

THE LIST- HORTICULTURAL THERAPY BIBLIOGRAPHY
By Matthew Wichrowski, MSW, HTR,
Barbara Fanning LCSW & Anna "Anya" Burova
Glass Garden Rusk Institute of Rehabilitation Medicine NYULMC

A search was done in the following databases using the key words: horticulture, horticultural therapy, nature-based therapy, gardening, and gardening therapy.

Agricola
Cinahl
Eric
Medline
Ovid
Psycinfo

The reference lists from selected articles were analyzed for further citations that may not have come up from the data-base searches. This is a good method for finding related work and background theory for a certain subject.

Certain journals focus on themes pertinent to HT work. These include: The Journal of Environmental Psychology, Environment and Behavior, *HortTechnology*, Horticultural Science, Acta Horticulturae. The Journal of Alternative and Complimentary Medicine, HERD, and Alternative Therapies in Health and Medicine are also good journals to check periodically for new developments. Articles from the Journal of Therapeutic Horticulture are not included in this data base. These are available on the AHTA website.

There are also many useful articles published in an assortment of conference proceedings i.e, People-Plant Symposiums etc.. Some of these are included in this data-base, but many others will have to wait for an update of this project. There are also more papers available regarding school gardens from the AGRICOLA data-base. This work contains some book references but this is another area that deserves its own data-base.

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AGEING, GERIATRICS, ALZHEIMERS, and DEMENTIA

Abbott, G., Cochran, V., & Clair, A.A. (1997). Innovations in inter-generational programs for persons who are elderly: The role of horticultural therapy in a multi-disciplinary approach. *Activities, Adaptation, and Aging*, 22(5), 27-37. Peer-reviewed article reviews the benefits, goals and conceptual

- framework of an innovative horticultural program incorporating patients 35-100+ years old.
- Arnetz, B.B., Theorell, T., Levi, L., et al. (1983). An experimental study of social isolation of elderly people. *Psychosomatic Medicine*, 45(5), 395-406. Peer-reviewed study of psychosomatic indicators of stress which is defined by increased social isolation and chronic under-stimulation.
- Barnicle, T. & Midden, K.S. (2003). The effects of a horticulture activity program on the psychological well-being of older people in a long-term care facility. *HortTechnology*, 13(1), 81-85. Research report in peer-reviewed journal describes a significant increase in "psychological well-being" in a group of long-term care facility residents who participated in indoor horticultural activities.
- Bassen, S. & Baltazar, V. (1997). Flowers, flowers everywhere. *Geriatric Nursing*, 18(2), 53-56. Peer-reviewed article describes a model horticultural therapy program in a geriatric facility. Implementation of such a program including selection criteria among varied geriatric populations, to meet cognitive, psychological, physical and psychosocial goals standardized by the American Horticultural Therapy Association are outlined.
- Beckwith, M. & Gilster, S. (1997). The paradise garden: a model garden design for those with Alzheimers Disease. *Activities, Adaptation, and Aging*, 22.5, 3-16. Peer-reviewed article citing current and recent research as rationale for integrating various elements into a model design of garden spaces for individuals with Alzheimer's Disease.
- Bergman-Evan, B. (2004). Beyond the basics: Effects of the Eden Alternative model on quality of life. *Journal of Gerontological Nursing*, 30(6), 27-35. Quasi-experimental peer-reviewed research report found that lower levels of distress were reported on scales of both boredom and helplessness by residents of a long-term care facility which included the accessibility of nature and/or gardens.
- Brawley, E. (2001). Environmental design for Alzheimer's Disease: A quality of life issue. *Aging & Mental Health*, 5(11), s79-s83. Peer-reviewed article citing environmental factors needing consideration when designing an environmental space for individuals with cognitive impairment. The therapeutic benefits of outdoor spaces and gardens are discussed as are the potential benefits of actively including individuals in their use and maintenance.
- Brawley, E. (2002). Therapeutic gardens for those individuals with Alzheimers Disease. *Alzheimer's Care Quarterly*, 3(1), 7-11. Peer-reviewed article citing potential benefits of the availability of outdoor space designed in accord with the needs of a cognitively-impaired geriatric population. Research is cited to support these extrapolated benefits.
- Cass, J. (2000 Spring). The accessible garden. *Accent on Living*, 44(4), 50-52, 62-54. Magazine designed for the handicapped population focusing on a range of issues of potential interest to this targeted population.

- Cobley, M. (2003). A place to delight the senses and refresh the soul. *Journal of Dementia Care*, 11(4), 20-23. Bimonthly magazine targeted to those working with elderly and cognitively impaired discusses the usefulness and useful components of a garden in both activity and orientation.
- Collins, C. C., O' Callaghan, A. M. (October- December 2008). The impact of horticultural responsibility on health indicators and quality of life in assisted living. *HortTechnology*. 18(4): 611-618. Peer reviewed, mixed design, Assessed impact of horticultural activities on 18 assisted living residents. Results showed significant increases in mastery, self-rated health and self-rated happiness.
- Collins, C.C. & O'Callaghan, A.M. (2008). The impact of horticultural responsibility on health indicators and quality of life in assisted living. *HortTechnology*, 18, 611-618. Research report in peer-reviewed journal showed short-term positive effects of participation in four two-hour horticultural classes. Significant gains in mastery, self-rated health and self-rated happiness were observed.
- Detweiler, M.B. & Warf, C. (2005). Dementia wander garden aids post cerebrovascular stroke restorative therapy: a case study. *Alternative therapies in health and medicine*. 11(4), 54-58. Peer-reviewed case study of post cva rehabilitation utilizing a dementia garden as a therapeutic setting.
- DiPietro, L. (2001). Physical activity in aging. *Journal of Gerontology*, 56(2), 13-22. Peer-reviewed journal reviews the amount types and benefits of moderate levels of physical activity including gardening and the need to increase the availability and accessibility of such activities.
- Eales, J. & Keating, N. & Dasma, A. (2001). Seniors experiences of client-centered residential care. *Aging and Society*, 21(3), 279-296. Peer-reviewed.
- Gigliotti, C., Jarrott, S., & Yorgason, J. (2004). Harvesting health: Effects of three types of horticultural therapy activities for persons with dementia. *Dementia*, 3(2), 161-180. Research-based article in a peer-reviewed journal supports the hypothesis that participants in an adult day service program (ADS) for older persons with dementia will show higher levels of productive behavior during horticulturally-based activities than participants in more traditional ADS activities. Affect was more positive during horticultural activities but measured differences did not approach significance.
- Gigliotti, C.M. & Jarrott, S.E. (2005). Effects of horticulture therapy on engagement and affect. *Canadian Journal of Aging*, 24(4), 367-377. Peer-reviewed comparative study of adult day service patients found that horticulture therapy was as effective or more effective in maintaining crucial measures of functioning.
- Hamilton, N. & Tesh, A. (2002). The North Carolina Eden Coalition: facilitating environmental transformation. *Journal of Gerontology Nursing*, 28(3), 35-40. Peer-reviewed.

- Han, K.H., Lee, S.M., Kim, H.S., Suh, J.K. (2008). A study on interpersonal relations of demented elders through therapeutic horticultural activities of buddy system. *Acta Horticulturae (ISHS)*, 790 133-137. Peer-reviewed research studied the psychological benefits of interpersonal activity focused on horticultural activity among elders with dementia. Levels of activity, psychological condition and communication ability all benefited, with those paired with the opposite sex benefited the most.
- Hawkins, J. L., Thirlaway, K. J., Backx, K., Clayton, D. A. (October 2011). Allotment gardening and other leisure activities for stress reduction and healthy aging. *HortTechnology*. 21(5):577-585. Peer reviewed research compared participation in indoor exercise group and outdoor activities (allotment gardening) (n=94 total). Results showed significantly lowered reported stress, but not significant differences in levels of social support and physical activity.
- Hazen, T. (1997). Horticultural therapy in the skilled nursing facility. *Activities, Adaptation, and Aging*, 22(5), 39-60. Descriptive article in peer-reviewed journal provides descriptions of two case studies of the integration of horticultural therapy into rehabilitation programs including treatment session formats.
- Heath, Y. & Gifford, R. (2001). Post-occupancy evaluation of therapeutic gardens. *Activities, Adaptation and Ageing*, 25(2), 21-43. Peer-reviewed journal focused on issues of aging.
- Heliker, D., Chadwick, A., & O'Connell, T. (2000). The Meaning of gardening and the effects on perceived well-being of a gardening project on diverse populations of elderly. *Activities, Adaptation, and Aging*, 24(3), 35-56. Primary research in a peer-reviewed journal studies the feasibility and effectiveness of horticultural therapy in a culturally diverse population (age 63-90) and its perceived meaning to those participating.
- Jarrott, S., Gigliotti, C., (December 2010). Comparing responses to horticultural-based and traditional activities in dementia care programs. *American Journal of Alzheimer's disease & Other Dementias*. 25(8):657-5. Peer reviewed research assessing responses of individuals in dementia care (n= 75 treatment, n=54 control) to twice weekly HT programming for 4 weeks versus traditional activities. Treatment group demonstrated higher levels of active and passive engagement, while control group showed higher levels of self-engagement.
- Jarrott, S. & Kwack, H. & Relf, D. (2002). An observational assessment of a dementia-specific horticultural therapy program. *HortTechnology*, 12(3), 4003-4410. Peer-reviewed research evaluated period of time of involvement and affect of patients with dementia in a horticultural therapy program versus a similar population involved in non-horticultural activities.
- Kanda, H., Takahashi, H., Yoshida, Y., Kunoh, M. (2008). Examination of optimal form of horticultural activities at welfare facilities in rural villages of Japan. *Acta Horticulturae vol*), 790, 231-235. Peer-reviewed.

- Kang, H.Y., Bae, Y.S., Kim, E.H., Lee, K.S., Chae, M., Ju, R.A., (December 2010). An integrated dementia intervention for Korean older adults. *Journal of Psychosocial Nursing & Mental Health Services*, 48(12):42-50. Peer reviewed research assessing effects of HT (n=20. Control= 12) in Korean adults w/ mild Dementia over 18 sessions. Significant differences were found in cognitive function, depression levels and mental- emotional health.
- Kerrigan, J. & Stevenson, N. (1997). Behavioral study of youth and elders in an intergenerational horticultural program. *Activities, Adaptation, and Aging*, 22(3), 141-153. Comparative and observational study in a peer-reviewed journal of intergenerational horticultural program and intergenerational crafts program suggests that horticultural programs are more conducive to intergenerational instruction than the more traditional crafts programs.
- Kiyota, E. & Selfridge, J. (2004). Eden Alternative: The experience of residents in an "Edenized" nursing home. *Acta Horticulturae* vol. 643, 215-21. Peer-reviewed descriptive research reports the goals and benefits of the "Eden Alternative" as originally proposed to improve the quality of life in nursing homes.
- Kim, H.Y, Cho, M.K., Han, I.J, & Kim, J.S. (2004). Effects of horticultural therapy on the community consciousness and life satisfaction of elderly individuals. *Acta Horticulturae (ISHS)*, 639, 159-165. Peer-reviewed research notes the use of horticultural activities as effective "community builders" – a key element in decreasing social isolation, as well as benefits to individuals rating life satisfaction and psychological variables.
- Langer, E. & Rodin, J. (1976). The effects of choice and enhanced personal response for the aged: A field experiment in an institutional setting. *Journal of Personality and Social Psychology*, 34(2), 191-198. Classic research study in peer-reviewed journal found that having responsibility for caring for a plant generalized to improved involvement and self responsibility in their setting.
- Mackenzie, E. & Agard, B. (2000). Horticultural therapy in long-term care settings. *Journal of American Medical Director's Assn.*, 1(2), 69-73. Peer-reviewed.
- Mackenzie, S. (2003). Implementing the Eden Alternative in Australia. *Journal of Social Work in Long-Term Care*, 2(3-4), 325-338. Peer-reviewed description of implementation of Eden philosophy in long-term care settings in Australia.
- Maheady, D. (2002). For healthier minds, a caring garden. *Nursing Spectrum*, 12(17), 11-18. Professional periodical for nurses.
- Marcus, C. (2003). Healing Havens - two hospital gardens in Portland, Oregon win awards for therapeutic values. *Landscape Architecture*, 9(8), 84. Peer-reviewed academic journal for landscape architects. Therapeutic garden descriptions.
- Mather, J. Nemeck, D., & Oliver, K. (1997). The effects of a walled garden on behavior of individuals with Alzheimer's. *American Journal of Alzheimer's*

- Disease*, 12(6), 252-257. Peer-reviewed article reports observational data on the positive results of a garden made available to cognitively-impaired in-patients.
- McCaffrey, R., Hanson, C., McCaffrey, W. (2010). Garden walking for depression. *Holistic Nursing Practice*, 24(5): 252-259. Peer reviewed mixed design assessing effects of 12 garden walks and reflective journaling on adults with depression(n=40). Results showed significant decreases in depression on geriatric depression scale. A number of positive themes emerged from journaling exercise.
- McKee, P. (1995). Gardening -- an equal opportunity joy. *Activities, Adaptation, and Aging*, 20(1), 71-78. Peer-reviewed. Article discusses the use of indoor gardens to provide a healing environment for those unable to fully participate in outdoor settings.
- Melling, G. (2003). A sensory garden created by, with, and for residents. *Journal of Dementia Care*, 11(5), 24-26. Trade magazine targeting caregivers for the elderly reports on the "Elderly Flower" project in which a sensory garden was created based on the expressed wishes of those living in the care home.
- Milligan, C. (2004). Cultivating health; therapeutic analysis and older people in northern England. *Social Science Medicine*, 58(9), 1781-1793. Peer-reviewed longitudinal research follows social networking, mental health and physical involvement over a nine-month period of community gardening.
- Mooney, P. & Nicell, P. L. (1992). The importance of exterior environment for Alzheimer's residents: effective care and risk management. *Health Care Management Forum*, 5(2), 23-29. Peer-reviewed.
- Pachana, N.A., McWha, J.L. & Arathoon, M. (2003). Passive therapeutic gardens: A study of an inpatient geriatric ward. *Journal of Gerontological Nursing*, 29(5), 4-11. Observational study in a peer-reviewed journal discusses the benefits, procedures and practical concerns involved in setting up such a conservancy garden in a geriatric in-patient unit.
- Park, S.E., Shoemaker, C. and Haub, M. (2008). Can older gardeners meet the physical activity recommendation through gardening? *HortTechnology*, 18, 639-643. Research report in peer-reviewed journal.
- Predny, M. & Relf, D. (2000). Interactions between elderly adults and preschool children. *HortTechnology*, 10(1), 64-70. Peer-reviewed.
- Schnister-Ulmann, R. (2004). Focal points on the utilisation of retirement centre gardens. *Acta Horticulturae (ISHS)*, 643, 209-213. Peer-reviewed research used semi-structured interviews to determine used and desired elements of garden design in retirement communities. Design elements are suggested in this report of an ongoing study.
- Shoemaker, C.A., Relf, P.D. & Lohr, V.I. (2000). Social science methodologies for studying individuals' responses in human issues in horticulture research. *HortTechnology* 10(1), 87-93. Peer-reviewed article focuses on

- qualitative and quantitative research methods and their application in studying horticulture as a therapeutic medium.
- Simson, S. & Haller, R. (1997). Horticultural therapy education and older adults. *Activities, Adaptation and Ageing*, 22(3), 125-139. Peer-reviewed report describes survey results of horticultural therapists and their educational/curriculum needs for work with older adults.
- Sommerfeld, A. J. Waliczek, T. M. Zajicek, J. M. (August 2010). Growing Minds: Evaluating the effects of gardening on quality of life and physical activity level of older adults. *HortTechnology*. 20(4): 705-710.
- Peer reviewed questionnaire research assessing gardeners and non gardeners perception of personal life satisfaction and levels of physical activity (n=298). Four components of quality of life were significant more, positive in gardeners compared to non gardeners.
- Thelander, V B., Robins W, Tarja-Brita, O, Lotta, H, Kristiina and Sonde, Lars (2008) Gardening activities for nursing home residents with dementia. *Advances in Physiotherapy*, 10(1): 53-56. An independence scale specifically designed for this study was given to 8 nursing home residents with dementia who participated in outdoor gardening activities 3 times a week for 8 weeks. Results indicate that activation and rehabilitation in outdoor environments are suitable in care dementia patients.
- Tyson, M. (2002). Treatment gardens: naturally mapped outdoor environments and independence. *Alzheimer's Care Quarterly*, 3(1), 55-60. Peer-reviewed article outlines the goals and requirements to meet the aims of a garden accessible and useful for alzheimer's patients.
- Yamane, K. & Adachi, M. (2008). Roles of daily horticultural activities in physical and mental QOL in elderly adults. *Acta Horticulturae (ISHS)*, 790, 165-171. Peer-reviewed research studied the impact of time passed engaged in horticultural activities on eight measured areas of physical, emotional, mental and social health. In the elderly population studied, significant correlations were found.
- Yusuf, H., Croft, J.B. et al (1996). Leisure time physical activity among older adults. *Archives of Internal Medicine*, 156(12), 1321-1326. Peer-reviewed correlational research looks at prevalence of physical activity in older adults.

