# Healing architecture: Designing for the Mentally Ill

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**ملخص**

الشباب الذين يُعانون من الأمراض العقلية معرضون لخطر العزلة الإجتماعية و البغض. في منطقةِ (الـشرق الأوسـط وشـمال أفريقيا)، قلة وسائل الرعاية الصحية الكافية والمتوفرةِ خَلَقت فجوة بين الشباب 'الطبيعين' وأولئك المصابين بـالامراض العقليــة. هؤلاء الأطفال أمّا إخفوا مِنْ أنظار الناس، أو بعثوا إلى وسائل مَعْزولة. مثل هذه الممارساتِ تُعيقُهم مِنْ إنْجاز إمكانيتِهم وتجعلهــم في الحقيقة يعانون ظروفاً سيئة. إنّ التحدي هو أنْ نخْلق لهم وسيلة صحةٍ عقلية تهدف لتعليمهم مهاراتَ الحياة، وتَسْمح لهم بــأن يكُونوا إجتماعيين، وتُشجّعُهم أنْ يُصبحوا مستقلون، وأخيراً مساعدتهم في إعادة تكاملهم مع المجتمع الأوسع. مثل هذه البيئةِ تَحتاجُ لتَقليد المجتمع، في تركيبه، ووظائفه، وفرص العمل، كما هو يَحتاجُ أيضاً لخَلْق التواصل بالمجتمع وتشجيع المشاركة الإجتماعية.

كمعماري، يُمْكنُ أنْ أُساهمَ بزيَادَة الوعي الذي يؤثر ُفي سماتَ التصاميم للشباب المصابين بالمرض العقلي وهذه البرامج يُمْكنُ أنْ تُحسّنَ منزلتَهم في المناطق الحضرية. وبالنظرِ إلى الأبعادِ المعمارية، مثل درجة التَحْقيز في البيئةِ، وفي العلاقاتِ بين الفراغاتِ، لكي يَفْهمَ نتائج التصميمَ وخَلْق البيئة العلاجّية التي تُروّجُ للشْفَاء وإعادة التكامل. أخيراً سأُقدّمُ لبنان وجُهوده المحليّة كمثال ودراسة الهدفَ الأكبرَ منها زيادة وعي البلدياتِ والإداراتِ المحليّةِ وكيف يُمْكنُ أنْ يلَعبوا الدور الأعظم في تمويل وتـشجيع مثـل هــذه المساعي.

## Abstract

Youth who suffer mental illness are at the risk of social isolation and stigmatization. In the MENA region, lack of adequate and available health care facilities has created a gap between 'normal' youth and youth with mental illness. These children are either hidden from the public eye, or sent away to secluded facilities. Such practices hinder them from achieving their potential and actually make their condition worse. The challenge is to create a mental health facility that is designed with the objectives of teaching them life skills, allowing them to socialize, encouraging them to become independent, and finally helping in reintegrating them into the wider community. Such an environment would need to mimic society, in its structure, functions, and work opportunities, as it would also need to create links to society and encourage community participation.

As an architect, I can contribute by increasing awareness of what design aspects make a difference for youth with mental illness and what functions and programs can enhance their status in urban areas. I will look at architectural dimensions, such as degree of stimulation in an environment, and at relationships between spaces, in order to understand the design implications of creating a therapeutic environment that promotes healing and reintegration. Finally, I will present Lebanon and its local efforts as a case study. The larger goal is to increase awareness to municipalities and local authorities of how they can play a greater role in funding and encouraging such endeavours.

## Introduction

Today, important social issues, such as discrimination, segregation and abuse of the mentally ill, are often overlooked. Making this group of people be treated with respect, dignity and acceptance is a must if they are to be a healthy part of the community.

In North America and most of Europe, the magnitude of this issue is widely recognized and solutions are sought to enhance the condition of the mentally ill and help them live more fulfilling lives. Increased awareness about the effect of the built environment on mental illness has led

professionals to realize that a joint venture between psychiatrists, psychologists, architects and the community is a better attempt at creating therapeutic environments.

In the MENA region, youth who suffer mental illness still face the stigma of shame, neglect, and suppression of speech. Society demeans their condition and the environment around them dimly understands their need for treatment. The lack of adequate health care facilities and educational programs for this special needs population does not encourage families to seek help and find the appropriate environment for their children. Furthermore, many professionals in the MENA region are still struggling to find ways to apply special design and architectural considerations, due to constraints such as lack of funding, awareness and even care.

My interest and strong belief in the importance of this topic stems from first, my personal experience with my autistic brother and second, from my thesis paper that I have written about this subject discussing specific issues and case studies in Lebanon (Makki, 2006). These learning experiences have shed light for me on the struggles youth with mental illness face as they try to fit in society, and have allowed me, as an architect, to contribute in finding creative and innovative design solutions.

My hypothesis is that architecture is one of the elements that can play a role in improving youth's status in urban areas: architecture has the potential to enhance their experience of space, increase their sense of power, build social bonds, and reintegrate them into society.

