanosta käytäntöön 2010.

[6] Kärkkäinen J. 2004. Onnistuiko psykiatrian yhdentyminen somaattiseen hoitojärjestelmään? Psykiatrisen hoitojärjestelmän kehitys Suomessa ja sairaanhoitopiiriuudistuksen arviointi psykiatrian näkökulmasta. Sosiaali- ja terveysalan tutkimus- ja kehittämiskeskus. Tutkimuksia 138. Saarijärvi: Gummerus Kirjapaino Oy.

[7] Sosiaali- ja terveysministeriön asetus kiireellisen hoidon perusteista ja päivystyksen erikoisalakohtaisista edellytyksistä 782/2014, [Accessed 20.01.2024] Available at: Sosiaali- ja terveysministeriön asetus… 782/2014 - Säädökset alkuperäisinä - FINLEX ®

[8] Leinonen, E. and Oinonen, R., 2021. Hoitohenkilöstön toiveet psykiatrisen sairaalan toimintaympäristön ja työhyvinvoinnin kehittämiseksi: laadullinen tutkimus.

[9] Juntti, J. and Antikainen, K., 2020. Psykiatrinen hoitotyö muutoksessa-hoitajien toiveet ja pelot, thesis, Savonia-ammattikorkeakoulu

[10] Kaikko, L., 2019. Henkilöstön näkemykset osallistumisestaan psykiatrian hoitoympäristön uudistamiseen, thesis, Satakunta University of Applied Sciences

[11] Simonsen, T.P.H., Brown, S.D. and Reavey, P., 2024. Vitality and nature in psychiatric spaces: Challenges and prospects for 'healing architecture' in the design of inpatient mental health environments. Health & Place, 85, p.103169.

[12] Simonsen, T.P. and Duff, C., 2020. Healing architecture and psychiatric practice:(re) ordering work and space in an in-patient ward in Denmark. *Sociology of Health & Illness*, *42*(2), pp.379-392.

[13] Linnaranta, O., Strand, T., Suvisaari, J., Partonen, T. and Solin, P., 2022. Mielenterveysstrategia 2020-2030: Toimeenpanon ensimmäiset vuodet ja yhteisen tekemisen tahto.

[14] Linnaranta, O., 2022. Selvitys psykiatristen sairaalapaikkojen määrästä. *Terveyden ja hyvinvoinnin laitos, Helsinki*

[15] Linnaranta, O., 2022. Toimenpidesuositus riittävän ja laadukkaan psykiatrisen sairaalahoidon turvaamiseksi, *Terveyden ja hyvinvoinnin laitos, Helsinki*

[16] Sadeniemi, M., Joffe, G., Pirkola, S., Ala-Nikkola, T., Kontio, R. and Wahlbeck, K., 2021. Residential services as a major cost driver in mental health and substance use services in southern Finland. *Psychiatria Fennica.*

[17] Wellbeing services counties will be responsible for organising health, social and rescue services, [Accessed 08.02.2024] Available at: Wellbeing services counties - Ministry of Social Affairs and Health (stm.fi)

[18] Laki potilaan asemasta ja oikeuksista 785/1992, [Accessed 21.01.2024] Available at: Laki potilaan asemasta ja oikeuksista 785/1992 - Säädökset alkuperäisinä - FINLEX ®

[19] Laki mielenterveyslain muuttamisesta 1283/2022, [Accessed 10.02.2024] Available at: https://www.finlex.fi/fi/laki/alkup/2022/20221283

[20] Hämeen-Anttila, L., 2018. Sosiaali-ja terveydenhuollon asiakkaan itsemääräämisoikeus-työryhmän raportti. *Sosiaali-ja terveysministeriön raportteja ja muistioita*, *27*, p.2018

[21] Mäkiranta, T., 2014. Psykiatrisessa tahdonvastaisessa hoidossa olevien aikuispotilaiden ulkoilumahdollisuuden toteutuminen. Thesis, Lapland University of Applied Sciences