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Exploring How Older Adults Who Qualify for the Association on Aging with Developmental Disabilities (AADD) Programs and Services Learn to Successfully Age in Place

by

Tina Grosso

A Dissertation submitted to the Education Faculty of Lindenwood University

in partial fulfillment of the requirements for the

degree of

Doctor of Education

School of Education

Exploring How Older Adults Who Qualify for the Association on

Aging with Developmental Disabilities (AADD) Programs and Services

Learn to Successfully Age in Place

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This dissertation has been approved in partial fulfillment of the requirements for the

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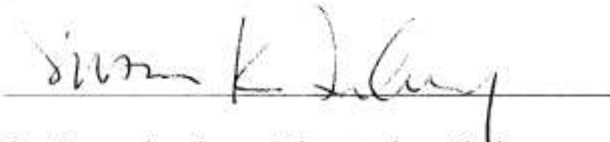

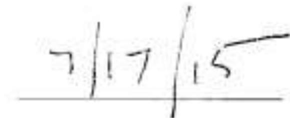

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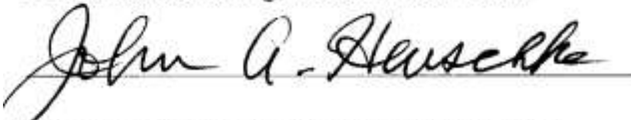

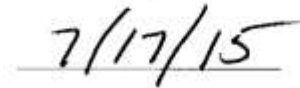

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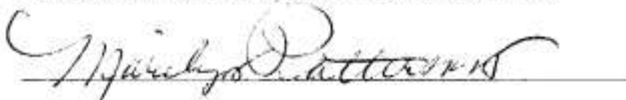

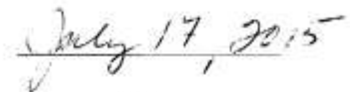

Dr. Marilyn Patterson, Committee Member

Date

Declaration of Originality

I do hereby declare and attest to the fact that this is an original study based solely upon my own scholarly work here at Lindenwood University and that I have not submitted it for any other college or university course or degree here or elsewhere.

Full Legal Name: Tina Louise Grosso

Signature: T.L. Grosso Date: 7/17/15

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Finally, I would like to thank my family and friends for their patience and loving support. Your encouragement made this feat possible. On a special note, I would like to dedicate this dissertation to my father, Malcolm J. McWhinnie.

Abstract

This qualitative case study explored the ways in which older adults with developmental disabilities (DD) learn to successfully age in place. As more persons with DD reach old age and outlive their natural caretakers, such as parents, it is becoming apparent that there are a multitude of age-related challenges and educational needs that must be addressed. However, information pertaining to the unique learning needs of older adults with DD is scarce. Andragogy (the art and science of teaching adults) and geragogy (teaching the elderly) provided the theoretical frameworks for this study. The main research question in this study was: How are older adults with DD unique adult learners? To answer this question, the primary investigator (PI) conducted a qualitative study exploring the ways in which older adults enrolled in the Association on Aging with Developmental Disabilities (AADD) programs and services for seniors learned to successfully age in place. The PI conducted observations, focus groups, in-depth interviews, and an email questionnaire with a sample of AADD program participants, staff, and board members. Verbatim transcriptions of the interviews and focus group sessions were analyzed using open and axial coding methods.

The following 11 themes emerged from the data: respect and equality, individualization, humor and fun, age-related learning challenges, social support, accumulation of loss, active aging and health maintenance, independence and autonomy, identity, attitudes towards those aging with DD, and learning strategies. The results provided evidence of the application of andragogy in meeting the unique learning needs of older adults with DD, as well as the premise that independent learning leads to independent living. Participants stressed the need for learning to be highly individualized

and fun. The importance of strong social support systems to help offset myriad age-related challenges faced by older adults with DD were also evidenced. Further exploration of educational programs designed to address emerging learning needs of those aging with DD, such as reverse caregiving roles (e.g., assuming the responsibility of primary caregiver for an elderly parent), as well as the application of andragogy to other aging with DD programs and services is warranted.

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Acronyms

AADD: The Association on Aging with Developmental Disabilities

AD: Alzheimer's disease

ADLs: Activities of daily living

IADLs: Instrumental activities of daily living

DD: Developmental disabilities

ID: Intellectual disabilities

IDD: Intellectual and developmental disabilities

CNA: Certified Nursing Assistant

CP: Cerebral palsy

DS: Down syndrome

PI: Primary investigator

Chapter One: Introduction

Background of the Problem

The global population is greying. In 2009, persons aged 65 and above numbered 39.6 million (12.9% of the U.S. population) (Administration on Aging [AoA], 2011, Aging statistics, para. 1). By 2030, researchers predict that this number will increase to 72.1 million (19% of the U.S. population) (AoA, 2011, para. 1). As society ages, new populations of older adults begin to emerge. One such group includes older adults with developmental disabilities (DD) (O'Brien & Rosenbloom, 2009). According to Janicki (2009), general aging population trends can be attributed to increased longevity, dropping birthrates, improvements in healthcare, and changing economic climates (Grosso, 2013). In addition, Doka and Lavin (2003) asserted that increasing numbers of persons with DD were reaching old age "due to better health care, greater medical understanding of developmental disabilities, and the beneficial results of deinstitutionalization" (pp. 135-136). Common types of DD included cerebral palsy, Down syndrome (DS), autism, learning disabilities, and epilepsy.

In 2005, the average life expectancy for developmentally disabled older adults was approximately 66 years, with younger generations having average life expectancies similar to those of the general aging population (mid-seventies) (Fisher & Ketti, 2005). In addition, advances in healthcare considerably extended the average life expectancy of people with DS from 25 years in 1983 to 50 years in 2008 (Sara, 2008, para. 7). Interestingly, researchers studying these trends also reported that older adults with DD experienced the same types of chronic illnesses that accompanied increased longevity in the general aging population (i.e., diabetes, heart disease, and cancer) (Fisher & Ketti,

2005, para. 2). Despite these similarities, however, researchers also noted an increased prevalence of certain health problems in older adults with DD, when compared to the general greying population. These included vision problems (i.e., glaucoma and cataracts), hearing loss, poor oral health, thyroid abnormalities, obesity, behavioral problems, mental health issues, and Alzheimer's disease (AD) in persons with DS (Fisher & Ketti, 2005; Sara, 2008). Furthermore, as healthcare and supportive services were often underutilized by aging persons with DD (Fisher & Ketti, 2005), there was a greater need for collaboration among healthcare, aging, education, and disability networks to meet the evolving needs of this heterogeneous population and their caregivers. Such action is imperative in order to promote independence and aging in place for this emerging population of older adults.

Deinstitutionalization. Deinstitutionalization of developmentally disabled persons in the 1970s led to an increase in community placement for persons with DD (Kapp, 1999). Consequently, their parents, with limited contact with social service agencies (Grosso, 2013), traditionally cared for many aging persons with DD at home. Resultantly, as more and more persons with DD reach late-life, they were outliving their parents and other primary caregivers (Heller, 1999). The loss of these pivotal figures, those who provided "the most consistent source of caregiving for people with mental retardation across the life span" (Heller, 1999, p. 155), meant that older adults with DD were finding themselves facing the challenges of late-life alone, in an increasingly complex world (Grosso, 2013). Further compounding these caregiver issues was the fact that many persons with DD were not married, nor did they have children of their own, thus, "they will lack the two key providers of informal care to older people" (Bigby,

2000, p. 5). As a result, persons aging with DD typically relied on friends, siblings and distant relatives for support as they aged (Bigby, 2000; Sara, 2008). They also had to learn how to best cope with their age-related challenges and transitions. In addition, education and training programs specifically designed for caregivers and service professionals supporting seniors with DD were lacking (Herman, M., personal communication, July 26, 2013). Furthermore, this dearth of awareness about aging with DD and the increased health risks for illnesses, such as stroke, cancer, heart disease, and AD, heightened practitioner concerns about the educational needs of those, who are at the forefront of this growing aging trend.

As more and more persons with DD age in place, numerous age-related challenges surface. In particular, there are a lack of educational programs and services at the local community level specifically designed to meet the age-related learning needs of this diverse group of older adults and their caregivers. A review of the services available to aging persons with DD in the St. Louis area, using the 2013 Senior Service Guide, found the Association on Aging with Developmental Disabilities (AADD) and the St. Louis Arc as the only organizations listed (St. Louis Times, 2013). Additional searches also highlighted L'Arche - St. Louis (L'Arche St. Louis, n.d.), the Productive Living Board for St. Louis Citizens with Developmental Disabilities (PLB, 2014), the Developmental Disabilities Resource Board (DDRB, n.d.), and Emmaus Homes (n.d.a) as resources for the developmentally disabled community. Furthermore, the prevalence of educational programs specifically designed for aging persons with DD is minimal. In addition, there is a gap in the research literature about effective educational programs and strategies designed to promote independent living for aging persons with DD. Instead,

research in the field typically focused on other age-related challenges including: (a) retirement preferences of older adults with DD (Hodges & Luken, 2006; Hodges, Luken, & Hubbard, 2004; Ohlson, 1994), and (b) adapting facilities and programming to meet the needs of intellectually and developmentally disabled (IDD) populations of older adults (Corrado, 2013).

At the time of this writing, information pertaining to programs specifically designed to address the unique needs of persons dually diagnosed with DD and dementia is scarce. As noted by Nagdee and O'Brien (2009), developmentally disabled persons were not only prone to developing dementia in later-life, but they were also more likely to develop it at an earlier age than the general population (pp. 10-11). In addition, persons with DS were at an even greater risk of developing AD (Janicki & Dalton, 1999; Nagdee & O'Brien, 2009; Sara, 2008). Sara (2008) reported that for persons with DS aged 65 and above, 60 to 75% would develop AD (para. 6). Such statistics are startling, especially given the complex nature of dealing with a dual diagnosis of AD and DS. It is, therefore, imperative for researchers to not only highlight the physical, psychosocial, and educational challenges of this expanding population of older adults and their caregivers, but also for them to address those needs through effective learning strategies.

Best Practices and Community Resources for Persons Aging with DD

Several St. Louis area organizations provided supportive programs and services for the aging developmentally disabled community. The St. Louis Arc provided support to persons of all ages with DD and their families (St. Louis Arc, 2014). Services included respite, employment, family support, and leisure programs. St. Louis Arc strived to promote those skills essential for successful aging. Emmaus Homes provided individually

tailored residential services and activities for persons aging with DD. Activities included sports, crafts, and therapeutic horsemanship (Emmaus Homes, n.d.b; n.d.c). Emmaus also collaborated with community organizations to provide job opportunities and training for persons with DD. The AADD was a private, non-profit, St. Louis area organization been offering services to older adults with DD, their families, and professionals working with this population since 1989 (P. Merkle, About AADD, personal communication, February 6, 2013). Their mission was to help older adults with DD promote dignity and independence (AADD, 2013a).

The Research Site

The primary investigator (PI) selected AADD's site for use in this qualitative exploratory case study, because the organization's focus was on aging persons with DD (as opposed to younger adults and children with DD), specifically. AADD connected professionals, families, and aging persons with DD, to education and supportive programs and services designed to promote independence and successful aging for developmentally disabled adults. Without the cooperation of AADD for this study, such individuals would remain an invisible and difficult population to study. AADD provided the following programs and services for developmentally disabled older adults in the St. Louis area:

Retirement Planning (Transitional Retirement). Designed for persons aged 50 and over (younger if they have Down syndrome [DS]), program objectives included assisting older adults with DD to plan for, and maintain, active retirement, while simultaneously remaining healthy and connected with the community. This was a one-on-one service, connecting older adults with DD to aging and developmental disability

providers. Members engaged in friendship building activities via community-based programs and activities. The program also strived to maintain vocational skills acquired through work (and life) experience.

Retirement Support Group. AADD's Support Groups, designed for people aged 50 and over (younger if they have DS), utilized a 1:6 staffing ratio. Participants met at local area senior centers, where they shared hot meals, built friendships and did the same things that the other seniors did. Participants also engaged in strength and endurance exercises, balance training, memory exercises, and social skills training.

Final Game Plan. The goal of this program was to keep older adults with DD in the environment that they wanted to live in, enabling them to age in place. The Final Game Plan program utilized a one-on-one model, focusing on advanced directives, funeral and will planning, life review on film, and geriatric assessment. For service professionals and care providers, this program assisted with DD communication training, as well as hospital and nursing home advocacy (Grosso, 2013; P. Merkle, personal communication, February 6, 2013).

Challenges Unlimited. 'Challenges' was a group recreation program open to developmentally disabled adults (aged 21 and over). The group meets after work and was open to those who resided in St. Louis City. Those involved in the Challenges program participated in community-based fitness programs (AADD, 2013b). The program reinforced the importance of maintaining a healthy lifestyle through exercise and nutrition. Program staff also assisted participants with management of health-related conditions (e.g., diabetes and weight gain), all of which magnified with age.

Social Clubs. Participants in the Social Clubs program met on Saturday evenings for socialization. Senior Club participants hung out and had fun. Activities included dances, movies, theatre shows, dinner, baseball games, and bowling (just to name a few). This program encouraged adults to be active and do the things all other people do – primarily enjoying hanging out with friends. Social Clubs promoted friendships and relationship building for those aging with DD.

Supported Living. The goal of this program was to help those aging with DD maintain existing skills or promote new ones necessary for independent living (AADD, 2013b). This program addressed health, safety, financial/economic, transportation, and psychosocial concerns that affected the ability of an older adult with DD to remain living independently in the community. Thus, AADD's Supported Living program helped older adults with DD address their ADLs and IADLs needs.

AADD also offered an Education Program that educated caregivers, health professionals (including nurses, social workers, and gerontologists), families, and the general community about the age-related health and learning needs of older adults with DD. AADD provided education through annual conferences, speaking engagements, and seminars. The results of this exploratory qualitative case study may, therefore, be used to fill any gaps in educational content regarding the unique age-related learning needs of older adults with DD, and the ways in which such educational needs are best met.

AADD Sample

AADD's 'Senior Hot Shots' (a name program participants attributed to themselves) Retirement Support Group members were invited to participate in this research study. However, it is important to note that many of AADD's members utilized

several programs and services offered by the organization. For example, many of the Senior Hot Shots also participated in the Final Game Plan, Challenges Unlimited, and even the Supported Living Skills programs (or had done so in the past).

Theoretical Frameworks

The PI proposed that the theories of andragogy (teaching adults) and geragogy (teaching the elderly), could be used as conceptual frameworks to determine how older adults with DD learn to successfully age in place. According to these theories, adults learn best in climates that foster independent learning, as opposed to dependent learning experiences (self-directedness), when facilitators tailor learning to individual learning needs and styles, when the learning environment is caring, humanistic, respectful, and trusting, and when learners and facilitators work collaboratively on learning projects (; John, 1988; Knowles, 1973, 1995; John, 1988).

Knowles' (1973, 1995) eight process elements of andragogy and six assumptions about adult learners, and John's (1988) six reasons for teaching the elderly, provided the theoretical frameworks for this research study:

Knowles' (1973, 1995) eight process elements included the following:

> (a) preparing the learner, setting the climate, involving learners in mutual planning, (b) involving learners in diagnosing their learning needs, (c) involving learners in forming their learning plans, (d) involving learners in designing learning plans, (e) helping learners carryout their learning plans, and f) involving learners in evaluating their learning outcomes. (p. 5)

Knowles' (1990) six assumptions about adult learners include:

> (a) need to know reason for learning something, (b) concept of learner,

> (c) learner's experience, (d) readiness to learn, (e) orientation to learning, and (f) motivation. (pp. 57-63)

John's (1988) rationale for teaching the elderly includes:

> (a) To maximize contributions to society (sharing wisdom and experience); (b) To provide quality of life for all (physical, psychosocial, and educational stimulation); (c) To meet self-fulfillment needs (personal growth, inquisitives); (d) To improve mental and physical health (a healthy brain, a healthy heart); (e) To reduce economic problems (healthy older adults are more active and less dependent on community and/or family resources); and (f) To provide society with creative products (elders may uncover hidden talents they did not have time to explore previously). (pp. 5-10)

The PI proposed that perhaps the theories of andragogy and geragogy could provide an overarching theoretical framework demonstrating that independent learning (versus dependent learning) leads to independent living (versus dependent living) (Grosso, 2013).

Purpose of the Study

The purpose of this exploratory qualitative case study was to determine how older adults with DD learn to maintain their independence and successfully age in place. This study achieved this by exploring the age-related learning needs of older adults with DD and the ways in which such educational needs were best met.

Rationale

As more and more persons with DD reach old age and outlive their natural caretakers, such as parents, there are multitudes of age-related challenges and educational needs that must be addressed. Research in the field of aging with DD typically focused on

retirement preferences of older adults with DD (Hodges & Luken, 2006; Hodges et al., 2004; Ohlson, 1994) and adapting facilities and programming to meet the needs of intellectually and developmentally disabled (IDD) populations of older adults (Corrado, 2013). In addition, inadequately prepared healthcare and nursing professionals in the field of aging with DD (Edwards, Plant, Novak, Beall, & Baumhover, 1992; Sara, 2008) was a pressing concern for researchers and service providers, alike. However, at the time of this writing, information pertaining to the unique learning needs of older adults with DD was scarce.

There was also a dearth of awareness detailing how older adults with DD cope with the aging process (Ohlson, 1994), and the complex challenges that may arise when aging with DD (Sara, 2008). Bishop, Robinson, and VanLare (2013) not only stressed the need for research to help raise awareness and understanding about “the challenges and diverse needs of older adults with IDD” (p. 17), but also for “preventative education for caregivers and aging individuals [with DD]” (p. 18). Consequently, this qualitative case study aimed to address these concerns by exploring the unique age-related learning needs of older adults with DD and the ways in which such educational needs are best met.

Although the application of andragogy (teaching adults) has been noted extensively in research literature (Henschke, 2011a), studies detailing the application of andragogy with IDD elderly populations are limited. Research conducted by Bowman and Plourde (2012) examining andragogy for teen and young adult learners with intellectual disabilities (ID) in the context of learning, independence, and best practices, yielded supportive findings for the successful application of andragogy with intellectually disabled adult populations. However, these results were not generalized to populations of

older developmentally disabled adults. This research study, therefore, attempted to fill this gap by exploring the unique age-related learning needs of older adults with DD and the ways in which such educational needs are best met. In addition, the researcher proposed that best practice models for addressing the unique learning needs of older adults with DD, as well as evidence demonstrating that independent learning (versus dependent learning) leads to independent living (versus dependent living) (Grosso, 2013) may also result.

Research Questions

The following research questions were investigated in this study:

Main Research Question: How are older adults with DD unique adult learners?

Sub-question 1: Which andragogical and gerontological adult learning needs must be met for aging adults with DD to successfully age in place?

Sub-question 2: How do aging adults with DD best meet their unique learning needs to successfully age in place?

Sub-question 3: What does one need to know in order to help older adults with DD successfully age in place?

To gather data for this study, the PI conducted the following research activities over a six month time period: Eleven email questionnaires with AADD staff members, two focus groups with Senior Hot Shots and AADD staff members, four support group meeting observations (two conducted during fishing trips at Busch Wildlife and two conducted at activity centers in St. Louis), and five in-depth interviews with AADD staff members.

Definition of Terms

Activities of Daily Living (ADLs): "ADLs are the functions that are fundamental to independent living, such as dressing and bathing" (Gallo, Bogner, Fulmer, & Paveza, 2006, p. 197).

Aging Adults*:* Developmentally disabled older adults over the age of 21 years.

Aging in Place*:* Aging in place refers to one's ability to remain living at home, in the community, while adapting to changing conditions as one ages (Fänge, Oswald, & Clemson, 2012). This term was also used to define independent living in this research study.

Alzheimer's Disease (AD) and Dementia*:* Dementia develops "when nerve cells in the brain (called neurons) die or no longer function normally. The death or malfunction of neurons causes changes in one's memory, behavior and ability to think clearly" (Alzheimer's Association, 2013b, Sec 1: 4). AD is the most frequent cause of dementia, with the greatest risk factor for AD being increasing age (Zarit & Zarit, 2007). According to the Alzheimer's Association (2013a), there are currently just over 5 million Americans living with AD. It is the sixth leading cause of death in the United States, and a new case is diagnosed every 68 seconds (p. 216).

Andragogy*:* "The art and science of helping adults learn" (Knowles & Associates, 1984, p. 1).

Developmental Disabilities (DD)*:* DD are typically lifelong, chronic disabilities that appear before the age of 22. DD can be cognitive, physical, or both (American Association on Intellectual and Developmental Disabilities, 2013b). Common types of DD include (but are not limited to) Down syndrome (DS), Cerebral Palsy, Epilepsy, and

Autism & Autism Spectrum Disorder (ASD) (Centers for Disease Control and Prevention [CDC], n.d.).

***Caregiver**:* Caregiving can be formal (service agencies) or informal (family and/ or friends). Caregivers are those people who provide emotional and physical (via assistance with ADLs and IADLs) support to older adults (Hooyman & Kiyak, 2011). For the purpose of this case study, the use of the term *caregivers* will include family and friends, AADD staff (including volunteers and Board members), and community professionals. The inclusive nature of study participants helped to capture a true representative sample of those who influence the lives of AADD program participants.

Geragogy: The term geragogy refers to the process of helping the elderly learn (John, 1988).

***Gerontology**:* Gerontology is a multidisciplinary field of study that examines the “biological, psychological, and social aspects of aging” (Hooyman & Kiyak, 2011, p. 3).

***Independence**:* The greatest fear of elderly persons regarding late-life is the loss of independence (Warnick, 1995). Maintaining autonomy and control over the way in which one lives one’s life in older adulthood is, therefore, imperative to the health and well-being of aging persons with DD. Herr and Weber (1999) stated that:

> The principle of independence has many dimensions. It calls for opportunities to work and have a say in determining when and at what pace to withdraw from the labor force. It stipulates access to the necessities of life as well as appropriate educational and training programs to enrich old age. The independence principle calls for living in environments that are safe and suited to personal preferences

and changing capacities. It also supports older people's right to reside at home as long as possible. (p. 354)

Instrumental Activities of Daily Living (IADLs): "IADLs include more complex daily activities, such as using the telephone, housekeeping, and managing money" (Gallo et al., 2006, p. 197).

Intellectual Disabilities (ID): According to the American Association on Intellectual and Developmental Disabilities (AAIDD), an "Intellectual disability is a disability characterized by significant limitations both in intellectual functioning and in adaptive behavior, which covers many everyday social and practical skills. This disability originates before the age of 18" (AAIDD, 2013a, Definition of ID).

Older Adult: Typically, when referring to the general population, persons aged 65 + constitute older adults (Hooyman & Kiyak, 2011). However, as aging is believed to have an earlier onset in persons with IDD (Campbell & Herge, 2000; Corrado, 2013), age 50 will be used to differentiate older adults in this research study.

One*:* In this study, the term *one,* in the context of *what does one need to learn…*, refers to the various stakeholders involved in working with or caring for older adults with DD. Such stakeholders include AADD staff, persons with DD, caregivers, caretakers, family members, healthcare professions (e.g., nurses, gerontologists, social workers), and the general population. One refers to anyone who helps or intends to help older adults with DD successfully age in place.

Senior Hot Shot Retirement Support Group*:* A retirement support group provided by the AADD in St. Louis, Missouri. The program is designed for people aged 50 plus (younger if they have DS). Participants, known as the 'Senior Hot Shots' (a name

they assigned to themselves), share a hot meal, build friendships, and do the same things that the other older adults do. Participants also engage in strength and endurance exercises, balance training, memory exercises, and social skills training.

Successful Aging: According to Troutman, Nies, Small, and Bates (2011), “Successful aging includes multiple dimensions: a sense of meaning or purpose, and physical, functional, psychological, intellectual, social, and spiritual health for older people” (as cited in Kozar-Westman, Troutman-Jordan, & Nies, 2013, p. 239).

Limitations

This study utilized a purposive sample of AADD Senior Hot Shots Retirement Support Group program participants, their caregivers, staff, and AADD Board members; thereby, results are not generalizable to the larger population of aging persons with DD and the vast array of caregivers supporting persons with DD. However, the results of this study yielded interesting findings that may be applicable to future research examining the learning needs of older adults with DD. In any case, the use of purposive sampling techniques was necessary in research examining this population. Without utilizing such methods, the majority of persons aging with DD and their caregivers would remain invisible with regard to best practices for learning. For example, if random sampling techniques were applied at a local gyms, wellness centers, malls, universities, or healthcare settings “to select a representative sample from the population” (Frankel, Wallen, & Hyun, 2012, p. 93), capturing a representative sample of persons aging with DD and their caregivers may not have been possible, since the presence of aging persons with DD may not have been likely in these locations.

As this emergent population remains somewhat hidden in society, without organizations such as AADD, this population of aging adults and their caregivers possibly would simply fall through the cracks. This may account for the fact that, at the time of this writing, there was limited research pertaining to the educational needs of those currently aging with, and caring for persons with, DD. In addition, inter-rater reliability on behalf of the PI and the PI's chair may have biased the results somewhat. For example, as the study was developed and conducted by the same person (the PI), evidence of andragogical and geragogical theories, as documented by the PI and PI's chair, may have been biased, with the investigators only seeing and hearing evidence as it pertained directly to the theoretical frameworks of this study. However, these limitations were offset by having the PI's chair conduct the focus group sessions, while the PI conducted the interviews with AADD staff, AADD's Executive Director (ED), and an AADD Board Member, in addition to observations of the Senior Hot Shots Retirement Support Group (thus, triangulating the results).

In order to capture the true essence of the educational learning needs of this population of aging adults, full, and thus biased, immersion was necessary. Without fully exploring the learning needs and age-related challenges faced by the Senior Hot Shots via natural observations (at regular Senior Hot Shot support group meetings), and speaking to them in focus group sessions, obtaining rich and invaluable data in order to obtain "the whole picture" (Frankel et al., 2012, p. 507) may not have been possible. Therefore, the use of full immersion was warranted in this study.

Delimitations

The study does not explore the age related learning needs of all aging persons with DD, as results are only generalizable to the AADD Senior Hot Shots. In addition, the results of this study do not specify the age-related learning needs that accompany certain DD diagnoses (e.g., cerebral palsy versus DS), but rather DD as evidenced in AADD's Senior Hot Shots as a whole. The study does not attempt to serve as a program evaluation of AADD's services for seniors.

Assumptions

The principles of adult learning (andragogy) state that there is an ability to learn if the climate (both physical and psychological) is right (e.g., warm, supportive, trusting, humanistic) (Henschke, 2011a, 2011b; Knowles, 1973, 1981, 1990, 1995), thus this assumption was made. In addition, there is often an incorrect assumption that persons with DD always have an intellectual disability; however, that is not always the case. It is important to note, however, that persons with ID always have a DD (Saxon, Etten, & Perkins, 2010, p. 268).

It was also assumed that all participants in this study answered questions in the interview, questionnaire, and focus group sessions, honestly. Furthermore, an assumption was made that participants' behavior was not altered by the presence of the PI and the PI's chair during the support group observations. The same assumption also applied to the focus group sessions in which the PI's chair facilitated the discussions, while the PI recorded notes.

Summary

This qualitative case study was designed to explore how older adults with DD learn to maintain their independence and successfully age in place. This study utilized a purposive sample of Senior Hot Shots – participants enrolled in AADD's retirement support group program, and AADD staff members. Chapter Two reviews research literature in the fields of aging with DD, andragogy (teaching adults), gerontology (physical, psychological, and social aspects of aging), and geragogy (teaching the elderly). Chapter Three details the methodology used in this study to explore the age-related learning needs of older adults with DD and the ways in which such educational needs may be best met.

Chapter Two: The Literature Review

This literature review examines research from a wealth of sources, including peer-reviewed, scholarly journals, online databases, books, government documents, and reports published by professional organizations regarding the learning needs of older adults with DD. The extensive search for information pertaining to unique age-related learning challenges and effective educational methodologies for this emergent heterogeneous population crossed many disciplines including gerontology, psychology, sociology, andragogy, adult education, and geragogy. A general overview of aging population trends are addressed first, followed by an examination of broad terms, and a comparison of age-related learning challenges faced by general versus developmentally disabled older adults. The theories of andragogy and geragogy provide the conceptual frameworks for this research study.

Statistical Trends in Aging

The global population is aging. "In 1900, life expectancy was 47.3 years; in 2000 it was 76.9 years. Americans who reach 65 today have an average life expectancy of 82.9 years" (Saxon et al., 2010, p. 1), thus increasing the demand for careers in aging as well as specially educated gerontological health and social service professionals.

In 2009, persons aged 65 years and above in the United States (U.S.) numbered 39.6 million (12.9% of the U.S. population) (AoA, 2011, Aging Statisticsp. 1). By 2030, this number is projected to increase to 72.1 million (19% of the U.S. population) (AoA, 2011, Aging Statistics, p. 1). This is a stark comparison to the fact that only 4% of the American population was age 65 or older in 1990 (Saxon et al., 2010, p. 1). According to Janicki (2009), general aging population trends can be attributed to increased longevity,

dropping birthrates, improvements in healthcare and changing economic climates (as cited in Grosso, 2013).

Interestingly, “The fastest segment of the older population is those over age 85, the oldest-old” (Saxon et al., 2010, p. 1). Gerontologists commonly differentiated the different age groups by ‘young-old’ (65-74), ‘old-old’ (75-84), and ‘oldest-old’ (85+) (Hooyman & Kiyak, 2011Saxon et al., 2010), and thus, highlight the need for uniquely tailored service provisions for each group. According to Saxon et al. (2010), services and programs for seniors “should be planned, orientated, and delivered in different ways for each group” (p.1). Furthermore, as individual differences typically become more pronounced with age, it is imperative that service providers adequately assess, and address, the needs of this heterogeneous population of adults.

Gerontology

Gerontology is a multidisciplinary field of study that examines the “biological, psychological, and social aspects of aging” (Hooyman & Kiyak, 2011, p. 3). The word ‘gerontology’ originates “from ‘ology’ meaning ‘the study of,’ and the Greek word ‘gero’ referring to elders” (Foos & Clark, 2008, p. 9). According to the College of Public Health Institute of Gerontology (n.d.), geriatrics focused on the medical care of older adults, whereas gerontology focused on the physical and psychosocial aspects of aging. Gerontologists must therefore, study the process of aging from various perspectives including medical (e.g., physical health), social (e.g., informal versus formal supports, role theories), economic (e.g., financial, government funding, and policy), and cultural (e.g., differing worldviews), as opposed to strictly diseases of aging (Hooyman & Kiyak, 2011). Furthermore, they described aging as the “changes that take place in an organism

throughout the life span – good, bad, and neutral" (p. 6). Gerontology also considered myriad perspectives ranging from the social sciences to business disciplines (Foos & Clark, 2008).

Gerontologists approached aging as a lifelong process, rather than an aspect unique to later-life (Herr & Weber, 1999). Zarit and Zarit (2007) described life-course and lifespan approaches to aging as encompassing "the interaction of biological, psychological, and social processes" (p. 20). Furthermore, Foos and Clark (2008) stressed the importance of experience in the lifespan developmental perspective, which asserted that we are shaped by our experiences. According to Baltes, Staudinger, and Lindenberger (1999), older adults were capable of lifelong learning due to the fact that "cognitive plasticity in the mechanisms of cognition is preserved among healthy older adults and is easily activated through experiential manipulation" (p. 496). This attested to the importance of experiential learning (and growth) for aging persons.

The important features of the lifespan development perspective were further outlined by Baltes (1987) as (a) development as a lifelong process, (b) development as multidisciplinary, (c) development as gains and losses, (d) development shows plasticity, (e) development as embedded in history, and (f) development occurs within a context (as cited in Foos & Clark, 2008, pp. 21-24). Furthermore, researchers also stressed that understanding how a person dealt with transitions and challenges earlier in life helped to predict how they would address age-related challenges in later-life (Warnick, 1995). Such transitions included, but were not limited to, changes in social roles, retirement transitions, and threats to independence.

Warnick (1995) discussed the pressures of third age (late-life) extensively. In particular, he asserted that as people moved through life, their experiences and life-course had a tremendous impact on their ability to deal with age-related challenges. Consequently, how a person entered the third age varied immensely between individuals, "Some enter as secure individuals who can deal with the stresses of this stage of life. Others are insecure and wilt at the first hint of challenge" (p. 11). The top 10 pressures of the third age (also referred to as the challenges of aging) included (a) lifestyle changes, (b) losses, (c) relationships, (d) health problems, (e) fears, (f) being treated as old, (g) frustration, (h) grief, (i) accumulation of life problems, and (j) economic problems (pp.15-19).

According to Warnick (1995), the aging process was defined by an accumulation of pressures (similar to the kitchen sink principle), whereby individual differences accounted for a large variation in the ways in which persons responded to the various challenges of aging. For example, for some, chronic health conditions (e.g., terminal illness, arthritis, diabetes etc.) greatly hindered one's ability to cope with the aging process when depression, fear of the future, and finical burden further complicated the situation. However, for those with strong social support systems (e.g., family, friends, church groups etc.) addressing the complex challenges of aging may not be so burdensome. For example, when a person experienced physical limitations due to a stroke, a family member who helped with ADLS and IADLs (e.g., grocery shopping and making meals), and a friend who took time to socialize regularly, helped alleviate some of the challenges (physical and psychological) of aging.

For those older adults who felt overwhelmed by the aging process, perhaps due to accumulation of losses (e.g., family members and friends), eliciting the motivation to stay engaged in the community, and the desire to maintain one's own physical and psychological health may be warranted. For some, this motivation was highly internalized; however, for others, nudging them toward improving their quality of life may be necessary (Warnick, 1995). Regardless of whether or not motivation exists, researchers assert that individuals must be motivated to change their circumstances, behaviors, and/or predicaments. If not, then development cannot occur, and the pressures of late-life continue to accumulate and burden the individual. Thus, according to this perspective, the various stakeholders involved in the care of an older adult (i.e., family members, friends, healthcare, and service professionals) should identify the unique pressures an individual is experiencing, while simultaneously exploring they ways in which they can best learn to address them.

Biological theories of aging. Senescence, or biological aging, refers to declining bodily systems and increased susceptibility to disease (Foos & Clark, 2008; Hooyman & Kiyak, 2011, pp. 71-72). Researchers asserted that individual differences greatly influenced the aging process, whereby "individual aging depends largely on genetic inheritance, nutrition and diet, physical activity, and environment" (Hooyman & Kiyak, 2011, p. 72). According to these researchers, popular biological theories of aging included (a) wear and tear, (b) cellular aging, (c) immunological theory, (d) cross-linkage, (e) free radical (or oxidative stress), and (f) Mitochondrial DNA mutation theory (p. 73). However, despite biological functional declines, gerontologists continued to attest that older adults were still able to enjoy active lifestyles and achieve active aging by

modifying their physical surroundings to accommodate their declining health. Gerontologists referred to this concept as the person-environment perspective (or P-E Fit model). According to this theory, “the environment is not a static backdrop, but changes continually as the older person takes from it what he or she needs, controls what can be modified, and adapts to conditions that cannot be changed” (p. 9). This suggested that in order to age successfully, older adults must adjust to (and adequately utilize) their environment, in order to offset the challenges that accompany aging.

Psychosocial theories of aging. In addition to biological theories of aging, other researchers and theorists examined the effects that experience had on development across the life-course. Saxon et al. (2010, pp. 13-17) discussed the following psychosocial theories of development:

Maslow’s Hierarchy of Basic Human Needs. Maslow (1968) identified a hierarchy of basic human needs. According to this theory, once an individual met his/her basic human needs for survival (e.g., safety and security needs); they were motivated to meet higher needs such as self-esteem, acceptance, and self-actualization. Thus, according to this model, needs must be accurately assessed and addressed in order to achieve personal development and growth for each unique individual.

Erickson’s Stage Theory of Development. Erickson’s (1963) theory of development proposed that humans experienced a series of crises as they moved throughout their life course (in sequence, either positively or negatively). For older adults, Erickson proposed the following stages: Middle Age, Generavity versus Ego Stagnation (desire to leave a legacy), and Late Adulthood, Ego integrity versus Despair (putting one’s life in perspective, did it have a purpose? Was it meaningful?). According

to this theory, it was during this stage that people made sense of their lives and assigned value and meaningfulness to their accomplishments. For example, an older adult may reflect on a life well lived, career successes, personal accomplishments, and treasured family and social relationships (ego-integrity). However, for others, this stage could be fraught with despair, when one feels as if life did not have any meaning or purpose (ego despair).

Peck's Tasks of Middle and Old Age. Peck (1968) further expounded on Erickson's psychosocial theory of development, by proposing that there were three specific tasks that must be accomplished (sequentially or simultaneously) in older adulthood: (a) Ego Differentiation versus Work Role Preoccupation, (b) Body Transcendence versus Body Preoccupation, and (c) Ego Transcendence versus Ego Preoccupation.

Ego differentiation versus work role preoccupation. Those who primarily defined themselves by their work role or identities, lacked self-esteem when they no longer performed such duties. In contrast, those who generally viewed themselves positively and worthwhile and were not defined by their work role, were able to age more positively via boosting or maintaining their self-esteem and feelings of self-wroth by engaging in alternative positive experiences (e.g., developing friendships outside of the workplace, volunteering etc.).

Body transcendence versus body preoccupation. Those who were unable to overcome poor health or became preoccupied with the negative physical changes of aging, fared less well than those who were able to brush them aside and embrace the

physical changes of aging. Those who accepted the changes were better able to derive satisfaction from their later years and age positively.

Ego transcendence versus ego preoccupation. Those who remained actively engaged in society and others (as opposed to themselves) aged passively. Thus, according to this developmental perspective, a person's attitudes and experiences during their earlier years greatly influenced the ways in which they dealt with the aging process in later adulthood.

Sociology of Aging

According to gerontologists, with age, social roles and relationships changed (Foos & Clark, 2008; Hooyman & Kiyak, 2011). As a result, older adults sought support from a multitude of sources to help deal with late-life transitions. Retirement, whether an autonomous decision or determined by uncontrollable health concerns (disability), required a transition from the workforce, thus, altering a person's role identity and the scope of friendships and social networks. For those adults who raised their own children, there often came a time when those children assumed the responsibility of the caregiver, thus reversing earlier social roles. In addition, over time, the accumulated loss of close friends and family members, forced older adults to seek supports from a variety of sources - some familiar (e.g., lifetime friends, church groups etc.), whereas others may be novel (e.g., social service agencies). Either way, the roles and relationships one assumes, alter with age. Whether or not a person is able to age successfully (physically, socially, and/or psychologically) is often greatly dependent on the types of support and resources available to them.

Gerontologists stress the importance of formal and informal support networks, arguing that strong social networks or "interrelationships among individuals that affect the flow of resources and opportunities . . . can be powerful antidotes to some of the negative social consequences of aging" (Hooyman & Kiyak, 2011, p. 340). According to these researchers, social supports can be informal (friends, family members), formal (social services, state and/or federal governmental agencies), and/or reciprocal (people help others who in turn help them).

Researchers have noted that gender, generational, and cultural differences exist in support system utilization. According to Antonucci and Akiyama (1991), "Women tend to have larger networks with more family than men do . . . and place more people in their inner circle [convoy]" (as cited in Foos & Clark, 2008, p. 210). Furthermore, Foos and Clark (2008) stated that women also tended to "maintain close, confiding relationships with people other than their spouses while men are more likely to confide only in their spouses" (p. 210). These thoughts further demonstrate the gender differences with regard to social networks and sources of support across the life-course.

Researchers who examined the social context of aging also reported generational changes in the make-up of social networks. According to Blieszner (2006), the social networks of the baby boomers were predicted to be more diverse than those of older adults in previous generations, due to greater "cross-race and cross-gender relationships" across the life-course (as cited in Hooyman & Kiyak, 2011, p. 370). In addition, gerontologists also noted cultural difference pertaining to customs and/ or cultural norms with regard to social support systems for older adults. According to Antonucci (2001), African Americans' networks contained more relatives than Whites. Hispanic American

elders' networks contained a multitude of people, including immediate and extended members, and Chinese Americans relied heavily on their children (chiefly daughters) for support (as cited in Foos & Clark, 2008, pp. 210-211).

Regardless of the make-up of the network, social supports were reported to help older adults overcome physical (e.g., disability) and cognitive (e.g., depression, anxiety) health concerns, grief, changes in status (retirement), social isolation, and relocation due to living arrangement transitions (Hooyman & Kiyak, 2011). Furthermore, researchers also stated that older adults "with strong support have healthier cardiovascular, endocrine, and immune systems" (Foos & Clark, 2008, p. 211), as well as, according to Uchino, Cacioppo, and Kiecolt-Glaser (1996), a general slowing of "some aspects of the biological aging" (as cited in Foos & Clark, 2008, p. 211).

Antonucci, Fuhrer, and Dartigues (1997) attested that the effects of positive social support networks extended beyond the physical and social realms, as older adults who reported strong satisfaction with close friends and family, tended to have high levels of psychological well-being. These findings were further supported by Newsom and Schulz (1996) (as cited in Foos & Clark, 2008). This provides strong evidence that social supports can help increase the overall well-being of older adults when addressing the multitude of age-related challenges that often accompany later-life.

Diseases of Aging

With age, there was an increased risk of disease, which was largely attributable to a decline in the ability to respond to stress, as opposed to the myth that aging itself causes disease (Spence, 1999). However, according to researchers, some general age-related

changes, as well as notable dysfunctions and diseases, may occur in the various body systems with age. Examples of such changes are outlined as follows.

Saxon et al.'s (2010) and Spence's (1999) body system overviews gave an extensive account of the various age-related changes and dysfunctions that occur in the body with age. The following diseases are pertinent to this research study:

Sensory loss. Age-related changes in vision, hearing, taste, and smell usually begin around age 40 (Saxon et al., 2010). Researchers affirmed that unlike other body systems, many of the changes that occur within the sensory system are considered normal aging declines (e.g., loss of vision and/or hearing). However, diseases in the sensory system (e.g., glaucoma, detached retina, and age-related macular degeneration - eyes, and presbycusis, tinnitus, and vertigo - ears) (Spence, 1999), could drastically hinder a person's quality of life, affecting not only physical health, but also psychosocial well-being. For example, a person who develops cataracts may not only experience vision loss, but also psychological consequences of a loss of sight. For example, depression may develop, followed by social withdrawal.

