



CADTH Reference List

Equine-Assisted Therapy for Mental Health Conditions

May 2023

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Cite As: *Equine-Assisted Therapy for Mental Health Conditions*. (CADTH reference list: summary of abstracts). Ottawa: CADTH; 2023 May.

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Funding: CADTH receives funding from Canada's federal, provincial, and territorial governments, with the exception of Quebec.

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Key Message

We found 2 randomized controlled trials and 1 nonrandomized study about the clinical effectiveness of equine-assisted therapy as an adjunct to usual care for adults with mental health conditions.

Research Question

What is the clinical effectiveness of equine-assisted therapy as an adjunct to usual care for adults with mental health conditions?

Methods

Literature Search Methods

An information specialist conducted a literature search on key resources including MEDLINE, PsycINFO, the Cochrane Database of Systematic Reviews, the International HTA Database, the websites of Canadian and major international health technology agencies, as well as a focused internet search. The search approach was customized to retrieve a limited set of results, balancing comprehensiveness with relevancy. The search strategy comprised both controlled vocabulary, such as the National Library of Medicine’s MeSH (Medical Subject Headings), and keywords. Search concepts were developed based on the elements of the research questions and selection criteria. The main search concepts were equine-assisted therapy and mental health conditions. [CADTH-developed search filters](#) were applied to limit retrieval to health technology assessments, systematic reviews, meta-analyses, or indirect treatment comparisons, and any types of clinical trials or observational studies. The search was completed on May 12, 2023, and limited to English-language documents published since Jan 1, 2018. Internet links were provided, where available.

Selection Criteria and Summary Methods

One reviewer screened literature search results (titles and abstracts) and selected publications according to the inclusion criteria presented in [Table 1](#). Full texts of study publications were not reviewed. The Overall Summary of Findings was based on information available in the abstracts of selected publications.

Table 1: Selection Criteria

Criteria	Description
Population	Adults with mental health conditions (e.g., depression, anxiety disorders, posttraumatic stress disorder, substance use disorders)
Intervention	Equine-assisted therapy as an adjunct to usual care
Comparator	Usual care alone (e.g., psychotherapy, pharmacotherapy)
Outcomes	Clinical benefits (e.g., psychological symptoms, function, quality of life, patient satisfaction) and harms (e.g., adverse events)
Study designs	Health technology assessments, systematic reviews, randomized controlled trials, nonrandomized studies

Results

Two randomized controlled trials (RCTs)^{1,2} and 1 nonrandomized study³ were identified regarding the clinical effectiveness of equine-assisted therapy as an adjunct to usual care for adults with mental health conditions. No relevant health technology assessments or systematic reviews were identified.

Additional references of potential interest that did not meet the inclusion criteria are provided in [Appendix 1](#).

Overall Summary of Findings

Two RCTs^{1,2} and 1 non-randomized study³ were identified regarding the clinical effectiveness of equine-assisted therapy as an adjunct to usual care for adults with mental health conditions. Both RCTs^{1,2} compared equine-assisted therapy to a control group in veterans with posttraumatic stress disorder (PTSD). One RCT¹ found significant changes in PTSD symptom scores and resilience scores, with no difference between the equine-assisted psychotherapy and standard therapy groups. Another RCT² reported that military veterans in the therapeutic horseback riding group had significant decreases in PTSD symptom scores but no change in coping self-efficacy, emotional regulation, or social and emotional loneliness scores. The nonrandomized study³ investigated equine-assisted short-term psychodynamic psychotherapy in adults with intrapsychic and interpersonal problems. For both conditions, the authors found a significant decline in psychological dysfunction, with no difference between equine-assisted therapy and standard care.³

References

Health Technology Assessments

No literature identified.

Systematic Reviews

No literature identified.