CHILDREN AND YOUTH

- Ackley, D. & Cole, L. (1987). The effect of a horticultural therapy program on children with cerebral palsy. *Journal of Rehabilitation*, 53(4), 70-73. Peer-reviewed journal.
- Aguilar, O.M Waliczek, T.M Zajicek, J.M (April - June 2008). Growing environmental stewards: The overall effect of a school gardening program on environmental attitudes and environmental locus of control of different demographic groups of elementary school children. *HortTechnology*

- 18(2):243-249. Peer reviewed survey research. Study looked at effects of garden program on 3rd-5th grade students. Various results are presented.
- Alexander, j. et al. (1995) master gardener classroom garden project: an evaluation of the benefits to children. *Children's Environments Quarterly* 12(2), 256-263. Peer-reviewed research article of inner city gardening project reports positive effects on school-age children as measured by qualitative interviews.
- Blair, D. (2009). The child in the garden: An evaluative review of the benefits of school gardening. *Journal of Environmental Education*, 40(2), 15-38. Peer-reviewed research showed positive quantitative outcomes of school gardening on science achievement and food behavior. Qualitative study showed a positive trend in these areas including social and environmental behaviors.
- Brooks, K.W. (1997). Too much fun for therapy: Therapeutic recreation as an intervention tool with at-risk youth. A series of solutions and strategies. No. 11. Publication introduces therapeutic recreation as an education tool and its uses and goals for "at-risk youth." Horticultural therapy is included and goals and benefits are outlined.
- Bunn, D. (1986). Group cohesiveness is enhanced as children engage in plant stimulated discovery activities. *Journal of Therapeutic Horticulture* (1), 37-43. Research report in peer-reviewed journal describes pre-school horticultural program study of social and educational impacts of group-based interaction with plants. Albeit dated, this study is notable for its outcomes as well as experimental design.
- Canaris, I. (1995). Growing food for growing minds: integrating gardening and vocational education into a total curriculum. *Children's Environments* 12(2), 264-270. Peer-reviewed description of inquiry-based learning activities in a snack garden originally created to increase nutrition awareness.
- Cheng, J. Chen-Hsuan Monroe, Martha C. (January 2012). Connection to nature: Children's affective attitude toward nature. *Environment and Behavior* 44(1): 31-49. Peer reviewed. Outlines development and testing of connection to nature index measuring children's affective attitudes toward the natural environment.
- Clemens, J. (1996). Gardening with children. *Young Children*, 5(4), 22-27. Peer reviewed. The author discusses a broad range of issues connected with gardening with children, included are different types of gardens, physical maintenance of the garden, and how to expand the learning connected with gardening.
- Crane, W. (2001 Summer). How nature helps children. *Montessori Life*, 13(n3), 22-24. Trade journal for Montessori teachers. Discusses role of natural environment in child development.
- Danfonth, P.E, Waliczek, T.M, Macey, S.M, Zajicek, J.M (July – September 2008). The effect of the national wildlife federation's schoolyard habitat

- program on fourth grade students' standardized test scores. *HortTechnology* 18(3):356-360. Peer reviewed research contrasting 306 fourth grade students whose classes participated in National Wildlife Federation Schoolyard Habitat Program with 108 students whose teacher's traditional curriculum. Treatment group showed significantly improved math scores, but few differences were found in reading scores.
- Doutt, K.M. (1989). Horticulture therapy activities for exceptional children. *Journal of Therapeutic Horticulture*, 4(6), 10-14. Peer-reviewed article describes a phased horticultural program grouping learning disabled and gifted children together with the common goal of educational enrichment.
- Doyle, R. & Krasny, M. (2003 February). Participatory rural appraisal as an approach to environmental education in urban community gardens. *Environmental Education Research*, 9(n1), 91-115. Trade journal providing analysis and coverage of teaching. International peer-reviewed journal describes social and learning outcomes centered around ethnic gardening practices in urban community gardens.
- Eick, C. (1998 April). Growing with the standards. *Science Scope*, 21(n7), 10-14. Professional trade journal centers on teaching techniques and activities.
- Faber Taylor, A., Kuo, F., & Sullivan, W. (2001). Coping with attention deficit disorder. *Environment & Behavior*, 33(1), 5-34. Peer-reviewed research suggests ways that urban public housing environments could be configured to enhance residents' psychosocial resources for coping with poverty.
- Farmer, A. & Wott, J. (1995). Field trips and follow up activities: Fourth graders in a public garden. *Journal of Environmental Education*, 27(n1), 33-35. Peer-reviewed statistical analysis of the relationships between cognitive learning, field trips and follow-up activities.
- Fjortoft, I. (2001). The natural environment as a playground for children :the impact of outdoor play activities in pre-primary school children.. *Early Childhood Education*, 29(2), 111-117. Peer-reviewed quasi-experimental study found positive relationship between versatile play in the natural environment and impact on motor fitness in children.
- Fleener, A.W Robinson, C.W Williams, J.D Kraska, M. (August 2011). Literature in the garden curriculum effects on life skills of children. *HortTechnology*. 21(4): 424-428. Peer reviewed survey research assessing impact of junior master gardener curriculum literature in the garden. No significant differences in teamwork, self understanding, decision making, and overall skills.
- Fried, G.G. & Wichrowski, M.J. (2008). Horticultural therapy: a psychosocial treatment option at the Stephen D. Hassenfeld Children's Center for Cancer and Blood Disorders. *Primary Psychiatry*. 15(7) 73-78. Peer-reviewed journal describes HT program and benefits for children having cancer.

- Fusco, D. (2001). Creating relevant science through urban planning and gardening. *Journal of Research in Science Teaching*, 38(8), 860-877. Peer-reviewed description of community based science project with urban teens.
- Geller, G. & Warren, L. (2004). Toward an optimal healing environment in Pediatric rehabilitation. *Journal of Alternative and Complimentary Medicine*, 10(1), s179-s192. Review article in a peer-reviewed journal discusses the multiple aspects of pediatric rehabilitation programs, the role of multiple therapies and suggestions for necessary research.
- Grane, E. (2001). What's going on in the children's garden? *Young Children*, 56(3), 67-73. Middle school educational trade journal.
- Greenhalgh, L. (1995 Autumn). An infant's school project. *Environmental Education Research*, 50, 11. Peer-reviewed.
- Gwynn, M. (1988 April). A growing phenomenon. *Science and Children*, 25(n7), 25-26. Elementary school educational trade journal.description of classroom "mini ecosystem" and curriculum associated with it.
- Hammond, D. E., McFarland, A. L., Zajicek, J. M., Waliczek, Tina M. (April 2011) Growing Minds: The relationship between parental attitudes towards their child's outdoor reaction and their child's health. *HortTechnology*. 21(2): 217-224. Peer reviewed survey research 142 surveys completed by parents of 6 to 13 year old children. Time spent outdoors was inversely related to reports of health problems in children.
- Hanscom, J. & Leipzig, F. (1994). The panther patch: a far north k-to-6 gardening project. *Green Teacher*(38),10-13. Educational trade journal outlines development of an urban elementary school gardening project, including timeline, projects, and testing.
- Han, Ke-Tsung, (2009). Influence of limitedly visible leafy indoor plants on the psychology, behavior, and health of students at a junior high school in Taiwan. *Environment and Behavior* 41(5):658-692. Peer reviewed quasi-experimental research looking at effects of placing six plants at back of classroom. Class with plants (n=38) had significantly stronger feelings of preference, comfort, and friendliness and fewer hours of sick leave and punishment records due to misbehavior. Experiment did not control for additional factors which could influence reported outcomes.
- Heffernan, M. (1994). The children's garden project at river farm. *Children's Environments*, 11(n3), 221-231. Special edition- Knowing and caring for the natural environment peer-reviewed journal supports inclusive and sustainable environments for children.
- Hickling, A. & Gelman, S. (1995). How does your garden grow? *Child Development*, 66(3), 856-876. Peer-reviewed research describes 4 year old's understanding of the concept of seed growth.
- Hinnant, H. (1999 March). Growing gardens and mathematics: More books and math for young children. *Young Children*, 54(n2), 23-26. Peer-reviewed.

- Kahn, P.H. & Kellert, S.R. (Eds.). (2002). Children and nature: Psychological, sociocultural and evolutionary investigations. *MIT Press*. Papers included provide scientific and theoretical investigations of the role of nature in physical, psychological, intellectual and moral development.
- Kahtz, A. (1995). Impact of environment education classes at Missouri Botanical Garden on elementary school children. *HortTechnology*, 5(4), 338-340. Peer-reviewed pre-test/post-test research design provides early discussion of differences between knowledge of environment and attitudes toward it.
- Koch, S., Waliczek, T.M. & Zajicek, J.M. (2006). The effects of a summer garden program on the nutritional knowledge, attitudes and behaviors of children. *HortTechnology*, 16(4), 548-693. Peer-reviewed research reports increased nutritional knowledge and choice of healthier snacks among elementary school aged children after participating in a summer gardening program. Attitude toward fruits and vegetables did not improve, however.
- Kohlstedt, S.G. (2008). A better crop of boys and girls: The school gardening movement. 1890-1920. *History of Education Quarterly*, 48(1), 58-93. Peer-reviewed article describes the history of school-gardening, the theoretical constructs of experiential learning, and the emergence of diverse goals associated with school-gardening.
- Korpela, A., Kytta, M. & Hartig, T. (2002). Restorative experience, self-regulation and children's place preferences. *Journal of Environmental Psychology*, 22(4), 387-398. Peer-reviewed research studied the uses children made of their favorite places. Over one-half used their favorite place for cognitive restoration and over one-third sought out their favorite place for emotional regulation. Many parents did not know where their child's favorite place was and by implication had not been facilitators in its use.
- Krupa, K. (1994 April-May). The abundance of nature's imagination: school yard naturalization as an inspiration for the arts. *Green Teacher* (n3), 16-17. Educational trade journal.
- Lawson, L. & McNally, H. (1995). Putting teens at the center: Maximizing public utility of urban spaces through youth involvement in planning and employment. *Children's Environments*, 12(2), 209-221. Peer-reviewed report of youth alternative program including description, evaluation, and future direction.
- Lineberger, S. & Zajicek, J. (2000). School gardens: Can a hands-on teaching tool affect student's attitudes & behaviors regarding fruit and vegetables 10(3)(593-597). *HortTechnology*, 10(3), 593-597. Peer-reviewed research studied attitudes and eating behaviors pre- and post-school gardening program. Attitudes improved toward vegetables but eating behaviors did not significantly improve.
- Marcus, C. & Whitehouse, S. (2000). Kids like to do stuff. *Landscape Architecture*, 90(5), 136. Trade journal.
- McFarland, A. L. Hammond, D. E. Zajicek, J. M. Waliczek, T. M. (April 2011). Growing Minds: The development of an instrument to measure parental

- attitude toward nature and their child's outdoor recreation. *HortTechnology*. 21(2):225-229. Peer reviewed. Purpose of this study was to develop an instrument to measure parental attitude towards nature and parental attitude towards children's outdoor recreation. A connection to nature index was developed and tested to measure children's affective attitude toward the natural environment. Connection to nature influences interest in performing environmentally friendly behaviors.
- Moffat, B. M., Johnson, J. L., Shoveller, J. A., (Mar 2009). A gateway to nature: Teenagers' narratives on smoking marijuana outdoors. *Journal of Environmental Psychology*, 29(1):1-172. Peer reviewed qualitative research looking at narratives of 14-18 year olds describing their use of marijuana in natural settings. Freedom in nature, pleasure of leisure, awe in the natural world and making meaning of the natural world and making meaning of the natural world, and establishing a connection with their natural world were identified.
- Moore, R. (1993). Plants for play. A plant selection guide for children's outdoor environments (book). *MIG Communications, Berkley, California*, 121. A resource for planning child-friendly environments by a leading landscape architect and designer of children's environments.
- Moore, R. (1996). Compact nature: The role of playing and learning gardens on children's lives. *Journal of Therapeutic Horticulture*, VIII, 72-82. Peer-reviewed report describes research and interdisciplinary approach to creating urban gardens for children and the benefits of doing so..
- Morris, J.L. & Zidenberg-Cherr, S. (2002). Garden-enhanced nutrition, curriculum, improves fourth grade school children's knowledge of nutrition and preferences for some vegetables. *Journal of the American Diabetic Association*, 102(1), 91-93. Peer-reviewed research brief.
- Nimmo, J. & Hallett, B. (2008). Childhood in the garden: A place to encounter natural and social diversity. *Young Children*, 63(1). Peer-reviewed report on a pilot program for very young children and gardening. Observed social, educational and emotional learning benefits are discussed.
- Nolan, G. A. McFarland, A. L. Zajicek, J. M. Waliczek, T. M. (June 2012). The effects of nutrition education and gardening on attitudes, preferences, and knowledge of minority second to fifth graders in Rio Grande Valley toward fruits and vegetables. *HortTechnology*. 22(3):299-304. Peer reviewed research comparing nutritional knowledge, snack choice and preference for fruit and vegetables of school children (n=141) before and after a gardening program. It was concluded that gardening and nutritional instruction had a positive effect on student's nutritional knowledge, preferences for fruit and vegetables, and snack choice.
- Rosenow, N. (2008). Learning to love the earth...and each other. *Young Children*, 63(1). Peer-reviewed report cites evidence of the need for

