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Review Article

Canine-assisted Occupational Therapy: a scoping review of the brazilian literature

Terapia ocupacional assistida por cães: uma revisão de escopo da literatura brasileira

Mirela de Oliveira Figueiredo[a], Ana Luiza Alegretti[b], Lilian Magalhães[a]

[a]Universidade Federal de São Carlos – UFSCar, São Carlos, SP, Brasil.
[b]University of Texas Health Science Center, San Antonio, Texas, USA.

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Abstract

Occupational therapists have practiced Animal-Assisted Therapy (AAT) by incorporating dogs in their interventions. The production of national knowledge about Canine-assisted Occupational Therapy was analyzed through a scoping review. This investigation sought to obtain answers about which populations have been focused on Canine-assisted Occupational Therapy in Brazil, what are the objectives and therapeutic results, how the dog acted in this process, what training is necessary for the dogs and what training is required for the occupational therapist to carry out such therapy. The research occurred in the national journals of Occupational Therapy and *Scielo.br* library through descriptors and inclusion criteria. No studies of occupational therapy were found with dogs as assistants, but on the care of animals composing a human occupation and an occupational role (n = 4). One study mentioned occupational therapy as one of the professions that, in the international context, perform Canine-assisted Occupational Therapy with people with disabilities and/or physical or mental sequelae, being the therapeutic objectives and results of physical or cognitive rehabilitation. The review reveals that national production is incipient, especially compared to the international literature that reports on Canine-assisted Occupational Therapy and informs about populations, therapeutic objectives and results, the training and skills needed by the therapist, and the training required for the therapy dog. The need for studies and the production of national knowledge for the theoretical basis and guidelines for the practice of Canine-assisted Occupational Therapy in Brazil is reaffirmed.

Keywords: Animal Assisted Therapy, Occupational Therapy, Dogs, Canine-assisted Therapy, Literature Review as Topic.

Resumo

Terapeutas ocupacionais têm praticado a terapia assistida por animais (TAA) incorporando cães em suas intervenções. A produção de conhecimento nacional

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sobre a Terapia Ocupacional Assistida por Cães foi analisada por meio de uma revisão de escopo. Esta investigação buscou obter respostas sobre quais populações têm sido focalizadas na Terapia Ocupacional Assistida por Cães no Brasil, quais os objetivos e resultados terapêuticos, de que forma o cão atuou neste processo, qual o treinamento necessário aos cães e qual a formação requerida ao terapeuta ocupacional para realizar tal terapia. A busca ocorreu nos periódicos nacionais de terapia ocupacional e na biblioteca *Scielo.br* por meio de descritores e critérios de inclusão. Não foram encontrados estudos da terapia ocupacional tendo cães como assistentes, mas sim sobre o cuidar de animais como uma ocupação humana e um papel ocupacional (n=4). Um estudo referiu a terapia ocupacional como uma das profissões que, no contexto internacional, realiza a Terapia Ocupacional Assistida por Cães com pessoas com deficiência e/ou sequelas físicas ou mentais, sendo os objetivos e resultados terapêuticos de reabilitação física ou cognitiva. A revisão revela que a produção nacional é incipiente, sobretudo se comparada à literatura estrangeira, que relata sobre a Terapia Ocupacional Assistida por Cães e informa sobre as populações, objetivos e resultados terapêuticos, a formação e competências necessárias ao terapeuta e o treinamento requerido ao cão. Reafirma-se a necessidade de estudos e de produção de conhecimento nacional para o embasamento teórico e diretrizes para a prática da Terapia Ocupacional Assistida por Cães no Brasil.

Palavras-chave: Terapia Assistida por Animais, Terapia Ocupacional, Cães, Terapia Assistida por Cães, Literatura de Revisão como Assunto.

Introduction

Animal Assisted Therapy (AAT) dates back to the 1960s in the United States, based on the work of Boris Levinson, who included his dog in therapy with children. In the 1970s, Samuel Corson and Elisabeth Corson continued the procedure, who called it "pet therapy". The model continued to develop throughout the world, with the composition of different areas and fields of knowledge, which guaranteed the expansion of its principles, foundations, and terminology. However, this breadth of terminology has sometimes provided partial subsidies and hindered a consensual understanding (Fine et al., 2019).

