Horticulture for Health and Well-Being
Webinar Series
Webinar 4: Evidence-Based Practice in Horticultural Therapeutic Interventions
Panel

Jane Soiers, HTTR, PhD (Psychology and Neuroscience), AAS (Sustainable Agriculture) and her husband Darin grow certified organic vegetables, fruits, mushrooms, and herbs and keep chickens and goats at their farm in Hillsborough North Carolina. They welcome people of all ages to the farm for educational and wellness programs and to visit the farm store. They believe that everyone can be healthier and happier by spending daily time, be it minutes or hours, with plants and animals. Jane will moderate and will kick off the session by defining EBT and discussing its role in relation to other frameworks for guiding therapeutic horticultural practice.

Derrick Stowell, PhD, HTTR, CTRS is the Education and Horticultural Therapy Program Administrator for the University of Tennessee Gardens. His research interests focus on the use of horticulture as therapy. He has over 20 years of experience in fundraising and program development. Derrick is responsible for developing University of Tennessee Gardens horticultural therapy program. Derrick served on the Board of Directors for the American Horticultural Therapy Association (AHTA) from 2016-2018 and was recently appointed President of the Board. He will discuss EBP in relation to his horticultural therapy program serving veterans with mental illness and will consider the role of partnerships in helping EBP to flourish in horticultural therapy.

Matthew J. Wichrowski MSW, HTTR has been practicing horticultural therapy at Rusk Rehabilitation NYU-Langone Medical Center for 25 years and is currently Clinical Assistant Professor. He teaches in the Horticultural Therapy Certificate Program at New York Botanical Garden, presents regularly at national and international conferences, and has won many awards for his work. Matt is also Editor-in-Chief of the AHTA’s Journal of Therapeutic Horticulture. His research interests center around the effects of nature on human health and wellness and his work has been published in a variety of media, including textbooks, journals, and magazines. He will discuss EBP in relation to his research with horticultural therapy for participants undergoing cardiopulmonary rehabilitation and will consider the current status and future of research supporting EBP in horticultural therapy.
AGENDA

• Introduction to Evidence-Based Practice (EBP) (Jane)
• EBP in Action (Derrick, Matt)
• Questions and Answers
• EBP in Therapeutic Horticulture: Future Directions (Matt, Derrick)
• Questions and Answers
• EBP: What Can You Do? (Jane)
INTRODUCTION TO EVIDENCE-BASED PRACTICE (EBP)

JANE SAIERS
RAMBLE RILL FARM
HILLSBOROUGH, NC
WAYS OF KNOWING THAT INFORM THERAPEUTIC PRACTICE

Horticulture as Therapy

EXPERIENCE

TRADITION

AUTHORITY

SCIENCE


Betty MJ. Thinking quantitatively. Available at: https://sciencebasedlife.wordpress.com/
EVIDENCE-BASED PRACTICE (EBP)

Basing patient care decisions and practices on **scientific evidence**
- Evaluated through the lens of **clinical expertise**
- Taking into account
  - The **patient’s values and circumstances**
  - Information from the **practice context**

From https://canberra.libguides.com/evidence
GOALS OF EBP

| Improve | quality of care |
| Prevent | inappropriate care |
| Improve | patient outcomes |
| Reduce | costs |
IMPORTANCE OF EBT IN THERAPEUTIC HORTICULTURE

- Improve quality of care and participant outcomes
- Broaden the acceptance and role of therapeutic horticulture in health care
APPLICATION OF EBP

Steps of Evidence-Based Practice

1. Ask
   - Convert information into an answerable clinical question
2. Acquire
   - Track down best evidence for answering the question
3. Appraise
   - Critically appraise the evidence for validity, impact & applicability
4. Apply
   - Integrate the evidence into your clinical decision making
5. Audit
   - Evaluate steps and seek ways to improve

Assess
- Clinical decision required

From https://canberra.libguides.com/evidence
HIERARCHY OF SCIENTIFIC EVIDENCE

Meta-Analysis

Systematic Reviews

Randomized Controlled Trials

Cohort Studies

Case Control Studies

Cross-Sectional Studies

Case Series / Case Reports

Animal Studies / Laboratory Studies

Synthesized evidence

Experimental studies

Observational studies

Quality of Information

https://guides.mclibrary.duke.edu/ebm
SCIENTIFIC EVIDENCE: GETTING THERE!

Design of evidence-based gardens and garden therapy for neurodisability in Scandinavia: data from 14 sites
Josephine Anne Spring

Meta-analysis of controlled trials testing horticultural therapy for the improvement of cognitive function
Heng-Bing C., & Fei-Yu C.

What is the evidence for the impact of gardens and gardening on health and well-being: a scoping review and evidence-based logic model to guide healthcare strategy decision making on the use of gardening approaches as a social prescription
Michelle Howarth,  Alison Breetle, Michael Hardman, Michelle Maiden
EBP in Action

Derrick Stowell, Ph.D., HTR, CTRS
Veterans Experience Growth through Garden Interactive Experiences (VEGGIE)

• 2017

• Trinity Health Foundation
THE IDEA

• Who are you serving?
• What will you be doing?
• How will it help?
• How will it be funded?
• When and where will the program be offered?
Who are you serving?

