

# Medical architecture on the social valorisation of psychiatric patients: employing transdisciplinary approaches between architecture, physical and mental well-being disciplines.

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**ABSTRACT** Medical architecture -- therapeutic architecture or architecture for salutogenesis as it is also known-- is an interdisciplinary field related to the evidence based, planning and design of healthcare facilities. It has been one of the first fields that addressed evidence based design and over the years becomes more and more inclusive, involving medical professionals, designers, planners, managers, carers as well as patient representatives actively in the decision making and design processes.

In this paper, we report on work carried out within the project ‘The social invisibility of mental health facilities: Raising awareness on social exclusion in urban environments through artwork’, involving three schools at UCL, i.e., Architecture, Psychiatry and Fine Art, and describe our approach in using transdisciplinary research methods.

Inequality has been reported in medical and healthcare management literature but not connected to building stock. Especially the façades of mental health facilities buildings are directly visible from the community and contribute to the opinion of the public, staff and patients and convey messages on how society approaches the illness. It is also what service-users see just before crossing facility thresholds. The aim of this project is to juxtapose the

exteriors of mental-health/health buildings and their urban integration, documenting this inequality from the socio-spatial perspective.

We evaluate buildings proximity to transport and architectural materiality/façade analysis using multimedia techniques to identify differences in service provision and contrast facilities of an inner-city catchment area in terms of access, condition and status compared to their surroundings. We present an attempt to develop new ways of approaching these facilities that extend beyond conventionally applied methods within traditional architectural education by adopting knowledge from the fields of psychiatry, psychology and medical architecture, on the pathology of mental illness, the stigma associated with it and the ways of social valorisation of people with mental illness and at the same time employ visual methods to support the interpretation and interrogation. That way, the team juxtaposed the evidence base with the intuitive and the self-referenced. At the same time disciplines that have dealt with the subject from a specialized perspective could see new perspectives and capture new dimensions of an otherwise familiar to them subject.

In this paper, we discuss potentials and challenges that arise when different disciplines work together. Concretely, we outline the different roles of architectural students and art student, the psychiatrist, the psychologist and the medical architect collaborating to investigate inequality generated through social perception of health care facilities. We identify pedagogic issues that influence how students conceptualise and internalise the various methods and highlighted factors such as understanding curiosity and the role of discovery as crucial aspects in learning.

**KEYWORDS** trasdisciplinarity, medical architecture, participation, healthcare facilities

## **BACKGROUND**

Medical architecture has been a multidisciplinary sector focused on the design of healthcare facilities. Initially, it was a discipline concentrating on the factional aspects of healthcare facilities such as infection control, distribution of pipes and mechanical systems, ergonomics, etc. However, developments in patient focused care as expressed by the Plane Tree hospitals – hospitals of the Planetree Organization, a pioneer organization for implementing and advocating patient-focused and healing environments – and developments in the field of environmental psychology influenced healthcare buildings towards a more therapeutic design direction. This was pollinated by the theory of salutogenesis<sup>1 2</sup>. Salutogenesis explores the ways that psychosocial interventions can increase the sense of coherence and through that path increase people's wellbeing and sense of wellbeing. Dilani<sup>3</sup> transferred the theory of salutogenesis to design for health. Parallel, Chrysikou brought together the two sectors - medical architecture and architecture for salutogenesis- to cater for the needs of mental ill people in environments that could promote

the therapeutic regime and patients' sense of wellbeing at the same time. In the introduction of 'Architecture for psychiatric environments and therapeutic spaces'<sup>4</sup> she described therapeutic architecture as the people-centered, evidence-based discipline of the Built Environment that aims to identify and support ways of incorporating into design those spatial elements that interact with people's physiology and psychology. It is a significant field of architecture that becomes even more important when people experience ill health, as it is in this state that they present the least abilities to cope.

