

109 年度失智友善資源整合計畫 7 月份文獻摘譯

文章	<p>Creating a dementia-friendly environment through the use of outdoor natural landscape design intervention in long-term care facilities: A narrative review 在長期照護機構運用戶外自然景觀設計營造失智友善環境：描述性文獻回顧</p>
作者	<p>Parinaz Motealleh, Wendy Moyle , Cindy Jones , Karine Dupre Health & Place, 58, 102148.</p>
目標	<p>此篇為一描述性文獻回顧，以近年的研究文章探討在設計自然戶外景觀時，如何使用失智友善環境的原則，改善躁動、淡漠的情形，並提升失智者在長期照護機構的活動參與。</p>
前言	<p>在古代文化中，美麗的景觀被視為神聖且有使人恢復的力量。近代科學證據顯示，景觀設計對於生理、社會和心理健康都有益處，尤其對於老年族群更有顯著的幫助。</p> <p>「治療性景觀」的名詞，在 1993 年由 Gesler 提出，意指對生理、心理、靈性具有復原和治療力量的自然/人為景觀(Gesler, 1993)。因此，眾多專家學者們也針對環境的治療效果進行研究，範圍包含醫院、綠色環境(公園、花園)、藍色環境(海洋、河流、湖泊)等。雖然戶外自然景觀已被證實具有對健康和活品質的益處，但針對生活在長期照護機構失智者的研究仍很缺乏。</p> <p>近年來，「失智友善環境」造成一股新潮流，目的是提供支持和最適合的協助，以利於失智者參與日常生活中有意義的活動。起初，醫院和長期照顧機構從室內環境開始著手，改善地板、燈光、家具和視覺提示的設計；後來，戶外自然景觀也越來越被重視，讓失智者可在綠能農場(Green Care Farms)和花園進行活動、欣賞風景。</p> <p>為失智者設計戶外自然景觀時，除了要對應他們的需求外，也需考慮失智友善環境的原則，例如清楚的方向標示、可近性、社交互動、有意義的活動、懷舊活動、感官刺激、安全性和永續性(詳見表一)。</p>
方法	<p>由數個文獻資料庫中搜尋 2007 年到 2017 年的研究文章，使用自然景觀、失智症、長期照顧機構、情緒問題行為等四組相關關鍵字進行搜尋；另有四篇文章經由文獻檢查而取得，共納入 15 篇研究文章。在資料分析的過程中，研究者進一步使用 Mixed Methods Appraisal Tool (MMAT)，檢驗研究設計和資料收集的適切性。</p>
結果	<p>此回顧文章將 15 篇研究文章的內容分成以下向度來探討(表三)：</p> <ul style="list-style-type: none"> ● 研究方法學：10 個量性研究、2 個質性研究，以及 3 個研究使用了混合型的研究方法。 ● 研究所在地區：6 個於歐洲、6 個於美國、2 個於澳洲、1 個於亞洲執行。 ● 研究參與者：在此 15 個研究中，共有 1179 位參與者(包含失智者、工作人員和家屬)；每個研究中失智者的平均年齡為 71-89 歲，認知缺損的程度由輕度到重度皆有，簡易心智量表平均分數為 5.7-20 分。 ● 研究的介入內容： <ul style="list-style-type: none"> ■ 園藝活動(horticultural activities):部分研究顯示可以降低失智者的躁動行為和提升活動參與度(增加主動身體行動或口頭反應的行為、被

