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Social representation of animal-assisted activity in hospitals

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Abstract

Pet visits to hospitals have become increasingly more frequent, and although its biopsychosocial benefits have been empirically and scientifically ascertained, this activity has risk-related limitations that should be properly addressed. This exploratory, quantitative and qualitative study sought to characterize the social representation of animal-assisted activity. Respondents selected from society in general (N=116), volunteers (N=15), staff members (N=16), and patients (N=16) who participate in animal interventions were receptive to the presence of animals, praising the benefits – especially the emotional – of the activity, and disregarding its limitations, mainly related to biosafety and animal well-being. Results show that the risks involved in the activity can be mitigated by the dialogical, multidisciplinary, deliberative and consultative nature of a bioethical approach aimed at assessing the costs, benefits and alternatives to ensure the well-being of all the actors involved.

Keywords: Vulnerability analysis. Animals. Animal care committees. Ethics, institutional. Humanization of assistance.

Resumo

Percepção social sobre atividade assistida por animais em hospitais

A visita de animais de companhia em hospitais vem se tornando cada vez mais frequente, e os benefícios biopsicossociais dessa prática têm sido atestados empírica e cientificamente. Contudo, é preciso refletir sobre certas limitações que podem gerar vulnerabilidades. O presente estudo objetivou caracterizar, por meio de pesquisa exploratória, qualiquantitativa, a percepção social sobre a atividade assistida com animais. Respondentes da sociedade (n=116), voluntários (n=15), equipe terapêutica (n=16) e pacientes participantes de intervenções desse tipo (n=16) se mostraram receptivos à presença de animais, enaltecendo os benefícios (especialmente os emocionais) da prática e ofuscando as limitações relativas à biossegurança e ao bem-estar animal. Os resultados corresponderam à expectativa inicial, de que as vulnerabilidades da atividade assistida por animais podem ser mitigadas com o apoio da bioética, dada sua natureza dialogante, multidisciplinar, deliberativa e consultiva, visando a ponderação dos custos, benefícios e alternativas para o bem-estar de todos os atores envolvidos.

Palavras-chave: Análise de vulnerabilidade. Animais. Comitês de cuidado animal. Ética institucional. Humanização da assistência.

Resumen

Percepción social de la actividad asistida por animales en hospitales

La visita de mascotas en hospitales se ha vuelto cada vez más frecuente, y los beneficios biopsicosociales de esta práctica han sido demostrados empírica y científicamente. Sin embargo, es necesario reflexionar sobre ciertas limitaciones que pueden generar vulnerabilidades. El presente estudio tiene como objetivo caracterizar, por medio de una investigación exploratoria, cualicuantitativa, la percepción social de la actividad asistida por animales. Encuestados de la sociedad (n=116), voluntarios (n=15), equipo terapéutico (n=16) y pacientes participantes en intervenciones de este tipo (n=16) se mostraron receptivos a la presencia de animales, enalteciendo los beneficios (especialmente los emocionales) de la práctica y eclipsando las limitaciones relativas a la bioseguridad y al bienestar animal. Los resultados correspondieron a la expectativa inicial de que las vulnerabilidades de la actividad asistida por animales pueden ser mitigadas con el apoyo de la bioética, dada su naturaleza dialógica, multidisciplinaria, deliberativa y consultiva, buscando considerar los costos, beneficios y alternativas para el bienestar de todos los actores implicados.

Palabras clave: Análisis de vulnerabilidad. Animales. Comités de atención animal. Ética institucional. Humanización de la atención.

The authors declare no conflict of interest.

Research

The symbiotic interrelationship between humans and nature, which has been fixed by evolution, conditions people's physical, mental, social and spiritual well-being, as described by the biophilia hypothesis [1,2]. The way human beings see animals involves a complex social and biological representation, which shapes numerous relationship models that include a variety of values and projections about these living beings in terms of production, service provision, recreation, and companionship [3]. Although discussions in society on ethical limits and abuses are abundant, companion animals are gaining increasingly more space in the lives of their guardians, earning the status of family members [4].

Animal-assisted interventions (AAI) have been shown to be effective in physical, mental and social rehabilitation [5,6], with formal recognition of animals as a therapeutic tool occurring in 1961 by Delta Society, a US organization currently known as Pet Partners [7]. AAI programs, such as animal-assisted therapy (AAT) and animal-assisted education (AAE), have since been incorporated into health care and schools around the world.

While different species can be used depending on the intervention, dogs are preferred for physical rehabilitation [8]. Concurrently with AAI, animal-assisted activity (AAA) has been gaining traction in nursing homes, schools, and hospitals. AAA includes diverse and informal actions whose goal is to bring animals and people together, without strict rules, supervision or links with official programs, aiming primarily at recreation and improving quality of life [9,10].

AAA, therefore, is based on emotion and recreation [6,11], and its use in therapeutic contexts can have psychological (reducing stress and anxiety), physiological (reducing blood pressure and heart rate) and social (enabling socialization and learning) benefits [11]. Animals probably also benefit from the activity, possibly with an increase in hormones linked to well-being such as endorphins, oxytocin, prolactin and phenylacetic acid, and a decrease in hormones like cortisol [12].

