LANDSCAPING AS AN ENVIRONMENTAL PSYCHOLOGICAL STRATEGY, IN ORDER TO PROMOTE THE MENTAL WELL-BEING AND MENTAL HEALTH OF PEOPLE

THILANNIRMANA R. L

Email: thilannirman@gmail.com

Abstract - At present, people face many psycho-social issues for the reasons of societal competition, environmental related issues and for the issues that concern them personally. Among them mental health related issues have come to forefront. However, it is apparent that people with mental illnesses opt for medicinal treatments based on tablets and pills as a method of cure. Physical and biological side effects nevertheless appear in later life. In search of a solution for mental health related illnesses solutions beyond pills are tested. Among such solutions the principles of environmental psychology and landscaping are mostly discussed. The benefit of adapting the theories and the principles of environmental psychology is that this will provide practical remedies and structures for day today stress people go through.

Index terms - Mental health, Illnesses, Environmental Psychology, Landscaping.

INTRODUCTION

Environment is a complex of many variables, which surrounds man as well as the living organisms. The notion of Environmental Psychology is basically based on the environment. Simply Environmental psychology is the study of transactions between individuals and their physical settings[1].In these transactions, individuals change their environments, and their behavior and experiences are changed by their environments. It includes theory, research, and practice aimed at making the built environment more humane and improving human relations with the natural environment[2]. Landscaping can also be considered as a part of environmental psychology as a media of promoting and developing mental health as well as mental well-being of people. Landscape and mental health is increasingly forming a tight connection by way of research and policy formulations. The links between landscape and mental health are increasingly recognized as important in research and at the policy level. The European Landscape Convention (Council of Europe, 2000, p. 2) is one such document that aims to promote landscape protection, management and planning, considering landscape as ‘‘a key element of individual and social well-being’’[3].

Per the definition provided by the World Health Organization (1946, p. 1) health is ‘‘a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity’’[4]. This definition of health provides a positive start in our attempt to set the premise to understand how visual landscapes contribute in individual and social health and well-being. Our definition of health effects reflects the broad health definition of the WHO, encompassing effects on physical, mental and social well-being. Stress-related diseases have now finally come into the limelight having been hidden in the closet for decades. Every day each hour various depressants are experimented and recommended in the healthcare industry. However, it did not take long enough to realize that another form of cure for mental health related illnesses shall be found in nature on which the human beings inherently depend on. Thus, advancing knowledge as to ways in which visual landscape impacts mental health. Researches have to be carried out with the aim of producing landscape elements and modules that cater to the rising demands in the field of mental health.

Escapism into nature as a cure for chaotic life created due to unending demands made by city life date back centuries. Ancient Romans had noted that contact with nature helps one cope with urban noise and congestion[5]. The late nineteenth century medical professionals recognized the importance of urban parks or rather in terms of that day “pleasure grounds” in industrial cities and thus laid another foundation to practically elaborate the correlation in green spaces and mental health. More recently, such intuitions are confirmed by scientific measures of human stress and physiological response. Green landscapes provide restorative settings that allow people to recover from daily and chronic stressors.
As technological advancements rocketed in a phase that made it hard to undermine, the importance and the attention that was given to nature and its natural healing qualities gradually diminished and people tended to undermine the importance of nature as an antidote for demands in their mental wellbeing. Through history, the connection between nature and healing was gradually superseded by increasingly technical approaches and the idea that access to nature could assist in healing lost much of its significance[6]. However, it appears now that society in the last 25 years recognized the negativities in ignoring the impact of nature on mental health and how its loss significance could have been a positive light on human health, have rekindled the link between nature and health effects. The academic

literature on this area have since been successful in exploring the relationship between nature and mental health.

Arepsychological medications and treatments always effective?

In today's society people are used to refer a psychiatrist or psychological treatments in order to palliate their psychological problems and disorders. Despite some serious side effects are attached to these medications and treatments. According to the Barlow, D.H[7]. he pointed out some serious questions associate with these kinds of treatments, one of the best example Barlow noted is the " Critical incident stress debriefing" this is the kind of therapy meant to use people with immediate traumatic experiences like natural disaster or accident, with them, psychologists or therapists findit quite difficult to make any psychological intervention, because their prime urge is to forget these memories and get rid of these kinds of experiences. But what the research has found is that in groups of people who have been treated with CISD actually experience greater and more severe symptoms when later measured. This made little sense to researchers, their confusion was how people who've actually been given a psychological intervention then later go on to experience even worse symptoms.

