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Title: Equine facilitated learning for children and adolescents in residential psychiatric care
--Horses Helping to Heal Hearts

Clinical Question

P (population) Among children and adolescents requiring residential psychiatric care
I (intervention) does attendance in an equine facilitated learning program
C (comparison) versus non-attendance in an equine facilitated learning program
O (outcome) increase client's self-esteem and client/parent satisfaction?

Target Population

Children and adolescents, ages 8-18, with a mental health diagnosis in residential treatment

Definitions:

Equine Facilitated Psychotherapy: is a specialized form of psychotherapy using the horse as a therapeutic tool to address self-esteem and personal confidence, communication and interpersonal effectiveness, trust, boundaries, and limit setting (Schultz, Remick-Barlow, & Robbins, 2007 [4a]).

Equine Facilitated Learning: Includes equine activities incorporating the experience of equine/human interaction in an environment of learning or self-discovery, promotes personal exploration of feelings and behaviors in an educational format. (www.narha.org/SecEFMHA/Glossary.htm [5a])

Equine Assisted Counseling: is the incorporation of horses into the counseling process to facilitate the therapeutic outcome (Trotter, Chandler, Goodwin-Bond, & Casey, 2008 [4a]).

Recommendation:

It is recommended that an Equine Facilitated Learning Program be conducted with children and adolescents with mental health diagnoses to promote an increase in client's self esteem and improve client/parent satisfaction [Grade of the Body of Evidence:Moderate] (Nimer and Lundahl, 2007 [1a], Bass, Duchowny, & Llabre, 2009 [2a]; Trotter, Chandler, Goodwin-Bond, & Casey, 2008 [4a]; Schultz, Remick-Barlow, & Robbins, 2007 [4a], Glazer, Clark, & Stein, 2004 [2b]; Elliott, Funderburk, & Holland, 2008 [2b], Macauley and Guterrez [4b]; Kaiser, Smith, Heleski, & Spence, 2004 [4b]; Ewing, MacDonald, Taylor, & Bowers , 2007 [4b]).

Note 1: Measuring outcomes in the areas of self esteem, social interactions, communication skills, and relationship skills through participation in an equine facilitated learning program would provide internal evidence (Bass, Duchowny, & Llabre, 2009 [2a]; Trotter, Chandler, Goodwin-Bond, & Casey, 2008 [4a]; Macauley and Guterrez [4b]; Kaiser, Smith, Heleski, & Spence, 2004 [4b]; Schultz, Remick-Barlow, & Robbins, 2007 [4a]; Ewing, MacDonald, Taylor, & Bowers , 2007 [4b]).

Note 2: According to the evidence, it is beneficial to have an equine specialist/expert present at all times with mental health professionals during equine activities to mitigate the risk of injury (Bass, Duchowny, & Llabre, 2009 [2a]; Glazer, Clark, & Stein, 2004 [2b]; Elliott, Funderburk, & Holland, 2008 [2b]; Trotter, Chandler, Goodwin-Bond, & Casey , 2008 [4a]; Macauley and Guterrez [4b]; Schultz, Remick-Barlow, & Robbins, 2007 [4a]; Ewing, MacDonald, Taylor, & Bowers , 2007 [4b]).

Discussion/summary of evidence

A literature search identified a total of 29 studies, 9 of which were relevant to the topic, and appraised for the Evidence-based Practice project. The recommendations are based on a review of the literature of 9 applicable studies.

