The Impact of Service Dogs on Engagement in Occupation among Persons with Mobility Impairments: A Phenomenological Study

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Abstract

The use of service dogs as a form of assistive technology (AT) by people with disabilities is an emerging area. There is little research examining the impact of service dogs on engagement in occupation among persons with mobility impairments. This study used qualitative methodology via telephone, to explore the lived experiences of four service dog owners with mobility impairments. These lived experiences of the participants with their service dog included performance of daily occupations within the home, workplace and community. Data analysis indicated each participant’s service dog has a significant impact on their everyday lives and their ability to independently perform everyday occupations. Information gathered in this study may be used by service dog training organizations and individuals interested in obtaining a service dog. The positive outcomes reported by participants also indicated that service dogs could be suggested more as a form of AT for persons with mobility impairments.

*Keywords*: engagement in occupation, service dogs
Crepeau, Cohn, and Schell (2003) stated that occupations are “daily activities that reflect cultural values, provide structure to living, and meaning to individuals; these activities meet human needs for self-care, enjoyment, and participation in society” (as cited in American Occupational Therapy Association [AOTA], 2008, p. 628-629). According to AOTA (2008), daily occupations are broken down into categories including activities of daily living (ADLs), instrumental activities of daily living (IADLS), education, work, leisure, and social participation. ADLs are activities that involve taking care of one’s own body, such as bathing, dressing, eating and functional mobility. IADLs include activities such as care of others and pets, shopping and community mobility.

Engagement in occupation involves the performance of structured activities that extend over a period of time, which lay a foundation for meaning in an individual’s life (Trombly, 1995). Furthermore, engagement in occupation allows individuals to learn new tasks and broaden their personal experiences and, in return, obtain a positive outlook on life. Participation in everyday activities is important because it provides individuals with a sense of meaning and purpose in life. It is common for individuals to overlook the significance of participation in everyday occupations until the ability to do these occupations is lost or altered. Individuals who have faced any type of challenges in their lives, more specifically, physical challenges, may not be able to independently engage in desired occupations (Hammell, 2004).

According to Law (2002), an individual may encounter decreased independence as a result of living with an impairment, which results in a loss of meaning and can ultimately lead to a search for new ways to engage in occupation. When individuals have deficits in completing
day-to-day occupations, assistive technology (AT) is a tool that may be utilized to aid individuals in engagement in everyday occupations (Hoening, Taylor, & Sloan, 2003). According to the Technology-Related Assistance for Individuals With Disabilities Act of 1988 (Public Law 100-407), AT is “any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve functional capabilities of individuals with disabilities. AT service is directly assisting an individual with a disability in the selection, acquisition, or use of an assistive technology device.” AT can range from devices and services, to strategies and practices that can be taught to an individual (Cook & Polgar, 2007). The use of AT devices and services helps an individual to regain independence and function in various aspects of life (Agree & Freedman, 2003; Hammel, Lai & Heller, 2003; Hoeing et al., 2003; Souza, Kelleher, Cooper, Cooper, Iezzoni, & Collins, 2010).

AT is not limited to devices, as it includes a broad range of services. Due to the type of assistance service dogs provide their owners, they may be considered a form of AT. Use of AT may present obstacles in performing everyday occupations; however, service dogs may be a more successful alternative form of AT for some people with disabilities (Winkle & Zimmerman, 2009). Service dogs can perform many tasks to help their owners function more independently in daily activities. As described by Camp (2001), “Service dogs are used to enhance independence in occupational performance areas and contribute to improvements in psychosocial functioning. Given these benefits, service dogs could be used as a form of assistive technology…” (p. 509). Service dogs influence an individual’s engagement in occupation by providing assistance in functioning independently in daily activities such as ADLs and IADLs (Camp, 2001; Rintala, Matamoros, & Seitz, 2008; Winkle, Crowe, & Hendrix, 2011).
Assistance dogs are trained to help individuals with a broad range of disabilities. There are different types of assistance dogs that can be trained to help individuals engage in various occupations. Some examples of assistance dogs are guide dogs, hearing dogs, and service dogs for those who have a variety of impairments, including mobility impairments. Service dogs can be trained to help individuals with mobility impairments engage in occupations such as propelling wheelchairs, opening doors, retrieving dropped items, providing balance, and conserving energy. The use of service dogs can provide those with mobility impairments the chance to more fully engage in occupations (Rintala et al., 2008; Sachs-Erikson, Hansen, & Fitzgerald, 2002; Winkle & Zimmerman, 2009; Winkle et al., 2011).

Statement of Research Problem

There is a limited body of knowledge regarding how service dogs impact engagement in occupation among individuals with mobility impairments. A study conducted by Camp (2001) provided preliminary research supporting the idea that service dogs can assist with performance of occupations. However, Camp indicated that there was a need for further research regarding how assistance dogs compare to an individual’s prior form or forms of AT. Furthermore, there could be a potential positive impact on the owner’s independent functioning in daily activities. In a literature review conducted by Winkle et al. (2011), it was concluded that additional qualitative studies should be conducted to examine the meaningfulness of service dog use, and provide comparison of previous AT with current service dog use.

Purpose of the Study

The purpose of this phenomenological qualitative study was to explore how service dogs impact engagement in occupation among persons with mobility impairments that affect gait or balance. This study built upon previous research by exploring, from the owners’ perspective,
how their service dog influenced their engagement in occupations inside the home and throughout the community. This study further explored the service dog owners’ feelings related to their independence level in performing daily activities before and after obtaining their service dog, comfort level going into the community with their service dog, and how their service dog compared to AT used in the past.

**Theoretical Perspective**

The Model of Human Occupation (MOHO) and Rehabilitative Frame of Reference (FOR) were used to guide this study. Both of these theories are foundational in the discipline of occupational therapy. MOHO was first introduced by Gary Kielhofner in the early 1970’s. It is an occupational therapy practice model that has been developed and expanded throughout the last three decades (Bruce & Borg, 2002). According to Kielhofner (2009), “MOHO conceptualizes occupational therapy as a process in which clients engage in occupations that shape their abilities, routine ways of doing things, and thoughts and feelings about themselves” (p. 154). This theory supported the qualitative design of this study, and the holistic approach of using interviews to explore the lived experiences of the participants. According to MOHO theory, service dogs could have the potential to impact their handlers’ volition because of the assistance and motivation they provide to perform daily occupations in a variety of environments. In addition, this theory guided this study because it looked beyond an individual’s physical impairments and focused on aspects such as habits, routines, roles and motivations that influenced an individual’s performance of daily activities (Kielhofner, 2009).

The Rehabilitative FOR also helped direct this study. According to Pedretti (2006), “The focus of [rehabilitative] intervention is often engagement in occupation through alternative means” (p. 39). This FOR addresses an individual’s current capabilities while teaching him or
her compensatory methods of using their body to perform activities, or implementing the assistance of adaptive equipment to perform daily activities (Pedretti, 2006). This specifically applied to our study because the participants utilized their service dog as AT to engage more independently in daily occupations. Therefore, by using their service dog as a compensatory strategy, the handler can be enabled to regain function in the performance and completion of daily tasks within the home, workplace, and community.

Research Questions

The following research questions were addressed in this study:

1. In what ways does your service dog impact your independence in performing daily occupations?
   a. How has your service dog, as a form of assistive technology, impacted your performance of ADLs? IADLs?
   b. How has performing your daily occupations been impacted from before receiving your service dog, and after receiving your service dog?

2. How does having a service dog influence your participation in social activities?
   a. In what ways does your service dog affect how you feel about going into public/going to public places?
   b. How does your service dog affect your comfort level in public places? In your home?

3. How does your service dog compare to other forms of assistive technology that you have used in the past?
   a. Was there an external factor that influenced your decision to utilize a service dog as a form of assistive technology? If so, what was it?
b. Do you feel that you use your service dog, or other assistive devices, more frequently in daily activities? Why?

**Definition of Terms**

**Activities of daily living (ADLs).** Tasks oriented towards the care of one’s body. These tasks involve basic survival skills that contribute to one’s social engagement and overall well-being (AOTA, 2008).

