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Effects of Therapeutic Climbing in Healthcare and Rehabilitation: A Systematic Review

Topic: Physical Modalities

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BACKGROUND

From a leisure pursuit to a sport, climbing is a rapidly expanding physical activity worldwide. Its growing popularity has led healthcare professionals to examine the potential benefits of this practice. In particular, climbing is increasingly being used in the treatment of psychological and psychiatric disorders, and its therapeutic applications are now being explored for other pathologies as well. The aim of this systematic review is to determine the effects of this intervention in healthcare settings and to identify the different protocols employed for each targeted condition.

METHODS

The literature search was conducted through July 12, 2024, using the MEDLINE, EMBASE, Cochrane Library, Web of Science, and EBSCO databases. In accordance with PRISMA guidelines, two teams of reviewers performed all tasks, including screening, selection, and data extraction. Both teams assessed each study's risk of bias using appropriate tools. Any disagreements were resolved through discussion until consensus was reached. The characteristics of the included studies (e.g., population, pathology), the protocols used (session duration, frequency, instructor qualifications), and the observed effects were then extracted and compiled into various summary tables.

RESULTS

A total of 36,151 studies were identified across the various databases, of which 29 met the inclusion criteria and were included. These studies involved 1,221 patients aged between 4 and 78 years (average age from 37) with psychiatric, psychological, traumatic, or neurological disorders. Overall, they reported positive outcomes, including improvements in physical parameters (up to 30% muscle strength, up to +20% joint range of motion, up to 13% balance, and +26% in posture) and psychological parameters (reduction in stress and anxiety, up to +20% enhancement in self-efficacy, and +80% social skills development). However, there was considerable heterogeneity in how climbing sessions were conducted—for example, differences in wall height (from 2,5 m to 15 m) or whether an instructor (physiotherapist, climbing instructor or occupational therapist) was present. In addition, no adverse effects related to climbing were reported during these studies.

CONCLUSION

Therapeutic climbing is a safe therapeutic tool, used in a wide variety of ways with patients. Beneficial effects on patients' physical, cognitive and psychological functions were found in the various studies included. The review also highlighted the need for future studies to confirm these results.

Statement of Disclosures

None

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