## **MENTAL ILLNESS AND STIGMA**

The social exclusion of the mentally ill people is a subject that has concerned psychiatry even before 1797, when Pinel and his team removed the chains of the psychiatric inmates<sup>5</sup>. Mental health has been associated with stigma even from ancient times, with psychiatric issues being dealt with as pagan and mystic concepts targeting Evil, even in cases where the mental patient was treated as a sacred person<sup>6 7</sup> or being related with witchcraft and heresy in the 15<sup>th</sup> century or even after 1650 when in Britain, the Vagrancy Act of 1714 enabled the

incarceration of thousands of people in mad-houses, associating lunacy with criminal behaviour<sup>8</sup>.

The 18th century was the starting point for psychiatry, as a new discipline of medicine. It supported the idea of a therapeutic relationship with the patient and the belief in the possibility of cure, using scientific tools of observation and experimentation<sup>9 10</sup>. At the end of the 19th century the concept of the asylum was questioned again<sup>11</sup>. The 1950s proved to be a period with important developments regarding legislation both in the UK and France towards de-institutionalisation<sup>12</sup>. In 1960, from the UK and France, doctors A. Baker and P. Sivadon and architect RL. Davies collaborated on the World Health Organisation (WHO) publication "Psychiatric services and architecture" and proposed a system of psychiatric care, with the psychiatric hospital occupying a central role within an extensive network of community facilities that no longer resembled a prison but was as close to a domestic setting as possible<sup>13</sup>. Nevertheless, the local community was often opposed to them using the slogan "Not In My Backyard" (NIMBY). But, even after the closure of the asylums and the replacement of the big psychiatric institutions by smaller ones in the community, mentally ill people still remain among the most excluded population groups, with research indicating that recently created facilities in the community became new, smaller scale institutions. In Europe, almost 20% of the burden of disease relates to mental illness that affects 1 in 4 people and has 9 out of 10 countries with the highest suicide rates<sup>14</sup>. As mental illness has low diagnostic and low medical treatment accuracy factor<sup>15</sup>, environment is central for the quality of care and treatment of mentally ill people and crucial for social re-integration.

Society responds to those mental health problems by giving a lower priority to the treatment of mental illness in comparison with physical illness. Inequality in provision is often reflected in where treatment is provided and in what sort of building treatment is given<sup>16</sup>. As a general trend, the building stock of any mental health service presents no exception, with planners and architects having very limited knowledge on how to approach the design of these facilities. This gap of knowledge on how psychiatric space operates became more obvious when research combining methodologies deriving from medical

sociology and architecture, under the principles of salutogenics and their implementation to healthcare facilities found that even awarded psychiatric facilities might present strong institutional characteristics in terms of building features and in terms of users' perspective<sup>17</sup>. Additionally, as normalization theory references suggest<sup>18</sup>, a building that is not integrated in its surroundings, increases the fact of social exclusion and the incidents of vandalism from the community. Moreover, mental health facilities face severe budgets limitations, which are not necessarily the case for the rest of the healthcare services that might even be commissioned to star architects, such as the Maggie Centres<sup>19</sup>.

Common factor in all these contexts analysed above is that mental healthcare still remains the Cinderella of any health service, i.e., the under-resourced and often neglected part of the system, with stigma being the main cause for these inequalities. These inequalities reinforce and perpetuate shame and stigma and add further barriers that hinder successful treatment. So, we suggest that a visual comparison of the facilities for the mentally ill people in the community to the facilities for healthcare in general could illustrate what professionals involved in the treatment and the care of mentally ill people already know: the phenomena of NIMBYism (NotInMyBackYard syndrome, a characterization of opposition by residents to a proposal for a new development because it is close to them) and the social exclusion of mentally ill people in our society is still a reality.

Inequality has been reported in medical and healthcare management literature but not connected to building stock. The aim of this project is to explore whether inequality could be detected by the exterior of the facilities, what service users see just moments before entering the facility's threshold. The main research objectives of this study are to: i) identify the urban integration of the mental health facilities and ii) evaluate the exterior in terms of materiality, condition and façade architecture.