**Instrumental activities of daily living (IADLs).** Tasks used to gain meaning in one’s home and community. These tasks are more complex and individualized than ADLs because they involve high-level performance skills (AOTA, 2008).

**Engagement in occupation.** The act of participating in meaningful activities that structure an individual’s life and contribute to one’s well-being. Participating in meaningful occupations that relate to activities of daily living, instrumental activities of daily living, rest and sleep, education, work, play, leisure, and social participation (AOTA, 2008).

**Assistive technology.** As defined by the Technology-Related Assistance for Individuals with Disabilities Act of 1988 (Public Law 100-407), AT is “Any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified or customized, that is used to increase, maintain or improve functional capabilities of individuals with disabilities.”

**Assistance dog.** A general term for service dog, which includes three types of dogs: guide, hearing, and service dogs. These dogs live with their handler for the purpose of assisting in daily tasks that cannot be performed independently (Assistance Dog International Inc. [ADI], 2011; Sachs-Erikson et al., 2002).
**Service dog.** “Dogs specially trained to assist with functional tasks and mobility for individuals with mobility limitations…” (Collins, Fitzgerald, Sachs-Ericsson, Scherer, Cooper & Boninger, 2006, p. 42).

**Independence.** The ability of an individual to be autonomous in the completion of goal-oriented activities and behaviors in a satisfying manner. Independence could involve an individual performing the activity in an adapted or modified environment, utilizing AT, or self-directing a caregiver to complete the activity (AOTA, 2008).

**Significance of Study**

Prior research supports the use of service dogs to assist individuals with mobility impairments in performance of daily activities and functional tasks (Camp, 2001; Fairman & Huebner, 2000; Rintala et al., 2008; Winkle et al., 2011). However, as stated by Camp (2001), “Because the use of service dogs has only recently gained attention, research is extremely limited. [Research] has only begun to explore a number of common experiences among service dog owners…” (p. 516). Winkle et al. (2011) stated that, “From an occupational therapy perspective, the recommendation for service dogs as assistive technology [AT] options is an emerging practice area, and the evidence of the effectiveness is in its infancy” (p. 55). Therefore, this study built upon prior research by exploring how the participant’s service dog impacted, as a form of AT, their engagement in occupation by providing assistance in daily activities inside the home and throughout the community. This study will investigate the owners’ perceptions regarding their independence levels before and after obtaining their service dog, their comfort level going into the community with their service dog and how their service dog compares to AT used in the past, prior to obtaining their service dog.
The increase in knowledge concerning service dogs could potentially have a positive outcome on society in general. In particular, the information gained from this study could be used by service dog training organizations to improve the training and services provided to persons with mobility impairments.

Limitations of Study

The main limitations for this study concerned the method of sampling and inability to generalize findings to an entire population. The participants were not obtained randomly; instead, convenience sampling was used. The participants in this study were four Caucasian females who responded through the same certified service dog training organization, in the same geographic location.

Review of the Literature

Prior research has indicated that service dogs have been used as a form of AT among individuals with mobility impairments. The purpose of the following literature review was to explore the current literature surrounding how service dogs are used to aid individuals in engagement in daily occupations. This literature review will begin with an overview of engagement in occupation, and how various disabilities may impact one’s performance in daily occupations. Next, a discussion of what AT is, how AT has an impact on engagement in occupation, and the advantages and disadvantages of different types of AT will be covered. Then, a description of service dogs will be provided. How service dogs function as a form of AT will be discussed last, with emphasis placed on the facilitation of engagement in meaningful occupations through use of a service dog.

Engagement in Occupation

According to Law (2002), participation in occupations is a fundamental part of everyday living, and contributes to the process of forming meaning and purpose in one’s life. There are
several areas of occupation that individuals participate in on a routine basis including ADLs, IADLs, rest and sleep, education, work, play, leisure, and social participation (AOTA, 2008). Many individuals do not think about the routine tasks they perform from day to day as meaningful occupations. Tasks often become so familiar and usual to people that they tend to become second nature. Turning on light switches, picking up objects off the floor and opening doors are tasks that many people complete without a second thought. Occupations consist of everything people do to occupy themselves including looking after themselves, homes and others (ADLs and IADLs); enjoying life (leisure); and contributing to the social community (social participation) (Hammell, 2004). When individuals engage in purposeful and meaningful activities, they gain meaning and an overall positive outlook on life (Law, 2002).

However, when individuals are not engaging in meaningful occupations in the capacity they desire, it can lead to a loss of meaning and less positive outlook on life. Hammell (2004) stated that “One of the primary consequences of an illness or injury is the cessation of doing: the ability to engage in personally meaningful occupations” (p. 298). Disabilities, whether congenital or acquired, can impact an individual’s ability to engage in meaningful occupations. Specifically, impairments that affect mobility in the areas of gait and balance influence the way that individuals perform occupations within the home and in the community. For example, Hammell (2004) described an individual who experienced a spinal cord injury. This impairment affected the individual’s mobility, and his ability to engage in occupations that were once routine, such as bathing, dressing, grooming, and functional mobility, was lost. The disruption to his engagement in occupation resulted in a loss of structure, meaning, and purpose in his life.

Lund and Nygard (2004) conducted a qualitative study to investigate how individuals with disabilities engage in occupations within the home environment. Thirteen people between
the ages of 25 and 73 years of age with physical disabilities related to the medical diagnoses of stroke, spinal cord injury, traumatic brain injury, multiple sclerosis and rheumatoid arthritis participated in the interviews. Eleven of the individuals utilized a wheelchair for mobility. Open-ended questions were used, and the data was analyzed using the constant comparative method (Lund & Nygard, 2004).

The results indicated that there are many conditions that influenced engagement in occupation in the home setting including intra-personal conditions, rehabilitation conditions, housing conditions, and social support conditions. Access to social support was determined to be the central category influencing the participant’s engagement in occupation in the home. All of these individuals experienced changes in the way they participated in occupations within the home as a result of their disabilities. The first main theme identified, “occupations – always performed with others,” referred to the fact that these individuals required continuous interaction with others. Some participants mentioned missing the quiet and/or relaxing time alone. The second main theme, “occupations – occasionally disrupted,” reflects that some individuals still participated in their desired occupations independently. However, at times these individuals had disruptions or difficulties related to their personal caregivers (support), such as having their guests wait while their caregiver offered them assistance. The final main theme, “occupations – deprived,” suggests that some participants felt as though their impairment had significantly affected their ability to engage in occupations. These individuals expressed a dependence on support from others to leave their beds and engage in any occupations (Lund & Nygard, 2004).

It was noted that the inclusion criteria of this study excluded participants who received support from people close to them and therefore, was partial to individuals using complex social service and rehabilitation services. Additionally, because of the dependence on caregivers these
individuals displayed and their desire to engage in meaningful occupations, it was suggested that further research be conducted to examine how informal and formal supports facilitate or inhibit meaningful occupational experiences among individuals (Lund & Nygard, 2004). The findings from this study indicated that individuals who experience a physical challenge, such as a mobility impairment, may need support from personal caregivers and others to engage in occupations. Therefore, the use of a service dog could be a potential positive support, reducing the dependence on caregivers.

Lexell, Lund and Iwarsson (2009) conducted a qualitative study that revealed similar themes to those reported by Lund and Nygard (2004) in regards to the impact that disabilities have on satisfactory engagement in meaningful occupations. The experience of individuals with multiple sclerosis (MS) was examined in relation to their engagement in occupation. Ten participants between the ages of 41 and 67 were interviewed in the study, and the data was analyzed using a constant comparative method of grounded theory. According to Lexell et al., (2009) “Our participants perceived themselves as being in a constant struggle with different forces to remain engaged in occupations that they found meaningful” (p. 779). The core category found in the study was that the participants felt as though their lives were constantly changing due to the difficulties of their physical impairment. Four underlying categories identified by the researchers included decreased engagement in meaningful occupations; from constantly struggling for engagement in occupation; to being a different person; compared to living life differently. The participants in the study noted that being unable to engage in prior occupations in a satisfactory manner affected feelings of competence, and resulted in a search for other meaningful occupations to engage in (Lexell et al., 2009).
Research clearly indicates that when engagement in occupation is lost, altered or decreased, an individual may encounter decreased independence, which results in a loss of meaning in life and a search for renewed competence and structure in life (Hammell, 2004; Lexell et al., 2009; Lund & Nygard, 2004). This could occur through engagement in new occupations, or the use of new strategies to engage in these activities (Law, 2002). One approach to assist these individuals engagement in meaningful occupations is the use of AT (Agree & Freedman, 2003; Hammel, Lai & Heller, 2003; Hoeing et al., 2003; Souza, Kelleher, Cooper, Cooper, Iezzoni, & Collins, 2010).