Common side effects of psychiatric medications are inevitable, some of which are similar across different classes of drugs. Different patients with similar symptoms respond to the same psychiatric medicine differently. Thus, the side effects shown by each patient vary from one another. For an example side effects of "Antipsychotics" may include drowsiness, restlessness, muscle spasms, tremor, dry mouth, or blurring of vision. The long-term side effects include tardive dyskinesia (TD), a disorder characterized by involuntary movements most often affecting the mouth, lips and tongue, and sometimes the trunk or other parts of the body such as arms and legs. Moreover, it is generally identified that taking medications for a considerable amount of time, usually for years increase the risk of side effects.

Environmental Psychology vs. Clinical Psychology

On the other hand clinical psychology can most broadly be seen as a field involving problems, theories, and methods that cut across a range of activities and populations with potential applicability to a range of environmental psychological phenomena[8]. In other words, clinical psychologists are concerned with pathology. Clinical psychologists generally focus on the individual as the single entity of analysis and most of their theoretical approaches are person centered with less regard for the setting or the environment they come from or dwell. By contrast, environmental psychologists focus on the person-in environment system as the primary unit of analysis. Per Stokols there is a connection between the setting and the location in which a particular situation takes place or the environment in which the usual life events of a person take place. The position taken by the environmental psychologists is that clinical psychologists must try to comprehend the physical environment that their patients generally associate in order to glean an accurate or rather a better understanding of the issue in order to recommend better therapeutic approach.

Theoretical Interpretations Associated with the Connection between Mental Health and Nature

A rich academic literature, theories and approaches explain and evaluate the influence of landscapes on human health. Contemporary theories, such as Ulrich's ''Stress Recovery Theory''[9](Ulrich,1984, 1999), predicts that natural scenes tend to reduce stress, whereas settings in the built environment tend to hinder recovery from stress. Evolutionary theories of landscape have explained the benefits of natural scenes as reflecting landscape qualities to satisfy human biological needs. According to the researchers in the field of environmental psychology have assessed that the restorative quality of nature shall be the reason for which the city dwellers prefer rural settings to city in situations of stress and to satisfy the need for mental relaxation.

As a result of more than 20 years of research, Rachel and Stephen Kaplan developed the Attention Restoration Theory that describes the restorative effect of natural environments on human mental fatigue[10].(Kaplan and Kaplan, 1989) ''Restoration'' has been defined as ''the process of renewing physical, psychological and social capabilities diminished in ongoing efforts to meet adaptive demands'. The approach of the concept of ''TherapeuticLandscapes''(Gesler, 1992) is linked to the idea of place identity, and to the use of particular places or settings for the maintenance of health and well-being.

Due to demands caused by the modern society by ways of financial strain, work load, job loss, complex family interactions, marital conflict, and other persistent situations everyday stress factors have gone to different levels. In urban environments, population and infrastructure density are often agglomerated to a land space that is not relatively extensive to hold up such urban agglomeration. Thus, people are often weighed down by congestion, noise, movement, and visual complexity as they are forced to go through situations and scenario the industrial cities always put them into which ultimately drive them to sensory overload. Undergoing such situations daily can be exhausting and it can overwhelm people. Therefore, people who are raised in urban environments experience increased risk for mental health disorders[11].

The negative effects of urban living can be mitigated by the experience of nature. Several experiments have been carried out to monitor the psychological responses of participants to a task they have been asked to complete, in a setting with controlled conditions.

In 1991, Roger Ulrich and colleagues conducted one of the earliest and most often cited studies[12]. Firstly, participants had to watch a mentally painful movie and then each individual watched one of six videos portraying urban and natural environments. Data was obtained using both self-rating of stress levels and physiological indicators such as heart period, muscle tension, skin conductance, and plethysmography (which correlates with systolic blood pressure). Recovery experienced by the individuals who viewed natural settings, was faster and complete and as seen in Figure 1 these individuals recorded approximately 4 minutes for their recovery. Figure 1

