



Audrestch, Hilary M. and Whelan, Chantelle T. and Grice, David and Asher, Lucy and England, Gary C.W. and Freeman, Sarah L. (2015) The role of assistance dogs in society. *Disability and Health Journal*, 8 (4). pp. 469-474. ISSN 1876-7583

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The role of assistance dogs in society.

Introduction

Assistance dogs are dogs that are specially trained to undertake a variety of tasks to help individuals with disabilities. Their role is to allow people to achieve an optimal level of functional independence. The three most common types of assistance dogs in the UK are guide dogs, hearing dogs and mobility assistance dogs.

Guide Dogs

Guide dogs are trained to lead visually impaired individuals around various obstacles, offering increased mobility, location of objectives and destinations. They have arguably higher demands than the other types of assistance dogs (Whitmarsh, 2005). Guide dogs must learn to avoid environmental features which may come into contact with their owner, including objects at height. Training principles such as straight line work are introduced to aid user orientation, where the dog must walk only in straight lines unless requested otherwise. Stopping at each kerb they encounter is introduced for safety. The amount of learning for a guide dog is very high, however it is their decision making that sets them apart from other assistance dogs. Although it is the owner who announces when it is safe to cross a road, the dog too must be traffic aware, showing selective disobedience if their owner thinks it is safe to cross when it is not. Confidence in decision making is vital for a guide dog (Guide Dogs UK, 2014). [PHOTO]

The use of guide dogs has been part of European culture for hundreds of years; however, the first ever training school for guide dogs in the UK, Guide Dogs UK, was founded in 1931 (Fishman, 2003). There are currently around 4,800 guide dog owners in the UK. This is still only a small percentage of the 360,000 people in the UK who are registered as blind or

partially sighted due to severe or irreversible sight loss (RNIB, 2014). It is believed that a much greater percentage could benefit from owning a guide dog (Guide Dogs UK, 2014).

Hearing Dogs

Hearing Dogs for Deaf People, launched in 1982, train dogs to alert their hearing impaired or deaf owners to a number of specific sounds by touching their owner's foot with a paw, or nudging them with their nose. The dogs are trained to recognise up to seven different sounds, including fire alarms, kitchen timers, doorbells and telephones. When alerted to the sound, the owner asks "what is it?" using a signal or their voice, and their dog will lead them to the source of the noise, or lie down in the case of a fire alarm alert. [PHOTO] Hearing Dogs for Deaf People have trained over 1,600 dogs and currently have over 750 working partnerships in the UK (Hearing Dogs for Deaf People, 2014).

Mobility Assistance Dogs

Dogs for the Disabled, founded in 1988, were the first charity in the UK to train mobility assistance dogs for physically disabled adults. They have trained over 661 dogs, and currently have 278 working partnerships across England and Wales (Dogs for the Disabled, 2014). Canine Partners for Independence, founded in 1990, also train dogs to provide assistance with daily tasks that can be difficult, painful or impossible for people with mobility impairments to perform (Canine Partners, 2014). Mobility assistance dogs offer greater independence to people with mobility impairments through practical support; performing such tasks as opening doors, turning on lights and retrieving objects (Rintala *et al.*, 2008). [PHOTO]

Service Dogs

Mobility assistance dogs are defined as 'Service dogs' by Assistance Dogs International (2013). Other assistance dogs that come under this category include medical detection dogs,

autism assistance dogs and psychological assistance dogs. Medical detection dogs are kept as companion animals by people with medical conditions with symptoms that can be detected by the dog prior to their onset. The dog is trained to give a specific cue to the handler to warn them. For example, low blood sugar levels in a diabetic person or an oncoming seizure in someone with epilepsy (Wells et al., 2008). It has recently come to light that dogs are able to detect cancer volatiles from humans (Willis et al., 2004). Thus assistance in early cancer diagnosis could be a further role of medical detection dogs in the future.

Autism Spectrum Disorder (ASD) is a developmental disorder, often characterised by limited social skills, with individuals failing to read social cues and struggling to communicate with others (APA, 2000). Autism Assistance Dogs are paired with children on the autistic spectrum and help mediate social interactions between ASD children and others e.g. drawing attention away from linguistic communication; assistance dogs can be an invaluable tool to facilitate social interactions for these children (Solomon, 2010). Other duties these dogs provide include helping to calm the child if they are having a behavioural outburst, locating children who have bolted or wandered away from their responsible adult, interrupting repetitive behaviour and providing support in unfamiliar environments.

Whilst not currently utilised in the UK, other countries have introduced Psychological assistance dogs. These dogs work with people with a range of mental illnesses including depression and various anxiety disorders. Some of the duties carried out by these dogs include reminding their owners to take medication, helping to wake those whose medication makes it difficult to wake up, and providing support when feeling anxious.