Animals used in AAA are usually cared for and provided by volunteers. But much as this humanitarian attitude is commendable, AAA has certain limitations that might be a risk to people, animals and institutions [6,10,13]. Fischer, Zanatta, and Adami [10] investigated the issue from a bioethical perspective, showing the consequences of actions lacking in integrity, responsibility and care, highlighting the importance of following protocols in environments such as hospitals. One must therefore recognize, for example, that patients may have immunodeficiencies, allergies, phobias and restrictions, they may dislike animals or simply not be willing to participate in a relaxation activity [6,10,12]. Likewise, one has to ensure the animals' well-being [6,10,14].

Brazil has no specific legislation regulating AAA, and Bill (PL) 5,093/2016, proposed by Senator Mara Gabrilli, was filed without being put to vote [15]. The bill provided for the regulation of AAT, AAE and AAA, but was criticized for its regulation of therapy animals, guide dogs and service animals. PL 9787/2018 [16], a bill proposed by Federal Deputy Vicentinho authorizing and regulating pet visits in hospitals, is currently in the final stages of approval. The state of Paraná already has Law 18,918/2016 [17], which authorizes the entry of domestic animals and pets to hospitals. Although prohibiting entry of animals into specific areas and prescribing the need for medical authorization, veterinary report, hygiene and leash, this law delegates the establishment of specific rules to each facility.

Implementing AAA programs in Brazilian medical institutions [8], even considering the legal authorization for entry of companion animals in hospitals [17], is insufficient to ensure that different actors, such as employees [18-20], nurses [21-23] and patients [22,23] are equally benefited. A bioethical investigation on the issue requires therefore the knowledge on the social representations of AAA.

This study examines, from a bioethical standpoint, the perceptions of AAA in society in general, by volunteers who make their animals available, by staff members and by patients. To that end, we tested the following hypotheses: H1) the social representation of AAA is conditioned by the role of each actor; H2) despite the growing adoption of AAA, its purposes are still little known; H3) AAA's good intentions contribute to its benefits being extolled while its limitations are disregarded; H4) AAA's limitations are usually left unrecognized, especially those related to animal well-being; and H5) the use of pets is an alternative to minimize risks associated with volunteer work.

Methods

This is an exploratory, qualitative, and quantitative study on the social representation

of AAA by society and actors participating in AAA in the hospital setting. For the "society" category, data underwent quantitative analysis. An invitation to answer an online questionnaire was sent to at least 30 personal profiles and 50 groups covering various social and academic segments on Facebook, Instagram and WhatsApp. The goal was to obtain a heterogeneous sample, and participants were only required to be over 18 years old. The questionnaire was made available from October 20, 2017, to August 7, 2018, time that was necessary to reach a minimum sample of 114 participants (80% confidence and 6% error for a population of 200 million inhabitants).

The instrument, which was specially designed for this study, comprised five questions aimed at characterizing the participants (gender, schooling level, age and contact with animals outside and inside the hospital environment); 18 scoring questions (0-10) referring to benefits and limitations of animal visits in case of hospitalization; and one open question asking the participants opinion on a problem-situation involving a conflict of interest (Appendix).

The interviews conducted with participants in AAA carried out in a public hospital in Curitiba by the non-governmental organization *Cão Amigo* underwent qualitative analysis. To this end, the study has a restricted sample, which included a volunteer team (people who made their animals available for interventions), staff members and patients.

The instrument applied to the volunteer team consisted of 3 questions about the respondent (gender, age and area of expertise); 6 about the volunteer work performed (motivation, work in hospitals, time, frequency, animal, how the animal's potential was identified); 4 on AAA performance (behavior of the animal before and after visits and factors influencing performance); and 4 on AAA (benefits, limitations, embarrassing situations and need for improvement).

The instrument answered by the staff comprised 2 questions to characterize respondents (training and length of experience in the hospital); 8 regarding AAA assessment (purpose, perception of improvement by patients and staff, inconveniences, routine, protocols, replacement with pets, frequency and duration); and 12 scoring questions (0-10) on perceptions of AAA benefits and limitations.

The instrument applied to the patients consisted of a semi-structured interview with 12 questions on the interviewee's opinion on visits, purpose of AAA, improvement in the patients' health and in the team, inconveniences, breaks in routine, risks, protocols, frequency and replacement with pets. All interviews were recorded.

For quantitative analysis of frequency data, the non-parametric chi-square test was used. For the average data on society's perceptions of AAA benefits and limitations, the parametric Anova test (H) was used, with *a posteriori* Tukey's test. In both cases, homogeneity of the sample was considered as a null hypothesis, with 95% confidence and 5% error. The "society" category's open response to the problem-situation and the patients' responses were categorized according to Bardin's content analysis [24], and the results were presented using descriptive statistics.

