

## THERAPEUTIC OUTDOOR DESIGN FOR MENTAL PATIENTS

**Abd. Haris Shamsuddin**

*Faculty of Architecture, Planning and Surveying, Universiti Teknologi MARA, Shah Alam, MALAYSIA*

### ABSTRACT

The awareness that outdoor design may promote health was discovered during the earliest civilization of man. Gardens were known as places that could provide peacefulness and rest, as well as to offer therapeutic benefit. However as the interest in science advanced, the role of outdoor design for therapeutic purposes has been neglected. Studies have indicated that there are four considerations in designing an outdoor area that may contribute therapeutic benefits:

- i)* it should promote a sense of control amongst patients as well as to allow privacy;
- ii)* the arrangement should accommodate social support from visitors, relatives and administration staff,
- iii)* the layout should encourage physical movement for users as well as exercise activities;
- iv)* it should provide access to nature as well as other positive distractions.

In general, mental patients are physically fit. However they are in a position of mental disorder and the curing treatment concentrates on evoking their memory and rationalising their thinking ability. Therefore, it is suggested that the focus of outdoor therapeutic design for mental patients should be aimed towards reducing their stress as well as stimulating the mind gradually.

### INTRODUCTION

#### Therapeutic Defined

According to *Webster's New Dictionary*, the term therapeutic derives from the word 'therapy,' which means 'the art of healing' or 'curative treatment.' In general, the term can be described as a constituent in the medical practice of a patient's healing. Healing, on the other hand, has a broader sense of curing compared to therapy. It can be referred to as a beneficial process that may promote overall human well-being (*Marcus and Barnes, 1999*).

However, the term 'healing' is manifested differently as compared to 'curing.' According to Dr. John Upledger in *Miliken, (1998)*, 'healing' refers to "what is done by the patient (or the patient's body) in order to resolve a problem of the body, mind, or spirit". In contrast, the meaning of 'curing' refers to "what is done to the patient by the physician or therapist". Nevertheless, the term 'therapy' more apparently refers to a variety of healing methods that are not used in most conventional medical practices. It is more accepted for medical practitioners who apply non-medical approaches as a method of healing.

#### What is Therapeutic Outdoor Design?

The dictionary gives the definition for design as 'to plan.' It can also refer to making a new arrangement by placing together parts to be made a whole. As indicated above, the focus of this paper is to list the guidelines in design that could provide a therapeutic outdoor environment that may facilitate healing. Since the term 'outdoor' refers specifically to the exterior or external spaces of building structures, the idea is to create and integrate all of the outdoor site elements

and features into an environment that can support and promote a therapeutic value in facilitating the healing process.

### **HISTORICAL REVIEW OF THERAPEUTIC OUTDOOR DESIGN**

Particularly during the twentieth century, interest in the importance of natural environment and landscape has been intensified throughout the world. The outdoor setting has been publicly noticed as a part of decoration purposes. Courtyards and surroundings within hospital areas were designed merely as a place to facilitate building ventilation and were rarely realised to have the potential in healing capabilities. The phenomena continued for many years until recently, when the awareness began to raise the concern of the public.

The awareness of the therapeutic benefits of outdoor design was actually discovered way back in history. The Judaic, Christian and Islamic religions symbolize paradise by a garden (Marcus & Marni, 1999). The ancients believed that illnesses were caused by supernatural forces. A similar hypothesis of sickness was also applied by the ancient Greeks. However, Hippocrates (460 - 377 B. C.), known as 'the Father of the Modern Medicine,' detached the healing profession from religion, and also the role of physician from priest. For him, treatment or curing included a diet programme, maintaining fresh air, exposure to sunshine and appropriate living conditions.

During the Renaissance (after the Middle Ages) interest in science developed. During that period, the emphasis on religion was subsequently decreased and man began to develop theories and scientific research leading to the beginning of modern medical knowledge. This knowledge was expanded and disseminated throughout the world, which finally led to the establishment of the field of medicine.