**Theories towards reintegration**

The argument for institutionalization is that specialized institutions serve as therapeutic milieus that are beneficial for the patients. Although institutions were created for justifiable purposes, they had an adverse effect of creating isolation, dehumanization, and disempowerment. Furthermore, the gap between society's reality and the institution life made it difficult for patients to be reintegrated back into society. This led to the deinstitutionalization movement which was influenced by both the idea of achieving social integration and the belief that all people no matter their physical, social, or psychological limitations, are to function in the normal everyday life of the community (Larsen, 2004). However since no community-based care, services and other alternatives were provided for them, the mentally ill, who could not cope on their own became isolated once more. The support of specialized institutions and differential spaces is therefore needed if the right to be different is to be recognized (Lefebvre, 1991, as cited in Larsen, 2004). The fact remains that institutionalization is effective only if there is a system of reintegration where the mentally ill can avoid problems such as crime and homelessness and have social integration opportunities. This is possible when institutions are linked to the local area and not isolated from urban life. The focus in this movement is on empowering these people and helping them live independently.

**Architecture and psychology**

If architecture concentrates only on the properties of geometric space, it tends to ignore how the space will be experienced by the people who are likely to use it, and if psychology neglects the physical context of behavior and experience, then it will be hard to create therapeutic environments. A link between architecture and psychology is thus needed as "an attempt to provide an optimum psychological fit between people and their physical surrounding" (Sime, 1986, p. 49). Lawson (2002) studies the psychology of space and groups factors that affect healing into two categories. The first one is concerned with the relationship between people and their environment which is affected by things such as colors of surfaces or temperatures of rooms. The second one is concerned with the way the environment mediates the relationships between people such as through matters of

maintaining privacy or establishing community. Berger and Good (1963) suggest classifying components of architectural environments into categories such as structure, visibility, perception, light, sound and atmosphere, and components of psychological understanding into categories related to treatment such as conveying to the patient a sense of acceptance and nurturance. The created environment can then have the potential for improving mental health and well-being. I developed a chart, inspired by Maslow's hierarchy of human needs, which shows how architectural components can be translated into psychological ones and vice versa (Appendix A).

**Methodology**

People with mental disorders have particular ways of perceiving reality and thus have different behavioral, social and physical needs. Investigating how they deal with the objective and the subjective space, the physical and the mental space, allows me to outline design implications that have to be considered when designing spaces for them. These design implications came out of a study of architectural dimensions and relationship between spaces. For the purpose of this research paper, I chose to look at two mental illnesses, autism and schizophrenia, to see how design is different for different users. I chose autism and worked with my brother as a case study since I had the opportunity to observe how he uses and experiences space. On the other hand, I chose schizophrenia due to its prominence and prevalence in youth.

In the following section I will give a brief account of what autism and schizophrenia are, identify major mental illness features and pinpoint their possible design implications.

- Autism

Autism is characterized by impaired development in areas of social interaction, communication and repetitive behavior, in addition to a keen sensitivity to touch, sight, loud noises and certain smells and tastes (Wood, 2003). These symptoms become apparent before the age of 3. People with autism are isolated in a world of their own. They are obsessed with order and need to control their environment in an attempt to understand it and make it predictable and consistent. Many people with autism can learn and develop new skills through repetition, and can therefore be trained to work and participate in the community (National Institute of Mental Health, 2003).

- Schizophrenia

Schizophrenia is characterized as having delusions (false beliefs), hallucinations (distorted visual, auditory, tactile, gustatory, and olfactory perceptions), disorganized speech and behavior, and/or lack of motivation and emotional expression (Wood, 2003). Schizophrenia usually starts in adolescence or adulthood, and is marked by social withdrawal, impaired functioning, and confusion. There is no cure for schizophrenia, however symptoms can be treated and the person can function in society.

**Architectural dimensions**

Based on a study of the role of architecture in human health (Evans & McCoy, 1998), I applied the following 5 architectural dimensions to my methodology.