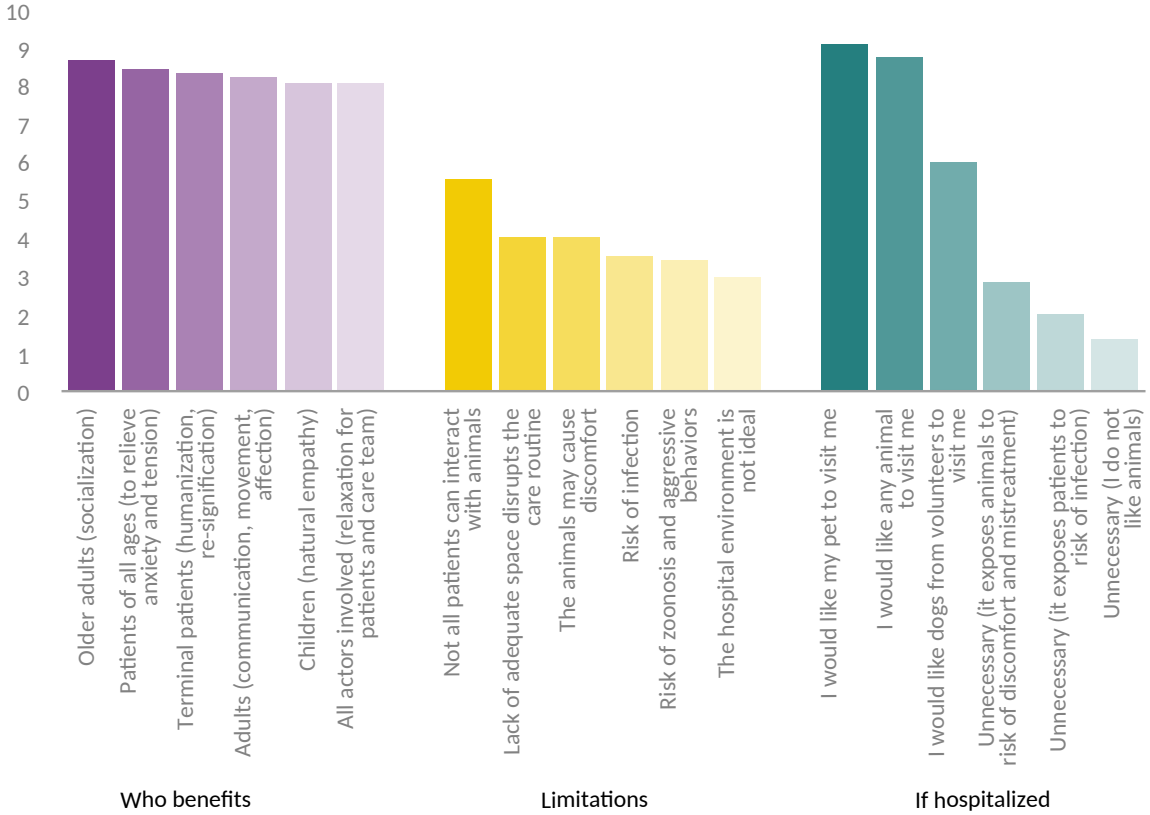
Results

Society's perception of animal-assisted activity

Perception of AAA by society was characterized based on the participation of 116 respondents with mean age of 30.4±10.6 years (116; 18-71), mostly women (83%*), graduated or attending higher education (86%*) and with training outside the biological area (69.3%*), totaling 93 different professions. Most were guardians of companion animals (73%*), mainly dogs (60%*) – cats: 4%; dogs and cats: 22%; dogs, cats and others: 14%. Only 39.2%* of the respondents had ever been hospitalized for longer than one month. Knowledge of programs that use animals in hospitals was reported by 24.2%* of the participants, and was obtained via internet (36.2%*), television (32.3%*), from acquaintances (12,5%) and in the educational environment (16%).

Respondents agreed with all statements regarding AAA benefits. As for AAA limitations, the most common response was that not all people want or can interact with animals. Most respondents declared wishing to be visited by animals, their own or owned by volunteers, in case of hospitalization (Figure 1).

Figure 1. Mean score of respondents in statements about the benefits and limitations of animal-assisted activity and agreement with animal visits in case of hospitalization



Mean values were compared in each category using the Anova test. Significantly different values (p<0.05) indicated by different letters.

Regarding the problem-situation (Appendix), 29.2% of the respondents considered the outcome to be correct, describing the volunteer's behavior as commendable (18%) and opining that: she should insist on her voluntary work (36%); the animal was having a bad day (18%); the animal was overburdened and it was necessary to ensure his well-being before resuming interactions (18%); the animal was tired due to age, and it would be better to use younger animals (10%); if more complications occurred, it would be necessary to suspend the activity (18%). On the other hand, most respondents (70.8%*) described the outcome as wrong, warning that the benefits were limited to patients and arguing that: there was abuse and exploitation of the animal, which was tired, stressed and uninterested (64%); there was negligence in not considering the animal's age, sociability and training (13%); it was necessary to pay more attention to the animal's limits and interest, offering him more time to rest (20%); a shelter animal should be used (2%).