### **THE CRITERION OF THERAPUTIC OUTDOOR DESIGN**

It is important to notice that the outdoor area is also a potential source of therapeutic treatment. Tyson, (1998) has stated that the simple truth is that the landscape surrounding us has a great impact on our sense of well-being'. This statement is reinforced by several research studies that have been previously conducted. According to Ulrich in Marcus and Barnes, (1999), a supportive outdoor garden and design that would contribute to healing should incorporate the following four considerations:

#### **A sense of control and access to privacy**

People who feel that they have some control over the events in their lives are better able to cope with stress than people who feel that their lives are determined by forces outside themselves. Hence, the design should promote their sense of control in conjunction with promoting their self-confidence.

#### **The prospect of social support**

People who receive high levels of social support are usually healthier than those who do not; hence the material and emotional support a person receives from others is an important factor that should be considered in designing outdoor spaces that stimulate an environment conducive to social support activities.

### **Freedom or access to physical movement and exercise**

Body movement and physical exercises are known to be beneficial for health. It is proven that they improve psychological well-being and foster gains in other health outcomes. The outdoor design should accommodate patients' opportunities for mild exercises or physical movement.

### **Access to nature and other positive distractions**

Many studies suggest that visual exposure has the ability to influence the mind. Natural elements with positive distraction could also reduce stress and offer therapeutic benefits. They could promote a calmer emotional state in the perceiver. Scenic views, listed plant materials, open lawn, specific garden flowers and water elements contribute to calmness and therefore should be considered as part of the design elements.

According to Ulrich in Marberry, (1995), a positive distraction is an environment feature or element that elicits positive feelings, holds attention and interest without taxing or stressing the individual, and therefore may block or reduce worrisome thoughts. Research suggests that many nature scenes or elements foster stress recovery because of these reasons. New research also indicates that views dominated by nature content foster more rapid and complete restoration in terms of the physiological effect.

Therefore, the main role of outdoor design which could promote therapeutic benefits is to reduce the stress of patients. Stress is known as one of the main cause of diseases. Dr. Pelletier in Miliken, (1998) defined illness as the result of "a complex interaction of social factors, physical and psychological stress,..." In addition, Ulrich (1990) in Marberry, (1995) has suggested that patient stress has three negative effects; namely psychological, physiological, and behavioral manifestations that work against wellness:

- a) the psychological effect of stress can be manifested, for instance by the feeling of depression or helplessness;
- b) the physiological effect of stress is associated with some manifestation such as increased blood pressure and reduced immune functioning; and
- c) the behavioral effect of stress, is associated with varieties of reactions that adversely affect wellness including passivity, sleeplessness and alcohol or drug abuse.

Although the idea that stress could directly cause physical illness is undoubtedly still debatable, many studies have linked the consequences of stress with diseases. Managing stress is known as one way to prevent or control illness. Thus, effective therapeutic outdoor design may contribute to the whole approach of creating a total environment that may stimulate healing.

### **THE TREATMENT OF MENTAL PATIENTS**

There are various categories of mental illness among mental patients. However, generally, these patients are physically fit. However, their actions are highly unpredictable and they may react to anything unexpected. The method of treating mentally-ill patients is through continual consultation provided with medical treatment. The process requires plenty of time and patients may have to spend months for the treatment.

As stated by Aman Shabri (2001), the goal and focus of the outdoor design process is to reduce their stress and to stimulate their minds. This strategy is important in assisting patients to gradually recall their memory over the time. Eventually, this may improve their thinking ability as well as promoting them to think rationally as they used to.

Stimulating the mind can be achieved through the five human senses, which are the senses of sight, sound, touch, smell and taste. Among them, the sense of smell is known to be the most effective agent to gain or recall memory and past experiences.