**Assistive Technology**

AT can provide assistance in the performance of everyday occupations such as eating, bathing, dressing, community outings, social activities, and functional mobility. Different types of AT devices include but are not limited to wheelchairs, crutches, walkers, canes, back/leg/arm braces, raised toilet seats, grab bars, portable oxygen tanks, shower seats, tub stools, and elevators (Hoeing et al., 2003). Persons with disabilities may have a difficult time performing in areas of occupation including ADLs, IADLs, rest and sleep, education, work, play, leisure and social participation; therefore, AT is an option available to utilize in any of these areas (Agree & Freedman, 2003).

Many people with disabilities need resources, such as AT devices, which can accommodate their individual needs to help them more fully participate in the community (Hammel et al., 2003). A lack of personal independence in daily activities can be detrimental to an individual’s independence and well-being (Kennedy, 2001). These individual needs can be addressed with AT, which is capable of facilitating independence and mobility in daily activities of individuals with disabilities. AT is one form of adaptation that impacts an individual’s
engagement in occupation and helps individuals with disabilities achieve functional independence.

When individuals experience difficulties with their gait or balance, which may ultimately affect their ability to independently engage in meaningful occupations, AT devices may be useful tools to enhance their mobility and increase their independence (Souza et al., 2010). Souza et al. (2010) conducted a systematic review of the literature published on mobility assistive technology (MAT) devices to facilitate mobility in persons with multiple sclerosis (MS). These authors were able to locate 50 articles that provided research based-evidence regarding the type of MAT device and how it could benefit an individual with MS. A study with 101 persons with MS revealed that they wanted to become MAT users to enhance their mobility and independence. Individuals with MS could benefit from utilizing a MAT device because the device could “potentially diminish activity limitations and participation restrictions, prevent or reduce fatigue by energy conservation and, ultimately, improve quality of life” (p. 215). MAT devices are also useful because they are designed to improve one’s ability to function in his or her community while increasing one’s independence (Souza et al., 2010). This systematic review showed that among individuals with MS, the use of an assistive device (AT) allowed one to ultimately increase their engagement in occupation by conserving their energy and lifting activity limitations and participation restriction. The authors concluded that an increase of participation in engagement in occupation leads to an overall increased quality of life for these individuals.

Another study regarding the use of AT for persons with disabilities was conducted to compare the use of AT and assistance from a caregiver. Hoenig et al. (2003) conducted a cross-sectional study on persons over 65 years of age, with one or more limitations in ADLs. This study examined the similarities between technological assistance (AT) and personal assistance.
The results of this study indicated that people who had one or more ADL limitations used technological assistance to help them cope with their disability. The findings in this study “clearly support the hypothesis that technological assistance might substitute for at least some personal assistance in coping with a disability” (Hoeing et al., 2003, p. 335). Results of this study indicated that individuals with a physical disability who experienced limitations with performing ADLs preferred using a technological (assistive) device rather than receiving assistance from a caregiver.

Despite the advantages, there are also disadvantages to using AT. These include a lack of consumer motivation to use the device, or unwillingness to perform a task. If the individual has no motivation in the first place, then it is likely that an AT device will not be utilized. There may also be problems accessing the device and maintaining and repairing the device (Hoeing et al., 2003). Alper and Raharinirina (2006) performed a systematic literature review that found that there is a lack of instruction on how to operate an assistive device properly, and/or if the device is not matched properly to satisfy an individual’s needs.

Because of the inconveniences associated with using AT, many individuals reject their AT device shortly after receiving it. “Many different factors influence whether assistive technology will serve as an enabler or barrier to occupational performance” (Polgar, 2006, p. 200). There are two key factors that influence whether AT will serve as an enabler of or barrier to, occupational participation. The first factor included a variety of personal features that are involved when trying to make the most effective AT-person match, including: an individual’s opinion in response to AT; stigma that may be associated with a particular assistive device; and how an individual feels about completing different occupations with the AT. The second factor included social or environmental components such as the inconsistency of tool use and also
different individuals in the social environment that may have an influence on one’s health care including professionals, family, friends, and others (Polgar, 2006).

Another possible disadvantage of using AT is the possibility of abandonment. The abandonment rate for AT use is roughly 33%; abandonment typically occurs within the first three months of obtaining the AT (Winkle & Zimmerman, 2009). AT abandonment is likely to occur when the client’s needs and preferences are not fully considered; changes in one’s level of function; the device is unsuccessful in meeting the individual’s needs; the individual does not receive proper training with the device; lack of motivation to use the AT; and lack of accessibility to the AT (Winkle & Zimmerman, 2009). Additionally, prior research regarding AT abandonment proposes that individuals learn shortly after operating the device, whether or not it will work for them. If it does not work for them, they no longer have the assistance from a device with completion of everyday occupations. AT abandonment is reduced when client’s needs are met. Specific needs include: “improved physical functioning and well-being, quality of life, social participation within meaningful context and a decreased need from others” (Winkle & Zimmerman, 2009, p. 14). Service dogs have the potential to meet these specific needs.

AT has been discussed as being a particular type of device or piece of adaptive equipment that can help a person with a disability become more functional and increase engagement in his or her desired occupations. “Enabling persons with disabilities to take full advantage of AT is imperative for their success in home, school, and community settings” (Alper & Raharinirina, 2006, p. 53). Because service dogs possess the ability to assist persons with disabilities by improving independence and participation in occupations, they can be considered an alternative form of AT (Camp, 2001; Fairman & Huebner, 2000).
History of Assistance Dogs

Dogs have been man’s best friend for many years. The first formal training of dogs to be used to assist persons with disabilities began at the end of World War I, with dogs being trained to lead the blind. Since then, dogs have been trained to perform a variety of different tasks to help people with various disabilities (Duncan, 2000; Ng, James, & McDonald, 2000; Sachs-Erikson et al., 2002). The training of assistance dogs for persons with disabilities besides blindness was first initiated in the mid-1970s, when dogs began to be trained to assist individuals with mobility impairments and deafness (Sachs-Erikson et al., 2002). Within the past 25 years, there has been a significant increase in the use of assistance dogs for disabilities other than vision impairments, and there are now a number of different types of assistance dogs (Olson, 2002).

Assistance Dogs

The term assistance dog refers to specially trained dogs which assist individuals with disabilities (ADI, 2011; Sachs-Erikson et al., 2002; Winkle et al., 2011). Within the general category of assistance dogs there are different types of assistance dogs specifically trained to assist individuals with different types of disabilities. There are three main types of assistance dogs, which include guide dogs, hearing dogs, and service dogs (ADI, 2011; Sachs-Erikson et al., 2002; Winkle et al., 2011; Winkle & Zimmerman, 2009). Guide dogs assist individuals with vision impairments or blindness by guiding them in the community and assisting with safety in tasks such as crossing streets (ADI, 2011; Winkle et al., 2011; Winkle et al., 2009). Hearing dogs assist individuals with hearing impairments or deafness by alerting them to sounds such as a doorbell, phone call or smoke detector (ADI, 2011; Rintala et al., 2008; Winkle et al., 2011; Winkle et al., 2009).
Service dogs can assist people with vision and hearing impairments, but are seen more often aiding individuals with completion of daily activities (Winkle et al., 2011). These are individuals commonly seen with mobility impairments resulting from conditions such as muscular dystrophy, spinal cord injuries, multiple sclerosis, cerebral palsy, polio and postpolio syndrome, and acquired brain injuries (Sachs-Erikson et al., 2002).