- young children to have contact with nature and reviews methods of increasing this contact for very young children.
- Steining-Hotwagner, B. (2002). A garden to live and to learn for socially-deprived adolescents. *Acta Horticulturae*, 639, 51-55. Peer-reviewed journal article describes the process and benefits of a project of designing a school garden in the campus of a boarding school for socially-deprived adolescents with special needs.
- Taylor, A. Kuo, F., (March 2009) Children with attention deficits concentrate better after walk in the park. *Journal of Attention Disorders*. 12(5): 402-409. Peer reviewed research (n=17) assessing effects of walk in 3 different environments a city park and 2 different urban environments on 7 to 12 years old children diagnosed with ADHD. Children on nature walk had significant improvement of attention performance. Effect sizes were comparable to medication.
- Taylor, A.F., Kuo, F.E. & Sullivan, W.C. (2001). Coping with ADD: The surprising connections to green play settings. *Environment and Behavior*, 33(1), 54-77. Survey study in peer-reviewed journal supports attention restoration theory. Children with ADD were noted to function better than usual after activities in green settings and the "greener" the setting, the less severe were symptoms.
- Taylor, A.F., Kuo, F.E., & Sullivan, W. (2002). Views of nature and self-discipline: Evidence from inner city children. *Journal of Environmental Psychology*, 22(1-2), 49-63. Peer-reviewed research studied the correlation between self-discipline and near-home nature in inner-city children.
- Tunncliffe, S.D. (2001). Talking about plants: Comments of primary school groups looking at plant exhibits in a botanical garden. *Journal of Biological Education*, 36(1), 27-34. Research article presents an analysis of conversations and the effects of age, sex, and presence of adults in groups at a botanical garden.
- Waliczek, T. & Logan, P. (2003). Exploring the impact of outdoor environmental activities on children using a qualitative text data analysis system. *Hort Technology*, 13(4), 684-688. Research report in peer-reviewed journal uses computer-based qualitative data-analysis to indicate that elementary school age students had learned math and science skills during participation in a outdoor environmental program as well as increased levels of synthetic and evaluative thinking skills.
- Waliczek, T.M. & Bradley, J.C. (2000). Using a web-based survey to research the benefits of children gardening. *HortTechnology*, 10(1), 71-76. Peer-reviewed article about a web-based survey study of adults involved in gardening projects with school-aged children. Although parents and teachers differ in their perceptions of the most beneficial outcomes of such projects, both reported perceived benefits to children's self-esteem and stress levels.

- Waliczek, T. & Bradley, J. (2001). The effects of school gardens on children's interpersonal relationships and attitudes toward school. *HortTechnology*, 11(3), 466-468. Research report in peer-reviewed journal discusses significant variables including gender, age and grade level when analyzing impact of participation in garden activities among school-age children.
- Whitehouse, S., Varni, J., & Seid, M. (2001). Evaluating a children's hospital garden environment: Utilization and consumer satisfaction. *Journal of Environmental Psychology*, 21, 301-314. Review and survey research in peer-reviewed journal, reviews restorative uses of gardens by adults and children in a hospital environment.
- Witt, S.D. & Kimple, K.P. (2008). How does your garden grow? Teaching pre-school children about the environment. *Early Child Development and Care*, 178(1), 41-48. Peer-reviewed pre-post testing research using lessons and activities with preschoolers proves the early capacity to improve knowledge in all targeted concepts.

COMMUNITY GARDENING

- Armstrong, D. (2000). A survey of community gardens in upstate New York: implications for health promotion and community development. *Health and Place*, 6(4), 319-327. Peer-reviewed research surveyed reasons for participating in community gardening, finding health benefits, enjoyment and community building to be central.
- Armstrong, D. (2000). A community diabetes education and gardening project to improve diabetes care in a northwest American Indian tribe. *Diabetes Educator* 26(1), 113-120. Peer-reviewed.
- Beer, A.R. (2003). A Changing Understanding of the Role of Greenspace in High-density Housing: A European Perspective. *Built Environment*, 29(2) 132-143. Peer-reviewed journal article uses case-studies to demonstrate approaches to reclaiming, regenerating and maintaining urban "gardens."
- Carney P., Hamada J., Rdesinski R., Sprager L., Nichols K., Liu B., Pelayo J., Sanchez M., Shannon J. (August 2012), Impact of a community gardening project on vegetable intake, food security and family relationships: a community-based participatory research study. *Journal of Community Health*. 37(4): 874-881. Peer reviewed qualitative study (n=42 families). Assessed impact of community gardening utilizing community based participatory research. Vegetable intake significantly increased. Mental and physical health benefits as well as economic and family health benefits were reported.
- Cowley, D. (2004). Building community ties through gardening. *Nursing & Residential Care*, 6(7): 321. Trade journal.
- Guitart, D. Pickering, C. Byrne, J (August 2012) Past results and future directions in urban community gardens research, *Urban Forestry & Urban Greening*, DOI: 10.1016/j.ufug.2012.06.007. Peer reviewed survey of features of

- English community gardens. Peer reviews review of the literature regarding community gardens around the world.
- Kimura, M., Nishiwaki, M. & Miyata, M. (2008). Attitudes among residents towards the creation of a community by horticultural activity on the roof top of a housing complex in Tokyo. *Acta Horticulturae (ISHS)*, 790, 205-211. Peer-reviewed research report studied attitudes and differences toward community including wish for social interaction and satisfaction between those involved in roof top gardening and those not involved. Additionally, differences among those not involved were studied. The garden was found to attract and provide satisfaction for those seeking self-fulfillment and pleasure and social development through communication within the community.
- Kuo, F.E., Bacaicoa, M., & Sullivan, W. (1998). Transforming inner-city landscapes: trees, sense of safety, and preferences. *Environment and Behavior*, 30(1), 28-59. Research study in peer-reviewed journal found that contrary to popular belief increased density of trees and grass maintenance increased sense of safety in an inner-city environment.
- Meyer, M. (1997). Master gardener projects -- making connections. *HortTechnology*, 7(4), 339-344. Peer-reviewed.
- Myers, M.S. (1998). Empowerment and community building through a gardening project. *Psychiatric Rehabilitation Journal*, 22, 181-183. Peer-reviewed article reports the process of setting up a series of community-based gardens and the impact of these activities on an out-patient psychiatric rehabilitation community. Sources of funding and support are included.
- Okvat, H.A. & Zatura, A.J. (2011). Community gardening: A parsimonious path to individual, community, and environmental resilience. *American Journal of Community Psychology*. 47, 374-387. Peer reviewed article describing issues and benefits of community gardening spanning from individual to global viewpoints.
- Twiss, J., Dickinson, J., Duma, S., Kleinman, T., & Paulsen, H. (2003). Field action report. Community gardens: lessons learned from California healthy cities and communities. *American Journal of Public Health*, 93(9), 1435-1438. Peer-reviewed article describing the benefits of community gardens for public health.
- Wake, S. (2007). Children's Gardens: Answering the 'Call of the Child.' *Built Environment*, 33 (4), 441-453. Peer-reviewed journal article addresses the role of children as "co-constructors" of outdoor space, the various educational models that may inform adult-child discussion of the use of outdoor space and outcomes of this discussion.
- Waliczek, T., & Mattson, R. & Zajicek, J.M. (1996). Benefits of community gardening on quality of life issues. *Journal of Environmental Horticulture*, 14(4), 204-209. Peer-reviewed.
- Zoellner J., Zanko A., Price B., Bonner J., Hill J., (2012) Exploring community gardens in a health disparate population: findings from a mixed methods pilot study, *Progress in Community Health Partnerships: Research*,

Education, and Action, 6(2): 153-65. Peer reviewed pilot study (n=10) utilizing Community Based Participatory Research (CBPR) method to assess benefits and challenges of community gardens at environmental, community and individual levels.

DEVELOPMENTAL DISABILITIES

- Baslow, M. (2000). Gardening for all. *Journal of Intellectual Disability Research*, 44, 2000. Peer-reviewed.
- Burda, A., & Mycmk, M., Wahl, M., Zia, C. (2001). Toxic landscaping of facilities for developmentally disabled adults. *JAMA*, 286(21). Peer-reviewed Case study of an adult having a developmental disability who died after consuming yew leaves from his residence's landscaping.
- Kay, B. (1990). Bittersweet Farms. *Journal of Autism and Developmental Disorders*, 20(n3), 309-321. Peer-reviewed description of farm-based program for autistic adults.
- Kim, Bo-Young, Park, Sin-Ae, Song, Jong-Eun, Son, Ki-Cheol. (June 2012). Horticultural therapy program for the improvement of attention and sociality in children with intellectual disabilities. *HortTechnology*. 22(3):320-324. Peer reviewed research comparing level of socialization in a Korean Special Ed elementary school classroom utilizing an HT activity. HT group (N=12) showed significant improvement in socialization as compared to class as usual control (n=12).
- Relf, D. & Sheri, D. (1995). Horticulture: meeting the needs of special populations. *Hort Technology*, 5(2), 94-104. Peer-reviewed.
- Stoneham, J. & Kendle, A. & Thoday, P.R.(1995). Horticultural therapy: Horticulture's contribution to the quality of life of disabled people. *Acta Horticulture*, 391, 65-75. Peer-reviewed article discusses a wide range of research addressing the role of horticulture and ht in the lives of the disabled.

EDUCATION

- A.L. McFarland, T.M. Waliczek and J.M. Zajicek (*February 2010*), Graduate Student Use of Campus Green Spaces and the Impact on Their Perceptions of Quality of Life, *HortTechnology*, 20(1): 186-192. Peer reviewed survey research comparing campus green space use and quality of life for undergraduate (n=347) and graduate (n=79) students.
- Armstrong, D. (2000). A community diabetes education program and gardening projects to improve diabetes care in a northwest American Indian tribe. *The Diabetes Educator*, 26(1), 113-120. Peer-reviewed. Project

- description utilizing a community garden and educational workshops to address diabetes within a Northwest American Indian tribe.
- Baptist, K.W. (2002). The garden as metaphor for curriculum. *Teacher Education Quarterly* 29(4), 19-37. Peer-reviewed article assists teachers in designing an ecological learning laboratory providing goals and curriculum elements to consider.
- Blair, D. (2009). The child in the garden: An evaluative review of the benefits of school gardening. *Journal of Environmental Education*, 40(2), 15-38. Research review article in peer-reviewed journal focuses on both qualitative and quantitative outcome reports of school gardening projects.
- Bowker, R. & Tearle, P. (2007). Gardening as a learning environment: A study of children's perceptions and understanding of school gardens as part of an international project. *Learning Environments Research*, 10(2), 83-100. Peer-reviewed international research study reports the effects on learning and perceptions toward school gardening of experiential learning program. Cross-cultural differences in children's perceptions, interpretation and understanding of school gardening are noted.
- Bowles, B. (1995). Celebrating common ground: Storytelling in children's gardens. *Children's Environment* 12(2), 271-274. Peer-reviewed article describes the uses of garden storytelling to teach and interweave diverse cultural traditions.
- Bradley, L.K. (1995). Tierra Buena: The creation of an urban wildlife habitat in an elementary school in the inner city. *Children's Environments* 12(2), 245-249. Peer-reviewed description of a program designed to increase environmental awareness and responsibility.
- Brynjegard, S. (2001). School gardens: Raising environmental awareness in children. Descriptive report and case studies are used to review the effectiveness of school gardens in raising environmental awareness and action. Necessary and optimal aspects of participation in the establishment of school gardens are cited.
- Corazon, S.S., Schilhab, T.S., Stigsdotter, U.K. (2011). Developing the therapeutic potential of embodied cognition and metaphors in nature-based therapy: lessons from theory to practice. *Journal of Adventure Education and Outdoor Learning*. 11(2), 161-171. Peer reviewed theoretical article looking at the connection between cognitive metaphors in therapy and reinforcing the learning and change process through physical movement.
- Danforth, P.E., Waliczek, T.M., Macey, S.M., & Zajicek, J.M. (2008). The effect of the National wildlife Schoolyard Habitat Program on fourth grade students standardized test scores. *Horttechnology* 18(3), 356-360. Peer-reviewed research reports significantly increased math scores, but not reading scores among students participating in the garden program.
- Dobbs, K., Relf, D. & McDaniel, A. (1998). Survey on the needs of elementary education teachers to enhance the use of horticulture or gardening in the classroom. *HortTechnology*, 8(3), 370-373. Peer-reviewed survey

- research determines the needs of teachers who would like to include horticulture or gardening into their teaching curriculum.
- Doxon, L. E., Mattson, R. H., & Jurish, A. P. (1987). Human stress reduction through horticultural vocational training. *Hort Science*, 22(4), 655 - 656. Peer-reviewed.
- Hammatt, H. (2001). An educational environment. *Landscape Architecture*, 91(6), 18. Trade journal.
- Hayes, D. (2002 April). Summertime nutrition fun. *School Foodservice & Nutrition*, 56(4), 22-27. Government newsletter directed to school food service personnel offers novel ways to continue nutrition education and interest through the summer and in the community.
- Hinnart, H.A. (1999). Growing gardens and mathematicians: more books and math for young children. *Young Children*, 54(20), 23-26. Peer-reviewed guideline for using gardening as a teaching tool with primary grade students.
- Horwood, B. (1991). Tasting the berries: deep ecology and experiential education. *Journal of Experiential Education*, 14(3), 23-26. Peer-reviewed article describes an experimental educational program and its goals.
- Klemmer, C.D., Waliczek, T., & Zajicek, J.M. (2005). Growing minds: The effect of a school gardening program on the science achievement of elementary students. *HortTechnology*, 15(3), 448-452. Peer-reviewed research article describes significantly higher science scores in elementary school students participating in school gardening activities. Variations among ages of the students and degree of learning are also reported.
- Langhout, R. & Rappaport, J. (2002). Integrating community into the classroom: community gardening, community involvement, and project-based learning. *Urban Education*, 37(3), 323-349. Peer-reviewed description of classroom-based community gardening project.
- Meyer, M. & Amma, F. (1997). Teaching horticulture & native-american agriculture traditions. *HortTechnology*, 7(2), 110-118. Peer-reviewed bibliography of reference to native-american traditions and their multidisciplinary integration into classroom teaching.
- Morris, J. & Koumjian, K., Briggs, m. et al (2002). Nutrition to grow on: a garden-enhanced nutrition education curriculum. *Journal of Nutrition Education Behavior*, 34(3), 175-176. Peer-reviewed program description.
- Ozer, E.J. (2007). The effects of school gardens on students and schools: Conceptualization and considerations for maximizing healthy development. *Health Education and Behavior*, 34(6), 846-863. Peer-reviewed article discusses the need for rigorous research, a framework to guide this research and the implications for education.
- Pigg, A.E., Waliczek, T.M. & Zajicek, J.M. (2006). Effects of gardening program on the academic progress of third, fourth, and fifth grade math and science students. *HortTechnology* 16(2), 188-189. Peer-reviewed research article notes differences in science achievement scores in group

- participating in a school garden program as part of traditional science curriculum versus those who had not.
- Rahm, J. (2002). Emergent learning opportunities in an inner-city youth gardening project. *Journal of Research in Science Teaching*, 39(2), 164-184. Peer-reviewed research article of youth-initiated actions in an urban garden and the learning opportunities in science, community and work.
- Robinson, C.W. & Zajiczek, J.M. (2005). Growing minds: The effects of a one-year school garden project on six constructs of life skills of elementary school children. *HortTechnology* 15(3), 453-457. Peer-reviewed research studying life skills growth measures in school children. Overall scores showed significant growth compared to control group.
- Skamp, K., & Bergmann, I. (2001). Facilitating learnscape development, maintenance and use: Teacher's perceptions and self-report practices. *Environmental Education Research*, 7(4), 333-358. Peer-reviewed report of the use of school gardens as learning environments.
- Smith-Sebasto, N.J. (2001). Potential guidelines for conducting and reporting environmental education research; Quantitative methods of inquiry. *Journal of Environmental Education* 33(1). Peer-reviewed recommendations for conducting research.
- Volk, T.L. & Cheak, M.J. (2003). The effects of an environmental education program on students, parents and community. *Journal of Environmental Education*, 34(4) 12-5. Peer-reviewed qualitative and quantitative research followed the impact of a school-based, student driven environmental research and action program and its effects on students, teachers and community.
- Wagner, L. & Fones, S. (1999). Enhancing science education experiences. *HortTechnology*, 9(4), 566-569. Peer-reviewed report of an inquiry-based science and math learning program at the South Carolina Botanical Garden reviews the learning opportunities available to college students, elementary school teachers, parents and upper-elementary age students.
- Waliczek, T. M. Zajicek, J. M. (October 2010). The benefits of integrating service teaching and learning techniques into an undergraduate horticulture curriculum. *HortTechnology*. 20(5): 934-942. Peer reviewed survey research looking at effects of service integrated into undergrad horticulture curriculum showed increase in positivity regarding community involvement after participation.