## **PROPOSAL & DESIGN GUIDELINES**

Listed below are proposals and guidelines for therapeutic outdoor design. These guidelines and proposals are divided into three categories, which are the pre-design stage, design stage and the post-construction stage.

### **The pre-design stage:**

a) Utilise collaborative effort with other professionals in the design stage, as well as architects, interior architects, healthcare providers, physicians or psychologists. If possible, conduct a survey and study the needs of end-users as well as their habits.

### **The design proposals:**

a) The surroundings should integrate with natural forms of the environment. Natural undulating landforms should be preserved, as well as distance from urban areas to avoid air, or noise pollution or unfavorable visual impacts

b) Outdoor spaces should be designed to promote calmness and to consider user comfort and user safety. A list of suggested guide lines are:

- i. Apply elements that may provide shade to encourage space utilization.
- ii. Apply plant materials with the focus of arrangement on stimulating the human senses. Colourful flowering plants, as well as fragrant plant, may encourage patients to think more frequently as part of the healing process.
- iii. Other site features such as water, waterfalls, natural stone and wildlife may gradually improve patients' ability to remember. The independent living of chickens, birds (by providing birdbaths), fishes in pools, butterflies etc. may gently stimulate positive thinking about life.
- iv. Avoid poisonous plants or plants that may irritate such as thorny, falling seeds / fruits, soft stem, etc.
- v. Capture and utilise the natural wind flow.
- vi. Provide separate outdoor areas for smokers and nonsmokers. Smoking patients should not be forced to quit, as it may raise the level of their stress.
- vii. Urban noise such as street traffic, air conditioners or overhead aircraft should be considered. It may be excluded in the design features or else masked them by nature sounds such as waterfalls, singing birds, breezes, etc.

c) Colour scheme - apply 'cool' colours generously. Overall layout should be in harmony with the surroundings (including the building structures) to reduce stress and avoid chaos or confusion.

d) The elements of space:

- i. The overall area should be well sight-captured and easily accessible.
- ii. Provide space to facilitate social interaction between medical officers, administration staff, relatives, visitors and patients. Pool or water elements could also attract groups for social interaction.
- iii. Provide privacy spaces (e.g. filtered view or tinted glass in windows for supervision). Access to privacy spaces should be separated from access to social spaces.
- iv. Provide physical exercise spaces. Exercise elements may be in the form of walkways, steps, open spaces or mild exercise spaces.

- e) All site features must be properly chosen with the greatest consideration given to safety aspects. They should not be easily breakable, and without sharp edges. Benches and garden tables should also be durable, and preferably fixed to the ground.
- f) Ambiguous and abstract site features should be avoided. These include ambiguous sculptures or abstract art drawings.
- g) Preserve open views to natural beauty or towards interesting natural features. Scenic views should be utilized to reduce stress. For a closed outdoor space, a transparent fence might be practical. As for the building, provide some kind of windows from the building to offer views of the external environment.

**The post-construction stage**

- a) Maintenance should be the main agenda after the completion of construction. Broken garden lights, benches, plant material or felled trees should be removed or replaced immediately.



**Figure 1:** Building should integrate with natural surroundings to promote maximum therapeutic benefit



**Figure 2:** Existing scenic view towards nature should be preserved to promote calmness

## CONCLUSION

In summary, it is evidenced that the outdoor environment carries potential therapeutic benefits for healing purposes. It should also be well planned to coordinate with building structures to provide maximum advantages for patients. For mentally-ill patients, the character of the outdoor setting should be directed towards reducing stress and therefore the whole layout should promote peacefulness as well as stimulating human senses. Design guidelines should include:- promoting a sense of independence among users; providing access to some extent of privacy; accommodating social support to patients from visitors and employees; providing spaces for physical movements and exercise activities; as well as facilitating accessibility to nature or other positive distractions. Strategies may be drawn up to achieve the listed objectives, along with the general aim of evoking relative memory capacity and rationalising thinking capability.

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