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Integration of Animal-Assisted Therapy Standards in Pediatric Occupational Therapy

Sara J. Shue, Melissa Y. Winkle, and M. J. Mulcahey

Keywords: animal-assisted therapy, animal-assisted intervention, pediatric occupational therapy, best practice, standards of practice

Abstract The primary purpose of this study was to describe how the best practice recommendations and standards of practice related to animal-assisted therapy (AAT) are being incorporated into pediatric occupational therapy (OT). The study design was a nonexperimental survey that identified the qualifications of pediatric occupational therapists that are incorporating AAT, the AAT standards of practice that are or are not used in practice, and the barriers and facilitators to being an AAT qualified occupational therapist. There were 21 respondents to the survey. The majority of respondents had a master’s degree, more than 10 years working as an occupational therapist, less than 10 years of experience with AAT, and practiced in the inpatient rehabilitation setting. The data collected indicated that 2 out of the 13 standards of practice and none of the best practice recommendations are being implemented by 50% or more of respondents. The lack of education and awareness of the AAT standards of practice according to the professional organization Animal Assisted Intervention International and the actual role of volunteer organizations may be impacting the best practice implementations in pediatric occupational therapy practice.

Introduction

There have been reports of successful outcomes regarding animal integration into various environments as pet volunteers and animal companions, alongside an increase in the use of animals specifically for therapeutic means, commonly termed animal-assisted therapy (AAT) (Altschiller, 2011; Burch, 1996; Macauley, 2006; Serpell, 2011; Thompson, 2005; Winkle & Canfield, 2008). The International Association of Human-Animal Interaction Organizations (2014) defines AAT as “a goal oriented, planned and structured therapeutic intervention directed and/or delivered by health, education and human service professionals . . . focus[ing] on enhancing physical, cognitive, behavioral and/or

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socio-emotional functioning of the particular human client” (p. 4). Through this definition, AAT can be used with varying theoretical bases and techniques among various fields to assist with their specific goals. AAT is not limited to any specific profession nor is its use limited to any specific population.

Some psychological, physiological, and physical effects of using animals with therapy have been demonstrated; these include increased enjoyment and motivation, decreased pain and anxiety, and increased positive or appropriate behavior, participation, and function (Abate, Zucconi, & Boxer, 2011; Braun, Stangler, Narveson, & Pettingell, 2009; Lange, Cox, Bernert, & Jenkins, 2007; Macauley, 2006; Marcus, 2013; Silva, Correia, Lima, Magalhães, & Sousa, 2011; Sobo, Eng, & Kassity-Krich, 2006). As an example, the presence of a therapy dog eased children’s pain in a study involving AAT and children with acute postoperative pain (Sobo et al., 2006). In a study that incorporated AAT into anger management group counseling sessions with adolescents, the therapy animal provided calming benefits and increased motivation (Abate et al., 2011). Likewise, in a medical study investigating the effects of the presence of a therapy dog on hospitalized patients recovering from heart failure, a reduction in ambulation refusal rates from 28% to 7.2% was reported (Abate et al., 2011). This same study documented an increase in walking distance from 120.2 steps to 235.07 steps when the patients ambulated with the therapy dog (Abate et al., 2011).

While there is a void in studies specific to pediatric occupational therapy (OT) with AAT, OTs working with animals during therapy is gaining popularity (Casey, 1996; Winkle & Jackson, 2012). Based on the Occupational Therapy Code of Ethics (American Occupational Therapy Association, 2015), therapists must adhere to best practices, and while there are no standards or credentialing criteria related to AAT from the American Occupational Therapy Association, there are published minimum best practice recommendations and standards of practice from Animal Assisted Intervention International (AAII) (AAII, 2015; Winkle & Jackson, 2012). These best practice recommendations include a requirement for therapists to be educated about and trained in identifying animal body language, eliciting and reinforcing desired animal behaviors, and interpreting and interrupting undesired animal behaviors using professional and humane methods (AAII, 2015; Winkle & Jackson, 2012). More recently, additional standards of practice have been published by AAII (2015) that include general implementation considerations, as well as considerations related to the therapist and animal. AAII is a nonprofit organization that supports animal-assisted intervention within professional healthcare and social service settings and aims to create a community of practitioners interested in animal interventions and professional standards of practice.

With respect to considerations for the therapist, the AAII standards state that the therapist must screen the child for risk factors including but not limited to allergies, medical and mental health conditions, and prior animal history and participation in AAT. The therapist must also obtain caregiver consent and ensure that interventions are goal-specific and measurable, and that sessions are practiced within the OT ethical guidelines. The therapist must be able to advocate on behalf of the dog, and if the therapist is a novice AAT user, he/she must be mentored by an experienced AAT mentor.