	<p>動的觀察和聆聽活動內容)。</p> <ul style="list-style-type: none"> ■ 治療性花園(therapeutic gardens):三個研究顯示失智者在活動參與和社交行為上有正向的效果，而活動參與的行為包含澆花、種植植物、賞花，也增加了他們的溝通表達。 ■ 綠能農場(green care farm)：在 4 個研究中顯示，對失智者的社交表現和活動參與有正向的結果，但對神經精神症狀(如躁動、淡漠)沒有顯著的影響。 <p>● 戶外景觀設計的步驟：</p> <ul style="list-style-type: none"> ■ 位置分析(site analysis)：分析地點和環境是否適合，包含土壤、水源、排水、樹蔭，以上皆會影響可種植的植物類別。 ■ 環境分析(environmental assessment)：可參照失智友善設計，了解環境中的優勢及劣勢、失智者的需求，以利設計者更為善用選定的環境。 ■ 失智友善環境的特色：設計中須考量定向感、可近性、社交互動、有意義的活動、懷舊活動、感官刺激、安全性和永續性。 ■ 戶外自然景觀的計畫：依據以上步驟的分析和失智者的需求，設計者可將構想作為草圖和計畫，其中也包含所需要的建築物元素和施工細節。
<p>討論</p>	<ul style="list-style-type: none"> ● 15 篇研究文章都在西方國家進行為主，除了因篩選的語言為英文外，也可能西方文化素來重視治療性景觀設計而有此現象。 ● 部分前導研究提出，戶外自然景觀可以改善失智者的問題行為；但是，因文獻數量不足，目前仍很難得到明確的結論。 ● 在此文獻回顧所收錄的 15 篇研究文章中，雖然學者們提出失智友善的設計和環境，但是缺乏清楚的建議和環境設計圖。
<p>結論</p>	<ul style="list-style-type: none"> ● 此文獻回顧探討了戶外自然景觀對住在長期照護機構失智者的效果。雖然越來越多學者進行此類研究，可惜科學證據上仍不夠完整。 ● 將環境改善的過程，可參照失智友善環境的原則進行室內和戶外設計，除了讓失智者生活環境更舒適外，也可以運用戶外景觀的治療療癒力量。

Study	Creating a dementia-friendly environment through the use of outdoor natural landscape design intervention in long-term care facilities: A narrative review
Author	Parinaz Motealleh, Wendy Moyle , Cindy Jones , Karine Dupre Health & Place, 58, 102148.
Objectives	<p>This narrative review aims to investigate recent studies that examine and use the characteristics of a dementia friendly environment (DFE) in the design of an outdoor natural landscape to reduce agitation and apathy and to encourage engagement of people with dementia in long-term care (LTC) facilities.</p>
Introduction	<p>A number of ancient cultures, including the Greeks, considered landscape as a holy element with curative power, utilizing it spiritually in both their cleansing rituals and constructions More recent studies on landscape have demonstrated the benefit of its various components including green and blue spaces for the physical, social and psychological well-being of individuals, especially for older adults.</p> <p>The term therapeutic landscape was first defined by Gesler (1993) as being all types of places, natural or built (human-made) environments or milieus associated with healing or treatment which have “attained an enduring reputation for achieving physical, mental, and spiritual healing.”</p> <p>The emphasis on the significance of place (e.g. built environment) has driven researchers to evolve the concept to consider and examine therapeutic effects of a wide range of sites such as home environments, hospitals, green milieus (parks, gardens, etc.) and blue spaces (sea, rivers, lakes). Several new initiatives have evolved to allow people with dementia to take advantage of the potential therapeutic effects of an outdoor natural landscape. One of these is the creation of green care farms where people can spend time in an outdoor natural landscape, and they can take part in various farming and gardening activities</p> <p>Designing an outdoor natural landscape for people with dementia in LTC facilities must not only correspond to their needs but also incorporate DFE characteristics, such as orientation, accessibility, socialization, meaningful activities, reminiscence, sensory stimulation, safety and sustainability</p>
Method	<p>A comprehensive literature search from 2007 to 2017 in peer-reviewed journals was carried out through several databases. The search terms applied in the databases included four diverse groups of terms: landscape, dementia, long-term care facilities, and behavior and emotion. A further four studies identified through manual reference checking were included, resulting in a total of 15 studies being included in this narrative review. The quality assessment of included articles was guided by the Pluye et al. (2011) Mixed Methods Appraisal Tool (MMAT).</p>

Result

A data extraction form was created in an Excel file for data management of included studies. Data extracted from each of the included articles was tabulated in terms of methodological approach, study region, study participants (i.e. demographic characteristics of participants), intervention studies (i.e. intervention dose and assessment tools) and types of landscape design (i.e. site analysis, environmental assessment phase), DFE characteristics and the landscape plan.