- A stimulating environment: Stimulation is the amount of information in a setting that affects the human user. Lack of stimulation leads to boredom and a weak connection to space, whereas high levels of stimulation create complex scenes that overload the senses and lead to distraction (Figure 1a).
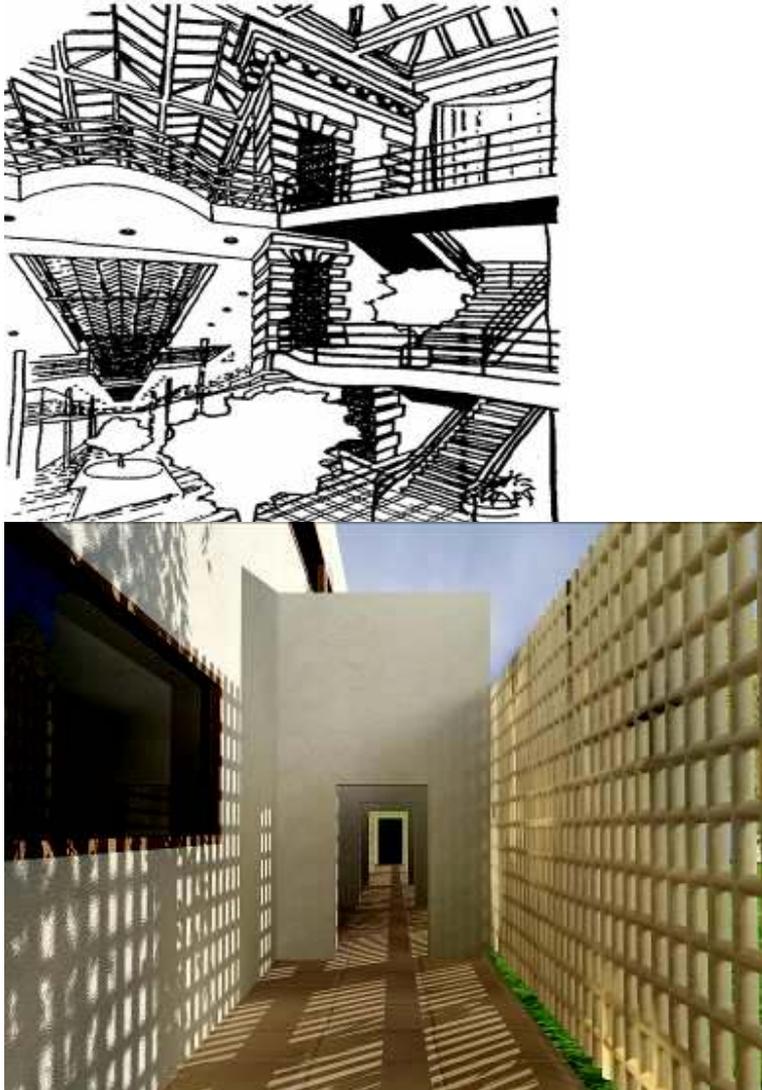
Figure 1a

Patients then function best under moderate levels of stimulation with regard to colors, light, noise, and patterns (Figure 1b). Because autistics lack interest in exploring the environment, using visual coding / signage system, such as certain floor patterns (Figure 2), colors, materials, and other sensory cues, will intrigue them to discover spaces. However, some schizophrenics, due to the intensity of hallucinations, might find such elements frustrating, confusing, and chaotic. As for colors, one needs to take into account that they can influence their moods. For example, red can agitate, blue can subdue aggressive behaviors, yellow can negatively affect sleep, and orange can create a feeling of well-being.

- A legible space: Because the organization of spaces can sometimes be confusing to both the autistic and the schizophrenic, spaces need to be clear and legible. In general simplifying design is key to avoiding disorientation and confusion (Oueini & Campbell, 2005). Ambiguity can result when for example there are rapid changes in visual access such as corners that do not allow to see what is behind them; or when there is conflicting information such as when there is an unnoticed ledge between two identical surfaces; or when cues are vague such as when the

128

design of a door is unclear about how it is to be utilized. Navigational aids are useful in these cases for marking any change of direction within a space by placing distinct elements such as statues or plants (Regnier, 2002). Clear architectural cues such as picture coding are also helpful in conveying the function of the space (Figure 3).



Figure 2

- Coherence: The space needs to be coherent and predictable with appropriate boundaries that allow one to know what to do in different spaces. Both the autistic and the schizophrenic need to create a boundary to feel a sense of safety. Such a boundary is created when the patients manipulate objects in their space to privatize their space and transform it into a place to which they feel more connected (Sime, 1986). Furthermore, since humans have a natural instinct for creating order in their environment, architecture needs to help them find this order in the space by creating visual and functional harmony (Moller, 1968). For example, the use of certain areas/rooms for different activities needs to be coherent and consistent; the space for therapy, for example, is different from that of play which allows patients to create a physical and a mental boundary between therapy and play. Simple elements suchas a partition, a big rug, or a step can help in distinguishing between two spaces
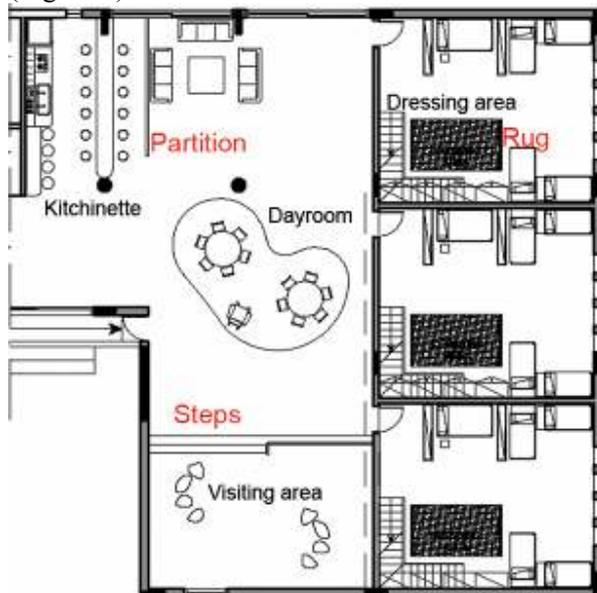
129

Figure 3

(Figure 4).