ENVIRONMENT AND...

- Adachi, M. (2000). Effects of floral & foliage displays on human emotions. *HortTechnology*, 10(1), 59-63. Researched-based article in peer-reviewed journal reports changes in human emotions and "clearheadedness" as subjects responded to floral and foliage displays.
- Aguilar, O.M., Waliczek, T.M. and Zajicek, J.M. (2008). Growing environmental stewards: The overall effect of a school gardening program on environmental attitudes and environment locus of control of different

- demographic groups of elementary school children. *HortTechnology*, 18, 243-249. Peer-reviewed research.
- Andrade, C., Lima, M., Fornara, F., Bonaiuto, M. (June 2012). Users' views of hospital environmental quality: Validation of the perceived hospital environment quality indicators (PHEQIs). *Journal of Environmental Psychology*, 32(2):97-111. This magazine article describes medical benefits of hospital gardens.
- Arbogast, K.A., Kane, B.C.P, Kirwan, J.L., & Hertel, B.R. (2009). Vegetation and outdoor recess time at elementary schools: What are the connections? *Journal of Environmental Psychology* (in press). Peer-reviewed research studied the amount of outdoor recess time as it correlated with amount of spaces available, type of vegetation and other school characteristics.
- Barnhart, S., Perkins, N. et al. (1998). Behavior and outdoor setting preferences at a psychiatric hospital. *Landscape and Urban Planning*, 42(2-4), 147-156. Peer-reviewed research studied hospital psychiatric staff and patients' preferences of activities in both natural and open outdoor space and outdoor enclosed space.
- Barton, J. Hine, R. Pretty, J. (December 2009), The health benefits of walking in greenspaces of high natural and heritage value. *Journal of Integrative environmental sciences*. 6(4): 261-278. Peer reviewed research looking at the effects of spending time in green spaces on self-esteem and mood. Results showed significant improvement in both self-esteem and mood for those leaving the forest as compared with those just entering.
- Berto, R., Baroni, M.R., Zainaghi, A, Bettelia, S. (Dec. 2010). An exploratory fatigue. *Journal of Environmental Psychology* 30(1): 494-500. Peer reviewed (n=31) study examining role of fascination in attention restoration theory. Interactions between variables clouds results.
- Bramston, P., Pretty, G., Zammit, C. (Nov. 2011). Assessing environmental stewardship motivation. *Environment and Behavior*, 43(6):776-788. Peer reviewed survey research utilizing a convenience sample assessing the personal benefits volunteers receive from their environmental stewardship work. Themes of developing a sense of belonging, caretaking the environment, and expanding personal learning emerged.
- Bringslimark, T. Hartig, T., Patil, G., (Dec. 2009). The psychological benefits of indoor plants: A critical review of the experimental literature. *Journal of Environmental Psychology*, 29(4):422-433. Peer reviewed article looking at variety of variety of outcomes including emotional states, pain perception creativity, task performance and indices of autonomic arousal as a result of presence of indoor and plants. Pain management was recurrent, but the rest of the results were mixed. Diversity in methodologies, settings, sample size and measures contributed to the mixed outcomes. Recommendations regarding design measurement analysis and reporting are made.
- Bringslimark, T., Hartig, T., & Patil, G. (2007). Psychological benefits of indoor plants in workplaces: putting experimental results into context.

- HortScience* 42, 594-604. Peer-reviewed cross sectional research looks at potential benefits of indoor plants in a broad workplace context.
- Byoung-Suk K., Ulrich, R.S., Walker, V.D. and Tassinari, L.G. (May 2008). Anger and stress: the role of landscape posters in an office setting. *Environment and Behavior* 40(3), 355-381. Peer reviewed experiment assessing the effects of aesthetically pleasing art posters on 210 college students. Results indicated significant decreases in state anger and stress for males, but not for females.
- Campbell, A.N. Waliczek, T.M., et al. (1997). The influence of activity-based environmental instructions on high school students' environmental attitudes. *HortTechnology*, 7(3), 308. Peer-reviewed research notes increased likelihood of positive environmental attitudes among students taught using hands-on environmental education activities.
- Chawla, L. (1998). Significant life events revisited: A review of research on sources of environmental sensitivity. *Environmental Education Research*, 29(3), 11-21. Extensive literature review in peer-reviewed journal explores strengths, weaknesses and variations in qualitative research about influences on those who are environmentally involved with their surroundings. Suggestions for further and more refined research are included.
- Chawla, L. (2006). Research methods to investigate life experiences: Review and recommendation. *Environmental Education Research*, 12(3-4), 359-374. Peer-reviewed article reviews and recommends research approaches to determining those life events that exert significant impact on future environmentally responsible behavior.
- Chan, C. & Chen, P. (2005). Human responses to window views and indoor plants in the workplace. *HortScience* 40(5), 1354-1359. Peer-reviewed research looks at physiological responses to window views and plants in a workplace setting.
- Cimprich, B. (1993). Development of an intervention to restore attention to cancer patients. *Cancer Nursing*, 16(2) 83 - 92. Peer-reviewed seminal study of cognitive restoration for breast cancer patients who spent time in a garden setting.
- Cole D. N., Hall, T. E. (2010). Experiencing the restorative components of wilderness environments: Does congestion interfere and does length of exposure matter? *Environment and Behavior* 42 (6): 806 -823. Peer reviewed self assessment survey research hikers at wilderness trailheads reported substantial stress reduction and mental rejuvenation. Restorative aspects of experience increased as length of trip increased.
- Coleman, C.K. & Mattson, R.D. (1995). Influences of foliage plants on human stress during thermal biofeedback training. *HortTechnology*, 5(2), 137-141. Peer-reviewed preliminary research findings indicate that although no significant results were found, a greater percentage responded during thermal biofeedback training to exposures to plant or plant-images under stress reduction than those without.

- Comstock, N., Dickinson, L. M., Marshall, J. A., Soobader, Mah-J, Turbin, M. S., Buchenau, M., Litt, J. S., (Dec 2010). Neighborhood attachment and its correlates: Exploring neighborhood conditions, collective efficacy and gardening. *Journal of Environmental Psychology*. 30 (4): 339-594. Peer reviewed Survey research (n=410) looking at effects neighborhood attachment. Results indicate length of residency collective, efficacy, and home, and community participation are associated with neighborhood attachment.
- Devlin, A.S., & Arneill, A.B. (2003). Health care environments; a review of the literature. *Environment and Behavior* 35(5), 665-694. A review article in peer-reviewed journal concerning aspects of the healthcare environment and patient outcomes. Opportunities for research are considered.
- Dijkstra, K., Pieterse, M. E., & Pruyn, A. (2008). Stress reducing effects of indoor plants in the built healthcare environment: the mediating role of perceived attractiveness. *Preventive Medicine*, 47 (3), 279-283. Peer-reviewed research looks at stress reducing properties of natural elements in the healthcare environment.
- Dravigne, A., Waliczek, T.M. et al. (2008). The effect of live plants and window views of green spaces on employee perceptions of job satisfaction. *HortScience*, Feb 2008 43, 183-187. Peer-reviewed study found significant effects of interior plants or window views of green spaces on worker quality of life and job satisfaction.
- Duffy, S. V., Michelle (November 2010). Forces of nature affect implicit connections with nature. *Environment and Behavior* 42 (6):723-739. Peer reviewed survey of 220 participants showed seasonal and methodological factors affected performance on implicit task but not explicit environmental attitudes.
- Felsten, G. (2009). Where to take a break on the college campus: An attention restoration theory perspective. *Journal of Environmental Psychology*, 29(1), 160-167. Peer-reviewed research studied the relative restorative benefits of murals depicting nature and window views of "mundane" nature which included built structures, finding that murals were reported as more restorative.
- Fjeld, T. (2000). The effect of interior planting on health and discomfort among workers and school children. *HortTechnology* 10(1), 46-52. Peer-reviewed.
- Frumkin, H. (2001). Beyond toxicity, human health and the natural environment. *American Journal of Preventative Medicine*, 20(3), 234-240. Extensive literature review in peer-reviewed journal documents the wide range of benefits of exposure to nature and a natural environment to diverse populations and communities.
- Han, K-Tsung, (Mar. 2010). An exploration of relationships among the responses to natural scenes: scenic beauty, preference, restoration. *Environment and Behavior*, 42(2):243-270. Peer reviewed correlational experiment (n=

274 students) showed high correlations (0.94) between ratings of scenic beauty, preference, and restoration of 48 landscapes slides of 6 biomes.

- Han, K-T. (2003). A reliable and valid self-rating measure of the restorative quality of natural environments. *Landscape and Urban Planning*, 64(4), 209-232. Peer-reviewed study of a self-rating restoration scale developed based on the constructs of Attention Restoration Theory was found to be a better valid and reliable measurement tool.
- Hartig, T. (2001). Guest's editor's introduction: Restorative environments. *Environment and Behavior*, 33(4), 475-479. Peer-reviewed summarization of articles addressing attention restoration processes and the numerous factors involved.
- Hartig, T., Kaiser, F.G., Bowler, P.A. (2001). Psychological restoration in nature as a positive motivation for ecological behavior. *Environment and Behavior*, 33(4), 590-607. Peer-reviewed research study sought to determine factors that lead to environmentally responsible behaviors.
- Hartig, T., Book, A., & Garvill, J., et al. (1996). Environmental Influences on psychological restoration. *Scandinavian Journal of Psychology*, 7(4), 378-393. Peer-reviewed research tested two theories of the utility of restorative environments. Outcomes suggest natural environment positively effect ratings of emotion.
- Hartig, T., Mang, M. & Evans, G.W. (1991). Restorative effects of natural environment experiences. *Environment and Behavior* 23(1), 3-26. *Peer-reviewed*.
- Hartig, T., Nyberg, L. , et al. (1999). Testing for mood congruent recall with environmentally induced mood. *Journal of Environmental Psychology*, 19(4), 353-367. Peer-reviewed research found environmental manipulation produced moderate changes in self-reported mood but did not produce apparent changes in similar recall.
- Hartmann, P., Apaolaza-Ibanez V. (Mar 2010). Beyond savanna: An evolutionary and environmental psychology approach to behavioral effects of nature scenery in green advertising. *Journal of Environmental Psychology* 30(1): 119-128. 750 subjects were sampled to determine behavioral effects of landscapes in advertising. results indicated that respondents had preferences for nature scenes with lush green landscapes and familiar biomes as compared to urban or desert scenes.
- Herzog, T., Black, A., Fountaine, K., & Knotts, D. (1997). Reflections and attentional recovery as distinctive benefits of restorative environment. *Journal of Environmental Psychology*, 17, 165-170. Peer-reviewed article addresses and defines attention restoration theory and studies the relative levels of perceived restoration in three different settings.
- Herzog, T., Chen, H., & Primeau, J. (2002). Perception of the restorative potential of natural and other settings. *Journal of Environmental Psychology*, 22(3), 295-306. Peer-reviewed research. Participants rated 40 activities on restorative potential. Concluded that restorative potential of natural settings was underappreciated.