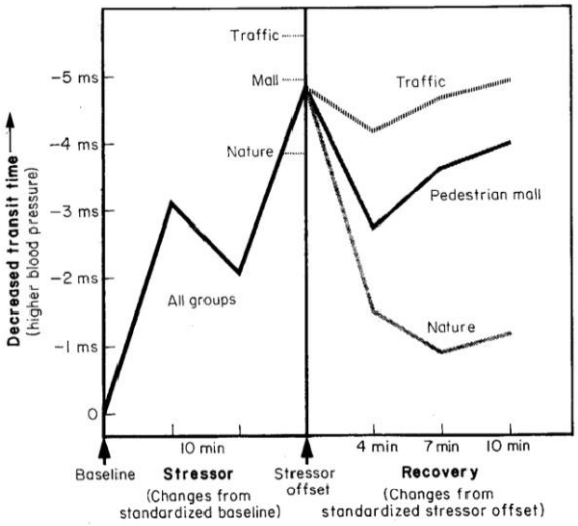

Figure 1: Stress recovery rates when viewing different urban settings (using pulse transit time as a physiological stress indicator).

Moreover, a considerable number of studies have confirmed that natural world and the time one spends in it can contribute to reductions of chronic diseases. The mechanism of the chemistry on how this happens is yet to be understood and documented. Yet, studies continuously prove the positive association between natural elements and health. Even in these researches the quality of the urban green spaces were assessed in terms of the quantity of nearby nature, distance to an amenity, the amount of time spent in the space, and the quality of the green space as a whole. The findings of the research includes that passive experiences (such as walking nearby trees, parks, and gardens can effectively reduce stress[13]. This effect is increased if initial stress or anxiety levels are high. It was revealed that residents in urban cities with trees nearby were better at coping with stressful major life issues compared to those with homes surrounded by concrete[14]. Furthermore, it was found that women respond more positively to neighborhood greeneries. Some studies suggest that viewing photographs of natural scenes are effective in relaxing stressed minds[15].

Built Environment and Mental Well-Being

Today, Urbanization and separation of humans from nature have caused enormous damages to human beings. Influx to the cities and lack of space caused the loss of natural spaces which is one of the most important stressful factors for humans[16]. Researches have shown that lack of each person's control over the environment and existence of problems in design-engineering system of the buildings caused congestion and social isolation which ultimately have led to some problems regarding job and social features; and consequently, these factors endanger the mental health of the individuals[17].

Environmental psychology as a science could be useful in understanding the dissociation between the man and the environment, and it indicates that how location specification affect behavior and helps the behavior change and causes compatibility with the environment .

Recent research has demonstrated connections of key physical design characteristics with the Five Ways to Well-Being (Connect, Keep Active, Take Notice, Keep Learning and Give), which have been associated with positive mental health[18]. Based on these findings, we can assume that how the provision of local urban and domestic resources can impinge on the five healthy behaviors. And shows that a sufficient quantity and quality of diverse environmental, social and physical resources can influence human cognition, which, in turn, can increase the healthy behaviors of the wider population.

In "Broken Window Theory", James Q Wilson (1982) showed that environment has powerful influence on human health and wellbeing[19]. Personal wellbeing shows individuals' satisfaction and happiness about their life quality and is a positive status of physical, psychological and social welfare. One of the aspects of environment that may affect human health is Building Environment conceptually, Building Environment includes all of constructed environments in which humans live and work, and it also includes building design and interior architecture and effects human's emotions, excitement and performance[20].

Horticultural therapy is another area of psychology clinical practice based on proven benefits to the physical, mental and emotional wellbeing that accrues from gardening as a healing or therapeutic agent. Gardening is generally considered as a relaxing

exercise to mind. The combination of the fresh air and the physicality of the tasks helps oxygenate the bloodstream and energize the physical body while simultaneously releasing endorphins involved with stress alleviation. Numerous scientific studies validate the calming effect of the garden by showing findings that reveal simply being in a garden lowers blood pressure[21]. The regular activities that involve in maintaining a garden help in vent anger and aggression and it teaches to accept the realities of life such as life and death[22]. In the modern world, urban designing also has taken a sharp turn. To the architectural science of city scaping psychology also has crept in. In fact, many researchers using highly developed technical machines have calculated and measured the stimulation and responses the brain give to specific urban settings. For example, in one recent set of experiments, conducted by Kevin Barton of Relive, a stark-looking industrial setting was designed consisting of about 30 city blocks. The streetscapes were so designed to explore the impact of different types of layouts on how we find our way and how the shape of an environment influences attention, cognitive effort, and urban stress. One layout was very orderly, like a Manhattan, Washington or Canberra, while another was more organic and meandering, like New Orleans or London. It was discovered that the manner in which such cityscapes were explored, and the psychological reactions to their design, varied strongly with their overall grammar[23].