Figure 4

- Control: Patients should feel that they have control over their environment and need to be able to alter and interact with space. An example of how the architect can provide patients with choice and control, is creating a hierarchy in size and layout of spaces that makes it clear which spaces are private and which are public, which can be noisy and which can be quiet, and the patients would have the choice of where they want to be (Figure 5). Flexible and dynamic spaces, where spatial arrangements for example can be changed, give patients a feeling of empowerment and

independence as they interact with them in meaningful ways to foster their mental health (Moller, 1968).



Figure 5

- Restorative qualities of space: Design elements have the potential to function therapeutically. Certain elements such as comfortable furniture, soothing colors, homelike ambiance, retreat areas, and exposure to views of nature can all be soothing. Retreat areas with a minimum degree of distraction, for example, provide an opportunity for solitude and a break from over-stimulation (Figure 6). Furthermore, elements in space need always to be safe when they are intended to have a restorative quality and to avoid the risk of self-injury. For example, windows within spaces where patients are in a stable condition, can be low and easily manipulated, thus maintaining issues of view and control. However, within spaces where patients are in a harmful state, windows should be higher so they won't be a threat to safety.
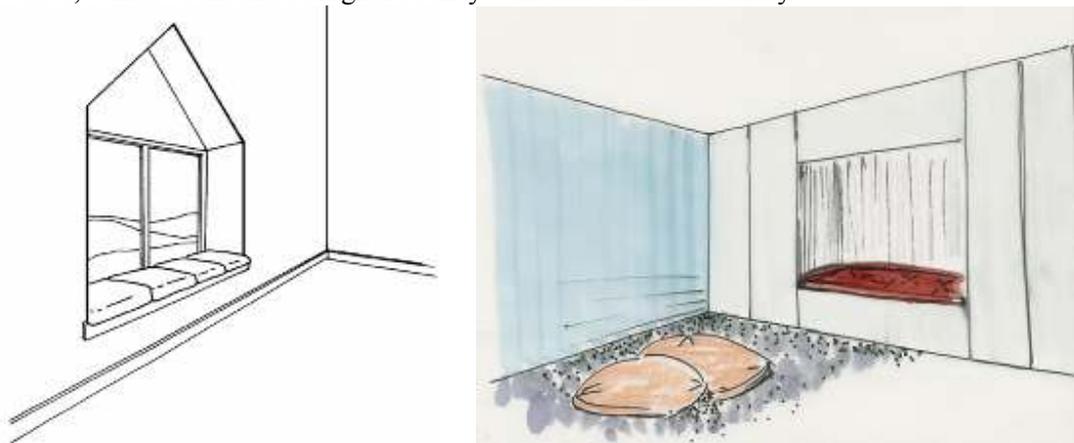


Figure 6

**Relationships between spaces**

The above discussion looked at architectural details / architectonics that need to be considered. The next important step is looking at relationships between spaces, their organization, and their

131

functions. I looked at two local case studies of mental health institutions in Lebanon, *Al-Zawrak* and *Dar-Al-Ajaza*, which will be mentioned in detail later in this paper. From this study, I will now give a few examples of critical spaces that can be found in schools or institutions.

- [Classes VS playgrounds]

It is more effective to have playgrounds located near the classes. This makes the transition from the classroom to the playground and back smoother for the students, especially for ones who have a hard time walking or ones who get anxious when asked to move from place to place.

- [Classroom VS therapy room]

Therapy rooms need to be visible to the students from their classroom, in order to help them make a connection between the space they are in and the space they are going to. This will avoid making students anxious during this transition (Figure 7).



Figure 7

- [Classroom VS kitchens]

Cooking programs are used as a treatment method to teach students autonomous skills. The location of kitchens and their design is important in helping students to associate them to learning spaces. The kitchen should be spacious with its equipment positioned in specific ways to facilitate learning. It is then that kitchens are no longer just for eating but become part of the healing program.

- [Workshops VS outside]

Having workshops, where students or patients learn work skills, open up onto outdoor spaces, can allow them to display their works in a more pleasant environment. These exhibitions will attract visitors and encourage socialization.

- [Offices VS dayrooms] VS [staff resting area]

If offices are far from patient dayrooms, segregation between staff and patients is created. Instead, a transparent relation between staff areas and patient dayrooms allows for social interaction (Figure 8). Furthermore, to help staff recharge energy, avoid stress and burn-out, and therefore better serve their patients, separate resting areas need to be designed, in addition to access to hot drinks and bigger meeting places.

- [Patient rooms VS communal spaces]