- Methodological approach: Three studies adopted a mixed-method approach, while the remaining 12 studies exclusively utilized either a qualitative or quantitative approach.
- Study region: The majority of studies were conducted in Europe (n = 6); and the USA (n = 6). Two studies were conducted in Australia and one in Asia.
- The reviewed studies included a total number of 1179 participants (people with dementia, staff and family members) of which their sample size varied between 10 to 423. The mean age of people with dementia who participated in the studies ranged from 71 to 89 years. . In addition, the mean level of cognitive impairment in participants varied in the studies between mild to a severe level of dementia. The average Mini-Mental State Examination (MMSE) was between 5.7 and 20.
- Intervention studies:
 - Horticultural activities: Two studies applied horticultural activities as a way to reduce agitation, while one study used these activities to increase the level of engagement in people with dementia. This increase in the level of engagement occurred either actively (i.e. physically or verbally responding to the presented activity) or passively (i.e. observing and listening to the presented activity).
 - Therapeutic gardens: Three of these studies reported positive effects of therapeutic gardens on engagement and socialization of people with dementia. These studies showed that therapeutic gardens increase the level of participation in activities such as watering, planting and watching flowers, or increased communication among people with dementia.
 - Green care farms: They were shown to have a positive influence on the level of socialization and engagement of people with dementia, and no significant effect on the level of neuropsychiatric symptoms, including agitation.
- Outdoor natural landscape design
 - Site analysis: The primary step for designing each outdoor natural landscape is an analysis or audit of the site or environment to recognize various conditions of the site including soil, water, drainage and sunlight/shade requirements, which affect the type and location of plants.

	<ul style="list-style-type: none"> ■ Environmental assessment phase: Utilizing audit tools that are aligned with the characteristics of a DFE is another complementary step in analyzing the site before the design of the environment, which creates a useful framework for the assessment of the environment. It helps designers understand the strengths and weakness of the environment and users' needs before any design takes place. ■ Dementia-friendly environment characteristics: DFE characteristics that should be applied in designing outdoor natural landscape are orientation, accessibility, socialization, meaningful activities, reminiscence, sensory stimulation, safety and sustainability ■ Outdoor natural landscape plan: The last step in the design of an outdoor natural landscape is providing conceptual diagrams and plans involving the essential architectural elements and details for implementation in the outdoor natural landscape following site analysis and individuals' need.
<p>Discussion</p>	<ul style="list-style-type: none"> ● This narrative review investigated qualitative, quantitative and mixed-method studies to assess the effectiveness of outdoor natural landscapes concerning the behavioral and psychological signs and symptoms of dementia including agitation and apathy, and engagement. ● From a statistical point of view, when looking at the dates of publication, articles from the USA form one early group while the most recent articles are from either Europe or Australia. This could be explained by the language criterion being restricted to English during the review process. It also raises the question of whether culture is an influencing factor when exploring this topic. For example, has the investigation of the therapeutic landscape effect been something that has interested western countries due to their long tradition in designing therapeutic landscape? ● The outcomes of preliminary studies in the study of outdoor natural landscape design and health to date suggest that outdoor natural interventions can lead to improved outcomes in people with dementia, specifically some BPSD including agitation and apathy and also engagement in people with dementia. However, with a limited body of literature, it is difficult to reach a definite conclusion. ● From the perspective of outdoor natural landscape design, research on the outdoor natural landscape has provided insufficient layouts and architectural plans. This could be further developed not only to validate the entirety of the methodology but also to create a body of best-practices.
<p>Conclusions</p>	<ul style="list-style-type: none"> ● This narrative review investigated the effect of outdoor natural landscape aligned with the characteristics of a DFE on agitation, apathy and engagement of people with dementia in LTC facilities. Although social scientists and health geographers have increasingly studied the relationship between the outdoor natural landscape, health and the healing process currently there is inadequate evidence to support the use of the outdoor

	<p>natural landscape for people with dementia living in LTC.</p> <ul style="list-style-type: none">● Along with these studies, the poor environmental and institutional-like conditions of LTC facilities, which cannot fulfill the needs of people with dementia, have focused attention on transforming environments to more livable places. These transformations could be facilitated by the creation of DFEs encompassing both indoor and outdoor spaces. DFE characteristics could be applied in the design of outdoor natural landscapes in order to not only make a more livable and comfortable environment for people with dementia but also to utilize the therapeutic potential of the outdoor natural landscapes.
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