Volunteers' perception of animal-assisted activity

Volunteers' perception of AAA was collected in 15 interviews with volunteers with mean age of 42.5±12 years (15; 26-64), mostly women (80%), working in eight different occupations (33.3% were psychologists, 13.3% were veterinarians and the remaining 56.4% worked with business management or exact sciences). The main reasons for volunteering were: desire to help others and passion for volunteering (54%); love for animals (27%); and personal development (19%).

The choice for working in the hospital environment was mainly due to practicality (28%); the vulnerable people in need of distraction (28%); health (12%); and affection and support (20%). The participating animals were dogs (66.7%), dogs and

cats (26.7%) and cats (6.7%). The average time of working as a volunteer was 55.4±51 months (15; 1-156). Visits to hospitals occurred weekly (46.7%), monthly (26.7%), every two weeks (20%) or two to three times a week (6.7%), with an average duration of 80±26 minutes (16; 60-120).

Eight handlers identified their pets' potential to become therapy animals due to their docile behavior and self-control in stressful situations. Other seven handlers realized that their pets liked to interact with people or showed a need for interaction. Handlers identified excitement (68.2%), anxiety (27.3%) and calmness (4.5%) as behaviors prior to the visits; after the visits, the animals showed tiredness and fatigue (67%), satisfaction (22.2%) and tranquility (11.1%). Three interviewees reported not having identified these behaviors in any other situation in the pet's routine. The other interviewees described these behaviors as similar to those shown during outdoor walks or when receiving visits.

The volunteers considered as abnormal behaviors during the intervention: refusal to enter the room (20%), movement in the opposite direction (20%), impatience and agitation (20%), fear (13.3%), attempts to evacuate (13.3%), vocalizations (6.7%) and attempts to nibble (6.7%). Five volunteers, however, declared they did not notice any of these behaviors, or failed to report them if they had indeed occurred. Another 10 volunteers stated that, if they identified such behaviors, they would take the animal aside to calm it down and, if the problem persisted, they would end the visit.

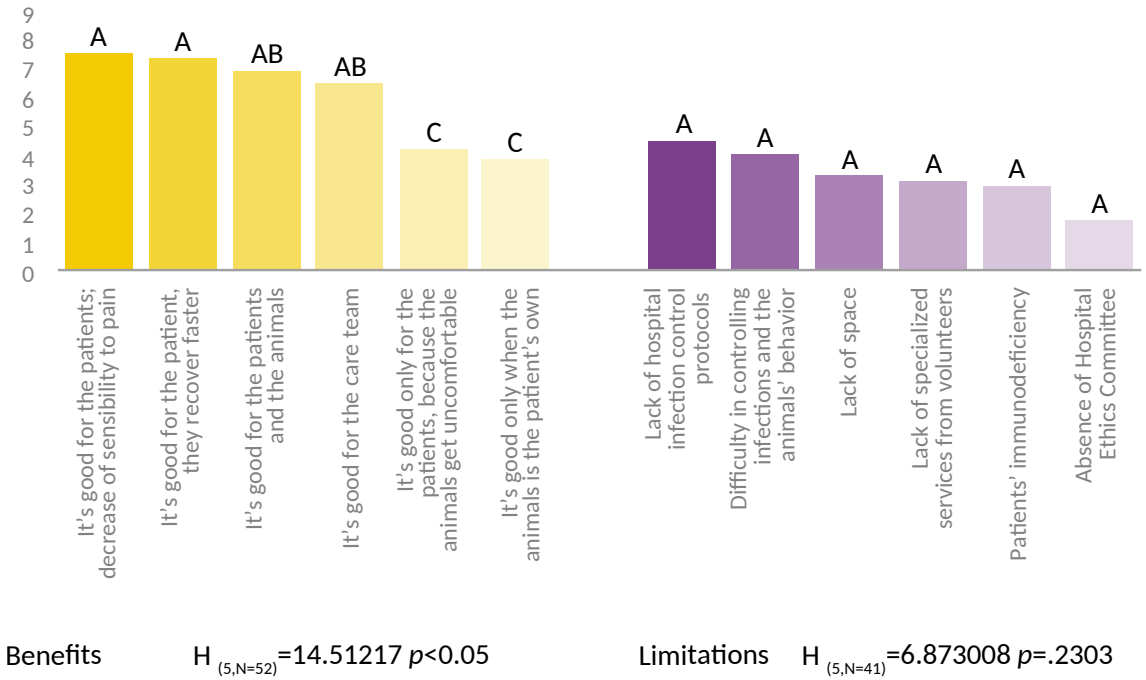
According to the volunteers, the patients influence the animals' behavior, which seem to prefer children, women and older people. As benefits for the patient, the volunteers list: happiness (47%), global improvement (19%), good memories (15.5%), relaxation (12.5%), improved self-esteem (3%) and acceptance (3%). For the animals: satisfaction (61%), interaction (28%) and calmness (11%). For the institution: an improved hospital environment (69%) and quick recovery of patients (31.3%). For volunteers: happiness (64.3%), plenitude (28.6%) and no benefit (7.1%). The limitations identified in the patients were: rejection (72%) and unfamiliarity (28%). In animals: handling (66.6%) and exhaustion (33.3%). In the institution: restrictions (77.8%), lack of knowledge (11.1%) and lack of suitable space (11.1%). No limitations related to the volunteers themselves were identified.