The majority of research on Equine Facilitated Psychotherapy/Learning (EFP/L) is qualitative and is still in its infancy. Positive and effective interventions at the crucial adolescent stage are imperative to the emotional growth of the youths at risk, indicating that EFP may be a viable intervention option with this population (Ewing, MacDonald, Taylor, & Bowers, 2007 [4b]). The results from a meta analysis support the long held impression that animals can help in the healing process and that positive, moderately strong findings were observed across medical well-being and behavioral outcomes (Nimer and Lundahl, 2007 [1a]). Trotter, Chandler, Goodwin-Bond, & Casey (2008 [4a]) compared an Equine Assisted Counseling (EAC) program to classroom-base counseling. Social Stress and Self Esteem scales (of the Behavior Assessment System for Children) indicated that participants' self satisfaction, sense of identity increased, and participants' level of ego strength improved to appropriate levels after receiving EAC. Children that were referred to a psychotherapist for various childhood behavioral and mental health issues, and questioned before and after each EAC session, indicated that working with horses allowed them to move from powerlessness to seeking support to feelings of success (Schultz, Remick-Barlow, & Robbins, 2007 [4a]). In addition, Elliot, Funderburk, & Holland stated that participants reported a boost in their self esteem and self worth and that riding provided them with a sense of pride and accomplishment (2008, [2b]).

In addition, self esteem was an implied benefit through the progression of other behavioral and emotional advances for children participating in EFL. A study including children with Autism spectrum disorders, demonstrated improvement in critical area including improved social motivation and sensory sensitivity, as well as decreased inattention and distractibility (Bass, Duchowny, & Llabre, 2009 [2a]). Glazer, Clark, & Stein(2004, [2b]) noted that trust and confidence in some children participating in a EFP/L program was related to self esteem and self confidence, evidenced by their increased ability to communicate with others as with the horses.

The evidence indicates satisfaction with the results of EFL among parents and guardians of children enrolled in the programs. In a study to determine whether the children, parents, and adult volunteer would view the program as encouraging the processing of grief and personal development, a grandmother noted that this was "a good chance to trust in new situations...the learning to trust and then ride the horses certainly has helped her confidence level" (Glazer, Clark, & Stein, 2004 [2b] p. 174). In another study, (Trotter, Chandler, Goodwin-Bond, & Casey, 2008 [4a]) parents of EAC participants reported improvement in several areas of behavioral and emotional areas: "These findings are reflective of how, from the parents' perspective, EAC was very effective in reducing internalizing and externalizing problem behaviors while also improving adaptive skills..." (p. 279). Some of the parents/guardians indicated that the EFL programs gave their children a sense of identity and a new sense of confidence. In a study to investigate the impact of therapeutic riding on children with mild to moderate physical and mental disabilities, a parent reported that her daughter's positive experiences had led to an improvement in her self esteem, stating that, "She enjoys it so much and it is something she can excel in so it gives her a bit of I guess self-worth and builds up her self esteem for them to be able to do something like that when they cannot do other stuff in school" (Elliott, Funderburk, & Holland, 2008 [2b] pg. 23).

Although qualitative assessment from parents, instructors, and medical professionals and previous case studies have suggested that therapeutic riding has a positive effect on psychosocial measures, quantitative research documenting such effects is not common (Kaiser, Smith, Heleski, & Spence, 2004 [4b]). Case studies illustrated the positive effects the youth exhibited following the program. Interviews and observations from special education teachers, therapeutic riding instructors and volunteers indicate how powerful this intervention can be.

"Learning to ride instilled the confidence she was lacking. After completion of the nine week program, 'FC' had acquired enough social skills and improved her behavior so much that the day school's teacher had her repeat the program. At the end of one year, 'FC' displayed enough progress and such a strong turnaround that she was allowed back into a traditional middle school. 'FC' has grown from an animal-like, wild child to an

adolescent who can successfully function in a mainstreamed classroom” (Ewing, MacDonald, Taylor, & Bowers, 2007 [4b]) pg. 67).

And perhaps the most enlightening statement came from a study done of children with language-learning disabilities: “the parents reported that their children made greater improvements in speech and language abilities, motivation, and self concept following hippotherapy when compared to results from traditional clinic-based therapy” (Macauley and Guterrez (2004 [4b] p. 210).

As a result of the literature review and analysis, it is indicated that more research is needed to answer specific questions regarding the experience of therapeutic horse riding (Elliot, Funderburk, & Holland, 2008 [2b]). Overall, studies show great promise for recreation therapists using horse riding programs for children with special needs and that “therapeutic riding has been shown to be an effective intervention with clients who have a variety of medical and psychological difficulties” (Glazer, Clark, & Stein, 2004 [2b]).