**Service Dogs**

**Characteristics.** Mariti, Ricci, Carlone, Moore, Sighieri and Gazzano (in press) stated that over time, dogs have been used to aid people in the completion of a variety of leisure tasks (i.e. hunting, guarding & pulling sleds) as a companion. More recently, dogs have been utilized to complete occupational tasks while still acting as a companion. In order to complete these occupational tasks, service dogs must possess certain characteristics such as “…sociability, self-confidence, courage, adaptability, trainability, stamina and confidence to approach strangers and move in different situations” (Mariti et al., in press, para. 3). Because of the demands and expectations placed on service dogs, it is important that they possess appropriate temperament for the job. Service dogs must be calm in a variety of situations as they accompany their handler to many public places such as school and work settings, restaurants, malls, hospitals and churches. In addition, they must be people-oriented and remain at ease even if people attempt to pet them when in public situations. Service dogs cannot be protective, because that could lead to undesirable and dangerous behavior when other people approach their handler. In addition, it is important for a service dog to be focused and capable of ignoring many distractions in public (ADI, 2011; Froling, 1998).

Golden retrievers and Labrador retrievers are the most common breeds of dogs to be trained as service dogs (ADI, 2011; Froling, 1998). Both golden retrievers and Labrador
retrievers are recognized for their easiness to train and laid-back personality. They are generally large enough to pull wheelchairs and pick up objects, but small enough to fit on buses, airplanes, or under the table at restaurants. When matching an individual with his/her service dog, it is important to consider the individual’s size and need of assistance when choosing a gender and breed. This is to ensure that the dog is large enough to provide adequate support and to pull the handler’s wheelchair if necessary (Froling, 1998; ADI, 2011).

**Training.** Training service dogs is a challenging and expensive process; the cost of training a service dog appropriately is very high, and ranges from $20,000 to $30,000 (4 Paws for Ability, 2013; Keystone Human Services, 2013; Paws With a Cause, 2013). In addition to training costs, there are costs for food and veterinary care (Rintala et al., 2008). Because most individuals in need of a service dog are unable to afford the high prices, many service dog-training programs are non-profit organizations, which provide service dogs to individuals who qualify at no cost. In the United States the two largest service dog training organizations are Paws With a Cause and Canine Companions for Independence, but there are also many smaller regional programs that provide training for service dogs (Sachs-Erikson et al., 2002).

Assistance Dogs International, Inc. (ADI) is an association of non-profit organizations that provide training and placement of service dogs. The purpose of ADI is to educate staff, volunteers and the public about service dogs, while also aiming to improve the standards for training, placement and utilization of service dogs (ADI, 2011). ADI has developed minimum standards for the training of service dogs. These are designed to make sure that service dogs are well-trained before they are placed with handlers. Some of the requirements listed consist of a necessary level of responsiveness to commands and obedience skills. Additionally, it is required
that the service dogs wear a cape, harness, backpack, or comparable equipment with an easy to read logo that identifies the dog as a service dog (ADI, 2011).

**Use of service dogs.** Service dogs are trained to perform a broad range of functions for their owners around the house and in public settings to facilitate the owner’s independence and engagement in occupation. Fairman and Huebner (2000) conducted a survey study containing both open-ended and closed-ended questions to investigate the impact of service dogs on persons with disabilities, by identifying advantages and disadvantages of service dogs. There were twenty-eight questions organized in four categories: “…activities of daily living, work and productive activities, play and leisure activities and miscellaneous” (Fairman & Heubner, 2000, p. 44). All the questions elicited positive feedback, indicating that service dogs assist individuals in ways unique to their needs. Specifically, the activities that required the highest service dog use consisted of, “getting around the community and home, obtaining and using communication equipment, shopping, cleaning and allowing respondents to engage in play or leisure activities” (Fairman & Heubner, 2000, p. 44). The participants in this study reported that the use of a service dog increased their engagement in the activities (occupations) listed.

Rintala et al. (2008) conducted a pre-post, wait-list controlled pilot study to assess the impact of assistance dogs on persons with mobility and hearing impairments. The study consisted of a predog (before obtaining an assistance dog) and postdog (after obtaining an assistance dog) task checklist; 12-Item Short Form Health Survey (SF-12); Functional Independence Measure (FIM); Craig Handicap Assessment and Reporting Technique (CHART): Physical Independence, Mobility, and Occupation Subscales; and a Satisfaction with Life Scale (SWLS). The results obtained from persons with assistance dogs were analyzed separately from those obtained from persons with hearing dogs. Results of the study revealed that individuals
who received an assistance dog were very satisfied with a mean score of 8.94 on a 10-point scale. Seventy-eight percent of the participants indicated that the greatest impact that their assistance dog provides is retrieval of items. Other tasks that had a positive impact on participants included provision of emotional support; helping the participant stand, walk, and balance; carrying items; turning light switches on and off; and opening doors. The participants also reported that having an assistance dog changed the way in which their daily tasks were completed. The dogs were able to complete tasks such as, retrieving items, pulling towels from a rack and placing them in a hamper, carrying a bag, picking items off store shelves, helping pull linens from beds and/or pull clean linens into place.

Rintala et al. (2008) reported perceived negative aspects of owning an assistance dog from the participants including the high cost of care; undesired attention in public places; and excess housekeeping chores. Although it was found that there are many positive aspects to owning an assistance dog, such as needing less human assistance and changing the way in which tasks were performed, the results of the SF-12, FIM, CHART and SWLS from pre- to post- dog placement yielded no significant differences. This may be due to the small sample size of the study or the limited amount of time of owning an assistance dog before the post tests were conducted. The authors also concluded that the small positive changes of owning an assistance dog may not outweigh measures of participation, functioning, health status and overall life satisfaction.

In a literature review, Winkle et al. (2011) stated that the main benefits service dogs provide to their owners include an increase in social participation, as well as functional and psychological outcomes. An extensive search was conducted over two years to find articles to support the integration of occupational therapy into service dog training and placement. After
narrowing down the 551 articles with very specific inclusion and exclusion criteria, 12 studies were analyzed. Many articles identified positive and negative changes in social participation, from prior to owning a service dog to after receiving their service dog. Several articles identified that individuals felt like they made new friends and that they were often approached in public. Two articles identified that in public places, the individuals felt that they were purposely avoided when they did not have their dog, and now with their dogs, they felt like they belonged in public. The negative aspect about taking the dog in public was that individuals would often give them attention while they were being trained or while they were working.

Winkle et al. (2011) concluded that with social participation, the overall findings were positive and all individuals felt more comfortable in the community. A main outcome is that service dog owners felt that they could be more independent with their dogs and were able to let their caregivers participate in more desired activities. Winkle et al. (2011) concluded after the extensive literature review that more studies, which have rigor and credibility, need to be completed on the topic of service dogs and occupational therapy aid in training. She did not feel that any of the current articles demonstrated high levels of evidence due to the studies having a small sample size, and inconclusive or limited evidence.

**Skills of service dogs.** Service dogs possess skills that are helpful for individuals in their daily routines. These skills consist of picking up dropped items, turning light switches on and off and retrieving the phone. Service dogs assist with functional mobility and balance by pulling wheelchairs and assisting in bracing during transitional movements, such as sitting to standing or moving from a wheelchair to a seat. In addition, their ability to open doors is helpful for their handlers in both the home and the community (Sachs-Erickson et al., 2002; Winkle & Zimmerman, 2009; Winkle et al., 2011).
By assisting individuals in gathering items for activities of daily living, service dogs are able to help their handlers conserve energy, which can be concentrated on more meaningful occupations for the individual throughout their home and community (Sachs-Erikson et al., 2002; Winkle & Zimmerman, 2009). As well as conserving energy, prior research has shown that a service dog can decrease the number of hours that caregivers are needed per day (Fairman & Huebner, 2000; Ng et al., 2000; Rintala, et al., 2008; Winkle et al., 2011). By providing assistance throughout the execution of ADL’s, work and productive activities, play and leisure, service dogs can function in place of a caregiver in many situations (Sachs-Erikson et al., 2002; Rintala et al., 2008; Winkle & Zimmerman, 2009; Winkle et al., 2011).

In addition to increasing independence in areas of occupation, research has shown that service dogs increase an individual’s psychosocial functioning such as increased self-esteem, increased social interaction, decreased stress, and greater internal control (Camp, 2000; Fairman & Huebner, 2000; Rintala et al., 2008). With an increase in areas of occupation and psychosocial functioning, one is able to better engage in everyday occupations (AOTA, 2008).