All respondents stated that the activity brings benefits to patients, who feel lighter and happier, since animals are often their only visitors. According to three interviewees, the visits are efficient and need no improvement. The other interviewees, however, believe that it is necessary to increase the frequency of visits (28.6%), comply with rules (14.3%), prepare those involved for follow-up (14.3%), involve psychologists (14.3%), and have an exclusive space (14.3%).

Staff members' perception of animal-assisted activity

Staff members' perceptions were collected in interviews with 12 nurses and nursing technicians who have worked in hospitals for an average of 274±114 months (12; 1-240). Participants' views on AAA were positive, highlighting the joy and improvement of the environment brought by the activity. Only one of the professionals warned about the risk of contamination. Three interviewees reported ignoring the reason for the visits, two cited humanization and well-being, and three cited distraction. Eleven respondents identified improvements in patients, mainly mood-related, and all interviewees stated that AAA improves teamwork. None of the participants noticed any inconvenience or interference in the hospital routine. Only three said they knew the protocols, highlighting the need for training the dogs and cleaning their paws, and the length of the visit (one hour). Seven interviewees reported that the existence of official protocols would make the intervention more efficient, and the periodicity of visits was considered important by all. Only three respondents opined on the length of the visit (15, 30, and 90 minutes), and all agreed that a visit by the patient's own pet would be better than that by one owned by volunteers. The agreement with statements about benefits revealed a greater attribution of benefit to patients. As for limitations, we found no differences in perception (Figure 2).

Figure 2. Average score of staff members' agreement with statements on the benefits and limitations of animal-assisted activity



Average values were compared in each category using non-parametric Anova (H). Significantly different values (p<0.05) indicated by different letters.

Patients' perception of animal-assisted activity

Patients' perception of AAA was collected in 16 interviews carried out soon after the animal visits. The sample comprised mainly adult (81.2%) women (68.7%). Most patients were receptive to visits, and only two declined to participate in the research.

Respondents considered the interventions good (56.3%) and very good (43.7%), identifying benefits for themselves (64.7%), for the other participants (29.4%) and for the animals (5.9%). The patients' opinion about the intervention pointed mainly to personal satisfaction (36%), moments of distraction (28%), calmness (12%), stimulation of affection (8%), memories of their own pets (4%), and improvement of the environment (8%). Only one patient pointed out the need to take care of the animals. Seven respondents were unable to specify the activity's goal, while four stated that the visits sought to provide moments of joy, break the routine, promote well-being, exchange energy and provide new experiences.

Only one interviewee reported no perception of improvement after AAA. The others (70%) reported that the visits brought on good feelings, mainly related to emotional aspects – happiness (39.1%), well-being (13%), enthusiasm (13%) and self-esteem (4.2%) – and spiritual aspects (20%). Only one patient pointed out social and physical benefits. Three patients observed no staff-related benefits; among those who identified such benefits, emotional aspects predominated (66.7%).

Four patients identified inconveniences regarding the activity, mentioning people who are afraid of animals. Respondents considered that cats are not ideal for AAA and identified fatigue in some animals. No patient believes that AAA disrupts the hospital routine or poses a risk.

The participants were unable to identify the implementation of protocols, but 16 pointed out the need for standardized procedures, considering that hospitals are controlled environments. Only one patient called attention to possible risks to the animal's health. Ten respondents suggested that visits should be more frequent, while one proposed that the activity should not follow a routine, claiming that the surprise factor makes it more exciting. For three patients, AAA should

be brief so as not to disrupt the hospital routine or those who do disapprove of the presence of animals; for another three, however, longer visits would bring greater well-being.

Five respondents considered unimportant whether the volunteer's animal is replaced by the patient's own pet or not. On the other hand, ten interviewees stated that it would be better to be visited by their own pet, claiming that they missed them, that the pets would be able to recognize their feelings, and that the visit would bring out positive emotions in both the patient and the animal.

Discussion

The study data allowed us to characterize the social perception of AAA. The group of participants corresponding to the "society" category, although heterogeneous, proved to be composed of academics. Their little experience in hospitalization, however, was enough to contrast their perception with that of other participants who experienced AAA.

Regardless of knowledge and performance in AAA, respondents had similar answers regarding the scarce knowledge about this type of intervention and their positive opinion on it, praising its benefits in detriment of its limitations. Expected differences in social representation (H1) was partially confirmed, as emotional aspects stood out even among the staff, prevailing over technical considerations, with patients identifying only minimal limitations, practically invisible before the immediate benefits observed.

Similar results were obtained by Eaglin [21] in interviews with nurses at a pediatric hospital in Hawaii; by Moody, King, and O'Rourke [18] in a study conducted with staff at a pediatric hospital in Australia; by Bibbo [19] with staff at an oncology hospital in California; by Stefanini, Bigalli, and Tani [23] with parents and staff at a pediatric psychiatric hospital in Italy; and by Moreira and collaborators [22] with nurses and patients at a pediatric oncology hospital in Northeastern Brazil. For Bibbo [19], acceptance of AAA and willingness to interact with animals are linked to positive preconceptions that may make stress or extra work imperceptible.