- Herzog, T., Maguire, C., & Nebel, M. (2002). Assessing the restorative components of environments. *Journal of Environmental Psychology*, 23(2003), 159-170. Peer-reviewed article uses survey data to measure the constructs of "restorative environment".
- Herzog, T. R. Strevey, S. J. (November 2008). Contact with nature, sense of humor, and psychological well-being *Environment and Behavior* 40: 747-776. Peer reviewed survey study factor analysis showed contact with nature was a predictor of effective functioning.
- Herzog, T.R., Strevey, S.J. (2008). Contact with nature, sense of human and psychological well-being. *Environment and Behavior*, 40(6), 747-776. Controlled study in peer-reviewed journal found that contact with nature was a better predictor of effective functioning whereas sense of humor was a better predictor of personal development.
- Home, R. B., Hunziker, N., Marcel (July 2010). Cultural and biological determinants in the evaluation of urban green spaces. *Environment and Behavior* 42(4):494-523. Peer reviewed survey research survey research (n=17) factors associated with exploring meanings of urban green spaces in order to provide a tool to match urban natural resources management with needs of residents.
- Horowitz, S. (2008). Optimal healing environments. *Alternative and Complementary Therapies*, 14(6), 300-305. Peer-reviewed article reviews a broad spectrum of what makes an area more conducive to healing, gives multiple resources and an extensive bibliography.
- Irvine, K.N & Warber, S.L. (2002). Greening healthcare: practicing as if the natural environment really mattered. *Alternative Therapies in Health and Medicine*, 8(5), 76-83. Peer-reviewed. Review article supporting interaction with the natural world as a vital part of biopsychosocial-spiritual well-being.
- Jackson, L. (2003). The relationship of urban design to human health and condition. *Landscape and Urban Planning*, 64(4), 191-200. Peer-reviewed survey of state of science regarding impact of urban design on human health.
- Kaplan, R. (1993). The role of nature in the context of the workplace. *Landscape and Urban Planning*, 26(1 - 4), 193-201. Peer-review of literature and presentation of theoretical model concerning views of nature and employee well-being and work effectiveness.
- Kaplan, R. (2001). The nature of the view from home -- psychological benefits. *Environment and Behavior*, 33(4), 507-542. Survey study in peer-reviewed journal studied satisfaction with neighborhood and aspects of well-being in neighborhoods with views of nature and neighborhoods with views of built environments. Views of built environments contributed to neighborhood satisfaction. Views of nature contributed to both neighborhood satisfaction and sense of well-being.
- Kaplan, S. (2001). Meditation, restoration, and the management of mental fatigue. *Environment and Behavior*, 33(2001), 480-506. Summary article

- of many studies by the author in a peer-reviewed journal about attention, brain function, restoration from "attentional fatigue" including the restorative role of natural surroundings.
- Kaplan, S. (1995). The restorative benefit of nature: Toward an integrative framework. *Journal of Environmental Psychology, 15*(3), 169-182. Peer-reviewed analysis of Attention Restoration Theory, the related concept of recovery from "attentional fatigue," and the role of the environment in recovery.
- Kaplan, S. & Kaplan, R. (1989). *The experience of nature: a psychological perspective*. New York: Cambridge University Press. Book provides comprehensive theory of attention, attentional stress and the role of nature in restoration after attentional fatigue based on studies of those individuals meeting criteria and participating in an outdoor program.
- Kellert, S. R. & Wilson, E. O. (1993). *The Biophilia Hypothesis (book)*. Washington, DC: Island Press. A collection of invited papers both supporting and refuting the hypothesis humans possess a biologically based attraction to nature and relates this to potentially serious consequences of ongoing environmental degradation.
- Korpela, K. & Hartig, T. (1996). Restorative qualities of favorite places. *Journal of Environmental Psychology, 16*(3), 221-233. Peer-reviewed research focuses on students' ratings of favorite places as correlated with perceived restoredness scale.
- Kuo, F.E. & Sullivan, W.C. (2001). Environment and crime in the inner city. Does vegetation reduce crime? *Environment and Behavior, 33*(3) 343-367. Peer-reviewed research report notes negative correlation between both fear of crime and number of crimes (both property and violent) reported and degree of vegetation of an area.
- Kuo, F.E., Bacaicoa, M. & Sullivan, W.C. (1998). Transforming inner-city landscapes: trees, sense of safety and preference. *Environment and Behavior 30*(1), 28-59. Peer-reviewed.
- Kuo, F.E. & Sullivan, W.C. (2001). Aggression and violence in the inner city: Effects of the environment via mental fatigue. *Environment and Behavior, 33*(4), 543-571. Peer-review research studied nature's capacity to mitigate attentional fatigue as a factor involved in increased violence and aggression.
- Laumann, K., Garling, T., & Stormark, K. (2001). Rating scale measures of restorative components of environments. *Journal of Environmental Psychology, 21*(1), 31-44. Peer-reviewed research study on development of restoredness scale and "ART".
- Laumann, K., Garling, T., & Stormark, K. (2003). Selective attention and heart rate responses to natural and urban environments. *Journal of Environmental Psychology, 23*(2), 125-134. Peer-reviewed research studied the effects of environment on autonomic arousal and its effects on attention-orienting tasks.
- Lohr, V. I. & H, Pearson-Mims, C. (2008). People's response to discomfort in the presence of interior plants or art. *Acta Horticulturae vol. 790*, 173-178.

- Peer-reviewed research studied the effects of the presence of plants on pain perception, finding that the presence of plants decreased the perception of pain.
- Lohr, V. I. & H, Pearson-Mims, C. (2006). Responses to scenes with spreading, rounded and conical tree forms. *Environment & Behavior*, 38(5), 607-688. Research study in peer-reviewed journal notes participants reported more positive emotions when viewing trees than when viewing inanimate objects. Furthermore, they were happier when viewing spreading trees than other tree forms.
- Lohr, V. I. & Pearson-Mims, C. H. (2000). Physical discomfort may be reduced in the presence of interior plants. *HortTechnology* 10 (1), 53-58. *Peer-reviewed* research looks at the ability to endure discomfort as a function of plants and other types of décor.
- Lohr, V., Pearson-Mims, C., & Goodwin, G. (1996). Interior plants may improve worker productivity and reduce stress in a windowless environment. *Journal of Environmental Horticulture*, 14(2), 97. Peer-reviewed research report describes decreased objective measures of stress, increased objective measures of productivity and increased subjective measures of attentiveness in the experimental group of subjects exposed to a task in a room which included plants..
- MacDonald, J.E. (1996). The restorative effects o a vacation from work: The role of novelty, positive affect and nature. *Sciences and \Engineering*, 57(1-B), *Dissertation abstracts international: Section B*. Research study of pre/post vacation stress levels of office workers including variables of vacation environment, novelty, and affect/arousal ratings.
- Manzo, L. (2003). Beyond house and haven: Toward a revisioning of emotional relationships with places. *Journal of Environmental Psychology*, 23(2003), 47-61. Peer-reviewed literature review article studies the dynamic, multifaceted and fluctuating emotional relationship between people and place and the sociopolitical milieu in which it is embedded.
- Mayer, S. & Frantz, C. (2004). The connectedness to nature scale: A measure of individuals' feeling in community with nature. *Journal of Environmental Psychology*, 24(4), 503-515. Peer-reviewed journal article presents a review of studies testing the "connectedness-to-nature scale", its validity and reliability and its ability to predict ecologically-minded lifestyle, behaviors and interests. Suggestions for future research are included.
- Mayer, F., Frantz, S., McPherson C., Bruehlman-Senecal, E., Dolliver, K. (September 2009). Why is nature beneficial? : The role of connectedness to nature. *Environment and Behavior*. 41: 607-643. Peer reviewed research studies examined effects of exposure to nature on positive and ability to reflect on a life problem. Results showed exposure to nature increased connectedness to nature, attentional capacity, positive emotions and ability to reflect on a life problem.
- McFarland, A.L., Waliczek, T.M., and Zajicek, J.M. (2008). The relationship between student use of campus green spaces and perceptions of quality

- of life. *HortTechnology*, 18, 232-238. Peer-reviewed research reports undergraduate student use of campus green spaces and perceptions of quality of life were related.
- Mckensie-Mohr, D., Nemiroff, L.S., Beers, L., & Desmaris, S. (1995). Determinants of responsible environmental behaviors. *Journal of Social Issues*, 51(4), 139-156. Three research studies in peer-reviewed journal report social, educational, and individual determinants of three different responsible behavior. Research supports the role of psychology in increasing environmentally responsive behaviors.
- Mealey, L., & Theis, P. (1995). The relationship between mood and preferences among natural landscapes. *Ethnology & Sociobiology*, 16(3) 247-256. Peer-reviewed research supports that mood can affect aesthetic judgment and this may be a result of a psychological mechanism to facilitate adaptive behavior.
- Moore R. (1997). The need for nature: A childhood right. *Social Justice*, 24(3). Peer-reviewed article addresses impact of decreasing availability of outdoor space on childhood development.
- Nisbet, E. K., Zelenski, J. M., Murphy, S. A. (September 2009). The *nature relatedness scale*: Linking individuals' connection with nature to environmental concern and behavior. *Environment and Behavior* 41 (5) 715-740. Peer reviewed study looked at development of nature relatedness scale through factor analysis of 831 participant responses.
- Nisbet, E. Zelensk, J. (September 2011) Underestimating Nearby Nature: Affective Forecasting Errors Obscure the Happy Path to Sustainability. *Psychological Science*, 22(9): 1101-1106. Peer reviewed research. 150 college students were divided into 2 groups, indoor walk and outdoor nature walk. Outdoor walks promoted better moods than indoor walks. Contact with nature walks facilitated a sense of nature relatedness and environmentally responsible behavior.
- Ottosson, J., Grahn, P., (January 2008), The Role of Natural Settings in Crisis Rehabilitation: How Does the Level of Crisis Influence the Response to Experiences of Nature with Regard to Measures of Rehabilitation?, *Landscape Research*, 33(1): 51-70. Peer reviewed survey research (n=547) respondents reported experiencing nature has a powerful influence on the rehabilitation potential of affected by crisis. Study is supportive of "green care" movement in Europe.
- Papinchak, H. L. Holcomb, J. E. Best, T.O., Decoteau, D.R. (April- June 2009). Effectiveness of houseplants in reducing the indoor air pollutant ozone. *HortTechnology*. 19(2):286-290. Peer reviewed research looking at ability of snake plants, Pothos, and spider plants to reduce ozone levels. Ozone depletion rates were higher in chambers with plants, but no significant difference between plants was found.
- Park, S.H. & Mattson, R.H. (2009). Therapeutic influences of plants in hospital rooms on surgical recovery. *HortScience* 44(1)102-105. Peer-reviewed randomized clinical trial showed positive effects of plants on a variety of dimensions.

- Parsons, R. (1991). The potential influences of environmental perception on human health. *Journal of Environmental Psychology, 11(1)*, 1-23. Peer-reviewed article examining earlier research of the physiological and psychological basis of environmental preferences, the relationship of evidence to theory and the potential links to human health.
- Perkins, Helen. E. (Dec. 2010). Measuring love and care for nature. *Journal of Environmental Psychology, 30(4)*:455-463. Peer reviewed survey development project. 307 university students were sampled to create a 15 item love and care for nature scale, a measure of one's personal and emotional relationship to nature.
- Pretty, J. Peacock, J. Hine, R. Sellens, M. South, N. Griffin, M., (2007), Green exercise in the UK countryside: Effects on health and psychological well-being, and implications for policy and planning. *Journal of Environmental Planning and Management, 50(2)*: 211-231. Peer reviewed study (n=263) of effects of exercise in green environments on healthy subjects. Results showed green exercise led to significant improvement in self esteem and decrease in mood disturbance.
- Perrin, J. L., Benassi, V. A., (Dec 2009). The connectedness to nature scale: A measure of emotional connection to nature. *Journal of Environmental Psychology, 29(1)*: 86-94. Peer reviewed research correctional factor analysis looks at Connection to Nature Scale (CNS) as a tool to explore beliefs about nature. Research extends psychological framework of environmental altruism and developing measure of concept of biophilia.
- Relf, D. (1990). Psychological and sociological responses to plants: implications for horticulture. *HortScience 25(1)*, 11-13. Peer-reviewed.
- Ryan, R. M., Weinstein, N., Bernstein, J., Brown, K., Mistretta, L., Gagne, M. (June 2010). Vitalizing effects of being outdoors and in nature. *Journal of Environmental Psychology, 30 (2)*: 135-266. Peer reviewed multi-method research assessed effects of being outdoors on subjective vitality results indicated being outdoors was associated with greater vitality.
- Schultz, P., Schriver, C., Tabanico, J., & Khazian, A. (2004). Implicit connections with nature. *Journal of Environmental Psychology, 24(1)*, 31-42. Peer-reviewed research regarding subjects' attitudes toward their belief that they are a part of nature. Results are interpreted within a broad model of environmental issues.
- Schweitzer, M., Gilpin, L., & Frampton, S. (2004). Healing spaces: Elements of environmental design that make an impact on health. *Journal of Alternative and Complimentary Medicine, 10(1)*, s-71-s-83. Research review in a peer-reviewed journal cites relevant design elements impacting on a wide-range of outcomes including health, staff/client satisfaction and other variables of "healing." Design elements cited include use of gardens, plants, window views of nature and artwork of nature as "salutogenic".

- Scopelliti, M. & Giuliani, V. (2004). Choosing restorative environments across the lifespan: A matter of place experience. *Journal of Environmental Psychology, 24*(4), 423-437. Peer-reviewed research studies the role of experience of interaction within different environments as it differs across lifespan and other factors and the restorative effects of these different environments, adding affect to the variables of environments as potentially restorative.
- Shibata, S. & Suzuki, H. (2002). Effects of the foliage plant on performance and mood. *Journal of Environment Psychology, 22*(3), 265-272. Peer-reviewed research studied the effect of presence and placement of foliage plants on performance of two different types of tasks. Positive effects were greater for males performing a more creative type of task.
- Snelgrove, A.G., Michael, J.H., Waliczek, T.M., & Zajicek, J.M. (2004). Urban greening and criminal behavior; a geographic information system perspective. *HortTechnology, 14*(1), 48-57. Research article in peer-reviewed journal reports significantly negative correlation between incidences of crime and amount of vegetation in urban areas in which the crimes occurred..
- Staats, H., Gatersleben, B., & Hartig, T. (1997). Change in mood as a function of environment design: Arousal and pleasure on a simulated forest hike. *Journal of Environmental Psychology, 17*(4), 283- 300. Peer-reviewed research studies the effects of two forestation variables--vegetation density and accessibility on mood.
- Staats, H., Kieviet, A., & Hartig, T. (2003). Where to recover from attentional fatigue: An expectancy-value analysis of environmental preference. *Journal of Environmental Psychology, 23*(2), 147-157. Peer-reviewed experimental design tested likelihood of restoration among those "attentionally fatigued" versus those feeling fully refreshed. Preference for forest over city was twice as strong among those "attentionally fatigued" with expectations of restoration, reflection and social stimulation.
- Summit, J. & Sommer, R. (1999). Further studies of preferred tree shapes. *Environment & Behavior, 31*(4), 550-576. Peer-reviewed research of preferred tree-shapes is found to support functional and evolutionary theories of landscape preferences.
- Taylor A.F., Wiley, A., Kuo, F.E., & Sullivan, W.C. (1998). Growing up in the inner city. *Environment and Behavior, 30*(1), 3-27. Observational research study in peer-reviewed journal reports increased levels of play and access to adults in spaces with more grass and trees and significantly less creative play in barren spaces than in relatively green spaces--over 64 urban public housing outdoor spaces.
- Tennessen, C.M, & Cimprich, B. (1995). Views to nature: effects on attention. *Journal of Environmental Psychology, 15*(1), 77-85. Peer-reviewed research studied the effects of environment on measures of attention. Increased performance was associated with views of natural environments.

- Ulrich, R.S. (1979). Visual landscapes and psychological well-being. *Landscape Research*, 4(1), 17-23. Peer-reviewed exploratory research relates positive affect and fear arousal measures to visual landscaping scene and the implications for environmental planning and design..
- Ulrich, R. S. (1986 A). Human responses to vegetation and landscapes. *Landscape and Urban Planning*, 13, 29-44. Peer-reviewed overview of research concerning responses to natural vs. urban landscapes.
- Ulrich, R. (1981). Natural versus urban scenes: Some psycho-physiological effects. *Environment & Behavior*, 13(5), 523-556. Peer-reviewed research study found natural views had positive influences on psycho-physiological states.
- Ulrich, R. S. (1984). View through a window may influence recovery from surgery. *Science*, 224(4647), 420-421. Peer-reviewed early correlations were noted between various measures of post-surgical recovery and the views available from hospital windows.
- Ulrich, R., Simons, R., & Losito, B. (1991). Stress recovery during exposure to natural and urban environment. *Journal of Environmental Psychology*, 11(3), 201-230. Peer-reviewed research examines complexity of research when studying natural versus urban environments and environmental impact on stress reduction. Environmental content differences in each case appeared decisive in recuperation from stress and perceptual intake.
- Verderber, S. (1986). Dimensions of person-window transactions in hospital environment. *Environment & Behavior*, 18(4), 450-466. Peer-reviewed empirical research studied the degree of satisfaction and associated behaviors of patients as correlated with available views, daylight and space of hospital room windows.
- Vincent E, Battisto D, Grimes L, McCubbin J.,(2010 Spring), The effects of nature images on pain in a simulated hospital patient room. *HERD*. 3(3):42-55. Peer reviewed mixed method study assessed effects of four nature images prospect, refuge hazard, mixed prospect refuge, and control (no image) on pain and mood (n=100, 20 per group) in college student. Results showed mixed prospect and refuge impact showed significant potential to reduce sensory pain.
- Wells, N. (2000). At home with nature: The effects of greenness on children's cognitive functioning. *Environment and Behavior*, 32(6), 775-795. Peer-reviewed longitudinal study relates the availability of "greenness" to higher levels of cognitive functioning in children.
- Westphal, J. (2001). Medical musings about intergeneration design phenomena at the 4-H children's garden. *Landscape Research*, 26(3), 257-269. Peer-reviewed article applies behavioral and medical perspectives to the design of a garden frequented most often by both children and senior citizens.
- Wood, R.A., Orwell, R.L., Tarran, J., Torpy, F., & Burchett, M. (2008). Indoor plants: Improving the indoor environment for health well-being and productivity. *Acta Horticultural* vol. 790, 151-156. Peer-reviewed.