Lajoie (2003), found 20 different definitions for AAT in a literature review, and 12 different terms for the same phenomenon. Therefore, for terminological standardization, the term Animal Assisted Interventions (AAI) was introduced, classified, and differentiated into three types: Animal Assisted Therapy (AAT), Animal Assisted Activity (AAA), and Animal Assisted Education (AAE) (Kruger & Serpell, 2006).

Animal Assisted Therapy (AAT) consists of incorporating an animal as an integral part of the therapeutic process, with organized and supervised interventions by a health professional who has previously determined objectives and the results of the interventions are evaluated and recorded. The Animal Assisted Activity (AAA) aims to improve the quality of life of the assisted person, does not require the supervision of a health professional and the results will not

necessarily be evaluated. Animal Assisted Education (AAE) is a pedagogical resource in which the animal is considered an integral part of the formal or informal teaching and learning process or of the socialization process in school life (Friedmann et al., 2015a; Reed et al., 2012).

The first international studies on the benefits of AAT also date from the 1960s, with patients who had psychiatric clinical conditions (Squilasse & Squilasse Junior, 2018). Over the years, a significant theoretical development includes animals in treatment settings, expanding the population assisted and objectives (Şahin et al., 2018), as with children with cerebral palsy, neurological developmental disorders, autism spectrum disorders, sensory processing disorders, neurological degenerative and muscle disorders with a focus on, for example, controlling muscle tone, mobility and balance (Martin & Farnum, 2002).

Currently, there is a significant amount of health services in industrialized countries that carry out AAT in physical and/or psychiatric rehabilitation centers. Thus, AAT assists several populations, encompassing different age groups and disorders to improve emotional and psychosocial states, physical, sensory and/or cognitive skills (Şahin et al., 2018).

The dog is one of the animals frequently used in AAT, preferred by professionals for being friendly, sympathetic, obedient, playful and with better and immediate interaction with people. Thus, dogs are considered to have great potential to improve the physical, cognitive, functional and social skills of individuals, to increase the degree of independence and autonomy in carrying out activities of daily living and facilitating communication and interaction with humans (Şahin et al., 2018).

In recent decades, research has demonstrated the potential of dogs in rehabilitation programs for the health, well-being and quality of life of people of different ages and mental, physical and/or cognitive impairments (Hall et al., 2017). Studies have identified stress reduction in children (Nagengast et al., 1997; Hansen et al., 1999; Viau et al., 2010), improved oxygen saturation in cancer patients undergoing chemotherapy (Orlandi et al., 2007), reduced heart rate variability in adults (Motooka et al., 2006), reduced diastolic blood pressure (Tsai et al., 2010), reductions in epinephrine and norepinephrine levels, pulmonary artery systolic pressure and blood pressure pulmonary capillary wedge in patients with heart failure (Cole et al., 2007), decreased serum cortisol in healthcare professionals (Barker et al., 2005), improved quality of life for residents in nursing homes with dementia (Nordgren & Engstrom, 2012) and family members of children with down syndrome and others with severe physical and mental disabilities (Stumpf & Breitenbach, 2014), increased physical activity, improved physical function and quality of life in the elderly people (Abate et al., 2011 ; Friedmann et al., 2015b), improved performance of daily living and walking skills of women living in nursing homes due to dementia (Nordgren & Engstrom, 2012), and decreased pain in hospitalized children (Braun et al., 2009).

In the international context, occupational therapists practice AAT incorporating dogs in their interventions aimed at different populations and therapeutic objectives (Camp, 2001; Fairman & Huebner, 2001; Velde et al., 2005; Isaacson, 2013; VanFleet et al., 2019; Herlache-Pretzer et al., 2017). Some

occupational therapists and researchers have focused on the impact of assistance dogs for the development of children, adolescents or adults and for the establishment of healthy relationships between family members and children with different health problems (Viau et al., 2010; Davis et al., 2004; Smyth & Slevin, 2010).

The brazilian context has records that, in the 1950s, Nise da Silveira, a psychiatrist and responsible for the Occupational Therapy sector at the Psychiatric Center D. Pedro II, located in Rio de Janeiro, included animals in the treatment of schizophrenic patients. Dr. Nise da Silveira observed a link that emerged between patients and dogs, with the dog becoming a point of reference in the external world, facilitating the resumption of the patient's contact with reality, called it by her as co-therapists (Squilasse & Squilasse Junior, 2018).

Considering the international scientific evidence on the effectiveness of dogs in AAT and occupational therapy interventions, this study aimed to investigate the knowledge production of brazilian occupational therapy on Animal Assisted Therapy, specifically on Canine-assisted Occupational Therapy.