The animal also must have certain qualifications according to the AAII standards of practice. These include being registered through volunteer organizations and having an evaluation for temperament, emotional soundness, and obedience (AAII, 2015). The dog must be free from hunger or thirst; discomfort; pain, injury, or disease; fear or distress; and have the ability to express normal animal behavior (AAII, 2015; Farm Animal Welfare Council, 2009). Introducing the animal to the therapy setting and to the clinical population prior to session implementations is another standard, in addition to ensuring access to water, food, and toileting before and after each session. Team evaluations should be completed prior to and during a mock or actual session in the specific therapy environment, with similar populations, during similar activities with which the teams will be working, and with reevaluations occurring.
yearly or any time there is a population or environment change (AAII, 2015).

In terms of general standards of practice considerations, AAT should be avoided in food preparation, medication, infection-sensitive, and any other areas specified by the participating facility. Ongoing documentation including health and behavior evaluations, summaries of the sessions, length of sessions, outcomes, and any incident reports should be maintained. Lastly, AAT services should be terminated if AAT no longer supports the client’s goals, because of client or animal health concerns, or if the animal's performance is no longer conducive to intervention requirements (AAII, 2015).

Research Question

Implementation of these best practice and standards of practice recommendations in the context of animal-assisted occupational therapy (AAOT) is not evident in the OT literature (Butler, 2013; Butler & Fredrickson-MacNamara, 2010; Winkle, 2003; Winkle & Jackson, 2012). Thus, this study attempted to answer the question of whether the best practice recommendations and standards of practice are being implemented by pediatric occupational therapists. The study also explored the facilitators and barriers of therapists’ qualifications for using AAT.

Methods

This was a cross-sectional study using an online survey. Purposeful and snowball sampling (Newell & Burnard, 2011) was used to recruit pediatric occupational therapists in the United States who utilize AAOT in practice. Pediatric occupational therapists who were known to the investigators, those who subscribed to AAT social media accounts, and members of the special interest sections of the American Occupational Therapy Association were targeted as survey respondents. As a way to encourage a larger sample, targeted therapists were asked to forward the survey to additional occupational therapists who they knew use AAOT (snowballing).

Instrument

An 18-item survey consisting of forced-choice and open-ended questions was developed based on the literature about AAT best practice standards as delineated by AAII (AAII, 2015; Winkle & Jackson, 2012) and the study objectives. The questions addressed demographics, qualifications of the respondent and therapy animal, information regarding implementation of standards of practice and best practice recommendations, and facilitator and barrier information. Prior to administration, the survey was reviewed by three experts in survey design and one content expert in AAT to ensure ease of survey format and clarity of questions, and to establish face validity.

Data Collection

The survey was administered electronically via Survey Monkey with a link that explained consent to participate. It was available for six weeks, and to optimize response rate, reminder emails were sent out every other week, one week prior to survey close, and one day prior to closing the survey. Surveys were completed in anonymity.

Data Analysis

Demographic data were analyzed to garner salient information about respondents. Frequency of responses was calculated for each forced-choice question, and content of open-ended responses was analyzed thematically.

Results

Demographics

As shown in Table 1, 21 therapists responded to the survey. The majority of respondents had a master’s degree (57%), more than 10 years of experience as an occupational therapist (67%), three years or less of
AAOT experience (57%), and practiced in inpatient rehabilitation (48%).

As shown in Figure 1, the majority of respondents used AAOT with children with traumatic brain injuries (TBI) (80%), stroke (CVA) and cerebral palsy (60%), and developmental delay (55%). Half of the respondents used AAOT with children with spinal cord injury (SCI) and orthopedic impairment. Respondents used AAOT to facilitate a variety of occupational areas (Figure 2) and performance skills (Figure 3). The majority of therapists used AAOT with therapy associated with the occupational areas of play, leisure, and social participation, and for a variety of performance areas within various treatment settings.

Practice Patterns

**Therapist qualification and training according to best practice recommendations.** The majority (66%) of therapists did not have any training in AAOT or had training that did not meet the AAT standards of practice. Five respondents (24%) reported having no education or training and only six (29%) respondents indicated that they were trained in all four areas of animal behavior, which is considered the best practice.