Review article discusses the scientific research correlating the presence of indoor plants to the building occupant's health, well-being and productivity.

GARDENING

- Boyer, R. & Waliczek, T. (2002). The master gardener program. *Hort Technology*, 12(3), 432-436. Peer-reviewed.
- DiMattero, K. (1997). Does organic gardening foster food born pathogens. *JAMA*, 277(21), 1679-1680. Peer-reviewed. Commentary on risk of use of animal manures as fertilizers for food crops.
- Hamilton, S. & Marrais, K. (2001). Visits to public gardens. *HortTechnology*, 11(2), 209-215. Peer-reviewed.
- Fawcett, L. (1998). Gardening with nature. *Landscape Architecture*, 88(6), 87. Trade journal.
- Kaplan, R. (1973). Some psychological benefits of gardening. *Environment & Behavior*, 5(2), 145-162. Survey study in peer-reviewed journal looks at the elements of satisfaction derived from community gardening versus home gardening and vegetable versus flower gardeners.
- Kurtz, H. (2001). Differentiating multiple meanings of garden and community. *Urban Geography*, 22(7), 656-670. Peer-reviewed.
- McGann, M. & Berghage, R. (2004). The Penn State University medieval garden. *HortTechnology*, 14(1), 155-160. Peer-reviewed.
- Olwell, C. (1990). *Gardening from the Heart: Why Gardeners Garden (book)*. Berkley, California: Antelope Island Press.
- Rahm, J. (2002). Emergent learning opportunities in an inner-city youth gardening program. *Journal of Research in Science Teaching*, 39(2), 164-184. Peer-reviewed description of science-based learning objectives from consumer driven community gardening program.
- Tusco, D. (2001). Creating relevant science through urban planning and gardening. *Journal of Research in Science Teaching*, 38(8), 860-877.
- Waliczek, T.M. & Soyer, R. (2002). The master gardener program: Do benefits of the program go beyond improving horticultural knowledge of the participants. *HortTechnology*, 12(3), 432-436. Peer-reviewed pre-post test research showed significant improvement in several areas of quality of life measures, including physical and social activity, self-esteem and nutrition.

HEALING GARDENS

- Armstrong, D. (2000). A community diabetes education and gardening project to improve diabetes care in a northwest American Indian tribe. *Diabetes Education*, 26(1), 113-120. Peer-reviewed article describes the purpose

- and goals of a community garden and the necessary community liaison requirements prior to implementation.
- Coulter, A.H. (1999). Healing Gardens: When nature is the therapy *Alternative & Complementary Therapies*, 5(2), 64-73. Peer-reviewed article discusses the historical basis and current use of healing gardens in medicine.
- Dolan, T.G. (2003). Healing gardens: A bouquet of benefits for long-term care. *Long Term Care Interface*, 4(11), 12.6. Peer-reviewed article addresses the healing use of gardens in long-term care facilities such as skilled nursing facilities, rehabilitation centers and sub-acute care settings.
- Franklin, D. (March 2012). Nature that Nurtures: Hospital gardens turn out to have medical benefits. *Scientific American*, 306: 24-25.
- Kamp, D. (1997 Sept-Oct). Therapeutic Gardens. *Hastings Center Report*, 27(5), 48. Peer-reviewed.
- Marcus, C.C. (2003). Healing havens: Children's gardens at Legacy Emanuel Children's Hospital, Portland, Oregon. *Landscape Architecture*, 92(8), 84. Trade journal.
- Mc Cormick, K. (1995). Realm of the senses. *Landscape Architecture*, 1995. Trade journal
- Miyahi, F.A, Takaesu, Y. & Kweon, H. (2004). Identifying the image of a healing landscape: A descriptive study. *Acta Horticulturae* vol. 639, 221-227. Peer-reviewed descriptive and age-comparative study of elements of landscapes subjects identified as providing "relief" and/or "peace."
- Purcell, A. & Lamb, R. et al (1994). Preference or preferences for landscape. *Journal of Environmental Psychology*, 14(3), 195-209. Peer-reviewed research investigates landscape preferences and correlated cognitive factors in categorization.
- Purcell, T., Peron, E. & Berto, R. (2001). Why do preferences differ between scene types? *Environment and Behavior*, 33(1), 93-106. Controlled survey study in a peer-reviewed journal used scales to separate the study of "preference" "restorative value" and "familiarity." Preference and restorative value were more highly correlated than either familiarity or restorative value.
- Rauma, P. (2003). What makes a healing garden? *Nursing Homes Long-Term Care Management*, 52(10), 50, 54-56. A tour of three facilities' gardens that nurture residents' well-being.
- Schlenker, E. (2000). Outdoor healing spaces: A personal and professional journey. *Reflections on Nursing Leadership*, 26(4), 36-37. Personal account of use of outdoor spaces in peer-reviewed journal of nursing honor society.
- Soderback, I., Soderstrom, M., & Schalander, E. (2004). Horticultural therapy: the 'healing gardens' and gardening in rehabilitation measures at Danderyd Hospital Rehabilitation Clinic, Sweden. *Pediatric Rehabilitation*, 7(4), 245-260. Peer-reviewed journal reviews literature on horticultural therapy. The patients with "brain damage" were included in an

- intervention phase following brain damage and its effectiveness was judged.
- Spurgeon, T. (2001). Therapeutic horticulture -- growing for optimum wellbeing. *Positive Health*(71), 19-22. On-line consumer magazine article reviews the therapeutic uses of gardens during the eighteenth, nineteenth and twentieth centuries.
- Stigsdotter, U.A., Grahn, P. (2002). What makes a garden a healing garden? *Journal of Therapeutic Horticulture*, 19, 60-69. Review article in peer-reviewed journal summarizes different research disciplines, theories of the concept of "healing gardens" and design elements of such gardens.
- Warner, S. (1995). Restorative landscapes. *Landscape Architecture*, 1995. Trade journal.

HEALTH

- Airhart, D.L., Airhart, K.M., Tristan, J. (1995). Implementing pest-control strategies for vocational and therapeutic greenhouses. *HortTechnology*, 5(2), 182-184. Peer-reviewed article discusses teaching methods of pest-control strategies in therapeutic and vocational greenhouse programs which are limited in their use of clinical and commercially available strategies for prevention and maintenance of a pest-free environment.
- Bosma, H., Boxtel, M.P.J., Ponds, R.W.H.M., et al. (2000). Pesticide exposure and risk of mild cognitive dysfunction. *Lancet*, 356(9233), 912-913. Peer-reviewed research suggests subtle cognitive changes in those exposed over time to pesticides.
- Chambers, N. (2003). Horticultural therapy and infection control in the healthcare environment. *Journal of Therapeutic Horticulture*, 14, 57-61. Literature review in peer-reviewed journal concludes that the benefits of exposure to plants and soil-related activities surpasses the risks of infection among most hospitalized patients. Infection control guidelines developed by horticultural therapists with infection control specialists are provided.
- Cole, D.C., Eyles, J., et al. (1999). Links between humans and ecosystems: The implications of framing for health promotion strategies. *Health Promotion International*, 14(i), 65-72. Peer-reviewed discussion article focuses on different perspectives on ecosystems and health within the population, and the need to flexibly appeal to those holding each perspective.
- Detweiler, M.D. & Warf, C. (2005). Dementia wander garden aids post cerebrovascular stroke restorative therapy: A case study. *Alternative Therapies*, 11(4), 54-59. Peer-reviewed journal presents a case report about the positive effects of using a "healing garden" as the setting for standard CVA recovery treatments.

- Dunnett, N. & Qasim, M. (2000). Perceived benefits to human well-being of urban gardens. *HortTechnology*, 10(1), 40-45. Peer-reviewed research surveys reports age, gender and social demographics related to individual and community perceptions of the benefits of urban gardens.
- Jonas, W.B. & Chez, R.H. (2004). Toward optimal healing environments in health care. *Journal of Alternative and Complimentary Medicine*, 10(1) (Supplement 1), s1-s6. Introduction to symposium and supplemental journal issue focused creating and implementing optimal healing environments.
- Kim, E. (2003). Horticultural therapy. *Journal of Consumer Health on the Internet*, 7(3), 71-76. Peer-reviewed article discusses background of horticultural therapy and reviews internet resources and databases.
- Lee, Min-Jung (December 2010). Effects of various horticultural activities on the autonomic nervous system and Cortisol response of the mentally challenged adults. *HortTechnology*. 20(6)971-976. Peer reviewed research (N=30) looked at cortisol levels as a result of Horticulture activities. Cortisol levels were significantly decreased indicating stress lowering response.
- Lemaitre, R., Siscovick, D., et al. (1999). Leisure-time physical activity and the risk of primary cardiac arrest. *Archives of Internal Medicine*, 159(7), 686-690. Peer-reviewed survey study questioned the incidents sudden cardiac arrests and physical activity levels of the participants. Results suggest that regular, moderate-levels of physical activity -- including gardening and walking -- are associated with reduced incidents of primary cardiac arrest.
- Littrell, J. (1996). How psychological states affect the immune system: Implications for interventions in the context of HIV. *Health and Social Work*, 21(4), 287-295. Peer-reviewed research. Review article addresses the early known links between immunological function and psychological states. Psychologically-based intervention strategies aimed at amelioration of psychological states and, therefore, boost immunological function are reviewed and further methods are proposed.
- Lochrie, C. (2002). The grace of gardening: in addition to its mental benefits, gardening helps counteract the physical harms of stress. *Vibrant Life*, 19(1), 16-18. Article in Christian magazine reviews the physical, emotional and social benefits of gardening.
- Lu, C. , Knutson, D.E., et al. (2001). Biological monitoring survey of organophosphorus pesticide exposure among pre-school children in the Seattle metropolitan area. *Environmental Health Perspectives*, 109(3), 299-303. The long-term health effects of exposure to organophosphorus pesticides is unknown. This peer-reviewed research article measured the presence of metabolites of the pesticide and possible exposure rates. Based on this research use of organophosphorus pesticides is not recommended for areas in which children are likely to play.
- Maheady, D. (2002). For healthier minds, a caring garden. *Nursing Spectrum*, 12(17), 11,18. Trade journal for nurses.

- McClenahan, J. (2003). On being a patient: the greenhouse effect. *Annals of Internal Medicine*, 138(5), 434. Regular column in peer-reviewed medical journal discusses the therapeutic effects of flowers.
- McDonough-Means, S.I., Kreitzer, M.J., & Bell, I.R. (2004). Fostering a healing presence and investigating its mediators. *Journal of Alternative and Complementary Medicine*, 10 (Supplement 1), s25-s41. Peer-reviewed discussion paper seeks to explore and explicate the phenomenon of "healing presence" and environment. Based on the discussion methods of qualitative-quantitative research, designs are proposed.
- Moss, M. Oliver, L. (June 2012) Plasma 1, 8-cineole correlates with cognitive performance following exposure to rosemary essential oil aroma. *Therapeutic Advances in Psychopharmacology*, 2: 103-113. Peer reviewed research (n=20) correlating improved cognitive performance in both speed and accuracy, with exposure to rosemary essential oil aroma.
- Park, S.-H, Mattson, R.H., & Kim, E. (2002). Pain tolerance effects of ornamental plants in a simulated hospital patient room. *Acta Horticulturae*, 639, 241-247. Research report in peer-reviewed journal reports significant improvement of all studied bio-metric and self-report measures of pain in the experimental group exposed to plants during and after painful stimuli. Adding flowering plants had more positive effects than foliage plants.
- Pogoda, J., & Preston-Martin, S. (1997). Household pesticides and risk of pediatric brain tumors. *Environmental Health Perspective*, 105(11), 1214-1220. Peer-reviewed research studies the incidents of pediatric brain tumors and use of pesticides from pregnancy to diagnosis. Risks were significantly elevated with prenatal exposure to flea/tick products.
- Pols, M., Peeters, P.H. Twisk, J.W, et al. (1997) Physical activity and cardiovascular disease risk profile in women. *American Journal of Epidemiology*, 146(4), 322-328. Peer-reviewed cross-sectional survey study found leisure-time activities were inversely related to cardiovascular risk but work and household activity were not.
- Salovey, P. & Birnbaum, D. (1989). Influence of mood on health-relevant cognitions. *Journal of Personality and Social Psychology*, 57(3), 539-551. Peer-reviewed research of mood as related to perception of health-related vulnerability, of physical complaints and confidence in carrying out illness alleviating behaviors, found that all are mediated by mood.
- Seong-Hyun Park & Mattson, R.H. (2008). Effects of flowering and foliage plants in hospital rooms on patients recovering from abdominal surgery. *HortTechnology*, 18(4), 563-568. Peer-reviewed research report suggests that foliage and flowering plant are a useful addition to traditional recovery care since all subjective and objective measures were improved over those patients in room that had no plants. Measured factors included blood pressure, analgesic intake, rating of pain, anxiety and fatigue, and satisfaction with their rooms.