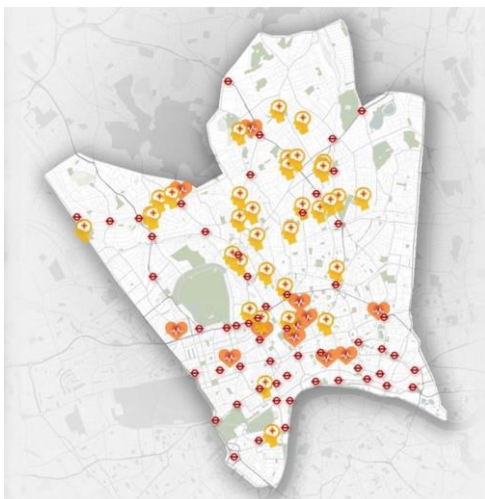
## METHODOLOGY

To achieve that goal, we primarily selected a research area, the catchment area of Camden & Islington NHS Foundation trust, the mental

health trust surrounding University College London (UK). A catchment area is the geographical area that is under the same referral path for medical provision and treatment, which means that all people living in that area would be referred and treated in the services of the catchment area. The project juxtaposes the view from the street and the distance from underground stations of the health vs mental health facilities of the same area, raising awareness of inequality and social exclusion.

For the first objective, a visual map was produced with all the NHS facilities (both healthcare and mental health) of the selected catchment area (Figure 1). The study reference has been an NHS online platform, which maps elaborately all services, including offices and different specializations as separate ones although belonging to the same complex. Apart from the facilities, the underground stations of the area were also highlighted, so as to check the vicinity of the facilities to public transportation and identify any potential differences in terms of access. Only underground stations were chosen for the creation of the map, as areas close to underground stations have a premium when it comes to property values<sup>20</sup>. Additionally, we did not look at the bus coverage as it has a denser distribution and we took the bus network as given, while considering the underground network as a premium on top of that.

The heart on the map symbolizes the healthcare facilities and the brain the mental health ones. The cross in the brain symbol and at the centre of the heart indicates the exact location of the facility on the map.



*Figure 1: Map of the healthcare and mental health facilities of the Camden and Islington NHS Foundation Trust catchment area. The psychiatrist of the team identified the importance of location as a potential indicator of inequality. (credit: Anastasia Katikaridi)*

For the second objective, we photographed the exterior facades and entrances of healthcare and mental health facilities of the catchment area (Figure 2). Only NHS facilities were included in the study. In cases where there is more than one building in the facility's site, these cases were treated as a whole, since we were interested in what is visible from the street level and not each single façade within the campus. Another inclusion criteria was that only mental health sites providing accommodation were selected, so as to avoid those serving as offices only. The same photographic camera, weather conditions and light levels were used for all photographs. Primary care facilities, such as GP centres, were excluded. There was one example of primary care facility that was selected but only due to its integration with mental health provision and as such was studied.



*Figure 2: Photographs of the exteriors of mental and healthcare facilities of the selected catchment area (Copy right: The social Invisibility of Mental Health Facilities)*

Based on the above criteria and out of 73 different services, we studied 20 case studies, 11 healthcare and 9 mental health facilities of that area, visited and documented through photography the public perception of these selected facilities: their exteriors, entrances and façades. We compared the photographs of the 20 selected facilities to evaluate the materiality and façade analysis of the buildings and identify any differences in terms of condition and status compared to their surroundings. Since this is a multi-disciplinary project we tried to approach these facilities by adopting knowledge from all the fields

involved in the project: that of architecture, psychiatry, psychology and medical architecture, on the pathology of mental illness and the stigma associated with it. As a result, the study pursued a visual interrogation of the architectural and urban elements that reveal or conceal those buildings identities as usage.

The map and representations derived from the architectural skills of the team as they were considered less abstract to convey the message. The artists contributed mostly at the earlier stages of the analysis, such as the multi-media approach and they also provided insights through their interpretation of the buildings, such as comments and interpretations of the colour schemes and the atmospheres. Additionally, discussions with the psychiatrists in the team suggested looking into accessibility as proximity to the closest tube stations, to see how the mental health facilities would relate to London's underground system.

In this respect, visibility and accessibility parameters were constructed through these discussions in a common language that would help us explore the possibility of stigmatization of mental versus healthcare buildings.