Randomized Controlled Trials

1. Burton LE, Qeadan F, Burge MR. Efficacy of equine-assisted psychotherapy in veterans with posttraumatic stress disorder. *J.* Jan 2019; 17(1):14-19. [PubMed](#)
2. Johnson RA, Albright DL, Marzolf JR, et al. Effects of therapeutic horseback riding on post-traumatic stress disorder in military veterans. *Mil.* 01 19 2018; 5(1):3. [PubMed](#)

Non-Randomized Studies

3. Kovacs G, van Dijke A, Leontjevas R, Enders-Slegers MJ. The Relevance of Internal Working Models of Self and Others for Equine-Assisted Psychodynamic Psychotherapy. *Int J Environ Res Public Health.* 08 30 2022; 19(17):30. [PubMed](#)

Appendix 1: References of Potential Interest

Previous CADTH Reports

CADTH. Canine and Equine Therapy for Mental Health: A Review of Clinical Effectiveness. Ottawa: CADTH; 2019. <https://www.cadth.ca/canine-and-equine-therapy-mental-health-review-clinical-effectiveness> Accessed 2023 May 15.

Systematic Reviews

Mixed Population – Adults and Children

Fennig MW, Weber E, Santos B, Fitzsimmons-Craft EE, Wilfley DE. Animal-assisted therapy in eating disorder treatment: A systematic review. *Eat.* 12 2022; 47:101673. [PubMed](#)

Unclear Comparator

Kovacs G, van Dijke A, Enders-Slegers MJ. Psychodynamic Based Equine-Assisted Psychotherapy in Adults with Intertwined Personality Problems and Traumatization: A Systematic Review. *Int J Environ Res Public Health.* 08 05 2020; 17(16):05. [PubMed](#)

Boss L, Branson S, Hagan H, Krause-Parello C. A Systematic Review of Equine-Assisted Interventions in Military Veterans Diagnosed with PTSD. *J Veterans Stud.* 2019;5(1):23-33. <https://journal-veterans-studies.org/articles/10.21061/jvs.v5i1.134> Accessed 2023 May 15.

Stern C, Chur-Hansen A. An umbrella review of the evidence for equine-assisted interventions. *Aust J Psychol.* Dec 2019; 71(4):361-374.

Jormfeldt H, Carlsson IM. Equine-Assisted Therapeutic Interventions Among Individuals Diagnosed With Schizophrenia. A Systematic Review. *Issues Ment Health Nurs.* Aug 2018; 39(8):647-656. [PubMed](#)

Type of Animal-Assisted Therapy Not Specified

Cordani C, Young VM, Arienti C, et al. Cognitive impairment, anxiety and depression: a map of Cochrane evidence relevant to rehabilitation for people with post COVID-19 condition. *Eur J Phys Rehabil Med.* Dec 2022; 58(6):880-887. [PubMed](#)

Hediger K, Wagner J, Kunzi P, et al. Effectiveness of animal-assisted interventions for children and adults with post-traumatic stress disorder symptoms: a systematic review and meta-analysis. *Eur J Psychotraumatol.* 2021; 12(1):1879713. [PubMed](#)

Parbery-Clark C, Lubamba M, Tanner L, McColl E. Animal-Assisted Interventions for the Improvement of Mental Health Outcomes in Higher Education Students: A Systematic Review of Randomised Controlled Trials. *Int J Environ Res Public Health.* 10 14 2021; 18(20):14. [PubMed](#)

Phadsri S, Shioji R, Tanimura A, Jaknissai J, Apichai S, Sookruay T. Nonpharmacological Treatment for Supporting Social Participation of Adults with Depression. *Occup Ther Int.* 2021 Apr 29; 2021:8850364. [PubMed](#)

Hawkins EL, Hawkins RD, Dennis M, Williams JM, Lawrie SM. Animal-assisted therapy for schizophrenia and related disorders: A systematic review. *J Psychiatr Res.* 08 2019; 115:51-60. [PubMed](#)

Charry-Sanchez JD, Pradilla I, Talero-Gutierrez C. Animal-assisted therapy in adults: A systematic review. *Complement Ther Clin Pract.* Aug 2018; 32:169-180. [PubMed](#)

Spattini L, Mattei G, Raisi F, Ferrari S, Pingani L, Galeazzi GM. Efficacy of animal assisted therapy on people with mental disorders: An update on the evidence. *Minerva Psichiatr.* Mar 2018; 59(1):54-66.