### Table 1  Demographic Information of Respondents (n = 21) Who Use AAOT with Pediatrics

<table>
<thead>
<tr>
<th>Total Respondents</th>
<th>Percent of Therapists Utilizing AAOT in Peds</th>
<th>Number of Therapists Utilizing AAOT in Peds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education Level</td>
<td>Bachelor’s Degree 33.3%</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Master’s Degree 57.1%</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>PhD 4.8%</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>OTD 4.8%</td>
<td>1</td>
</tr>
<tr>
<td>Years as Occupational Therapist</td>
<td>1–3 years 19.0%</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>4–10 years 14.3%</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>&gt; 10 years 66.7%</td>
<td>14</td>
</tr>
<tr>
<td>Years Utilizing AAT</td>
<td>&lt; 1 year 14.3%</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>1–3 years 42.9%</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>4–10 years 23.8%</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>&gt; 10 years 19.0%</td>
<td>4</td>
</tr>
<tr>
<td>Primary Practice Setting</td>
<td>Acute care 4.8%</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Inpatient rehab. 47.6%</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Outpatient rehab. 19.0%</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Private practice 19.0%</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>School 4.8%</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Inpatient mental health 4.8%</td>
<td>1</td>
</tr>
</tbody>
</table>

![Figure 1. Reported frequencies and percentages of respondents’ AAOT use with diagnoses. This figure illustrates the diagnosis for which therapists use AAOT. Note that the cumulative number of therapist across all diagnoses is greater than the total number of respondents (n = 21) due to individual therapists using AAOT with more than one diagnosis.](http://docs.lib.purdue.edu/paij/vol1/iss1/3)
AAT participation according to standards of practice. The majority of respondents (86%) reported that they utilize personal judgment to identify children for AAOT participation, and 71% of therapists reported obtaining caregiver consent for AAOT participation. Use of intake forms (19%) and obtaining medical/allergy–related clearance (5%) were underutilized.

Health and safety according to best practices. Most therapists reported that they provided water and/or food (81%) and bathroom breaks (76%), and that they familiarized the dog with the environment prior to therapy sessions (71%). Less than half implemented play breaks (43%) or familiarized the dog with the treating therapist prior to therapy sessions (43%). Seven of the 21 respondents (33%) reported having all five of the standard animal needs (freedom from hunger or thirst; discomfort; pain, injury, or disease; fear or distress; and have the ability to express normal animal behavior) (AAII, 2015) implemented into their sessions. In regard to general population health and safety recommendations, the majority (38%) of the sites that implement AAOT did not have treatment areas or equipment designated specifically for AAOT use.

Facilitators and Barriers

Figures 4 and 5 summarize the perceived facilitators to and barriers of becoming qualified for AAOT. On-site in-services and having an experienced mentor were the most frequently cited facilitators. The most significant barrier to obtaining education and meeting qualifications for AAOT was lack of access and/or awareness of AAT courses, followed closely by lack of time and funding for continuing education.

Discussion

Over the last several years, recommendations for best practice and standards of practice for AAT have been established and published. Consistent with the scope of ethical and evidence-based occupational therapy,
these recommendations should be embedded or reflective in AAOT. However, the results of this study showed that occupational therapists were inconsistent in implementing best practice recommendations and did not routinely adhere to standards of practice for AAT as delineated by AAII. Moreover, the study showed that access to and awareness of formal AAT education and training were perceived as major barriers to meeting best practice recommendations and standards of practice. These findings provide a sound rationale for expanding both access to and awareness of opportunities for therapists to gain AAT education, using strategies that are economically feasible and considerate of the time constraints and competing priorities of busy practicing therapists. Having specific competencies and training related to AAOT may assist with standardized integration of AAT in OT while also advancing the knowledge of how AAOT can advance the goals of OT in various settings and with various populations.

While the majority of occupational therapists reported using AAOT with therapy associated with play, leisure, and social participation, which is concurrent with the literature supporting these as primary areas of occupation for children (American Occupational Therapy Association, 2008; Scott, 1997; Winkle, 2003), they did not have training that met the standards of practice. Having a mentor is considered best practice if the practicing therapist is a novice AAOT user (AAII, 2015; Winkle & Jackson, 2012); however, only two out of the seven qualifying respondents indicated having a mentor. The low report of mentorship may reflect a lack of access to local qualified occupational therapists, but may also be indicative of the fact that only a small number of all occupational therapists may qualify as an AAOT mentor. In order to meet the standard of practice of mentorship for novices, a concerted effort within the profession is needed to train occupational therapists in AAOT, and occupational therapists may need to reach out for mentorship to other professional disciplines who meet competency standards.

The majority of respondents (48%) indicated that their qualifications included site-specific in-services, which may not have qualified for AAOT-related continuing education credits, specific to animal behavior, or taught by a qualified AAOT professional. Only nine respondents (43%) reported completing AAT-specific continuing education credit courses, despite the availability of educational workshops that are sponsored by the American Occupational Therapy Association (AOTA), professional AAT organizations, and qualified occupational therapists.