## FINDINGS

Through mapping the facilities we, in that instance an architectural Masters student and a post graduate research assistant in collaboration with the medical architect, identified differences in terms of access. Searching for the optimum accepted time a person should walk from a transport service point to local facilities, in particular for this study from the closest underground station to healthcare and mental health facilities, we considered the suggestion of a 12 minute walk<sup>21</sup> as a threshold distance people should be willing to walk to service points from a tube station in a study on connectivity. From medical sciences and sustainability perspective, facilities' distributions in an area are calculated as per population numbers, favouring density as an indicator. In a study on average distance on emergency hospital admissions, for instance, Camden had the shortest average distance at 2,5 km, equal to 1,6 miles. For this study, the typical distance count was taken from home to hospital, particularly to emergency hospital care, and showed that hospitals tend to be located in

densely populated areas<sup>22</sup>. Medical research on mental health facilities in Spain recommends considering territorial accessibility as the distance from a person's place of residence to a mental health facility<sup>23</sup>. The distance is given in minutes (temporal) taking three different scenarios; less than 30 minutes, between 30 and 60 minutes and over 60 minutes.

For the purposes of this study, we focused on temporal accessibility and the experience of the everyday person passing by these facilities in a daily commute. Through the production of the visual map, the research conveyed differences to access to transportation with the healthcare facilities being much closer to London underground stations in comparison to the mental health ones, bringing another obstacle to their access and their community integration. Based on the 12 minute threshold, all of our selected facilities fall within the optimum walking time, with hospitals having significantly more proximity to tube stations with a mean of 4, 818 minute walk, whilst the 9 selected mental health facilities have a mean 8, 66 minute temporal distance. The mean walking distance for all 71 mental health facilities is 7, 591 minutes (excluding 2 facilities: Kingston Improving Access to Psychological Therapies (IAPT) and SMS Kingston Wellbeing Service).

This difference in the mean distance makes every day travelling to mental health facilities more difficult as it adds to the exhaustion of their already burnt-out staff. Yet, centrally located mental health facilities might be perceived as too institutional or too expensive for healthcare but just perfect for luxury accommodation. Thus, patients and staff must travel even further from their networks, families and places.

Moving beyond the selected buildings and method of temporal accessibility, we started to experience barriers in terms of proximity. What adds to this is the complexity of the urban fabric, where railways cross widely areas making it inappropriate to transcend on foot areas with physical discontinuity that otherwise seem in proximity on the map. It is also possible at the level of signage and wayfinding that stigmatization or lack of provision might need to be addressed.

Through the photograph comparison and the mapping of the facilities, we identified (one architectural and one art student in collaboration with the medical architect) important point of differences between health vs mental-health networks in terms of:

- demonstration of purpose vs hidden use,
- sheltered and highlighted entrance vs unsheltered entrance or hidden at the back of the building,
- labelling vs invisible entrance,
- visual transparency: glazing introduced in playful ways even combined with art vs fear of transparency: glazed areas viewed as a problem rather than a solution that brings light in
- extensive use of glazing to bring light in vs opacity and extensive use of brick walls
- variety of colours and textures including the NHS uniform green vs predominantly dark façade colours
- use of artwork or custom-made ornamental artefacts vs lack of artwork and ornaments attached
- proximity to landmarks and location in high value land vs remoteness from landmarks & location in more deprived areas and

There were also differences regarding:

- complexity of volumes vs plain facades lacking canopies or balconies,
- grid on the facades with a repetition on windows vs in-compliance to grid and home-likeness, with restrictions to openings
- maintenance vs demonstrations of vandalism, with its' general impact on the community feeling unsafe and discouraged from utilization of these facilities,
- Stand-alone healthcare use vs hybrids or mixed use, with some facilities included in residential or primary care complexes

Another important finding is the significant differentiation in scale between health and mental health facilities. Hospital buildings and complexes designed for purpose in mind and they do carry significant architecturally visual elements that establish the volume and signage that help people associate the usage. On the

other hand, most mental health facilities do perform in smaller scale, having less units and refraining to share any manifestation with the public of what they are. They tend to be more 'hidden', in some cases even within other hospitals or health provision facilities, without any special signage. In other cases access is not direct from the street level. Their building stock is in most cases in worst condition than that of the healthcare facilities, lacking façade ornaments and artwork. They tend also to be located within primarily residential areas, occasionally residential buildings that have converted to this new usage. These facilities do not focus on residential buildings but on (mental) healthcare buildings including accommodation. The fact that they contain accommodation (in-patient beds) does not make them residential as they are still clinical spaces and treatment takes place in there.