• Veterans
  – What challenges do they face, or needs do they have?
  – What programs have been offered?
  – What worked?
  – What did not work?
  – What gaps are there in programs/services?
What will you be doing?

- What horticultural therapy programs exist that are focused on Veterans?
- How have these programs been funded?
- How are the programs designed?
- Who is leading these programs?
1. Convert information into an answerable clinical question.

• Premise – horticultural therapy programs can help veterans who have mental health challenges

• Can horticultural therapy improve outcomes for veterans who have mental health challenges?
2. Track down best evidence for answering the question.

- Books
- Peer reviewed journals
- Programs currently operating
- Past programs
Examples


2. Track down best evidence for answering the question.

- Chicago Botanic Garden
- Talmar
- Ask questions?
- Collaborators
3. Critically appraise for validity, impact, and applicability.

- Review site visits
- Review research and other evidence
Review research

- horticultural therapy – 842,000 hits
- Narrow search terms – horticultural therapy, veterans - 725 hits
- Look at titles
- Read abstracts
- Methods, Results
4. Integrate your evidence into clinical decision making.

• Begin developing the program
  – Focus group
  – Creation of pilot project
5. Evaluate steps 1-4 and seek ways to improve

- Conduct pilot
- Collect data
- Assess program
- Review
- Plan for next step
Developing Evidence-Based Practice in Therapeutic Horticulture

Matthew Wichrowski MSW, HTR
Senior Horticultural Therapist
Clinical Assistant Professor
Rehabilitation Medicine
NYU School of Medicine
Editor-In-Chief
Journal of Therapeutic Horticulture
American Horticultural Therapy Association
We Can Do It -But Why?

- Streamlines treatment
- Increases treatment effectiveness
- Creates data- prospective and archival
- Allows for research inquiry
- Research becomes built in

- Standardized data gathering
- Allows for multi site studies
- Higher level evidence
- Meta analysis and reviews
- Ultimately more acceptance for field
## Developing a Cardiopulmonary Rehabilitation Program—Hit the Lit

<table>
<thead>
<tr>
<th>Clinical Needs in Cardiopulmonary Rehabilitation</th>
<th>Clinical Benefits of HT</th>
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<tbody>
<tr>
<td>• Physical—increase endurance and aerobic capacity</td>
<td>• Physical—activity tolerance, endurance, strength, motor skills</td>
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<tr>
<td>• Emotional—stress reduction, improved mood, distraction from pain</td>
<td>• Emotional—mood, stress reduction, self esteem</td>
</tr>
<tr>
<td>• Cognitive—Learning precautions and energy conservation techniques</td>
<td>• Cognitive—memory, sequencing, skill building</td>
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<tr>
<td>• Social—Opportunity and engagement</td>
<td>• Social—socialization opportunities and skill building</td>
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Program Development

- Meets the needs of participants
- Be observant of how session goes
- Information gathering-ask folks
- Meets the needs of the team- feedback
- Build in data collection
- But not too much data collection
- How to use data-plan ahead
We Can Do It - But How?

- Standardized documentation—stick with the proven winners
  - Pain
  - Stress
  - Mood
  - Functional gains
  - Team goals
Program Delivery

• A big hurdle due to different:
  • Practice styles- therapist
  • Practice settings- type of environment
  • Practice settings- type of participant
  • Program goals
Measures used in Rehabilitation

Psychology-GAD-7, PHQ-9, confusion assessment

OT-pain, CAMDRS

PT – pain, 10 meter walk test

Speech-pain, cog/com

HT-pain, mood, stress.
Education - Practitioner Skills

- Standardize education across programs
- Experimental design
- Assessment and notetaking
- Build in research potential
- Practitioner scientist model
The Process – Examples From Asia

• Korea-Research-Replication

• Hong Kong collaboration
  • Background

• Participants

• HT Scale-

• Validation process

• Keys to success- education, expertise, partnership
Summary - Quantify the Magic

- Practitioner skills – Know your patients, become familiar with the research, good assessment and notetaking, research protocols

- Start building what you can clinically - ideas and projects

- Start building a team - research design, statistics, data collection

- Project pitch - Be a good salesman for your idea

- Do it!!!
Thank You
EBP Future Directions

Derrick Stowell, Ph.D., HTR, CTRS
• Collaborations are critical
• Researchers
• Organizations
• Funders
• Publications/Presentations
• Participants
VEGGIE Partnerships

- East TN Military Advisory Council
- Veterans Resource Centers
- Helen Ross McNabb
- TN AgrAbility Project
- Dr. Gina Owens - psychologist who specializes in PTSD & Veterans
- Bee Ridges Farm & The Warrior Initiative
EBP: WHAT CAN YOU DO?
LEARN MORE ABOUT EBP AND HOW TO APPLY IT

https://libguides.ecu.edu/ebpforalliedhealthsciences

https://guides.mclibrary.duke.edu/ebptutorial

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KEEP ABRASEST OF THE RESEARCH
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