Having the patients' rooms near communal spaces (dayrooms, courtyards,…) where they have the opportunity to move around, helps them release their stress, shake off their boredom, and socialize. These communal spaces also serve as places for recreational activities, exhibitions, and self expression.
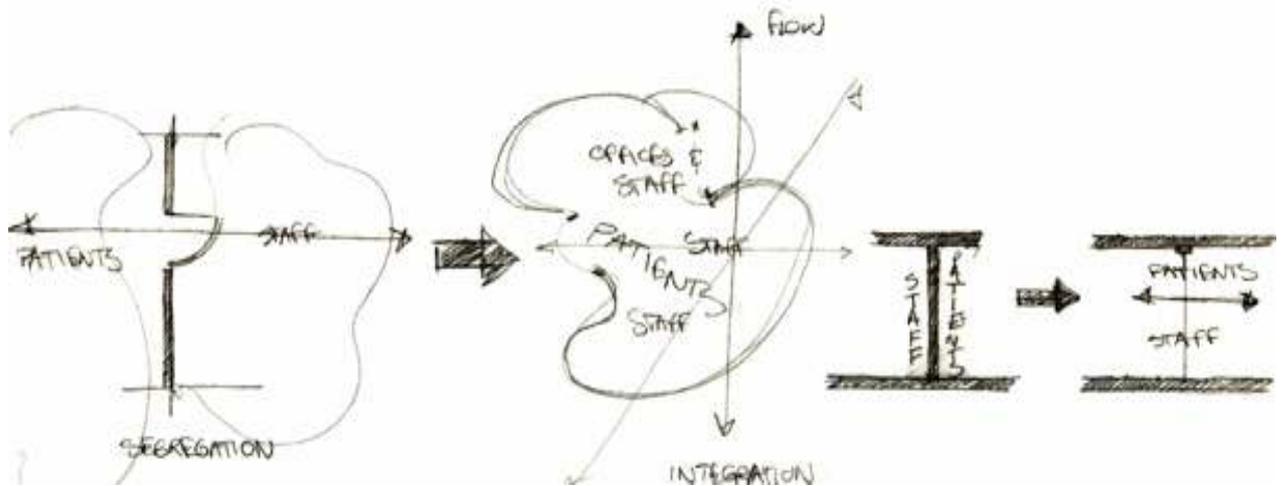
Figure 8

- [Rooms VS hallways]

Hallways can function as rendezvous and aeration spaces for patients who want to socialize, but have difficulty being too far from their private space. Therefore the design of hallways should be considered when they are intended to function as a socializing space. For example, wide hallways as opposed to narrow ones (Figure 9), can accommodate for and even encourage such an interaction, as they might also house other functions such as exhibiting personal art or simply wandering around.

- [Ward VS ward]

At home, a brother and his sister are provided with two separate bedrooms because at a certain age of maturity, issues of privacy and boundary become relevant. However, having separate bedrooms does not mean that the family is divided, because all the members of the family still live under the same roof, sharing all other activities and spaces in the home. Similarly, in institutions, the sexes need to be segregated in their distinct wards for privacy, comfort, and safety. Here is where the communal areas play a strong role of serving as spaces where both sexes can meet, socialize, and connect. These communal spaces allow them to feel part of a small community of men and women, as they also reflect an image of a small society.
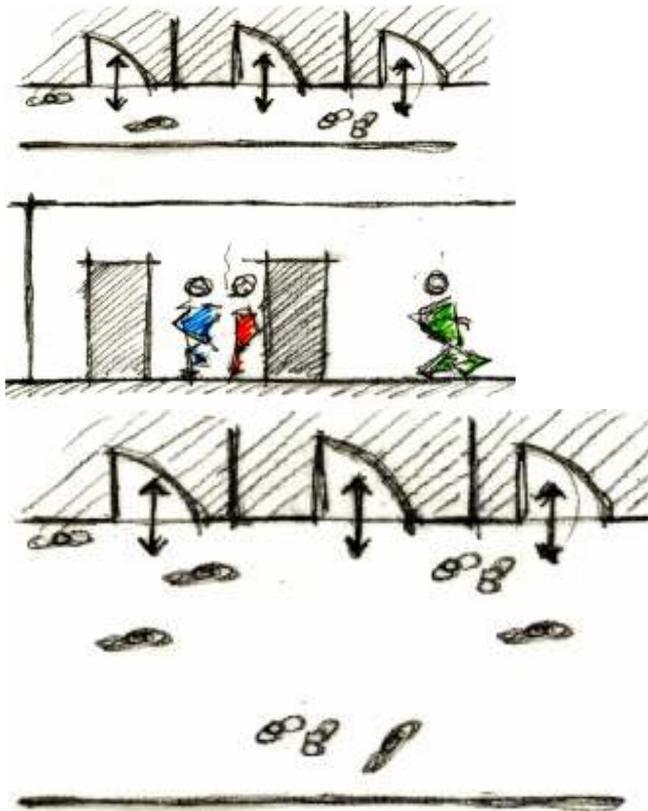
Figure 9

This process helped me understand how specialized design can meet specific needs. I discovered how private spaces, public spaces and specific elements of design can have the purpose of healing. The private space is healing because it gives the patient independence and privacy. The public space is healing because it allows the patient to socialize and express him/herself. Design elements are healing when they communicate safety, boundary, and freedom. Although the study was limited to two mental illnesses, what we learned from this methodology can be applied to a wider scale that includes more than these cases.

**Design implications of a therapeutic environment**

A therapeutic environment is an experiential journey that begins with basic building blocks that when combined, become a unified body and concept. According to this thinking, healing is a multi-component rehabilitation network.