Benefits and Risks

As an adjunct to talk or play therapy, therapeutic riding has been shown to be an effective intervention with clients who have a variety of mental health and behavioral issues (Glazer, Clark, & Stein, 2004 [2b]). This alternative treatment modality focuses on the areas of self esteem, relationship skills, and communication. There were no studies that indicated or mentioned risks associated with EFP/L. Although with this type of intervention, there is inherent risk by nature (ie. being stepped on, kicked, or thrown from horse). Consent forms are signed by all members and their guardians engaging in this type of therapy.

References/citations (evidence grade in []; see *Table of Evidence Levels following references*)

1. Bass, M. M., Duchowny, C. A., & Llabre, M. M. (2009). The effect of therapeutic horseback riding on social functioning in children with autism. *Journal of Autism & Developmental Disorders*, 39(9), 1261-1267. [2a]
2. Elliott, S., Funderburk, J. A., & Holland, J. M. (2008). The impact of the "stirrup some fun" therapeutic horseback riding program: A qualitative investigation. *American Journal of Recreation Therapy*, 7(2), 19-28. [2b]
3. Equine Facilitated Learning. (n.d.). In North American Riding for the Handicapped Association website. Retrieved from www.narha.org/SecEFMHA/Glossary.htm [5a]
4. Ewing, C., MacDonald, P., Taylor, M., & Bowers, M. (2007). Equine-facilitated learning for youths with severe emotional disorders: A quantitative and qualitative study. *Child & Youth Care Forum*, 36(1), 59-72. [4b]
5. Glazer, H. R., Clark, M. D., & Stein, D. S. (2004). The impact of hippotherapy on grieving children. *Journal of Hospice & Palliative Nursing*, 6(3), 171-175. [2b]
6. Kaiser, L., Smith, K. A., Heleski, C. R., & Spence, L. J. (2006). Effects of a therapeutic riding program on at-risk and special education children. *Journal of the American Veterinary Medical Association*, 228(1), 46-52. [4b]
7. Macauley, B. L., & Gutierrez, K. M. (2004). The effectiveness of hippotherapy for children with language-learning disabilities. *Communication Disorders Quarterly*, 25(4), 205. [4b]
8. Nimer, J., & Lundahl, B. (2007). Animal-assisted therapy: A meta-analysis. *Anthrozoos*, 20(3), 225-238. [1a]
9. Schultz, P. N., Remick-Barlow, G. A., & Robbins, L. (2007). Equine-assisted psychotherapy: A mental health promotion/intervention modality for children who have experienced intra-family violence. *Health & Social Care in the Community*, 15(3), 265-271. [4a]

10. Trotter, K. S., Chandler, C. K., Goodwin-Bond, D., & Casey, J. (2008). A comparative study of the efficacy of group equine assisted counseling with at-risk children and adolescents. *Journal of Creativity in Mental Health*, 3(3), 254-284. [4a]

Note: Full tables of evidence grading system available in separate document:

- [Table of Evidence Levels of Individual Studies by Domain, Study Design, & Quality](#) (abbreviated table below)
- [Grading a Body of Evidence to Answer a Clinical Question](#)
- [Judging the Strength of a Recommendation](#) (abbreviated table below)

Table of Evidence Levels (see note above)

<i>Quality level</i>	<i>Definition</i>
1a† or 1b†	Systematic review, meta-analysis, or meta-synthesis of multiple studies
2a or 2b	Best study design for domain
3a or 3b	Fair study design for domain
4a or 4b	Weak study design for domain
5	Other: General review, expert opinion, case report, consensus report, or guideline

†a = good quality study; b = lesser quality study

Table of Recommendation Strength (see note above)

<i>Strength</i>	<i>Definition</i>
“Strongly recommended”	There is consensus that benefits clearly outweigh risks and burdens (or visa-versa for negative recommendations).
“Recommended”	There is consensus that benefits are closely balanced with risks and burdens.
No recommendation made	There is lack of consensus to direct development of a recommendation.