The finding that the majority of therapists relied upon personal judgment for identifying AAOT participants was somewhat unanticipated and is outside of best practice. A therapist may be unaware of prior child history situations, such as animal or child abuse and/or neglect, or negative interactions...
with animals, that could cause the child to react to AAOT and the animal in a counterproductive manner. These possible situations pose ethical and liability concerns relevant to the child and animal.

In regard to best practice related to animal understanding, most respondents (76%) reported being trained to reinforce desired behaviors, and approximately half (52%) reported being trained in identifying animal body language. Less than half were trained to interpret animal language (38%) and interrupt undesired animal behaviors (38%). Based on AAOT standards of practice, a therapist should have training in each of these four areas; only six therapists (29%) reported having training in all of the areas (AAII, 2015; Winkle & Jackson, 2012). Based on this finding, less than one-third of responding therapists were qualified to use AAOT, and this may underestimate the actual number since respondents were not explicitly asked to disclose that they had no training in each of the four areas.

One respondent reported that using his/her own pet facilitated the implementation of AAOT, a practice that can result in malpractice and that goes against the OT code of ethics in regard to beneficence and nonmaleficence if that personal pet has not completed the training and evaluation required for AAT (AOTA, 2015). Also, while it is best practice for an animal to be evaluated by an objective third party prior to use in AAOT, as some therapists reported doing, the skills being evaluated and/or observed may not directly relate to healthcare and OT. The majority (81%) of respondents indicated that the animal they worked with during AAOT was registered through a volunteer organization, and 24% of respondents indicated that they themselves were registered as an animal-handler team. The fact that a high number of therapists reported that their animal was registered through a volunteer organization and that they were also registered as a handler reveals that therapists have an inaccurate understanding of the role of volunteer organizations, as these organizations do not register healthcare professionals, nor do they evaluate or register animals for healthcare use. AAII is the only membership/practitioner-driven international organization that provides healthcare-specific training; however, they do not provide registration for healthcare professionals in practice. Many of the volunteer organizations’ evaluators and educators do not have formal OT training, knowledge of therapy environments, or populations specific to rehabilitation, or an understanding of therapeutic intervention planning (Winkle & Jackson, 2012). These are all important elements for effective training and evaluation of occupational therapy practitioners and their AAOT skills.

Training in AAOT specific to clinical populations and environments should be implemented in addition to general AAT training so that the therapist and animal are familiar with and are able to react and respond to emerging situations (AAII, 2015; Butler, 2013; Strzelecki, 2007; Winkle & Jackson, 2012). In this study, occupational therapists reported using AAOT with at least two and up to 13 different clinical populations. The ability of the animal and the therapist to generalize abilities and training across diagnoses and samples cannot be assumed. To ensure generalization and to promote increased safety and awareness of therapist and animal comfort, an AAOT reevaluation should occur anytime there is a population or environment change according to the standards of practice (AAII, 2015; Winkle & Jackson, 2012).

In addition to formal qualifications and training, the animal also has the right to freedom from discomfort, thirst, and hunger, and standards of practice require that the dog be familiarized with the therapist and environment prior to intervention (AAII, 2015; Farm Animal Welfare Council, 2009; Winkle & Jackson, 2012). Seven respondents (33%) reported having all of the animal needs implemented within their practice procedures. Although there are no current guidelines on the length of time an animal can work within AAOT, the standards of practice for animal-assisted intervention animals state that sessions should be no longer than one hour with at least a 30-minute rest break between sessions (AAII, 2015). The majority of respondents reported that their therapy animal worked less than three hours per week, which is well below the maximum standard practice level. However, 57% of therapists reported that their AAOT animals were not provided
with play breaks, and 23% of therapists reported not providing the animal with bathroom breaks.

Limitations

The low response rate is a limitation of this study. Although the survey was posted on social media outlets and on professional AAT connection sites, it was also sent to the authors’ colleagues, many of whom practice in neurorehabilitation; this likely skewed the demographic results.

Another limitation of this study is that the survey did not undergo rigorous validation. The strategies used to ensure that the format was low burden and that the items had clarity and reflected concepts in the literature helped to establish face validity, but cannot replace methods used to establish rigorous psychometric properties.

Summary for Practitioners

For AAT to be a legitimate modality that is used within OT practice, occupational therapists must adhere to AAT standards of practice and recommendations for best practice. There are no previous published studies on OT adherence to AAT standards of practice or knowledge about best practice recommendations, and the results of this study suggest a need for increased awareness in these areas. The American Occupational Therapy Association does not have a white paper or position paper on AAT, nor are the standards that are published by Animal Assisted Intervention International available as an AOTA resource. The void in peer-reviewed and gray literature makes this study the first to examine OT relevant to AAT standards of practice, and therefore could be a catalyst for work within AOTA and future research.

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