Method

In this study, we carried out a scoping review. This type of review establishes the mapping of the sources and types of evidence available that support a research area (Arksey & O'Malley, 2005). It is a cross-sectional procedure that enables the identification of the concepts and gaps that exist in a research area. It is preferably applied to areas that have not yet been comprehensively reviewed previously (Arksey & O'Malley, 2005), as in this study.

We adopted the parameters recommended by Arksey & O'Malley (2005) and reworked by O'Brien et al. (2016), Peters et al. (2015), Colquhoun et al. (2014), and Tricco et al. (2016) in this study, carried out in 5 stages:

1) definition of the research questions;

2) identification of relevant studies through different sources;

3) composition of the final sample based on the search and inclusion/exclusion criteria;

4) extraction of data related to the research question, including general information about the study;

5) data description, numerical and thematic/conceptual analysis of the data, discussion.

The investigative questions that conducted this study were: What populations have been focused on occupational therapy that performs therapy assisted by dogs in Brazil? Are there indications about the therapeutic objectives and results achieved, and how the dog worked to assist in this process in Brazil? How was the training that dogs receive to become assistants in occupational therapy sessions in Brazil been referred to? How was the training that the occupational therapist needs to carry out Canine-assisted Occupational Therapy in Brazil been referred to?

Data Collection and Analysis Procedures

We analyzed the specific journals of the *Cadernos Brasileiros de Terapia Ocupacional da* UFSCar (CaBTO), *Revista de Terapia Ocupacional da USP (Revista TO-USP), Revista Baiana de Terapia Ocupacional* and *Revista Interinstitucional Brasileira de Terapia Ocupacional (RevisBrato),* and the digital library *Scielo.br*, as it has a collection of brazilian scientific journals in which studies of brazilian occupational therapy are published. We applied the descriptors from the Health Sciences Descriptors (DeCS): "animal-assisted therapy" and the synonyms "pet therapy", "pet-therapy", "therapy facilitated by pets", "therapy with pets" and "therapeutic use of pets" combined with "occupational therapy"[1].

For the composition of the sample, we considered the following publications: a) available online in journals and *Scielo.br*, regardless of the objectives, population, or methodology of the study; b) on AAT productions by occupational therapists, specifically with dogs as assistants; c) on fundamentals of the practice of occupational therapy that subsidize the practice of therapy assisted by dogs; d) on Animal-Assisted Therapy that referred to or mentioned occupational therapy.

Therefore, we excluded articles that despite appearing in the search did not contain descriptors in the text or, although they contain descriptors in the title, abstract or text, they were not produced by occupational therapists and/or did not mention occupational therapy, not providing subsidies for the practice of AAT by occupational therapists.

We only considered publications available online. Therefore, the period analyzed in the *Cadernos Brasileiros de Terapia Ocupacional of UFSCar* was from 1990 to 2020, in the *Revista de Terapia Ocupacional of USP* was from 2002 to 2020, in the *Revista Baiana de Terapia Ocupacional* was from 2005 to 2020, in the *RevisBRATO* was from 2013 to 2020, and in Scielo.br no temporal parameters were used.

Using the aforementioned descriptors, no articles were found in *Cadernos Brasileiros de Terapia Ocupacional, Revista Baiana de Terapia Ocupacional* and *RevisBRATO*. We identified 22 articles in *Revista de Terapia Ocupacional of USP* and 6 articles in Scielo.br.

In the *Revista de Terapia Ocupacional of USP*, the articles with the descriptors "animal-assisted therapy" (n = 3), "therapy facilitated by pets" (n = 1), "therapy with pets" (n = 5), and "therapeutic use of pets" (n = 2) were the same as those that appeared when each descriptor was associated with "occupational therapy". Therefore, the articles found were computed only once, totaling 11 articles. When reviewing the titles of these 11 articles, we verified repetitions. The 2 articles found

[1]It is important to clarify that the synonyms found in the DeCs for the term "animal-assisted therapy" are not recommended by international organizations focused on human-animal interaction and animal-assisted intervention (International Association of Human-Animal Interaction Organizations, 2018). However, these terms contained in the DeCS have been adopted for data collection as they are a source "[...] of common terminology for research in multiple languages, providing a consistent and unique means of retrieving information" (Centro Latino-Americano e do Caribe de Informação em Ciências da Saúde, 2018). The terms "pet therapy" and "pet-therapy" were not adopted in this review since they are not included in the DeCs and because they are considered terminology in disuse since the emergence and adoption of the term Animal Assisted Intervention, and its classification in three types of Animal Assisted Therapy, Animal Assisted Activity and Animal Assisted Education, by scholars, practitioners and associations focused on these interventions (Fine et al., 2019).