Dual-purpose dogs

Recently organisations within Assistance Dogs UK have collaborated to train dogs in more than one assistance role for individuals that have more than one disability. This began in 2003 when Hearing Dogs and Guide Dogs trained a dog in both roles for a deafblind individual.

The benefits associated with assistance dogs are multidimensional. They help reduce the negative impact of an individual's condition over a variety of areas such as simplifying daily activities, increasing safety, encouraging positive social exchange and improving psychological well-being (Sachs-Ericsson *et al.*, 2002). Although the assistance dogs discussed have the shared purpose of assisting an individual with an impaired ability or sense, the advantages and motivations associated with ownership are somewhat varied.

Daily Life, Health and Safety Benefits

The most commonly reported benefit, as well as the main purpose of an assistance dog partnership, is the improved ability to carry out daily tasks (Lane *et al.*, 1998, Whitmarsh, 2005, Rintala *et al.*, 2008, Winkle *et al.*, 2012). Research conducted by Guide Dogs UK in 1999 showed that approximately 20% of visually impaired adults never leave their home without human assistance. The use of a guide dog renders the need for human assistance unnecessary in many cases, allowing enhanced freedom and participation in society (Whitmarsh, 2005). Retrospective studies showed that hearing, physical assistance and guide dogs enhanced functioning for their owners at home and in the community. Furthermore, self-care and chores within the home were made simpler with an assistance dog (Lane *et al.*, 1998, Fairman and Huebner, 2001, Rintala, 2002). The benefits to daily life of working with an assistance dog were best summarised as an overall increase in owner independence by Rintala *et al.* (2008).

When asked to make comparisons between guide dog partnerships and the use of visual impairment aids, guide dog owners specified that working with a guide dog was more relaxing

than using a cane (Whitmarsh 2005). Guide dogs avoid obstacles and lead their owners around them, whereas the use of a cane requires the individual to detect each obstacle first, in order to permit avoidance. Guide dogs are trained to be aware of all potential obstacles for their owner, including those above their own eye line, such as low hanging branches. Cane users are unlikely to detect such obstacles. Visually impaired individuals working with guide dogs felt that their quality of life had improved following the partnership; whereas those who received their first cane to aid with their impairment reported no such improvement (Whitmarsh, 2005).

Lane *et al.* (1998) conducted a study investigating claims by mobility dog owners on the benefits to their overall well-being, including influences on self-perceived physical health. 47% of mobility dog owners believed that their physical health seemed better since acquiring the dog. Many participants also reported that the dog allowed them to worry less about their health (51%) and 69% felt that they were generally 'more relaxed' since having the dog (Lane *et al.*, 1998). Dog ownership in general has been frequently cited to reduce health problems, doctor visits and use of medication (Serpell, 1991).

In a study by Hart *et al.* (1996) of 38 hearing dog owners, the majority felt that their dogs fulfilled their chief expectations. Being alerted to sounds was the most frequently mentioned reason for acquiring a hearing dog, with 51.6% of owners citing this reason, other reasons included companionship (15.3%) and protection (20.5%) (Hart *et al.*, 1996). In a survey of 403 current guide dog owners and 427 prospective owners, only 3% of male and 5% of female current owners, and 6% of potential owners applied to obtain a guide dog for protection (Whitmarsh, 2005). However, this was a commonly reported benefit of hearing dogs: owners reported an increased feeling of safety when alone since obtaining their dogs, due to the protection they felt the dogs offered. Lower stress levels compared to the control group of 15 individuals on a waiting list for a hearing dog were also reported (Hart *et al.*, 1996).

Psychological and Social Benefits

Although the most commonly reported benefits of having an assistance dog, as well as the primary reason for obtaining one, were related to support in carrying out daily tasks; the majority of assistance dog owners also described improvements in social interactions as a result of their partnership (Lane *et al.*, 1998, Sachs-Ericsson *et al.*, 2002, Whitmarsh, 2005, Guest *et al.*, 2006, Rintala *et al.*, 2008). In a study conducted for Dogs for the Disabled by Lane *et al.* (1998), 92% of assistance dog recipients reported an increase in social integration, and 73% noted that they had made new friends since the beginning of the partnership. Furthermore, Hart *et al.* (1987) and Eddy *et al.* (1988) reported that adults and children using wheelchairs recognised an enhanced number of positive social acknowledgements when accompanied by their assistance dog. Users of hearing dogs reported similar observations; 76.5% experienced an increase in interactions with the hearing community after receiving their dogs (Hart *et al.*, 1996). Guide dog owners not only reported similar quantitative improvements in social interactions with the public, but they also identified qualitative changes in these interactions. Guide dog owners surveyed by Whitmarsh (2005) described communication from the public as more respectful and less condescending following their pairing with a dog. The guide dog appears to act as a social facilitator for sighted individuals possessing little experience interacting with the visually impaired; providing a focal point away from the perceived disability (Whitmarsh, 2005). These findings indicate that the value of assistance dogs extends beyond daily working tasks, to include enhanced opportunities for positive social exchange.