Safety is also a concern for those experiencing sensory losses. Vision loss may interfere with one's safety mobilizing inside and outside the home. It also affects driving ability. Hearing impairments may hinder one's ability to listen out for danger (e.g., when walking in the neighborhood and/or crossing roads). Furthermore, a loss of smell may hinder one's ability to detect gas and other hazardous fumes. Finally, declines in one's ability to taste may hinder an older adults' ability to detect the amount of salt in food or failing to taste when food has gone bad or expired (Saxon et al., 2010).

Each of these examples demonstrates how important the sensory system is for human survival. With age, the accumulation of sensory impairments often mounts. Therefore, it is important for those experiencing sensory losses to make adjustments to account for such limitations. For example, an older adult may wear vision glasses to improve eyesight, or perform eye surgeries to remove cataracts. One could wear hearing aids to improve hearing and communication with others in addition to installing temperature gauges on bathtubs and sinks to detect temperature degrees/ in addition, writing use-by dates in large numbers on containers of opened food may help prevent the elderly consuming expired foods. Home modifications (e.g., installing grab bars, non-slip flooring, and appropriate lighting) may also help alleviate many of the physical and functional losses that occur with age, and thus, help enhance the quality of life and safety for older all older adults, regardless of level of physical and psychological functioning.

The integumentary system. The *s*kin, hair, and nails (integumentary system) display some of the most visible signs of aging. This system helps to inform others about the physical and psychological well-being of an older adult, as evidenced by personal appearance, grooming, and hygiene. Therefore, being able to maintain skin health is an important indicator of functional status and general well-being (Saxon et al., 2010).

Cardiovascular disease. Although often preventable by maintaining a healthy lifestyle (via a balanced diet, nutrition, and exercise), heart disease was still the number one cause of death for persons over the age of 65 (Saxon et al., 2010). Researchers noted several risk factors for cardiovascular disease, including smoking, ethnicity, gender, exercise, and obesity (pp. 148-149). It is, therefore, imperative that persons of all ages are educated about healthy lifestyle choices, good nutrition, and the importance of

understanding one's family health history, in order to reduce the likelihood of developing cardiovascular diseases in later-life. In addition, it is crucial for older adults to be informed about the benefits of engaging in healthy lifestyles via good nutrition, exercise, and health promotion programs, regardless of age of implementation (even in late-life) (Foos & Clark, 2008; Hooyman & Kiyak, 2011; Spence, 1999; Saxon et al., 2010).

Obesity. According to the CDC (2003), between the 1970s and 2008, obesity rates increased by over 100% (as cited in Pruncho, Wilson-Genderson, & Gupta, 2014, p. 924). Furthermore, Finkelstein, Khavjou, and Thompson (2012) discussed the number of obese Americans growing from one third of the population in 2014, to a projected 42% to 51% of the population by 2030 (as cited in Pruncho et al., 2014, p. 924), with Mendes (2010) reporting that despite the increasing prevalence of obesity across various age categories, those aged between 45 and 64 years, were at the greatest risk (as cited in Pruncho et al., 2014, p. 924). Such concerns were not only unique to the U.S., but were also troubling for many other developed and developing countries across the globe. The World Health Organization (2014) stated that 42 million children under five were categorized as obese or overweight in 2013, with numbers projected to increase to 70 million by 2025 (para 2).

Increased rates of obesity were generally attributed to changes in diet and lifestyle, the increased production of processed foods, a heavier reliance on motor-vehicle transportation (as opposed to walking and riding bicycles), and a reduction in the amount of amount of physical activity and exercise persons engage in. Increased sedentary lifestyles due to factors such as an increased demand for desk-job workers, greater amounts of TV and IT usage, further compounded the obesity epidemic (Hamer, Weiler,

& Stamatakis, 2014). In order to curb the increasing rates (and costs) of obesity, policy makers, healthcare providers, and social service agencies across the globe, were looking for ways to effectively promote healthy lifestyle choices regarding diet, exercise, and nutrition.

Diabetes. According to Sue Kirkman et al. (2012), older adults had the highest prevalence of diabetes, a condition with profound physical and functional health implications for older adults. Diabetes remained the seventh leading cause of death in the U.S., with 11.8 million or 25.9% of the population aged 65 and older living with disease (American Diabetes Association, 2014, Statistics About Diabetes, para. 1). Furthermore, as discussed by SangNam, Smith, Dickerson, and Ory (2012), the increasing numbers of baby boomers and older adults with diabetes was of grave concern for healthcare professionals and policymakers due the escalating costs associated with this epidemic, which, according to some estimates, totaled $245 billion in 2012 (American Diabetes Association, 2014, Statistics About Diabetes, para. 6).

Diabetes was not a concern unique to the U.S., but rather a global concern, affecting countries not only in the Western world, but also in the Middle East and Sub-Saharan Africa. The primary reasons for increased prevalence across the continuum included urbanization, changing lifestyles, and aging populations (Al-Rubeaan et al., 2014; Frank et al., 2013). Thus, better education about maintaining a healthy lifestyle, reducing sugar intake, and engaging in regular exercise, in an attempt to curb the escalating numbers (and costs) of diabetes diagnoses, is a top priority for healthcare providers and policy makers across the globe.

Dementia. One of the greatest concerns surrounding the greying of the population was the increased prevalence of dementia, "a syndrome characterized by multiple disturbances in neurological, psychological, and social functioning . . . [involving] irreversible and progressive deterioration of functioning often over a long period of time" (Saxon et al., 2010, p. 92). Touhy (2008) categorized different types of dementias into (a) primary, and (b) secondary dementias. Primary dementias were the most common form, caused by pathological changes in the brain (e.g., Alzheimer's disease, vascular dementia, frontal temporal dementias, dementia with Lewy bodies, dementia with Huntington's disease, and Creutzfeldt-Jacob disease). Secondary dementias on the other hand, are associated with Parkinson's disease, HIV/ AIDS, dementia due to drugs, alcohol, major depressive disorder, normal pressure hydrocephalus (NPH), and metabolic disturbances (as cited in Saxon et al., 2010, p. 92).

Alzheimer's Disease (AD). There were an estimated 5 million Americans living with AD, which was commonly referred to as the "defining disease of the baby boomers" (Alzheimer's Association, 2011, p. 1). AD was the most common form of dementia, accounting for 60-80% of all cases (Saxon et al., 2010) and the sixth-leading cause of death in the U.S (p. e47). A major concern for healthcare professionals and the aging community in general, was the fact that in the U.S. alone, a new case of AD was diagnosed every 67 seconds (Alzheimer's Association, 2014, Facts and Figures). Further still, researchers predicted that this statistic will accelerate to every 33 seconds by 2050 (Alzheimer's Association, 2013a, Facts and Figures).

Although AD and other dementias were often associated with the elderly (as the greatest risk factor for developing AD/ dementias is age), it is important to note that AD

can affect individuals in their 40s and 50s. Such cases are referred to as 'early-onset' AD, many of which are linked to an inherited (genetic) pattern (Saxon et al., 2010; Zarit & Zarit, 2007). Such cases often have devastating social, psychological, and economic impacts on the lives of those affected, as early versus late-onset (ages 65+) individuals, are typically of working age, many of whom are still raising children of their own. In addition, early-onset cases of AD typically have a faster rate of progression, as compared to their late-onset counterparts.

Symptoms of AD. The most common early-stage symptoms of AD include memory loss - particularly short-term memory loss pertaining to recent events. For example, a person with AD may have trouble telling what they had just eaten for lunch; however, they could recollect numerous facts from their long-term memory (e.g., places they vacationed and remembering the year they were married etc.). In addition, persons with AD often have trouble remembering appointments or instructions as to how to perform familiar tasks. For example, a person with AD may forget the ingredients of a favorite recipe, or the directions to the local grocery store.

Oftentimes, persons diagnosed with AD become confused, disoriented, and even hostile. Irritability and agitation were also common symptoms of the disease (Hooyman & Kiyak, 2011; Saxon et al., 2010; Zarit & Zarit, 2007). Researchers noted that for those experiencing memory loss, either as the persons with the disease, or the caregivers/ family members, the early-signs could be very frustrating. In addition, depression and anxiety often resulted from the progression of the disease. Some used denial as a means of coping with the alterations in personality and behavior.

It is important to note that, as with many diseases, every case is different and highly individualized, with no two persons experiencing the same progression, symptoms, and reaction to the diagnosis of AD in exactly the same way (Saxon et al., 2010, p. 94). Typically, however, as the disease progresses from early to moderate stages, persons with AD begin to need assistance with ADLs and IADLs (p. 94). For example, persons with AD may forget to turn off the stove after cooking, wandering is commonplace, as well as the inability to dress appropriately for the various seasons of the year (e.g., layering up in winter jackets when it is 100 degrees outside). As the disease progresses to the final stages (death), body systems shut down, and functions such as swallowing become difficult. The only way to confirm a diagnosis of AD is via autopsy, upon death, when the brains of the deceased are examined for the characteristic traits of AD, amyloid plaques and neurofibrillary tangles (oftentimes referred to as plaques and tangles) (Hooyman & Kiyak, 2011; Zarit & Zarit, 2007).

Education about Alzheimer's disease was paramount for individuals living with, and caring for, persons with AD. Organizations such as the Alzheimer's Association, provided an array of community resources (e.g., support groups, education training seminars, community education/outreach, hotlines etc.) to help persons cope with the challenges of aging with AD (Alzheimer's Association, 2014). Furthermore, the resources were available across the U.S. and in a variety of languages. AD does not discriminate by color, gender, or geographical location. Therefore, it is imperative that communities across the globe prepare themselves for a growing number of older adults aging with AD and other related dementias.

Despite the increasing prevalence rates of AD and other dementias, researchers cautioned against the detrimental effects of over diagnoses of such diseases in older adults. Oftentimes, failing to recognize a urinary tract infection (UTI) in older adults caused healthcare professionals to misdiagnose dementia (Zarit & Zarit, 2007). This attests to the importance of ensuring that every individual receives a comprehensive geriatric assessment prior to diagnosis (Gallo et al., 2006).

Developmental Disabilities

Global greying also encompasses aging populations of older adults with DD (O'Brien & Rosenbloom, 2009). Researchers estimated that in the U.S. alone, 850,600 people with DD aged 60 and above were living in the (as cited in Heller, 2013, p. 1) with numbers projected to increase to 1.4 million by 2030, as stated by the U.S. Census, 2008 (as cited in Heller, 2013, p. 1). Like fellow researchers in the field, Doka and Lavin (2003) attributed this aging trend to "better health care, greater medical understanding of developmental disabilities, and the beneficial results of deinstitutionalization" (pp. 135-136).

Improvements in the quality and individualization of care for persons with DD, led to increased life expectancies for this population (Saxon et al., 2010, pp. 268-269). Braddock (1999) stated that "between the 1930s and 1990s, the mean age at death for persons with ID increased 47 years, from 18.5 years to 66.2 years" (as cited in Saxon et al., 2010, p. 269). In addition, according to Selikowitz (1990), persons with DS in the early 1900s had a life expectancy of nine years (as cited in Saxon et al., 2010, p. 269), thus never having the expectation of reaching adulthood. Therefore, despite experiencing much shorter life expectancies in years past, at the time of this writing, persons with DD

(and even DS) tend to have a life expectancy closer to that of the general population (Janicki & Dalton, 1999; National Down Syndrome Society [NDSS], 2012; Sara, 2008):

> As a very general guide, one can think of the ID population as having a life expectancy of around 10 years less than the general population, and those with DS having a life expectancy around 20 years less than the general population. (Saxon et al., 2010, p. 269)

Consequently, as more persons with DD reach later-life, they bring new age-related challenges to the forefront for healthcare, education, and social service providers.

When analyzing research literature on aging with DD, it is important to note that the terms ID and DD are often used interchangeably. Sometimes the terms are referred to as IDD (Focht-New, 2012). However, attempts to draw some distinctions between the two terms affirmed that the major differences between ID and DD are “the age of onset, the severity of limitations, and the fact that a person with a developmental disability definition may or may not have a low I.Q” (The Arc, 2013c, para. 9).

In order to distinguish between the two, DD were typically lifelong, chronic disabilities that appeared before the age of 22. DD can be cognitive, physical, or both. ID on the other hand, were closely intertwined with cognitive processes. referring more specifically to IQ tests and intelligence. Between 1 and 3% of Americans were believed have an ID (The Arc, 2013c) which originated before the age of 18 and were “characterized by significant limitations both in intellectual functioning and in adaptive behavior, which covers many everyday social and practical skills” (AAIDD, 2013a, para. 1).

Importantly, Saxon et al. (2010, p. 268) explained that persons with ID always have a DD; however, persons with a DD, such as cerebral palsy, may not experience intellectual disability. For example, a person with a DD might have speech difficulties, but intellectual functioning may be unaffected. Therefore, healthcare professionals and service providers must not assume that all people with a DD have intellectual disability; thus, adding to the uniqueness of this population of adult learners.

After reviewing the literature, the PI decided to use the term DD (as opposed to ID) throughout this study. The reasons for this decision were (a) AADD used the term DD, and (b) ID was often referenced under the larger umbrella of DD (AAIDD, 2013b). Regardless of the terminology used, however, indicators of DD included intelligence tests (IQ) and measures of adaptive behavior (life skills). According to AAIDD (2013b), scores of 70 (or even 75) on IQ tests indicate limitations in intellectual functioning (para. 8).

Adaptive behaviors can be measured by examining an individual's conceptual skills (e.g., money, time, and language), social skills (e.g., relationships, naiveté, and social problem solving skills) and practical skills (e.g., self-care, eating, bathing, and cooking) (AAIDD, 2013a). Activities of daily living (ADLs) include essential functions such as bathing, eating, and dressing. Independent activities of daily living (IADLs) include higher functioning tasks such as shopping, preparing meals, and using the telephone.

Geriatric assessment tools such as the Katz Index of Activities of Daily Living (Katz), Instrumental Activities of Daily Living (IADL), and/or The Five-Item Instrumental Activities of Daily Living (IADL) Screening Questionnaire, were used to

assess levels of functional impairments in older adults (Gallo et al., 2006, pp. 200-204). However, despite comprehensive geriatric assessment tools being effective measures for assessing the healthcare needs of older adults with DD (Carlsen, Galluzzi, Forman, & Cavalieri, 1994), the growth of this population prompted the need for modified geriatric assessment tools for those aging with DD.

It was imperative that if a DD was detected as a result of a comprehensive assessment, programs and services must be tailored to meet the unique needs of the individual (AAIDD, 2013a). Re-evaluations of ADLs and IADLs are also essential, as older adults with DD may continually confront age-related challenges in late-life that may require some form of adaptation and learning. In particular, functional assessments, those assessing one's ability to remain safely at home, are essential for older persons wishing to age in place. The complexity of maintaining independence (including safety) and a rich quality of life is, therefore, further compounded for those aging with DD.

AADD's Final Game Plan program attempted to address these concerns by capturing life movies of adults with DD. Staff at AADD filmed older adults with DD whilst they participated in a modified multidisciplinary geriatric assessment, developed in collaboration with Morley at St. Louis University, Missouri (P. Merkle, personal communication, August 26, 2014). This modified assessment tool assessed cognitive and physical abilities in order to provide a baseline of physical and psychological functioning for persons with DD. This document helped service professionals (including physicians and nurses) to track levels of functioning, should anything happen to the individual (physically, psychologically, or socially). For example, if an older adult at AADD has a stroke, healthcare and service professionals can review the individual's videotape in order

to assess if any cognitive, social, and/ or physical functions were resultant. This helps aid the recovery process, as well as the formulation of a personalized care plan, for the stroke victim. Often times, older adults with DD do not have parents or close family members to advocate for them; thus, the use of such videotaping techniques helps give a voice to those who are unable to advocate and communicate for themselves.

Types of DD. Common types of DD include DS, cerebral palsy, epilepsy, and ASD (The Arc, 2013a, 2013b). Many persons aging with DD have mixed diagnoses (P. Merkle, personal communication, September 19, 2014), adding to diversity of this population of adult learners. A brief overview of some of the most common types of DD is outlined below.

Down syndrome (DS). According to the National Down Syndrome Society (NDSS, 2012), "One in every 691 babies in the United States is born with Down syndrome, making Down syndrome the most common genetic condition" (para. 3), which is caused by a full or partial extra copy of chromosome 21. Although persons with DS experienced shorter life expectancies in years past, today they tend to have a life expectancy more closely aligned with that of the general population (Janicki & Dalton, 1999; NDSS, 2012; Sara, 2008). Therefore, it is imperative that the age-related learning needs of this heterogeneous population of adults are accurately identified, and met, in order to promote independence and successful aging in place.

Cerebral palsy. As the population of older adults with DD increases, so too does the number of older adults with cerebral palsy. A condition which once led many persons to believe that such individuals would never walk, has many times been proven wrong, with many individuals with cerebral palsy successfully aging in place, with the necessary

physical and psychosocial supports (AADD, personal communication, August 25, 2014). According to Mayo Clinic (2014), “Cerebral palsy is a disorder of movement, muscle tone or posture that is caused by an insult to the immature, developing brain, most often before birth” (2014, para. 1). Symptoms may include impaired movement and walking and/or unusual body posture.

As with DS, individual differences existed in the functional status of those with cerebral palsy. “Some people are able to walk while others aren't able to walk. Some people show normal to near normal intellectual function, but others may have intellectual disabilities” (Mayo Clinic, 2014, para. 4). This further attests to the importance of identifying the unique learning needs and age-related challenges faced by individuals aging with this DD. For example, for those individuals with the motivation and will power to succeed and promote independence, adequate supports should be available. However, for those lacking motivation and desire to increase mobility and independence, an exploration of individual needs and barriers to physical and psychosocial development is encouraged. Furthermore, a thorough exploration of cognitive versus functional learning needs is vital for persons aging with DD. For example, for some older adults with cerebral palsy, intelligence may be relatively ‘normal’; however, additional learning needs may exist in physical and/or functional domains (e.g., hydrotherapy for strengthening leg, torso, and arm muscles for improving balance and one’s ability to walk a short distance with an aid - mobility). However, for some, improving memory or even engaging in higher-level cognitive activities (e.g., reading, using novel technology, learning new skills) may be desired. Therefore, whatever the age-related learning need,

the appropriate supports and formulation of individualized learning goals/objectives are necessary for those wishing to age in place with DD.

Epilepsy. The Epilepsy Foundation stated that 300,000 older adults in the U.S. had epilepsy, with seniors being the fastest growing population with this condition (Epilepsy Foundation, n.d.a, para. 1). "A person is diagnosed with epilepsy if they have had at least two seizures that were not caused by some known and reversible medical condition" (Epilepsy Foundation, n.d.b, para. 2). For older adults, however, cardiovascular issues (including strokes) can trigger the onset of epilepsy. Furthermore, the use of medications, increased fall-risk, and loss of independence further compounds the health and safety of those affected by this condition (Epilepsy Foundation, n.d.a). Healthcare and service professionals must, therefore, be (a) informed about how to identify and diagnose epilepsy in older adults with DD, (b) able to address the age-related learning needs of older adults with epilepsy, and (c) adequately tailor services to meet the needs of those with life-long (from childhood) or later onset (as a result of cardiovascular issues) epilepsy cases.

It is important to note that when working with older adults with (or without) DD, one must take into consideration physical, psychological (personality), and social (support networks) histories, in order to formulate personalized care plans and learning goals. As discussed later in this chapter, aging successfully is dependent on multidisciplinary factors, which are most successful when tailored to meet the specific needs of each individual. For example, those older adults with DD who have available family supports and care would better manage with a late-onset diagnosis of epilepsy compared to those without such support networks. In addition, a late life diagnosis of

epilepsy may require an individual to come to terms with the diagnosis and adjust to lifestyle changes that are associated with the disorder (Epilepsy Action, 2015, para. 3). Thus, the age-related learning needs of such individuals will likely vary.

Autism. As with the other types of DD outlined earlier in the chapter, Autism is a highly individualized and complex disability, affecting individuals to varying degrees. Signs of autism "typically appear during early childhood and affect a person's ability to communicate, and interact with others" (Autism Society, n.d., para. 1). Thus, for those with Autism (as with other DD), healthcare and educational programs must be tailored accordingly throughout the life-course, in order to meet the unique learning needs of those living with this disability.

In the later-years, age-related learning needs of those with autism depended on the histories of the individual. For example, retirement transitioning may be necessary for those who worked, and permanency planning may be requested by those whose parents and other family members are deceased or no longer able to care for them. Again, life experience and the combination of physical and psychosocial development greatly influence a person aging with autisms' ability to deal with the challenges of aging.

Deinstitutionalization. Deinstitutionalization of developmentally disabled persons in the 1960s and 70s led to an increase in community placement of persons with DD (Kapp, 1999). Consequently, many persons with DD who were reaching old age, at the time of this writing, were traditionally cared for at home by their parents, with limited contact with social service agencies. Resultantly, as more persons with DD reached late-life, they were outliving their parents and other primary caregivers (Heller, 1999). The loss of these pivotal figures, those who provided "the most consistent source of

caregiving for people with mental retardation across the life span" (Heller, 1999, p. 155), meant that older adults with DD were finding themselves facing the challenges of late-life alone, in an increasingly complex world.

Challenges existed in many domains of life for those aging with DD including, but not limited to learning how to cope with their own age-related declines in health, as well as having to learn how to care for their elderly parents. In addition, "People with IDD often have difficulty accessing quality healthcare because many professional do not receive any instruction regarding their unique needs" (Perkins, 2013, p. 9). This was further supported by the fact that training programs specifically designed for caregivers and service professional supporting seniors with DD were lacking (Herman, M., personal communication, July 26, 2013). Therefore, research focusing on the unique learning needs of older adults with DD and their caregivers is highly warranted, and urgently needed.

Preparedness planning. Researchers have noted a disconnect between aging and DD networks regarding the permanency planning needs of older caregivers and their developmentally disabled children, in addition to "a lack of attention for how these parents must cope with the future of their offspring when they can no longer continue as caregivers" (Smith & Tobin, 1990, p. 35). According to Gold, Dobrof, and Tobin (1987), Heller and Factor (1987), and Seltzer and Seltzer (1985),

> Permanency planning . . . occurs in the later stages of the family life cycle for older parents and their adult dependent offspring. Successful permanency planning, that safeguards the future of these offspring, includes three components:

> residential arrangements, legal protection, and financial security. (as cited in Smith & Tobin, 1990, p. 37)

The gap in research literature regarding the permanency planning needs of older adults with DD and their families is due to the following factors: (a) inconsistent reporting on the number of older adults with DD being cared for by parents and/or other family members, (b) the fact that this population of adults is somewhat hidden in society, and (c) a disconnect between aging and DD service providers and policy makers. Worryingly, even among the social work community, limited research exists regarding best practice educational and intervention models for those caring for persons aging with DD (Botsford & Rule, 2004).

According to Janicki et al. (1985), Kauppi and Jones (1985), and Rose and Ansello (1987), without permanency planning interventions, many older adults with DD are likely to find themselves institutionalized (i.e., placed in nursing homes), once their parents and/or other family members are no longer able to care for them (as cited in Smith & Tobin, 1990, p. 37). The consequences of which are likely to have profound financial and quality of life implications for all involved. Furthermore, Botsford and Rule (2004) asserted that “unplanned transitions are associated with depression, dementia, reduced coping capacity, and increased risk of Alzheimer’s disease for adults with Down syndrome” (p. 423).

Although scarce, healthcare and service professionals have attempted to offset some of these concerns. For example, policy makers, service providers, and researchers in the St. Louis area have developed educational initiatives, such as AADD’s Final Game Plan and End of Life programs for seniors, to address matters pertaining to late-life

transitions and end of life issues for persons with aging with DD. Additionally, service professionals developed modified CNA training programs for those older adults with DD, who assumed the responsibility of primary caregiver for their own elderly parent(s), (personal communication, P. Merkle, AADD, March 2014). However, as with much of the research in this field, the effectiveness of such programs warrants further exploration.

Diseases of Aging for Those with DD

In 2005, the average life expectancy for developmentally disabled older adults was approximately 66 years, with younger generations having average life expectancies similar to those of the general aging population (mid-seventies) (Fisher & Ketti, 2005). In addition, advances in healthcare have considerably extended the average life expectancy of people with DS from 25 years in 1983 to 50 years in 2008 (Sara, 2008, para. 7). However, such strides in life expectancy also uncovered unmet needs for those aging with DD, or as stated by Doka and Lavin (2003), the paradox of aging with DD, increasing needs, decreasing supports. In addition, Fisher and Ketti (2005) discovered that aging persons with DD typically underutilized healthcare and supportive services, which was an additional concern when examining the age-related learning needs of this population of aging adults. Furthermore, as stated by Morrison, George, and Mosqueda (2008),

> People with IDD often have difficulty accessing quality healthcare because many healthcare professionals do not receive any instruction or education whatsoever regarding their unique healthcare needs [more worryingly is the fact that] Physicians admit to feeling ill prepared and lacking resources and specific knowledge about people with disabilities. (as cited in Perkins, 2013, p. 9)

This, therefore, highlights an urgent need for more education about the developmentally disabled population for healthcare and service professionals across the care continuum.

Researchers studying the increasing life expectancies of persons with DD reported that older adults with DD experienced the same types of chronic illnesses that accompany increased longevity in the general aging population, diabetes, heart disease, and cancer (Fisher & Ketti, 2005, para. 2). Despite these similarities, however, researchers also noted an increased prevalence of certain health problems in older adults with DD when compared to the general greying population. These include vision problems, particularly glaucoma and cataracts, hearing loss, poor oral health, thyroid abnormalities, obesity, behavioral problems, mental health issues, and Alzheimer's disease (in persons with DS) (Fisher & Ketti, 2005; Sara, 2008).

Obesity in the DD population. In addition to the increased concern about obesity in the general population, serious concern also existed about the lack of health education and promotion among the DD population. According to researchers, "the troubling trend of increasing rates of obesity in the general population appears to be much worse in the ID population" (Saxon et al., 2010, p. 278). Yamaki (2005) stated that 34.6% of those with ID were obese versus 20.6% in the general population (in data gathered between 1997 and 2000) (as cited in Saxon et al., 2010, p. 278). Even more worrisome was the fact that Rimmer, Braddock, and Fujiura (1993) and Lewis, Lewis, Leake, King, and Lindemann (2002) reported that the highest number of those with DD and obesity lived with their families or independently, as opposed to living in institutional or community-based locations (as cited in Saxon et al., 2010).

This research suggested there was a dearth of awareness about health education among the DD community, particularly individuals aging with DD and their families. It also implied there were inadequate health education programs and services available to those living independently in the community, thus highlighting an urgent educational need among this growing aging population, many of whom wish to age in place.

Research conducted by Stanišić (2012), demonstrated that access to, and engagement in, physical activity and sports programs, particularly team sports that promote collaboration and interaction; can offset the negative physical (obesity) and psychological effects (isolation) of sedentary lifestyles. This research supports the notion that increasing physical activity can improve the overall physical and psychological health of those aging with DD. However, despite such research, rates of obesity among the DD population continued to increase. Consequently, the detrimental effect that obesity has on the aging process for both persons with and without DD (e.g., links to cardiovascular disease and diabetes) was of great concern to healthcare professionals (Janicas, 2014; Saxon et al., 2010). Furthermore, for persons with DD, the health-related learning challenges of obesity and other ailments were further complicated due to several physical, psychosocial, and educational factors.

Diabetes in the DD population. As with the general aging population, diabetes was also a serious health concern for older adults with DD (Cardol, Rijken, & Van Schrojenstein Lantman-de Valk, 2012; Hale, Trip, Whitehead, & Conder, 2011; Lloyd, Tilley, Walmsley, & Davies, 2013; Saxon et al., 2010). However, as stated by Lloyd et al., (2013) "very little attention is given to this by researcher and health professionals" (p. 22). Rimmer et al., (2010) "found substantially higher rates of obesity and obesity-related

secondary conditions" (p. 793) such as diabetes, in persons with DD compared to the general aging population. Furthermore,

> Treatment of the myriad of physical and or mental health problems may lead to polypharmacy and may include the use of psychotropic medications . . . [, which] can be associated with additional health risks like obesity, metabolic syndrome, diabetes and heart disease. (Janicas, 2014, p. 122)

Therefore, diabetes develops as a result of medical treatment for other psychological and/or physical health issues, adding to the complexity of the condition and its management.

Hale et al.'s (2011) study examined the self-management abilities of diabetes in people with DD and "demonstrated that it is possible for people with ID to learn about and be involved in the management of their diabetes" (p. 227). The researchers also found that education should be continual and collaborative among the adults with DD and their care staff. Furthermore, participants in the study

> were not only involved in the management of their diabetes, but they were able to generate and share strategies to assist self-management (an example being having a walking buddy so each could support the other through exercise). They were also excellent informants as to the problems that people with ID face in their day-to-day management of the disease. (p. 228)

This research highlights the need to encourage older adults with DD to independently manage their overall health and well-being. The study also found that "Several of the adults spoke of feeling 'low' and depressed, or angry and agitated" (p. 228), suggesting

that such traits may be the product of diabetes and/or other physical or psychological health concerns and not behavior issues per se.

Cardol et al. (2012) discovered that "Development of information about diabetes that people can understand is an important step towards self-management" for those with DD (p. 359). Furthermore, they also stressed the important role that family and friends play in assisting and encouraging adults with DD to manage their diabetes. As stressed by Lloyd et al., (2013) "it is vital to educate carers, paid and unpaid, to support people in managing diabetes" (p. 24) in order to meet the health-related learning needs of persons aging with this long-term condition.

Dual diagnosis of AD and DD. As more and more aging adults decide to remain living independently in the community, the onset of AD and related dementias are typically undetected during the early stages. Fänge et al. (2012) described this new phenomenon as 'dementia in place'. Worryingly, as the disease progresses from early to mild stages, the safety of older adults living independently is at risk. For example, wandering (leaving the house and getting lost), leaving the bathtub water running, and deterioration in personal self-care tasks, pose serious health and safety risks for those wanting to age in place. Even more so, for those older adults with a dual diagnosis of DD and AD, the challenges of late-life and the detrimental effects AD has on one's ability to remain safely at home are magnified.

AD and DS. Researchers noted an accelerated aging process for persons with DS and its unique relationship to AD and dementia (Janicki & Dalton, 1999; Torr, Strydom, Patti, & Jokinen, 2010). The amyloid plaques and tangles characteristic of AD often appeared at much earlier ages in the brains of people with DS (sometimes 20 years

earlier). This, when combined with an accelerated aging process of persons with DS, results in a higher incidence of AD among those with DS (as opposed to the general developmentally disabled population) (Janicki & Dalton, 1999; McQuillan et al., 2003; Sara, 2008). In addition, researchers noted that caregivers for persons with DS were not aware of the high prevalence of AD in persons with DS (Sara, 2008).

Consequently, the increased longevity for persons with DS brought new (and not yet anticipated) challenges and complications (e.g., learning needs of older adults aging with DS, preparedness planning for the loss of parents and pivotal caregivers, complex healthcare needs, and financial implications) to the forefront for those working with, and caring for, the aging developmentally disabled population. In addition, researchers have stated that behavior and personality changes present themselves during the early (versus later) stages of AD for persons with DS (Ball et al., 2006), further adding to the complexity of accurate diagnosis and adequate care for this population of older adults.

Reports from the Alzheimer's Association (2014) stated that AD cost the nation $203 billion in 2013, rising to an astronomical $1.2 trillion by 2050 (p. e75). It is, therefore, imperative that the various DD stakeholders are not only educated and prepared for the unique challenges of a dual diagnosis of AD and DD, but that programs and services effectively meet the physical, psychosocial, and educational needs of this emerging population, while simultaneously curbing the escalating healthcare costs.

As noted earlier in this literature review, the Alzheimer's Association provided many support services and psychoeducational programs for those affected by AD (Alzheimer's Association, 2014). Examples of such programs in the St. Louis area included educational training workshops, Project Esteem (for early stage AD), and a

Cardinal Reminiscence group for baseball fans. However, upon closer review, such initiatives are practically non-existent for those wishing to learn, or seek support, for persons impacted by the dual diagnosis of DD and AD. Promisingly, however, seminars, conference presentations, and educational outreach efforts on the topic of DD and AD are gaining momentum, and given projected aging trends, future research examining the unique learning needs of older adults aging with the dual diagnosis of DD and AD is necessary. Consequently, it is imperative that persons aging with DD as well as the various stakeholders involved in the care of aging persons with DD, become better informed about the unique health and age-related learning needs of this heterogeneous population (Bishop et al., 2013).

The various theories used to explain the aging process explicitly stressed the need for a multifaceted approach when examining the age-related challenges and learning needs of persons with DD. When for example, a person experiences a stroke, a multi-faceted approach to treatment is required. Utilization of formal and informal sources occurs, forcing social adjustments on the part of the caregiver (e.g., time lost from work, reliance on family members or close friends for help with care tasks). Stroke patients are likely to undergo physical (e.g., ability to perform Activities of Daily Living (ADLs) and Independent Activities of Daily Living (IADLs), psychological (e.g., aphasia, depression, feelings of loss and isolation), and social (e.g., inability to go to work, socialize with friends, participate in social activities) adjustments.

Further compounding these changes is the fact that immediate family members of persons with DD (e.g., parents and siblings) may or may not be available sources of support for this aging population of heterogeneous adults. In addition, an older adult with

DD may have limited access to, or knowledge of, formal support services (e.g., health insurance, Medicare, or Medicaid). In such a scenario, caregivers and healthcare professionals must identify the most effective ways in which the older adult with DD can learn to regain their independence and health in order to successfully age in place. Thus, in order for persons with DD and their caregivers to cope effectively with such age-related challenges, a holistic approach to assessing their physical, psychosocial, and educational needs is required.

This is where organizations such as AADD are vital in promoting quality of life and active aging for all older adults with DD

> Active ageing is the process of optimizing opportunities for health, participation and security in order to enhance quality of life as people age. Active ageing allows people to realize their potential for physical, social, and mental well-being throughout the life course and to participate in society, while providing them with adequate protection, security and care when they need. (World Health Organization, 2015, para. 1-2)

Therefore, increasing awareness about the unique learning needs of those aging with DD is essential in order to promote independence and successful aging in place for this emerging population of older adults. As stated by Heller (2013) "With age there can be greater opportunities for personal growth, skill development, and life experience" (p. 1). Therefore, a more thorough exploration as how older adults with DD best achieve this growth is an area that warrants further attention.

Successfully Aging in Place

According to Troutman, Nies, Small, and Bates (2011), "Successful aging includes multiple dimensions: a sense of meaning or purpose, and physical, functional, psychological, intellectual, social, and spiritual health for older people" (as cited in Kozar-Westman et al., 2013, p.239). This corresponds with the holistic approach of gerontological theory, which encompasses the biological and psychosocial aspects of aging, as well as Hooyman and Kiyak's (2011) definition of successfully aging as a combination of (a) physical and functional health, (b) high cognitive functioning, and (c) active involvement with society (p. 224). Rowe and Kahn's (1998) categorization of successful aging "involving freedom from disability along with high cognitive, social, and physical functioning" (as cited in Saxon et al., 2010, p. 47) further supported these theories and definitions.

Successfully aging in place for the general population of older adults. Such definitions as those described in this chapter, led several researchers to examine the ways in which older adults successfully 'age in place.' This term refers to one's ability to remain living at home, in the community, while adapting to changing conditions as one ages (Fänge et al., 2012). Research conducted by Wiles, Leibing, Guberman, Reeve, and Allen (2011) examining the meaning of aging in place to older people, found that "older people want choices about where and how they age in place" (p. 357). In addition, older adults want to have autonomy over decisions regarding their living arrangements and access to amenities during their later-years. Researchers also discovered that although the term aging in place is widely used by service professionals and policy makers, many older adults were not familiar with the term or its meaning (Wiles et al., 2011).

Successfully aging in place for the population of older adults with DD. Although research literature historically purported that "people with intellectual disabilities (IDD) [experience] health disparities" (Anderson et al., 2013, p. 385) and "significant barriers to enjoying active aging as they transition into retirement" (Wilson, Stancliffe, Bigby, Balandin, & Craig, 2010, p. 211), there was evidence to support the contrary. For example, a longitudinal study conducted by Krinsky-McHale et al. (2008) examining hundreds of ageing adults with DS, found that one 70-year-old gentleman, Mr. C, was found to be aging successfully due to the fact that despite "complete trisomy 21. His medical records did not indicate heart disease of hypothyroidism, although these are common health issues for people with Down syndrome" (Ageing in Down syndrome, 2008, para. 1). In addition, "Mr. C is . . . the oldest of hundreds of participants in this study . . . who have not shown signs of dementia" (para. 2). Such results confirm that aging persons with DS can meet the physical and psychological determinants for aging successfully; however, the ways in which they learn to deal with their "unique aging profile[s]" (Krinsky-McHale et al., 2008, p. 216) and age-related challenges warrant further exploration.

Hodges et al.'s (2004) case study examining an autistic man's transition to retirement, amply exemplified how older adults with DD are able to age successfully if given adequate support and optimal learning opportunities. Addressing the unique age-related learning needs of older adults with DD is, therefore, essential for maximizing independence and successful aging for this emergent population of older adults.

Best Practice Support Services for Older Adults with DD

Research demonstrated as increasing numbers of persons with DD age in place, so too are the types of age-related learning needs that confront this population of older adults and their caregivers. This section depicts the types of programs and services available in the St. Louis area to support those aging with DD, at the time of this writing. Upon review, there were a lack of programs and services at the local community level specifically designed to meet the age-related learning needs of this diverse group of older adults and their caregivers. A review of the services available to aging persons with DD in the St. Louis area using the 2013 Senior Service Guide, found AADD and the St. Louis Arc as the only organizations listed (St. Louis Times, 2013). However, additional searches also highlighted L'Arche - St. Louis (L'Arche St. Louis, n.d.), the PLB (2014), the DDRB (n.d.), Emmaus Homes (n.d.a), and OASIS (n.d.), as resources for the aging developmentally disabled community.

The prevalence of educational programs specifically designed for aging persons with DD was minimal. In addition, a gap in the research literature existed pertaining to effective educational programs and strategies designed to promote independence and learning opportunities for persons aging with DD. Typically, research in the field focused on children and/or adolescents with DD. Avenues of research pertaining specifically to older adults with DD included retirement preferences (Hodges & Luken, 2006; Hodges et al., 2004; Ohlson, 1994) and adapting facilities and programming to meet the needs of IDD populations of older adults (Corrado, 2013). Additional research also examined permanency planning for parents and adults with DD (Botsford & Rule, 2004; Layton, 2012; Smith & Tobin, 1990).

The St. Louis Arc. **"**The St. Louis Arc is a non-profit, United Way agency that provides support and services to more than 3,500 adults and children with intellectual and developmental disabilities, and their families, throughout the St. Louis metropolitan area" (St. Louis Arc, 2014, para. 1). The St. Louis Arc's services included ARCH respite, community integration, early childhood, employment, family support services, leisure, and residential programs.

Emmaus Homes. Emmaus provided supports and residential services for individuals with DD (Emmaus Homes, n.d.a). Emmaus strives to give their residents choice about their housing options and daily activities. They tailor their services to meet the individual needs of each person regardless of the level of developmental disability. They also emphasized the importance of socialization and building relationships with community organizations to provide job opportunities for this population of adults (Emmaus Homes, n.d.a). In Emmaus' Spirited Adult Services (SAS) program, "staff work together to develop individualized schedules" (Emmaus, Services, n.d.b, para. 1).

Emmaus provided the following activities to older adults with DD, sports, movies, crafts, therapeutic horsemanship, special interest activities (e.g., cooking classes, cook clubs etc.), community outings and Special Olympics. Emmaus also worked with a local community college to provide LEADD (Learning Experiences for Adults with Developmental Disabilities). The LEADD program provided "non-credit continuing education opportunities to individuals with developmental disabilities . . . to teach independent living skills and provide life-enhancing experiences in a community educational and social environment" (Emmaus Homes, n.d.c, para. 1).

Each of the above mentioned organizations were geared towards increasing learning opportunities and quality of life for all individuals with DD, regardless of age. The programs also catered to those caring for individuals with DD. The following organization's mission, is however, specifically designed to support older adults with DD, and their caregivers.

Association on Aging with Developmental Disabilities. AADD provided an array of programs and services to adults with DD and their caregivers. Programs and services included (a) Education (for families, caregivers, healthcare professionals, and the general community about aging with DD); (b) In-Home Support (ADLs and IADLs); (c) Off-Site Day Habilitation Services; (d) AADD Social Clubs (participants meet on Saturday nights to eat out, watch movies, go bowling and dances); (e) the Supported Living Program (teaches independence); and (f) Youth Adult Support Services (programs and services designed for younger adults) (AADD, 2014b; P. Merkle, personal communication, February 6, 2013). In addition to the above-mentioned programs, AADD also provided the following programs and services specifically for older adults with DD.

Retirement Planning (Transitional Retirement). Designed for persons aged 50 and over (younger if they have DS), program objectives included assisting older adults with DD plan for and maintain active retirement, while simultaneously remaining healthy and connected with the community. This was a one-on-one service, connecting older adults with DD to aging and developmental disability providers. Members engaged in friendship building activities via community-based programs and activities (P. Merkle, personal communication, February 6, 2013). The program also strives to maintain skills learned by the older adult during work years.

Retirement Support Group. This program was designed for people aged 50 plus (younger if they have DS). The program utilized a 1:6 staffing ratio. Participants met at local area senior centers, where they shared a hot meal, built friendships and did the same things that the other seniors do (AADD, 2014b; P. Merkle, personal communication, February 6, 2013). In addition, participants also engaged in strength and endurance exercises, balance training, memory exercises, and social skill training.

Final Game Plan. The goal of this program was to keep older adults with DD in the environment that they want to live in, enabling them to age in place. The Final Game Plan program utilized a one-on-one model, focusing on advanced directives, funeral and will planning, life review on film, and geriatric assessment. For care providers, this program assisted with DD communication training, as well as hospital and nursing home advocacy (P. Merkle, personal communication, February 6, 2013).