There are several differences between the healthcare and mental health buildings, which disadvantage mental health patients and their provision to care. It should be noted here that the criteria on the effectiveness of the facilities, on which these findings were based, didn't derive from this study but it was based on a reference to the current state of the art of mental health facilities planning, as well as to dominant theories such as normalisation theory and social re-integration theories<sup>24</sup>.

These findings have implications to NIMBYism and stigma, staff burn-out and patient's engagement to the service and respond to the initial argument of inequalities in health provision on mental and healthcare services. However, there are some interesting points that occur through the interdisciplinary collaboration. The non-medical architects had an initial difficulty identifying the institutional elements. These were easier spotted by the art students. The artists though after contribution to the project they decided they wanted to retain their anonymity. This could have been for several reasons that are beyond the scope of the paper to discuss here but it could also be a result of stigma undercurrent.

## DISCUSSION AND CONCLUSION

In the research we presented above, we identified factors that contribute to the isolation of mental health facilities both in aspects of space and place. Healthcare buildings are better located and better

maintained than the mental health ones. Mental health facilities aim at blending in contrary to healthcare facilities that aim for visual attraction, expressing patient-focused ideals. Those facts have direct implications to the way society treats people with mental illness, staff burn-out and patient's engagement to the service, when medical literature suggests that mental health facilities need to be in proximity to people's homes as this encourages more access to usage<sup>22</sup>. This study is part of a broader research project that focused on the architecture of the psychiatric facilities, which is beyond the scope of this study. Here, we examine the existing situation of the facilities and suggest that understanding the surroundings of mental health facilities is fundamental for the care of vulnerable people and the comprehension of our societies by showing that there is a very thin line between discreet facades and the 'out of site, out of mind' ones.

Even though the study looked at a London Mental Health trust, it still remains a Cinderella compared to its surrounding hospitals easily accessible by public transportation. It demonstrates the obscurity that NIMBYism brings to mentally ill people, placing them inside remote and under-funded facilities<sup>16</sup>.

The project offered a great opportunity of a multi and interdisciplinary collaboration between science, architecture, art and humanities, all centered around the use of visual methods to support the project investigation. Important challenges arose from that collaboration, however, especially in relation to roles within the project team, their expectations and in terms of differences in the perception, methodological tools and especially around the meaning of human-centered approach. In this respect, the architectural team was given the chance to focus on issues related to architectural materiality and design and social inclusion and study evidence-based practices through these multi-interdisciplinary collaborations as already stated. Additionally, the team was

given the chance to deal with potential architectural problem solving for very vulnerable groups such as the mentally ill people, who have very limited ability to influence their environment and who experience the social exclusion, partially as a result of their environment.

In summary, this project put the basis for further research in the future so as to better understand the impact of the buildings of mental health facilities and how this is translated in the provision of care in the community. According to WHO investment on facilities is crucial for mental health provision<sup>25</sup>. It is commonly accepted that cities cannot increase the wellbeing of patients by sustaining buildings that promote antisocial behaviors. This fact, in relation to the expected increase on mental illness and dementia in the near future strengthens the policy need to challenge the current allocation of funds corresponding to facility provision and pay more attention to those underfunded facilities.

We argue that involving service users and passers-by in future studies to identify how they perceive the urban environment around these facilities and studying people's opinion on whether areas surrounding healthcare facilities are perceived as safe as those of the mental health ones, could help in the elimination of this inequality in the community. Moreover, including architectural spatial analysis methods such as Space Syntax analysis<sup>26 27</sup> of the selected catchment area, would help study further the location of the facilities in relation to their social integration and identify whether they are located in an integrated or segregated part of the city.

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