In conclusion, the reviewed literature indicated that being physically able to engage in meaningful occupations that structure a person’s life can be difficult for those who have mobility impairments. AT is a device that can allow individuals with mobility impairments the chance to become functionally independent in everyday activities. AT has been shown to be highly useful when an individual’s perspective is considered in the selection of the assistive device to avoid the possibility of AT abandonment. Individuals with disabilities should be made aware of the broad range of AT options available to them. A service dog could prove to be the best option for that individual once his or her needs and preferences are considered, which can potentially lead to a decrease in abandonment (Winkle & Zimmerman, 2009). Prior research has suggested that
service dogs can be utilized as a form of AT, but there is a lack of literature exploring the use of service dogs to help individuals engage in occupations within their homes and communities (Camp, 2001; Fairman & Huebner, 2000; Sachs-Eriksson et al., 2002; Winkle et al., 2011).

**Methods**

**Research Approach and Design**

This study utilized a phenomenological research design involving qualitative interviews with four participants. This approach allowed the researchers to learn the lived experiences of each participant’s engagement in occupation while using a service dog. The participants were obtained through convenience sampling and snowball sampling. A recruitment flyer was posted on the participating organization’s Facebook page and the recruitment flyer was also emailed to the members of the organization. The flyer had contact information in which three of the four participants contacted the researchers. The fourth participant was obtained through one of the initial participants.

**Participants**

The population for this study consisted of adults over 18 years of age, who have used a wheelchair for a minimum of one year, and have a service dog trained by an organization that is a member of ADI. The service dog had to assist them with completion of ADLs such as functional mobility and retrieving items; IADLs; such as caring for another living being and community mobility; work; and play, and/or leisure. In order to participate in this study, individuals had to be over the age of 18, have had their service dog for at least one year, and speak English. Persons not having their service dog for at least one year were excluded from this study.
Apparatus

Phone interviews were recorded using a RadioShack Telephone Handset Recording Control, model 43-1237. To use the recorder, the mini recorder control was connected to a tape recorder and phone headset.

Instrumentation

Data was collected through in-depth and semi-structured interviews. An interview schedule with general questions was used to guide the interview on service dog experiences. The questions focused on the impact of a service dog on the individual’s engagement in occupation. More specifically, the questions explored service dog owners’ feelings related to their independence level in performing daily activities before and after obtaining their service dog, comfort level going into the community with their service dog, and how their service dog compares to AT used in the past.

Two individuals with experience working with service dogs reviewed the interview questions to ensure that they were formatted clearly, so that the researchers were able to gain the most accurate and useful information. Questions were modified as needed, based upon feedback that was provided.

Procedures

Study site. The investigators made phone calls from a university campus in Michigan. The interviews were conducted at times that were most convenient for the participants. Data analysis also occurred on the university campus.

Data collection. The interviews were conducted in an in-depth, semi-structured format. The interviewers used an interview schedule to direct the interview. The researchers probed for more information by asking additional questions based on participant responses. These
interviews allowed the researchers to learn about the lived experiences of individuals using service dogs to engage in occupations.

Each participant completed one, one-on-one, in-depth interview via telephone. Each interview lasted approximately 45 to 90 minutes. The process of compiling and recording thoughts and ideas during each interview enhanced the credibility of the study. Data saturation was met when no new data obtained through interviews was present and reoccurring themes were observed. Trustworthiness was gained through researcher triangulation, which utilized a team of researchers to collect and analyze data in order to prevent biased views of one individual researcher (Patten, 2009).

**Data Analysis.** Open, axial, and selective coding were used in data analysis. Transcription occurred first, in which the interviews were typed into a document. Next, open coding was used to analyze the data and place it into categories and subcategories. At this stage, only the transcription of the interviews was examined. Axial coding was then used to determine any common themes among participants. The notes taken during the interview were added into the data (Patten, 2009). Lastly, selective coding was used to tie in over-arching ideas between generalized themes.

In order to ensure trustworthiness of this study as well as the reliability and validity of its outcomes, several measures were used. Triangulation was utilized by a team of researchers taking handwritten notes while interviewing the participants. Member checking was also used to ensure that the researchers captured the experience of the participants. Peer examination was utilized to ensure credibility by discussing results and findings among two individuals with experience. Lastly, transferability was enhanced by providing in depth descriptions of the participants (Krefting, 1991).
Results

Four female participants (see Table 1) were interviewed in this phenomenological study. The names of the participants and their service dogs were changed due to confidentiality. Each participant was interviewed one time, with interviews lasting between forty-five and ninety minutes.

Table 1

<table>
<thead>
<tr>
<th>Age</th>
<th>Disability</th>
<th>Name of Dog</th>
<th>Age of Dog</th>
<th>Breed</th>
<th>Years owned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sue</td>
<td>50</td>
<td>Multiple Sclerosis</td>
<td>Tulip</td>
<td>8</td>
<td>Black Lab, 5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Felix</td>
<td>Deceased</td>
</tr>
<tr>
<td>Linda</td>
<td>61</td>
<td>Multiple Sclerosis</td>
<td>Frisky</td>
<td>9</td>
<td>Black Lab 7</td>
</tr>
<tr>
<td>Jane</td>
<td>30</td>
<td>Progressive Epilepsy</td>
<td>Jet</td>
<td>4</td>
<td>Labradoodle 2</td>
</tr>
<tr>
<td>Ruth</td>
<td>27</td>
<td>Undiagnosed muscular</td>
<td>Bailey</td>
<td>3.5</td>
<td>Yellow Lab 1</td>
</tr>
</tbody>
</table>

Following analysis and coding of the data, five broad themes appeared (see Table 2): service dogs serve as a form of AT, emotional support, social context, unique personalization of service dog, and extra work caring for service dog. All of the participants expressed what a significant impact their service dog has made on their everyday life and their ability to independently perform everyday occupations.
Table 2

Main Themes and Subthemes

<table>
<thead>
<tr>
<th>Main Themes</th>
<th>Subthemes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Dogs as a form of AT</td>
<td>ADLs and IADLs</td>
</tr>
<tr>
<td></td>
<td>Less reliance on others, safety and</td>
</tr>
<tr>
<td></td>
<td>energy conservation</td>
</tr>
<tr>
<td>Emotional Support</td>
<td>Positive situations</td>
</tr>
<tr>
<td>Social Context</td>
<td>Challenging situations and</td>
</tr>
<tr>
<td></td>
<td>education of others</td>
</tr>
<tr>
<td>Unique Personalization of Service Dog</td>
<td>Training and matching process</td>
</tr>
<tr>
<td>Extra Work Caring for Service Dog</td>
<td>Extra expenses</td>
</tr>
<tr>
<td></td>
<td>Moods of service dogs</td>
</tr>
</tbody>
</table>

Service dogs act as a form of AT because of the assistance they provide in performing and completing ADLs and IADLs. This support results in less reliance on others, energy conservation, and an increase in the handler’s safety. Because of the constant support and interaction between the service dog and handler, a strong emotional attachment develops. This results in emotional support and a feeling of teamwork. With their service dog by their side, handlers feel better equipped to participate in social contexts. Over time, handlers and their service dog become familiar with each other, and develop unique signals and ways of communicating with one another. This is personal to each team and allows handlers to adapt
their dog to meet their needs. Finally as noted by participants, there is extra work and expenses to owning a service dog. The process of obtaining a service dog can be long and requires patience. Sometimes the dogs can be uncooperative; however, the participants expressed that all additional work and time pays off.

**Service Dog used as a form of AT**

The first broad theme expressed by the participants was that service dogs provide valuable assistance in completion of everyday activities within the home and community. The support that service dogs provide, as a form of AT, allows handlers to engage in everyday occupations more independently.

**ADLs and IADLs.** Participants shared that their service dogs help them in performing daily occupations including bathing and showering, dressing, functional mobility, personal hygiene and grooming, and toilet hygiene. Sue discussed how her service dog assists her in the ADL of dressing and undressing: “She’ll take my coat off and she takes my clothes off, she tugs them off for me, which by the time I’m getting undressed I’m exhausted, the fatigue really sets in with the MS.” Linda also described how her service dog is extremely helpful in assisting with her daily task of dressing.