Horticultural gardens are effectually planned to reduce stress and they may include Zen principles such as simplicity (Kanso), austerity (koko), or naturalness (Shizen). While zen gardens portray the nature as you find it without altering or beautifying the green spaces, these stress-reducing gardens are much different. They are often similar to any other woodland or flower garden, but planes with careful deliberation to highlight a particular design or colors[24].

According to the research conducted by Tehran University of Medical Sciences for Iranian Journal of Psychiatry, Environmental Psychology Effects on Mental Health Job Satisfaction and Personal Well Being of Nurses[25], they have studied about how does the Environmental Psychological strategies can be used for improving mental wellbeing among nurses in Khatamol-Al-Anbia hospital located in the third district of Tehran municipality[25]. Per stated by this research nursing is one of the stressful jobs in the world and usually exposed to stress, and researchers introduced some environmental psychological strategies to decline this work related stress and promote their mental well-being. These strategies included watching nature from a window, using natural elements in the work environment results in the following positive outcomes: reducing the environmental stress and increasing calmness, less depression and more mental compatibility, positive effects on happiness and quality of life[25].

In order to measure the connection between natural environment and work performance researchers have used three groups of the nurses who worked in three different work environments:

1. The nurses who worked in an environment with no interior design,
2. Nurses who worked in an environment with natural beautiful perspective
3. Nurses who worked in an environment with no interior design, but with limited view of the simulated garden.[25]

The nurses were given a questionnaires based on anxiety and depression In the meantime a garden was built using the principles of environmental psychology. This garden was created in the model of a mini jungle within the hospital. There was a waterfall, gentle sounds of birds and comfortable chairs made of bamboo for the nurses to rest.[25]



Figure 2:The reason I agree with this research is, this research clearly shows the interrelationship between environment and mental wellbeing in scientific basis. For further readings: (Tavakkoli. S, Asaadi. M.M, Pakpour. A.H, Hajiaghababaei. M., (2015), Environmental Psychology Effects on Mental Health Job Satisfaction and Personal Well Being of Nurses. Iranian Journal of Psychiatry. 2015;10(3). Pp. 158-164)

As a part of the research a group of nurses were given the opportunity to view this garden from far and the other group did not have the chance to do so[25].

The findings of this research showed that this peaceful garden area improved the job satisfaction of the nurses working at the designed area and those with a view to the designed area. The other findings of this research showed that the designed area for the resting time of the nurses affected their wellbeing and that the marks of nurses' wellbeing were higher in the group working in the designed area and those working in the area with a window rather than those working in the area with no natural environment.

Also, variance of depression among these two groups of nurses were too evident[25].

CONCLUSION

There exists an indivisible bond between the man and the environment. This study identified the landscaping and environmental psychological strategies in promoting mental well-being and mental health of people. We found the gap between urban versus nature environment and its effect on people's mental and physical well-being in those studies, as well as the impact of built environment and landscaping strategies as a tool of enhancing mental well-being reducing stress of people. Furthermore the literature review identified the main health aspects of exposure to landscape related to improve attention capacity, facilitation recovery from mental illnesses, and behavioral changes that improve mood and general well-being. These effects have been noticed by means of viewing natural landscapes during a walk, at a work, or viewing natural built environment in their work places,

Many developed Western countries at present are engaged in the task of creating a productive relationship between the man and the environment through the application of the principles of environmental psychology. Also, by the use of environmental psychology in its clinical aspect can be a great support in addressing many psychological disorders.

As we witnessed there is a strong relationship between Environmental Psychological strategies and human health. Today people are facing serious problems with mental disorders and day today stressors. Nevertheless, using some of medications and some types of psychiatric treatments may have side effects to human health. But if we could utilize these environmental psychological strategies and natural landscaping (urban landscaping and nature gardens etc.)as a media of palliating human mental disorders, it would be a great achievement in mankind in future.

REFERENCES

[1] Gifford. D., (1995), Natural psychology: An introduction in Journal of Environmental Psychology, 15, pp.167–168.