Dimensions: In determining the strength of a recommendation, the development group makes a considered judgment in a consensus process that incorporates critically appraised evidence, clinical experience, and other dimensions as listed below.

1. Grade of the Body of Evidence (see note above)
2. Safety / Harm
3. Health benefit to patient (*direct benefit*)
4. Burden to patient of adherence to recommendation (*cost, hassle, discomfort, pain, motivation, ability to adhere, time*)
5. Cost-effectiveness to healthcare system (*balance of cost / savings of resources, staff time, and supplies based on published studies or onsite analysis*)
6. Directness (*the extent to which the body of evidence directly answers the clinical question [population/problem, intervention, comparison, outcome]*)
7. Impact on morbidity/mortality or quality of life

Supporting information

Introductory/background information

The Equine Facilitated Learning Program at CCHMC is an expensive and labor intense intervention utilized for children and adolescents in the residential treatment program. Over the past 6 years, the program has changed facilities, facilitators, approaches, length and duration based on clinical expertise. Through the Therapeutic Recreation department and the EFL at CCHMC outcomes could be measured to ensure best practice amongst children and adolescents.

Group/team members

Group/Team Leader: Kristi Burger, CTRS, Division of OT/PT/TR in Psychiatry, TRII
 Support personnel: Mary Ellen Meier, EBP mentor, MSN, RN, CPN, Center for Professional Excellence, Research and Evidence-Based Practice.

Search strategy

- Article Search Range: 2004-2009
- Key Words: horse, children, adolescents, mental health, animal assisted therapy, equine, equine therapy, equine facilitated therapy, horse therapy, therapeutic horseback riding, hippotherapy, self esteem, psychological benefits, equine assisted counseling.
- Limits: English
- Search Databases: PsychInfo, Cinahl, MedLine, PubMed, Cochrane Library, Google Scholar

Applicability issues

Barriers are presented when utilizing specialized and unique interventions with children and adolescents in mental health. Maintaining an EFL Program is an additional, non-reimbursable expense. CCHMC has been able to provide this intervention through generous donations from an outside source. Currently, CCHMC does not measure outcomes of its program and it would benefit the institution to do so. In addition, CCHMC's EFL Program is faced with implementation issues due to the location of the program (which adds additional time and limits client eligibility), weather, and availability of staff and clientele.

Copies of this Best Evidence Statement (BEST) are available online and may be distributed by any organization for the global purpose of improving child health outcomes. Website address: <http://www.cincinnatichildrens.org/svc/alpha/h/health-policy/ev-based/default.htm>
Examples of approved uses of the BEST include the following:

- copies may be provided to anyone involved in the organization's process for developing and implementing evidence-based care;
- hyperlinks to the CCHMC website may be placed on the organization's website;
- the BEST may be adopted or adapted for use within the organization, provided that CCHMC receives appropriate attribution on all written or electronic documents; and
- copies may be provided to patients and the clinicians who manage their care.

Notification of CCHMC at HPCEInfo@cchmc.org for any BEST adopted, adapted, implemented or hyperlinked by the organization is appreciated.

Additionally for more information about CCHMC Best Evidence Statements and the development process, Center for Professional Excellence/Research and Evidence-based Practice office at CPE-EBP-Group@cchmc.org

Note

This Best Evidence Statement addresses only key points of care for the target population; it is not intended to be a comprehensive practice guideline. These recommendations result from review of literature and practices current at the time of their formulation. This Best Evidence Statement does not preclude using care modalities proven efficacious in studies published subsequent to the current revision of this document. This document is not intended to impose standards of care preventing selective variances from the recommendations to meet the specific and unique requirements of individual patients. Adherence to this Statement is voluntary. The clinician in light of the individual circumstances presented by the patient must make the ultimate judgment regarding the priority of any specific procedure.

Reviewed against quality criteria by two independent reviewers