Randomized Controlled Trials

Adults Not Specified

Gatti F, Walderhaug E, Kern-Godal A, Lysell J, Arnevik EA. Complementary horse-assisted therapy for substance use disorders: a randomized controlled trial. *Addict Sci Clin Pract.* 02 04 2020; 15(1):7. [PubMed](#)

Nonrandomized Studies

Alternative Population – People Experiencing Posttraumatic Stress Disorder and Their Partners

Willmund G, Zimmermann P, Alliger-Horn C, et al. Equine-assisted psychotherapy with traumatized couples-Improvement of relationship quality and psychological symptoms. *J Marital Fam Ther.* Oct 2021; 47(4):925-944. [PubMed](#)

Single-Arm Before-And-After

Cappelen H, Ivarsson A, Jormfeldt H. The Effects of an Equine-Assisted Therapeutic Intervention on Well-Being in Persons Diagnosed with Schizophrenia. A Pilot Study. *Issues Ment Health Nurs.* Feb 2023; 44(2):104-111. [PubMed](#)

Marchand WR, Lackner R, Hartquist A, Finnell L, Nazarenko E. Evaluation of a mindfulness and self-compassion-based psychotherapy incorporating horses for Veterans who have experienced trauma. *Complement Ther Med.* Mar 2023; 72:102914. [PubMed](#)

Marchand WR, Smith J, Hoopes KH, et al. A pilot observational study of horsemanship skills training for veterans with posttraumatic stress disorder. *Complement Ther Med.* Mar 2023; 72:102910. [PubMed](#)

Hoopes KH, Osborne M, Marchand WR, et al. A pilot observational study of recreational trail riding for Veterans with addictive disorders. *Complement Ther Med.* May 2022; 65:102813. [PubMed](#)

Marchand WR, Joubert K, Smith J, et al. A Pilot Observational Study of Implementing an Equine-Assisted Services Program Within a VA Medical Center Residential Substance Use Disorder Treatment Program. *Mil Med.* Mar 01 2022; 01:01. [PubMed](#)

Fisher PW, Lazarov A, Lowell A, et al. Equine-Assisted Therapy for Posttraumatic Stress Disorder Among Military Veterans: An Open Trial. *J Clin Psychiatry.* 08 31 2021; 82(5):31. [PubMed](#)

Shelef A, Brafman D, Rosing T, Weizman A, Stryjer R, Barak Y. Equine Assisted Therapy for Patients with Post Traumatic Stress Disorder: A Case Series Study. *Mil Med.* 10 01 2019; 184(9-10):394-399. [PubMed](#)

Wharton T, Whitworth J, Macauley E, Malone M. Pilot testing a manualized equine-facilitated cognitive processing therapy (EF-CPT) intervention for PTSD in veterans. *Psychiatr Rehabil J.* Sep 2019; 42(3):268-276. [PubMed](#)

Malinowski K, Yee C, Tevlin JM, et al. The Effects of Equine Assisted Therapy on Plasma Cortisol and Oxytocin Concentrations and Heart Rate Variability in Horses and Measures of Symptoms of Post-Traumatic Stress Disorder in Veterans. *J Equine Vet Sci.* May 2018; 64:17-26. [PubMed](#)

Romaniuk M, Evans J, Kidd C. Evaluation of an equine-assisted therapy program for veterans who identify as 'wounded, injured or ill' and their partners. *PLoS One.* 2018; 13(9):e0203943. [PubMed](#)

Additional References

Scoping Reviews

Diaz L, Gormley MA, Coleman A, et al. Equine-assisted services for individuals with substance use disorders: a scoping review. *Subst Abuse Treat Prev Policy.* 12 14 2022; 17(1):81. [PubMed](#)

Kinney AR, Eakman AM, Lassell R, Wood W. Equine-assisted interventions for veterans with service-related health conditions: a systematic mapping review. *Mil.* 08 29 2019; 6(1):28. [PubMed](#)