- Specific kinds of work

The mental health system needs to help patients develop work skills which allow them to be active, independent and empowered in the institution and later in the wider community (Hatfield & Lefley, 1993). Commitment to meaningful work and feeling productive can guard against alienation (Moller, 1968). The types of work that will be provided at an institution will depend on what the potential and interests of the patients are. For patients who show no initiative, such as the autistic, but who have the ability to learn repetitive and technical steps, workshops (woodwork, sewing, manufacturing tasks, etc…) can develop their skills in mechanical work. The schizophrenic can have, depending on the stage of illness, the understanding, communication skill and initiative it

takes to do other types of work that might involve creating handcrafts and selling them, or working alongside staff members (simple office work, or in the kitchen and library). In the MENA region, another type of work, horticulture, is widespread and well-known for its benefits to youth with mental illness (Okasha, 1999).

- Public spaces & social interaction

Socialization is an integral part of the reintegration process. The function of public spaces in an institution is mostly focused on them being spaces that encourage social interaction, recreational activities, self-expression and an opportunity to practice social skills. The architectural environment can then decrease sources of alienation and instead increase connection with others, be it between staff and patient, patient and patient, or patient and visitor (Moller, 1968). And in this way "a sense of place is created by the socialization of space" (Larsen, 2004, p. 7). Because patients would rather stay withdrawn and isolated, the architect has to design the space in a way that will motivate them to join others. Even minor architectural details and focal points such as where the vending machine is, stimulate social interaction because they determine where, when, and how people meet. Patients' art, exhibited in hallways and common spaces, can be an icebreaker to start a conversation between individuals. The way furniture is positioned affect whether patients will interact or not; if it is positioned in a way that eye contact is possible or if it can be moved around, patients will interact. Even size of rooms affects social interaction: the bigger the room is, the less social interaction there is. However if spaces are too small and overcrowded, this will lead to negative social interaction such as aggressiveness and frustration.

- Staff / patient relationship

For the therapeutic relation between staff and patients to be strong, the staff needs to spend time with patients in the same space rather than be separated from them behind glass dividers that patients call "the cage" (Rosenhan, 1973). If staff units are too far from common areas (as mentioned earlier) observation of and contact with patients will decrease, which decreases appropriate care (Edelstein, 2005). What is needed is a harmonious reciprocal relationship where staff and patients interact.

- Visits

Visits create a connection with the community and therefore need to be allowed and even encouraged. People should be sensitive to the importance of having a relationship with the patients and contributing to their healing. Space structure can affect relationships between patients and their visitors. If appropriate visiting areas are designed in a way that allows comfort and privacy away from the main core of the institution, family members will visit more often (Regnier, 2002).

- Recreational activities

Recreational activities are therapeutic in providing patients with an opportunity to socialize, be creative, and have fun. Trips, games, dancing, story-telling, acting, and singing are all examples. When patients participate in these activities, they can interact with other patients, staff, relatives, friends, and visiting artists. Another helpful activity is exercise which encourages them to be active and uplifts their mood.

- Private spaces & identity

"Identity or self-identity is a central condition for self-control and self-discipline" (Larsen, 2004, p. 4). The institution can function as an identity-creating place, where the patient would no longer hold

an identity of a helpless patient waiting to be cured, but of an active, productive, creative, and sociable individual. Identity is formed when there is enough potential for individuality to be expressed and privacy to be achieved, such as when patients are allowed to do private acts as praying or even redesigning the layout of their room (Edelstein, 2005). To privatize their room they can display personal effects so they can feel at home (Noble, 2004). Or they can decorate their doors so they can easily identify their room and distinguish it from other spaces. What is important then in these spaces is how we reflect our selves in them and how we inhabit them (Moller, 1968). The design and architecture of the institution can give a homely and private atmosphere such as having single bedrooms and positioning the bed in a way that it is not visible from the corridor (Edelstein, 2005). The function of private spaces in an institution is mostly focused on them being spaces that encourage empowerment, independence, and self-identity.

**Percentages of Disability in the MENA region**

Estimates found in the literature about the number of people living with disability include physical and mental health impairment. The estimate of disability was calculated to be between 9 and 27 million people in the MENA region in 2002 (The World Bank, 2005). Detailed estimates may be difficult to attain and may also not be an accurate account of true numbers because of differences in definitions of what constitutes mental illness, lack of adequate diagnosing measures and unrecorded cases of mental illness. Furthermore, the effect of ongoing wars and political violence in parts of the MENA region, such as Lebanon, Iraq, West Bank and Gaza, have lead to an increase in percentages of cases of Post Traumatic Stress Disorder, anxiety disorders and depression. Early intervention, increased access to health services and the creation of environments where self-expression is possible, can all aid in avoiding the long-term effects of war. Unfortunately the economic devastation of war leads to cuts in funds for the mental health services.