Ignorance of the purposes of AAA can pose risks for animals, patients, volunteers and institutions. It is therefore necessary to reflect on the arguments and values of each actor involved to ensure that AAAs are feasible, good for all and based on common interests [10]. For Moody, King, and O'Rourke [18], for example, planning AAA with employees prior to implementation is critical to the intervention's success.

Participants confirmed the hypothesis that the perception about AAA is positive (H3), a view mainly associated with the volunteers' good intentions. The few who ventured to opine on the goals of the activity, however, related it to recreation.

For Moreira and collaborators [22], the lack of knowledge, both from the medical team and the patients, hinders the effective implementation of AAA. Nurses interviewed by Eaglin [21] and Moreira and collaborators [22] complained about their lack of understanding of AAA therapeutic goals and the lack of training to interact with animals, identify clinical risks and restrictions, and plan mitigating measures.

Society learns about this new therapeutic approach mainly through the media, a fact also observed by Moody, King, and O'Rourke [18] in Australia. This was true even among participants from health courses, who reported not having been introduced to this practice in the educational environment.

Moreira and collaborators [22] stress that the nursing team needs to be aware of AAA, suggesting that this content be addressed in academic training. Learning about AAAs in academic training is important, since the media is often biased towards its emotional aspects, which can lead to a poor understanding of the issue and prevent an in-depth critical appreciation of the approach [18]. This has also been observed in other situations involving potential risks, such as those involving animals of medical interest [25], medication [26], and the water crisis [27].

Society's and staff members' views on the listed benefits indicated adherence to AAA and perception that it is beneficial to patients of all ages, to staff and even to the animals. Patients mainly identified emotional benefits, and confirmed improvement in their own health, corroborating the staff's perception. The immediate improvement in mood and environment perceived by the interviewees corroborates the scientific findings about AAA benefits [6], contradicting criticisms about the bias,

subjectivity, and lack of theoretical rigor of studies showing the effectiveness of AAA [6,10].

Perception of improved environment, including in the health care environment, corroborates the beneficial effects for patients pointed out by Schmitz and collaborators [28], with AAA promoting a positive experience for the staff and family members. According to Velde, Cipriani, and Fischer [29], although the benefits are indirect, AAA serves as preparation for other therapeutic models. Abrahamson an collaborators [20], in turn, found that the decrease in stress among staff members has received little empirical attention. Regarding possible benefits for the animals and their handlers, however, only volunteers opined, which suggests that AAA is assigned an instrumental value.

AAA's limitations, besides receiving little attention, were associated with possible impediments for the people involved, with no perception of issues related to animals or biosafety, thus confirming hypothesis H4. The perception of limitations and risks can be masked by the good intentions associated with the activity, allied with the atmosphere of relaxation, as shown by Iannuzzi and Rowan [14] and Zanatta and collaborators [6]. Although positive, the immediate adherence to AAA can make it difficult to identify risks, for example, by disregarding the fact that some people have health conditions that prevent contact with animals or simply do not feel comfortable in their presence [10].

Eaglin [21] also observed that respondents showed cultural and individual differences in perception. This vulnerability, although extremely relevant, is not unique to the hospital environment. Vaccari and Almeida [30] reported that apprehensive parents did not allow their children to interact with animals because they were unaware of the goal of the interventions. As Cunha and collaborators [31] point out, however, depriving patients of animal visits can also generate feelings of rejection, and an alternative would be to have specific spaces for these interventions.

Hospital environments' inherent characteristics, both with respect to care routine and the need for biosafety, were not associated with potential AAA limitations, not even by staff members, as noted by Bibbo in a study conducted in California [19]. Moody, King, and O'Rourke [18], on the other hand, warn that doctors and nurses have more realistic perceptions about increased workload and disruptions of hospital routine than other staff members, especially those who seek outcomes from their specific therapeutic interventions.

Volunteers tend to perceive institutions as limiting, complaining about restrictions, lack of knowledge and lack of a suitable environment, and often arguing for a specific space to perform AAA. For Zanatta and collaborators [6], these spaces would be biophilic environments, where animals would be free to interact with people without restrictions, and unfit patients could observe the animals separated by appropriate barriers.

Biosafety-related limitations were rarely mentioned, which corroborates the results by Zanatta and collaborators [6]. The risk for people is generally associated with the transmission of zoonoses, but, as noted by Ferreira and Gomes [11], the risk of pathogen transmission between patients and animals is only significant when hygiene standards are ignored. But studies have yet to undoubtedly ascertain the safety of AAA for patients and animals, and there is little research on the subject based on a bioethical approach to care. Caution should therefore be prioritized to minimize possible complications [10,13].