But when I get ready for bed at night, all I have to do is kick off my sneakers and she picks them up and puts them away, she knows where they go. And if, like, the next morning I’m someplace else in the house, and ask her for my sneakers, she will go get them and bring them to me.

According to all four of the participants, one of the biggest assets of owning a service dog is the dogs’ ability to assist with functional mobility. Because the participants’ mobility impairments affect their gait and/or balance, their ability to ambulate, transfer, reach to the floor,
ascend and descend stairs, carry items and perform other tasks requiring movement is impaired. The participants’ service dogs provide assistance to their handlers by turning on and off light switches, opening and closing doors, adjusting wheelchair foot rests up and down, pushing automatic buttons, providing support and balance during transfers and retrieving and picking up objects. Linda talked about the many objects her dog retrieves and mentioned that, “the smallest thing she ever retrieved in the bathroom off of our tile floor was the back of an earring.” Additionally, participants described how their service dogs provide support and balance when transferring and ambulating. For example one participant stated her dog “provides support and balance when I get out of the pool. I go swimming about once a week and it’s hard to get back into my wheelchair after I’ve worked out. She helps me, though” (Ruth).

The participants described how their service dogs help them in more complex daily activities such as doing the laundry, shopping, meal preparation, traveling, and performing work related tasks. For example, Jane stated that:

… he knows how to open the refrigerator and get my water, he knows how to open cabinets, he knows how to turn on and off my lights, he knows how to do my laundry along with, helping me get up and down the stairs.

She also stated that, “I like help getting [retrieving] groceries at the other end of the store, because he helps me carry things and I am able to be somewhat normal with the help of the dog. It’s huge.”

Ruth described how her dog assists her in checking out at the store:

She gives my money to the cashier at the store. I have a pay wallet that I keep my credit card in. She takes the wallet, gives it to the cashier, and then puts the card and receipt back in the wallet before handing it back to her.
The participants have all engaged in many forms of travel including train, bus, airplane, car, taxi, tram and cruise ship.

Yes, and thank God for him cuz I am a nervous traveler but his is so good. We have flown to California twice and he just knows the drill… he goes on the bus just fine, he goes on the train just fine, he knows traveling, he’s great and he helps me on long car rides. Long car rides do me in cuz I get motion sickness in the car and when I start feeling icky he just kind of brings his head up to the front and says it’s ok mommy just chill out [laughs] (Jane).

Ruth has been on a cruise with her service dog and Sue is planning on going on a cruise in April of 2013. “Well I’ve been on a cruise. Yeah, so not many dogs can say they’ve been on a cruise. She was fabulous. She did great on the plane and she just took to cruising like an old pro” (Ruth).

Two of the participants are currently employed and their service dogs attend work with them to help them perform ADLs and simple job tasks. Ruth recently found employment at a church as a children’s ministry director.

Everyone loves having a dog at church, and they love seeing her work. They have asked me before if I need help with something, such as taking my coat off, and I say no thanks. Then I hold out my arm to my service dog and ask her to take it and tug. She then helps me with my coat, and the others around me comment on what a good and wonderful companion she is. If anything, she helped me get the job because the senior pastor fell in love with her at once. One day soon I’ll have to take her harness off and let him pet her.

**Less reliance on others, enhanced safety and energy conservation.** The participants explained that with the assistance of their service dog in performing tasks, they conserve energy
and require less help from others. For example, Jane described an instance where her dog decreased her reliance on others:

He helps me get things done without having to ask people all the time. I don’t have to hold my husband’s hand all the time when I can’t walk. I can do things by myself. For the first time ever, last year I was able to go swimsuit shopping by myself in the mall because I had him as a counter balance and as an alert dog so I knew I was completely safe. I knew I could do it all by myself.

Linda expressed how well her service dog understands her physical tolerance level and knows when she needs to refrain from an activity: “She knows me better then I know myself, she’ll tell me when I’m done and you know fatigued and I try and get up and take a couple steps or something, she’ll stand in front of me, not beside me”.

The participants explained how their service dogs have impacted their habits and routines, and life with their service dog has become natural. Because they are accustomed to their life with a service dog, sometimes it was difficult for them to remember and list off all of tasks that their service dog performs within the day. However, Linda fully realized how supportive her service dog is when she was unable to use her.

Ok, she had to have surgery and I couldn’t use her for a day or two, I was lost. As far as her impact on doing my ADLs, there are some ADLs I can’t do and she does them for me. There’s other ones that I can do but because of my energy level, having her do them for me saves me a whole lot of energy.

The participants all stated how their service dog impacts their safety both at home and in the community. Because of the service dogs’ constant companionship, their handlers never feel alone. The service dog’s ability to retrieve a phone or push a lifeline button in an emergency
provides a sense of security. Ruth commented how having the constant support of the dog increases her feeling of security and has helped her feel safe to go outside alone.

Before I got her, I was nervous sometimes at night. I felt vulnerable. After I got her, I do not feel as vulnerable. My partner is always with me to help and to just be with me. I also realized how cloistered I was. Before I got her, I never went outside by myself unless someone was coming to pick me up. Once I got her, I had to go out alone because she needed to play. I realized how good it felt to go outside on my own. I actually started going outside on nice days to just sit and read for my classes. I also got out of my wheelchair and sat in the grass because I knew she could help me back into my wheelchair when I was ready to go.

Sue explained how her service dog impacts her safety. Her dog provides support and balance and has prevented many falls.

Absolutely, first of all I couldn’t tell you how many times she has kept me from falling. If I lose my balance, she plants her feet like a rock and doesn’t move. I have tramped on her paw trying to regain my balance and she didn’t even move her paw. So I feel very safe.

My husband, that was one of the things he remarked from the get-go was that it made him feel so much better with me being home alone that she was there because she takes care of me.

Overall, it was discovered that all of the participants’ service dogs aid in the performance and completion of ADLs and IADLs at home, in the workplace and in the community. As a result of the assistance and support their dog provides the participants expressed an increase in their energy level, safety and they ultimately rely less on others for everyday needs.
Emotional support

The next main theme that emerged is that service dogs provide emotional support to their handlers. As a result of the constant companionship and interaction between the handlers and their service dogs, a strong emotional bond forms. Ruth stated,

She’s definitely an emotional support too. You know, she wasn’t trained to do that but they all are. I mean, when you’re with someone twenty-four hours a day, seven days a week, you know, just all the time, you know you begin to emotionally support each other.

Linda further expressed how inseparable she is with her service dog.

So that’s the one thing with her is that by just having her around cause she’s with me 24/7, cause even my husband isn’t with me as much as she is. We’ve been together seven years. Out of the seven years we figured it out that we have only been apart for six hours.

When Jane was comparing her life before and after obtaining her service dog, she described a situation in which she had to utilize a scooter. Now that she has a service dog, Jane relies solely on her dog for support and balance when ambulating.

He’s just great at helping in general. When I did use a scooter once, right after a seizure when I was in a Wal-Mart actually and I tell you if I ever had to use something again I still think I’d just use the dog because they have an emotional substance to them that you just can’t get from a walker or a scooter or a wheelchair that you get from a service dog. They just do so much more for you and they give much more to you when you’re in pain; they feel it, and they try to help you so much and give you so much back that it is just so worth it. You’re so grateful for everything they do.

The participants all expressed how their lives have been changed for the better since obtaining their service dog. The service dogs have brought a new sense of happiness and
unconditional love into each participant’s life by their constant companionship and gentle personalities.

There is absolutely no way any first time person, that gets their first dog can know the joy they are in for. Unconditional love, that, I can reprimand her and two minutes later she is back loving me. I’ll sit down on the couch, I sit sideways on the sofa, and then she’s laying there between my legs. (Linda).

All of the participants were in agreement that they could not imagine their life without their service dog in it. When Sue was asked how the performance of daily occupations has been impacted from before and after receiving her service dog, she answered simply, “Oh, I can’t imagine life without it.”