[2] Geller. E. S., (1987), Applied behavioral analysis and environmental psychology: From strange bedfellows to aproductive marriage, Stokols. I, Altman (Eds.), Handbook of environmental psychology. New York: Wiley, pp.

[3] 361–388

[4] Council of Europe, 2000. European Landscape Convention. CETS No. 176. Council of Europe, Florence.

[5] World Health Organization, 1946. Constitution of the World Health Organization. WHO, Geneva.

[6] Glacken, C.J. 1967. Traces on the Rhodian Shore: Nature and Culture in Western Thought FromAncient Times to the End of the Eighteenth Century. University of California Press.

[7] Ulrich, R.S., 2002. Health benefits of gardens in hospitals. Paper for conference: Plants for People.International Exhibition Florida.Availablefrom:/http://www.plantsatwork.org/pdf/HealthSettingsUlrich_copy.pdfS (accessed 29 June 2007).

[8] Barlow, D.H. (2010). Negative effects from psychological treatments. American Psychologist, 65, Pp. 13-19.

[9] Bechtel R, Churchman A (2002). Handbook of environmental psychology. John Wiley & Sons, Inc. New York.

[10] Pp. 129-143.

[11] Ulrich, R.S., 1999. Effects of gardens on health outcomes: theory and research. In: Cooper-Marcus, C., Barnes,M. (Eds.), Healing Gardens: Therapeutic Benefits and Design Recommendations. Wiley, New York, pp. 27–86.

[12] Kaplan, R., Kaplan, S., 1989. The Experience of Nature: a Psychological Perspective. Cambridge University

[13] Press, Cambridge.

[14] Lederbogen, F., P. Kirsch, L. Haddad, et al. 2011. City Living and Urban Upbringing Affect Neural Social StressProcessing in Humans. Nature 474, 7352:Pp.498-501.

[15] Ulrich, R.S., R.F. Simons, B.D. Losito, E. Fiorito, M.A. Miles, and M. Zelson. 1991. Stress Recovery During Exposure to

[16] Natural and Urban Environments. Journal of Environmental Psychology 11, 3:201-230.

[17] Ulrich, R.S., and D.L. Addoms. 1981. Psychological and Recreational Benefits of a Residential Park. Journal ofLeisure Research 13, 1:43-65.

[18] Kuo, F.E. 2001. Coping with Poverty: Impacts of Environment and Attention in the Inner City. Environment

[19] and Behavior 33, 1:5-34

[20] Kahn, Jr., P.H., B. Friedman, B. Gill, et al. 2008. A Plasma Display Window? The Shifting Baseline Problem in aTechnologically Mediated Natural World. Journal of Environmental Psychology 28, 2:192-199.

[21] Brown. T, Morgue. B., (2007), Off the Couch and the Move: Global public health and the medication ofnature. Social Science &Medicine. Vol: 64. pp.1343–1354.

[22] Gifford. R., (2007), Environmental psychology and sustainable development: Expansion, maturation, andchallenges, in Journal of Social Issues.; 63. Pp. 199–212.

[23] Anderson. J., (2014), Urban design and wellbeing. Cambridge: Doctoral thesis, University of Cambridge,London: New Economics Foundation.

[24] Cohen. D.E, Brooks-Gunn .J, Eventual .T, Hertz man .C., (2002), Neighborhood income and physical and socialdisorder in Canada: associations with young children's competencies, Child Development. Pp. 1844–1860.

[25] Butter worth. I., (2000), The Relationship Between the Built Environment and Well Being.

[26] Horticulture to 12 Basic Education Curriculum Technology and Livelihood Education Learning Module.Republic of the Philippines Department of Education.

[27] Ahrentzen. S, Jue. G. M, Skorpanich. A, Evans. G. W, (1982), School environments and stress. In G. W. Evans

[28] (Ed.), Environmental stress, New York: Cambridge University Press. pp. 224–255

[29] Ellard. C, Cities and their Psychology: how neuroscience affects urban planning, The Guardian.

[30] Tavakkoli. S, Asaadi. M. M, Pakpour. A.H, Hajiaghababaei. M., (2015), Environmental Psychology Effects on Mental Health Job Satisfaction and Personal Well Being of Nurses. Iranian Journal of Psychiatry pp.158-164.

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