Challenges Unlimited. ‘Challenges’ was a group recreation program open to developmentally disabled adults (age 21 and over). The group met after work and was open to those who reside in St. Louis City. Participants in this program were encouraged to “participate in health and fitness classes, learn new skills, and attend community activities” (AADD, 2014b, para. 8). Challenges participants partake in competitions such as ‘The Biggest Loser’ a weight loss program, and other health initiatives. Participation in Challenges helps increase health education and awareness amongst those aging with DD, while simultaneously offsetting some of the age related health concerns faced by persons with DD (including obesity, physical disability, and poor lifestyle choices).

Social Clubs. Participants in the Social Clubs program met on Saturday nights for socialization and fun. Activities included dances, movies, taking trips to the theatre, dinner, and bowling with friends. This program encouraged adults to be active and do the things all

other people do, enjoy time with friends, dine out at favorite restaurants, and watch the Cardinals play. The goal of Social Clubs was to promote friendships and relationship building for those aging with DD (P. Merkle, personal communication, February 6, 2013). The program provides opportunities for persons aging with DD to get involved in the community and enjoy recreational activities with others who have similar interests and hobbies.

Supported Living. The goal of this program was to help those aging with DD maintain existing skills or promote new ones necessary for independent living (AADD, 2014b). This program addressed health, safety, financial/economic, transportation, and psychosocial concerns that affect one's ability to remain living independently in the community. Topics included bus route information (the majority of AADD participants rely heavily on buses as their primary means of transportation), housing options (especially when family circumstances or levels of functional ability change), as well as how to remain safe at home (avoiding fraud) (P. Merkle, personal communication, February 6, 2013). Thus, the Supported Living program taught seniors the independent living skills necessary for aging in place.

Retirement

Hooyman and Kiyak (2011) defined retirement as "the period of life, usually starting between age 60 and 65, during which an individual stops working in the paid labor force" (p. 543). Once considered a time of disengagement, or withdrawal from society, more recent-day retirees have changed the scope of the transitional period of old age. Many older adults, whether out of a need for financial reasons, or personal growth and development, continue to pursue some form of employment. Such retirement

transitioning options include flextime, seasonal work, part-time, or volunteer opportunities.

Gerontologists stressed the importance of older adults remaining connected to family, friends, and the greater community during their retirement years. For those older adults who lacked adequate social supports, withdrawal, isolation, and boredom may result during retirement years. Therefore, for some older adults and their families, retirement may be a concerning prospect, especially when one considers some of the more negative aspects it may entail. According to Saxon et al. (2010) retirement not only encompassed positive connotations, but also negative ones for older adults, it "represents many potential losses . . . saying goodbye to a large piece of one's life, which may result in loneness, a sense of worthlessness, and depression" (p. 442). Therefore, one must not presume that all older adults embrace the concept of retirement. For some, retirement represents additional losses and withdrawal from society.

Retirement transitioning in the general aging population. In general, people, regardless of age, value autonomy. Researchers studying retirement in the general community found that "choice and control over retirement decisions is very important to wellbeing in retirement" (Quine, Wells, de Vaus, & Kendig, 2007, as cited in Stancliffe et al., 2013, p. 14). Some older adults are happy to retire from their jobs and life-long careers to fulfill lifetime dreams of traveling and/or taking up hobbies, or pursuing educational opportunities they did not have the time for while working. Other older adults, however, wish to continue in some form of paid employment and seek part-time job opportunities, flextime options, and seasonal work. Some older adults may decide to switch careers altogether in their later-years. Regardless of what one wishes to do,

retirement is a highly individualized transition, often thwarted with myriad financial, physical, and psychosocial implications.

Retirement transitioning in the DD population. The Americans with Disabilities Act (ADA) (1990) mandating equal opportunities for people with disabilities, and the Olmstead case, a landmark community integration decision (Olmstead v. L.C., 1999), fostered the growth of employment opportunities for persons with DD (as cited in Wehman & Revell, 2005). As a result, of increased workforce participation, many older adults with DD now face retirement, one of the most defining transitions of late-life (van Solinge & Henkens, 2007). Researchers exploring this transition for older adults with DD unearthed some interesting findings, particularly with regard to perceptions and attitudes toward retirement.

Ohlson (1994) conducted an exploratory study examining retirement preferences and life review processes of elderly developmentally disabled individuals. Life review, a concept based on Erickson's psychosocial concept of old age, is the "process of assessing one's whole life and coming to terms with life events and choices" (p. 5). Findings from Ohlson's (1994) research indicated that interviewees viewed work as very important to them, an attitude largely attributed to the fact that friendships and social interactions center in the work environment. In addition, "having a job gave the participants a sense of accomplishment and pride" (p. 44). Workforce activity can therefore, help boost self-esteem and feelings of self-worth for persons aging with DD in addition to fulfilling social needs. This research highlighted the importance of promoting independence and fostering positive self-images for persons with DD who transition to retirement. One way

of achieving this is by meeting age-related learning needs for those adjusting to the new social role of ‘retiree.’

AADD’s Retirement Transitioning and Support Groups Programs assist older adults with DD with their transition to retirement. Furthermore, AADD’s Social Clubs, Final Game Plan, and Challenges programs for seniors assist older adults with DD with the necessary skills they need in order to maintain their independence and successfully age in place. For example, Challenges encouraged healthy lifestyles by a way of educating older adults with DD about their diets, making healthy food choices, and encouraging activity and exercise. AADD’s Final Game Plan program helped older adults with DD organize their wills, end-of-life decisions, and funeral arrangement planning. The program also prepared older adults with DD for a time in which they may not be able to communicate their wishes (advance directives). The geriatric assessment portion of the Final Game Plan encouraged older adults with DD to demonstrate their cognitive and functional abilities, prior to a life threatening or changing event, such as a stroke. In addition, the program also encouraged older adults to advocate for themselves when speaking to doctors or nurses (e.g., when they need clarification about topics such as medication dosages and/or treatment plans). Such initiatives help promote independence and autonomy for older adults with DD wishing to age in place.

AADD’s Social Clubs promoted active engagement in the community. Participants chose which activities they wished to participate in (thus promoting autonomy for this population of older adults). The programs also helped older adults with DD develop friendships and social networks in the community. In addition, the Supportive Living program reiterated the importance of maintaining skills necessary for

independent living (e.g., transportation coordination – how and where to catch the bus, managing money, and healthy lifestyles and nutrition). Thus, each of these programs provided educational opportunities for independence promotion. Most importantly, having the ability to select which program one wants to participate in (promoting autonomy and choice), along with the combined impact of participating in multiple programs at any one time, helps those aging with DD maximize their independence in as they age.

Interviewees in Ohlson's (1994) research also reported positive relationships (via reports of accomplishment and satisfaction) with family and friends. The majority of interviewees stated that their main hopes for the future included maintaining positive relationships, good health, and active engagement in hobbies (pp. 46-47). Thus, stressing the importance of support networks in relation to the overall life satisfaction of persons aging with DD.

The majority of interviewees involved in Ohlson's (1994) research viewed retirement negatively, with many failing to voluntarily mention retirement as part of their future plans. Participants in the study also did not wish to disengage from their jobs and activities, thus illuminating it as age-related challenge. Furthermore, a Transition to Retirement (TTR) project, conducted by Stancliffe et al. (2013), found that "many people with disability did not fully understand retirement and avoided the issue" (p. 14), adding to the complexity of assessing and addressing the age-related learning needs of those with DD. Furthermore, the majority of the participants in this study were concerned about the social consequences of retiring, including the loss of friends, social isolation, and boredom.

Ohlson (1994) continually reiterated the clear lack of choice regarding retirement and late-life planning for persons aging with DD, implying that future retirement programs and services should promote autonomy, innovation, and be highly personalized in order to the meet the unique needs of each aging individual. Furthermore, persons aging with DD must be encouraged to develop the necessary skills to adjust to their retirement years, including building strong support systems (friendships) that mimic those developed in the work environment.

Hodges et al.'s (2004) ecological case report, which examined Bradley, a 55 year-old autistic man's three-year transition to retirement, further supported these findings. Based on a Supported Retirement Services (SRS) program devised "on the belief that people have the right to decide how to spend their time and choose activities in which to participate" (p. 302), the study demonstrated that being independent involves having the ability to make choices regarding one's life. This further supports the importance of person-centered and self-determination in planning retirement opportunities for older adults with DD.

Highlights from Hodges et al.'s (2004) study included the fact that Bradley lived in a group home and worked in a sheltered workshop for 10 years. He expressed a desire to retire, something the researchers in this case study wished to explore further. Bradley's preferred method of communication was reading and writing notes, potentially emphasizing his unique orientation to learning. Hodges et al. used a structured interview guide to assess Bradley's attitudes toward retirement, providing support for the effective use of qualitative interviewing techniques for use with older adults with DD. Results indicated that Bradley had a concept of retirement as well as personal preferences toward

retirement and/or leisure activities, supporting the notion that aging persons with DD should be empowered to be autonomous regarding the ways in which they deal with age-related challenges, such as retirement (p. 304).

It is also important to note that in this study, recreational therapists (RT) worked with Bradley to develop a person-centered action plan. This supports the andragogical principle of encouraging an individual to set his or her own goals with the help of a facilitator. Together they set short-term goals leading the larger goal. This also supported Bowman and Plourde's (2012) research, which stated that goals should be broken into small manageable steps for persons aging with DD, as well as Warnick's (1995) third age research, which asserted that older adults preferred to set and work toward smaller, attainable, and concrete goals. In addition, as stated by Hyer (2014) individualizing care plans was also essential when working with older adults. Thus, setting small attainable, yet flexible goals was strongly encouraged in the research literature, when developing learning, treatment, and/or care plans for older adults with, or without, DD.

Hodges et al. (2004) also discussed the importance of training staff who work directly with persons with DD. Importantly, the authors noted that there was resistance by staff persons to engage in training programs. This suggests a possible avenue for future research. These findings also attest to the importance of increasing awareness about the unique learning needs of older adults with DD.

It is noteworthy to mention that during the three-year period, Bradley developed a friendship with a fellow participant at one of the senior centers that he attended, affirming the importance of social supports and friendships among this population of older adults. This also supported Ohlson's (1994) research in which elders with DD emphasized a

strong desire to maintain friendships in their later-years. Hodges et al. (2004) also reported that a party was organized to celebrate Bradley's successful transition from the workforce, to part-time and eventually full-time retirement. The party not only celebrated Bradley's accomplishments, but also created a positive retirement culture for persons aging with DD. Furthermore, Hodges and Luken's (2006) research examining stakeholders' perceptions of planning needs regarding retirement choices for developmentally disabled older adults, examined the concept of retirement culture in greater depth. Results stressed that the unique learning needs of those facing retirement was an important avenue for researchers in the field of aging with DD to explore.

The results of Hodges et al.'s (2004) study also indicated that when Bradley was re-administered the initial interviewee guide (used at initial assessment), there was a shift in his concept of retirement from "not working" to "starting something new" (p. 308). This suggests that there was a positive shift in retirement attitudes resulting from participating in a person-centered retirement planning experience, emphasizing the importance of promoting educational opportunities (and personal growth) for retirees with DD.

This was a well-conducted case study; however, the limitation of this type of research design, as with all single-study designs, is whether or not the results can be generalized to the larger population of adults with DD (Fraenkel et al., 2012). However, despite this limitation, it was encouraging to learn that at the end of this study, the local Association for Retarded Citizens (ARC) contracted with SRS to continue supported retirement services. This suggests a possible best practice model for retirement

transitioning for older adults with DD (Hodges et al., 2004). This research was, therefore, valuable to the field of retirement planning for persons with DD.

Interestingly, Bradley progressed more through one-on-one learning supports than from participating in pre-retirement classes. In addition, adult learning (andragogical) principles and practices (e.g., individualized learning opportunities and tailoring the educational experience to meet the unique needs of the learner) were also evident in this research study, thus, supporting the application of andragogy with aging developmentally disabled learners (Hodges et al., 2004).

Hodges et al.'s (2004) research also stressed the need for person-centered (or learner-centered) programs and services. In addition, in order for optimal learning to occur, program developers must assess the unique learning styles of persons involved. Plans must be devised using the guidance of a facilitator; however, prompting, or as Warnick (1995) stated 'nudging' the client, is the key to successful goal planning.

Hodges et al. (2004) also asserted that the training of staff would be beneficial when developing programs and services to meet the needs of the aging DD population. This suggests that understanding the unique learning needs of this population of older adults is essential to maximizing their independence and ability to successfully aging in place.

Learning in Later-Life

Learning can occur throughout the life-course (lifelong learning), starting in infancy and continuing through later- adulthood. One of the major myths about aging is the notion that older adults are incapable of learning. However, this is not true, and as stated by Saxon et al. (2010), "older adults . . . certainly do have the capacity to learn" (p.

399). Furthermore, Wilson (2006) proposed that no one is too old to learn, based on his theoretical framework of neuroandrogogy, the study of adult brain functions and adult learning (andragogy).

Researchers noted the importance of utilizing different learning methodologies with various ages of learners, geragogy (teaching older adults) versus andragogy (teaching adults) and pedagogy (teaching children) (Saxon et al., 2010, p. 399). Acknowledging this distinction is of importance as the number of older adults (especially baby boomers) seeking lifelong learning opportunities will continue to increase in the future, for both leisure and/or job-related purposes. Thus, the need for highly individualized teaching and learning methodologies may be in increasing demand.

Saxon et al. (2010) described learning as "the acquisition of new information or a new skill through practice or experience" (p. 85). However, according to Henschke (2011a, 2011b), the definition of adult learning should include the acquisition of knowledge, understanding, skill, attitude, value, and interest (KUSAVI), not just knowledge and skill alone. This was further supported by Stanley, Blair, and Beare (2005) who stated that that several issues including the learners interests, motivations, attitudes, readiness to learn, self-esteem, culture, physical and psychosocial states, and the instructors expertise (as cited in Saxon et al., 2010), were also reported to influence learning and experience.

Learning in later-life with DD. According to Woolfolk (2004) in the later stages of development (post high school), learning goals were directed toward "transition programming – preparing the student to live and work in the community" (p 131). Consequently, as the life expectancy for persons with DD continues to increase (O'Brien

& Rosenbloom, 2009), so too does the demand for age-related educational programs. Thus, we have seen the birth of retirement transitioning, permanency planning, and independence promotion programs and services designed to increase the quality of life for those aging with DD.

Andragogy Learning Theory

Andragogy, "the art and science of helping adults learn" (Knowles & Associates, 1984, p. 1), is a theory of adult learning. According to researchers, Kapp authored the term andragogy in Germany (Henschke, 2010). However, Savicevic, a Yugoslavian adult educator first introduced the term to Knowles, who popularized the term in the U.S. in 1967, to differentiate youth versus adult learning (Knowles, 1990, p. 51). According to andragogical theory, adults learn best in climates that foster independent learning as opposed to dependent learning experiences (self-directedness), when learning is tailored to individual learning needs and styles, when the learning environment is caring, humanistic, respectful, and trusting, and when learners and facilitators work collaboratively on learning projects (John, 1988; Knowles, 1973, 1995).

Knowles' (1973, 1995) eight process elements and six assumptions of andragogy, provided the theoretical framework for adult learning. Fundamental to the building blocks of andragogy, is the acquisition of knowledge, understanding, skill, attitude, value, and interest (KUSAVI) (Henschke, 2011a, 2011b), resulting from the learning experience. This implies that in addition to increasing one's knowledge and skill, adult learning also encompasses the holistic growth of an individual. For example, when diagnosing their learning needs, adults should explore truth, playfulness, honesty, and richness. When translating learning needs into objectives, adults should focus on factors such as

principles, values, interest, concerns, originality and autonomy. This process encouraged learners to become well-rounded, self-aware, and self-directed. Andragogy is, therefore, a learner-centered teaching model, versus a teacher-centered learning model (pedagogy).

Modeling. A crucial aspect of the practice of andragogy is modeling, exemplifying what is being taught or "walking what one talks" (Henschke, 1998a, 1998b, 2014, p. 149). Andragogues, those who help adults learn, include people in a variety of vocational roles including leaders, supervisors, executives, teachers, administrators, and program directors. According to andragogy theory, students not only learn more from action than words, but they also are inquisitive to see if actions match the words of those facilitating the learning experience. Modeling is therefore crucial to the success of adult learning.

According to Henschke (1998, 2014, p. 150), there were four essential ingredients that make a model (a) andragogy; (b) attitude; (c) congruence; and (e) reciprocity of empathy, trust, and sensitivity. When modeling, facilitators of adult learners must be cognizant of the fact that motivation is internal rather than external. In addition, the reason for learning must make sense to the learner. It is also important for andragogues to have a caring attitude towards the adult learner. In order to be an effective model, the facilitator of learning must also recognize the uniqueness of each individual learner. Such practices must also be conducted consistently; ensuring congruence between what the facilitator says and does.

Andragogues must also combine reciprocity of empathy, trust, and sensitivity to the learning experience. This is imperative as insensitivity may hamper the modeling process. According to Henschke (2014) the elements of empathy, trust, and sensitivity for

the andragogues included the following: (a) empathy, promotes positive self-esteem in learners; (b) trust, expresses confidence that learners will develop the skills they need, communicates to learners that they are unique, respects the dignity of learners, and experiences unconditional positive regard for learners; and (c) sensitivity, understands the learner's perspective, is patient with learners, uses whatever amount of time learners need to grasp a concept, and always encourages learners to ask questions (pp. 150-151).

Applications of andragogy. The application of andragogy has been documented internationally (Henschke, 2011a, 2011b). Andragogy has also been applied to various disciplines including nursing, counseling, human resource development (HRD), police training, higher education, government organizations, and community education programs (Henschke, 2011a). However, research detailing the application of andragogy with elderly and/ or developmentally disabled populations is limited.

Adult basic education (ABE) learners. Henschke (1989) applied the principles of andragogy to the instruction of adult basic education (ABE) learners, those who have a limited education. The premise of teaching ABE learners is derived from andragogical theory, which differentiates teaching children versus adults. According to Henschke (1989) adults (a) are self-directed learners as opposed to dependent learners, (b) have a rich pool of resources and experiences to bring to their learning situation, and (c) seek educational opportunities as volunteers and thus are highly motivated to learn.

Henschke (1989) outlined the following five characteristics of ABE learners, accompanied by recommended instructional techniques for the ABE teacher: (a) Immediate concerns, use concrete situations and realistic problems, (b) Low self-concept, respect the learner for what he/ she respects in him/herself, value life experience, (c)

Different value systems, discuss value systems across the life-course, (d) Use of defense mechanisms, promote goal seeking and constructive behavior, and (e) Sensitivity to non-verbal communication, be alert to non-verbal cues and feelings as opposed to what is only being said, avoid negative gestures, facial expressions, and other forms of non-verbal communication (p. 4). By adopting the above-mentioned techniques, instructors of ABE learners should be able to create enriching learning experiences for the novice learner.

Applying andragogy to older adult learning. Knowles (1990) identified various life problems of American adults ranging from early adulthood (18-30) to middle adulthood (30-65), and finally later adulthood (65+). Table 1 outlines problems experienced by older adults (those aged 65+).

Knowles' (1990) life problems also coincided with Warnick's (1995) pressures of the third age, which include ageism, grief, loss, heath concerns, economic concerns, and increased disability) as well as general gerontological principles of aging across the life-course.

Andragogy and DD. Although the application of andragogy has been documented extensively in the research literature (Henschke, 2011a), its application to adults with DD is limited. Bowman and Plourde (2012) examined the learning process for teen and adult learners with ID from an andragogical perspective. They reported strong evidence of andragogical principles and processes in enriching learning experiences for persons with ID. The following sections will detail several findings from Bowman and Plourde's (2012) research, which may also apply to older adults with DD.

Table 1.

Life Problems of Americans in Later Adulthood (Aged 65+)

Vocation and Career	**Home and Family Living**	**Personal Development**
Transitioning to retirement, exploring new vocations and abilities	Adjusting to reduced income, novel living arrangements, loss of friends and family (spouse)	Adjusting to changes in physical and functional health, understanding the aging process experiencing increased disability
Understanding state and federal welfare programs (e.g., social security, Medicare & Medicaid), long-term care insurance, and planning for retirement	Exploring new (intimate) relationships, experiencing novel relationships with family and grandchildren, learning to live alone, will and estate planning	Re-examining your values Keeping future-orientated, apprised of modernization and technology, relating to youth, maintaining a good appearance, finding a new self-identity, keeping active and engaged in the community, keeping curious and open minded Developing a new time perspective and preparing for the end of life

Enjoyment of Leisure	**Health**	**Community Living**
Establishing relationships with the older age group Finding new hobbies, participating in novel recreational activities	Adjusting to age related changes in physical and psychological health, keeping active, staying fit, managing stress, eating a balanced and nutritional diet, keeping up with medical appointments and preventative healthcare, monitoring drug, medicine, and alcohol intake	Promoting quality of life for older adults, volunteering, connecting with organizations and the larger community

Note. Modified from Knowles (1990, pp. 143-145, Appendix A).

As andragogical theory assumes that adult learners (including those with ID) have unique motivations and learning needs, it is therefore important to tailor learning experiences accordingly. Learning is “almost always specific to a personal goal or tied to a particular occupational skill” (Bowman & Plourde, 2012, p. 790). For example, the goal of participants enrolled in AADD’s Challenges program, is to learn how to promote health and fitness. In addition, researchers demonstrated that learning encompass personal experience and individual learning levels. As people make sense of the world through their experiences, they are particularly useful in novel learning situations. Experience can guide new learning opportunities. In addition, if information or processes are too complex for adults with DD to comprehend, learning will not take place, as individuals are likely to be too overwhelmed to engage in the educational experience. Furthermore, as learning requires energy and effort, presenting information in an ambiguous way or at a level too difficult for an older adult with DD to understand, would likely demotivate them and cause them to withdraw from the learning situation. Thus, in order for learning to occur, information and material should meet the needs of the learner, not the expectations of the teacher.

Activities and social situations for people with DD. According to Bowman and Plourde (2012), a lack of exposure to various social and academic situations by persons with DD led to fewer freedoms and opportunities for independence in later-life. They attributed this mainly to restrictive classroom environments and over-protective parents. In addition, special education classrooms led to programs with greater institutional control which “has created docile learners who have difficulty making decisions, initiating actions, responding spontaneously, and who are too easily victimized and

exploited" (p. 791). This in essence created dependent, as opposed to independent adult learners.

Overcoming these limitations should be a learning objective for programs designed to promote independence and aging in place for older adults with DD. In order for learning to occur, facilitators must trust that developmentally disabled older adults not only have the willingness to learn, but also the ability to do so. Furthermore, a premise of andragogical theory is that people learn from people (Wartenberg, 1994). Therefore, collaboration and socialization are essential elements for a successful learning environment for older adults with DD.

Goal-independence toward a normalized life. For persons aging with DD, their goal is "to lead as independent and productive a life as possible" (Bowman & Plourde, 2012, p. 791). AADD appears to have adopted this philosophy, as their mission is to promote independence for persons with DD (AADD, 2013a). For example, for those enrolled in AADD's Challenges program, promoting health, fitness, and wellness, are essential to maintaining overall wellbeing and independence. Furthermore, Bowman and Plourde (2012) continually reiterated that caregivers and those working with developmentally disabled adults, should not inhibit choices and independence among this population. By doing so, they may restrict or delay achievement of independence (p. 792). Concern pertaining to choice restriction, was also evidenced by the lack of retirement planning and preparation programs available to older adults with DD (Hodges & Luken, 2006).

Lifelong learning approach. Lifelong learning should be a multidisciplinary approach for persons with DD encompassing all aspects of functioning - physical,

psychological, and social domains (Bowman & Plourde, 2012). This further corresponds with gerontologists' multifaceted approach to aging and overall health promotion across the life-course. As older adults are capable of learning new things (Wilson, 2006), lifelong learning can be an enriching experience for those eager to explore novel educational opportunities as they age.

Supported approach. Older adults with DD should be encouraged to transfer new skills learned to situations outside of the educational setting. For example, AADD's Senior Hot Shots should be able to transfer dietary plans and exercise regimes discussed during AADD's support groups to their everyday lives. Having participants work with friends and family outside of the group setting to provide encouragement, may also help adherence to health promotion activities.

Community as resources. Bowman and Plourde (2012) discussed the segregation versus integration argument for individuals with ID. Years of institutionalization and being shielded from mainstream social service agencies and educational systems led to many elders with DD lacking the necessary skills to be successful in community inclusion programs. However, if society becomes better educated about the aging process for those with DD, community immersion should become more prevalent, and possibly foster healthier and more successful aging outcomes for this population of older adults.

Learning styles. Those working with persons with DD must accurately assess and address individual learning styles. Bowman and Plourde (2012) asserted that presenting lessons using a variety of modalities (e.g., visually, verbally and or via hands-on learning opportunities) enhances learning for adults with DD. Researchers also noted, "Adults with ID may have trouble with memory retention" (Bowman and Plourde, 2012, p. 795).

Therefore, in order offset these challenges, utilization of warm up techniques (recapping previously learned material) can help build momentum and confidence for adult learners with DD.

Concrete learners with short attention spans. Bowman and Plourde (2012) stated that persons with DD are concrete learners. Consequently, they tend to repeat familiar tasks, and resist change. As a result, applying learned information to new situations could be problematic for this population of adult learners. In addition, having short attention spans means that DD learners need consistent reinforcement and feedback. Older adults with DD should also be encouraged to focus on one piece of information at a time. These techniques also apply to the general population of older adult learners, whereby facilitators should convey information slowly, concisely, and with examples, in order for optimal learning to occur (Saxon et al., 2010)

Setting goals. Goal setting is essential when working with older adults (Warnick, 1995), particularly small, manageable goals. As stated by Bowman and Plourde (2012), "Learning should follow the learner's own interest, have purpose and usefulness, and be related to the functional goal of living" (p. 796). Breaking tasks down into manageable steps is a useful technique for older adults and DD learners. For example, if the goal for a participant in AADD's Challenges program were to lose 10 pounds, setting smaller, more achievable short-terms goals would be beneficial. For example, the goal for week one could be to purchase healthy eating options from the grocery store (i.e., purchasing fruit instead of potato chips for a snack item). This in turn would aid in weight loss, but in incremental measures, as opposed to one overwhelming large goal.

Such techniques are especially useful for persons with AD or dementia, whereby a complex array of steps can be too overwhelming to process. For example, asking a person with dementia to 'put the laundry away' is quite an ambiguous direction. However, asking a person to put the towels in the bathroom closet is a much easier task to comprehend. Researchers have noted that modeling, role-plays, and continual peer tutors are effective learning strategies for adult with DD learners (Bowman & Plourde, 2012).

Bowman and Plourde (2012) also stated that it is useful to assess students' prior knowledge, identify what they want to know, and then debrief them about what they have learned after the educational experience. In addition, learners with DD also benefit from a 5 to 10 second wait time before answering a question (Bowman & Plourde, 2012). Thus, confirming a belief that silence is OK, particularly when working with older adults (Warnick, 1995).

To summarize, Bowman and Plourde's (2012) research importantly examined adult learning for individuals with DD from a multidimensional perspective. The authors identified key andragogical components and processes that support the notion that andragogical theory applies to learning situations for populations of developmentally disabled adults. This evidence also aligns with gerontological theory, which emphasizes taking a holistic approach to examining the aging process for all.

Andragogy and aphasia. Advances in healthcare and treatment options for stroke victims, led to the development of an increasing population of individuals suffering from aphasia (Isenberg, 2013). According to the National Aphasia Association (NAA), "Aphasia is an impairment of language, affecting the production or comprehension of speech and the ability to read or write. Aphasia is always due to injury

to the brain-most commonly from a stroke**,** particularly in older individuals" (NAA, n.d., para. 1). Thus, as more and more persons survive strokes, healthcare and service professionals are forced to find ways to help such persons re-learn many facets of life, ranging from speech and language, to ADLs and IADL skills. As a result, finding effective learning methodologies for this heterogeneous population of adults is a priority.

Preliminary research by Isenberg (2013) investigating the learning needs of adults with aphasia examined the application of andragogy with this population of adults. Results from the study found that these individuals "need to (a) be respected and trusted that they will learn and recover, (b) participate in mutually planning their goals and therapy, and (c) learn from each other in groups in order to relearn speaking, reading, and writing" (p. 9). These findings do therefore, show evidence of the application of andragogy with adults with aphasia. However, the study also found "that medical insurance reimbursement policies seem to determine the type and quantity of the therapy, not what's best for the timely recovery of the adult with aphasia" (p. 9), suggesting that the needs of those suffering from aphasia, like those with DD, are not adequately assessed and addressed by healthcare and service providers.

Geragogy

According to John (1988), geragogy provides the theoretical framework for teaching the elderly. Learning is not something we only do as children and young adults; rather it is "ageless" (p. 1). John (1988) asserted that if society is to function productively and positively, then it must continue to educate the elderly. John (1988) provided the following reasons for promoting learning opportunities for older adults: (a) to maximize contributions to society (sharing wisdom and experience), (b) to provide quality of life for all (physical, psychosocial, and educational stimulation), (c) to meet self-fulfillment

needs (personal growth, inquisitives), (d) to improve mental and physical health (a healthy brain, a healthy heart), (e) to reduce economic problems (healthy older adults are more active and less dependent on community and/or family resources), and (f) to provide society with creative products (elders may uncover hidden talents they did not have time to explore previously) (pp. 5-10).

John's (1988) discussions of geragogy, individualized learning opportunities, and intrinsic motivation aligns neatly with the theory of andragogy and adult education. Therefore, as research has demonstrated that andragogy can be applied to rewarding learning experiences for persons with DD (Bowman & Plourde, 2012), then so too should the theory of geragogy. If this theory provides the theoretical framework for teaching frail older adults (John, 1988), then it may also transfer to helping those with DD.

John (1983, p. 7) depicted various assumptions of pedagogy (teaching children), andragogy (teaching adults), and geragogy (teaching the elderly), which was adapted from a lecture given by Knowles (1981) at the Institute on Adult Education, Institute in Alexandria, Virginia (Table 2).

Table 2.

Assumptions of Pedagogy, Andragogy, and Geragogy

	Assumptions		
	Pedagogy	**Andragogy**	**Geragogy**
Concept of the learner	Dependent	Independent	Interdependent
Role of the learner's experience	To add to existing experience	A rich resource for learning	An enjoyable reference
Readiness to learn	Determined by age & curriculum	Influenced by the demands of life	Able but may be held back by excuses or concerns
Orientation to learning	Subject-centered	Task or problem-centered	Related past experiences
Motivation	Externalized (rewards)	Internalized (incentives)	Personal and social challenge
	Process Elements		
Climate	Guided by authority, competitive, and formal	Environment conductive to learning both physically and psychologically: relaxed, fun, warm, trusting, humanistic, collaborative	Informal, enthusiastic, warm trusting, safe for older adults
Planning	Directed by the teacher	Mutual planning by learner and teacher	Set by the class facilitator Question elders' interests
Diagnosis of Needs	Determined by the teacher	Mutual assessment by learner and teacher	General need for stimulation
Setting of Objectives	Teacher driven	Mutual negotiation by learner and teacher	Student driven with teacher follow-up
Learning Activities	Determined by the teacher to meet learning objectives	Mutually agreed upon by learner and teacher	Interaction and verbalization are the primary focus of activities
Evaluation	Conducted by the teacher	Review of goals (criterion) by learner and teacher	Measured by level of teacher response

Note. Modified from John (1983, p. 7).

Summary

Upon reviewing the research literature, there was an apparent lack of awareness about how older adults with DD cope with the aging process (Ohlson, 1994), as well as a lack of understanding for both persons with DD and their caregivers about the complex challenges that may arise when aging with DD (Sara, 2008). Furthermore, Bishop et al., (2013) stressed the need for evidenced-based research to help raise awareness and understanding about "the challenges and diverse needs of older adults with IDD" (p. 17) as well as "preventative education for caregivers and aging individuals [with DD]" (p. 18).

This qualitative exploratory case study, therefore, aimed to address this concern by examining the ways in which older adults with DD learn to maintain their independence and successfully age in place. This study achieved this by exploring the age-related learning needs of older adults with DD and the ways in which such educational needs are best met. Andragogy (adult education) and geragogy (teaching the elderly) provided the contextual frameworks for this study. The PI also explored possible best practice educational models for promoting independence for those aging with DD, and their caregivers.

Chapter Three: Methodology

The following section details the purpose of the study, the rationale for the use of a qualitative exploratory case study design, and the research questions that framed the study. A discussion of the research site, sample selection, and participants is also included. The chapter concludes with a discussion of the data gathering instruments and data analysis procedures used in this study.

Research Methodology

As more persons with DD continue to reach old age, it became apparent that there were multitudes of age-related challenges and educational needs to be addressed. The purpose of this qualitative exploratory case study was, therefore, to determine how older adults with DD learn to maintain their independence and successfully age in place. This study achieved this by exploring the age-related learning needs of older adults with DD and the ways in which such educational needs were best met.

Frankel et al. (2012) described qualitative research designs as "research studies that investigate the quality of relationships, activities, situations, or materials" (p. 426). Qualitative research occurs in natural settings and is an in-depth, detailed inquiry about a particular phenomenon. Creswell (1998) defined qualitative research as:

> an inquiry process of understanding based on distinct methodological traditions of inquiry that explore a social or human problem. The researcher builds a complex, holistic picture, analyzes words, reports detailed views of informants, and conducts the study in a natural setting. (p.15)

The various qualitative research techniques employed in this study explored (a) how older adults with DD are unique adult learners, (b) the andragogical and

gerontological adult learning needs that must be met for aging adults with DD to successfully age in place, (c) how aging adults with DD best meet their unique learning needs to successfully age in place, and (d) what one needs to know in order to help older adults with DD successfully age in place.

Research Questions

This qualitative exploratory case study utilized triangulation techniques - collecting data using a variety of methods including interviews, observations, and focus groups, as a means of validating the research findings (Creswell, 1998; Fraenkel et al., 2012; Stake, 1995). The following research questions were investigated in this study:

Main Research Question: How are older adults with DD unique adult learners?

Sub-question 1: Which andragogical and gerontological adult learning needs must be met for aging adults with DD to successfully age in place?

Sub-question 2: How do aging adults with DD best meet their unique learning needs to successfully age in place?

Sub-question 3: What does one need to know in order to help older adults with DD successfully age in place?

The Research Site

The PI selected AADD for participation in this research study, as it was a community resource for persons aging with DD and their caregivers. AADD's agreement letter to participate in this study is located in Appendix A. AADD connected professionals, families, and aging persons with DD to educational and supportive programs and services designed to promote independence and successful aging for

developmentally disabled adults. Without the cooperation of AADD for this study, such individuals would remain an invisible and difficult population to study.

The program of particular interest in this research study was the Retirement Support Group. This program was designed for people aged 50 plus (younger if they had DS). The program utilized a 1 to 6 staffing ratio. Participants met at local area senior centers, where they shared hot meals, built friendships, and did the same things that the other seniors did. Participants also engaged in strength and endurance exercises, balance training, memory exercises, and social skills training. Program participants, also known as the ‘Senior Hot Shots,’ a name they assigned to themselves, also participated in field trips, such as fishing at Busch Wildlife, a night of pool, and other recreational activities. The aim of the group was to have fun and promote independence and successful aging in place for older adults with DD.

In addition to the Retirement Support Group program, the majority of the Senior Hot Shots also participated in other AADD programs and services, which primarily included (a) Retirement Planning (promoting active retirement), (b) Final Game Plan (learning about advanced directives, funeral and will planning, participating in life review on film, and geriatric assessments), (c) Challenges Unlimited (participating in health and fitness promotion programs), (d) Social Cubs (attend leisure and recreational events), and (e) Supported Living (learn about maintenance of independent living skills).

Sample

The PI used purposive sampling techniques to select AADD volunteers for this study. Fraenkel et al. (2012), stated that researchers could use their knowledge of the population to determine whether a sample will be representative of the population. The PI

invited all AADD staff (approximately 45) to participate in the questionnaire. In addition, the PI invited one AADD Board member, the Executive Director (ED), and three AADD program facilitators to participate in a one-on-one interview. Selection for the interviews was based on the judged expertise and experience of those working with AADD's programs and services for seniors.

The Senior Hot Shots were selected for participation in the observations and focus group sessions as they, according to the PI and AADD's ED, exemplified older adults with DD who are aging successfully – staying healthy both physically and cognitively, while simultaneously remaining actively engaged in their community. The Senior Hot Shots were also the crème of the crop in terms of those aging successfully with DD. The majority lived independently in the community (alone, with family or friends), many were recent retirees having worked for several years (30 or more years for some, many in the same job), and had families of their own. Furthermore, the Senior Hot Shots were actively tackling the physical, psychological, and social challenges that accompanied the aging process.

It would not have been feasible for the PI to examine each of AADD's programs and services for seniors, and its more than 300 program participants, due to time and resource limitations of this study. Furthermore, in order to participate in research studies, participants must have the capacity and competency to volunteer and give informed consent. Consequently, the PI and the expert judgment of AADD's ED determined that the Senior Hot Shots were the best group to study, based on levels of cognitive capabilities, as well as by the fact that the majority of participants had been members of AADD for several years.

It is important to note that the ED had more than 30 years of experience working with people with DD. She was highly educated in the field of aging, DD, healthcare, and interacted with AADD program participants daily. The ED and AADD staff members were advocates for older adults with DD. The majority of older adults enrolled in AADD's programs and services did not have family members and/or guardians to help care for them. It was for this reason that the PI used the expert judgment of the ED to ascertain who to invite to participate in the study. Furthermore, in order to conduct focus group sessions, participants needed to be willing and able to engage in group-based discussions. Interestingly, upon discussing the study with the Senior Hot Shots, all wanted to volunteer and be part of the observations, and the majority of the Senior Hot Shots wanted to participate in the focus groups.

Bluman (2010) cautioned against the utilization of volunteers in research stating that "studies sometimes have a built-in bias" (p. 17), whereby those AADD program participants who volunteered to participate in this research study may have had different views and opinions about the age-related learning needs of older adults aging with DD compared to those who chose not to participate. This was of particular importance in this study, as those attending AADD's programs and services may have felt their care or ability to participate may have become jeopardized if they responded negatively to questions concerning whether or not their age-related learning needs were being adequately identified and met. Likewise, facilitators of AADD's programs and services may have also feared that responding negatively to questions may somehow jeopardize their careers or relationships with the organization and its members. This was particularly true in the focus group sessions in which AADD staff members were also present.

However, risks existed in not including AADD staff. For example, the Senior Hot Shots may have felt anxious about being questioned by researchers; and this was judged by the PI, ED, and AADD staff to outweigh the potentially negative cost of having staff present.

Although prior to gathering the data, issues of diminished capacity and competency with the developmentally disabled population and ethical considerations about their involvement in research (McDonald & Patka, 2012), were a concern, when asked whether or not Senior Hot Shots wanted to volunteer to participate in the study, the majority of them said yes. As the ED knew each of the Senior Hot Shot members well, she was best able to determine whether participants had the ability to give the necessary consent to volunteer for the study. Furthermore, the ED was best able to determine whether or not participants could understand and respond to questions in the focus group, whether or not they would be willing to talk to people, as well as the likelihood that participants would enjoy participating in the study (outgoing and talkative versus shy personalities).

As a result, after consulting with the Senior Hot Shots, the ED and AADD staff assigned those who wanted to participate in a focus group to one of two sessions. This assignment was based on the scheduling needs of each individual participant. Several of the participants were on vacation during the first focus group session; therefore, they were assigned to the second, later group. Furthermore, the ED and AADD staff also created a balance within each group of outgoing -versus-shyer individuals to help facilitate discussion and participation rates in the focus group sessions.

It is important to note, however, that despite being necessary, the sampling techniques used in this study (i.e., limiting it to Senior Hot Shots only and asking for

volunteer participants) may have biased the results somewhat. It is a possibility that the less competent program participants or those who did not come forward to participate in the focus group sessions, may have had different views about their age-related learning needs compared to those who participated in observations and focus group sessions.

The ED's expert judgment may also have been biased (e.g., favoring certain AADD program participants' over others for participation in the study and/or selecting those older adults who tended to have more positive attitudes about the aging process or AADD's programs and services). Thus, care must be taken when generalizing results from this particular study to the general population of older adults with DD, including those solely enrolled in other AADD programs and services (i.e., Final Game Plan, Retirement Transitioning, and/or Challenges Unlimited) and not the Senior Hot Shot Support Group.

Despite these limitations, however, the majority of the Senior Hot Shots also participated in multiple AADD programs and services for seniors; therefore, a detailed exploration of the unique learning needs of those aging with DD was undertaken in this study. Furthermore, in order to offset some of the above-mentioned limitations, all the Senior Hot Shots in attendance at the activity centers or fishing trips on the research days, volunteered to participate in the observations. This enabled the researcher to observe the behaviors and learning experiences of all of those involved, regardless of their level of developmental disability or personality type. This allowed for a rich exploration of the learning needs and age-related challenges of those aging with DD.

Participants

Fifty-seven AADD participants partook in this study. Twenty-seven were Senior Hot Shots and 31 fell into the category of AADD staff (including care staff, administrators, Board members, and Board members who were also Senior Hot Shots). In addition, it is important to note, that the majority of the participants partook in more than one portion of the study (e.g., observations and/or focus groups).

Eleven AADD staff partook in the questionnaire portion of this study. Twenty-five Senior Hot Shots partook in the retirement support group observations (15 females and 10 males). In addition, 15 AADD staff participated in the observations (11 females and 4 males). Sixteen Senior Hot Shots and five AADD staff (all female) partook in the focus group sessions (12 females and 4 males). Five one-on-one phone interviews were conducted in the following sequence: (a) one AADD Board member, (b) the ED, (c) a Final Game Plan staff member, (d) a Social Clubs staff member, and (e) the Assistant Director.

Instrumentation

The PI developed a questionnaire to gather the opinions of AADD's staff regarding the learning needs of older adults with DD. Questions for the questionnaire were developed using information obtained from the research literature pertaining to successful aging and age-related challenges (Hooyman & Kiyak, 2011; Saxon et al., 2010; Warnick, 1995), as well as adult learning for those with DD (Bowman & Plourde, 2012).