The participants further described how they function as a team with their service dogs and that is how they want others to view them. Linda explained how her service dog moves the foot rests on her wheelchair and then proceeded to say, “You see just another example of how in-tune a team becomes, they flow through their day together doing their daily living skills as a team.”

As a result of the constant interaction between the participants and their service dogs, a strong emotional attachment was developed. The participants disclosed how their service dogs have impacted their lives by providing constant support and motivation to engage in valued occupations.

Social Participation.

The third broad theme that emerged was that service dogs have an impact on social participation. Two main themes were developed to capture the experiences of the participants in the community: positive situations in public and challenges, which led to education of others.
**Positive situations in public.** All of the participants discussed that their service dog made them feel like they could go out into public more. While visiting public places they felt a sense of security because the service dog is solely focused on their handler’s well-being.

As far as how she reacts to people … if we are out in a crowd or shopping, she just ignores people. She’s focused with me and she’s fine. Like if we go to church or if we go to concerts or anything like that she just ignores everything (Linda).

Participants discussed that with their service dog by their side they feel that they can participate in more social situations, too. Jane stated that “…he encourages me to go out, it’s just a matter of me actually getting out because I don’t drive…it still hinders me but…I laugh more so I want to be out more.” Many common anxieties about going into public, that are experienced by individuals with disabilities are lost when they have a service dog by their side.

I would be lost without her in public, ya know how many times I dropped my debit card and she picks it up for me off the floor or drop my money and it went everywhere, coins and everything and I have to get her to pick it up for me, one dime at a time…and I mean I’m not hesitant at all about going out in public with her and we do a lot of shopping together [laughs] (Sue).

The participants feel more confident and competent going into social settings because their service dog is by their side to retrieve any items, assist with transferring, opening and closing doors and any other necessary tasks.

**Challenging situations and education of others in public.** While going out in public with a service dog it is common for others to want to pet the service dog, stare at the service dog, and ask questions regarding the service dog. The handlers often have to educate others that the service dog is working and should not be distracted from his or her work. As described by Ruth:
…the biggest issue that I have, is that everyone wants to pet her [laughing] and so you know, I have to tell them, and you know I hate doing this, I hate having to tell people that they’re not allowed to pet her. But you know, I have to say I’m sorry she’s working, she can’t be distracted.

Once an individual realizes they cannot distract the dog from their work, many become curious as to what kind of work the dog does. The curiosity of others in public leads to the handler getting asked many questions. Participants alluded that it is common for them to be stopped while they are out; as Sue describes:

…for the most part its usually positive, it can be a little tiresome repeating a million questions …what’s that thing on her back and… what does she do for you and why do you have that thing on her back, that looks heavy.

While out in the public the service dog is working for the handler, this can include tasks such as paying cashiers, picking up dropped items, and aiding in dressing rooms. However, not all employees are as receptive of service dogs as others or understand what the service dogs are doing for their handler. As described by Sue, service dog teams may face challenges even in businesses they frequently visit.

…well one morning I went in and Felix went to go do the ‘go pay’ and it was a young kid… all of a sudden it was ‘ah I’m not touching that money that dog doesn’t even belong in this place’.

This situation led to education of the employee, the business, local residents, and other local businesses. Unfortunately these situations happen in which the handlers and service dogs are treated unfairly. When these situations arise the handlers are trained by the organization they are affiliated with to educate the general public. A requirement of the particular organization
involved in this study, that trains the service dog, is to carry a law book when going to public places. The law book is to justify the service dog’s rights. Linda describes a situation in which she used her law book to educate the employee at the business.

…she [Frisky] opened the door for me and we went in and as soon as I got in he [employee] came over to me and said ‘no dogs are allowed to come in’.

I said ‘she is not a dog, she is a service dog.’

‘No, she’s not allowed to come in.’

‘Legally she is allowed.’

‘Nope, can’t have dogs in here.’

‘Am I allowed to come in?’

‘Oh, yes you are.’

‘Then she is allowed to come in.’

One of the things [my organization] has us do is show them our, we call it our law book, and it’s a book that has every state law in it.

The participants expressed that some social settings present challenging experiences. Often when people do not know how to respond appropriately to an individual with a service dog, misinterpretations can occur. However, the participants discussed how they have learned to provide education to people who may not understand the role of a service dog.

**Unique Personalization of Service Dog**

The fourth broad theme that captured the views of the participants in the study was how each of them had adapted their service dog to fit their specific needs in their specific contexts, such as in their home to help maximize their independence. As Sue describes:
Another thing we do here at the house is um late at night if I need medication or if just a
snack or something if I’m really hungry, I will text down and say ‘hey will, if I send
Tulip down will you get me a baggy of crackers or can you put two Tylenol in a Ziploc
baggy or whatever and send it up for me’ so then I send her, I say ‘go take it’ and then
they call her down and she brings whatever I asked for up in a baggy.

Another unique personalization as described by Ruth stems from being in public with her service
dog, which leads to people wanting to pet and talk to her dog. To avoid her service dog from
becoming distracted while she is working, she describes this story:

So they’re like, she’s so pretty what’s her name? And of course I don’t tell them her real
name because uhh if they say her name then she gets distracted. So I give them a code
name, I call her Happy. Cause her tail is always wagging and she’s so happy to be alive.

So it suits [laughing].

Since the handlers and their service dogs are constantly together, they will learn each other’s
mannerisms and codes even without being formally trained. Linda describes a situation similar to
this.

… and that’s why you heard me clear my throat, that’s one of our little codes and I will
use it out in public, when I clear my throat she knows that either what I asked her to do or
she knows what she should be doing, she’ll do it and she wasn’t doing it just now. And
then I quietly said ‘what are you supposed to be doing’ she laid down. Now see that
wasn’t a command just what are you supposed to be doing, like a child. And that’s
something a new dog wouldn’t know, and that’s just something she’s learned after 7
years.
All of the participants expressed how they have developed ways of tailoring their service dog’s commands to fit their individual needs. This unique form of adaptability is an attribute that service dogs possess that traditional AT does not.

**Extra Work Caring for Service Dog**

The final broad theme that was found was the handlers gaining extra work and expenses after receiving their service dogs. Extra work can come from the training that the handlers had to complete to obtain a service dog, matching their personalities during the training, grooming of the service dog and the occasional “attitude” that the service dog seems to have.

*Telling people about their service dogs*.

Each certified service dog organization has regulations and training sessions that the handlers and dogs need to attend prior to being on their own. Sue describes her experience with obtaining her service dog.

…they interviewed me and you have to just start attending these graduate support classes to show that you are interested and they are held like one [day] a month…and you go basically as um an applicant because you’ve applied to be a recipient to get a dog and you actually are watching all the recipients with their dogs…you’re watching them do their exercise with their dogs and um ya know do all their things that the trainers have set up for them to do…I was going month after month, I went like 3 months in a row, all of a sudden [a trainer] came in and she had like 4 or 5 blacks labs and then there was this darkish brown poodle there in the mix…

She continues to explain that they were just told to interact with the dog they were given to see how things went and to make sure their personalities were a correct match. After Sue had time to interact with her first dog, she stated “I was so amazed that, he was so gentle as if he was
telling me…and I fell in love with him.” Linda described a similar experience when receiving her service dog.

You know, so they try to match personality and they did an excellent job with her and I. I told them that they did such a good job and didn’t even realize it, but I’m left handed and so is she.

**Extra expenses.** Along with any classes or new dog, there are expenses associated with ownership and the upkeep of a service dog. Sue describes that the cost of obtaining a service dog varies depending on the organization the service dog came from and the individual’s income.

…normally there is a sliding scale between one and five thousand dollars for the person. It depends on their income and if they don’t have the money, [the organization] gives them ideas on raising money, how to raise the money and they also have scholarships.

She goes on to describe that this is the flat rate for the dog and that there is more money that goes into the training of the dog and the fieldtrips that are taken while the handler is first working with their new service dog. Sue also mentions the extra expenses associated with items her organization required her to purchase for the service dog. “…like ear powder and stuff like that for grooming, um it went on with a whole list of things that you needed to purchase um dog toys, ya know all kinds of stuff…”

Ruth states that after she gained her service dog, there was more work involved for her. “…you know she also comes with more responsibility. You know, like I have to groom her everyday…” She goes on to describe in detail the extra tasks and expenses that have gone into her dog.