Animal-related limitations were mentioned only by volunteers, who indicated problems associated with excessive handling and exhaustion. This perception of AAA is also found in other situations, such as educational assistance to children with special needs. In this sense, Fischer, Zanatta, and Adami [10] point to an anthropocentric/utilitarian bias that amplifies limitations and benefits related to people, to the detriment of animals. For Iannuzzi and Rowan [14], guidelines should be developed to rid practices such as AAA from anthropocentrism, and the intervention should not focus solely on the patient. Moreira and collaborators [22], in a similar perspective, warn that one must overcome viewing the animal as a tool.

Despite the obvious connection with their pets, few actors observed exhaustion, anxiety due to exposure to different stimuli, unpredictability, and physical or psychological incompatibility in the animals [6]. As Fischer, Zanatta, and Adami [10] point out, therapy animals are already being diagnosed with burnout syndrome, and the recommendation is that visits last a maximum

of 30 minutes and occur up to three times a week (the participants in this study, it is worth remembering, reported one-hour visits).

Although the selection of animals for AAA is unsystematic, based only on sociability and low reactivity, with no training required [32], Murthy and collaborators [13] argue that these animals should be trained, certified, and undergo regular evaluations, which would only be possible, according to the authors, with dogs. In this sense, Cavalli and collaborators [32] compared the behavior of pets and dogs participating in AAA without formal training, and found that therapy dogs gaze longer at strangers, are more persistent in communication, and less impulsive. The authors believe that these important characteristics are due to learning experiences during AAA and should be considered in selection and training.

Regarding animal well-being, Iannuzzi and Rowan [14] argue that, if it is not possible to measure the real benefit of the activity for the animal, all precautions should be taken to prevent inappropriate use and exploitation. Fischer, Zanatta, and Adami [10] analyzed the alternative of using social robots, whose effectiveness has been scientifically evaluated and proven, especially with children, who are able to project feelings and personalities onto inanimate objects.

Limitations associated with volunteering were not identified by the study participants. In general, volunteers are seen as well-intentioned people who like animals. The participating volunteers proved to be a heterogeneous group, with people from different professional backgrounds and little technical knowledge on animal and human behavior, but who see their work at the hospital as an opportunity to help improve the routine of vulnerable people.

Fischer, Zanatta, and Adami [10] warn that volunteering in the context of AAA should be further discussed, since amateurism in an activity involving vulnerable people may give rise to conflicts, even considering the more recreational nature of AAA compared to AAI. For Murthy and collaborators [13], the characteristics of AAA should not exempt the handler from having their technical, ethical, and legal qualification formally certified.

Among the problems of amateurism, one can highlight the lack of training of handlers to recognize when to stop the activity. Another important point is the fact that the supposed potential of the animal is identified by the volunteers themselves. Such identification is based on personal perception and tends to interpret the animal's behavior before and after visits as analogous to the behavior perceived in moments of relaxation, as if the animal were having fun. In this respect, it is interesting to note that the volunteers were able to list various behaviors considered abnormal, but resisted associating them with low levels of animal well-being or presenting mitigating strategies.

According to Pet Partners [7], the handlers' behavior, in aspects such as tone of voice, influences the animal's behavior, and a good relationship allows handlers to predict how the animal will respond to certain situations and stimuli, resulting in appropriate responses before undesirable situations [7]. Prokop and Randler [34], however, condition this desirable pattern to having basic knowledge on ethology, zoonosis, and training.

Training for interaction with patients cannot be neglected either, since the "handler" must be able to deal with awkward situations and bring the animal closer to people, often without prior communication, which is essential to prevent patient anxiety and apprehension. Bibbo [19] uses the term "handler" to refer to the animal's trainer or guardian, whose role in the intervention is significant, but usually forgotten. The author emphasizes that the handler, who introduces, interprets, and manages the animal, is usually a stranger to other actors, and the dog, therefore, is the social catalyst that facilitates communication.

Some volunteers interviewed pointed out the need for follow-up by a psychologist. Bibbo [19] also addresses this issue by suggesting that further studies should be carried out to assess the handler's influence on the beneficial effects perceived by the patient.

All the above factors lead us to conclude that volunteer work, regardless of its importance and value, should be widely and further discussed [10]. The goal should be to strike a balance between professional aspects, through efficient communication, and train everyone involved in AAA. If, on the one hand, volunteering reduces the costs of staff training and maintenance, on

the other, amateurism weakens the adoption of validated protocols and brings concerns about animal well-being, since the activity is neither regulated nor monitored [10].

Both Fischer, Zanatta, and Adami [10] and Zanatta and collaborators [6] considered replacing volunteer animals with the patients' own pets in visits. Our findings showed that such replacement is well accepted by society, staff members and patients, confirming hypothesis H5. Although they consider that pet visits have benefits and advantages, such as a stronger bond and less risk of accidents, Murthy and collaborators [13] also point out limitations such as lack of training. Besides advising that visits be restricted to dogs and only take place in appropriate spaces, the authors also list at least 20 specific recommendations.

Zanatta and collaborators [6] consider that, within palliative care, while contact with volunteer animals encourages socialization, contact with one's own pet leads to introspection and the re-signification of illness and death. The authors also argue that allowing pet visits is justified by current data that attest to the increasing inclusion of animals as family members. Allowing pet visits would therefore contribute to humanize the hospital environment. Paraná state law [17] and PL 9,787/2018 [16] go in this direction, authorizing the entry of pets such as dogs, cats, birds, rabbits, chinchillas, turtles and hamsters, provided medical clearance is given, regulating the animals' transport and monitoring by their handlers.