Interviewing each employee (approximately 35-45) was beyond the scope of this study, due to time and financial restraints of the PI. Therefore, the questionnaire was

utilized instead. According to Fraenkel et al. (2012) questionnaires are an effective data collection technique for gathering responses from several people at the same time (via mail, in-person, or via email). However, one must be cautious not to use questions that are unclear or ambiguous when utilizing questionnaires, as such questions which cannot be clarified by the PI (pp. 125-126). Utilization of the short and concise questionnaire in this study enabled the PI to gather diverse opinions from 11 AADD staff members, feasibly.

Gathering data using the questionnaire also helped address the following concerns: (a) perhaps AADD's staff had insight about other AADD programs that did not specifically target seniors (e.g., habilitation programs) or those other programs for seniors that were not specifically selected for further exploration in this study (e.g., Transition to Retirement, Final Game Plan, and Challenges Unlimited) that helped address the age-related learning challenges faced by older adults with DD; (b) perhaps participation in such programs helped promote learning opportunities that fostered independence and aging in place for persons with DD; (c) perhaps the experiences of AADD's staff – those who worked in the field or had been working in the field of DD for several years, may have had additional insight as to how to best address the age-related learning challenges faced by those aging with DD; and finally, (d) perhaps there were additional rescores (outside of AADD) that were effective at helping older adults with DD learn to be independent. If so, these needed to be further explored in this study.

Non-participant, observer-as-participant techniques were utilized in this research study. In such studies, the researcher "identifies herself as a researcher but makes no pretense of actually being a member of the group she is observing" (Fraenkel et al., 2012,

p. 446). It is important to note, however, that the PI did engage with the Senior Hot Shots for several reasons: (a) building rapport, (b) establishing trust, and (3) reducing participant anxiety. Prior to conducting the observations, the ED stressed the importance of becoming part of the group, as opposed to observing as an authoritarian figure. This was important in order to gain the trust of AADD's participants, and by doing so, gain a more accurate picture as to what types of learning needs and challenges older adults with DD face as they age. Furthermore, the ED informed the PI that the staff members at AADD worked hard to integrate themselves with program participants, whereby they attempted to make it difficult for outsiders to see who did and did not have a DD.

Prior to conducting the study, the researcher, and on one occasion the researcher's chair, visited the Senior Hot Shots Support Group several times to become familiar with the program format, its staff, and participants. This also enabled the Senior Hot Shots, as well as AADD staff, to get to know the researcher, so that when the study was underway, observer effects, people changing their behavior when they know they are being studied (Fraenkel et al., 2012, p. 448), were reduced. Consequently, the PI was able to obtain a more accurate picture of the ways in which the Senior Hot Shots' age-related learning needs were identified and addressed.

According to Bluman (2010), during observational studies, researchers observe present or past happenings, and draw conclusions based on their observations (p. 12). Advantages of utilizing observational techniques include (a) they can be conducted in natural settings, such as during AADD's Senior Hot Shots Support Group; (b) they can be conducted in situations where conducting an experiment would be unethical; (c) and

they can be conducted “using variables that cannot be manipulated by the researcher” (p. 15), such as developmental disability.

Disadvantages of observational studies include (a) the inability to establish definite cause-and-effect relationships; (b) they can be expensive and time consuming, therefore, the observations in this study were limited to four 2 to 4 hour sessions over a two -month period; and (c) if original measurements were not utilized during the observational study, then inaccuracies in results may be recorded (Bluman, 2010). In order to offset these limitations, this study utilized measurements constructed and/or modified by the PI - the andragogy process elements and assumptions checklist (Appendix B). This checklist was evaluated by andragogy professors, Henschke (1989, 1998a, 1998b, 2010, 2011a, 2011b, 2014) and Isenberg (2013), one of whom (Henschke), studied with Knowles (1973, 1981, 1990, 1995), to ensure appropriate modification and use of andragogical theory.

The PI conducted five in-depth interviews, each lasting a maximum of one hour, with AADD stakeholders. According to Bluman (2010), interviews “have the advantage of obtaining in-depth responses to questions from the persons being interviewed” (p. 10). This data collection technique was important in this particular research project as the age-related learning challenges encountered by older adults with DD, their caregivers, and service providers, were complex and unique.

John’s (1988) rationale for teaching the elderly provided the foundation from which the interview questions were developed. Research literature pertaining to the aging and DD field also provided guidance to the development of the interview questions and subject matter, particularly as it pertained to independence issues and learning in adults

with DD (Bowman & Plourde, 2012). However, as noted by Bluman (2010), limitations of this particular method included interviewer bias in the selection of interviewees, and the lack of training in interviewing techniques by the researcher (particularly in the ways in which questions were asked, and answers were recorded). In addition, discussions with the ED of AADD, determined which AADD participants would be invited to also participate in the interviews. Again, potential bias on the part of selection criteria used by the ED and PI should be taken into consideration when evaluating the results of this study.

In this study, the PI also conducted two focus groups, in which Senior Hot Shots participants thought about and responded to questions as a group (Fraenkel et al., 2012). One of the major advantages of using focus groups was that by hearing others respond to questions, other participants may be prompted to share their own experiences. This was especially true when talking about somewhat sensitive topics, such as age-related challenges. Therefore, hearing others talk about such issues as loss of independence, ability to perform ADLs and IADLs, and learning to take care of oneself while addressing age-related challenges, may make others feel comfortable in sharing their own thoughts and opinions about such matters.

Ohlson (1994) discussed the importance of structuring interview questions simply, eliminating ambiguity for persons with DD, a concern also stressed in Bowman and Plourde's (2012) research on applying andragogy to teen and adult learners with DD. The PI considered this when developing research instruments for use with the Senior Hot Shots. In addition, gerontological theory and successful aging – physical, psychological, and social well-being (Hooyman & Kiyak, 2011) provided the framework for the focus

group questions. The PI submitted the focus group questions to the PI's chair (also a nurse), as well as AADD's ED for approval. Both had experience working with people with learning disabilities (including stroke victims and/ or persons with aging DD). This practice enabled the researcher to test the clarity, ease of administration, ambiguity, and content validity of the questions.

Despite careful planning to ensure the questions used in this study were clear and free of ambiguity, during the first focus group, question three, 'How do you stay safe living at home?,' yielded very literal answers pertaining to security systems, locking doors, using key cards, and having dogs living in the home. Consequently, the PI interjected by asking participants 'how they learn about remaining safe at home.' With the assistance of the AADD staff participants present, the Senior Hot Shots responded with answers pertaining to practicing balance to avoid falls, the use of pull cords if and when they did fall, stating that they did not answer the door or phone to people they did not know. These latter responses further expounded on additional areas of safety education for those aging with DD.

As a result of the ambiguity of focus group question three, the PI amended this question (using the above mentioned prompt) for use with the second focus group. The PI's chair provided the focus group participants with various examples of safety at home, such as checking expiration dates on food, answering the door to strangers, and performing home modifications (e.g., grab bars in bathrooms). This helped clarify the question for participants in the second focus group.

Procedure

The PI distributed the questionnaire and the appropriate informed consent information to the ED via email (Appendix C). The ED then forwarded the questionnaire to all (45) AADD staff. Once completed (AADD staff had three months to complete the questionnaire), the ED forwarded responses back to the PI, omitting identifying information (e.g., names and/or email addresses). Once returned, the PI organized the responses and prepared them for open coding and analysis.

Prior to conducting the observations, the PI obtained informed consent (Appendix D) from each participant at each Senior Hot Shot Support Group. Two observations took place at a senior activity center and another two took place during regularly scheduled fishing trips. Each observation lasted between two to four hours. During each observation, the PI wrote field notes, which were later typed and aligned with the Andragogy Checklist. Observation data was analyzed using axial coded methods.

The PI scheduled two focus groups within a one-month period, and each focus group session lasted approximately 60 minutes (Appendix E). Each participant (Senior Hot Shots and AADD staff) completed an informed consent form (Appendix F) upon arrival at the focus group. The PI also sought permission from each participant to audio record each session. The PI's chair led the focus group sessions. The PI was also present to record responses and make the Senior Hot Shots feel comfortable about answering questions presented by the PI's chair. The PI provided snacks and light refreshments for all participants.

At the start of each focus group, participants introduced themselves. The focus group participants were asked eight questions pertaining to the age-related learning

challenges they faced as they aged. In each focus group, participants chose to answer each question individually (rotating clockwise around the table). This gave each participant an opportunity to share his or her own stories and responses (something they were enthusiastic to do), without having the potential issue of a participant monopolizing or controlling the focus group session. Participants did not answer questions they did not want to answer. This occurred on two occasions. On each instance, the person sitting next to the reluctant participant began sharing his or her own response, thus continuing with the focus group session.

Upon completion of the focus group session, the PI transcribed the audio recording and typed all field notes. This process took approximately 20 hours to complete, per focus group. The notes were then organized and prepared for coding analysis.

To conclude the gather gathering process, the PI conducted five in-depth interviews, each lasting a maximum of one hour, with aging -with -DD stakeholders. The interviews took place by telephone (PH), and were audio recorded. The one-on-one interviews were conducted in the following sequence: (a) one AADD Board member (PH); (b) the ED; (c) a Final Game Plan staff member; (d) a Social Clubs staff member; and (e) the Assistant Director (Appendix G).

The PI emailed each participant an informed consent form (which was signed and returned prior to the interview) (Appendix H) and the list of interview questions, ahead of time. This enabled the interviewees to prepare for the interview, if they wished. Interviews were also audio recoded with the permission of the interviewees, in order to

"capture what the interviewee is actually saying" (Fraenkel et al., 2012). The PI also took notes during each interview.

Upon completion of each interview, the PI transcribed the audio recording and typed handwritten notes. This took approximately 10 hours to complete, per interview. The PI then emailed transcriptions to each interviewee for review. Interviewees were informed that they could review the transcription and make any comments or corrections. Once this process was complete, the PI gathered the complete data set and prepared it for analysis.

Data Analysis

Research data were analyzed using open and axial coding methods. Open coding, a process by which "the researcher forms initial categories of information about the phenomenon being studied by segmenting information" (Creswell, 1998, p. 57) was used to analyze the interview, questionnaire, and focus group data. This technique enabled themes and categories to emerge from the data. Questionnaire respondents were labeled E1 (Employee 1), E2 (Employee 2), etc. Focus group participants were labeled Respondednt1 (R1) through Respondent 21 (R21). The PI and PI's chair were not notated numerically. Interviewees were labelled I1 through I5.

The PI used axial coding methods to analyze observation data. The PI coded field notes (observed behaviors) according to the Andragogy Checklist, providing evidence of andragogical theory.

Summary

The questionnaire, interview, observations, and focus group sessions enabled the researcher to gather a variety of information about the types of age-related learning

challenges faced by the Senior Hot Shots as well as the types of learning strategies one can use to help address the unique learning needs of older adults with DD. Such discussions provided useful insights into the educational needs of this growing population of aging adults, as well as the ways in which older adults with DD were unique adult learners. The results of this study are presented in the following chapter.

Chapter Four: Results

The PI conducted a qualitative case study in order to explore how older adults with DD learn to maintain their independence and successfully age in place. The PI attempted to achieve this by identifying the age-related learning needs of older adults with DD and the ways in which such educational needs are best met. The qualitative research techniques employed in this study explored (a) the types of age-related learning challenges faced by older adults with DD, (b) the ways in which andragogical and geragogical theory applied to older adult learners with DD, and (c) the learning strategies that helped older adults with DD live independently and successfully age in place.

This qualitative exploratory case study utilized triangulation techniques by collecting data using a variety of data-gathering methods including interviews, observations, and focus groups, as a means of validating the research findings (Creswell, 1998; Fraenkel et al., 2012; Stake, 1995). In order to answer the main research question, ‘How are older adults with DD unique adult learners?,’ the PI analyzed all data. This was supported with three sub questions: (1) ‘Which andragogical and gerontological adult learning needs must be met for aging adults with DD to successfully age in place?’; (2) ‘How do aging adults with DD best meet their unique learning needs to successfully age in place?’; and (3) ‘What does one need to know in order to help older adults with DD successfully age in place?’ Open and axial coding methods were utilized to analyze the data and themes. Interview data were aligned with the main research question and sub-questions (Table 3).

Table 3.

Aligning Research Questions with Interview Questions

Main Research Question:
How are older adults with DD unique adult learners?

Sub-Question 1: Which andragogical and gerontological adult learning needs must be met for aging adults with DD to successfully age in place?	*Sub-Question 2:* How do aging adults with DD best meet their unique learning needs to successfully age in place?	*Sub-Question 3:* What does one need to know in order to help older adults with DD successfully age in place?
Interview Question 2: What age-related learning challenges do older adults with DD face?	*Interview Question 3:* In what ways do you help elderly persons with DD learn to cope with the challenges of aging?	*Interview Question 1:* What does one need to know in order to help older adults with DD live independently and successfully age in place?
Interview Question 6: What learning strategies help adults with DD live independently and successfully age in place?	*Interview Question 4:* How do you help older adults with DD learn to address their physical needs (i.e., ADLs and IADLs)?	*Interview Question 8:* Are there any ways in which AADD's programs and services for seniors do not prepare older adults with DD for the challenges of aging?
	Interview Question 5: How do you AADD help older adults with DD learn to address their psychosocial needs?	*Interview Question 9:* Do you have any other comments?
	Interview Question 7: In what ways do AADD's programs and services for seniors prepare older adults with DD for the challenges of aging?	

Interview Results

This section details the results obtained from the five phone interviews conducted by the PI. Each interview question was aligned with one of the three sub-research questions.

Sub-question 1: Which andragogical and gerontological adult learning needs must be met for aging adults with DD to successfully age in place? Interview questions 2 and 6 were aligned with research sub-question 1.

Interview question 2: What age related learning challenges do older adults with DD face? In general, older adults with DD "face similar age-related changes that the generic population faces" (I3). For example, "Learning to live with any disability if it would be decreased vision, decreased hearing, that would certainly be something that should be learned" (I1). This was supported by I2 who stated, "As anyone gets older, it takes a longer amount of time to do things that you used to do in a matter of minutes, may take half an hour now," thus reflecting slower reaction speeds and a need for more time to complete tasks. Interviewee 3 also commented that "falls, strokes, hearing losses, or vision losses" are common age-related physical challenges experienced by older adults with DD.

In addition to physical age related, learning challenges, cognitive challenges also arise with age. As stated by I2, "Sometimes we . . . have to go back and refresh our memories or ask someone for help in doing something that may have come so easily to us when we were younger." Therefore, those aging with DD appear to experience the same general age-related declines in physical and psychological functioning as those in the general aging population. However, there are some instances when drug usage and past

experiences may have an impact on the age-related challenges faced by those aging with DD. For example, according to I2,

> The thing that makes [people with DD] a little different is a bulk of it can be tied back to long-term drug usage and Tardive Dyskinesia . . . there has been a part of them that spent some time in an institution. With that model, you had to be able to manage behavior . . . If you can't physically constrain them, you have to mentally restrain them [so] you have the side effects of that occurring a long-time ago popping up in some of our aging guys.

Thus, the impact of long-term drug use was an important consideration for those working with older adults with DD, as was an exploration of histories and experiences across the life-course pertaining to health and care.

Interviewee 3 reiterated the importance of taking into consideration that, just like everybody else, those aging with DD are unique individuals. For example, "Sometimes . . . you have a perfectly viable human being with a DD, and they die at 40 [due to] a liver involvement." Thus, the aging process is highly individualized, and not all persons with DD will experience growing old in the same way. For example, the "types of drugs that folks may take just for DD, an example being epilepsy drugs, make the person more likely to break" (I3). Furthermore, persons "with cerebral palsy . . . hurt more than the regular person" (I3). Again, these examples highlight the complexity of the aging process and the types of challenges faced by those aging with DD. I3 also urged caution when working with older adults with DS, particularly with regard to a dementia diagnosis.

> There is a premature aging component for people with DS. One of the things that will occur is that someone will point at a person with DS and say, 'they've got

> Alzheimer's or they're demented,' but it goes to that accelerated aging process, and if for example, you take away vision or hearing that can look like dementia or confusion. So as a field, we should be more aware . . . because when treated, that person can reverse back to who they were before there was a change. (I3)

Therefore, according to I3, an over diagnosis of AD and related dementias in persons with DS was something that healthcare professionals and those working with DD populations should be cognizant about. This was further illustrated by the following example:

> I got called in as a consultant . . . where a lady had DS and had been crying, appeared to be confused . . . they were moving her to a nursing home. However, the family called me in, and when I went in and met this lady I just looked at her and she was blue and confused . . . [rule number one] rule out medical first. Her carotids were occluded so she was not getting blood flow to her brain . . . she got her carotids clean and went right back to being the happy, jolly person that she was. (I3)

Thus, this lady had underlying physical health issues that were causing her confusion, not dementia or AD. This example highlighted the fact that there was a need for healthcare professionals to be aware of underlying medical conditions that may be affecting the behavior or overall health and wellbeing of persons aging with DD.

In addition to physical challenges, older adults with DD also faced myriad social age-related learning challenges, including the

> capacity and need to help people understand death and dying – that when we get to certain ages some of the people that we love might predecease us [as well as

> the] need to continue to learn social graces and socially appropriate behaviors. (I1).

Furthermore, older adults with DD "are more likely than not to be less connected with a group of folks that have similar interests and backgrounds, and more likely to be isolated" (I3). Therefore, the need to refine social skills was necessary in order to maximize opportunities for friendship building and social engagement for those aging with DD. This was further expounded by the fact that there is "a higher amount of loss in the lives of people w/DD . . . mostly [due] to staff changes [and] turnover . . . [whereby] the grieving process is a pretty big deal for people with DD" (I3). However, despite this, one interviewee reported that the Senior Hot Shots' "coping strategies in some ways are much better" (I3). For example, I3 commented on the fact that

> [Older adults with DD] have better coping skills for everyday losses that you and I would experience, but they don't deal with the loss of their parent very well. If you step back in time and you sit down and talk to the Senior Hot Shots, and you ask them about their parents, you would see some just bleeding, grieving, and their parents died 40 years ago. You're right because even when I observed and have spoken to a few of them, a lot their parents come up in conversations and they do refer back to what their parents did or to the historical perspective and relationships that they had with them. It may have been one of the only times they felt really safe.

This example illustrated some of the psychosocial age-related learning challenges faced by those aging with DD. Understanding death and dying, as well as the grieving process appears to be an age-related learning need faced by this population of aging adults.

Furthermore, the social challenges faced by older adults with DD are highly individualized, based on a person's past history and experience.

Another age-related learning challenge faced by adults aging with DD was concerned with resource utilization. According to I2,

> People who are aging who do not have DD have a lot more resources than people without DD have, and that a lot of times if a person with DD learns about a resource, they may hear about it but they may not know how to access it. They may not have transportation to get there, so that can cause them not to be able to access it. Also, for some of those resources, they may not have the ability to read or understand how it might pertain to them.

Thus, for those aging with DD, age-related learning challenges included the inability to access certain resources or services due to transportation and/or comprehension issues. This study found that staff members at AADD tried to overcome these barriers by educating older adults with DD about the resources that were available to them. They did this by educating them that they can access any resource out there for adults, regardless as to whether or not a DD exists.

> It doesn't matter if they have that label of being DD. Any resource out there can, and has to compensate for their disabilities. So we try to teach that every day, by taking them to senior centers where people do not have disabilities go. On a daily basis, they see more and more that they can access those things and they are learning more about where they can access things as well. (I2)

Therefore, a lack of knowledge and understanding about the types of aging services available, and the ways in which adults with DD can access them, was an age-related learning challenge that must be addressed by healthcare and service providers.

When older adults with DD utilize healthcare and/or supportive services, it is important that information is conveyed in a clear manner, and they have the ability to ask questions. As stated by I1,

> While most people hopefully will have an advocate with them when they [older adults with DD] go to the doctor . . . if anyone is talking to them in language they don't understand - particularly a nurse or a doctor - giving them some simple phrases like, 'can you please draw me a picture or can you explain this to me in very simple words,' [will help].

This example highlighted a need for promoting self-advocacy skills for those aging with DD. In addition, it also stressed the importance of effective communication between healthcare and service professionals working with those aging with DD.

Another age-related learning challenge faced by those aging with DD pertained to safety. In addition to physical health and safety (keeping out of harm's way, avoiding falls, forgetting to turn the stove off etc.), I1 also discussed the importance of ensuring that older adults with DD understand "how not to be victims of criminal behavior." This was essential for those wishing to maintain their independence and successfully age in place. This also tied into I4's comments regarding the ability of older adults with DD to comprehend age-related behaviors and challenges. Interviewee 4 gave the following example:

> Our guys, although they're aging, some may not fully understand what it takes as the aging individual. For example, a person without DD, they are planning for retirement . . . what they are going to do once they decide to retire [they think about] savings . . . investment. A person with DD may not think about that, and those are the age appropriate decisions that they have to make.

Therefore, learning how to make age-appropriate decisions, while avoiding threats to one's safety and security (e.g., fraud), was a learning challenge faced by older adults with DD. Therefore, for staff at AADD, the opportunity exists to assist those aging with DD plan for retirement. Importantly, such a program is highly individualized and each participant's "goals and objectives [are] age-related . . . [and] written . . . specific[ally] for that person only" (I4).

It is important to note, however, that a potential barrier to assisting older adults with DD meet the challenges of aging is the fact that

> the way that individuals do things are deeply ingrained. They've utilized whatever skills that they have for many years, maybe for all their life, for all of their adulthood, and those skills or the way that they choose to do things may in some ways be functional, but they may not be the best option for a person. (I2)

In order to address such issues, I5 stressed the importance of "building trust". In order to help older adults with DD learn to address their age-related challenges,

> Enough relationship [must be] built with a person so that you can maybe slowly make suggestions or offer alternatives without the person taking offense, and try to help people learn other things that may meet their needs in a better way or may actually be better suited for them as they grow older. (I5)

Such learning challenges were not only unique to those aging with DD, but also for those providing care or services to this population of older adults. For example, I3 discussed how AADD works.

> [AADD] is a habilitative [teaching] model . . . not a medical model . . . so if there's a system failure . . . folks in DD might not catch it . . . People can die, if staff miss what is going on with them – that is a problem. It's a training issue. If you've got somebody who is coughing, they are blue in the face, and they are having trouble catching their breath, it doesn't matter if they have a disability or not, they need to seek care. If you have someone who is a diabetic and it is not managed, it is the same thing. You're watching over their feet. But if you don't understand that if you smell their breath and it smells sweet, there is an issue going on. However, in the DD world, people are not trained that way.

Therefore, the challenges faced by this emerging population of older adults were not unique to them, but also to those entrusted with their care. Thus, a comprehensive understanding of the physical, psychological, and social age-related learning challenges faced by those aging with DD, was also essential for those providing this population with any form of care and/or support.

Interview question 6: What learning strategies help older adults with DD live independently and successfully age in place? Two interviewees, I1 and I2, stressed the importance of independence promotion for those aging with DD. Importantly, I1 emphasized the importance of retiring to older adults with DD, and that "you have a right to have an individual choice - you don't always have to do what the group wants to do."

In addition, specific learning strategies used to help promote independence and successful aging in place for those at AADD included

> Money management [and] practicing impulse control so that you don't go into the dollar store and buy everything and then you're out of money for the rest of the month . . . using some good judgment around food choices, transportation . . . conflict resolution . . . [and] teaching what's available in terms of recreation. (I1)

The concept of promoting independence for those aging with DD was further supported by I2, who stated, "independence is very important to our guys and we certainly promote them being independent for as long as physically possible." In addition, learning how to promote independence did not only come from AADD staff, but also from peers. According to I2, the Senior Hot Shots "are also good about watching out for each other." In her interview, I2 discussed how some of the Senior Hot Shots came to her and said, "I noticed that so and so maybe isn't feeling so good today, could you check them out?" This highlighted the important role that friendships and rapport building had on helping those aging with DD to promote their independence and age in place. As stated by I2, the Senior Hot Shots "want their friends to maintain their independence too. OK. So they will go out of their way to help them in any way they can." This reiterated the importance of taking care of others, as well as oneself. Again, the matter of manners and high expectations was highlighted by the following response:

> Our guys are not shy. They will ask for help and they are the most polite and appreciative people you will ever meet. They never fail to say thank you, you're welcome, and they say please. They are so polite and so appreciative. (I2)

Such admirable characteristics and mannerisms helped to promote independence and successful aging in place in the community. Thus, they were important age-related learning needs for those aging with DD.

The importance of social support networks and “being connected to the community and to peers” (I5) was noted as being an integral learning strategy for those aging with DD.

> [When] you are learning in conjunction with other people, you’re building on other people’s experience and knowledge . . . [therefore,] the better support network a person has, the more likely they are going to be able to identify and access the supports they need in order to maintain their level of independence. (I5)

Thus, working with others and sharing valuable resources, experiences, and knowledge appeared to be beneficial for helping older adults with DD tackle the challenges of aging.

Interviewee 5 identified the following learning strategies that helped older adults with DD optimize their learning experiences: (a) modeling; (b) patience; (c) when working on a particular skill, breaking things down into task analysis, or chaining things together; (d) use of physical and/or verbal prompts, depending on what it is the person needs; (e) promotion of self-monitoring when possible - helping older adults with DD recognize a need for themselves, rather than relying on outside help. This last point was particularly important when memory was a concern. For example, “if folks have trouble remembering things, if they have the ability to read, they might ask for a list of steps” (I2).

Interviewee 5 also identified repetition as an important learning strategy when working with older adults with DD "because it may be weeks or months or a years-time, before the person gets something in a particular way." In particular, "if it is something that they are motivated to do and they want to learn it, then there's no amount of time that is too much time [; however,] if it is not something the person is motivated to learn, then it's pointless to continue" (I5). Repetition can help older adults develop the necessary skills they need in order to remain independent in the community. As discussed by I4, AADD's Supported Living staff would work with the Senior Hot Shots to write processes for specific tasks that were essential for independent living. For example, "when you get up in the morning this is what you should do a, b, c, d . . . almost like a checklist." However, according to I4, "some individuals will create a dependence on that repetition and any deviation from that deviation can cause a setback, but that is far and few in between." Thus, the extent of support individuals need varied considerably depending on the task and individual differences.

Regardless of the level of support needed, "praise and positive interaction with people, reinforcing those positive behaviors" (I5) were components that should be part of the learning experience for those aging with DD. Fostering a positive learning environment included the benefits from humor and the fact that at AADD "everyone is willing to laugh at themselves" [in addition to the fact that] when teaching, staff are on a level playing field" (I3). Importantly, I3 also noted that when working with older adult learners with DD, one must consider whether the subject matter was something they want to learn. For example, "if they've gone 60 years old and they still do not know how to tie

their shoe, then let it go." This reiterated the importance of ensuring that the educational experience makes sense to the older adult with DD learner.

Sub-question 2: How do aging adults with DD best meet their unique learning needs to successfully age in place? Interview questions 3, 4, 5, and 7 were aligned with research sub-question 2.

Interview question 3: In what ways do you help elderly persons with DD learn to cope with the challenges of aging? One of the most important strategies AADD used to help older adults with DD cope with the challenges of aging was "creating a social support system/ social group so that individuals feel they have meaningful relationships and that somebody else cares" (I1) about them. According to I1, at AADD, older adults with DD "learn a lot about taking time to have fun. They learn how to take care of each other and care about each other (e.g., if someone they are friendly with gets sick or loses a parent)." In addition to creating meaningful relationships with fellow peers, those accessing AADD's programs and services for seniors also "develop strong relationships with the staff that assist them" (I1); thus, broadening the scope and depth of their social support networks. Such relationships therefore helped those aging with DD to learn "because they know someone will really listen and pay attention to what they say" (I1). This was important, given the fact that

> the best way to cope with challenges of any sort is to tell somebody what your feeling and what you're experiencing and going through, and I know that most of the clients feel the staff at AADD really do listen. (I1)

This example demonstrated the importance of building positive relationships and rapport in order to enhance the learning experience for those aging with DD. This was further supported by I5, who stated that

> We certainly provide opportunities and encouragement for people to stay active and stay engaged in their community. Not to face aging issues in isolation . . . the retirement support group is . . . a natural pool of peers. So, if somebody is going to have cataract surgery or hip replacement surgery or is having some lifestyle change, like they have to start wearing adult undergarments, somebody in the group has already experienced those things [so they can say] hey, I'm not in this alone.

Encouraging natural friendships was also a way that AADD helped older adults with DD deal with the challenges of aging. According to one interviewee, "we really truly see a group of people who provide mutual support and encouragement to each other and really do develop friendships - they are not just a group of people who are put together" (I5). Thus, natural (and reciprocal) friendships were beneficial to those aiming to learn how to successfully age in place.

Educating older adults about the aging process was identified by each of the interviewees as being a major component of helping older adults with DD learn to cope with the challenges of aging. According to the interviewees, this was achieved in a multitude of ways. Examples included, teaching through AADD's "Annual conference and trivia night" (I1). They also encouraged older adults with DD to see themselves as part of "a broader community [whereby] there are things that they can do with other family members, with the staff, and with the Board members" (I1). The Senior Hot Shots

were very involved in their communities. This helped facilitate learning through the interaction with peers and those outside of AADD.

Staff educated older adults with DD about managing their health in order to cope with the physical challenges of aging in a variety of ways. For example, when going out to lunch, AADD staff encouraged the seniors to try novel – and healthier – places to eat.

> Instead of [going] to fast food [restaurants], I steer them towards somewhere like Sweet Tomatoes . . . a buffet, [which] has salads, soups, usually three kinds of pastas . . . and fruit. So it's a great place to talk about healthy food. (I2)

This type of learning environment was very experiential. The Senior Hot Shots not only heard about healthy food options, but they also got to visit the healthy locations, experience the different types of food, and learn about the benefits of eating nutritional meals. AADD staff also talked to the Senior Hot Shots about looking for calories on packaging (I2) and the importance of eating a balanced diet. This was also an example of what I5 referred to as "proactive aging" and preparing the older adult learner with DD about aging successfully. At AADD,

> Older adult services begin when a person is 50 years old [earlier than the general aging population]. So, by the time they are really in the midst of those age related challenges, they already have a support system in place . . . they're able to better navigate those age related changes when they occur, rather than waiting for a crisis to come. (I5)

Therefore, in order to best cope with the challenges of aging, preparing learners with DD about the aging process should be initiated prior to aging onset. Thus, AADD used a proactive rather that reactive educational model, when it came to meeting the learning

needs of older adults with DD. Another interviewee illustrated this further, by helping older adults with DD plan "their final wishes" in AADD's Final game Plan program,

> I assist [with] advanced directives and wills. I've had some guys come to me and say, "should I get a life insurance policy or should I get a pre-paid burial plan?" So, I go through and I explain what each of them is and I explain how long they will have to pay on something. I have taken clients to funeral homes and had them go through the entire pre-paid burial plan interview, and then talk to them about life insurance and see what would be most cost effective. (I2)

In this example, I2 educated older adults with DD about the numerous insurance and end-of-life plans available to them. It also helped prepare the Senior Hot Shots for end-of-life, and possibly helped raise some sensitive questions regarding death and dying. Another way in which AADD was proactive in helping address the challenges of aging was via the Final Game Plan's Life Review Program. According to I2, Life Review videos were a "legacy" for the Senior Hot Shots. In the Life Review program, videos were made detailing "all the capabilities" of the Senior Hot Shots. The videos captured the older adults with DD "walking, talking, reading, writing, doing math problems, moving their arms, moving their legs, exercising, [and] speaking."

The purpose of each video was that if a Senior Hot Shot experienced some type of functional or cognitive decline, such as when they "have a fall and break a hip, if they have a stroke and they're no longer capable of doing what they could do in the video" (I2), AADD staff can show the video to healthcare and service professionals so that they can get a clear idea as to how the person functioned before the incident. According to I2, this was imperative, as oftentimes people aging with DD "are discounted and . . . medical

professionals [in hospitals] sometimes have the attitude of 'oh well, they have a disability, we don't really have to try and get them back to where they once were.'" The Life Review videos were therefore, useful tools which can help advocate for the older adult with DD if they are no longer able to do so themselves.

Life Review videos also invite the Senior Hot Shots to "talk about their family life their friends, their work experience, things that meant a lot to them as children growing up., school" (I2). This helped tap into the identity of those aging with DD. I2 recalled how she has seen "family members with tears in their eyes as they watch the videos . . . [saying] I didn't know my sister or my daughter or my whomever it was, really felt that way and I am glad to learn that now." The Final Game Plan program was therefore, an effective tool for helping the various stakeholders involved in the care of those aging with DD get a more complete understanding as to the unique identities, desires, motivations, and learning needs of each individual. This was imperative when assisting older adults with DD to cope with the complex challenges of aging.

Importantly, the Final Game Plan program also ensured that every older adult with DD received a "comprehensive geriatric assessment [and] recommendations from the physicians [based on] those assessments" (I2). AADD then helped assist the older adult cope with limitations in physical, functional and/ or psychosocial needs, identified by the assessment process. For example,

> Whether a person needs diabetic education, whether they need to lose weight . . . work on balance or . . . whatever the doctors say they need to work on, we try to get them into classes or exercise fitness programs. We take them ourselves to the Y, walk with them, and talk with them about healthy foods. (I2)

Thus, learning was again tailored to meet the educational needs of each individual, rather than a generic approach for all. For some, a greater emphasis on selecting healthy food options would be more beneficial than signing up for a new gym membership. However, for others, understanding how to properly select, prepare, and cook healthier food options may be something that warrants further education for those aging with DD. This also corresponded with I4's emphasis about "knowing their capabilities." Whereby, recognizing an individual's physical, psychological, and functional capabilities was essential in order to help promote independence and mastery of techniques (ADLs and IADLs) that were essential for independent living and successful aging in place.

The concept of tailoring learning to meet the unique needs of those aging with DD was further expounded upon by I3, who stressed the importance of identity, something that is "tied to self-esteem, tied to who you are." When working with older adults with DD it was important to identify who they once were (e.g., prior to retirement) and who they are now (e.g., during or after the retirement transition). According to I3, identity and socialization are closely intertwined. The Senior Hot Shots were proud of their fishermen/lady identities. When asked what they do, they respond, "I'm a bowler;" "I'm a fisherman." AADD's programs helped them maintain and develop these identities as they aged. Respecting one's identity was, therefore, an important ingredient for helping older adults with DD cope with the challenges of aging. This, when combined with staff who engaged, protected, and taught those in AADD's programs and services, were essential elements for helping those aging with DD to successfully age in place.

Question 4: How do you help older adults with DD learn to address their physical needs? Specifically, like ADLs/ IADLs? Four out of five respondents highlighted the

importance of health maintenance in helping older adults with DD learn to address their own physical needs. As stated by I1, "A lot of this is done through 1:1 interaction with their care partner or the staff (e.g., helping them to the bathroom and those types of things) . . . [and] exercise programs." In addition, several of AADD's programs and services, including the "supportive living program [and] retirement services" (I5) addressed physical needs, as well.

In the Final Game Plan program, the "recommendations of their geriatric assessment" (I2) were extremely informative about the types of assistance each person needed with ADLs and IADs. Once the physician made the recommendations, the AADD program facilitator then referred the older adult with DD to supportive living. This particular program helped the Senior Hot Shots perform household skills, such as cleaning, cooking, and doing the laundry. The objective of the Supportive Living program was to "help them learn or relearn some of the skills they have kind of forgotten how to do" (I2). This type of teaching strategy helped reinforce those skills and practices necessary for independence promotion and successful aging in pace.

When such assistance was provided, I3 stressed the importance of supporting them in the same way that you would need to "support any human." In particular, "from a physical standpoint, it is to not make it so that they are embarrassed or not to make them feel bad for whatever it is that is causing them to need that kind of physical help" (I3); thus, treating them with dignity and respect. This was reiterated by one interviewee who stated that when addressing supportive living issues, particularly ADLs (e.g., personal hygiene and care tasks), when discussing "areas that they may be embarrassed about" it

was important to approach the situation in a sensitive and supportive manner and "not in a way that demeans them or makes them feel bad" (I5).

When the PI responded to this by asking the question, 'That kind of works for everybody in some shape or form doesn't it?,' I5 responded, "Yes, all of this is that we are more alike than different . . . many of the things are common across the board." Thus, reiterating the fact that although there were some unique characteristics of older adults learners with DD, they did in fact experience many of the same types of age-related learning issues as those faced by the general aging population. One interviewee gave an example of when you sometimes see a difference between those aging with DD and the general population. In her example, she stated that some older adults with DD may "hold onto and injury [or memory] . . . and they're feeling that pain or relationship to pain" (I3). According to I3, collaborating with healthcare and service professionals to assess the physical need was essential in order to help those aging with DD address their physical (including ADL and IADL) needs and regain prior levels of functioning.

As stated by I5, individualized assessments looked "at where people are and where they want or need to be." Thus, for those at AADD the task was to help regain lost skills, encourage older adults with DD to develop new skills they were interested in learning or maintain or modify those skills they already had. Thus, the underlying premise was to address the unique needs of each individual.

This corresponded with I4 and I5's comments about recognizing individual needs, capabilities, and motivations. It was the responsibility of the whole team to collaborate and work together to address the needs of those enrolled in AADD's programs and services. Understanding the older adults "history of their capabilities and of their

diagnoses" (I4) was an integral part of this process. Knowing whom that person was, where they came from, what their learning objectives were was all part of the learning experience. As stated by I4, "As long as everyone is working together for the common goal, then their capabilities are endless." This was further expounded upon by an interviewee who emphasized the importance of recognizing each Senior Hot Shot's type of disability.

> It really is trial and error. We help a person in one way, and that didn't work, so we will try this instead. . . . Sometimes there are components that are just who the person is and we have to respect those things and figure out ways to work around [them].

When working with older adults with DD to address their physical needs (such as ADLs and IADLs), interviewees also stressed the need to determine what it was a person was motivated to do. According to I5, "if it doesn't matter to the person, trying to tech it is pretty futile." As demonstrated in the following example:

> We have a person who, showering is not his thing, but impressing his girlfriend is. So, if we can tie the need to shower to something that is of value to him, then we are going to have greater success supporting him. (I5)

Again, this reflected the need to tailor the learning according to the unique needs, desires, and motivations of each person. In another example, one Senior Hot Shot who had a vision impairment was determined to go to the Rams games downtown. While walking to the game "there's curbs and he can't see them, but staff are walking with him and saying, 'there is a curb coming up, ready to step.'" (I3). In this example, the visually impaired

Senior Hot Shot was still able to promote his independence – attend the Rams football game downtown - with the appropriate level of assistance form AADD staff.

As with the general aging community, other things to take into consideration when helping older adults with DD address their physical needs was to be respectful of their dignity. For example,

> If you're working with a person in a wheel chair, then you are not using it as a leaning post, it is part of their body . . . you're dropping your body down closer to the ground so you are more on their eye level . . . not towering above them. If they've got an ear that they hear better out of, then that's the one you're talking into . . . make sure that they read your lips . . . that you're not chattering or speaking so quickly that they are not able to take in any of the information. From a visual perspective, making sure the lighting is good. (I3)

Each of these considerations helped to enhance the learning experience for those aging with DD. They also set an effective physical and psychological climate for older adult learning.

It is important to note that when helping older adults with DD to learn to address their physical needs, positive reinforcement and encouragement was an important part of the educational process. For example, "Complementing people when they have dressed nicely or appropriately for an event or put on make-up" (I1) can be a huge motivating factor for those attempting to promote their independence and successfully age in place. In addition, "Having the ability to play and laugh!" (I3) was one of the most effective strategies for helping older adults with DD cope with their physical age-related learning needs.

Question 5: How do you help older adults with DD learn to address their psychosocial needs? All interviewees (5/5) stressed the importance of relationships and social supports in helping address psychosocial aging needs. Events such as the Christmas party celebrating birthdays, going to AADD's annual conference, fishing, going to social centers, and even volunteering in the community (I1) were all ways in which the Senior Hot Shots developed friendships and social support networks with those both inside and outside of AADD.

Having friends with those at AADD, as well as those outside of AADD were also stressed by interviewees. As stated by I2, "I take them to senior centers where they can meet other older adults so they can build a social network." However, an interviewee also emphasized the importance of having AADD staff "that are intimate enough [to know an] individuals' baseline personality" (I1). In such a case, if a Senior Hot Shot appeared to be having psychosocial challenge (e.g., perhaps sinking into depression), appropriate assessment and intervention could be enacted immediately.

This understanding also extended to the relationships between the Senior Hot Shots themselves, "Our guys in Hot Shots, they take such good care of each other. They call each other on the phone, they ask how each other's doing. They show remorse when someone has lost someone in their family" (I2). Thus, those at AADD collaboratively worked together to ensure the overall health and wellness of the entire group. This also extended to the Senior Hot Shots looking out for AADD staff, as demonstrated in the following example:

> I found it very touching that I had taken a couple to doctor's appointments and they said, 'so what are you doing tomorrow?' and I said, 'actually, I have a

> doctor's appointment tomorrow.' Immediately they were asking, 'are you alright? What's it for? As soon as you get game from the doctors, can you call us and let us know that you did?' I almost broke down in tears. It's so touching that they would reciprocate in that way. (I2)

Learning was also reciprocal between the Senior Hot Shots and AADD staff. As stated by one interviewee, "I learn as much from them as they learn from me, and I don't ever forget to tell them that . . . they want to teach us what they know" (I2). Thus, addressing psychosocial learning needs was a continually engaging process between the staff at AADD and the Senior Hot Shots. As a result, typical (natural) friendships developed and continued to facilitate the learning experience for all of those involved.

Interviewee 3 reflected on the historical context about friendships and interactions among those aging with and without DD. In the past, when trying to foster (1:1) friendships between those aging with DD and the general aging population at an activity center, I3 stated that several difficulties arose. This was primarily because those without DD typically drove to the center and conversations about their children and grandchildren dominated discussions. Those aging with DD on the other hand, oftentimes did not drive themselves to the center, they may not have any children or grandchildren, were likely to have "lived in an institution . . . [and] were taken from their mom because there was too many kids" (I3). Thus, when the two groups of seniors came together they often had very little in common to discuss, with "the biggest similarity [being] related to heath" (I3). This in turn limited conversations and the ability to build strong social relationships.