Although the increased attention may have minor negative consequences, such as temporarily distracting the working dog, the subsequent psychological benefits of improved social integration are significant (Hart *et al.*, 1996). It is extremely difficult to separate the potential psychological effects of assistance dog ownership from pre-existing psychological differences that may motivate individuals to acquire a dog or not (Sachs-Ericsson *et al.*, 2002). However,

retrospective studies have been conducted, which strongly indicate positive psychological effects of assistance dog partnerships. Increased independence, better self-esteem, increased confidence and assertiveness, decreased feelings of loneliness and depression were improvements reported by over 70% of participants in each study (Valentine *et al.*, 1993, Fairman and Huebner, 2001). Self-esteem was measured by Rintala *et al.* (2002) using the Rosenberg Self-esteem Scale. Participants rated statements such as “I take a positive attitude toward myself” on a scale of 1-7, from ‘very untrue for me’ to ‘very true for me’. The results of the survey suggested that self-esteem improved after pairing with assistance dogs compared to before. Hart *et al.* (1996) found that hearing impaired individuals partnered with a hearing dog suffered less stress from stressful life events than those on the waiting list for a hearing dog. Furthermore, those in a hearing dog partnership reported significantly less loneliness than the waiting list group (Hart *et al.*, 1996).

Companionship was the third most important reason for acquiring a hearing dog, after alerting to sounds and protection (Hart *et al.*, 1996). A survey of mobility assistance dog owners showed companionship to be the second most frequently mentioned reason for desiring an assistance dog, after aiding with mobility impairments in daily life (Rintala, 2002). Along with increased mobility, confidence and socialising, companionship was cited as a significant benefit to guide dog ownership (Whitmarsh, 2005). The aforementioned reduction in feelings of loneliness reported by owners of each type of assistance dog would suggest that the assistance dogs do indeed act as important companions (Hart *et al.*, 1996). 93% of respondents to the survey by Lane *et al.* (1998) claimed that their dog is a valued member of the family. Companionship itself is known to benefit our psychological well-being. Studies on the positive impacts of canine companionship on humans show consistencies with the benefits associated with human company (Sachs-Ericsson *et al.*, 2002).

Although the majority of visually impaired people who apply for guide dogs, or other assistance dogs, do so for the mobility benefits of ownership, many additional benefits are realised once the partnership begins (Whitmarsh, 2005). Widely reported decreases in loneliness and improved social integration imply a significance of assistance dogs that far exceeds their initial assistance role (Hart *et al.*, 1996).

Impact on society

Despite widespread public recognition of the role of assistance dogs, there is a need for further evidence on their contribution to the One Health Initiative (strategy for integrating of human medicine, veterinary medicine and environmental science, www.onehealthinitiative.com), and to wellbeing and society. They are funded entirely through the third sector, and although this is unlikely to change, this should not preclude their contributions to society being recognised. The UN Convention on the Rights for Persons with Disabilities (2009) is a 37 page document which includes the general objectives for the convention. There is no mention of assistance dogs within this document, but it does outline an objective with emphasis on ‘research and development of... new technologies, including information and communications technologies.’ The UK Care Act 2014 has six aspects of their definition of wellbeing, including ‘physical and mental health and emotional wellbeing’, ‘control by the individual over day-to-day life (including over care and support provided and the way it is provided)’, and ‘participation in work, education, training or recreation’. This review has highlighted the many different ways in which assistance dogs may contribute to these aspects of an individuals’ wellbeing and social inclusion. Assistance dogs are also not mentioned in the 167 page document of the UK Care Act 2014, despite the emphasis of this Act on wellbeing, social inclusion and disabilities. There are a number of possible reasons for this. Research on the impact of assistance dogs make compelling reading, but the size and

type of studies limit the level of this evidence. The systematic review by Winkle et al. 2012, reviewed 12 published studies on the use of service dogs for people with mobility related physical disabilities, and described the evidence as ‘promising’ but ‘inconclusive and limited’ due to the issues with the quality and levels of evidence. However the impact of an assistance dog is complex, with many interlinking factors, such as the role of the dog, the dog’s behaviour and skills, the individual’s needs and involvement with society, the support framework within family and the community, and the interaction of an assistance dog partnership with society. Capturing all these aspects is challenging, and will require multi-disciplinary approaches, and novel methodologies which consider and balance the different components of an assistance dog partnership. Higher levels of evidence on the impact of assistance dogs are required to enable social care and policy makers to make evidence-based decisions, and to document and quantify the true role of assistance dogs within society.

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