She’s a little bit of extra work, but she’s worth it…ahh well you know I have to take her to the vet and you know, like I brush her teeth every day. She eats a special dog food. Well, I
mean, it’s not that special, I mean I get it at PetSmart. But you know it’s one of the more expensive, healthy brands.

While the participants noted that their service dog requires extra work and expenses, the benefits and support that they provide outweighs the additional work.

**Moods of service dogs.** Service dogs are constantly on the job, so they occasionally want to take a break. Ruth takes this potential issue lightly and states that “…besides being uncooperative some days? Which, you know, we all have our days [laughing].” Ruth goes on to describe how she handles these situations.

If I tell her to take something and she decides, for some, you know whatever reason that she doesn’t want to take it, I can’t take no for an answer…so I have to persist…and you know until she cooperates…so you know, in that way sometimes, what I think is a two second project, turns into a five minute ordeal [laughing]. And it’s like, oh my goodness, I don’t know if I had time for that.

Since the handlers can never plan for these moods their dogs tend to get, they have to plan ahead for them. Sue is familiar with this mood and has taken small tasks away from her service dog to keep her and her dog safe.

Once in a blue moon, yea they get their attitude…I don’t give her anything glass because occasionally she gets an attitude where she’ll just look at me and drop the bags and I don’t give her eggs [laughing] at the grocery store for that same reason.

Although at times service dogs may appear to be uncooperative, the participants have learned how to be flexible and be prepared for the service dog’s occasional non-compliant mood.
Discussion

In this phenomenological study the participants consisted of four women 27-61 years of age. The group of participants within this study had a range of mobility impairments that affect their gait or balance. Interviews from the participants revealed that their service dogs have had a positive impact on their life and allow them to be more independent in daily occupations. Not only do the participants’ service dogs provide assistance in the performance and completion of ADLs and IADLs, but also they are a constant source of emotional support and have increased their handlers’ participation in a variety of social contexts.

Previous literature and current practice. Information gathered from the participants regarding the use of service dogs supported the findings from previous literature. A service dog changes the way an individual’s daily tasks are completed. Service dogs perform tasks for their handler (i.e., turning on and off light switches) and aid in performance of tasks (i.e., dressing). By altering the way an individual’s daily tasks are completed, service dogs help their handlers conserve energy for more meaningful occupations within their home and community (Sachs-Erikson et al., 2002; Winkle & Zimmerman, 2009; Winkle et al., 2011). Narratives from the participants revealed that their service dogs aid in energy conservation. When performing these daily occupations with the assistance of their dog, the participants felt less reliance on others, felt safer and were able to conserve energy to perform more tasks during the day. However, the participants also reported that their service dogs are sensitive to their level of physical tolerance and will intervene and stop their handlers from overexerting themselves.

Furthermore, service dogs assist in increasing in their handlers’ social participation and provide a source of emotional support (Rintala et al., 2008; Winkle et al., 2011). Service dogs encourage their handlers to participate more in the community and allow their handlers to be
more independent by completing tasks such as opening doors, paying cashiers and by retrieving items that are out of reach in the community (Camp, 2001; Sachs-Erikson et al., 2002; Winkle et al., 2011). Findings from the present study were consistent with the previous literature. All of the participants mentioned an increase in their social participation because they felt more comfortable and safer while engaging in social activities with the support of their service dogs. As a result of constant daily interaction between the participants and their service dogs, it was discovered that a strong emotional connection had developed.

Previous research has indicated that because service dogs possess the ability to assist persons with disabilities by improving their independence and participation in occupations, service dogs can be considered an alternative form of AT (Camp, 2001; Fairman & Huebner, 2000; Winkle & Zimmerman, 2009). Findings from the present study were consistent with prior research regarding the use of service dogs as a form of AT. Additionally, it was found that the participants in the present study continued to use any AT (e.g. wheelchair, adapted van) they had utilized before obtaining their service dog. While some participants still use a mobility device, the service dogs, functioning as a form of AT, increase independence and participation in occupations for individuals with mobility impairments more than other forms of assistive technology.

In the present study, further information was discovered regarding the importance of personalization of service dogs to fit each handler’s specific needs. This concept was not originally addressed in the research questions, but emerged during the participant interviews. Each participant mentioned unique commands that their service dog performed which is specific to the individual needs of the handlers. The participants expressed how their service dog continued to learn new tasks and ways of communicating with them.
Furthermore, previous literature cited the expense of obtaining a service dog ranges from $20,000 to $30,000 (4 Paws for Ability, 2013; Keystone Human Services, 2013; Paws With a Cause, 2013). In addition to training costs, there are costs for food and veterinary care (Rintala et al., 2008). In the present study, participants also disclosed the significant time involved in the process of obtaining a service dog; this is required to ensure that the handler and service dog are well matched. Additionally, the participants mentioned that there was extra time and cost involved in grooming and feeding their service dogs. However, all of the participants expressed how the benefits of owning a service dog surpassed the extra costs and time required.

**Implications.** There were two implications gathered after reviewing the research findings. The first implication was that service dogs are being used as a form of AT. While participants in the present study still use a mobility device, they use their service dog in collaboration with devices that they were already using. It was discovered that the participants developed a unique personalization of their service dog from the time spent with one another. The participants expressed how they were able to establish specific commands or gestures with their service dog in order for the dog to fulfill the participants’ needs. Service dog possess a unique adaptability that traditional AT is not capable of. Therefore, service dogs have the potential to offer customized assistance that individuals may not be able to obtain from other forms of AT.

The present study found that service dogs impact every aspect of their handler’s lives including participation in daily routines and occupations within the home and community. Occupational therapy practitioners concentrate on areas of occupation including an individual’s routines and occupations they engage in. Therefore, it might be beneficial for occupational therapy practitioners to work more closely with service dog training organizations. If a client is
considering obtaining a service dog, occupational therapists can be knowledgeable on the
benefits of using a service dog as a form of AT (Winkle, et al., 2011). An occupational therapist
is trained to provide client-centered interventions to best meet each handler and service dog’s
individual needs. Individuals seeking the use of service dogs may have various impairments
which require individualized assistance. Occupational therapy can provide an assessment of the
handlers specific impairment needs and symptoms. The therapists can work in collaboration with
service dog training organizations by providing the findings of the assessments prior to
matching.

Limitations and directions for future research. Several limitations were present within
this study. A main limitation was the small sample size of only four Caucasian female
participants. All of the participants were received from the same certified service dog training
organization. Therefore, the participants and their service dogs received the same training and
there was no diversity of training organizations. If recruitment had been from varying training
organizations the participants may have had different experiences than those gathered in the
present study. The individuals who responded to participate in this study described a positive
experience as a result of obtaining their service dog. However, participants who may have had a
negative experience might not have been motivated to participate in the study. Consequently, the
results of the study are not easily generalized to the greater population.

Based on the outcomes of this study, there are several directions for future research. The
participants should include people from other ethnic groups and races, different geographical
locations, and various service dog training organizations. Additional research should be
conducted on the use of service dogs as a form of assistive technology.
Conclusion

The purpose of this phenomenological study was to explore whether service dogs impact individuals with mobility impairments engagement in occupation. After completing interviews with four participants and analyzing the data, it was found that the participants’ service dogs substantially impact their everyday life. The impact that the service dogs provide influences the participants’ abilities to independently perform everyday occupations. Additionally, the service dogs provide a sense of emotional support, thus, encouraging the participants to be more socially active within the community. The results of this study highlighted the value of personalizing service dogs to meet clients’ specific needs. The positive outcomes reported by participants indicated that service dogs could be suggested more as a form of AT for persons with mobility impairments. Although this study contributed to the body of research available, it has limited generalizability to the larger population. This is due to the small sample size, all participants being female, and all participants’ affiliation with the same service dog training organization. The use of service dogs as a form of AT by people with disabilities is an emerging area (Winkle et al., 2011). Additional research is suggested to examine “best practice” recommendations regarding the process of obtaining and utilizing a service dog. This suggests the need for more rigorous studies with a larger sample size, variance in gender, and a wider geographical range.
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