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The role of animal-assisted programs in physical health improvement of children and adolescents with special education needs - a systematic review

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ADMINISTRATIVE INFORMATION

Support - None reported.

Review Stage at time of this submission - Completed but not published.

Conflicts of interest - None declared.

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 20 January 2024 and was last updated on 20 January 2024.

INTRODUCTION

Review question / Objective What kind of health outcomes are the most typical in the animal-assisted activities, interventions and therapies? What kind of distribution can be found regarding the session length and duration of the programs by the animal involved and the age of the participants? What kind of strength and weaknesses can be detected in the research and existing literature focusing on the impact of AAA on physiological health? What kind of implications can be stated for practice?

Condition being studied This paper aims to systematically explore previous studies that assess the impact of animal-assisted activities, interventions and therapies on physical health characteristics, focusing on children and adolescents with special education needs. In our research, we have set out tomap the distribution of research integrating animal-assisted programs in physical health development. Our aims include providing abetter understanding of the implementation of such programs as well as the possibilities for further development and practical implications. In our review, we plan to go beyond reaffirming well-established benefits. Therefore, we formulated the following research questions: What kind of health outcomes prove to be the most typical ones in the animal-assisted activities, interventions and therapies? What kind of distribution can be found with regard to the session's length and duration of the programs by the animal involved and the age of the participants? What kind of strength and weaknesses can be detected in the research and existing literature focusing on the impact of AAA on physiological health? What kind of implications can be stated for practice? By synthesizing

existing research findings, such a review can provide a comprehensive understanding of the range of physical health outcomes associated with AAA. It may also help identify patterns, trends, and gaps in the literature, offering a critical evaluation of the methodological rigor of individual studies. Investigating the impact of animal-assisted activities on physical health among children with special needs is of paramount importance due to the unique challenges and considerations this population faces. Children with special needs often encounter difficulties in various aspects of physical development, including motor skills, coordination, and overall physical well-being. Animal-assisted activities have the potential to offer a holistic and supportive approach, addressing not only physical health but also emotional and social aspects of development. Therefore, exploring the currently available literature and summarizing their most important findings can provide theoretical and practical knowledge to professionals working with children with special needs. This paper aims to systematically search for previous studies measuring the impact of animal-assisted activities, interventions and therapies on physical health characteristics, focusing on children and adolescents with special education needs.

METHODS

Search strategy We used the EBSCO (Elton B. Stephens CO (company)) Discovery Service Search Engine for systematic search, which contains 85 databases. The keywords we used for searching were "animal-assisted therapy", "animal-assisted activity" OR "animal-assisted intervention" OR "pet therapy" AND "children" AND "special education" AND "psychological intervention". These terms were searched by using the “All text” option during the systematic search. The systematic searches, which has been carried out between 12 and 19 July 2023, found 262 records (all records were searched). After double filtering, we excluded 35 records, and a further 128 records were excluded after title and abstract screening, overall, 66 papers were included in full-text screening, and 21 papers were involved in the qualitative synthesis.

Participant or population This paper aims to systematically search for previous studies measuring the impact of animal-assisted activities, interventions and therapies on physical health characteristics, focusing on children and adolescents with special education needs.

Intervention This paper aims to systematically explore search for previous studies that assess measuring the impact of animal-assisted activities, interventions and therapies on physical health characteristics, focusing on children and adolescents with special education needs. In our research, we have set out to aimed to map the distribution of research integrating animal-assisted programs in physical health development. Our aims include, to providing a e better understanding of the implementation of such programs as well asand the possibilities for further development and practical implications. In our review, we planaimed to go beyond reaffirming well-establishedknown benefits.

Comparator None reported.

Study designs to be included We performed a multistage screening process to select studies which met the inclusion criteria. In the first step, the first author (KEK) searched the literature. In the next stage, the first review author screened the titles and abstracts of all identified records (KEK), and twenty-five per cent of all titles and abstracts were independently assessed by a second review author (EZB, BEN, BL, PB). Therefore, all titles and abstracts were checked by two authors. Besides the papers that unquestionably passed this screening stage, Aall studies whose appropriateness in the research context was que.

Eligibility criteria During the screening, we set a list of inclusion criteria. To be included, studies must be original empirical research published in English in peer-reviewed journals. We considered various types of empirical research, including both exploratory studies (e.g., pilot, experience) and comparative studies (controlled and non-controlled trials, between-group comparisons). However, only empirical results (e.g., survey or trial results) were considered. Study participants were below 18 years of age with special needs, diagnosed according to DSM or BNO criteria. Studies focusing on pet ownership or casual animal interactions were excluded. We excluded reviews, commentaries, letters to the editor, conference papers, books, book chapters, dissertations, and newspaper articles. Additionally, papers involving only children without special needs were not considered.

Information sources We used the EBSCO (Elton B. Stephens CO (company)) Discovery Service Search Engine for systematic search, which contains 85 databases.

Main outcome(s) In our research, we aimed to map the distribution of research integrating animal-assisted programs in physical health development,

to provide better understanding of the implementation of such programs and the possibilities for further development and practical implications. In our review, we aimed to go beyond reaffirming well-known benefits. Primary outcomes are as follows: Animals involved in the therapies, Age of the patients and the special needs represented, Length and duration in the age groups, and Outcome indicators/context. The results of the systematic literature analysis highlights the positive impact of animal-assisted programs on physiological health. Regarding the effects on the nervous and motoric systems, an overall positive and supportive impact can be detected compared to the control groups receiving normal pharmacological therapy. The significance of the impact may vary following the type of the disorder, its nature, severity and comorbidity. The papers focused rather on physical disabilities (e.g. cerebral palsy, dysphasia, etc.), and the manifestation of developmental disorders (autism, ADHD) was lower, probably due to the physiological improvement focus of the articles.

Quality assessment / Risk of bias analysis As the critical appraisal tool to check the risk of bias, the Joanna Briggs Institute (JBI) critical appraisal tool was applied (randomised controlled trials and non-randomised controlled trials followed by Barker et al. (2023) and cross-sectional studies followed by Moola et al. [19]). This tool is developed by the JBI Effectiveness Methodology Group to support the process of critical appraisal which must be carried out during systematic literature reviews. Papers were evaluated using the appropriate tool on a 4-point Likert scale (yes/no/unclear/not applicable).

Strategy of data synthesis As the critical appraisal tool to check the risk of bias, the Joanna Briggs Institute (JBI) critical appraisal tool was applied (randomised controlled trials and non-randomised controlled trials followed by Barker et al. [4], 2023 and cross-sectional studies followed by Moola et al. [19]). This tool is developed by the JBI Effectiveness Methodology Group to support the process of critical appraisal which must be carried out during systematic literature reviews. Papers were evaluated using the appropriate tool on a 4-point Likert scale (yes/no/unclear/not applicable). Data were manually assessed and evaluated. Content analysis was performed.

Subgroup analysis None reported.

Sensitivity analysis None reported.

Language restriction English.

Country(ies) involved Hungary.

Keywords animal-assisted programs, physical health, children with special needs, systematic review.

Dissemination plans academic publication (BMC Public Health).

Contributions of each author

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