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The Development of Healing Environment Concept: A review

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Abstract. Good environment will reflect the user's life in many aspects. Therefore, many concepts have been developed to produce such good and excellent environment. One of it is healing concept that have a positive effect based on previous research. Although this concept has been developed since many years ago but the understanding and implementation level are still low. Therefore, aim of this study was to explore the development of healing concept consist of several framework and can applied into comprehensive built environment design. Studies started from searching keyword that related with healing garden. The word healing has also substitute with other synonym words that reflect the same meaning. In general, healing can be defined as a good and positive effect of psychology. Finding shows that, healing concept can be applied in the building and landscape design. Healing garden is one of the implementations derive from healing concept. Research suggest for future, is to studies about benefits of healing or restorative concept and focus on specific user. Studies shows that this idea has brighter future to be explore especially for design and built environment specialist. Study contributes to the body of knowledge around practitioner and also researcher.

1. Introduction

Previous study shows that a vast of study on healing environment are related with healthcare. However, some of it are related with urban garden area and healing effect at workplace. Therefore, definite understanding of basic element in the concept of healing environment have to be explore to ensure the precise implementation. It is important to guarantee the positive effect of the concept. This study builds on review of healing concept and its synonyms that contributes to further exploration. The aim of this study was to explore the components of healing concept that can be applied into comprehensive built environment rather than just in healthcare facilities. Moreover, the main objective is to develop understanding about the concept. The exploration is true modest searching of literature review and this paper act as first kick start for the next stage of research.

2. Research process

Extracting healing environment info start with the related search string that have been choose. Random keyword that author can relate with healing concept have been choose to find the article. The retrieving process have been done on 10th December 2018 by using Scopus databased. Simple filtering process which limit the result within 5 years publications, journal paper and English language. Filtering stage have been done for repeating research paper for difference search strings. The search strings were stated in the Table 1 and as a result 35 papers have been retrieved. However, after filtering and duplication process only 28 journal papers are selected. Content of retrieved paper have been analysed. Discussions



analysis based on several subtopic that have been extracted from the research paper. Thus, several subtopics were discussed in this paper.

Table 1. Search string.

Search string	Number of papers
“Stress rehabilitation with garden”	2
“Healing garden”	121
“Garden therapy”	13
“Restorative garden”	5
“Therapeutic garden”	48

3. Theories and terminology

In view of understanding healing concept, related terms and theories has been explore. Discussion from several studies shows that healing effect are derive from nature that stimulate body to have the benefits [1]. Thus Jiang [1], has been summaries the various term and theories as shows in Table 2. Finding in this previous study has been demonstrated that healing concept may substitute with other terminology which describe the same idea. Besides, the respective theories describe the benefits of this concept.

Table 2. Four schools of theories in western studies for therapeutic landscape and healing garden [1].

School	Terminology	Theories
1. Medical	Therapeutic landscape	Sense of place; four dimensions of therapeutic landscapes: natural environment, built environment, symbolic environment and social environment.
2. Environmental psychology	Restorative environment	Attention Restoration Theory (ART); four features as restorative environment: being away, extent, fascination, and action and compatibility
	Therapeutic landscapes and healing garden	Esthetic-Affective Theory (AAT); psycho-evaluation theories; three features of healing gardens: relief from physical symptoms, illness or trauma; stress reduction for individuals dealing with emotionally and/or physically stressful experiences; and improvement in the overall sense of well-being
3. Ecological psychology	Solutegenic environment and therapeutic landscape	Theories of environmental affordances; ecological psychology
4. Horticultural Therapy	Garden and therapeutic garden	Theory of “flow experience”; sensory stimulation theories

The term and theories show that this concept could be implemented in several ways. Not limited for garden or reflect to natural element only. However, as referred to several previous research it more focusing on natural area such as garden and urban garden.

4. Evaluation of healing framework and healing garden concept

There are several frameworks have been produced as a guideline or reference to implement the concept. Currently a few of framework have been identified by previous researcher [1-6] and as an example in Figure 1 and Figure 2.



Figure 1. Optimal healing environments [4].

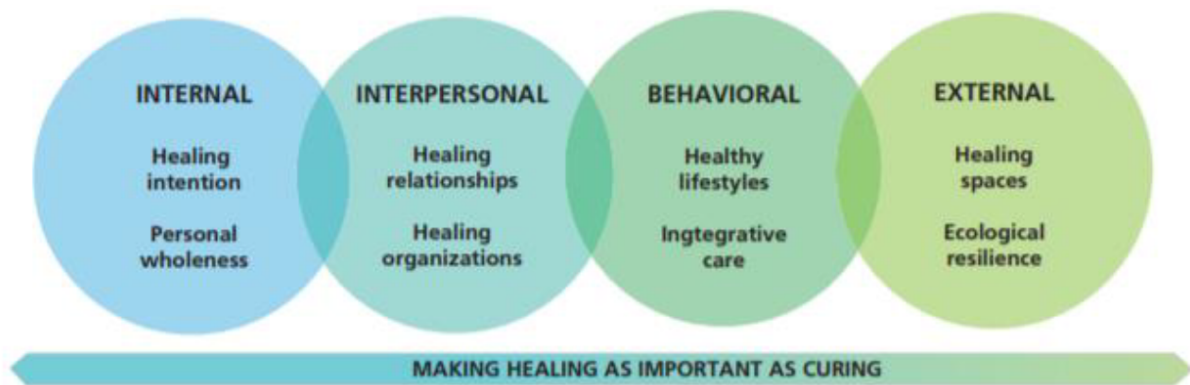


Figure 2. Optimal healing environments from Samueli Institute [6].