- Silver, S. (2004). Optimal healing environments in end-of-life care and beyond. *Journal of Alternative and Complimentary Medicine, 10 (Supplement 1)*, s201-s209. Peer-reviewed article about the utility and difficulty of studying optimal end-of-life care environments. Because end-of-life care has evolved as a response to standard medical models and has evolved in multiple settings, the individual elements involved in optimizing the care delivery environment have implications for all areas of medical care delivery.
- Sobel, D. (1995). Rethinking medicine: improving health outcomes with cost effective psychosocial interventions. *Psychosomatic Medicine, 57(3)*, 234-244.
- Starbuck, J. (2003). Gardening helps fight osteoporosis, too. *Bottom Line/Health, 17(5)*, 10. Consumer magazine.
- Stevens, M. (1995). Promotion of wellness. *Landscape Architecture, 1995*. Trade journal.
- Stevens, P. (November 2010) Embedment in the environment: A new paradigm for well-being?, *Perspectives in Public Health, 130(6): 265-269*. Peer reviewed. A look at the concept of ecotherapy, and its impact on the meaning of self, health, and illness.
- Walach, H. & Jonas, W. (2004). Placebo research: The evidence base for harnessing self-healing capacities. *Journal of Alternative and Complimentary Medicine, 10 (Supplement 1)*, s103-s112. Peer-reviewed article reviews empirical evidence of therapeutically meaningful responses to placebos and argues for the meaningful study of these placebos and their function in healing.
- Wesa, K. & Culliton, P. (2004). Recommendation and guidelines regarding the preferred research protocol for investigating the impact of an optimal healing environment on patients with substance abuse. *Journal of Alternative and Complimentary Medicine, 10 (Supplement 1)*, s193-s199. Peer-reviewed discussion of the complementary and alternative means of enhancing and individualizing treatment of substance abuse. Research design on the impact of creating optimized health environments and outcomes is suggested..
- Yamaguchi, M. Deguchi, M. Miyazaki, Y., (2006), The effects of Exercise in Forest and Urban Environments on Sympathetic Nervous Activity of Normal Young Adults. *The Journal of International Medical Research. 34(2): 152-159*. Peer reviewed experiment (n=15) measuring sympathetic amylase activity in saliva of male college students. Results showed decrease in sympathetic nervous activity confirming stress reducing effects of walking in the woods.

HORTICULTURE THERAPY

- Aldous, D. & Kidd, J. (2008). Horticultural therapy perspectives in Australia and New Zealand. *Acta Horticulturae*, 790, 93-99. Peer-reviewed article reviews the increasing and broadening use of horticultural therapy using case studies and citing research activities.
- Aldous, M. (2000). *Perspectives on horticultural therapy in Australia* (Vol. 10). Peer-reviewed description.
- Annerstedt, M., & Wahrborg, P. (June 2011). Nature-assisted therapy: systematic review of controlled and observational studies. *Scandinavian Journal of Public Health*. 39(4):371-88. Peer reviewed review assessing broad area of the effects of nature assisted therapy on human health. Significant improvements were found for varied outcomes in diverse diagnoses. Future research recommendations are provided. Articles rated for experimental rigor.
- Barley, E.A., Robinson, S., Sikorski, J. (2012). Primary care based participatory rehabilitation: User's views of a horticultural and arts project. *British Journal of General Practice*. 62(595), 127-134. Peer reviewed qualitative survey research (n=16) thematic analysis concluded HT promoted wellbeing by providing purposeful enjoyable activity improving mind and providing escape from life's pressures for individuals with serious mental illness.
- Catlin, P.A., Milliorn, A.B. & Milliorn, M.R. (1992). Horticultural therapy promotes "wellness" autonomy in residents. *Provider*, 18(7), 40. *Provider* is not peer-reviewed. Abstract not available.
- Chiu, L. (1999). Facility Profile: Planting hope.... Horticultural therapy and training program. *Rehab Management: The Interdisciplinary Journal of Rehabilitation*, 12(4), 92-94. Peer-reviewed. (Unable to get abstract.)
- Davis, S. H. (1995). American Horticultural Therapy Association: its purpose and potential. *Hort Technology*, 5(2), 121-126. Peer-reviewed.
- Flagler, J. & Poincelot, R. (1994). *People plant relationships setting research priorities (book)*. Binghamton, NY: Haworth Press Inc.
- Franco, S., Senni, S., & Monhe, E. (2004). The economics of horticultural therapy: A European perspective. *Acta Horticulturae* vol. 639, 179-183. Peer-reviewed article discusses the cost-benefit ratio of providing horticultural therapy in varied rehabilitation settings for individuals with intellectual and psychological disabilities.
- Franklin, H. (2004). White coats, green plants: Clinical epidemiology meets horticulture. *Acta Horticulturae* vol. 639, 15-26. Peer-reviewed article reviews research needs and methodologies to help evaluate the efficacy of horticultural therapy and advance it with sound research.
- Goodban, A. & Goodban, D. (1990). Horticultural therapy: A growing concern, Part 2. *British Journal of Occupational Therapy*, 53(11), 468-470. Peer-reviewed article provides issues to be considered in planning, implementing, and evaluation of a horticultural therapy program..
- Herzog, T. & Barnes, G. (1999). Tranquility and preference revisited. *Journal of Environmental Psychology*, 19(2), 171-181. Peer-reviewed research.

- Subjects rated sixty-six color slides of outdoor settings for tranquility and preference and on five different descriptive variables.
- Hewson, M. (1994). *Horticulture as therapy: A practical guide to using horticulture as a therapeutic tool* (book). Greenmor: Guelph, Ontario.
- Johnson, W.T. (1999). Horticultural therapy: A bibliographic essay for today's health care practitioner. Review article in peer-reviewed journal examines dominant themes in the practice of horticultural therapy and includes issues related to methodology, documentation and assessment. *Alternative Health Practitioner*, 5 #3.
- Ki Cheol, S. & Jin, H. (2004). Comparison of the effectiveness of different horticultural therapy programs. *Korean Journal of Horticultural Science & Technology*, 22(1), 135-143.
- Kim, E. (2003). Horticultural therapy. *Journal of Consumer Health*, 7(3), 71-76. Peer-reviewed article provides a brief history of horticultural therapy and websites for further research.
- Kuo, F.E. (2004). Horticulture, well-being and mental health: From intuition to evidence. *Acta Horticulturae* vol., 639, 27-34. Peer-reviewed literature survey reviews the evidence of horticulture's impact on mental health and well-being in select populations.
- Kwack, H., & Relf, P. (2002). Current status of human issues in horticulture in Korea. *HortTechnology*, 12(3), 415-419. Peer-reviewed article describes the increasing uses of horticultural activities in Korea, the current status of studies of these uses, and future issues to be addressed to sustain and increase knowledge and application of the activities.
- Lewis, C.A. (1996). *Green Nature/Human Nature: The Meaning of Plants in Our Lives* (book). Albuquerque, NM.
- Lewis, C.A. (1995). Human health and well-being: The psychological, physiological and sociological effects of plants on people. *Acta Horticulture*, 391, 31-39. Peer-reviewed summary of the history and research of the plant-person connection in the areas of environment and health, horticulture as therapy and the multiple applications of these.
- Lundgren, K. (2004). Nature-based Therapy: Its potential as a complementary approach to treating communication disorders. *Seminars in Speech and Language*, 25(2), 121-131. Peer-reviewed article reviews three types of nature-based therapy and its general and specific applications to populations with communication disorders.
- Markee, K. M., & Janick, J. (1979). A bibliography for horticultural therapy (1970-1978): A comparison of literature search techniques in an interdisciplinary field. *HortScience*, 14(6), 692-697.
- Matsuo, E. (2000). Education, research and use of human horticultural relationships in Japan & Korea. *HortTechnology*, 10(1), 14-17. Peer-reviewed.
- Mealey, L. & Theis, P. (1995). The relationship between mood and preferences among natural landscapes. *Ethology & Sociobiology*, 16(3), 247-256.

- Mountford, M. (2001). Health benefits of horticultural therapy. *Positive Health*, (65), 24-27. Online journal article describes ways in which horticultural therapy can positively impact health and well-being.
- Neuberger, K. (1995). Pedagogics & horticultural therapy: The favorite task of Mr. Huber, digging up potatoes. *Acta Horticulturae*, 391, 241-250. Peer-reviewed case study and theoretical report of the use of horticultural therapy to provide patients experiencing helplessness and passivity in their role of "patient" an experience of self-effectiveness, independence and creative organization of their environment as well as improving abilities and competence.
- Parsons, R., Ulrich, R.S. & Tassinary, L.G. (1994). Experimental approaches to the study of people-plant relationships. *Journal of Home and Consumer Horticulture*, 1(4), 347-372. Peer-reviewed article describes two sets of experimental approaches to studying the impact of natural environments, the first set of methods derived from the field of environmental aesthetics, the second from the field of psychophysiology.
- Poincelot, R.P. & Flagler, J. (Eds.) (1994). People-plant relationships: Setting research priorities. *Haworth Press: Binghampton, NY*. This book presents research on people-plant relationships and outlines priorities and methodology for further research.
- Prema, T.P., Devarajaiah, C. & Gopinatti, P.S. (1986). An attempt at Indianization of psychiatric nursing-horticultural therapy. *Nursing Journal of India*, 77(6), 15-6. Peer-reviewed. (No abstract available.)
- Relf, D. & Madsen, D. (1994). Historical perspectives on the people-plant council. *Journal of Home & Consumer Horticulture*, 1(4), 331-345. Peer-reviewed article describing the history of people-plant connections and their study.
- Relf, D., & Dorn, S. (1995). Horticulture: meeting the needs of special populations. *HortTechnology*, 5(2), 94-103. Peer-reviewed.
- Rossiter, S. (2006). A healing place: forget me not the farm. *Annals of the American Psychotherapy Association*, 9(1), 30-32. Peer-reviewed description of setting, goals, and activities of farm-based horticultural therapy program.
- Shoulders, H. & Wary, A. (1995). A study on horticultural therapy: Matt's seed story. *HortTechnology*, 5(2), 115-117. Peer-reviewed.
- Shoemaker, C.A. (2004). Horticulture therapy: Comparisons with other allied therapies and current status of the profession. *Acta Horticulturae* vol., 639, 173-178. This paper provides a brief history of the profession and an in-depth comparison of the evolution of horticultural therapy to the other allied therapies.
- Smith, D. (1998 October). Horticultural therapy: The garden benefits everyone. *Journal of Psychosocial Nursing and Mental Health Services*, 36(10), 14-21, 36-37. Peer-reviewed journal article discusses therapeutic nursing outcomes of horticultural therapy.
- Stoneham, J.A., Kendle, A.D., & Thoday, P.R. (1995). Horticultural therapy: Horticulture's contribution to the quality of life of disabled people. *Acta*

- Horticulturae* vol. 391, 65-75. Peer-reviewed description of broadening aims, goals and applications of horticultural therapy and research efforts aimed at these.
- Straus, M.C. (1994). Measuring the quality of treatment in horticultural therapy groups. *Journal of Home and Consumer Horticulture*, 1(4), 307-314. Peer-reviewed initial report of patient perception of horticultural therapy groups.
- Toyoda, M. (2008). Development of horticultural therapy evaluation system using three elements (program-support-client). *Acta Horticulturae* vol. 790, 55-61. Peer-reviewed research using earlier developed tool to evaluate the impact on quality of life of a horticultural therapy program for the elderly. The evaluation tool effectively separated effective and ineffective interventions.
- Vera, M.L., Angst, F., Beck, T., Lehmann, S., Brioschi, R., Schneiter, B., Aeschlimann, A. (2012). Horticultural therapy for patients with chronic musculoskeletal pain: Results of a pilot study. *Alternative Therapies* 18(2), 44-50. Peer reviewed research looking at addition of Horticultural Therapy to regular therapeutic regiment for 37 patients (control= 42) in pain management clinic. Study concluded that addition of Horticultural Therapy to pain management program improved participants' physical, mental health, and ability to cope with pain.
- Wichrowski, M., Whiteson, J., Haas, F., et al. (2005). Effects of horticultural therapy on mood and heart rate in patients participating in an inpatient cardio pulmonary rehabilitation program. *Journal of Cardiopulmonary Rehabilitation and Prevention*, 25(5), 270-274. Peer-reviewed research showed improvements in mood state and reduced heart rates following participation in a horticultural therapy session.
- Yamane, K., Kawashima, M, Fujishige, N. & Yoshida, M. (2004). Effects of interior horticultural activities within potted plants on human physiological and emotional status. *Acta Horticulturae* vol, 636, 37-43. Peer-reviewed research studied physiological and psychological measures of relaxation with significant results indicating increased states of relaxation among those working with plants.

INCARCERATED

- Cammach, C. & Waliczek, T. (2002). The green brigade: The educational effects on juvenile offenders. *HortTechnology*, 12(1), 77-81. Research report in a peer-reviewed journal notes significant improvement in both knowledge of horticulture and attitude toward environment scores in a population of juvenile offenders who have participated in a community-based horticultural program. Interestingly, those who had a less than 60% attendance had significantly more negative environmental attitude scores.
- Finch, C. (1995). Green Brigade: horticultural learn-and-earn program for juvenile offenders. *HortTechnology*, 5(2), 118-120. Featured report in

- peer-reviewed journal about the impact of a horticultural program for incarcerated juvenile offenders.
- Flagler, J. (1995). The role of horticulture in training correctional youth. *HortTechnology*, 5(2), 185-187. Peer-reviewed description of a horticultural therapy program for youth having the goals of employability and personal development..
- Lee, S.M., Suh, J.K., Lee S. (2008). Horticultural therapy in a jail: Correctional care for anger. *Acta Horticulturae* vol., 790, 109-113. Peer-reviewed study reports the development of a horticultural program and its effective impact on lowering measures of anger among female inmates.
- McGuinn, C. & Relf, P. (2001). A profile of juvenile offenders in a vocational horticulture curriculum. *HortTechnology*, 11(3), 427-433. Peer-reviewed explorative research of six offenders' responses showed pre-post test improvements in all social and vocational categories measured..
- Migura, M.M., Whittlesey, L.A., & Zajicek, J.M. (1997). Effects of a vocational horticulture program on the self-development of female inmates. *HortTechnology*, 7(3), 299-304. Peer-reviewed pre-post testing study followed female inmates and female inmate drug abusers on scales of life satisfaction, self-esteem and locus of control finding substance abusers had significantly benefited from the offered Master Gardener program.
- Migura, M.M. & Zajicek, J. (1997). Research tools for evaluating the effects of a vocational program for female inmates. *HortTechnology*, 7(3), 305-308. Peer-reviewed article discusses quantitative research tools available for studying the effects of horticulture vocational therapy programs.
- Rice, J. & Remy, L.. (1998). Impact of horticultural therapy on psychosocial functioning among urban jail inmates. *Journal of Offender Rehabilitation*, 26(3-4), 169-191. Peer-reviewed research studied the longitudinal impact of a horticultural therapy program on the psychosocial functioning on randomly assigned inmates.
- Richards, H. & Kafami, D. (1999). Impact of horticultural therapy on vulnerability and resistance to substance abuse among incarcerated offenders. *Journal of Offender Rehabilitation*, 29(3 & 4), 183-193. Peer-reviewed research studied pre-post measures of vulnerability to addiction and resistance to addiction of inmates participating in a horticultural therapy program. Vulnerability to addiction decreased significantly.

LANDSCAPE DESIGN

- Abkar, M. Mustafa Maulan, Suhardi Mariapan, Manohar Davoodi, S.R (October 2011). Relationship between the preference and perceived restorative potential of urban landscapes. *HortTechnology*. 21(5): 514-519. Peer reviewed study, exploring relationship between preference and perceived restorative potential of urban landscapes moderate correlations found.
- Bennett, P. (1999). Doing good -- a garden benefits the blind. *Landscape Architecture*, 89(4), 16. trade journal.