At the time of this study, AADD encouraged the Senior Hot Shots to interact with peers, AADD staff, family, friends, and the greater community. "When we are out on an

activity and we have a new person, we encourage the person to not be shy" (I3). An important component of the success of developing new social ties and friendships was respect. Thus, AADD staff made sure that those aging with DD understood that

> There are some social norm boundaries that are in place and are acknowledged . . . you don't yell at anybody, you don't poke at anybody, you don't make anybody fee bad that is around you, and you expect the same back. (I3)

This was illustrated further by I5, who stated that that there was no "need to childise or grouphomeise a person . . . We are about individuals in the community, doing what they want and need to do for themselves (I5). Older adults with DD should be treated equally, with dignity and respect.

In order to exemplify appropriate standards of behavior, staff at AADD "model what it is they are looking for" (I3). AADD encouraged older adults with DD to aspire to "high expectations" (I5), whereby just because a persons had a DD and wore a label, did not change the expectation for socially acceptable behavior. Although some people may have greater support needs than others "the expectation is the same" (I5). Such practices were therefore utilized by AADD to help older adults with DD meet their psychosocial learning needs and ability to successfully age in place.

Question 7: In what ways do AADD's programs and services for seniors prepare older adults with DD for the challenges of aging? AADD's programs and services for seniors strived to "engage, protect, and teach" (I5) older adult learners with DD. Staff at AADD encouraged Senior Hot Shots to collaborate with peers and the greater community to develop the skills they needed in order to address the myriad challenges of later-life. AADD was responsible for providing a safe learning environment for those they taught.

This also tied into keeping active and engaged in the community. AADD staff members also encouraged the Senior Hot Shots to become familiar with resources in their community (I2) that could help them address their age-related learning needs.

As health promotion was essential for successful aging, AADD's programs and services for seniors tried "to emphasize physical mobility and exercise . . . [and address] themes around successful aging and how not to become excessively disabled" (I1) with age. AADD's programs also prepared the Senior Hot Shots about what to "expect as they grow older" (I2) as well as emphasized to those aging with DD that they were not alone in tackling the aging process. In addition, AADD's programs strived to "prepare [the Senior Hot Shots] to maintain what they've got" (I3). This was achieved by engaging the Senior Hot Shots in strength and endurance building activities (e.g., yoga) to help maintain physical health and well-being, as well as encouraging them to participate in mental games like UNO and trivia (I3) to enhance cognitive functioning.

Recognizing individual abilities and capabilities was also essential when working with those aging with DD. When teaching exercise for example, if someone "can't do some exercises standing up . . . teach them how they can still move their kegs sitting down" (I2). This way, the older adults was still able to participate in the health promoting activity, while also learning how they can modify activities to suit their unique evolving age-related learning needs.

Preparing for the changes and challenges that accompany the aging process was also discussed by I2, who stated that "I think and hope that we teach them not to dread getting older, but look for things they can look forward to as they age. Certainly they can enjoy being together." This highlighted the importance of social support. The Senior Hot

Shots go through the aging process together. They helped one another and watched out for one another. This is demonstrated in the following example:

> If you've got a friend and can call them to say, "I've just fallen down the steps and hit my head," the chances are that friend is going to help you seek help. Whereas if you don't have a friend, then you're gonna fall down the stairs, hit your head . . . and then who knows what's going to happen to you. (I3)

In this example, having a close friend to help when dealing with a health-related issue was essential for overall well-being, and consequently, the ability to age successfully in place.

Additional ways in which AADD prepared older adults with DD for the challenges of aging included exploring identity (e.g., do you dye your hair?) (I1) and personal wishes (e.g., end of life). Furthermore, "when there is a death or an illness [AADD staff] certainly talk to the clients about that, and take them to the funerals" (I1). Such activities helped prepare persons aging with DD for some of the more difficult challenges and transitions that accompany later-life.

AADD's Life Review project also helped convey the wishes of the Senior Hot Shots on video record. This ensured that if there ever came a time "when, due to whatever disability, dementia or whatever may happen" (I1) they were unable to share history, their goals, desires, and life story could still be communicated. This stressed the importance of respecting the identity and legacy of those aging with DD. It also "brings to the surface what life is about" (I4).

Importantly, conveying the unique goals of each Senior Hot Shots was also imperative when preparing older adults with DD for the challenges of aging. As stated by

I4, "it's so important to know the goals of the individuals and share them with other staff. Also, sharing the progress of the goals with their family members, with their residential staff, whomever they're in contact with" was essential in order to ensure that each individual maximized their potential to remain independent and successfully age in place. It was also important to note that just because an individual with DD acquired a skill in one particular area, it did not necessarily "mean that it's going to transfer to some other aspect of [their life]" (I5), rather it was a new opportunity for learning.

Another way in which AADD prepared older adults with DD for the challenges of aging was by encouraging "friendly competition" (I5) (e.g., when playing UNO, when fishing at the dock). The element of competition acts as "an ego boost [whereby] people feel good about themselves when they are doing something well" (I5). This in turn motivated them to continue to learn and promote their independence. Furthermore, I5 stated that everybody was a "lifelong teacher . . . every activity that a person does, every interaction that we have is an opportunity for the person to learn" (I5). Thus, there were always possibilities for personal growth and development. Fun and friendly competition was one way that AADD helped those aging with DD achieve this.

Sub-question 3: What does one need to know in order to help older adults with DD successfully age in place? Interview questions 1, 8, and 9 were aligned with research sub-question 3.

Interview Question 1: What does one need to know in order to help older adults with DD live independently and successfully age in place? According to I1 and I4, recognizing that all people were unique, regardless of whether or not a DD existed, was

an important concept for people to understand in order to help older adults with DD promote independence and successfully age in place. As stated by one interviewee

> you have got to know [a person's] life story, what kinds of supports have or have not surrounded them throughout their life. Have they spent any time in an institution or have they been predominately community based? Do they have any comorbid conditions like a depression? . . . What's a motivator? (I1)

This was further broken down into recognizing individual goals and objectives of the person aging with DD. According to this particular interviewee, understanding a person's worldview and experiences helped to promote independence and successful aging. Such understanding also transcended into developing appropriate learning objectives and strategies used to help tackle the myriad age-related challenges and transitions faced by those aging with DD.

These ideas were further supported by I4, who stated that one needs "to know the participants. They need to know the clients. They need to know the goals and objective of the person they are working with". This interviewee also reiterated the importance of individualizing the services provided to persons aging with DD by stating that AADD's programs and services for seniors were not "off-the-shelf . . . where everyone is going to receive the same type of service [rather, AADD staff] get to know each person on an individual basis and serve accordingly." This was also important given the myriad types of DD served. For example,

> One needs to know the spectrum of . . . DD . . . [and understand that if] you've only encountered someone with DS it's very very different to working with someone with Prader Willis disease or another kind of DD. (I1)

However, regardless of the specific DD diagnosis, people needed to remember that "Just because a person has a particular diagnosis or a particular label . . . [it] simply makes [them] human" (I5). This related to another important concept, respect. Each interviewee (5/5) discussed the importance of treating older adults with DD as equals. As stated by I2, "they want to be treated just like anyone else . . . they have dreams and a lot of times those dreams are squashed because people discount them." This was further expounded upon by I3, who stated that

> It's that humanness that you support another person whether they have a DD or not with respect, and that you are not looking down at them and you are not looking up at them. You're on an even line, and you reach out and you give them a hand . . . and expect the same back. (I3)

In addition, attitudes with regard to respect, greatly impacted the ways in which persons aging with DD learned to address their age-related challenges and successfully age in place. "When that respect component is missed, the behavior you are going to get back from the person that you are supporting, based on their [past] experiences . . . will be different" (I3). Thus, those caring for or providing services to older adults with DD must be cognizant about the fact that attitudes do influence the behavior of those they support.

As stated by I2, some people did not believe that persons aging with DD "could possibly achieve things [yet] I've seen people with DD achieve tremendous things [with] encouragement and support . . . they are very good listeners and . . . they want to know what you want to teach them." Thus, the ability to learn and successfully age in place was fostered by learning environments that provided encouragement as opposed to those that failed to believe that persons with DD had the capacity to learn and promote their

independence as they age. This therefore reinforced the importance of treating people aging with DD "with dignity and respect . . . and to meet people where they are . . . It's not about what we want for the person. It is about what they want for themselves" (I5)

Question 8: Are there any ways in which AADD's programs and services do not prepare older adults with DD for the challenges of aging? Four out of five interviewees had several suggestions regarding emerging needs at AADD or in the aging with DD field in general. Recommendations for future preparation programs for those aging with DD included (a) death and dying issues and (b) medical and/or long-term care preparation initiatives (I1). Interviewee 1 also stated that possible emerging issues in the aging with DD field requiring greater attention included "human sexuality . . . equipment needs (e.g., lifeline or tracking devices) . . . yoga . . . and a Cardinals Reminiscence League, like the Alzheimer's Association."

Two out of five interviewees (I2 and I3) raised concern about the growing need for CNA training (or something similar) for those older adults with DD who were having to care for elderly parents and/ or other relatives. According to I3, AADD had "a reverse caregiving model going on now whereby you have the person with DD providing care for mamma or sister." This issue is exacerbated by the fact that

> Parents that are really involved [believe] that they are always going to take care of their child and they don't think about their own death [and] . . . some of our guys aren't prepared for their parents to die, because they've always been there. (I3)

Thus, AADD staff had to teach older adults with DD about the possibility that their parents and/or siblings may need to go into hospital or a nursing home. They also had to prepare the Senior Hot Shots for the possible death of family members or friends.

The need for medical knowledge also extended to the healthcare and service professionals working in the DD field. According to I3, “Anytime I see a resume that comes across and it says CNA and then has a background in the DD field, I’m looking for that person” as they have both the medical and DD knowledge and experience. According to this particular interviewee, the need for medical knowledge and expertise with relation to those aging with DD would only continue to increase as more persons with DD reach later-life. However, the need for medical knowledge must not discount the importance of rapport building between healthcare and service professionals and those aging with DD. Building trusting relationships was also essential for those wishing to work with those aging with DD. For example, “If we have a client whose brother was murdered . . . that is not something that is necessarily going to come out in the first five times you meet with that client” (I3). Therefore, a combination of sound medical knowledge, an awareness of DD, and strong social and rapport building skills were desired characteristics for those supporting older adults with DD.

Interviewees also mentioned factors that may hinder the ability of AADD’s programs and staff to maximize opportunities for learning. For example, AADD staff only “get a small glimpse into people’s lives . . So sometimes, there are things that are occurring and if the person does not tell us or chose to share them with us, we have no idea” (I5). As a result, staff at AADD could not be as proactive as they would like, due to the limited time they spent with each Senior Hot Shot. Interviewee 5 also stated that sometimes the Senior Hot Shots failed to “address needs in a timely manner . . . [and staff at AADD can only] encourage them, support them, and teach them and hope they’ll

follow through" Thus, there may be instances when the Senior Hot Shot themselves or their family members may ignore a recommendation or concern raised by staff at AADD.

Despite these limitations, however, I4 stated that he did not believe there were any gaps or lapses in AADD's programs and services for seniors. He mainly attributed this to the fact that AADD's programs and services were flexible, whereby

> If one program is not working, we will change it . . . It's not about us, it's about the people that you serve. We do listen to outside sources. We do listen to the parents of the people that we serve and/ or the guardians of the people that we serve. And we have developed programs according to that. As long as it's meeting the needs of the participants, then we will provide the service. (I4)

This suggested that in order for organizations to adequately address the unique learning needs of those aging with DD, they must be fluid enough to meet the evolving needs of those they serve.

Question 9: Do you have any other comments? Four out of five interviewees made additional comments. Interviewee 1, highlighted additional educational needs in the aging with DD field, particularly a need for "a formalized speakers bureau [led by AADDD] because they really are the experts in our region . . . a one-stop-shop . . . a consortium of agencies . . . [and a] center for excellence" (I1) in aging with DD. Interviewees also identified healthcare needs, including adequate "dental care" (I3) and "public policy" (I1) practices for those working with the aging with DD population.

According to I1, there should be "standardized mandatory training" for those working in healthcare (e.g., hospitals, retirement communities) and service (e.g., aging services) settings regarding the needs of those aging with DD. Therefore, there was

growing demand for high quality aging with DD programs and services "the more you do and the more successful you are at it, people . . . want you to do more" (I4), as well as a need for adequately trained healthcare and service providers who were able to identify the unique learning needs of those aging with DD. Importantly, as stated by I2, society as a whole needed to recognize that people aging with DD were capable of learning, they were capable of living independently, they wanted - and worked hard to gain - respect, they wanted to be treated as equals and above all, they should never be underestimated.

Observation Results

Four observations were conducted at AADD's Senior Hot Shots Retirement Support Groups. Two observations took place at local senior centers. The other two observations took place at a local fishing dock at a local wildlife reservation. The andragogy checklist (Appendix B) was used to record behaviors of AADD staff and Senior Hot Shots during each observation. Knowles's (1973, 1995) andragogy process elements and evidence of application with developmentally disabled older adult learners were as follows:

1. Preparing the learner – learners have the opportunity to gain insight as to what to expect from the learning experience. AADD staff verbally outlined the schedule for the day. They also introduced all new members (staff and Senior Hot Shots) to the group. Senior Hot Shots discussed the activities they wished to participate in while at the activity center or at the fishing lake.

Activity centers. Staff at the activity centers gave a verbal overview of the learning objectives for the day. For example, they talked about spending the first hour of the group catching up with one another and discussing recent events, followed by a

special visit by a St. Louis Ballet dancer who was to host a ballet exercise class. Staff also discussed lunch plans and activities (e.g., Bingo, UNO, and Bunco) that were scheduled for later in the afternoon.

Fishing field trips. AADD staff discussed the type of fish that might be caught in the lake, as well as the various types of bait that could be used to catch the fish. In addition, AADD staff continually reiterated the importance of safety while fishing. For example, staying hydrated, keeping out of the water, and keeping in the shade.

It is important to note that the majority of the Senior Hot Shots participated in the support groups for many years, so they maneuvered around the activity centers and fishing docks with ease. They were autonomous in organizing themselves for the activities ahead. For example, while fishing, the Senior Hot Shots gathered chairs, drinks, rods, bait, and a place to sit on the dock to fish.

2. Establishing a climate conducive to learning – the learning environment is conductive to learning both psychologically and physically. The environment was relaxed, fun, trusting collaborative, mutually respectful, informal, warm, supportive, authentic, and safe for older adult learners with developmental disabilities (DD)? Each of the learning environments observed were conducive to senior activities. Areas were wheel-chair accessible, well-lit, senior friendly, and safe. The atmosphere among AADD staff and the Senior Hot Shots was warm, supportive, and friendly. Each of the AADD staff members appeared to know each of the Senior Hot Shots extremely well, with many of the staff having worked with the group for a number of years. The staff and Senior Hot Shots created a fun and relaxed climate during the support group. They laughed (extensively), joked around, and had fun. The atmospheres during the observations were

authentic, informal, and real. They used a lot of humor and sarcasm. They interacted with one another and demonstrated true friendships.

Activity centers. The Senior Hot Shots appeared to have very supportive relationships. Many have been close friends for a number of years. For example, two Senior Hot Shots discussed how they have been long time friends for 43 years.

During the support group, many of the Senior Hot Shots talked about the numerous activities they had participated in together over the years. Two participants recalled the horse camps in the 70s, bowling, arts and crafts, a love of animals, and employment opportunities they had participated in together. They shared photographs and reminisced about the good times. Other Senior Hot Shots talked about other hobbies and activities they enjoyed participating in with peers, including painting, crocheting, fishing, and supporting the Cardinals baseball team.

Throughout the support groups, the Senior Hot Shots discussed various topics including weekend activities, family business, medical issues, the news, and fun outings planned they had planned with one another. The Senior Hot Shots were genuinely concerned about the well-being of their fellow peers. They demonstrated the importance of strong social supports and friendships – one member talked about how her friend in the group had supported her through several losses (including family members and friends), as well as through surgeries, and most recently the aging process.

AADD staff and Senior Hot Shots shared hot and nutritious meals at lunchtime. It was during this time that the groups talked about matters that were important to them. For example, health, nutrition, schedules for the week, and recent events. They also shared snacks and health advice with one another. On several occasions, a couple of the Senior

Hot Shots informed the group about the health benefits of drinking green tea versus drinking soda and other beverages. Particular attention was paid to the low sugar content in the green tea drink, as opposed to other beverages. One Senior Hot Shot also informed the group that two grocery stores (Schnucks and Shop & Save) had fantastic deals (10 for $10 offers) on tea beverages, thus saving nearly $3 per bottle; thus, demonstrating that healthy eating and drinking could be feasible for those on a limited income.

The Senior Hot Shots talked openly about themselves and their lives. Discussions about family members, pets, and hobbies continually dominated conversations. They also talked about their plans for the evening or week ahead. In one instance, a Senior Hot Shot stated that she was heading to school after the fishing trip to learn about money management, housekeeping, and exercise; while another was heading to choir practice.

When a Senior Hot Shot needed any form of assistance with an activity of daily living (ADL), such as assistance toileting, an AADD staff member was always available to help. Staff were always available to offer support and guidance when needed. However, they did not dictate or stand over the Senior Hot Shots during the learning activities.

Fishing field trips. The private lake AADD reserved for Senior Hot Shots support groups had its own dock, with railings, and a roof providing shelter from the sun, wind, rain, and other elements. It also had its own restrooms, and was handicap accessible. Chairs were provided for those wanting to sit and fish. AADD staff provided food (sandwiches), beverages (soda, Gatorade, and water) for the Hot Shots.

One participant, when learning that the PI was from out of town, recalled favorite famous bands e.g., “The Beatles and The Monkees.” This Senior Hot Shot recalled lines

from movies and songs pertaining to the Beetles and the Monkeys. Importantly, the Senior Hot Shots continued to fish whilst engaging in discussions. The whole group also started singing a famous Monkeys' tune, demonstrating excellent recall and memory. Another Senior Hot Shot, who was a member of a church choir, sang a lovely song on the deck. Peers and staff members clapped the singer and praised him for his wonderful voice.

In a different discussion, a Senior Hot Shot member talked about the night before and the Cardinals win over the Milwaukee Giants. The Senior Hot Shots attended the St. Louis Cardinals baseball game at Busch Stadium the previous evening. The group discussed the outing, and one participant recalled the score from the game – Cardinals 2, Milwaukee Brewers 0, as well as Adam Wainwright's no-hitter and game shutout against the Brewers. The Senior Hot Shots reminisced about the game and other games in history. Such activities helped foster the positive learning environment and supportive culture among the Senior Hot Shots.

During both fishing observations, the climate on the dock was fun and relaxed. People laughed, interacted with one another, and the group cheered and celebrated when someone caught a large fish. During one observation, the group celebrated the 59th birthday of a new Senior Hot Shot member. They sang Happy Birthday and shared a birthday cake. The group also shared a healthy lunch while on the dock. Meals included sandwiches, chips, vegetables, and fruit. AADD staff members and Senior Hot Shots prepared their own sandwiches; however, if someone needed assistance, staff or a fellow Senior Hot Shot would step in to help (i.e., when carrying the meal to the table).

3. Creating a mechanism for mutual planning - learning objectives are mutually agreed upon by persons aging with DD and the Association on Aging with Developmental Disabilities (AADD) staff. During each observation, AADD staff talked to the Senior Hot Shots about their learning objectives for the day; for example, by asking what activities the Senior Hot Shots wanted to participate in while at the activity centers(e.g., exercising or Bingo) and what types of fish they hoped to catch on the dock (e.g., Bass, Blue Gill or Catfish). This form of enquiry was conducted both as a group and individually.

Activity centers. When AADD staff asked the Senior Hot Shots whether or not they wanted to participate in the group exercise classes, all said, "yes." AADD staff encouraged the Senior Hot Shots to modify the exercises to fit their own needs and physical capabilities. The Senior Hot Shots also helped one another adapt the moves to suit their own needs. For example, they would give advice about how to modify a leg lift by only lifting it so far or using a chair for support when balance was an issue.

AADD staff also worked with the Senior Hot Shots one-on-one to plan their schedules for the upcoming week. For example, they scheduled doctor's appointments, visits the grocery store, and date nights. They also scheduled transportation services in order for the Senior Hot Shots to achieve their objectives.

Fishing field trips. While fishing on the dock, AADD staff asked the Senior Hot Shots what their goals were for the day. For some, it was touching a catfish, for others it was beating their score from the day before. One Senior Hot Shot stated that he wanted to beat his record from the previous day by catching over 22 fish.

Competition was a huge motivator on the fishing dock. AADD staff and senior Hot Shots recorded the number of fish each person caught in a tally chart. AADD staff and Senior Hot Shots also took photographs of one another when a fish was caught. They all celebrated one another's accomplishments by cheering and clapping.

4. Involving learners in diagnosing their learning needs – learners and AADD staff work together to identify learning needs. The learning needs of the Senior Hot Shots were evidently unique. AADD staff discussed general learning needs with the entire group (e.g., healthy eating) and more specific learning needs on an individual basis (e.g., diabetic diets) with each Senior Hot Shot.

Activity centers. When participating in the ballet class, the Senior Hot Shots only did the moves they were physically able to complete. This way, all were able to participate, regardless of the level of potential physical or psychological impairment. In addition, during Bingo, Senior Hot Shots determined how many Bingo boards they would play with. For some, one board was plenty, others were able to keep track of three boards at one time.

Fishing field trips. For new Senior Hot Shots, learning the basics of fishing was essential. During the observations, there were two new members to the fishing group. For the new fishermen, learning about safety on the dock and how to hook bait, and cast a line were the main objectives. For the veteran fishermen, achieving personal bests in terms of the number of fish caught was the primary learning objective. In order to do so, using years of fishing experience (e.g., switching baits and position on the dock) helped them achieve this goal.

5. Involving learners in forming their learning objectives that will satisfy their learning needs – objectives are mutually negotiated by learners and AADD staff. Schedules were flexible at AADD, and participation was dependent upon the Senior Hot Shots desire to participate in any given activity. If they wanted to fish, they went fishing. However, if they wanted to just sit and observe the wildlife, they did that instead.

Activity centers. Several Senior Hot Shots told AADD staff they wanted to try out a new activity center (one with less high volume activity). AADD staff honored their wish, and, during the fourth observation, the PI visited a sub-support group at a new location. The group consisted of females who were keen to participate in exercise classes and Bingo games at the activity center. The new center also provided them with "a quieter learning environment" (AADD staff), as it was easier to hold conversations and discussions.

Fishing field trips. Several of the Senior Hot Shots were scheduled to fish at Busch Wildlife on Thursday and Friday one week; however, due to the scorching hot temperatures, the group decided to play pool indoors instead. AADD staff accommodated this request by cancelling the fishing trip and organizing a game of pool at a sports bar instead. While fishing on the dock, Senior Hot Shots determined where they sat to fish, what types of bait they used, and where they wanted to cast the line. Thus, they worked with AADD staff to set their learning objectives.

6. Involving learners in designing a pattern of learning experiences – learners and AADD staff develop learning strategies, projects, etc. Group learning activities were prevalent during the observations; however, when necessary, one-on-one learning was initiated.

Activity centers. Individual learning need were assessed and addressed. For example, when a Senior Hot Shot needed more information on diabetes, AADD staff stepped in to address the issue by researching the appropriate health information on their phones. Fellow Senior Hot Shots also contributed to the discussion by offering advice on exercise tips and the need to reduce sugar intake by eating healthier foods.

While playing Bingo, the Senior Hot Shots told one another about the different Bingo games. Sometimes, the traditional Bingo line was the object of the game; however, in other instances, the pattern changed. For example, the Bingo caller would ask for the flag, top hat, or home plate to be assembled on the Bingo sheet. In each game of Bingo, the participants had to adjust their tactics in order to play the game and win. This game helped promote memory and cognition. The Senior Hot Shots also helped educate the PI about the game requirements, as she was unfamiliar with the more complex rules of Bingo.

As another example, during exercise classes, the Senior Hot Shots modified the exercises to suit their individual levels of functioning. For example, one Senior Hot Shot participated from her wheel chair, while another only lifted her feet slightly off the floor due to a physical limitation. In each example, the Senior Hot Shots developed learning strategies that suited their needs and accommodated their unique capabilities.

Fishing field trips. AADD staff and Senior Hot Shots collaborated continually throughout the fishing experience. They watched out for one another in terms of safety on the dock. AADD staff did not dictate or overwhelm the Senior Hot Shots, rather the group shared information and fishing tips collaboratively. They learned how to cast lines,

attach bait, and reel the fish in, from one another. The Senior Hot Shots and AADD staff discussed ways in which they could improve their fishing skills.

7. Helping learners conduct these learning experiences with suitable techniques and materials – how are learning needs addressed, what learning strategies are used by learners and AADD staff? Group activities helped facilitate many of the learning exercises at AADD. However, when necessary, individual learning strategies were utilized. AADD staff provided the Senior Hot Shots with the tools necessary for success.

Activity centers. Orientation and memory were assessed via a driver's license exercise. AADD staff and Senior Hot Shots passed around their driver's licenses. This technique was beneficial for several reasons (a) the group had to work together to pass the licenses around and identify the people in the photos, (b) the task reinforced the importance of having an ID on hand at all times, and (c) information was reviewed to make sure it was correct and up to date (e.g., addresses etc.).

The group also continually reiterated the importance of being kind and respectful to one another and helping people out, thus promoting positive relationships. In addition, during lunchtimes AADD staff reiterated the importance of health and safety. For example, remembering to chop food into smaller pieces to avoid choking, and eating a balanced diet. AADD staff and Senior Hot Shots helped assist those who were unable to chop their food independently or open containers due to physical limitations. Modeling and hands on learning activities were frequently utilized at AADD to help facilitate such learning experiences. Also, the importance of having fun was strongly reiterated throughout the learning experiences.

Fishing field trips. Safety was a top priority on the dock, especially when fishing at the water's edge. AADD staff continually reiterated the importance of keeping the floating dock balanced. AADD staff were always attentive as to where the Senior Hot Shots were, and they provided assistance when necessary; for example, when going up the hill to take bathroom breaks and helping them reel in the big catches of the day (e.g., Bass). AADD staff and Senior Hot Shots also discussed tornado safety during each of the support groups. This was a concern in the St. Louis area; therefore, the group discussed where to go, should one strike.

The entire group provided encouragement to one another throughout the observations. AADD staff offered guidance (nudges) when necessary, as opposed to strict instructions. For example, instead of dictating which bait Senior Hot Shots should use, they asked have you tried using pepperoni, as opposed to worms?

AADD also staff worked with the Senior Hot Shots to help prepare the lines for fishing. They worked together to reel the lines in when they had caught a fish. When reeling in small fish, the majority of the Senior Hot Shots were able to reel them in alone. However, when the lines got caught on seaweed (called Raccoons Tail) staff members helped untangle them.

AADD staff and Senior Hot Shots worked together in pairs and in groups. Senior Hot Shots gave advice to one another about the types of bait they were using. They also discussed which bait the fish seemed to prefer. As a group, they also talked about the direction the lines should be cast in order to catch more fish.

AADD staff recalled that much of what they did was talked about in sporting terms. For example, "I caught 4-2 bass," and lunch is referred to as "half-time." This

made the learning experience fun for the Senior Hot Shots. They were also able to relate to the learning experience when talked about in familiar ‘sporting’ language. In addition, AADD staff used different strategies to help maximize learning opportunities. One staff member conversed with the group about the Canada geese being Canada Geese as opposed to Canadian Geese (even if multiple). This was a subtle way of educating the group about the wildlife they were exposed to. This also prompted further discussion about the different types of birds and geese (e.g., snow geese) the Senior Hot Shots had experience with, or knowledge of.

8. Involving learners in evaluating their learning outcomes and re-diagnosing learning needs – Self-assessment, assessment by caregivers, AADD staff, and other healthcare professionals. The Senior Hot Shots typically evaluated their own progress. However, they also celebrated their own achievements, as well as those of their peers and AADD staff collaboratively. The groups continually praised, cheered, and encouraged one another to succeed.

Activity centers. The Senior Hot Shot continually praised one another during the support group. When participating in the ballet class, they clapped one another for doing a “good job.” During Bingo, they also cheered when a fellow peer won. They encouraged one another continually throughout the meeting. They helped one another achieve their learning objectives, and they gave one another advice on how to improve performance.

Fishing field trips. The competition factor was influential during the fishing trips. Senior Hot Shots were trying to catch as many fish as possible. They recapped on their progress from previous fishing outings. For example, during one observation they caught 45 fish, with one member catching over 20 alone. One Senior Hot Shot touched a fish for

the first time; that was a huge personal accomplishment. However, during the same trip, several Senior Hot Shots were frustrated that they had had "slow day" on the dock.

Knowles's (1973) six assumptions of adult learners and evidence of application with developmentally disabled older adult learners were as follows:

1. Need to know reason for learning something – reason that makes sense to the learner (e.g., maintaining independence). Many of the activities conducted at the Senior Hot Shot support groups reiterated the importance of safety. Whether it was about eating right, safety on the dock, assessing mobility by performing stretches and exercise sessions, assessing cognition and memory by asking orientation questions (e.g., the date) or staff noticing if a Senior Hot Shot seemed a little unlike their usual selves, safety and health promotion was continually reinforced. Such elements were essential for maintaining independence and safety in the community while aging in place.

Activity centers. AADD staff continually reiterated the importance of staying fit and healthy in later life. The exercise classes held at the activity centers helped enhance fitness, flexibility, strength, and balance. Such skills helped promote independence and overall well-being for the seniors who were aging in place. These skills helped to not only improve strength balance, but also reduce fall risk.

Fishing field trips. Fishing is a skill that requires learning and mastering techniques. Such skills are transferable to everyday living. For example, being nimble to handle bait and having the strength and coordination to cast out lines and reel them back in, were all skills that transferred to everyday activities of daily living. For example, being nimble enough to perform ADLs (e.g., button up clothes) and being able to chop and prepare food were essential for everyday life. In addition, practicing balance and

being safe outdoors by watching out for snakes and other harmful wildlife (i.e., snapping turtles) were also topics of discussion throughout the learning experience.

2. Concept of learner – increasing self-directedness and independent learning opportunities. The Senior Hot Shots were enthusiastic to learn about how they could improve their health and maintain their functional status and independence as they aged. For example, by eating right, exercising, promoting safety, and staying active in the community. The Senior Hot Shots were a highly active group, each with various needs and desires. They had autonomy about which activities they participated in and how they wanted to spend their time while at AADD.

Fishing field trips. The Senior Hot Shots took ownership of their “fishermen” identities. The Senior Hot Shots worked diligently preparing their lines. One participant chose not to fish, but instead she chose to draw the landscape. This participant engaged with the group – joking, engaging in discussions about the day, health and wellness, life, while drawing pictures of the dock, lake, fields, and grasses.

While on the dock, newer Senior Hot Shots observed staff and their fellow peers set up for the fishing day. They observed how the fishing lines were put together, how bait was attached to the rods, and how lines were cast into the lake. Once the majority of the group were set up, the newer members then began to assemble their own rods, mimicking what they had learned from their peers. The PI observed a sense of accomplishment in their relaxed and happy demeanors, as well as their happy expressions. Fellow peers (including AADD staff) praised the efforts of all the Senior Hot Shots as they independently mastered fishing techniques.

3. Learner's experience – rich resources for learning by self and from each other (transference of vocational skills to retirement). The Senior Hot Shots had strong social support systems. Many talked about how they worked together for several years before joining AADD's programs for seniors. Many Senior Hot Shots also discussed how they developed new friendships as a result of attending a variety of AADD's programs.

The Senior Hot Shots relied on one another to help remember things. For example, selecting which baits to use while fishing. They also encouraged one another to get involved and remain active (e.g., when participating in the exercise and ballet class at the activity center). One Senior Hot Shot said that after many of her family members passed away, she was lonely and bored, so she joined many of AADD's activities and programs to get involved and stay busy.

Activity centers. The Senior Hot Shots helped one another when they saw that someone was having difficulty. For example, during the ballet class, one Senior Hot Shot could not do a particular move correctly. A fellow Senior Hot Shot showed her how to do it by breaking it down into simple steps and showing her how it was done and how it could be modified.

Fishing field trips. The Senior Hot Shots used their existing knowledge of fishing to prepare the fishing lines with bait, reel in the catch, and then release the fish once caught. The Senior Hot Shots switched baits when they realized that the fish were not biting. This was something many of them had learned to do through experiences fishing.

4. Readiness to learn – develops from life tasks and problems (age-related challenges). The Senior Hot Shots were very eager to learn. They were enthusiastic and engaged in the learning experiences.

Activity centers. One member had been working on her functional abilities and had recently overcome a wheel chair limitation – being unable to unlock the door without falling out of her wheel chair. This particular Senior Hot Shot participated in many exercise classes at AADD and the local YMCA (including pool exercises) to help enhance her functional abilities. AADD staff said that her physical and functional health significantly improved over the previous few years. Such progress not only improved functional status, but also psychological well-being in terms of promoting self-esteem, and a positive attitude.

Fishing field trips. The Senior Hot Shots inquired about the types of fish they were catching. AADD staff educated the Senior Hot Shots about the different fish species. One Senior Hot Shot touched a fish, despite having reservations previously. This was achieved after two AADD staff members modeled how to hold and touch a fish. This exemplified how people could overcome their fears.

AADD staff and Senior Hot Shots continually discussed health and wellness at lunchtimes at both the fishing dock and activity centers. For example, nutritional ingredients, the importance of keeping hydrated. This helped the Senior Hot Shots manage their diets and age-related health challenges as they strived to maintain their independence.

5. Orientation to learning – immediate application of learning – promoting independence. The skills learned on the dock were transferable to activities performed at home, in the community. For example, wearing sun block and staying out of the sun was vital for physical health. Getting fresh air helped psychological, as well as physical well-

being. The tornado discussion was important. The Senior Hot Shots knew what to do and where to go in case of emergency, regardless of location, when a tornado hits.

The St. Louis ballet dancer shared an abundance of health and exercise information with the group. She talked about the importance of stretching and warming up muscles. She also mentioned how important and good it is to work different muscles groups. She discussed the importance of good posture and staying active.

6. Motivation – internal rather than external motivation - desire to age in place and to remain healthy and happy. The Senior Hot Shots had unique learning needs. For example, some required greater help with ADLs and IADLs (e.g., help with grocery shopping, transportation, and visiting the doctor, etc.). The Senior Hot Shots were enthusiastic about staying active and involved in their community. They expressed a desire to do the things that all older adults do, regardless of level of disability.

Table 4.

Summary of Evidence of Knowles' Eight Process Elements of Andragogy with AADD Senior Hot Shots.

Knowles's Andragogy Process Elements	Evidence of application with developmentally disabled older adult learners
1. Preparing the learner – learners have the opportunity to gain insight as to what to expect from the learning experience.	-Staff verbally outlined the schedule for the day, participants discussed the activities they wished to participate in.
2. Establishing a climate conducive to learning – the learning environment is conductive to learning both psychologically and physically. The environment is relaxed, fun, trusting collaborative, mutually respectful, informal, warm, supportive, authentic, and safe for older adult learners with developmental disabilities (DD)	-Learning environments were wheel chair accessible, well-lit, senior friendly, and safe. -Atmosphere was very warm, supportive, friendly, fun and relaxed. Participants laughed (extensively), joked around, used humor and sarcasm, and played.
3. Creating a mechanism for mutual planning - learning objectives are mutually agreed upon by persons aging with DD and the Association on Aging with Developmental Disabilities (AADD) staff.	-Staff and seniors discussed (individually and as a group) what activities they wanted to participate in at the activity centers and what types of fish they hoped to catch at the dock -1:1 staff and seniors planned schedules for the upcoming week (e.g., doctor's appointments, visits the grocery store etc.). They also scheduled transportation services to achieve objectives.
4. Involving learners in diagnosing their learning needs – learners and AADD staff work together to identify learning needs.	-In the ballet class, seniors only did the moves they were physically able to complete. All participated regardless of level of physical or psychological disability.
5. Involving learners in forming their learning objectives that will satisfy their learning needs – objectives are mutually negotiated by learners and AADD staff.	-Schedules are flexible, seniors choose which activities they want to participate in.
6. Involving learners in designing a pattern of learning experiences – learners and AADD staff develop learning strategies, projects, etc.	-Group learning activities were prevalent; however, when necessary, 1:1 learning was initiated.
7. Helping learners conduct these learning experiences with suitable techniques and materials – how are learning needs addressed, what learning strategies are used by learners and AADD staff?	-Orientation and memory were assessed, promoting positive relationships, safety issues were addressed (e.g., tornado drills, food safety – choking hazards, safety on the dock).
8. Involving learners in evaluating their learning outcomes and re-diagnosing learning needs – Self-assessment, assessment by caregivers, AADD staff, and other healthcare professionals.	-The competition factor – to catch as many fish as possible, continual positive feedback and praise.

Table 5.

Summary of Evidence of Knowles' Six Assumptions of Adult Learners with AADD Senior Hot Shots

Knowles's six assumptions of adult learners	Evidence of application with developmentally disabled older adult learners
1. Need to know reason for learning something – reason that makes sense to the learner (e.g., maintaining independence)	-Safety and health promotion are key to aging in place (e.g., how to exercise, eat a balanced diet, remain safe in the community, while fishing etc.)
2. Concept of learner – increasing self-directedness and independent learning opportunities	-Seniors were enthusiastic to learn about how they could improve their health and maintain their independence, they were active and motivated to learn, they had unique goals, were autonomous decision makers, and took ownership of their "fishermen" and "ballet dancer" identities.
3. Learner's experience – rich resources for learning by self and from each other (transference of vocational skills to retirement)	-Rich social support systems (family and friends), many seniors had worked together for several years before joining AADD - these friendships transferred to the support groups and other AADD programs, lots of peer support.
4. Readiness to learn – develops from life tasks and problems (age-related challenges)	-Seniors were very eager to learn; one member has been working on her functional abilities and has recently overcome a wheel chair limitation (unable to unlock the door without falling out of her wheel chair). - Health was continually discussed (e.g., nutrition, healthy foods, and the importance of keeping hydrated).
5. Orientation to learning – immediate application of learning – promoting independence.	-Skills learned on the dock are transferable to activities performed at home and in the community (e.g., wearing sun block and staying out of the sun is vital for physical health), fresh air helps psychological and physical well-being, - Ballet dancer shared an abundance of health and exercise information (e.g., the importance of stretching and warming up muscle groups, good posture, staying active, and preventing falls).
6. Motivation – internal rather than external motivation - desire to age in place and to remain healthy and happy.	-Seniors have unique learning needs (e.g., some require greater help with ADLs and IADLs), Overall they were enthusiastic about staying active and involved in their communities, the desire to do the things that all older adults do, regardless of level of disability. -Friendly competition, humor, fun, collaboration, engagement, and sarcasm are huge motivating factors.

Competition, humor, and sarcasm were huge motivators for the Senior Hot Shots. Being able to laugh at yourself was also promoted among the group. Table 4 provides a summary of evidence of Knowles's (1973, 1995) eight process elements of andragogy with AADD Senior Hot Shots. Table 5 provides a summary of evidence of Knowles's (1973) six assumptions of adult learners with AADD Senior Hot Shots.

Focus Group Results

Each focus group was conducted at AADD's main office in St. Louis. The PI's chair facilitated the focus group sessions, while the PI took notes. The ED determined that the presence of the PI was necessary as the Sr. Hot Shots had become familiar with the PI and would feel more comfortable if the PI was present. Focus group sessions were audio recorded. Sixteen Senior Hot Shots with an average age of 63 participated in the focus group sessions. All of the Senior Hot Shots were enrolled in more than one AADD program (Table 6).

Table 6.

Enrollment in AADD Programs

AADD Program/ Service for Seniors	Number of Participants Enrolled
Senior Hot Shots Support Group	16
Challenges Unlimited	9
Social Clubs	11
Retirement Transitioning	9
Supportive Living	5
Final Game Plan	9

Note. The majority of the participants were enrolled in the Senior Hot Shots support groups as well as social clubs.

Five AADD staff also participated in the focus group sessions. The Senior Hot Shots had been enrolled in AADD's programs for 7.3 years, on average. Similarly, staff had been employed at AADD on average, for seven years.

Focus group question 1: What is the hardest part about growing old? Several Senior Hot Shots discussed the psychological challenges of growing old, particularly as they pertained to independence issues. For example, R8 stated that dealing with her brother was difficult because "he makes decisions" regarding her living arrangements; thus, affecting the senior's sense of autonomy and independence. Another Senior Hot Shot, R5, stated, "It scares me that she [her sister] gets old and has a dog," thus alluding to the fact that there were additional challenges and stressors that developed with age. Respondent 5 stated, "We try to handle it together. I take care of the dog and her," providing evidence that the Senior Hot Host was also a caregiver, which further compounded the aging process. However, despite the increased responsibility, R5 commented on the positive aspects of aging and caregiving, stating, "My sister gave me a hug today"; thus, proving evidence of the rewards of caregiving. Another Senior Hot Shot, R16, stated, "doing nothing [and] being bored" were the most challenging aspects about growing old.

In addition to psychological issues, several Senior Hot Shots commented on the physical challenges that accompanied the aging process. For Example, R1 stated that "health issues" were the most difficult part about growing old. Respondent 2 further supported this by referring to the loss of teeth and having to "wear dentures" as being a difficult part of the aging process. Furthermore, R10, and similarly, R19, stated, "aches

and pains" and "joint trouble" were the hardest part about growing old. For R18 "managing weight" was the hardest part about growing old.

More specifically, for R17, whose "hip hurts" and R11, who reported that "pain in [the] hip, [and having] difficulty with mobility" were the greatest challenges of aging, further attested to the psychical challenges of aging. Furthermore, as stated by R12, as you age, you "cannot do the things like you used to [for example] running, playing softball"; thus, implying that having "a new hip" limits one's ability to remain engaged in favorable physical activity and sports. Furthermore, R5 reiterated the importance of maintaining independence by stating that the hardest part about growing old was "not being able to do [the] things you want to do" (e.g., walking without assistance).