with the descriptor "therapeutic use of pets", the only article found with the descriptor "therapy facilitated by pets" and one of the articles found with the descriptor "therapy with pets" duplicated those found with the descriptor "animal-assisted therapy". Thus, the 3 articles found with the descriptor "assisted therapy by animals" and 4 articles found with the descriptor "therapy with pets" were considered for analysis, totaling 7 articles. Three of these 7 articles were excluded because they did not meet the criteria already mentioned.

Among the 6 articles found on Scielo.br based on the descriptor "animal-assisted therapy", only 1 mentioned occupational therapy. The final sample consisted of 5 studies, 4 from *Revista de Terapia Ocupacional of USP* and 1 from Scielo.br. Figure 1 shows the search process with the identification of articles, exclusion of duplicates, the exclusion for non-compliance with the eligibility criteria, and composition of the final sample.

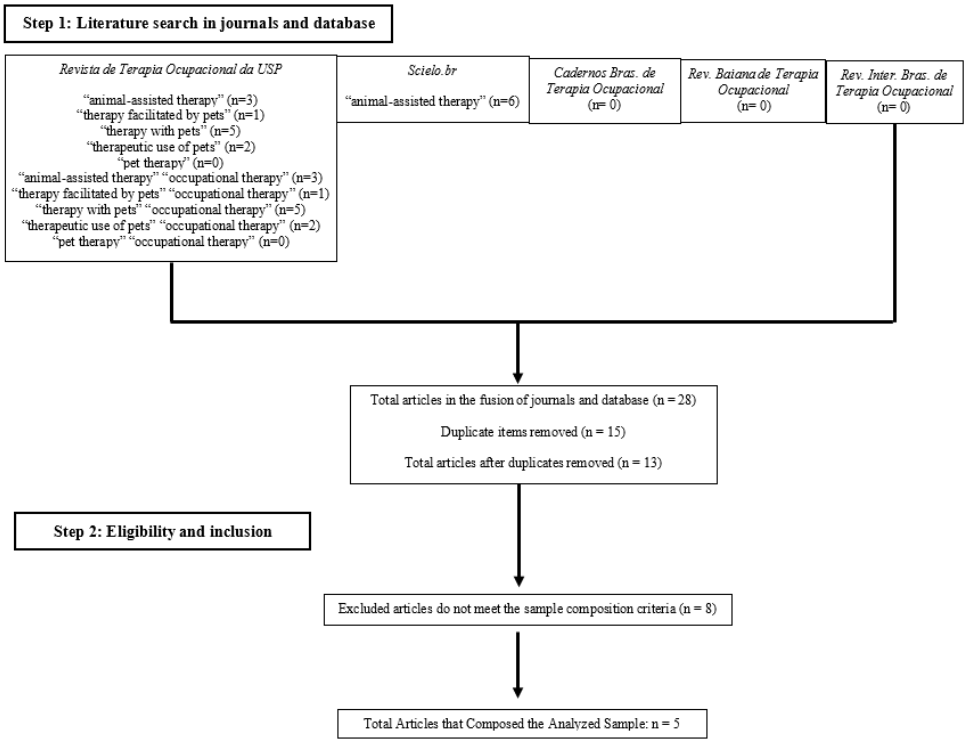

Figure 1. Flowchart of the Sample Search and Composition Process. Source: Elaborated by the authors.

We used three forms to record the information. The first form aimed at organizing all the articles that appeared in the search with the descriptors, another form for storing articles excluded by repetition or for not meeting the criteria, and a third form for organizing the information of the articles of the final sample, referring to the identification of the study (author/year, objectives of the study, type of study, sample) and content related to the research questions.

The first phase of data analysis was quantitative, with the sum of the articles found and the composition of the final sample, added to the simple frequency analysis. The second phase of the analysis was qualitative, involving reading all the

articles in full and extracting information that answered the investigative questions.