Bioethical perspective: decision-making, monitoring and protocols

The most important result of this study, which underpins the importance of bioethics for AAA, was obtained by the instrument applied to "society." The participants' agreement with the listed benefits and limitations of AAA was inconsistent with their views regarding the problem-situation (Appendix).

In the problem-situation provided respondents can identify benefits and limitations, which increases the chances of eliciting a critical position. This result points to the need for effective communication methods when aiming to encourage citizen protagonism. Prokop and Randler [34] argue that society's rationales and values, added to scientific evidence, guide responsible attitudes aimed at the common good, based on ethical and social paradigms that culminate in the development of legislation and public policies. The need to discuss AAA focusing on its actual benefits and limitations, enabling society to make conscious decisions [35] is thus evident. According to Jennings, Mitchell, and Hannah [36], this process, called "moral self-regulation," consists of the capacity to reflect on behaviors with subjective commitment, engaging in the control and governance of the behavior of one's peers.

Murthy and collaborators [13] collected hundreds of recommendations for animal-assisted interventions, highlighting that although AAA is casual in nature, one must comply with rules aimed at minimizing risks. For the authors, who present more than 120 recommendations in topics ranging from the animal's physical and mental conditions to the interaction with the environment and the patient, all staff must be trained and introduced to the guidelines regarding the practice. The handler, moreover, must be certified.

Bioethics, as a deliberative instance, reinforces symmetry in ensuring the well-being and safety of all actors by establishing norms and protocols [10,37]. The present study observed rules of conduct based on generalist information. The interviewees, however, believe that implementing protocols would make the activity more efficient. Paying attention to the frequency of visits and reducing the risk of accidents or inconveniences are the main points mentioned, which corroborates Fischer, Zanatta, and Adami [10].

Among these aspects, opinions on the duration and periodicity of the activity varied the most: some interviewees stated that the visit should be brief, so as not to disrupt the hospital routine or disturb those who disapprove of the activity; others, however, argued that the longer the visit, the greater the satisfaction obtained. Some nurses interviewed by Abrahamson and collaborators [20] opined that the benefits for patients are not greater only because of the short duration of the visits. Cunha and Zanoni [38], in turn, emphasize the need for further studies and recommendations, as well as statements by regulatory agencies, such as the National Health Surveillance Agency, and deliberative bodies, such as the World Health Organization, to effectively assess the feasibility of AAA.

Regulating and monitoring AAA are duties of the hospital ethics, human research, and animal use committees, which work with other deliberative bodies in hospitals. In our study, however, the inexistence of a hospital bioethics committee was not identified as a limitation by staff members and, in the literature reviewed, only Moreira and collaborators [22] call attention to the need for authorization by a hospital infection committee. Most interventions are probably not monitored by these committees, since AAA is not considered a research activity. But AAA is not a risk-free activity either. Finally, in the case of the animal use committee, monitoring extension activities is one of its legal duties [39].

AAAs, regardless of being characterized by benevolence and relaxation, should be mediated by bioethics, as a field of plural and global debate capable of weighing costs, benefits and alternatives. Its complex issues demand joint interventions concerned with minimizing negative effects through an approach to care that considers the well-being of all [10]. Only then can the goal of introducing humanized activities into hospital routine be achieved [6,2]. Successful AAAs, as Bibbo [19] points out, besides positively affecting the hospital environment and engaging the staff, should be systematically evaluated and adjusted.

Final considerations

This study allowed a bioethical examination of AAA based on the social representation of this type of intervention. The results partially confirmed hypothesis 1, that the perception of AAA is conditioned by the role of each actor, and fully confirmed hypothesis 2, which proposed that although AAA has become a common practice in hospitals, its goals are still little known. Hypotheses 3 and 4 were also confirmed, attesting the legitimacy of AAA on the grounds of its benevolence and beneficial effects to patients, mainly related to mood and relaxation. Our results, however, showed that AAA limitations are not being perceived, especially those linked to the absence of regulation and monitoring, which can potentiate conflicts between the interests of animals, patients, volunteers, the staff and the institution, generating risks and may even mischaracterize the goals of the activity.

Participants showed adherence and support for using their own animals, confirming hypothesis 5 – that the visit of the patient's own pet is an alternative to minimize AAA risks, especially those related to animal well-being. These results reflect the reality of hospitals around the world and reinforce the need for a broader discussion on AAA ethical and technical parameters, including during academic education.

The multidisciplinary, dialogical and risk-sensitive perspective of bioethics is conducive to the development of norms and guidelines for AAI, AAE and AAA. Such perspective, applied to the decision-making process of hospital ethics, human research and animal use committees can help to identify risks, propose mitigating measures, and adapt interventions to the reality of each hospital. Connecting these committees with academia would significantly promote synergy between technical-scientific knowledge and social demands.

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