Some Senior Hot Shots also encountered physical challenges when caring for other family members. For example, R13 discussed how her "oldest sister can't do very much at all." Respondent 13 also noted that she "can do anything, bowing walking [etc.], but it is hard to watch her [sister]." Furthermore, R13 discussed how she was modifying her schedule to accommodate the needs of her sister, "I'm now going to church to watch that she does not fall (she's 76)." In addition, R15 stated, "[I'm] taking care of mamma and me too. . . [it's] hard for me to breathe, [as] I'm on oxygen [I also have to] watch mum doesn't fall and watch that the] kids don't run out on the street." Thus, the challenges of aging extend beyond the Senior Hot Shots themselves, as they also impacted the health and well-being of their aging siblings and parents.

The challenges of tackling age-related changes for oneself and one's family were also discussed by those without DD, including AADD staff, the PI, and the PI's chair. Respondent 20 stated, "being responsible for everything and everybody around me

[providing] food, [and] shelter" was challenging. In addition, the PI's chair further expounded on this by stating, "having a mother who is 90 years old, and having children and grandchildren to take care of . . .it is a hard place to be." This attested to the increasing caregiving responsibilities faced by the Sandwich generation - those who care for their own children and grandchildren in addition to their aging parents.

In contrast, for those Senior Hot Shots who did not have siblings, the challenges could be quite different. Respondent 3 stated that with no brothers or sisters and with only having one cousin, it was difficult for them "trying to get wills made out and get ourselves going." Thus, legal issues that accompany the aging process as well as end of life planning, could be somewhat daunting, and thus a difficult challenge for those aging with DD.

Social losses also compound the aging process for those aging with DD. For R4, the "loss of [her] parents and brother" was the most difficult aging challenge. This was also true for R7, who stated, "having parents and grandparents die" was the hardest part about getting older. She further stated that "[the pain] doesn't go away for a long time." Furthermore, R7 stated that she saw her sister one or two times per year; however, she did not know her brothers, she stated that they "don't care about her," further attesting to the loss or difficulties older adults with DD face as they age. However, regardless of the numerous challenges discussed, one participant, R14, stated "I feel pretty good about myself. I do exercise, all kinds of activity, [and] I walk to church." This response demonstrated that regardless of the accumulation of losses and transition, it was possible to overcome the challenges of aging, and remain active in later-life. Another participant, R9, also stated that there were no challenges to report.

Focus group question 2: How do you keep active and healthy? Every participant (22 of 22) stated that they "exercise" in order to keep active and healthy. For example, R12 "exercise[s] every morning" and R10 noted that "exercise[ing] with AADD Sr. Hot Shots" was important to her overall health and well-being. The Senior Hot Shots also used buses and other public transportation services (e.g., metro) as their primary form of transportation. This helped them maintain their independence and active engagement in their communities. For example, R1 used the metro to go to the YMCA and R4 took "the bus all the time to pay bills."

Besides exercising regularly, R1 also stated that he walked a lot, as well as (according to his peers), maintained a good diabetic diet. This was the same for R14 and R2, who also watched their diabetes and made sure they eat healthy (with low sugar diets). Respondent 6 also adopted a healthy lifestyle by exercising a lot and taking "vitamins" in addition to "eat[ing] veggies and fruits." Respondent 14 also stated that she "just got a juicer," thus supporting the adoption of healthy diets and lifestyles. In addition, R7 stated that she "watch[es] food [doesn't] get over done." Thus, highlighting the important need to learn how to prepare and cook food properly in order to stay healthy. However, in contrast to the talk of watching diets, R5 stated that she "eats what she likes," thus suggesting that for some, eating foods that are enjoyable outweighs the need to eat healthy fruits and veggies.

The positive health benefits of adopting a healthy, active, nutritional lifestyle included the fact that R7 dropped from "140 to 120 lbs.," and R3 had "gone from 161 lbs. to 134 lbs." Respondent 3 would like to do more; however, she "is limited due to health issues." Nevertheless, she still "does lots of exercise," just like R5 who did "four miles at

the Y[MCA].” For those who did not get outside of the home as much, keeping busy in the vicinity of the home was an option. For example, R7 “keeps busy by [going] to certain places in the apartment building.”

For those with injuries, such as R3 who “got a bad ankle in softball . . . health issues restrict activity.” Therefore, it could be a challenge to stay active. However, despite physical limitations, “exercise helps not having to use a cane.” This suggested that keeping active, within one’s physical and functional limits, was necessary in order to promote active aging and health, with age.

In addition to exercise and maintaining a healthy diet, the Senior Hot Shots also discussed the importance of hobbies and of varying interests, in relation to maintaining active lifestyles as they age. For example, R3 stated that she had “lots of hobbies . . . [including] crocheting [and] painting.” In addition, R5 went to the YMCA, for fun, whereas R6 took his “camera everywhere [and enjoys] taking pictures of people.” Respondent 9 enjoyed going “to different places.” Respondent 11 enjoyed “feed[ing the] birds and squirrels bread.” He also stated that he was “driving all the time,” however, he enjoyed “walk[ing] in the park,” although “sometimes [he] burn[s] in the sun and it’s too hot to be outside,” thus, demonstrating the importance of staying safe when participating in recreational activities as one ages.

Aside from hobbies specifically, the Senior Hot Shots also discussed the day-to-day activities that helped them keep active, primarily ADLs and IALDs. For example, 5 of 22 Senior Hot Shots did their “laundry” (R3; R9; R13; R14; R15), 3 of 22 stated that doing “housework” kept them active, others did multiple chores to help keep active, such as “R14 who “do[es the] laundry, cooking, [and] trash.” One Senior Hot Shot stated that

he, (R3) "do[es] housework and help[s his] wife." Thus, sharing the chores. Another participant (R13) stated that her "sister does all the cooking, I eat what she makes. [I do] the vacuuming, laundry, washing dishes (as she cooks)"; again, demonstrating that Senior Hot Shots balance the housekeeping responsibilities with others in order to maintain a healthy, active lifestyle, as well as promoting their independence and autonomy as they age.

For some Senior Hot Shots, the responsibilities extended beyond the household. For example, R15 discussed how she kept active,

> I take the trash out, [do the] laundry, make sure mum's OK. Go downstairs, exercise, see what we need, chase dog back up the stairs, play with the kids, help sister bring groceries in, make breakfast and make sure mom doesn't fall.

Thus, demonstrating the complexities of maintaining one's own health with age, while also making sure family members were taken care of.

For some Senior Hot Shots (2 of 16), residential staff helped with ADLs and IADLs. For example, R12 stated that "staff [at my residence] help out." This was similar to R16, who stated, "staff cook and do house work, [I stay healthy by] eat[ing], get[ing] medicines, [and] sleep," thus, identifying additional factors that were essential to overall well-being in later-life. Furthermore, for those who did still perform their ADLs and IADLs, when "tak[ing] the trash out [and] do[ing] laundry, [I] walk up and down the steps [but I] make sure I hold onto the handle/ banister" (R10). Thus, caution must be exercised when performing day-to-day activities.

The ways in which the Senior Hot Shots reported that they stayed healthy and active, corresponded with those without DD. Respondent 17 stated that she "eats lots of

fruits and veggies, avoids fast foods [and engages in regular] exercise" in order to promote her own health and well-being. The same was true for R18 who went "to the gym four days per week [does] cardio and weights [as well as] eating a low carb diet, veggies, lean protein, and some fruit." For others, physical exercise, such as "walk[ing] the dogs [and riding] horses" (R19) were activities that helped maintain an active lifestyle. For R20 going "to bed at 9 PM {and] get[ting] a good night's sleep" helped them stay active. In addition, "go[ing] to the country" were also ways in which respondents are able to promote physical and psychological well-being.

Focus group question 3: How do you stay safe living at home? This particular focus group question raised a variety of responses. Each response was categorized into (a) external forms of protection and alarms, (b) protection by family/friends/others, (c) adaptive behavior, or (d) special safety drills. Examples of each of the ways in which older adults with DD stayed safe living at home are outlined in the following sections.

External protection/ alarms. Initial responses to this question by the Senior Hot Shots focused on literal safety responses referring to physical sources of protection such as "lock[ing] the doors" (R3; R4), installing "ADT" (R3) or other security system "alarms" (R13; R14; R15). For others, using "a key card to get in to the building" (R1), and in the case of R8, having a "guard" where she lived in her gated community, help promote safety. In addition, R15 said she used a "bar door" and did not "open [the] door" to anybody she did not know. R18 stated she "locks doors [has] mace and hornet spray next to bed [as well as a] whistle on key chain" to help protect her. In addition she stressed the importance of staying "flexible as it helps you stay well balanced."

Furthermore, several Senior Hot Shots stated, “if [I] fall, [I’d] call 911” (R13; R14), [AADD] “staff” (R10; R12), or “someone” (R4). Respondent 9 stated, “I have a cell phone, and [I’d] call my sister to get help,” another Senior Hot Shot stated, “they [intruders] won’t mess with me.” Both R13 and R4 stated that they “use rails [and/or] bars” in their homes to ensure safety with mobility such home modifications can help aging in place, safely, by reducing fall risk and injuries. Respondent 12 further supported this by stating that he used a “cane [although, he wished he] didn't have to use it” to ensure safety at home.

Respondent 17 stressed the importance of “making sure everything is tidy and germ free.” Respondent 19 also urged caution against “wet floors in the house [as they are] slip hazards.” Each of these responses highlights precautionary measures that help ensure safety while living in the community.

Protection by family/ friends/ others. In addition to the above mentioned physical forms of safety and protection, several (5 of 16) Senior Hot Shots discussed the importance of family members and friends in helping them remain safe at home. For example, R15 stated that “family are close” and R14 stated that she was “safe with my two sisters.” Thus, attesting to the importance of social support and strong informal networks. Respondent 9 also stated that she would “call [her] sister to get help.” Siblings appeared to be valuable sources of support for the Senior Hot Shots, whose parents were likely to have already passed. Respondent 2 said that her “brothers” looked after her and helped out, along with the “puppy dogs,” again stressing the importance of family ties. However, when family was not close by to help, Senior Hot Shots turned to other forms of support. For example, R16 “call[s] for help when need[ed] . . . staff members have

keys [and] people inside the apartment watch out." Therefore, formal networks of support also enhanced the Senior Hot Shots' ability to remain safe at home.

Protection of family/ friends. In addition to being protected by family member and friends, several of the Senior Hot Shots (R12; R13; R15) stated that they watch out for their own family members. For example, R12 had "a girlfriend [and he] watch[ed] out for her," R15 had a responsibility to "make sure mom's safe," and R13 stated that she "protect[s] [her] sister too." Thus, protection of family and/or friends was reciprocal for those aging with DD.

Adaptive behavior. Several of the Senior Hot Shots also mentioned they modified their behaviors in order to promote safety. For example, R6 "does not open the doors to everyone" and carries a form of "protection" at all times, R9 "[does not] go out at nighttime." In order to ensure physical safety, R10 and 11 stated that they "hold onto banisters when getting up stairs." Furthermore, in order to offset the damages of driving, R11 stated that he did not "go [drive] on highways anymore"; thus, eliminating driving risk.

Respondent 1 also discussed the importance of home safety, by stating that she only used "a microwave," as opposed to cooking on the stove. Such adaptive behavior helped eliminate several safety risks (e.g., burns, leaving the gas on) in the kitchen. Respondent 20 also discussed how she "put grab bars in the shower [and] moved the bed close to the wall" in an effort to prevent falling. On the topic of falling, the PI's chair also stated that "to go fast, you've got to go slow to stay safe. When rushing, you fall." Therefore, being cautious when maneuvering about the home and community was identified as being essential for promoting safety and well-being when aging in place.

***Special safety drills*.** In addition to the above-mentioned safety practices, AADD staff stated that that the Senior Hot Shots "practice tornado drills" and other safety precautions. The group talked about using "fall cords . . . and practice[ing] balance" which helped with walking. They used commodes, bars in the bath tubs, and grab bars if they could not reach things. They talked about the fact that they "don't answer calls [and] they use voicemails." When asked by an AADD staff member what to do in case of an emergency, the Senior Hot Shots answered with a resounding call "911" (or kids as one Sr. Hot Shot put it). The group also responded to the PI's comment about checking sell-by dates on food, stating, "yes," they [the Sr. Hot Shots] did learn about that; further adding the scope of ways in with the Senior Hot Shots stay safe at home.

Focus group question 4: What is your favorite way to learn? Table 7 depicts the Senior Hot Shots' preferred learning methods.

Table 7.

Senior Hot Shots' Preferred Learning Methods

Method	Number of Participants
Hands-on	8
With somebody	1
Movie	1
Group	9 (1- listening to everybody else)
Individual (1:1)	1
Interactive	1
Reading	1

Note. Group (collaborative learning) followed by hands-on learning opportunities were the most popular to those aging with DD.

The majority of the Senior Hot Shots stated that they preferred to learn in groups (9 of 16) and via hands-on experiences (5 of 16). The information from Table 7 aligned with andragogical theory, stating that adults learned best in collaborative learning environments, whereby there was a reciprocal exchange of learning.

Focus group question 5: Which AADD programs do you enjoy most? The majority of the Senior Hot Shots stated that they were unable to list one single AADD program as their most favorite. Instead, several of the Senior Hot Shots named programs they found to be the most enjoyable (Table 8). In the majority of cases, those programs and services that were socially driven were favored by the Senior Hot Shots.

Table 8.

Senior Hot Shots' Preferred AADD Programs

AADD Program	Number of Participants
Senior Hot Shots	8
All	7
YMCA (R5) Not AADD directly – wheelchair bound individual who has gained increasing functional ability since being a part of AADD and YMCAs programs.	1
Challenges	6 (lots to do on the calendar)
Social Clubs	5
AADD Conference	2
Special Events (Christmas party, advocacy trips to Jefferson City, baseball games)	4
Small groups (1:1)	2

Note. The majority of the participants selected several, if not all of AADDs programs as their most favorite. The Senior Hot Shots support group was noted as being the most popular, individually. Activities that promoted socialization (e.g., dancing, trips out to the Baseball, the Christmas party) were well liked by the AADD participants.

Focus group question 6: Besides AADD, where else do you learn about aging? The majority of the Senior Hot Shots (7/16) stated that family and friends were a valuable aging resource (7/16). Their comments, outlined in Table 9, demonstrated the importance of family and friends in helping older adults with DD learn about the aging process and health and wellness concerns. Parents were pivotal figures in the Senior Hot Shots education about aging and health, especially concerning conditions such as “diabetes” (R10) and “cataracts” (R15). Four out of 16 Senior Hot Shots stated that “life experiences” helped them learn about the aging process, followed by healthcare professionals and physicians (3/16). A couple of the Senior Hot Shots discussed OASIS and their residential communities as aging education resources. These responses also corresponded with the PI, PI’s chair, and AADD staff’s answers who stated that friends and family were the main sources of aging information, followed by TV and books.

Focus group question 7: What other programs/services would help you? The Senior Hot Shots suggested a variety of ways in which additional learning needs could be met. General categories included (a) utilizing external programs/ agencies such as OASIS (R8), (b) obtaining greater assistance with health related topics such as “learning about what medications do to me” (R1) and information about “YMCA’s silver sneakers program [discount rates for senior]” (R11), as well as (c) getting additional support with day-to-day ADLS and IADS such as “support with cleaning” (R10).

Table 9.

Educational Aging Resources

External aging and/or DD organizations	**Friends/ Family**	**Life Experience**	**Healthcare Professionals**
St. Elizabeth's (where she lives) (R8)	AADD people [staff and participants], friendships, people you've worked with, medical terms I learned from my dad (R3).	Life experiences (R5)	Physicians (R3)
			Doctors, staff, therapists (physical therapy), Delmar gardens therapy, rehab, and Bethesda (R12)
OASIS (R1; R2)	Friends, that's how I got in here, my niece referred me to AADD (R9)	Reading (R6)	Doctors (eye exams), hip, gallbladder (R11)
	Mom, I'm also a diabetic. Mom had problems with her eyesight, now I go to the eye doctor (R10)	Jefferson City, advocating at the Capitol (with PARAQUAD) (R7)	
	AADD staff, parents and siblings (R11)	Exercise (R16)	
	From dad, he lost his leg, [that's the] first time he said 'take care of your leg' (R13)		
	Mom, took care of [her]sick mom, [she was on a] defibrillator (R14)		
	My dad, he had cataracts and mom (R15)		

During the discussion, R10 and R11 stated that their Life Skill lady was "not doing enough" to support them. AADD staff and fellow Senior Hot Shots urged the couple to speak up at an upcoming meeting with the Life Skills coordinators, regarding their needs. Respondent 2 also stated that "workshops [and more assistance with] life skills" would be beneficial.

Respondent 6 "[would like to see] bus stops closer [to residential areas] for handicapped people." He also hoped to take a trip to Jefferson City to advocate for better bus stop locations in the St. Louis area; thus, attesting to the importance of adequate public transportation services for those aging in place with DD. In addition, R3 "would like [to develop] new wills with a lawyer"; thus stressing a need for legal advice or counseling services.

Respondent 3 wanted "help for her and her cousin [to] make things easier" (e.g., Power of Attorney [POA]). Loss of family also appeared to be an area of need. Perhaps a grief counseling program for those aging with DD (the ED stated that she was currently working on developing a grief-counseling program).

Fall prevention, financial assistance, and supported living were additional areas of program development discussed by AADD staff and the Senior Hot Shots. The remaining Senior Hot Shots (R12; R13; R14; R15) stated they did not need additional assistance, as they have "nice staff . . . [and] lots of friends and support" (R13), as well as "case managers" (R14) to help them meet their evolving age-related learning needs.

The two focus groups sessions provided a wealth of information pertaining to the unique learning needs of those aging with DD, as well as insight into the

ways in which the educational needs of this population of older adults was continuing to evolve. The results of the focus group sessions, when used in collaboration with the additional data gathered from the interviews, observations, and questionnaires, may provide opportunities and recommendations for additional programs and services for this population of seniors.

Questionnaire Results

This section details the results obtained from the email questionnaire sent to all AADD staff. Questions one through four on the questionnaire pertained to demographic information. Eleven AADD staff members volunteered to participate in the email questionnaire. Table 10 depicts the job titles of those participating in the questionnaire, with the majority being retirement specialists (4 of 11) and support staff (4 of 11).

Table 10.

Job Titles of Questionnaire Participants

Job Title	Number
Retirement Specialist	4
Support Staff	4
Program Coordinator	1
Final Game Plan Coordinator	1
Administrative Assistant Clubs/ Direct Care Staff	1

Table 11 shows that the majority of the questionnaire participants facilitated AADD's Supported Living (4 of 11) and DMH (4 of 11) programs and services, with the majority (8 of 11) facilitating multiple programs. The average number of years participants were employed at AADD was 2.8 years, with the

average number of years participants had been working with and/or caring for older adults with DD being 14.9 years.

Table 11.

Programs and Services Facilitated by Questionnaire Participants

Programs and Services Facilitated by AADD Staff	Number
Retirement Support Group	3
Supported Living,	4
Transitional Retirement	3
DMH	4
Social Clubs	2
Challenges Unlimited	3
Final Game Plan	3
All	1

Questionnaire question 5: What age-related learning challenges do older adults with DD face? Participants reported myriad age-related learning challenges faced by older adults with DD. Challenges ranged from physical, such as "sensory impairments" (E6) and the fact that "Body movement[s] decrease [requiring] help to get around and take care of minor needs" (E5), to psychological challenges, such as "Remembering certain things" (E3). Like E6, E5 also stated that "Hearing and sight diminishes and that causes mistakes," further compounding the age-related challenges faced by older adults with DD. However, as stated by E9, "Individuals with DD really face the same challenges as those without DD such as: taking a longer time to complete the same tasks they have been doing all of their lives [and] forgetting how to do tasks." Each of these limitations (whether

physical and/or psychological) impacted on the ways in which older adults with DD tackled the challenges of later-life.

Despite these similarities, however, it is important to note that for those aging with DD, oftentimes, “declines in health and skills that accompany aging are dismissed as being part of the individual’s developmental disability” (E2). This could be detrimental to the health and well-being of older adults with DD. This stresses the importance of educating older adults with DD about the likely age-related challenges that they may experience. For example, E4 stated, “Learning about getting older, the new vocabulary that entails, and medical problems that arise that may not have been an issue before as well as routine medical tests that come with age” were important learning needs to be addressed by those working with older adults with DD. Furthermore, as stated by E11, “Remembering that their bodies are changing. They might start feeling stiff and sore [and] Also remembering everyday things as well” were also challenges that should be discussed with older adults with DD.

In addition to the physical and functional challenges faced by persons aging with DD, cognitive age-related challenges were also identified. For example, “Learning, understanding what’s good for them, managing money, [and] making decisions” (E1), were identified as areas needing to be addressed by service professionals. In addition, as “memory loss increases, [older adults with DD] are not able to hold on to information” (E5) which, according to E10, “[means] they do not always understand what is happening to them and why they need more help.” This was challenging for those older adults with DD who had

"been trying and learning to be independent for so long" (E10). Thus, as persons with DD age, "cognitive impairment [can cause] limitations in expressive communication" (E6), which leads to limitations in "Reading and writing, mobility issues, transportation availability, health and safety issues, [and] economic issues" (E8).

Besides the physical and psychological age-related challenges listed above, "finding an identity in the community after retirement" (E4) was also a challenge for those aging with DD. As stated by E7, "one of the biggest challenges older adults with DD face is an indifference within the 'system' as to their needs." As a result, "this is why AADD was created." This was further supported by E9, who asserted that

> There are not as many resources available to individuals with DD as they age as there are for the general population. Even if the persons with DD does hear about a resource they may not have the ability to read/understand how it pertains to them or transportation to access the resource.

Thus, suggesting that the age-related learning challenges faced by persons aging with DD pertain not only to themselves, but they also extend to the larger aging and DD service networks.

Questionnaire question 6: In what ways do you help elderly persons with DD learn to cope with the challenges of aging? Give examples. Engagement and support for persons learning to cope with the challenges of aging were thoroughly

documented by participants. For example, one staff member reiterated the importance of "constant engagement."

> At the end of the day, engaging the aging DD population is the only way to cope with these challenges of aging. Engaging in conversation and using teachable moments to work on socialization skills is incredibly important . . . By actively listening to these people and interacting with them based on that listening, we teach these people to be advocates for themselves. It also builds relationships. (E2)

This also attested to the importance of communication and empowerment of older adults with DD. AADD's programs and services helped achieve this "By giving them a voice [and] letting someone know that their opinions/concerns are valued [while also] empower[ing] people to use the skills they already have" (E7). In addition, service professionals must also "[support] people with being involved in their community and not withdrawing" (E4). This was further supported by E11 who stressed the importance of "encouraging walking and other exercises [as well as talking] to them [persons with DD] about aging and what to expect."

Employee 3 also reiterated the importance of individualizing the learning experience for each older adult with DD by "find[ing] ways that can help them learn. Help them find what methods work best for them. Such as pictures, games, verbal, or any methods they know." When cognition was a concern, E5 suggested one should "just explain to them it is OK [and] we all forget time to time." In addition, using memory techniques such as posting notes "where you would

notice them daily" (E5) were also recommended techniques to help combat some of the challenges of aging.

Due to the complex and highly individualized nature of the age-related leaning challenges faced by older adults with DD, AADD staff utilized a variety of techniques to help offset some of the challenges. For example, E4 had "assisted elderly people at doctor appointments and with financial situations whether budgeting money on a retirement salary or disability payments or preparing for end of life financial planning." Similarly, E9 (a) assisted in planning final wishes (e.g., advance directives and wills), (b) acted as a consultant in deciding if life-insurance or pre-paid burial plans would best serve their needs, (c) recorded their life on video detailing their capabilities and legacy, (d) ensured that each person in the program received a comprehensive geriatric assessment, followed by recommendations by a physician, and (e) assisted with follow-up on the recommendations. Each of these initiatives enabled AADD staff to help those aging with DD cope with the challenges of later-life.

Health promotion was a key element of the educational program at AADD (E1; E8; E10). As stated by E1, "teaching [older adults with DD] to stay young with healthy food choices, exercise with range of motion, balance and cardio [are] emphasized." Furthermore, "helping [older adults with DD] with their transportation" (E8), and "trying to explain to and show them . . . healthy relationships with both friends and significant others, help them attend appointments, and keeping their minds stimulated with games and "mental exercises" (E10) were also noted as effective learning strategies for use with this

population of older adults. In addition, as stated by E6 “being a good listener” was also imperative for those wanting to help older adults with cope with the challenges of aging.

Questionnaire question 7: How do you help older adults with DD learn to address their physical needs (i.e., ADLs and IADLs)? Employee 1 noted that “teach, advise, assist, and motivate” were the key elements in helping older adults with DD to learn to address their physical needs. This was further supported by E2, who stated that using “a lot of repetition and leading by example” were essential elements for helping older adults with DD address their physical needs.

> It’s all well and good to encourage our folks to walk everyday because ‘it’s easy.’ But what makes a greater impact is if we walk with those people so they understand that we will do everything we ask them to do. It’s avoiding the dreaded ‘Do as I say and not as I do’. (E2)

Thus, modeling behaviors and infusing older adults with advice pertaining to physical health and well-being were identified as effective means of helping older adults with DD address their age-related physical needs. For example, by “teaching and giving information and demonstrating how to care for their health” (E6) and “by educating them on the signs and symptoms of illnesses and encouraging/ assisting them in accessing medical care” (E7), healthcare and service professionals could help older adults with DD learn to address the challenges of aging.

Employee 3 reiterated the importance of effective communication when working with those aging with DD. This was supported by E4, who stated, “lots

of discussion about clean habits" was essential when helping older adults with DD successfully age in place. Furthermore, "it is sometimes difficult to know how to address the need for cleanliness. It needs to be handled discreetly with dignity for all involved" (E4). Such topics were sensitive and one must be cautious not to embarrass the older adult. As stated by E5, "you will need to have [a] conversation with them about their needs, and to assist them with things they can no longer manage." This was particularly important when covering issues pertaining to one's own health and independence (particularly ADLs and IADLs).

Due to the sensitive nature of some discussions, some AADD staff collaborated with other healthcare professionals in order to help older adults with DD meet their physical needs. For example, E9 "helps [older adults with DD] follow the recommendations of their geriatric assessment as far as doing exercises to improve strength, balance, fine motor skills, gross motor skills, endurance, [and] coordination etc." Employee 9 connected with a Supported Living team member in order to help each older adult meet their specific assessment needs and recommendations. Such collaboration helped to ensure that the older adult was getting required assistance. In addition, another staff member educated older adults with DD about things that can impact them physically and socially (perceptions of others) such as "hygiene, brushing teeth, bathing, proper nail care; and cleanliness" (E10). Thus, collaboration with multiple healthcare and service professionals was noted as being an effective method for helping older adults address their physical age-related learning needs.

Questionnaire question 8: How do you help older adults with DD learn to address their psychosocial needs? Good communication was noted as being essential for helping older adults with DD learn to address their psychosocial needs. As stated by E1, the key elements to promoting psycho social well-being were to “listen, advise, and motivate.” Facilitating relationships by presenting older adults with DD opportunities to form new friendships both at AADD and with people in the community was also noted as being an important way to help those aging with DD address the psychosocial challenges of aging. In addition, connecting older adults with DD to folks in the greater community also helped reduce the stigmas that exist about people with DD (E2).

Helping those aging with DD navigate the resources available to them was also essential when helping this population tackle the psychosocial challenges of aging. Furthermore, E10 stressed the importance of providing fun and novel learning opportunities (e.g., attending a book reading, multiple things at once) for those aging with DD. This approach was noted as being a great way to help older adults with DD meet new people and again, help offset some of the psychosocial challenges of aging.

Conducting thorough comprehensive geriatric assessments (E6) by someone who preferably specializes in DD and geriatrics (E5) was also important for psychosocial well-being. For example, “depression is a factor for many elderly including those with DD [therefore,] keeping the elderly population involved in the community and stimulated mentally and challenged in [a] way benefitting each person [’s] strengths and weaknesses” (E4) was essential for promoting

overall health and well-being. Also, seeking professional help and/or "medication" (E7) if necessary, is also important when helping older adults with DD cope with the psychosocial challenges of later-life."

Questionnaire question 9: What learning strategies do older adults at AADD use to help them maintain their independence? Promoting autonomy and "communication" (E3) were noted as being essential learning strategies for independence promotion among older adults with DD. As stated by E1, older adults with DD "need to learn how to make decisions, staff can assist by giving them choices, and motivating them to stay independent." For example, staff at AADD encouraged the Senior Hot Shots to promote their independence by using "transportation like the bus or setting up a call-a-ride" (E10). They also encouraged the Senior Hot Shots to engage in regular exercise regimes to maintain their strength and balance, both of which were essential for successful aging in place. This was best achieved by using the following learning strategies: (a) repetition, (b) consistency, and (3) modeling (E2). Older adults with DD

> learn differently in some cases and more slowly in others. Repetition helps get us to a point where the people we work with can see progress . . . It is important for us to encourage consistency because if these people we work with are not consistent in using their skills, then they cannot possibly maintain their independence. A lot of the people we work with are also visual learners, and a lot of them mimic what AADD employees do . . . [the Senior Hot Shots are] sponges that soak up what they are exposed to. (E2)

Thus, there was ample opportunity for new learning and development for those aging with DD. Motivation was also important when working with older adults with DD and it could be external (motivation by peers and AADD staff) and/or internal (by enhancing one's overall health).

Engaging older adults with DD in the educational experience was necessary for learning to occur. At AADD "they play games that will cause them to think, move, listen, and interact with others" (E5). Thus, "maintaining relationships with their peers, staff, and health professionals" (E6) was also an effective learning strategy for helping older adults with DD promote their independence as they age. In addition, "the emphasis on continuing education, that it is never too late to learn valuable skills, is essential. Older adults in AADD's programs are constantly encouraged to keep striving to learn and increase their independence" (E7). AADD staff, program participants, families, healthcare professionals, and the greater community, also attended AADD's "yearly conference where different issues are discussed" (E8) to help increase awareness about aging with DD.

Questionnaire question 10: In what ways do AADD's programs and services for seniors prepare older adults with DD for the challenges of aging? AADD's programs helped older adults with DD "learn how to be healthier and happier" (E1). Program participants learn independence from staff and social activities that encourage participation and collaboration. "By building a network of support, AADD participants are part of a network of peers, professionals, and family members who all bring their unique abilities together to ensure that no

AADD participant has to face aging challenges alone" (E7). Employee 2 reiterated the importance of "body, mind, and spirit" health in order to prepare for the challenges of aging

> We challenge them to grow. Not on their own, but with their peers and with the AADD staff who they work with. They tackle the challenges of aging side by side with staff, not through having staff there to do everything for them. We challenge them to exercise, eat healthier, try new and different things . . . We [also] challenge them to maintain those relationships, and nurture them, and support the people they share those relationships with. (E2)

Not only do AADD staff talk to the Senior Hot Shots "about the aging process and what they can expect as they age so they can be prepared to accept the challenges of growing older" (E9) but they also teach them how to embrace their later-years by having fun (E11). E6 also noted that "ensuring that [older adults with DD] receive information regarding the aging process, so they would know what expectations or challenges they may face as they age" was also imperative. For example, staff at AADD assisted Senior Hot Shots in finding resources that can help them as they age, like a good doctor (E10).

Perhaps one of the most important things AADD did to help prepare older adults with DD for the challenges of aging was to "help give older adult's w/DD an identity outside of their diagnosis" (E4). This was particularly important for those who were aging with DD and may have had to retire from the workforce or assume new roles, such as caregiver. Preparedness planning initiatives and

programs helped to equip older adults with DD with the skills needed to adjust to these new roles as well as "deal with awareness of age, retiring . . . and death" (E5). Such initiatives helped prepare those aging with DD for the myriad of challenges that may occur in later-life.

Questionnaire question 11: Is there anything else you think people should understand about older adult learners with DD? Several respondents stressed the importance of treating "people with DD as equals" (E1; E11). Contrary to what some people may believe, older adults with DD "are able to learn just as anyone else can and they are very smart" (E3). As stated by E2, older adults with DD

> express their intelligence in unconventional ways . . . Don't assume that just because you don't see an older adult with any sort of developmental disability putting a skill on display, they don't already have that skill down cold, or are completely capable of learning it. (E2)

Thus, older adults with DD "want to be treated with the same respect as you would give anyone else. They want to be independent and will work very hard to stay independent" (E9). In addition, when working with older adults with DD "you should never underestimate them" (E9). You may need to "give them extra time, to think, move, hear, and understand . . . [however] they will learn" (E5). Patience and repetition is key (E6).

Encouraging older adults to ask for help was also essential. As stated by E10, "even though [they] have been learning to be independent for all these years" giving them the necessary tools to ask for help enabled older adults with

DD to “enjoy [their] older age.” Furthermore, it was imperative to understand that older adults with DD “love to learn, but they also love to teach [so] Listen and learn from them” (E9). This was supported by E4 who asserted that “We are all learning everyday [therefore,] there is no reason we can’t all age with dignity no matter the level of assistance needed to life a long healthy life.” This attested to reciprocal nature of learning, and the potential for all to continue to learn throughout the life-course.

Emerging Themes

The PI used open-coding techniques to analyze the focus group, questionnaire, and interview data. The following themes emerged from the data: respect and equality, individualization, humor and fun, age-related learning challenges, social support, accumulation of loss, active aging and health maintenance, independence and autonomy, identity, attitudes towards those aging with DD, and learning strategies. Each of the themes are discussed using examples from the research data.

Emerging theme 1: Respect and equality. Older adults should be treated “with dignity and respect in all aspects of your communication with them” (I5). “It’s that humanness that you support another person . . . you’re on an even line” (I3). Interviewees also highlighted the fact that “not everybody has the same support needs. Not everybody has the same desires as for how they live their life” (I5). Thus, respecting the needs of each individual was essential when working with this heterogeneous population of older adults. “It’s not about what we want for the person. It is about what they want for themselves” (I5).

Emerging theme 2: Individualization. When working with older adults with DD, one must recognize their individual "capabilities" (I4). Therefore, in order for learning to occur, one must "recognize where that person is and what it is they want, and provide them supports accordingly" (I5). This was demonstrated during observation 3, whereby the Senior Hot Shots and AADD staff worked together to achieve the individual learning objectives of those on the fishing dock. For some Senior Hot Shots, the learning objective was "touching a catfish, for others it was beating their score from the day before." However, for two newcomers to the group, "learning the basics of fishing was the main objective of the day." Furthermore, as evidenced in the focus group sessions, learning preferences for those aging with DD were also highly individualized – e.g., group learning versus hands-on learning opportunities.

Emerging theme 3: Humor and fun. AADD staff encouraged the Senior Hot Shots to have fun (on the fishing dock and at the senior centers) as a means of facilitating engaging learning experiences. For example, during the observations, the PI noted "the staff and Senior Hot Shots created a fun and relaxed climate during the support group." They laughed (extensively), joked around, and had fun. The atmospheres during the observations were authentic, informal, and real. They used a lot of humor and sarcasm. They interacted with one another and demonstrated true friendships.

Emerging theme 4: Age-related learning challenges. Older adults with DD had to address myriad physical and psychological health challenges, many of which were "the same challenges that people without DD face as they get older"

(I2). Physical challenges included sensory and functional impairments, as well as the onset of disease (e.g., diabetes). Therefore, "learning to live with any disability if it would be decreased vision, decreased hearing that would certainly be something that should be learned" (I1). Employee 5 also stated that "Hearing and sight diminishes and that causes mistakes," further compounding the age-related challenges faced by older adults with DD. Respondent 10 also stated. "aches and pains" were the hardest part about growing old, as did R11, who noted that "pain in [the] hip, [and having] difficulty with mobility" were the greatest challenges of aging. Furthermore, as stated by R12, as you age, you "cannot do the things like you used to [for example] running, playing softball." Thus, the challenges of aging were largely individualized.

Psychological challenges included the accumulation of loss – particularly family, friends, and care staff - was also a challenge for many older adults as they "are more likely than not to be less connected with a group of folks that have similar interests and backgrounds, and more likely to be isolated" (I3). There was also "a need to help people understand death and dying – that when we get to certain ages some of the people that we love might predecease us" (I1). This was particularly important due to the fact that for R4, "the loss of [her] parents and brother" was the most difficult aging challenge. This was also true for R7, who stated, "having parents and grandparents die" was the hardest part about getting older. She further stated that "[the pain] doesn't go away for a long time." Thus, attesting to the loss and psychosocial challenges older adults with DD face as they age.

Problems with memory and a general slowing which impeded learning and psychological well-being were also evident. For example, “sometimes if folks have trouble remembering things, if they have the ability to read, they might ask for a list of steps” (I2) to help them manage ADLs and IADLs. Several Senior Hot Shots also discussed the psychological challenges of growing old, particularly as they pertained to independence issues. For example, R8 stated that dealing with her brother was difficult because “he makes decisions” regarding her living arrangements; thus, affecting the senior’s sense of autonomy and independence. Some Senior Hot Shots also encountered physical challenges when caring for other family members. For example, R13 discussed how her “oldest sister can’t do very much at all.” R13 also noted that she “can do anything, bowing walking [etc.], but it is hard to watch her [sister].” Furthermore, R13 discussed how she was modifying her schedule to accommodate the needs of her sister, “I’m now going to church to watch that she does not fall (she’s 76).”

Emerging theme 5: Social support. Strong social networks consisting of family and friends (including AADD staff) helped older adults with DD tackle myriad age-related challenges. The majority of the Senior Hot Shots (7 of 16) stated that family and friends were a valuable aging resource (7 of 16). Their comments demonstrated the importance of family and friends in helping older adults with DD learn about the aging process and health and wellness concerns. For example, parents were pivotal figures in the Senior Hot Shots education about aging and health, especially concerning conditions such as “diabetes” (R10) and “cataracts” (R15).

Several (5 of 16) Senior Hot Shots discussed the importance of family members and friends in helping them remain safe at home. For example, R15 stated that "family are close" and R14 stated that she was "safe with my two sisters"; thus, attesting to the importance of social support and strong informal networks. Genuine friendships dominated many of the discussions as a means of helping tackle the challenges of aging, ranging from advice on health, financial matters, and evolving learning needs, whereby being connected to the community and to peers

> is a learning strategy because you are learning in conjunction with other people. You're building on other people's experience and knowledge and working in that way [thus,] the better support network a person has, the more likely they are going to be able to identify and access the supports they need in order to maintain their level of independence. (I5)

Emerging theme 6: Accumulation of loss. Older adults with DD have experienced a greater amount of loss than the general aging population. This was largely attributed to the fact that in addition to the loss of family members and friends, they also experienced loss of care staff throughout their lives. As stated by I3, "Staff turnover in relation to losses and a grieving process is a pretty big deal for people with DD."

Social losses also compounded the aging process for those aging with DD. For R4, the "loss of [her] parents and brother" has been the most difficult aging challenge. This was also true for R7, who stated, "having parents and grandparents die" was the hardest part about getting older. She further stated that

"[the pain] doesn't go away for a long time." These results corroborated with research conducted by Heller (1999) who found that the loss of family members and pivotal caregivers meant that those aging with DD were facing the complex challenges of late-life alone.

Emerging theme 7: Active aging and health maintenance. AADD promoted proactive aging by beginning its services for those aging with DD at age 50, somewhat earlier than the general aging population (I5). This enabled those aging with DD to develop a pool of resources and supports, prior to the onset of late-life challenges and age-related transitions. Consequently, this helped those aging with DD prepare for the challenges of later-life.

At AADD, they practiced healthy eating, as staff "steer them towards [eating] somewhere like Sweet Tomatoes [as opposed to fast food restaurants]" (I2). In addition, every participant (16 of 16) stated that they "exercise," for example, R12 "exercise[s] every morning," and "walk [or drive their wheelchairs] everywhere" in order to keep active and healthy. Respondent 10 stated that "exercise[ing] with AADD Sr. Hot Shots" was important to her overall health. The Senior Hot Shots also used buses and even the metro public transportation services as their primary form of transportation.

Emerging theme 8: Independence and autonomy. The general aging population were noted as having "a lot more resources than people without DD have [and] if a person with DD learns about a resource, they may hear about it but they may not know how to access it" (I2). However, AADD's programs and services for seniors helped those aging with DD to access the services that would

best suit their learning needs. For example, R1 used the metro to go to the YMCA. In addition, due to the information learned at AADD, R1 stated "he walks a lot as well as maintains a good diabetic diet." Similarly, R2 "walks down to [the] bus, walk home [from] the store, [walks from the] house to the dollar store." Respondent 2 also watched "diabetes and eats healthy"; thus, demonstrating some ways in which the Senior Hot Shots were able to promote their independence and autonomy as they age.

Emerging theme 9: Identity. AADD promotes identity, which 'is tied to self-esteem, tied to who you are. It is tied to your posture and your behavior" (I3). Thus, while fishing at the dock, when asked who they were, Senior Hot Shots responded "fishermen" (O2). The Senior Hot Shots also discussed the importance of hobbies in relation to maintaining active lifestyles as they age. For example, R3 stated that she has "lots of hobbies . . . [including] crocheting [and] painting" that helped shape her identify in retirement. Thus, one of the most important things AADD did to help prepare older adults with DD for the challenges of aging was to "help give older adult's with DD an identity outside of their diagnosis" (E4). This was imperative for older adults when adjusting to role changes that accompany the aging processes (e.g., retirement and/or reverse caregiving).

Emerging theme 10: Attitudes towards those aging with DD. Unfortunately, oftentimes in medical settings (i.e., hospitals), "people with DD are discounted [whereby there is a belief that professionals] don't really have to try and get them back to where they once were" (I2). Therefore, in order to help prepare older adults with DD for the challenges of aging, healthcare and service

professionals need to believe that older adults with DD have the ability to learn and overcome physical and/or psychological ailments.