- Brown, C. & Grant, M. (2005). Biodiversity and human health: What role for nature in healthy urban planning? *Built Environment*, 31(4), 326-338. Peer-reviewed journal article reviews diverse effects of nature in health and well-being. The role of biodiversity within those settings is extrapolated.
- Hagerall, C.M. (2001). Consensus in landscape judgements. *Journal of Environmental Psychology*, 21(1), 83-92. Peer-reviewed research studied variability of landscape preferences among different positively preferred landscapes and explored the role of commonly shared mental representations in these preferences.
- Johnson, J.M. & Hurley, J. (2002). A future ecology of urban parks: Reconnecting nature and community in the landscape of children. *Landscape Journal* 21(1), 110-115. Peer-reviewed article discusses models of urban parks to enrich childhood experiences, identifying daily accessibility and other key factors that can foster a reconnection between nature and childhood.
- Marcus, C.C. & Barnes, M. (1999). *Healing Gardens: Therapeutic Benefits and Design Recommendations*. NY: Wiley and Sons. (book)
- Tyson, M.M. (1998). *The Healing Environment: Therapeutic Outdoor Environments*. NY: McGrawHill Co. (book)

MENTAL HEALTH

- Arnitz, B., Therorell, T., & Levi, L. (1983). An experimental study of social isolation of elderly people. *Psychosomatic Medicine*, 45(5), 395-406. Peer-reviewed research on psychoendocrine and metabolic effects of social isolation. Significant psycho-physiological effects noted.
- Burbach, F.R. (1997). The efficacy of physical activity interventions within mental health services: anxiety and depressive disorders. *Journal of Mental Health* 6(6), 543-566. Peer-reviewed.
- Casey, D. (2002). Therapy and ecology: viewing the natural world through systematic lenses. *Australian and New Zealand Journal of Family Therapy*, 23(3), 138-144. Peer-reviewed article discusses the broadening scope of psychotherapy and psychotherapy models to include awareness of environmental issues.
- Chalquist, C. (2009). A look at ecotherapy research evidence. *Ecopsychology*. 1(2), 64-74. Peer reviewed article exploring overview of research into application and effectiveness of ecotherapy.
- Chang, C.Y., Lin, Y.H., & Chou, M.T. (2008). Experiences and stress reduction of viewing natural environmental settings. *Acta Horticulturae (ISHS)*, 775, 139-146. Peer-reviewed research reports varied levels of psychological benefits correlated with different scenic views.

- Davis-Berman, J. & Berman, D. S. (1989). The wilderness therapy program: An empirical study of its effects with adolescents in outpatient settings. *Journal of Contemporary Psychotherapy*, 19(4), 271-281. Peer-reviewed.
- Edwards, J. & Bess, J. (1998). Developing effectiveness in therapeutic use of self. *Clinical Social Work Journal*, 26(1), 89. Peer-reviewed article looks at factors which can improve therapeutic interactions with clients.
- Eddy, R. & Belfiore, P. (1995). Comparing productivity in greenhouse tasks of individuals with mental disabilities. *HortTechnology*, 5(2), 134- 137. Research update in a peer-reviewed journal.
- Fieldhouse, J. (2003). The impact of an allotment group on mental health clients' health, well-being and social networking. *British Journal of Occupational Therapy*, 66(7), 286-296. Qualitative study in peer-reviewed professional journal studied the health and social benefits of allotment groups to participants with serious mental health problems.
- Folkman, S. & Moskowitz, J. (2000). Positive affect and the other side of coping. *American Psychologist*, 647-654. Peer-reviewed background article reviews the role of positive affect in coping with negative experience. Plants and planting activities can often be associated with positive affect in situations of chronic stress (negative affect).
- Futterman, A., Kemeny, M., Shapiro, D., & Fahey, J. (1994). Immunological and physiological changes associated with induced positive and negative mood. *Psychosomatic Medicine*, 56, 499-511. Peer-reviewed background article reviews the immunological and physiological changes associated with different states of affect.
- Galvin, K., Sharples, A., Hume, S. (2000). User's perspectives of work rehabilitation with horticultural therapy. *International Journal of Therapy and Rehabilitation*, 7(6), 262-265. Peer-reviewed qualitative study of the users of a wholesale shrub nursery as a sheltered workshop for those recovering from mental illness.
- Gonzalez, M. T., Hartig, T., Patil, G. G., Martinsen, E. W. and Kirkevold, M. (April 2011), A prospective study of group cohesiveness in therapeutic horticulture for clinical depression. *International Journal of Mental Health Nursing*, 20(2):119-29. Peer reviewed with in subjects design (n=46) assessing 12 week HT program. Increased social activity and cohesiveness noted as well as significant changes in other study variables.
- Gonzalez, M.T., Hartig, T. Patil, G.G. Martinsen, E.W. Kirkevold, M., (2011). A prospective study of existential issues in therapeutic horticulture for clinical depression. *Issues in Mental Health Nursing*. 32(1):73-81. Two studies (n=18 and n=28) with single group design assessed effects of 12 week Therapeutic Horticulture Program on Depression and Existential issues. Depression was decreased while existential issues did not change significantly. Participants described horticulture experience as meaningful influence in their lives.

- Gullone, E. (2000). The biophilia hypothesis and life in the 21st century: mental health or increasing pathology? *Journal of Happiness Studies* 1(3) 293-321. Peer-reviewed article traces the conceptual development of biophilia theory and offers key insights and examples for incorporating biophilia into practice strategies and techniques.
- Kohlleppel, T, Bradley, J.C. & Jacob, S. (2002). A walk through the garden: Can a visit to a botanical garden reduce stress? *HortTechnology*, 12(3), 489-492. Peer-reviewed research study suggests that visitors to a botanical garden successfully used this as an effective coping strategy for stress and depression.
- Kuo, F.E. (2004). Horticulture, well-being and mental health: From intuition to evidence in Relf, D. (ed.) xxvi International Horticultural Congress: Expanding Roles for Horticulture in Improving Human Well-Being and Life Quality, Toronto, Canada. Peer-reviewed presentation reviews the diverse literature suggesting that horticulture contributes significantly to human well-being and mental health. Research from diverse populations is cited and the implications for vulnerable populations is reviewed.
- Kuo, F. & Farber Taylor, A. (2004). A potential natural treatment for attention deficiency disorder/hyperactivity disorder. *American Journal of Public Health*, 94(9), 1580-1586. Peer-reviewed research where parents rated effects of forty-nine activities on children's ADHD symptoms. Green outdoor activities significantly reduced symptoms versus built outdoor or indoor activities.
- Lee, S., Kim, M.S., & Suh, J.K. (2008). Effects of horticultural therapy of self-esteem and depression of battered women at a shelter in Korea. *Acta Horticulturae* vol. 790, 139-142. Peer-reviewed research report studied the impact of a group horticultural therapy program, finding it effectively increased self-esteem and decreased depression for women in a battered women's shelter.
- Lee, Y.-H., Ro, M.-R., Lee, Y.-S. (2004). Effects of horticultural activities on anxiety reduction of female high school students. *Acta Horticulturae* vol. 639, 249-251. Peer-reviewed research examines "state," "trust" and "social anxiety levels" pre- and post-horticultural program participation, showing improvement in all scores.
- Lochrie, C. (2002). The grace of gardening: in addition to its mental benefits, gardening helps counteract the physical harms of stress. *Vibrant Life*, 19(1), 16-18. Article in bimonthly life style magazine reviews research about the use of gardening as stress-reliever.
- McGinnis, M. (1989). Gardening as therapy for children with behavioral disorders. *Journal of Child and Adolescent Psychiatric and Mental Health Nursing*, 2(3), 87-91. Peer-reviewed anecdotal report of an in-patient gardening project and review of early horticultural therapy literature to support the project.
- Middleman, R. & Wood, G. (1991). Communicating by doing. *Journal of Contemporary Human Services*, 72(3), 153-156. Theoretical article in

- peer-reviewed journal describes ways activities can be helpful in the therapeutic context.
- Minei, T., Kiyuna, T., Tanaka, M., Takaesu, Y. (2008). Horticultural therapy for the aged with chronic schizophrenia. *Acta Horticulturae (ISHS)* 790, 63-66. Peer-reviewed case study reviews activities therapies including horticulture with elderly mentally ill individuals.
- Moonkyoung, C. Seung, I. Et. al.(2003). Effect of phased application of horticultural therapy programs on improvements of assertiveness & interpersonal relationship of chronic schizophrenia. *Journal of Korean Society of Horticultural Science*, 44(6), 972-973. Peer-reviewed.
- Neuberger, K. (2008). Some therapeutic aspects of gardening in psychiatry. *Acta Horticulturae*, vol, 790, 83-90. Peer-reviewed, theoretical and clinical report reviews the potential benefits of the use of gardening in psychiatry. A potential user evaluation instrument is also offered for future study and validation.
- Ottosson J. & Grahn, P. (2008). The role of natural settings in crisis rehabilitation: How does the level of crisis influence the response to experiences of nature with regard to measures of rehabilitation? *Landscape Research*, 33(1), 51-70. Research article in peer-reviewed journal reports the ameliorating effects of experience with nature on those experiencing moderate-high levels of stress. Comprehensive background of psycho-physiological studies are included.
- Page, M. (2008). Gardening as a therapeutic intervention in mental health. *Nursing Times*, 104(45), 28-30. Trade journal article describes horticultural therapy project as a workers cooperative. Therapeutic benefits are discussed.
- Parker, S. (2004). Grass roots healing. *Mental Health Practice*, 7(8), 20-22. Trade journal.
- Perrins-Margalis, N., Rugletic, J., Schepis, N., Stepanski, H., & Walsh, M. (2000). The immediate effects of a group-based horticulture on the quality of life of persons with chronic mental illness. *Occupational Therapy in Mental Health*, 16(1), 15-31. Research-based article describes the impact on quality of life factors including life satisfaction and sense of accomplishment within a group of chronically mentally ill persons who participated twice weekly horticultural therapy group. Subjective report of factors leading to improved QOL are reported and related to the group horticultural experience.
- Rossiter, S. (2006). A healing place: forget me not the farm. *Annals of the American Psychotherapy Association* 9(1), 30-32. Peer-reviewed description of setting, goals, and activities of farm-based ht program.
- Smith, D.J.. (1998). Horticultural therapy: the garden benefits everyone. *Journal of Psychosocial Nursing and Mental Health Services*, 36(10), 14-21. Peer-reviewed article describes use and benefits of horticultural therapy from a nursing perspective in a mental health setting.
- Son, K.C., Um, S.J., Kim, S.Y., Song, J.E., Kwack, H.R. (2004). Effect of horticultural therapy on the changes of self-esteem and sociality of

- individuals with chronic schizophrenia. *Acta Horticulturae* vol., 639, 185-191. Peer-reviewed research reports significant improvement in symptoms of social and psychological functioning of chronic schizophrenia following horticultural therapy program.
- Smith, D.J. (1998). Horticultural therapy: the garden benefits everyone. *Journal of Nursing and Mental Health Services*, 36(10), 14-21. Peer-reviewed report describes the use of ht in treatment of mental illness to include creating a therapeutic alliance, assessment of patient status and promoting therapeutic community.

PHYSICAL DISABILITIES AND HT

- Brooks, C. (2005). Gardening: Can ya dig It ? *PN Paraplegia News*, 59(3), 14-20. Newsletter. Discusses the role of ht in paraplegic rehabilitation and includes tips and resources for gardening seated and/or in a chair.
- Galloway, M. & Jokl, P. (2000). Aging successfully: The importance of physical activity in maintaining health. *Journal of American Academy of Orthoscopic Surgery*, 8(1), 37-44. Peer-reviewed article reviews elements of "aging successfully" which include participation in physical activities and maintenance of muscle functioning.
- Gibson, S. (1996). Horticulture as a therapeutic medium. *British Journal of Therapy and Rehabilitation*, 3(4), 203-209. Four case studies are presented in this peer-reviewed article each highlighting different therapeutic experiences while using horticulture as a rehabilitation medium.
- Riodan, R. (1983). Gardening as a rehabilitation adjunct. *Journal of Rehabilitaion* 49(4), 39-41. Peer-reviewed.
- Sarno, M. & Chambers, N. (1997). A horticultural therapy program for individuals with acquired aphasia. *Activities, Adaptation and Ageing*, 22, 81. Peer-reviewed program description.
- Spring, J.A., Baker, M., Dauya, I., Ewemade, I., Marsh, N., Patel, P., Scott, A., Stoy, N., Turner, H., Viera, M., Will, D. (2011). Gardening with Huntington's disease clients-creating a programme of winter activities. *Disability and Rehabilitation*. 33(2), 159-164. Peer reviewed article describing issues and benefits in development of HT program for Huntington's disease clients.
- Tonkin, J. (1996). Everything in the garden is therapy. *Physiotherapy Frontline*, 2(15), 20-21. Physiotherapy Frontline Journal does not currently have a website. Magazine not peer-reviewed.
- Unruh, A.M. (2004). The meaning of gardens in daily life: a comparison between gardeners with serious health problems and healthy participants. *Acta horticulturae*, 639, 67-73. Peer-reviewed research found benefits of gardening to those interviewed. Cancer patients reported gardening was used as a coping strategy.

- Wannamethee, S.G., & Shaper, A.G. (2001). Physical activity in the prevention of cardiovascular disease: An epidemiological perspective. *Sports Medicine*, 31(2), 101-114. Review of evidence suggests that moderate, leisure-time activity including gardening and walking in middle or older age provides significant reduction of cardiovascular disease and all-cause mortality.
- Washburn, R., & Zhu, W. et. (2002). The physical activity scale for individuals with physical disabilities: development and evaluation. *Archives of Physical Medicine & Rehabilitation*, 83(2), 193-200. Peer-reviewed research designed to establish validity of a 13 item physical activity scale useful for research with subjects having physical disabilities.
- Wolski, C. (2004). The secret garden: The Rusk Institute brings a therapeutic patch of nature to its pediatric guests. *Rehabilitation Management*, 17(6), 14-16. Trade journal.

SPIRITUALITY

- Cohen, M. (1993). Integrated ecology: The process of counseling with nature. *The Humanistic Psychologist*, 21, 279-295.
- Fredrickson, L. & Anderson, D. (1999). A qualitative exploration of the wilderness experience as a source of spiritual inspiration. *Journal of Environmental Psychology*, 19(1), 21-39. Peer-reviewed qualitative exploration of wilderness experience and spiritual inspiration.
- Mazumdar, S. & Mazumdar, S. (1993). Sacred spaces and place attachment. *Journal of Environmental Psychology*, 13(1993), 231-242. Peer-reviewed qualitative study exploration of interconnectedness between religion, identity, and attachment to sacred places.
- Oliven, P. (1998). Cultivating sacred space: Gardening for the soul. *Library Journal*, 123(3), 165.
- Powell, L., Shahabi, L., & Thoresen, C. (2003). Religion and spirituality: linkages to physical health. *American Psychologist*, 58(1), 36-52. Peer-review article of links between spirituality, religion, and health.
- Williams, K. & Harvey, D. (2001). Transcendent experience in forest environment. *Journal of Environmental Psychology*, 21(2001), 249-260. Peer-reviewed qualitative study describes subjects' transcendent experiences in a forest.
- Yu, Wan-Wei, Ling, Der-Lin, Chang, Yu-Sen. (June 2010). Comparison of the effects of plant parables on the promotion of spiritual benefits in students with differing horticultural backgrounds. *HortTechnology*. 20(3)568-573.