Earlier Optimal Healing Environment (OHE) framework have been developed by a group of medical practitioners which is Samueli Institute (Figure 1). The non-profit institute and dedicated to exploring the science of healing. Therefore, the variables are more directly related with cure and healing at healthcare. In other word, healing concept have been accepted as one of treatment to cure health problem.

However, OHE framework have been developed and adjust in certain area by the built environment researcher such as architecture person as illustrate in Figure 2, Terri [4-5]. Thus, the elements of healing are broader and related with built environment. From two different framework that derive from different background of researcher, it shows they relate the same concept with their nature. As for Jonas [2] and Jonas [3] it more related with medical domain. However, Terri Zborowsky [4] add sustainability domain which relate to construction industry.

Furthermore, DuBose [6] have been focusing on building space as illustrate by Jonas [2] and Jonas [3]. Therefore, they modified the domain by using “architecture”. Moreover, they categorise the variable

into two main category which are external and internal. Then, Shukor [7] have been focusing the healing element for garden. Besides, the author has divided the element into two categories which area hardscape and softscape. On top of that, Figure 3 demonstrate that Samueli Institute have been extend the healing variable into several domain compared to Figure 1. Therefore, it shows that the concept still can be evolve in future. Finding shows that this concept is not limited for medical treatment purposed. The idea also suite with building design and creating any environment. The implementation also not only for healthcare or medical scope.

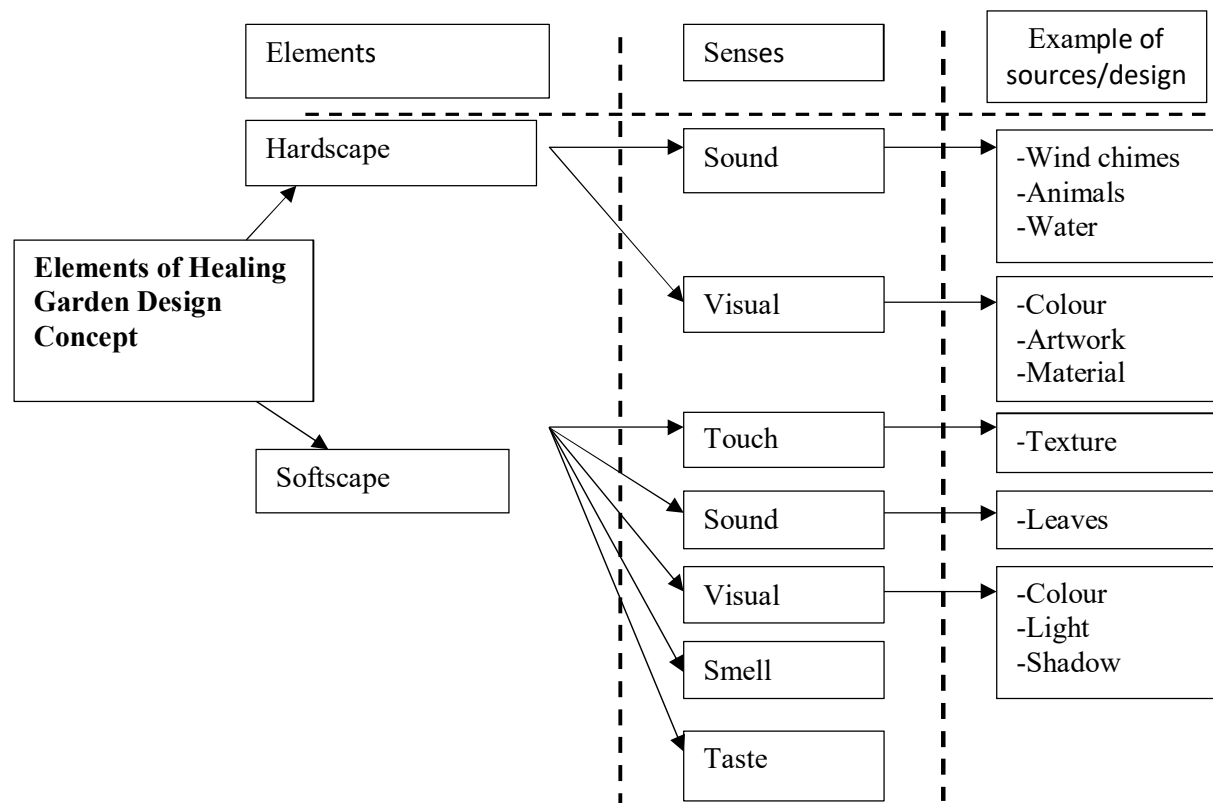


Figure 3. Elements of Healing Garden Design Concept [7]

5. Benefits of healing concept

Nature environment have positive effect to health especially mental health. Natural element such as trees, leaves and vegetation have an exclusive benefit for mental refreshment [8]. Moreover, their research hypothesized that seeing a vegetated environment would result in a positive mood and reduced perceived effort.

Incorporating greeneries or natural setting in the organization will give micro-restorative experience such as walk-through activity and will enhance staff’s well-being [9]. Optimal Healing Environment (OHE) consist of social, psychologic, spiritual, physical, and behavioural components to support and encourage healing as a whole [2-3].

Previous research also supports that interacting with natural environments have positive effect in relation to mental and physical health healing [10]. Number of studies also relate that natural environment with stress restoration [10].

6. Conclusion

More research can be done after having some understanding about healing or restorative benefits. As the implementation are variety, Therefore, the benefits may also vary suite with the area of implementation. This study shown that this area has brighter future to be explore especially for design and built specialist. This study adds to the body of knowledge around practitioner and also researcher.

7. Reference

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