Emerging theme 11: Learning strategies. The staff and Senior Hot Shots created a fun and relaxed climate during the support group observations. They laughed (extensively), joked around, and had fun. The atmospheres during the observations were authentic, informal, and real. They also used a lot of humor and sarcasm to create an environment that was conducive to learning. In addition, it was important to ensure that "staff are on a level playing field, that one's not standing over the other saying you need to learn this" (I3).

Engagement and support for persons learning to cope with the challenges of aging were thoroughly documented by participants. For example, E2 reiterated the importance of constant engagement by stating "at the end of the day, engaging the aging DD population is the only way to cope with these challenges of aging." In addition, E3 also reiterated the importance of individualizing the learning experience for each older adult with DD by "find[ing] what methods work best for them. Such as pictures, games, verbal, or any methods they know." Staff at AADD also stressed the use of modeling (I3) and lots of "patience" (I5) as effective learning strategies for those aging with DD.

When asked, 'How do you help older adults with DD learn to address their physical needs (i.e., ADLs and IADLs)?,' Employee 1 noted that "teach, advise, assist, and motivate" were the key elements in helping older adults with DD to learn to address their physical needs. This was further supported by E2, who stated that using "a lot of repetition and leading by example" were essential

elements for helping older adults with DD address their physical needs. In addition, learning experiences should be geared towards the individual needs of participants, whereby "whatever it is that they are learning [it should be] "something that they are motivated to [learn]" (I5). AADD also "encourage[s] friendly competition for the individuals [they] serve" (I5). This was not done to hurt anybody's feelings, but rather to be "an ego boost" (I5) to help encourage those aging with DD to promote their independence and successfully age in place.

Summary

The various AADD stakeholders provided a wealth of information as to how older adults with DD addressed their physical, psychosocial, and educational age-related learning challenges. Analysis of the qualitative data resulted in several emerging themes and characteristics that were important considerations when working with older adult learners with DD. Evidence of andragogy, particularly with regard to treating those aging with DD with respect and dignity, individualizing learning, as well as setting a climate conducive to learning, were important considerations when working with this heterogeneous population of older adults. For facilitators of adult learners with DD, responsibilities included engaging, protecting, and teaching learners and remembering to never underestimate those with DD.

Chapter Five: Discussion, Implications, and Recommendations

This chapter provides a discussion of the research data, the research literature, and the research questions. This section begins with a discussion of the research data, including interviews, focus groups, observations, questionnaires, and emerging themes, and linkage of the study's findings to the research literature. The PI then discusses the implications of the results, recommendations, state of the program at the time of the study, and draws conclusions based on the research data.

Discussion and Linkages to Literature

The purpose of this study was to explore how older adults who qualify for AADD's programs and services learned to successfully age in place. Each data set provided information detailing how the various AADD stakeholders helped older adults with DD cope with the challenges of aging in order to promote independence and successful aging in place. The results of this study provided evidence of the application of andragogy with older adult learners with DD. Possible best practice learning models for helping older adults with DD meet their age-related learning needs to successfully age in place are also discussed.

Interviews. The five phone interviews conducted with AADD stakeholders yielded important findings regarding the unique learning needs of those aging with DD. In this section, the results of each interview question are discussed and aligned with the research literature.

Interview question 1: What does one need to know in order to help older adults with DD live independently and successfully age in place? According to I1

and I4, recognizing that all people are unique, regardless of whether or not a DD exists, is an important concept for people to understand in order to help older adults with DD promote independence and successfully age in place. "You have got to know life story, what kinds of supports have or have not surrounded them throughout their life . . . Do they have any comorbid conditions, like a depression? …" (I1). The research literature supported these findings and the application of andragogy (Knowles, 1973, 1995) with older adult learners with DD, whereby recognizing the unique learning needs, experiences, and resources is essential when teaching adult learners.

This can be further broken down into recognizing individual goals and objectives of the person aging with DD. Understanding a person's worldview and experiences helps to promote independence and successful aging. For example, were they bullied or institutionalized during their childhoods? If they worked, where did they work? These ideas were further supported by I4, who stated that one needs "to know the participants. They need to know the clients. They need to know the goals and objective of the person they are working with." Thus, these findings seemed to align with the work of Bowman and Plourde (2012) who applied the theory of andragogy to teaching young adult learners with DD. The same principles of tailoring learning to meet the individual needs of the learners, also applies to aging older adults with DD. This seemed to align with Saxon et al.'s (2010) suggestion of "determining learning needs" (p. 409), prior to initiating the learning experience with older adults, as well as Hyer (2014), who stressed the importance of individualizing care plans.

Interviewee 4 reiterated the importance of individualizing the services provided to persons aging with DD by stating, “This [AADD] is not an off-the-shelf type program.” These findings seemed to corroborate with the research findings of Hodges et al. (2004), which stressed the importance of individualizing learning opportunities and retirement choices for those aging with DD. These findings also appeared to provide additional evidence to support Bowman and Plourde’s (2012) work on applying andragogy to teaching those aging with DD.

Attitudes with regard to respect greatly impact the ways in which persons aging with DD learn to addresses their age-related challenges and successfully age in pace. For example, according to I2, some people do not “think that they [persons aging with DD] could possibly achieve things, and I’ve seen people with DD achieve tremendous things.” Thus, the ability to learn and successfully age in place is fostered by learning environments that provide encouragement, as opposed to ones that fail to believe in the fact persons with DD have the capacity to learn and promote their independence as they age. This therefore, reinforced the importance of treating people aging with DD “with dignity and respect in all aspects of your communication with them, and to meet people where they are” (I5). Thus, taking each of these factors into consideration may help promote lifelong learning opportunities for those older adults with DD who wish to promote their independence and successfully age in place.

Interview question 2: What age-related learning challenges do older adults with DD face? In general, older adults with DD “face similar age-related changes that the generic population faces” (I3). These findings seemed to

correspond with literature in the field which stated that older adults with DD experienced the same types of chronic illnesses that accompany increased longevity in the general aging population, including diabetes, heart disease, and cancer (Fisher & Ketti, 2005, para. 2).

Researchers also noted an increased prevalence of certain health problems in older adults with DD when compared to the general greying population. These included vision problems, such as hearing loss, poor oral health, thyroid abnormalities, obesity, behavioral problems, mental health issues, and Alzheimer's disease (in persons with DS) (Fisher & Ketti, 2005; Sara, 2008). The research literature supported this study's findings, as demonstrated by I1, who stated, "Learning to live with any disability [including] decreased vision, decreased hearing, [is certainly] something that should be learned" by those aging with DD. Furthermore, as aging is believed to have an earlier onset in persons with DD (Campbell & Herge, 2000; Corrado, 2013), programs and services (such as AADD) designed to increase awareness and understanding about the challenges older adults with DD may face as they age, are imperative.

According to several Senior Hot Shots in the focus group sessions, health issues, joint trouble, having to wear dentures, and managing weight (R1; R2; R10; R18; R19) were noted as being the hardest issues about growing old. Such challenges hinder the ability for those aging with DD to do the things they used to do. Questionnaire participants (E5 & E6, in particular) also identified the accumulation of physical health-related challenges as the most challenging aspects about growing older. Such examples highlight the different types of

gerontological age-related learning challenges faced by older adults with DD. For example, learning how to manage weight by eating healthy and exercising regularly is essential for those wishing to age in place successfully. In keeping with literature in the field of aging with DD, exercise and health promotion seemed to be essential for offsetting the detrimental effects obesity has on the aging process for persons with and without DD (e.g., links to cardiovascular disease and diabetes) (Janicas, 2014; Saxon et al., 2010).

Interestingly, although there was an increased prevalence and risk of AD in persons with DS (Janicki & Dalton, 1999; McQuillan et al., 2003; Sara, 2008) and concerns about educating healthcare professionals about increased awareness and understanding about a dual diagnosis of AD and DD (Janicki & Dalton, 1999; Nagdee & O'Brien, 2009; Sara, 2008), this research study highlighted the need for healthcare and service professionals to be cautious about over-diagnosing cases of AD in DS individuals. As stated by I3,

> One of the things that will occur is that someone will point at a person with DS and say, "they've got Alzheimer's or they're demented," but it goes to that accelerated aging process, and if for example, you take away vision or hearing, that can look like dementia or confusion. (I3)

Thus, this urges those working with or caring for persons aging with DS and other DD to be cognizant of the importance of ruling out all other medical causes (e.g., UTI's, vision, hearing, respiratory, and/or general cognitive slowing), prior to diagnosing dementia or AD in persons with DS and other DD. Zarit and Zarit (2007) cautioned against over diagnosis of dementia and AD, when discussing the

importance of comprehensive geriatric assessment in the general aging population.

Aside from physical challenges, the results of this study demonstrated that older adults with DD also faced myriad social age-related learning challenges, including the “capacity and a need to help people understand death and dying” (I1). Furthermore, older adults with DD “are more likely to be less connected with a group of folks that have similar interests and backgrounds, and more likely to be isolated . . . and have a higher amount loss” (I3) than the general aging population. These findings seemed to align with Warnick’s (1995) challenges of the third age as well as Knowles’ (1990) life problems of American adults, who both asserted that, with age there is an accumulation of loss.

According to these researchers, one of the challenges of getting older was learning to cope with, and adjust to, the loss of friends, loved ones, identity (e.g., work and social roles), and independence. However, as evidenced in this study, although older adults with DD have a difficult time coping with the loss of their parents, as stated by R7, “having parents and grandparents die” was the hardest part about getting older. “Their coping strategies in some ways are much better” (I3). Therefore, the social challenges faced by older adults with DD are highly individualized, based on a person’s past history, lifelong relationships, and experiences.

Another age-related learning challenge faced by adults aging with DD at AADD concerned resource utilization. According to I2,

> People who are aging who do not have DD have a lot more resources than people without DD have, and that a lot of times if a person with DD learns about a resource, they may hear about it but they may not know how to access it. They may not have transportation to get there, so that can cause them not to be able to access it.

Thus, age-related challenges included an inability to access a resource or service due to transportation and/or comprehension issues. Staff members at AADD tried to overcome these barriers by educating older adults with DD about the resources that are available to them. This may help to explain why Fisher and Ketti (2005) discovered that aging persons with DD typically underutilized healthcare and supportive services. Furthermore, it attests to the importance of ensuring that healthcare, nursing, and service professionals are adequately prepared to address the needs of those aging with DD, a concern pressed by Edwards et al. (1992) and Sara (2008).

Interview question 3: In what ways do you help elderly persons with DD learn to cope with the challenges of aging? One of the most important strategies AADD used to help older adults with DD cope with the challenges of aging was by “creating a social support system/ social group [with peers and AADD staff] so that individuals feel they have meaningful relationships and that somebody else cares” (I1) about them. This seemed to align with the work of Hooyman and Kiyak (2011), Ohlson (1994), and Warnick (1995) who stressed the importance of building positive relationships and rapport in order to enhance the learning experience for older adults.

Continuing education opportunities like those offered at "AADD's annual conference" (I1) for those aging with DD, their caregivers, and service providers, was noted as being an important means of educating older adults and the general community about the age-related learning challenges of this aging population. This was further supported by questionnaire participants who identified that modeling behaviors and infusing older adults with advice pertaining to physical health and well-being were as effective means of helping older adults with DD address their age-related physical needs. For example, by "teaching and . . . demonstrating how to care for their health" (E6) and "educating them on the signs and symptoms of illnesses and encouraging/ assisting them in accessing medical care" (E7), healthcare and service professionals can help older adults with DD learn to address the challenges of aging. Thus, education for those caring for or providing supportive services to those aging with DD is imperative (Cardol et al., 2012; Lloyd et al., 2013).

AADD staff members educated the Senior Hot Shots about managing their health in order to cope with age-related health challenges using a variety of techniques. For example, when going out to lunch, AADD staff members encouraged the Senior Hot Shots to dine at healthy restaurants as opposed to "fast food" (I2) diners. In addition, when grocery shopping (and while at the support groups) AADD staff and Senior Hot Shots discussed the importance of eating healthy and nutritious meals and watching out for calories (I2). This helps address concerns related to obesity (Saxon et al., 2010) and diabetes (Cardol et al., 2012;

Hale et al., 2011; Lloyd et al., 2013; Saxon et al., 2010), which are both health-related concerns for the aging with DD population.

Such educational measures are what I5 referred to as “proactive aging.” At AADD, services were initiated at age 50, as opposed to 65 and above, “so, by the time [the Senior Hot Shots] are really in the midst of [the] age related challenges, they already have a support system in place” (I5). Therefore, in order to best cope with the challenges of aging, preparing learners about aging processes should be enacted early. This may help to offset what Doka and Lavin (2003) referred to as the paradox of aging with DD - increasing needs, decreasing supports. Thus, by assessing needs early, healthcare and service professionals can mobilize appropriate services to meet the needs of those aging with DD.

Preparedness planning was identified as way in which AADD helped prepare older adults with DD for the challenges of aging. AADD’s Final Game Plan program, assisted with advanced directives, wills, funeral planning, life review, legacy videos, and geriatric assessment (I2). This comprehensive program was highly individualized and helped older adults with DD prepare for the challenges of aging, particularly the more sensitive end-of-life decisions. Thus, AADD’s Final Game Plan program helps address concerns among the social work community regarding limited research pertaining to best practice educational and intervention models for those caring for persons aging with DD (Botsford & Rule, 2004). The Final Game Plan not only helped older adults with DD, but also helped educate their family members and caregivers about the programs and

services that were available to them during their retirement years and at the end of life.

The Final Game Plan program also ensured that every older adult with DD received a “comprehensive geriatric assessment [and] recommendations from the physicians [based on] those assessments” (I2). AADD then helped assist the older adult cope with any limitations in physical, functional, and/ or psychosocial needs identified by the assessment process. These findings seemed to not only support Gallo et al.’s (2006) ideas pertaining to the importance of comprehensive geriatric assessment for older adult populations, but they also appeared to corroborate with Carlsen et al.’s (1994) research that asserted that comprehensive geriatric assessment tools were effective measures for assessing the healthcare needs of older adults with DD.

When working with persons aging with DD, maintaining identity, particularly in the retirement years is a huge deal (I3). This finding seemed to align with the work of Ohlson (1994), whose research indicated that interviewees viewed work as very important to them, an attitude largely attributed to the fact that friendships and social interactions centered in the work environment. In addition, “having a job gave the participants a sense of accomplishment and pride” (p. 44). Workforce activity can therefore, help boost self-esteem and feelings of self-worth for persons aging with DD in addition to fulfilling social needs.

This study helped further highlight the importance of promoting independence and fostering positive self-images for persons with DD who

transition to retirement. One way of achieving this is by meeting age-related learning needs for those adjusting to the new social role of 'retiree.' As stated by I3, "Identity is tied to self-esteem, tied to who you are." Thus, enabling older adults with DD to redefine themselves in their later years is essential for personal growth and independence promotion. These results appeared to align with the work of Quine, Wells, de Vaus, and Kendig, (2007; as cited in Stancliffe et al., 2013), who found that autonomy over retirement decisions was very important to well-being in later-life.

Respecting one's identity was identified as an important method for helping older adults with DD cope with the challenges of aging. As stated by I3, "Respect, competition, humor, identity, stubbornness, trust, rapport building, and touch are components that go into how we support our fellow human being." At AADD staff were encouraged to "engage, protect, and teach." In order to do this successfully, one must know the individual capabilities of each learner and organize their learning experiences accordingly.

Interview question 4: How do you help older adults with DD learn to address their physical needs? Specifically, like ADLs/ IADLs? Four-out-of-five respondents highlighted the importance of health maintenance in helping older adults with DD learn to address their psychical needs. Much of this was done by one-on-one interactions (e.g., exercise and health promotion) and engagement in AADD's services for seniors. In addition, AADD's Final Game Plan program geriatric assessment recommendations were informative about the types of assistance a person needs with ADLs and IADs.

Interviewees also stressed the importance of avoiding embarrassment when working with older adults with DD (particularly when working on physical aspects of aging) and always treating older adults with dignity and respect. These findings seemed to support Bowman and Plourde's (2012) recommendations for teaching adults with DD as well as John's (1988), Knowles' (1973, 1995), and Saxon et al.'s (2010) recommendations for teaching the elderly, whereby treating adult learners with respect was of utmost importance for optimal learning to occur. Again, when working with older adults with DD, it is imperative to recognize individual capabilities, diagnosis, motivations, and goals when working to support their psychical needs.

Interview question 5: How do you help older adults with DD learn to address their psychosocial needs? All interviewees stressed the importance of relationships and social supports in helping address psychosocial aging needs. Relationships existed between Senior Hot Shots, AADD staff members, Board members, and the greater community. In addition, relationships at AADD were reciprocal, a finding that aligned with the emphasis researchers placed on the importance of social supports and friendships to help buffer the negative effects of aging (Hooyman & Kiyak, 2011; Ohlson, 1994; Warnick, 1995).

This study demonstrated that older adults with DD can learn to be helpers (assisting to others including family and friends), as well as being receivers of support. As evidenced in the focus group sessions, the majority of the Senior Hot Shots (7 out of 16) stated that family and friends were a valuable aging resource, helping older adults with DD learn about the aging process and health and

wellness concerns. Parents were noted as being pivotal figures in the Senior Hot Shots' education about aging and health, especially concerning conditions such as "diabetes" (R10) and "cataracts" (R15). However, on the other hand, persons aging with DD are capable of assisting others with their age-related challenges, whereby several (12) Senior Hot Shots acted as the primary caregiver for their elderly parents (I3).

The Senior Hot Shots used their supportive friendships to help promote one another's overall health and wellness. During each observation, the Senior Hot Shots provided encouragement, e.g., praise, when someone caught a fish (O2 and O3), clapping when someone mastered a new exercise move (O1) and/or ballet move (O4), as well as providing useful advice (e.g., drinking tea instead of soda) as a means of helping promote overall well-being. Furthermore, friendships and participation in AADD's activities for seniors help reduce isolation among those aging in with DD.

Respect, a key element of trust (Henschke, 1998b) was continually discussed throughout this study during the interviews, questionnaires, focus groups, and observations, as being perhaps the most important factor for helping facilitate learning opportunities for older adults with DD. As stated by one interviewee, "There's no need to childise or grouphomeise a person" (I5). This finding seemed to align with Saxon et al. (2010), who stated, when teaching the elderly "do not talk down to them or treat them as children" (p. 420). Furthermore, AADD encouraged the Senior Hot Shots to aspire to high standards of behavior and conduct. "Just because you happen to wear a label, does not

change that expectation" (I5). Such strategies help to promote dignity and independence for those aging with DD, while simultaneously enabling them to develop the necessary skills they need to successfully age in place.

Interview question 6: What learning strategies help older adults with DD live independently and successfully age in place? This research study identified several effective learning strategies that helped older adults with DD promote their independence. These included the following:

> Modeling and patience . . . breaking things down into task analysis or chaining things together . . . [using] prompts of all sorts, physical prompts, verbal prompts, depending on what it is the person is needing . . . [and help older adults with DD] self-monitor when they can. (I5)

These results seemed to align with Henschke's (1998a, 1998b, 2014) discussions of modeling as an integral component of the adult learning experience, whereby the Senior Hot Shots learned by observing the behaviors of AADD staff. For example, AADD staff continually demonstrated polite manners (saying please and thank you) and respect. In turn, these characteristics were adopted by the Senior Hot Shots who are very polite and respectful. Another example took place at lunch. AADD staff talked about food safety and chopping food into small pieces. Instead of just talking about such practices, AADD staff actually chopped their food and demonstrate how to avoid possible choke hazards.

The results of this study demonstrated that learning should be individualized. This finding appeared to align with Bowman and Plourde (2012), who stated that learning was "almost always specific to a personal goal" (p. 790).

When helping older adults with DD promote their independence, one must acknowledge the unique capabilities and desires of each individual. As evidenced in this study, if the reason for learning does not make sense to the Senior Hot Shot, learning will not take place (I5). This finding seemed to align with Knowles' (1973, 1995) andragogical theory for teaching adults, and John's (1988) geragogical theory for teaching the elderly, whereby learning will only take place when the reason for leaning something makes sense to the learner. This was reiterated further in Saxon et al.'s (2010) commentary on teaching the elderly.

Repetition is also an important learning strategy when working with older adult learners with DD (I5). This finding seemed to align with Saxon et al.'s (2010) techniques for teaching the elderly, whereby "memory training programs . . . and repetitive practice have been shown to improve mental performance" (p. 402). This also corresponded with I4, who discussed similar ideas, regarding capabilities and motivation to learn. Some people will need more repetition than others when learning. Thus, when working with older adults with DD, learning must be tailored according to individual capabilities, goals, and desires. Again, the research literature (Bowman & Plourde, 2012; John, 1988; Knowles, 1973, 1995) supported these findings.

Although the extent of support individuals need varies considerably depending on the task and individual capabilities, "praise and positive interaction with people, reinforcing those positive behaviors" (I5) are components that should be part of the learning experience for those aging with DD. In addition, learning environments that are "social" (Saxon et al., 2010, p. 407), fun, and relaxed

(Knowles, 1973, 1995), and also help facilitate learning. This was also demonstrated at AADD, whereby staff and the Senior Hot Shots were “willing to laugh at themselves” (I3). In addition, “staff [were] on a level playing field” (I3) which seems to corroborate with gerontological researchers who stress that learners should be treated “with respect, and as mature adults capable of learning” (Saxon et al., 2010, p. 411).

Building good communication, relationships, and rapport were noted as effective learning strategies when helping older adults with DD meet their age-related learning challenges. As stated by E1, the key elements to promoting psycho social well-being were to “listen, advise, and motivate.” These findings seemed to align with Warnick’s (1995) techniques for working with older adults, whereby listening skills and nudging older adults to make changes were effective strategies to help them overcome challenges of later-life.

Interview question 7: In what ways do AADD’s programs and services for seniors prepare older adults with DD for the challenges of aging? According to the interviewees, the core of AADD’s services were to engage, protect, and teach. As health promotion was essential for successful aging, AADD’s programs and services encouraged older adults with DD to remain actively engaged in the community, while simultaneously maintaining their safety, dignity, well-being, and happiness. In addition, AADD’s programs and services helped teach older adults with DD what to expect from the aging process – the good and the bad, as well as how each individual could best address their own age-related challenges.

Program participants learned about how they could promote their independence by participating in social activities that encouraged participation and collaboration. AADD also emphasized the importance of building a strong network of support – friends, family members, healthcare and service professionals, to ensure that the Senior Hot Shots did not face the challenges alone but rather they learned what to expect from others around them. This is perhaps best achieved by AADD's fun, relaxed, and respectful learning climates. These findings seemed to align with Knowles' (1973, 1995) theory of andragogy and Henschke's (1998a, 19998b, 2014) discussions of modeling as essential ingredients to adult learning environments.

AADD taught older adults with DD the importance of lifelong learning (Henschke, 2011a; Saxon et al., 2010) and the importance of experience in helping cope with the challenges of aging (John, 1988; Knowles, 1973, 1995; Warnick, 1995). In addition, results from this study highlighted the reciprocal nature of learning and the fact that AADD staff learned as much from the Senior Hot Shots as they did from them. Thus, trusting and respectful friendships grounded in personal histories and experiences seemed to be essential for helping buffer the stressful age-related learning challenges that accompany the aging process.

Interview question 8: Are there any ways in which AADD's programs and services do not prepare older adults with DD for the challenges of aging? Several interviewees discussed possible future programs such as life book, hospital and nursing home preparation programs (to reduce the fear of placement

in a medical or long-term care setting for those aging with DD) (I1). Two out of five interviewees (I2 and I3) raised concern about the growing need for support or CNA training for those older adults with DD who were caring for elderly parents and/ or other relatives. This finding seemed to align with Heller (1999) who raised concerns about the increasing number of older adults with DD who were outliving their primary caregivers and other key providers of support (friends and family).

There is an urgent need for community education about aging with DD. Increased awareness and understanding about the challenges faced by those learning to promote their independence and successfully age in place is also warranted among healthcare and social service professionals. In addition, there is a great need for public policy (such as formalized training for those working in the aging with DD field), as well as more structured aging with DD resource and service networks.

During the focus group sessions, Senior Hot Shots stressed the need for new programs on the legal issues of aging, particularly financial assistance (e.g., power of attorney) (R3). In addition, one Senior Hot Shot (R1), discussed a need for more information pertaining to polypharmacy – the effects of taking increasing numbers of medications. Senior Hot Shots also discussed the need for greater assistance with IADLs (e.g., cleaning the home) (R10; R11), as well as greater access to public transportation (e.g., bus stops) for those living independently in the community (R6). Such needs warrant further attention by service providers and professionals in the fields of aging and DD. Each of these examples help highlight what Doka and Lavin (2003) referred to as the paradox of

aging with DD – increasing needs, decreasing supports. Thus, in order to adequately prepare older adults with DD for the challenges of aging, a continual and thorough assessment of the age-related learning challenges faced by this heterogeneous population of older adults is warranted.

Interview question 9: Other comments. When asked if they had additional comments, several of the interviewees made recommendations regarding working with older adult learners with DD. Interviewee 2 stressed the need for healthcare and service professionals to never underestimate older adults with DD, reiterating the fact that the Senior Hot Shots should be treated with respect. They do want to stay independent, and they should be encouraged to learn in later-life. Interviewee 2 also emphasized the fact that learning is reciprocal, and we (society as a whole) can learn a lot from them, also.

Interviewee 1 stressed the need for a formalized DD and aging network, with AADD (the regional experts) creating a go-to place for aging with DD information. Interviewee 2 suggested that professionals and educators in the field of aging with DD develop a consortium, or center for excellence in aging with DD, to help increase awareness about aging with DD, as well as provide educational resources for healthcare professionals, families, and the greater community as a whole about the unique challenges of those aging with DD.

The interview results seemed to align with Troutman, Nies, Small, and Bates' (2011), discussion about the multidimensional nature of successful aging, which stressed the importance of psychosocial, functional, social, and physical health (as cited in Kozar-Westman et al., 2013, p.239). As the numbers of older

adults with DD continue to grow, so too will the demand for services and education about the unique age-related learning needs of this heterogeneous population of older adults. Thus, it is imperative that educational resources are provided for the myriad of stakeholders involved in promoting independence and successful aging in place for this population of seniors.

Focus groups. Each of the two focus group sessions unearthed insightful findings concerning the age-related learning needs of older adults with DD. The focus group data also provides insight into the ways in which older adults with DD promote their independence and successfully age in place. In the following section, focus group data are analyzed and discussed in conjunction with pertinent research literature.

Focus group question 1: What is the hardest part about growing old? The results of this study demonstrated that issues concerning autonomy and independence are a challenge for those aging with DD. Respondent 5 reiterated the importance of maintaining independence by stating that the hardest part about growing old was “not being able to do [the] things you want to do” (e.g., walking without assistance). Other Senior Hot Shots stated that in order to offset age-related learning challenges, they teamed up with their siblings and did things together. This collaborative environment and the desire to build friendships seemed to align with the theory of andragogy (Knowles 1973, 1995) and utilizing the resources and experience of others to help enrich the learning environment. Respondent 16, stated, “doing nothing [and] being bored” were the most challenging aspects about growing old. These findings seemed to align with the

theories of andragogy (Knowles, 1973, 1995) and geragogy (John, 1988), which stressed the need to encourage adult learners to seek educational opportunities that they find meaningful and of personal interest to them (Saxon et al., 2010). Engaging in activities of interest (such as joining AADD's Social Clubs program) may help offset feelings of boredom and loneliness.

Several Senior Hot Shots commented on the physical challenges that accompany the aging process. For Example, "health issues" (R1), having to wear dentures (R2), and dealing with "aches and pains" and "joint trouble" (R19) were the hardest part about growing old. Such concerns are not unique to those aging with DD but are similar to those experienced by the general aging population. These findings seemed to align with the work of Fisher and Ketti (2005) and Saxon et al (2010). Furthermore, R18 stated that "managing weight" was the hardest part about growing old, which is a concern given the fact that obesity is a pressing concern for the DD (Saxon et al., 2010). Concerns over weight and health also extended to non-DD respondents in the groups. This finding seemed to align with researchers who asserted that obesity, diabetes, and concerns regarding the negative health effects of increasing sedentary lifestyles were not unique to DD populations (CDC, 2003, as cited in Pruncho et al., 2014; Commission on Ending Childhood Obesity, 2014; Hamer et al., 2014; Sue Kirkman et al., 2012), but also for the quality of life of all older adults.

Some Senior Hot Shots also encountered physical challenges when caring for other family members (e.g., parents and siblings). Thus, the challenges of aging extend beyond the Senior Hot Shots themselves, as many of them were

finding themselves in a reverse role – being the primary caregiver for aging parents and in some instances, siblings. The challenges of tackling age-related changes for oneself and one's family were also discussed by those without DD, including AADD staff, the PI, and the PI's chair. Respondent 20 stated that "being responsible for everything and everybody around me [providing] food, [and] shelter" was challenging. However, for those aging with DD, having to comprehend the aging process for oneself, as well as for others, presents additional learning opportunities and needs. This is a pressing concern warranting future research.

Social losses also compound the aging process for those with DD. The loss of parents, grandparents, and friends was commonly reported among the focus group participants. Adjusting to loss and dealing with grief are highly individualized processes, a finding that seemed to align with the work of Warnick (1995). However, regardless of the numerous challenges discussed, one participant stated, "I feel pretty good about myself. I do exercise [and] all kinds of activity" (R14). This response demonstrates that regardless of the accumulation of losses and transition, it is possible to overcome the challenges of aging and successfully age in place.

Focus group question 2: How do you keep active and healthy? Exercise was a huge part of the lives of the Senior Hot Shots. Every participant (22 out of 22) stated that they exercised in order to keep active and healthy. Exercise took place at home, during AADD's programs, and also while performing ADLs and IADLs (e.g., housekeeping, using the metro, walking to and from the store).

Several respondents stressed the importance of exercising regularly and maintaining a well-balanced nutritious diet (particularly for those treating diabetes). Respondent 6 also discussed the importance of supplementing one's diet with "vitamins" in addition to eat[ing] veggies and fruits." Respondent 14 also stated that she "just got a juicer," thus supporting the adoption of healthy diets and lifestyles by those aging with DD. Several of the Senior Hot Shots lost several pounds (much of this is due to participation in AADD's Challenges program). Research literature urging the need for greater health education for those older adults with DD in order to offset physical (obesity) and psychological (isolation) health concerns (Stanišić, 2012) supported these findings. According to Rimmer, Braddock, and Fujiura (1993) and Lewis, Lewis, Leake, King, and Lindemann (2002), such health initiatives may also help to combat increasing obesity rates among those with DD living independently or with families (as cited in Saxon et al., 2010), as well as diabetes (and related diseases) management (Hale et al., 2011; Rimmer, Yamaki, Davis Lowry, Wang, & Vogel, 2010).

In addition to exercise and maintaining a healthy diet, the Senior Hot Shots discussed the importance of hobbies (e.g., crocheting, photography, painting) in helping them stay active and engaged in the community, with age. This finding seemed to align with geragogical (John, 1988) and andragogical (Knowles' 1973, 1995) theories which emphasized the importance of older adults pursuing activities and learning opportunities that were of particular interest to them.

Focus group question 3: How do you stay safe living at home? Aside from physical safety (e.g., using alarm systems) and adaptive behaviors (e.g., not going out at night), friends and family played an important role in the safety of the lives of older adults with DD. When in need, Senior Hot Shots called friends, family, or AADD staff for assistance, supporting the import role that formal and support networks played in the lives of older adults wishing to age in place (Foos & Clark, 2008; Hooyman & Kiyak, 2011, Warnick, 1995). This in turn is often reciprocal, with the Senior Hot Shots also helping check on friends and family, as well. This reiterated the importance of reciprocity and genuine concern for those in one's community. Such behaviors and characteristics helped the Senior Hot Shots promote their independence, identity, and place in the community, all of which helps them improve their ability to age in place.

AADD staff also continually educated the Senior Hot Shots about the importance of emergency protocol – calling 911, as well as knowing what to do in the case of a tornado or severe weather storm. Each of these protocols are essential for those wishing to live independently in the community. Repetition of health and safety information helps those aging with DD learn how to stay safe when living independently.

Physical home modifications to enhance functional abilities and ADL and IADL capabilities were also discussed by the Senior Hot Shots. For example, both R13 and R4 stated that they "use rails [and/or] bars" in their homes to ensure safety with mobility such home modifications can help aging in place, safely, by reducing fall risk and injuries. These findings seemed to align with gerontological

researchers in the field who reiterated the importance of home safety for promoting successful aging in place (Hooyman & Kiyak, 2011). Furthermore, R17 stressed the importance of "making sure everything is tidy and germ free" and R19 urged caution against "wet floors in the house [as they are] slip hazards." Each of these responses highlights precautionary measures that help ensure safety while aging in place.

In order to offset the dangers of driving, R11 stated that he did not "go [drive] on highways anymore" to help prevent against the risk of automobile accidents. This is important given the fact that there many seniors with DD experience increased vision problems with age (Fisher & Ketti, 2005). Respondent 1 also discussed the importance of home safety, by stating that she only uses "a microwave" as opposed to cooking on the stove. Such adaptive behavior helps eliminate several safety risks (e.g., burns, leaving the gas on) in the kitchen. This is imperative, especially for those older adults with DD who may present with some form cognitive loss or impairment.

Focus group question 4: What is your favorite way to learn? The majority of the Senior Hot Shots stated that they preferred to learn in groups (9 out of 16) and via hands-on experiences (5 out of 16). This aligned with andragogical theory (Knowles 1973, 1995), stating that adults learn best in collaborative learning environments, whereby there is a reciprocal exchange of knowledge. Experiential learning is also encouraged in such learning climates.

Focus group question 5: Which AADD programs do you enjoy most? The majority of the participants selected several, if not all of AADDs programs

for this question. However, the Senior Hot Shots support group was noted as being the most enjoyable, individually. Activities that promoted socialization (e.g., dancing, trips out to the Baseball, the Christmas party) were well liked by the AADD participants. These findings seemed to align with social theories of aging and the importance of positive support systems (Hooyman & Kiyak, 2011), when promoting successful aging in place.

Focus group question 6: Besides AADD, where else do you learn about aging? The majority of the Senior Hot Shots (7 out of 16) stated that family and friends were a valuable aging resource (7 out of 16) particularly regarding questions and concerns pertaining to the aging process and health and wellness. Parents were pivotal figures in the Senior Hot Shots education about aging and health, especially concerning conditions such as “diabetes” (R10) and “cataracts” (R15). Four out of 16 Senior Hot Shots stated, “life experiences” helped them learn about the aging process, followed by healthcare professionals and physicians (3 out of 16). A couple of the Senior Hot Shots discussed OASIS and residential community as an aging education resource. These responses also aligned with the PI, PI’s chair, and AADD staff members’ answers, who stated that friends and family were the main sources of aging information. These findings seemed to align with the theory of andragogy (Knowles 1973, 1995) and the importance of valuing the rich pool of resources and experiences that adult learners have, and the cumulative effect they can have on helping others learn.

Focus group question 7: What other programs/services would help you? The Senior Hot Shots suggested a variety of ways in which additional learning

needs could be met. General categories included (a) utilizing external programs/ agencies and other aging resources (R8); (b) obtaining greater assistance with health related topics, such as the effects of medications, as well as information about additional leisure programs and resources specifically designed for seniors; obtaining legal advice, such as power of attorney (POA); (c) dealing with loss; and (d) getting additional support with day-to-day ADLS and IADS, such as "support with cleaning" (R10). The research literature (Bowman & Plourde, 2012; Henschke, 2011a, 2011b; John, 1988; Knowles, 1973, 1995; Saxon et al., 2010) supported this range of examples, and the importance of individualizing educational opportunities for those aging with DD.

Fall prevention, financial assistance, and supported living were possible areas of program development discussed by AADD staff and the Senior Hot Shots. Thus, when serving older adults, there is a need for programs and services to evolve in order to meet the changing needs of those they serve. In the case at AADD, a growing population of older adults reaching retirement has driven the need for retirement transition programs. A more developing learning need at AADD is that several of the Senior Hot Shots were now finding themselves caring for elderly family members (typically parents and/or siblings). AADD administrators discussed the need to develop a caregiver, or can, training program for those Senior Hot Shots fulfilling the role of primary caregiver. This is an important emerging educational need for those wishing to age in place with DD. Thus, programs and services designed to promote independence and successful

aging for those with DD must evolve to meet the changing needs of this heterogeneous population of older adult learners.

Observations. In keeping with Knowles' (1973, 1995) theory of andragogy, setting climates conductive to learning on the dock and at the activity canters was of paramount importance at AADD. The learning environments were conductive to learning both physically (safe, warm, suitable for older adults,) and psychologically (friendly, respectful, fun, warm, trusting). AADD's ED and staff were natural andragogical leaders. They worked collaboratively with the Senior Hot Shots, they helped the seniors set and achieve their own learning goals, and they had fun! They encouraged friendly competition, motivation, and participation. They demonstrated that is OK to make fun at yourself and demonstrate vulnerability and humanism. They were caring, compassionate and highly driven to improve the quality of life for those in their care.

While observing the folks at AADD, it was difficult for the PI and the PI's chair to identify who was staff and who was a Senior Hot Shot. Both groups wore the same clothes, participated in the same activities, shared the same snacks, and communicated with one another in the same way. They are equals – learning as much from one another as possible. AADD staff and Senior Hot Shots demonstrated true friendships. Staff were supportive and reliable. They were able teach, educate and protect those they serve. The results of this study seemed to align with Bowman and Plourde's (2012) research examining the application of andragogy with young adult learners with DD.

Questionnaires. AADD staff members' responses to questionnaire questions one through four yielded interesting results pertaining to the types of programs facilitated and length of time AADD staff have been working in the field of aging with DD. The majority of the questionnaire participants (8 out of 11) facilitated multiple AADD programs. On average, questionnaire participants were employed at AADD for 2.8, in contrast to 14.9 years, working with or caring for older adults with DD, in general. These numbers reflect high staff turnover rates in the aging-with-DD field. These result help illustrate the concerns raised by I3 regarding the accumulation of loss that persons with DD experience throughout the life-course. These results seemed to align with the work of Warnick (1995), who discussed the challenges older adults faced when having to deal with increased losses in later-life (e.g., loss of family and friends, work roles, identity, functional status etc.). However, for those aging with DD, a life-time of having to adjust to new care staff, case managers, and service professional may further compound the ways in which they deal with loss.

Questionnaire question 5: What age-related learning challenges do older adults with DD face? Participants reported myriad age-related learning challenges faced by older adults with DD, further supporting the results of the focus group and interview sessions. In keeping with the work of gerontologists (Foos & Clark, 2008; Hooyman & Kiyak, 2011; Saxon et al., 2010; Spence, 1999), older adults with DD face numerous physical, psychological, and social challenges as they age. Challenges range from "sensory impairments" (E6) and the fact that "movement[s] decrease [requiring] help to get around and take care of minor

needs" (E5), to psychological challenges, such as "Remembering certain things" (E3). As stated by E9, "Individuals with DD really face the same challenges as those without DD" which seemed to align with the work of Fisher and Ketti (2005) and Saxon et al. (2010).

Despite these similarities, however, E2 stated that it is important to note that when working with older adults with DD, general aging declines in health are often dismissed as being "part of the individual's developmental disability." This is troubling as healthcare professionals should "work harder to combat [such issues] in aging people with DD because it often takes longer to teach the importance of addressing these issues, as well as teach the how of addressing them" (E2). This is imperative when tackling health concerns such as obesity, diabetes, and cardiovascular disease whereby adequate health education, monitoring, and management can help offset the detrimental effects of such health concerns – an area of great concern for current healthcare professionals (Janicas, 2014; Saxon et al., 2010).

Preparing older adults for possible age-related challenges they may face was a big component of AADD's retirement support groups. Questionnaire responders emphasized the need to educate older adults with DD about medical vocabulary pertinent to the aging process (E4), as well as typical physical and/or functional declines (e.g., the impact of arthritis) (E11). In addition to the physical and functional challenges faced by persons aging with DD, cognitive age-related challenges (e.g., managing money, judgment, and decision-making) were identified as areas needing to be addressed by service professionals. Furthermore,

issues relating memory loss and problems with comprehending the aging process (E5) also pose threats to the ability of older adults with DD to safely age in place; therefore, stressing the need for comprehensive geriatric assessments (Gallo et al., 2006) - such as that conducted in AADD's Final Game Plan program for those aging with DD (Carlsen et al., 1994).

In addition to the physical and psychological age-related challenges listed thus far, "finding an identity in the community after retirement" (E4) is also a challenge for those aging with DD. These findings seemed to align with the theories of andragogy (Knowles, 1973, 1995) and geragogy (John, 1988) which stressed the need for older adults to assess and address their individual learning needs and identities with age. These findings also seemed to align with Warnick's (1995) work pertaining to the challenges of later-life.

One of the major challenges for those aging with DD is the fact that DD and aging networks are somewhat disconnected in terms of providing resources for those aging with DD. That is where organizations such as AADD come in. Even when resources are available, persons with DD may not know how to access them or have the "ability to read/understand how it pertains to them or transportation to access the resource" (E9). This finding seemed to align with Doka and Lavin's (2003) paradox of aging with DD - increasing needs, decreasing supports. In addition, it also appeared to align with the work of Fisher and Ketti (2005), who discovered that aging persons with DD typically underutilize healthcare and supportive services.

Questionnaire question 6: In what ways do you help elderly persons with DD learn to cope with the challenges of aging? Give examples**.** Several of the questionnaire participants reiterated that much of what they did at AADD to help older adults cope with the challenges of aging was to engage, protect, and teach. Socialization (building friendships) and refining listening skills are also imperative to helping foster a teaching environment that is conductive to learning for those tackling the challenges of aging with DD. These findings seemed to align with andragogy theory (Knowles 1973, 1995); John's (1988) rationale for the teaching the elderly; and Hodges et al.'s (2004) work with DD learners, whereby listening to the experiences, interest, motivations, and concerns of each individual is essential in order to adequately address the unique challenges they face.

These findings also appeared to attest to the importance of effective communication and empowerment of older adults with DD.