Results

The 5 studies analyzed were published between 2014 and 2019, with two theoretical studies, two qualitative and one systematic review. Studies with participants (n = 3) involved children, adolescents, and their families. The studies had different objectives and we only extract data that answered the questions that guided this scoping review in the results of the studies. No study was produced in the journals and the analyzed database produced by occupational therapists on animal-assisted therapy with the dog as an assistant.

We found two publications, the American Occupational Therapy Association (2015) document and the article of Dias et al. (2014) mentioning the act of taking care of animals as part of the daily activities of human beings, composing the occupational dimension of self-caring, others and the environment in which they live.

The document of the American Occupational Therapy Association called "Structure of the Occupational Therapy Practice: Domain and Process" (American Occupational Therapy Association, 2015) defined that caring for animals is part of the Instrumental Activities of Daily Living (IADLs). These acts are described as "[...] organizing, supervising or caring for pets and service animals" (American Occupational Therapy Association, 2015, p. 20). In this topic, the document also references animals as components of people's physical environment, that is, "[...] the natural or built non-human environment, which surrounds people and in which their occupations are performed" (American Occupational Therapy Association, 2015, p. 29).

The study by Dias et al. (2014) also refers to "taking care of animals" composing the leisure/hobby activities often performed by the elderly people, considered an Advanced Activity of Daily Living (AADL).

Another 2 studies found by Cid et al. (2017) and Lopes & Matsukura (2018) referred to the desire of people in the treatment process to be close to their pets and to be able to care for them. Cid et al. (2017) indicated that caring for animals was characterized as an activity of routine and provides the sense of responsibility of the child in psychological distress. For Lopes & Matsukura (2018), being close to pets was one of the desires of adolescents with cerebral palsy.

A study on AAT was found that mentioned occupational therapy as one of the professional areas of knowledge that performs AAT. The systematic review study by Mandrá et al. (2019) found only two studies involving occupational therapy with dogs. These studies were carried out in North America and provide information on the assisted population (people with physical or mental disabilities, or sequelae of dementia, or cerebral palsy). According to the authors, the therapeutic objectives of the studies covered physical or cognitive rehabilitation, and it is indicated that they have been achieved. However, Mandrá et al. (2019) refer that it is not clear how the dog acted to assist in this process.

Table 1 details the information recorded about the publications of the analyzed sample.

Table 1. Description of the analyzed articles.

Author/Year	Objective of the Study	Type of Study	Sample	Data Related to Research Questions
Dias et al. (2014)	To discuss the main characteristics of advanced activities of daily living (AADL), their classification in the domains of social, physical, productive, and leisure activities, and to highlight the importance of including AADL in the functional assessment of the elderly population.	Theoretical	Textual	"caring for animals" is one of the leisure/hobby activities for the elderly population.
American Occupational Therapy Association (2015)	To publish the translation of the official document of the American Occupational Therapy Association (AOTA): "The Structure of the Occupational Therapy Practice: Domain and Process, 3rd Edition".	Theoretical	Textual	"caring for animals" is considered one of the Instrumental Activities of Daily Living (IADLs), with animals forming the environment in which people carry out their occupations.
Cid et al. (2017)	To identify the perceptions of those responsible for children in psychological distress about the activities they develop with them, the educational practices they use in their daily lives, and how they understand their influence on children's behavior.	Qualitative study	Child in psychological distress and family	caring for animals is part of the routine and provides the sense of responsibility of the child in psychological distress.
Lopes & Matsukura (2018)	To know the perspectives regarding the social participation of adolescents with Cerebral Palsy, from the perspective of the adolescents and their families.	Qualitative study	Adolescent with cerebral palsy and family members	being close to pets is one of the desires of adolescents with cerebral palsy.
Mandrá et al. (2019)	To verify evidence on the application of Animal Assisted Therapy in health by conducting a systematic literature review.	Systematic review	Database articles: MedLine, PubMed, Scopus, Lilacs Scielo	occupational therapy was identified as one of the professional areas that performed AAT, with specifically 2 studies having dogs assisting the therapy.

Discussion

The production of national knowledge about Canine-assisted Occupational Therapy provides answers only to the investigative questions related to the population focused on this type of therapy, the respective therapeutic objectives, and results achieved.