Another important issue is the wide discrepancy between local and international statistics and percentages of mental disability in the MENA region. There is approximately 10% difference between both results, and thus these results are not reliable and only give us an idea about the situation. More specific and accurate studies should be further made. The following table shows the different numbers and percentages of disability in fourteen Arabic countries (Nehme 2006).

| | Country | Population | Number of Disabled According to Questionnaire | Internationally Expected at the rate of 10% | Percentages % |
|---|---|---|---|---|---|
| 1 | Jordan | ٥,١٨٣,٠٠٠ | ٢٥٨,٩٠١ | ٥١٨,٣٠٠ | %٤,٩ |
| 2 | UAE | ٢,٣٩٨,٠٠٠ | ٢,٠٥٣ | ٢٣,٩٨٠ | %٠,١ |
| 3 | Bahrain | ٦٦٦,٥٠٠ | ٤,٢٢٩ | ٦٦,٦٥٠ | %٠,٦ |
| 4 | Tunisia | ٩,٤٤٢,٤٠٠ | ١٧٠,٦٣٤ | ٩٤٤,٢٤٠ | %١,٨ |
| 5 | KSA | ١٦,٩٢٩,٢٩٤ | ٥٠٠,٠٠٠ | ١,٦٩٢,٩٢٩ | %٢,٩ |
| 6 | Sudan | ٣٠,٣٢٦,٠٠٠ | ٢٢٧,٦١٠ | ٣٠٣,٢٦٠ | %١,١ |
| 7 | Syria | ١٦,١١٠,٠٠٠ | ٩٤,٤٧٨ | ١,٦١١,٠٠٠ | %٠,٦ |
| 8 | Oman | ١,٧٧٧,٧٨٥ | ٣١,٥١٠ | ١٧٧,٧٦٨ | %١,٧ |
| 9 | West Bank & Gaza | ٢,٩٥٨,٥٧٩ | ٤٦,٠٦٨ | ٢٩٥,٨٥٧ | %١,٥ |
| 10 | Qatar | ٦٧٦,٠٠٠ | ٣,٠٠٠ | ٦٧,٦٠٠ | %٠,٤ |
| 11 | Lebanon | ٣,١١١,٨٦٨ | ٣٣,٨٠٧ | ٣١١,١٨٦ | %١,١ |
| 12 | Libya | ٥,٤٧١,٠٠٠ | ٤٦,٢٧٢ | ٥٤٧,١٠٠ | %٠,٨ |
| 13 | Egypt | ٦٤,٥١٠,٤١٣ | ٢٨٤,٣٨٨ | ٦,٤٥١,٠٤١ | %٠,٤ |
| 14 | Yemen | ١,٥٨٣,١٣١ | ٧٨,٤٦١ | ١٥٨,٣١٣ | %٤,٦ |

**Lebanon as a case study**

In Lebanon, my autistic brother has had the experience of being moved from one center to another in hope of finding a better match for his demanding needs. This situation was due to many factors: the lack of adequate facilities; the expensive cost of treatment; the lack of awareness campaigns about available facilities; and society's low tolerance of mental illness. However, some organizations have made the effort to upgrade their programs and facilities in order to become more suitable and available to more youth.

*Dar-Al-Ajaza* is a hospital for people with mental and physical disabilities that aims to meet the physical, psychological and social needs of men, women, and children. It also attempts to make the existence of these people visible as it believes that they need to be part of the community and that the community needs to be implicated in with their healing. It is known for its advanced medical care equipments as it is also very conscious of making its building accessible. It also provides the community with jobs and has many external services such as physiotherapy and pediatric clinics that ≈8000 citizens benefit from every year.

*Al-Zawrak* is an educational organization that aims to provide children, teenagers, and adults with mental illness with an environment where they can feel accepted, learn empowering skills and begin to be autonomous. It provides youth with many educational activities such as field trips, and focuses on teaching the students life skills.

*Arc-En-Ciel* is an organization that has made the effort to help people, with mental and/or physical illness, or any kind of difficulty, be productive citizens and provide them with a more prosperous future. Its policy is to provide services to all, with no discrimination against disability, age, sex, culture, religion or race, and encourage all of society to be active in helping people in need. Their slogan is *"la personne en difficulté au service de la personne en difficulté"*. This slogan is evident in the makeup of their organization, where the staff is made up of people who are mentally and/or physically disabled. In addition, this organization provides different work programs, such as factories that fabricate equipment for the physically disabled, youth clubs, medical services, agricultural and environmental programs, and community programs. Their recruitment office can also help these individuals find a paid job in the community. For example, a few years back, 40 people in wheelchairs were provided with jobs in *Elecricité du Liban*. Having such work responsibilities helps them be independent, have a home, bring up a family, and feel accepted by society.

*Classe Orange* is a program that aims to teach work skills to people with mental illness. Of the things they get to learn in this program is the concept of money and its application. Part of their learning is to be exposed to real life situations where they get to use money.

These organizations need to be more properly advertised so that more users can benefit from them. The government, media, and education can act as those systems of awareness that spread knowledge about the mentally ill and help change society's attitude towards them. Some programs on television for example have started showing the difficulties people with mental illness face and how society can be actively involved in helping rather than stigmatizing them.