In the review study of Mandrá et al. (2019) in which we obtained the answers, also only a small number of occupational therapy publications focused on the topic. However, among the findings, both the population and the therapeutic results were diverse. Internationally, there are several studies on occupational therapy practices assisted by dogs also with different populations and referring to a positive contribution to different therapeutic objectives (Shue et al., 2018; Pietruch et al.,

2017; Berget & Braastad, 2011; Velde et al., 2005; Buckley, 1999; Alfano, 1998; Casey, 1996; Darrah, 1996). Specifically, in the pediatric area, studies indicate that the intervention of Canine-assisted Occupational Therapy favored increased participation (Bruce et al., 2015; Solomon, 2010; Sams et al. 2006), improvement in gross motor skills (Elmaci & Cevizci, 2015; Gaeta, 2005), fine motor skills (Roehm, 2010), verbal and non-verbal communication (Solomon, 2010; Elmaci & Cevizci, 2015; Amuso, 2003) and psychosocial skills (Elmaci & Cevizci, 2015).

The document of the American Association of Occupational Therapists (AOTA) that aims to guide the structure of the practice of occupational therapy, defining occupations and occupational roles that can be the target of this practice shows that among a person's daily activities there may be caring for animals (American Occupational Therapy Association, 2015). Caring for animals is recognized as an occupation, in which the occupational role of the caregiver is attributed to those who exercise it.

Other AOTA texts also attest that animals have been part of health service interventions for decades. Such documents deal with the use of AAT and assistance dogs in the practice of occupational therapy and aim to standardize the terminology to be adopted by the profession when dealing with AAT and assistance dogs, referring to the qualification necessary to practice AAT and the steps for its implementation (American Occupational Therapy Association, 2020).

However, although the field of AAT has increased and occupational therapists have started to perform this practice, it is still necessary to clarify the effectiveness of this type of intervention in people's lives, through scientifically substantiated evidence (Fine et al., 2019). The application of the results of research on therapeutic programs involving animals is still in its initial stages, with recent integration between professionals who practice AAT and researchers of this type of practice (McCune et al., 2014).

Therefore, the studies examined in this review did not provide answers to the investigative question on how the dog acted to assist in this process, but this question also persists in the international literature, despite the significant number of publications.

In this sense, Fine et al. (2019) refer that the AAT methodology is an issue that needs to be better understood to establish, for example, how the dog acts to assist in the rehabilitation process, and what can be done in interventions and that way. Thus, the use, registration, and dissemination of reliable methods are necessary. This includes, for example, collecting information with a standardized record of behavioral, emotional, and physiological data, both from animals and human beings. Standardizing the assessment of AAT practices will allow the grouping of scientifically produced results, which can then be compared with results from other studies and/or reapplied (Fine et al., 2019).

Recently, Hill et al. (2019) published a protocol for Canine-assisted Occupational Therapy intervention for children on autism spectrum disorder (ASD). Also, in a controlled and randomized study, Hill et al. (2020a) analyzed the effect of this protocol in comparison to interventions considered conventional for this population. The protocol developed and published by Hill et al. (2019) is essential because, despite the growing production of knowledge regarding the

positive impact of animal-assisted therapy for children with ASD, there are still no universal standards or formalized guidelines for this type of practice by occupational therapy.

In this sense, the application and testing of the protocol obtained confirmation that the incorporation of a therapy dog in occupational therapy sessions increased the amount of time the child was involved in the tasks provided for in the session and enabled to achieve the therapeutic objectives and goals in higher frequency compared to occupational therapy sessions without dogs (Hill et al. 2019, 2020a). Despite the positive results obtained, the authors reinforce the need for future research to obtain answers regarding the training of the occupational therapist for the exercise of AAT, the training required for the dog to provide therapy assistance, and the risks of including a dog in occupational therapy sessions, among other aspects, which are essential for ensuring the effectiveness of therapy, safety and well-being of the target individuals of the intervention and the therapy dog involved (Hill et al., 2020a).

Although the studies analyzed by this review do not provide information on the training of the occupational therapist and the training that the dog needs to perform therapy sessions, another recent study by Hill et al. (2020b) on the challenges for the practice of Canine-assisted Occupational Therapy, brings propositions for the composition of knowledge in this area.

Among the propositions by Hill et al. (2020b), the incorporation of a dog in the sessions by occupational therapists should be guided by an intervention based on evidence and centered on the occupation. Therefore, the dog is understood as a new and potentially motivating element for the performance of the sessions, and its participation in the therapy must be in line with the established therapeutic objective, that is, with the demand referred by the target individual of the intervention. The occupational therapist must be able to divide his attention between the child and the assisting dog while maintaining the focus on the therapeutic objective and the effectiveness of the intervention. The dog may have active or passive participation in the therapeutic tasks, being first necessary that the occupational therapist knows how the dog can assist the therapy and facilitate the achievement of the therapeutic objectives. For this, the occupational therapist needs to have theoretical and practical training in AAT and the dog needs to have a predictable and reliable temperament and behavior, having received obedience training and socialized in the clinical environment. The therapy dog also needs to undergo a periodic veterinary assessment of physical and emotional health, and an annual vaccination and preventive treatment for fleas, ticks, and parasites (Hill et al., 2020b).