Increased awareness can encourage both society and the government to contribute more in funding such and other efforts through donations and fundraising. The Lebanese government pays 17 000 L.L (11 US $) as a financial aid to each individual suffering from a mental illness, which is relatively little to meet their needs. This has led these organizations to rely mostly on donations. Ideally, increased funding and donations can improve the quality of care and the status of youth

with mental illness. Because of low governmental funds, these institutions can be very expensive. Families who do not have enough financial means, are then obliged to leave their children at home where they are deprived of the benefits of specialized care and the stimulation they deserve to reach their potential. When these governmental funds increase, special institutions and organizations would not then need to rely solely on fees and private donations. In this way they become more available to those families who cannot afford them, and their capabilities to meet different needs improve. 60% of *Dar-Al-Ajaza*'s economy, for example, comes from donations and the other 40% from contractual agreements with institutions and organizations such as the Ministry of Health. It needs annually around 5 million dollars to serve 800 patients, and with increased funding it could further improve their quality of care and serve more patients. Another example of a program that needs increased funding is a private school, *Lycée Abdel Ader*, that is trying to mainstream children with autism. Such an endeavor however is very costly if it is to serve more students. Furthermore, continual aid is needed to maintain the success of this mainstreaming. Aid does not only imply financial means but also moral support and care. For example, *Arc-En-Ciel* has been struggling to have the law for accessibility be practiced in the design of buildings and employment laws, but the government till today has not made an effort to enforce this law.

Finally, increased funding can allow designers to contribute in creating more appropriate environments for them. From an architectural perspective, the facilities in Lebanon are still not designed specifically for the user. Such unspecified design does not make the potential of architecture to be healing. The endeavor is to design buildings that accommodate the unique needs of youth with mental illness. Funding can improve quality of care, widespread availability and design considerations.

The role of municipal authorities is to assess, and re-assess, local needs through statistical surveys and awareness campaigns, and coordinate with the government to better intervene in improving the status of the mentally ill. This connection between the government and different municipalities can help in meeting the needs of more areas and therefore de-centralizing available care and facilities. Lack of interest in the mentally ill leads to losing a part of our youth who can be very resourceful if given the right opportunities. The government needs to then take the steps necessary to enhance youth's economic prospects and provide them with reintegration opportunities and paid jobs. These steps include enforcing employment laws, increasing funding for specialized facilities, and encouraging community participation.

## Conclusion: Institution mimicking society

The idea of creating a healing environment which will help the reintegration process is to create to some extent a replication of the dynamic outside world and society, within a so-called confined space of the institution. This philosophy facilitates the flow from the institution to society and vice versa, thus decreasing the shock of entering an institution and then exiting back into society. The institution can be then considered an environment within an environment, a microcosm of society. Within it there is a society where a real structure of hierarchy, with distributed responsibilities, and community life exists. As such, for the reintegration of youth with mental illness, at the societal level, it needs to first occur on the institutional level. The healing environment is thus an accumulation of the built architecture, programs, philosophies, and way of life. This network of components will need to mimic the real social structure of society. This mimicry involves:

1. Work: in the institution patients learn how to use and apply work skills, and discover the importance of work; similarly, in society they need to work to be part of the community, to be independent, and to lead a productive life.

2. Interpersonal relationships: In the institution they learn how to communicate and create bonds with others; similarly in society they need to create such relationships to avoid alienation and isolation.

3. Identity: In the institution they learn how to create a personal identity as they should create and express their identity in society so they can be visible.

Designers and architects have an obligation to pay attention to design features that affect the quality of life of the patients in order to maximize the healing benefits of the environment and foster their participation in the community. My methodology aimed at viewing patients as unique individuals that need special care and attention. The institution's efficiency lies then in being dedicated to providing them with the optimal care possible. No sacrifices can be made at the patients' expense. Because youth with mental health is dynamic and ever-changing, there is always a need for further research on architecture and its healing potential. This paper is a step for future developments in the MENA region.

**Appendix A**

This table shows the connection between psychology and architecture and how architecture can be healing when healing conditions are translated into design.

| Psychology | Healing Conditions | Architecture & Programs |
|---|---|---|
| Individual who is not fed, nurtured, & medically treated, cannot grow in a healthy way. | Physiological needs | Kitchen, cafeteria, lack of pollution, medical center and sustainable design. |
| Individual who feels no containment feels scattered. | Boundary | Privacy, walls, protection from the public, tree landscaping, fencing, private rooms. |
| Individual who feels s/he can be harmed will feel fear, frustration and anxiety. | Safety | Cleanliness (no moist, no seepage, good flow of air). Design detail (accessibility, stairs, doors, windows). |
| Individual who has no social contact is isolated. | Social connection | Public spaces, design that encourage social interaction. |
| Individual who feels unloved, has no self esteem, no joy and no self acceptance. | Love | Family visits, reciprocal staff/patient relationship, design materials, colors, rugs, cozy/intimate spaces. |
| Individual who feels powerless, is passive & lacks motivation. | Empowerment | Space can be manipulated & privatized, windows open manually... |
| Individual who feels dependant cannot be integrated into society. | Independence | Work programs, horticulture, workshops, programs such as cooking their own food, helping others, … |
| Individual who feels s/he does not belong anywhere, feels disconnected and afraid. | Sense of belonging- web condition | Public/interaction space, work, institute is homey, schedule (having something to do & having responsibilities). |
| Individual who feels s/he cannot be creative or who feels unproductive will not be able to fulfill his/her potential. | Creativity | Creating art, exhibitions, horticulture (growing their own plants), workshops, self expression (ex: graffiti), & alternative therapy (music & art therapy, or any kind of therapy where they are active in it). |



Maslow's hierarchy of human needs

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