Trying to expand knowledge about the training of therapists and dog training, and also to answer the investigative questions of this review, we highlight Stewart's pyramidal model of competencies at three levels (essential, intermediate, professional) (Stewart, 2014) that also provides information on the necessary knowledge, skills and attitudes.

In summary, the knowledge demanded includes knowing about the animal (breed, species, physiology, behavior and history), the well-being, care and health of the animal, about the specific principles of AAT articulated to the professional's area

of expertise. Together, knowledge about positive and non-coercive training methods and techniques is needed to train and socialize animals for a variety of environments and situations and to educate others about how to interact with the animal. Finally, the professional must have knowledge based on evidence about the history and types of AAT, how animals can be incorporated in therapeutic environments, the human-animal bond, the physiological and neurological impact of the interaction between human and animal, indications, contraindications and forms of risk management, among others (Stewart, 2014; Pet Partners, 2019).

Regarding the skills, we need to prevent animal stress and exhaustion by supplying the animal's needs, rest, hydration, nutrition, and evacuation. It is also necessary to develop skills to objectively assess an animal's suitability for therapy and the target population, and the animal's strengths and limitations, identifying possible personal and/or cultural prejudices against the animal (s) therapy. Therefore, these skills are concerned with the intentional incorporation of AAT into a person's therapeutic plan and process, through the evaluation and selection of the appropriate strategies and actions for each context, based on each session and the treatment objectives, with constant evaluation of results and redefinition of therapeutic objectives. The professional must be skilled not only in his area of specialty but also in the care of people and animals simultaneously and the impact of therapy on the patient and the animal (Stewart, 2014; Pet Partners, 2019).

One of the priority attitudes is the professional fully responsible for the animal (s) involved in the therapy in terms of well-being, defense, safety, and respect for the animal's characteristics, interests, and willingness to participate. The same type of responsibility is valid for the individuals targeted by the intervention. The professional must promote awareness, education, and training on AAT at the micro and macro levels (individual, community, public), being familiar with the existing literature, adopting the current and appropriate language and terminology, and acting in the development continuation of the AAT literature (Stewart, 2014; Pet Partners, 2019).

Final Considerations

This scoping review did not find studies of occupational therapy with dogs as assistants to interventions in Brazil. Among the five studies found and analyzed in this review, one was a review referring to occupational therapy as one of the professions that, in the international context, perform therapy assisted by dogs with people with disabilities and/or physical or mental sequelae, being the objectives and therapeutic results of physical or cognitive rehabilitation. The other studies referred to the care of animals composing one of the human occupations and one of the occupational roles that people can assume. The document on the structure of the profession's practice includes caring for animals as an occupation and occupational role, which may be the target of occupational therapy interventions.

Although we did not identify national publications capable of elucidating all investigative questions, there is international literature that provides illuminating information on the training and skills needed by the therapist and the training required for the occupational therapy assistant dog.

The incipient national production indicates the need for future research on the topic, specifically the systematization of evidence-based practices to understand the demands of the target population, occupational therapeutic objectives, and the way (s) to achieve them, having the dog as an assistant. There is also a demand for new research on the training and skills of the professional occupational therapist for the practice of AAT and on the training of the dog to promote effective and scientifically based therapeutic practices. The international literature indicates the need for investigations on how the dog can act to assist in the rehabilitation process, requiring the development of analysis and evaluation measures that are precise and capable of replication in other interventions. Finally, as this is the first national review on a topic with a limited number of publications, this study has limitations in the possibility of generalization and should be considered from this perspective.

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Author's Contributions

Mirela de Oliveira Figueiredo: contributed to the theoretical and methodological design of the study, data collection, discussion, and writing. Ana Luiza Alegretti and Lilian Magalhães: contributed to the theoretical and methodological contribution and final review. All authors approved the final version of the text.

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Corresponding author
Mirela de Oliveira Figueiredo
e-mail: mirelafigueiredo@gmail.com

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