> By giving them a voice [and] letting someone know that their opinions/concerns are valued is key. Most people have the ability to create their own coping strategies. However, someone who has never been encouraged to do so might appear helpless when faced with a challenge. We empower people to use the skills they already have. (E7)

These findings seemed to align with the work of Warnick (1995), who asserted that "empathy, sincerity, and positive regard" (p. 23) were qualities that help build strong communication and rapport with older adult clients. Thus, when working with older adults with DD, (a) listening to their concerns and challenges in a

nonjudgmental way; (b) seeing the world through their eyes; and (c) respecting the client, regardless of the type of information they share, are essential characteristics when helping promote independence and successful aging in place for those talking the complex challenges of later-life.

Individualizing learning experiences for older adults was an important learning strategy utilized by staff at AADD, with E3 stating that you must “find what methods work best for them.” This finding seemed to align with andragogical theory (Knowles 1973, 1995), and Bowman and Plourde (2012), who stated that learning must be tailored according to the unique needs and desires of each individual. Such customization also helps meet the self-fulfillment needs of older adult learners, as well as helping them achieve personal growth and development, components of John’s (1988) theory of geragogy.

Due to the complex and highly individualized nature of the age-related leaning challenges faced by older adults with DD (e.g., issues with memory, health and wellness, managing money, preparing for end of life), AADD staff utilized a variety of techniques to help offset some of the challenges. Some of the ways in which staff at AADD helped older adults with DD cope with the challenges of aging included the following: (a) by using memos (lists) to help remember things (such as appointments); (b) participate in stimulating memory games such as UNO; (c) teach older adults with DD about healthy food choices, the importance of exercise, balance, cardio, strength and range of motion; and (e) building friendships and relationships with others. These findings seemed to align

with the results of Bowman and Plourde's (2012) research, which examined the application of andragogy with teen and young adult learners with ID.

Questionnaire question 7: How do you help older adults with DD learn to address their physical needs (i.e., ADLs and IADLs)? AADD staff "teach, advise, assist, and motivate" (E1) older adults with DD in order to help them learn to address their physical needs, such as ADLs and IADLs. Employee 2 elaborated on this further by emphasizing the importance of "leading by example." These findings seemed to align with andragogy theory (Knowles, 1973, 1995) and Henschke's (1998a, 1998b, 2014) references to the importance of modeling - "walk the talk," not "Do as I say and not as I do" (Henschke, 1998b, p 11) in adult learning, words matched by E2

> It's all well and good to encourage our folks to walk everyday because "it's easy." But what makes a greater impact is if we walk with those people so they understand that we will do everything we ask them to do. It's avoiding the dreaded "Do as I say and not as I do."

Modeling behaviors by participating in group exercise activities, and infusing older adults with advice pertaining to physical health and well-being (e.g., cleanliness and personal hygiene) were, therefore, identified as effective means of helping older adults with DD address their age-related physical needs.

In order to fully assess the unique learning needs of older adults with DD, AADD staff collaborated with other healthcare professionals in order to get a holistic understanding of each individual's overall health and functional status. For example, E9 stated, "If I find out that they need assistance with ADLs or

IADLs then I refer them to the persons who does the supportive living assessments so that a supported living worker can be assigned to help them with these needs." Such collaboration helps to ensure learning is tailored according to the unique needs of each older adult with DD. This helps maximize personal growth (John, 1988) and successful ageing in place for those with DD.

Questionnaire question 8: How do you help older adults with DD learn to address their psychosocial needs? Good communication was noted as essential for helping older adults with DD learn to address their psychosocial needs. As stated by E1, the key elements to promoting psychosocial well-being were to "listen, advise, and motivate." Strong social support systems were also noted as being essential to helping buffer against psychosocial challenges of aging These findings seemed to align with Hodges et al.'s (2004) and Ohlson's (1994) emphasis on the importance of social support and interaction for those learning to deal with the challenges of aging with DD.

AADD's programs also encouraged older adults with DD to interact with people in the greater community. This helps build relationships with others outside of the immediate family and DD network. Reciprocity of relationships between older adults with DD and the greater community occurred through trivia nights, the annual AADD conference, and field trips to the theater, restaurants, and stores. In general, positive social supports can act as a buffer against psychological and sociological stress. These findings seemed to align with Foos and Clark (2008), Hooyman and Kiyak (2011), and Warnick (1995), who reiterated the importance of formal (agencies) and informal (family and friends)

sources of support for older adults who were tackling the myriad challenges of later-life.

Conducting thorough comprehensive geriatric assessments was also important for assessing psychosocial well-being, particularly assessing for concerns such as depression, a common condition in the elderly (Zarit & Zarit, 2007), including those with DD. For example, "keeping the elderly population involved in the community and stimulated mentally and challenged in [a] way benefitting each person ['s] strengths and weaknesses" (E4) is essential for promoting overall health and well-being. In addition, seeking professional help and/or "medication" (E7) when necessary, is also imperative when helping promote independence and successful aging in place for those aging with DD, which appeared to align with Warnick (1995) and Zarit and Zarit (2007).

Questionnaire Question 9: What learning strategies do older adults at AADD use to help them maintain their independence? Promoting autonomy and communication were noted as essential learning strategies for independence promotion among older adults with DD. As stated by E1, older adults with DD "need to learn how to make decisions [AADD] staff can assist by giving them choices, and motivating them to stay independent." For example, older adults with DD should be encouraged to independently carry our ADLs and IADLs (e.g., arrange their own transportation).

"Repetition, consistency, and modeling" (E2) were noted as effective learning strategies for use with older adults with DD. These findings seemed to align with andragogy theory (Knowles 1973, 1995) and Saxon et al. (2010)

considerations when teaching the elderly, whereby ensuring that skills are being executed consistently (exercise, daily hygiene, money management skills, etc.) are important to independence promotion and the ability for older adults with DD to remain safe at home. These findings seemed to align with Henschke's (2014) emphasis on congruence in andragogy – particularly as it pertains to the importance of modeling in adult education. In addition, AADD staff members maintained a positive attitude and modeled skills repeatedly, and in a consistent manner, also seeming to align with andragogy theory.

Motivation (external by peers and AADD staff and/or internal by enhancing one's overall health) is also important when working with older adults with DD. As stated by E4, "Without physical and mental encouragement those older adults could become stagnant and at risk of falling, declining mentally leaving a greater risk of ending up in a nursing home no longer able to take care of themselves." Engaging older adults with DD in the educational experience is also necessary for learning to occur. At AADD "they play games that will cause them to think, move, listen, and interact with others" (E5). This reiterated the importance of motivating older adult learners via social support (Hooyman & Kiyak, 2011) and collaborative learning (Knowles, 1973, 1995) for those aging with DD.

Opportunities for continuing education and the development or maintenance of new skills was also emphasized at AADD. Older adults in AADD programs were constantly encouraged to increase their independence and embrace opportunities to learn new things. These findings seemed to align with Saxon et al

(2010) discussion of lifelong learning, Wilson's (2006) theory of neuroandragogy, and the fact that it is never too late to learn, as well as John's (1988) rationale for teaching the elderly. AADD staff, program participants, families, healthcare professionals, and the greater community, were encouraged to attend AADD's annual conference to help increase awareness about aging with DD.

Questionnaire question 10: In what ways do AADD's programs and services for seniors prepare older adults with DD for the challenges of aging? Collaboration with staff, family, and friends are an essential components for helping older adults with DD prepare for the challenges of aging. AADD staff approached these learning opportunities in fun and playful ways – they taught them how to embrace new learning opportunities in their later-years (e.g., building new friendships, engaging in new activities and programs such as Social Clubs). AADD staff taught older adults with DD how to be happier and healthier as they age. They reiterated the importance of maintaining a healthy "body, mind, and spirit" (E2). Thus, these findings seemed to align with the tenants of successful aging theory – promoting overall physical, psychological and social health (Hooyman & Kiyak, 2011).

Staff at AADD challenged those aging with DD to grow individually, but also with others (e.g., with family, staff, and friends). Thus, they did not face the challenges of aging alone, but rather with those surrounding them – a community of learners. This is an important characteristic of andragogy theory (Henschke, 1998a, 1998b, 2014; Knowles, 1973, 1995) whereby older adults learn from a rich pool of resources, experiences, and interactions with others.

Preparedness planning initiatives and programs that equip older adults with DD with the skills necessary for successful aging are warranted. As permanency planning is a concern for the families and service professionals of aging adults with DD (Smith & Tobin, 1990), equipping older adults with the skills, knowledge, understanding, attitudes, values, and interests (KUSAVI) (Henschke, 2011a, 2011b), which promote independence and successful aging in place, helps prepare them for the challenges of aging. AADD's programs and services for seniors created learning environments that engaged, protected, and taught older adults with DD about the aging process. Such supports are essential for those older adults with DD whose family members have passed away. Thus, AADD's programs and services assisted older adults with DD with locating and utilizing the resources they needed to in order to successfully age in place.

Perhaps one of the most important things AADD did to help prepare older adults with DD for the challenges of aging was to "help give older adult's w/DD an identity outside of their diagnosis" (E4). Retirement transitioning programs help older adults with DD transition from the workforce role, to that of a retiree. These findings seemed to align with Hodges et al.'s (2004) research, which stressed the need for person-centered (or learner-centered) programs and services for older adults retiring from the workforce and finding new identities in later-life.

Questionnaire Question 11: Is there anything else you think people should understand about older adult learners with DD? Those at AADD continually reiterated the importance of treating older adults with DD as equals, with dignity and respect. This finding seemed to align with Knowles (1973, 1995)

theory of andragogy, gerontological research (Saxon et al., 2010; Warnick, 1995), as well as research in the field of aging with DD (Bowman & Plourde, 2012). AADD staff also stressed that older adults with DD are capable of learning and they are "very smart" (E2), which seemed to align with Wilson's (2006) theory that no one is ever too old to learn.

When working with older adults with DD it is important to not underestimate them. Just because they may not openly demonstrate a particular skill, does not necessarily mean that they do not know how to do something. This is an important consideration when working with those with invisible disabilities. It is also imperative to remember that learning is reciprocal. Staff at AADD stated that they continue to learn from those they support at AADD. These findings seemed to align with the theory of andragogy (Knowles, 1973, 1995) and the concept of reciprocity, whereby learners share resources and experiences with one another to create a learning environment that is enriching for all. Thus, learning continues to occur throughout the life-course, in exchanges with one's environment, and experiences.

Emerging themes. The following themes emerged from this study: (a) respect and equality, (b) individualization, (c) humor and fun, (d) age-related learning challenges, (e) social support, (f) accumulation of loss, (g) active aging and health maintenance, (h) independence and autonomy, (i) identity, (j) attitudes towards those aging with DD, and (k) learning strategies. Respect and equality are essential characteristics when working with all human being regardless of whether or not a DD exists (Warnick, 1995). However, when working with older adults

with DD, creating trusting and respectful learning environments that are warm, humanistic, trusting, and playful, helps to enhance the learning experiences for those wishing to promote their independence and successfully age in place. These themes seemed to align with Knowles (1973, 1995) theory of andragogy and the importance of creating a learning environment is that physically and psychologically conductive to learning.

Tailoring learning experiences to meet the unique needs of each individual was continually stressed throughout the data. This finding seemed to align with the work of Bowman and Plourde (2012), Hodges et al. (2004), John (1988), Knowles (1973, 1995), and Saxon et al. (2012), who stressed the need for learning experiences to be individualized based on the needs, motivations, goals, and desires of the adult learner. As the age-related learning challenges faced by those aging with DD are highly individualized, so too is the need for teaching and learning. These findings also appeared to align with the work of gerontologists Foos and Clark (2008), Hooyman and Kiyak (2011), and Saxon et al. (2010), who asserted that the aging process is multidimensional (physical, social, and psychological) and highly individualized. Herr and Weber’s (1999) perspective that aging as a lifelong process, rather than an aspect unique to later-life also supported these findings. Thus, opportunities for learning and development with regard to health promotion and the general aging process should be encouraged throughout the life-course.

Building relationships and true friendships with others was a major theme at AADD. Social support systems were frequently noted across the research data.

For example, several of the Senior Hot Shots were friends for several years (30+), and experienced several life-transitions with one another – from young adulthood, to the workforce, and more recently, retirement. This finding seemed to align with research literature in the field of gerontology and DD that stressed the need for strong social support systems for those hoping to ward off the negative effects of isolation in later-life (Hooyman & Kiyak, 2011), as well as helping cope with the challenges of aging (Ohlson, 1994), including an accumulation of loss (Warnick, 1995).

These results also seemed to align with Antonucci et al. (1997) and Newsom and Schulz (1996), who found that positive social supports can help improve the overall psychological well-being of older adults, as opposed to just the physical (biological) described by Uchino et al. (1996) and/or social well-being of those addressing the multitude of age-related challenges that often accompany later-life (as cited in Foos & Clark, 2008). Furthermore, although the demographic make-up of the social support systems of those at AADD were not fully explored in this study (e.g., gender and racial demographics), as explored by Antonucci (2001), friendships and relationships at AADD were diverse. These results seemed to align with Blieszner (2006), who found that as the baby-boomers continue to age, relationships and support networks would continue to diversity (as cited in Hooyman & Kiyak, 2011). In addition, several of the female Senior Hot Shots maintained close friendships spanning several decades, aligning with Foos and Clark's (2008) emphasis on the importance of confiding female friendships in later-life.

Psychosocial well-being in later-life is also interrelated with active aging for those wishing to age in place with DD. The ingredients to active aging reflect John's (1988) rationale for teaching the elderly, whereby maintaining overall physical, psychological, and social well-being (Hooyman & Kiyak, 2011), older adults are able to lead meaningful lives as they age, and contribute to society in beneficial ways (e.g., volunteerism though AADD). This concept also coincides with retirement and the ways in which older adults with DD have to adjust from the workplace to retiree status. AADD's programs and services for seniors supported this transition to retirement by emphasizing the importance of social support during retirement years. These findings seemed to align with concepts outlined in Erickson (1963), Maslow (1968), and Peck's (1968) psychosocial theories of aging (as cited in Saxon et al., 2010).

One of the ways in which AADD's retirement transitioning program and retirement support groups helped those aging with DD cope with the challenges of later-life was to create identities as they age. After leaving the workforce, many older adults at AADD partook in new hobbies, such as fishing, dancing, and crafts, all of which helped reshape their identities to that of "fisherman," "painter," and/or "ballet dancer" (Senior Support Group observations). Such transitions helped promote the overall psychical, psychological, and social well-being of those aging with DD, while promoting independence and ability to successfully age in place. Furthermore, AADD's programs services also encouraged older adults with DD to make decisions for themselves; they assisted them in developing their learning goals, plans for retirement, end of life, health

and wellness, and recreation. This process empowers those at AADD to become autonomous and self-directed regarding how they chose to spend their retirement years.

AADD stakeholders reiterated the importance of never underestimating those aging with DD. This is imperative for healthcare, service professionals, and the greater community as a whole. Just because someone is aging with a developmental disability, does not mean that they are incapable of learning and successfully aging in place. This finding seemed to align with Krinsky et al.'s (2008) findings of a 70-year-old man's ability to age in place with autism. AADD's philosophy of engaging, protecting, and teaching older adults in a fun, trusting, respectful, and playful climate, demonstrated that learning to tackle the challenges of aging is possible for those aging with DD. Remembering to acknowledge the unique capabilities and needs of each individual is essential for any program that strives to support older adults with DD. The results of this study appeared to align with that of Bowman and Plourde (2012) in that andragogy can be applied to populations of learners with DD – expounding upon initial findings to also include that of older adults with DD, not solely teen and young adult learners.

Agreement among Data Sets

Results of the interviews, focus groups, observations, questionnaires, and emerging themes were aligned with each other and with the research literature (Table 12).

Table 12.

Evidence of Themes

Theme	Interview Data Evidence	Focus Group Data Evidence	Observation Data Evidence	Questionnaire Data Evidence	Linkages to Literature
Respect and equality.	You just need to know that they want to be treated just like anyone else (I2). Treat older adults with DD "with dignity and respect" (I5).	Focus group participants took it in turns to speak and share their answers to the questions. No body monopolized the discussions.	Everybody (AADD staff and Senior Hot Shots) were treated as equals.	Treat "people with DD as equals" (E1, E11).	Bowman & Plourde (2012); Knowles (1973; 1995); Henschke (1989, 1998a, 1998b, 2011 2014); Saxon, Etten & Perkins (2012)
Individualization.	Not everybody has the same support needs. Not everybody has the same desires as for how they live their life. (I5)	Participation in AADD's programs and services depends on individual learning needs and preferences.	One Senior Hot Shot chose to draw and observe the landscape as opposed to fishing.	"Help them find what methods work best for them" (E3).	Bowman & Plourde (2012); Hodges, Luken, and Hubbard (2004); John (1988); Knowles (1973; 1995)
Humor and fun.	Respect, competition, humor, identity, stubbornness, trust, rapport building, and touch are components that go into how we support our fellow human being. (I3)	The focus group participants giggled and joked with one another throughout the focus group sessions (transcription and examples).	They laughed (extensively), joked around, and had fun. The atmospheres during the observations were authentic, informal, and real. They used a lot of humor and sarcasm.	E10 stressed the importance of providing fun and novel learning opportunities (e.g., attending a book reading, multiple things at once) for those aging with DD.	Knowles' (1973; 1995) – physiological and psychological environments conductive to learning.
Age-related learning challenges.	In general, older adults with DD "face similar age-related changes that the generic population faces" (I3). For example, "Learning to live with any disability if it would be	E5 also stated that "Hearing and sight diminishes and that causes mistakes", further compounding the age-related challenges faced by older adults with DD. R10 also stated that "aches and pains"	Physical and psychosocial age-related challenges were discussed by Senior Hot Shots during the support groups – e.g., in	Participants reported myriad age-related learning challenges faced by older adults with DD. Challenges ranged from physical, such as "sensory impairments" (E6) and the fact that "Body	Foos & Clark (2008); Hooyman & Kiyak (2011); Saxon, Etten, & Perkins (2010); Spence (1999)

Table 12. Continued

Theme	Interview Data Evidence	Focus Group Data Evidence	Observation Data Evidence	Questionnaire Data Evidence	Linkages to Literature
	decreased vision, decreased hearing, that would certainly be something that should be learned" (I1).	were the hardest part about growing old.	exercise class physical health and wellness concerns were discussed.	movement[s] decrease [requiring] help to get around and take care of minor needs" (E5), to psychological challenges, such as "Remembering certain things" (E3).	
Social support/ relationships.	The importance of social support networks and "being connected to the community and to peers" (I5) was noted as being an integral learning strategy for those aging with DD.	(5/16) Senior Hot Shots discussed the importance of family members and friends in helping them remain safe at home. R15 stated that "family are close" and R14 stated that she is "safe with my two sisters".	The Senior Hot Shots appeared to have very supportive relationships. Many have been close friends for a number of years . . . [43 years for a couple of ladies].	"By building a network of support, AADD participants are part of a network of peers, professionals, and family members who all bring their unique abilities together to ensure that no AADD participant has to face aging challenges alone" (E7).	Bigby (2000); Foos & Clark (2008); Hooyman & Kiyak (2011); Ohlson; (1994) Sara (2008); Wartenberg (1994)
Accumulation of loss.	[There is probably] a higher amount (big picture) of loss in the lives of people w/DD. (I5)	For R4, the "loss of [her] parents and brother" has been the most difficult aging challenge. This was also true for R7, who stated that "having parents and grandparents die" was the hardest part about getting older.	One member talked about how her friend in the group had supported her through several losses (including family members and friends).	Losses include physical, "sensory impairments" (E6) and psychological challenges, such as "Remembering certain things" (E3).	Grosso (2013); Foos & Clark (2008); Heller, (1999); Hooyman & Kiyak (2011); Warnick, 1995)
Active aging and health maintenance.	As health promotion is essential for successful aging, AADD's programs and services for seniors try "to emphasize physical mobility and exercise . . . [and address] themes around successful aging and how not to become excessively disabled" (I1).	In addition, every participant (16/16) stated that they "exercise", for example, R12 "exercise[s] every morning", and "walk [or drive their wheelchairs] everywhere" in order to keep active and healthy. R10 stated that "exercise[ing] with AADD Senior Hot Shots" is important to her overall health.	Discussions about health and wellness generally took place at lunchtimes (e.g., the health benefits of drinking green tea versus drinking soda and other beverages.	Health promotion is a key element of the educational program at AADD (E1, E8, and E10), "teaching [older adults with DD] to stay young with healthy food choices, exercise with range of motion, balance and cardio [are] emphasized" (E1)	Foos & Clark (2008); Hale, Trip, Whitehead, & Conder's (2011); Krinsky et al. (2008) Hooyman & Kiyak (2011)

Table 12. Continued

Theme	Interview Data Evidence	Focus Group Data Evidence	Observation Data Evidence	Questionnaire Data Evidence	Linkages to Literature
Independence and autonomy.	"you have a right to have an individual choice - you don't always have to do what the group wants to do" (I1).	R1 stated "he walks a lot as well as maintains a good diabetic diet". Similarly, R2 "walks down to [the] bus, walk home [from] the store, [walks from the] house to the dollar store". R2 also watches "diabetes and eats healthy".	The Senior Hot Shots were autonomous in organizing themselves for the activities ahead.	E1, older adults with DD "need to learn how to make decisions, staff can assist by giving them choices, and motivating them to stay independent".	Bowman & Plourde (2012); Hyer, 2014; Ohlson (1994)
Identity.	Identity is "tied to self-esteem, tied to who you are" (I3). Identify who they once were (e.g., prior to retirement) and who they are now (e.g., during or after the retirement transition). Senior Hot Shots are proud of their fishermen/lady identities.	R3 stated that she has "lots of hobbies . . . [including] crocheting [and] painting" that help shape her identify in retirement.	While fishing at the dock, when asked who they were, Senior Hot Shots responded "fishermen" (O2).	Perhaps one of the most important things AADD does to help prepare older adults with DD for the challenges of aging is to "help give older adult's w/DD an identity outside of their diagnosis" (E4).	Warnick (1995); KUSAVI – Henschke (2014)
Attitudes towards those aging with DD.	When that respect component is missed, the behavior you are going to get back from the person that you are supporting, (based on the experiences they've had in the past) will be different. (I3)	Lots of positive reinforcement, peer support, and collaboration.	There is a belief at AADD that older adults with DD can promote their independence and learn to maintain or develop new skills that are essential for successful aging.	There is a stigma attached to developing friendships or having conversations with the elderly, and that stigma increases . . . when those older people have a developmental disability.	Saxon et al. (2010); Wilson (2006); Henschke, (2014)
Learning strategies.	Encourage, protect, teach, listen, motivate, model, and the use of humor, and repetition.	The majority of the Senior Hot Shots stated that they prefer to learn in groups (9/16) and via hands-on experiences (5/16).	Modeling and hands on learning activities were frequently utilized at AADD to help facilitate learning experiences.	E1, "teach, advise, assist, and motivate" and using "a lot of repetition and leading by example" are essential learning strategies (E2).	Knowles ;(1973, 1995); Henschke (1989; 2011a, 2011b, 2014); Saxon et al. (2010)

Themes with four out of four data sets in agreement with one another demonstrate stronger findings compared to those with three out of four or one out of four agreement. As depicted in Table 12, there was agreement between the interview, focus group, observations, and questionnaire data. The eleven major themes resonated throughout the entire study, ranging from conversations with Senior Hot Shots and AADD staff, and Board members, as well as via observations of the various AADD stakeholders during the Retirement Support Groups. The major themes of respect, identity, individualization, and having fun were identified in this study as key elements that helped older adults with DD learn to successfully age in place. The results of this study demonstrate that it is imperative that society becomes better educated about the unique learning needs of those aging with DD, as well as the fact that this population of heterogeneous older adults should never be underestimated. Learning can continue throughout the life-course for those aging with DD, as well as for those providing learning opportunities and supportive care for this population of older adults.

Answering the Research Questions

The following research questions were investigated in this study:

Main Research Question: How are older adults with DD unique adult learners?

Sub-question 1: Which andragogical and gerontological adult learning needs must be met for aging adults with DD to successfully age in place?

Sub-question 2: How do aging adults with DD best meet their unique learning needs to successfully age in place?

Sub-question 3: What does one need to know in order to help older adults with DD successfully age in place?

Having interpreted, analyzed, and discussed the research data; the PI will now answer each of the research questions. Sub-questions one, two, and three will be answered first, followed by the main research question. Linkages to literature are also noted, based on previous discussions.

Sub-Question 1: Which andragogical and gerontological adult learning needs must be met for aging adults with DD to successfully age in place? In order for older adults with DD to successfully age in place, each of Knowles' (1973, 1995 p. 5) eight process elements must be met. The following examples illustrate such needs: (a) preparing the learner – Senior Hot Shots discussed the learning objectives at the start of each support group and/or fishing experience, (b) setting the climate – AADD's learning environments were physically safe for older adult learners with DD and also psychologically conductive to learning – fun, relaxed, trusting, humanistic, and positively reinforcing; (c) involving learners in mutual planning – Senior Hot Shots worked with AADD staff to organize their learning experiences; (d) involving learners in diagnosing their learning needs – Senior Hot Shots worked with AADD staff to determine what it was they wanted to learn (KUSAVI); (e) involving learners in forming their learning plans – Senior Hot Shots worked with AADD staff to determine how they met with learning objectives; (f) involving learners in designing learning plans – Senior Hot Shots worked with AADD staff to assess their own unique capabilities, goal, and learning objectives; (g) helping learners carryout their learning plans – AADD staff supported the Senior Hot Shots when working towards their learning objectives ; and (h) involving learners in evaluating their learning outcomes – Senior Hot Shots evaluated their progress with AADD staff and peers.

Knowles' (1990, pp. 57-63) six assumptions about adult learners are also applicable to helping older adults with DD learn to successfully age in place. For example, older adults with DD (a) need to know reason for learning something – why is this important to me?, (b) concept of learner – what do I need to learn to promote my independence?, (c) learner's experience - what happened previously? Past history?, (d) readiness to learn – is this something I want to learn now?, (e) orientation to learning – working in groups, with peers, and (f) motivation – is this something I want to learn?

Andragogical principles and practices of respect, creating a climate conducive to learning (physically and psychologically), promoting identity in retirement, having fun, working collaboratively, developing true friendships, and building rapport, are essential elements when helping older adults with DD learn to successfully age in place. Modeling what is taught, having patience, using repetition, and building rapport, are important characteristics for andragogues, teachers of adults (Henschke, 1998a, 1998b, 2014), working with aging DD learners.

Older adults with DD face the same types of health problems and gerontological needs as the general aging population. However, the findings from this study seemed to align with research in the field that noted an increased prevalence of certain health problems in older adults with DD when compared to the general greying population (e.g., vision and hearing concerns, obesity, diabetes, and cardiovascular disease). Such health complications not only impact physical well-being but also functional status, as well (e.g., limiting physical activity and the ability to participate in exercise programs and activities with age). Thus, learning how to manage weight by eating healthy and exercising regularly is essential for those striving to successfully age in place.

The results of this study demonstrated that older adults with DD also face myriad social age-related learning challenges, including coping with an accumulation of loss, grief, isolation, and barriers to resource utilization. Therefore, learning to cope with, comprehending, and learning to adjust to, the loss of friends, loved ones, identity (e.g., retirement), independence, and role changes (e.g., becoming the caregiver for an aging parent) are challenges faced by those aging with DD, and consequently, gerontological learning needs that must be met.

Sub-Question 2: How do aging adults with DD best meet their unique learning needs to successfully age in place? Older adults best meet their unique learning needs by engaging in learning experiences that are respectful, fun, playful, and tailored to their unique needs, capabilities, and desires. Working collaboratively with others and developing friendships with peers also help older adults with DD promote independence and successful aging in place. These findings seemed to align with Wartenberg (1994) who stated that people learn from people, a premise of andragogical theory. Attending annual education conferences, workshops, and an array of AADD's programs and services (e.g., AADD's Support Groups, Challenges Unlimited, and Social Clubs) also help older adults with DD get the information they need to successfully age in place.

Health education and awareness are of paramount importance for those aging with DD to stay active and independent in their communities. Proactive aging approaches were utilized at AADD to help older adults with DD plan challenges of aging. Preparedness planning programs and services helped educate older adults with DD about the ways in which they can cope with late-life transitions (including health and wellness, physical and psychological challenges, grief/ an accumulation of loss, retirement, end of

life planning, and identity issues/transitions). As reiterated by those at AADD, when educating older adults with DD about the challenges of aging it is imperative to engage, protect, and teach them about how to best meet their age-related learning needs.

Individualizing learning opportunities was continually stressed in this study as a key component to helping older adults with DD best meet their learning needs to successfully age in place. These findings seemed to align with Hodges et al.'s (2004) research, which stressed the need for person-centered (or learner-centered) programs and services for those aging with DD. The results of this research study also provide evidence that independent learning, versus dependent learning, leads to independent living, versus dependent living, (Grosso, 2013) - further demonstrating the application of andragogy to populations of older adult learners with DD.

Sub-Question 3: What does one need to know in order to help older adults with DD successfully age in place? It is imperative to understand that all people are unique, regardless as to whether or not a DD exists. One must respect an individual's learning goals, needs, motivations, life history, and type(s) of disability in order to help promote independence and dignity for those aging with DD. Understanding the world-view of each individual is also key to helping those with DD successfully age in place.

Understanding the unique capabilities of each individual is also important when working collaboratively to develop learning goals and objectives for those aging with DD. This finding seemed to align with the work of Bowman and Plourde (2012); Hodges et al. (2004); and Hyer (2014). One must never underestimate an older adult with a developmental disability. Learning environments that provide encouragement, positive feedback, humor, as well as the opportunity to be oneself and develop true friendships are

essential for service providers striving to help those with DD promote their independence and successfully age in place.

Main Research Question: How are older adults with DD unique adult learners? There is great heterogeneity among the aging with DD population, which is largely attributable to personality and genetics, the type of disability one has, as well as one's life experiences. Therefore, as older adults with DD have vast arrays of backgrounds and experiences, it is imperative that such histories transpire into their educational endeavors in later-life. Just like the general aging population, older adults with DD have individualized leaning needs, motivations, and goals. Therefore, an older adult with DD is unique, but not more unique than any other older adult learner.

Older adults with DD want to be treated just like anyone else. They have unique dreams and capabilities; therefore, those supporting them must be cognizant of the fact that older adults with DD are capable of learning in later-life and they can successfully age in place. In turn, those supporting older adults with DD also have the opportunity to learn a lot from them, as well. It is imperative to understand that people aging with DD should never be underestimated. They should be treated as equals, and respected just like the general aging population. Learning environments that foster fun, humor, trust, and lots of positive reinforcement, are essential when helping promote independence and successful aging in pace for those aging with DD.

The results of this study have helped fill a gap in the research literature by detailing how older adults with DD cope with the aging process (Ohlson, 1994), as well as identifying some of the complex challenges that arise when aging with DD (Sara, 2008). This study has also helped raise awareness and increase understanding about the

diverse needs of those aging with DD, as well as the age-related challenges they face as they reach later-life. AADD's education model has perhaps helped address the concerns of Bishop et al. (2013), who stressed a need for increased awareness about the challenges of those aging with DD, as well as preventative education for caregivers, healthcare, and service professionals, and those aging with DD themselves.

Personal Reflections

This study yielded a wealth of information pertaining to the age-related challenges and learning needs of older adults aging with DD. The Senior Hot Shots uncovered a plethora of information as to how they keep active and healthy as they age. Friendships and camaraderie among peers was noted as being a valuable learning and supportive resource by the Senior Hot Shots and AADD staff, attesting to the importance of strong social networks for those aging with DD. In addition, creating a learning environment that is respectful, trusting, safe, warm, humanistic, and fun, also emerged as a key component for fostering positive learning experiences for those aging with DD. Furthermore, AADD stakeholders and Senior Hot Shots highlighted the use of friendly competition, repetition, and tailoring learning to meet the unique motivations and desires of each individual, as being effective learning strategies to help promote independence and aging in place for older adults with DD.

Importantly, this study's results generally align with what other researchers have stressed, which is when teaching adults, the types of teaching methodologies and learning strategies utilized need to be highly individualized. In addition, this study's findings seem to align with the work of Stanley, Blair, and Beare (2005) (as cited in Saxon et al., 2010), who stated that learning and experience, including the learners interests, motivation,

attitudes, readiness to learn, self-esteem, culture, physical and psychosocial states, and the instructors expertise, are important factors to take into consideration when teaching older adults. Such factors are also applicable to older adult learners with DD.

Implications

The results of this study cannot be generalized to the larger population of aging persons with DD. The study utilized a purposive sample of AADD Senior Hot Shots Retirement Support Group program participants, their caregivers, staff, and AADD Board members. The small sample and single location of study hinder generalization. The results contribute to filling the gap in the research literature pertaining to the learning needs of this emerging aging population. The results of this study do, however, suggest that applying andragogy to AADD's programs and services to seniors is an effective learning strategy for helping older adults with DD learn how to stay independent and successfully age in place. This implies that programs and services for seniors that do not apply andragogical principles may not have the same outcomes as demonstrated in this research study.

AADD's ED leadership was of significant importance in this study in terms of helping to foster a climate conducive to learning for those aging with DD. Therefore, even if other programs and services for seniors with DD applied andragogical principles, without leadership like that at AADD, they may not generate results as effective. AADD's ED models key andragogical leadership characteristics, including relationship and rapport building, demonstrating vulnerability, promoting humor and humanism, ensuring respect and equality, having belief in the older adult learner with DD, and stressing the importance of having fun (I3). Without such leadership characteristics,

operation as a natural andragogical leader (known or unknown), and doing what has been proven to work, application of andragogical principles may not lead to success.

It is also important to consider that if a leader like AADD's ED decided to leave the organization, the future of the AADD programs might be unpredictable. There must be a process in place to hardwire what they do under this person's leadership. Such a program would need to understand the nuances of AADD. Therefore, it is imperative that there is a plan to manage the sustainability of the program. So, if a new leader was to come in, the programs and services would continue to operate in a similar way.

This research has demonstrated that perhaps AADD offers a best practice learning model for helping older adults with DD to successfully age in place. If so, maybe others can learn from an examination of the AADD model. This may be an area for future research.

Recommendations to the Program

In order to meet the evolving age-related learning needs of the Senior Hot Shots, AADD should address some of the recommendations put forth by participants in the focus group sessions. For example, grief and/or loss counseling services, polypharmacy and medication educational programs, and caregiver training for adults with DD (similar to Certified Nursing Assistant programs), as well as will and estate planning services, should be further explored by the organization. Perhaps AADD could incorporate some of these suggestions into their annual conference schedule. For example, AADD could host expert seminars on medication and polypharmacy issues in the elderly, in addition to a will and estate planning session hosted by an elder law professional. Such educational

initiatives would not only be beneficial for the Senior Hot Shots, but also the greater aging with DD community.

One AADD staff member urged a need for technical savvy and recreation specialists to expand their horizons to meet the learning needs of those aging with autism. According to the staff member, there are a lack of computer apps and recreational facilities (e.g., parks, swings, and walking areas) specifically designed for older adults with autism. Such initiatives would provide age-appropriate learning opportunities (and communities) for adults with not only autism, but also other types of developmental disability, which may help enhance the learning experience for this population of aging adults.

At the administrative level, perhaps developing a professional development course for AADD staff to help foster the core values of AADD may be useful. This would help to ensure that there is congruence between the facilitation of AADD's programs and services for seniors. The organization may also consider developing a leadership program whereby AADD staff have the opportunity to develop their leadership skills in line with the overall mission and values of the association. Again, this would help to ensure that a change in leadership would not affect the learning experience for those enrolled in AADD's programs.

Recommendations for Future Research

Due to the fact that the majority of the Senior Hot Shots utilized several AADD programs (e.g., Support Groups, Final Game Plan, Social Clubs, and Challenges), the PI would recommend that future researchers utilize a multiple case study approach to examine the combined effect these programs have on addressing the age-related learning

needs of persons with DD. In addition, a deeper exploration as to how AADD's other programs and services for seniors (e.g., Support Groups, Final Game Plan, Social Clubs, and Challenges) address the age-related learning needs of those with DD should also be explored. Expanding this research to other agencies and organizations in the St. Louis area (e.g., OASIS, ARC) that serve the DD community is also an avenue for future research.

Exploring additional andragogical avenues at AADD such as AADD staff members' belief in the older adult with DD learner, trust, and/or developing or modifying a tool to measure the propensity of AADD's program facilitators to be andragogical, may also be important areas for future research. Future researchers may also be interested in sampling different programs around the country or globe regarding the leadership styles utilized within programs and services supporting those aging with DD.

Current State of the Program

Lindenwood University undergraduate anthropology/social science students will be working with AADD in the summer of 2015 on a 'Good Life' research project headed by Dr. Christina Dames, Assistant Professor of Anthropology and Sociology. This project will entail undergraduate students conducting interviews and life histories aimed at understanding how older adults think of 'a good life.' This project will help add to the research literature pertaining to the needs of those aging with DD.

Conclusion

The results of this study provided evidence of the application of andragogy with older adult learners with DD. Treating older adults with DD as equals was noted as essential for helping promotion of independence and well-being in later-life. This

research study demonstrated that older adults with DD are able to promote this independence and successfully age in place, when they have the opportunity to learn in an environment that recognizes and respects their individual capabilities, motivations, goals, and desires, as well as an environment that requires high expectations and lots of fun.

Respect – treating everyone as equals regardless of whether a DD exists, and providing a learning environment that is fun, humorous, and trusting (I3, observations 1-4), emerged as key elements for enhancing the learning experiences for those wishing to age in place with DD. This study also highlighted the importance of maintaining an identity with age in order to promote independence and overall well-being in later life for those with DD. According to the various AADD stakeholders involved in this study, the essential components to helping older adults with DD learn to maintain independence and successfully age in place are to engage, protect, and teach. Additional characteristics, such as having the ability to listen, advise, and motivate, also help to create enriching learning environments for those aging with DD.

The Senior Hot Shots identified collaborative, hands-on, group learning experiences as optimal learning methods. In addition, the use of sarcasm, humor, and friendly competition were also found to be effective teaching methodologies used at AADD. Furthermore, genuine friendships and strong social networks with family and friends were continually reiterated as essential components to help buffer against the physical (e.g., ADL's and IADL's) and psychological (e.g., grief and memory) age-related challenges faced by older adults with DD. In particular, strong social supports, as

evidenced at AADD, were noted as being essential to help overcome the increased number of losses (e.g., friends, family, and staff) afflicting this population of older adults.

Knowledgeable care staff members versed in basic medical care, aging processes, and DD, were identified in this study as being essential qualities for those wishing to promote independence and aging in place for those with DD. In addition, keeping apprised of emerging age-related issues, in particular, a greater need for caregiving (CNA) training for older adults with DD who are experiencing reverse caregiving roles (and are having to care for their aging parents and/or siblings), public policy, and greater collaboration between aging and DD networks) was identified in this study as imperative to the development of this field. In addition, it is imperative that organizations striving to meet the educational needs of those aging with DD continually reassess the learning needs of this heterogeneous aging population and their caregivers.

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Appendix A

ASSOCIATION ON AGING WITH DEVELOPMENTAL DISABILITIES

Institutional Review Board
Lindenwood University
209 S. Kingshighway
St. Charles, MO 63301

June 10, 2014

Dear Lindenwood University IRB:

On behalf of the Association on Aging with Developmental Disabilities, I am writing to grant permission for Tina Grosso, a doctoral candidate at Lindenwood University, to conduct her research titled, "Exploring How Older Adults Who Qualify for the Association on Aging with Developmental Disabilities (AADD) Programs and Services Learn to Successfully Age in Place". I understand that Tina Grosso, along with her Faculty Chair, Susan Isenberg, will recruit our clients to participate in focus groups and observational studies as well as conduct interviews and a questionnaire with staff and caregivers at the Association on Aging With Developmental Disabilities over the next couple of months (upon IRB approval until November 30, 2014). We are happy to participate in this study and contribute to this important research.
Sincerely,

Signature

Pamela Merkle
Executive Director
Association on Aging with Developmental Disabilities

■ 2385 HAMPTON, STE. 110 ■ ST. LOUIS, MO 63139 ■ (314) 647-8100

PLB Partially funded by the Productive Living Board

St. Louis Office for Developmental Disability Resources

Appendix B

Andragogy Observational Checklist

Date:
Time:
Location:

Knowles's (1973, 1995, p. 5) eight process elements and six assumptions of the adult learner provided the theoretical framework for this checklist.

Knowles's (1973, 1995) Andragogy Process Elements	**Evidence of application with developmentally disabled older adult learners**
1. Preparing the learner – learners have the opportunity to gain insight as to what to expect from the learning experience.	
2. Establishing a climate conducive to learning – the learning environment is conductive to learning both psychologically and physically. The environment is relaxed, fun, trusting collaborative, mutually respectful, informal, warm, supportive, authentic, and safe for older adult learners with developmental disabilities (DD)?	
3. Creating a mechanism for mutual planning - learning objectives are mutually agreed upon by persons aging with DD and the Association on Aging with Developmental Disabilities (AADD) staff.	
4. Involving learners in diagnosing their learning needs – learners and AADD staff work together to identify learning needs.	

5. Involving learners in forming their learning objectives that will satisfy their learning needs – objectives are mutually negotiated by learners and AADD staff.	
6. Involving learners in designing a pattern of learning experiences – learners and AADD staff develop learning strategies, projects, etc.	
7. Helping learners conduct these learning experiences with suitable techniques and materials – how are learning needs addressed, what learning strategies are used by learners and AADD staff?	
8. Involving learners in evaluating their learning outcomes and re-diagnosing learning needs – Self-assessment, assessment by caregivers, AADD staff, and other healthcare professionals.	

Knowles's (1973) six assumptions of adult learners	**Evidence of application with developmentally disabled older adult learners**
1. Need to know reason for learning something – reason that makes sense to the learner (e.g., maintaining independence)	
2. Concept of learner – increasing self-directedness and independent learning opportunities	
3. Learner's experience – rich resources for learning by self and from each other (transference of vocational skills to retirement)	
4. Readiness to learn – develops from life tasks and problems (age-related challenges)	
5. Orientation to learning – immediate application of learning – promoting independence.	
6. Motivation – internal rather than external motivation - desire to age in place and to remain healthy and happy.	

Appendix C

Emailed Informed Consent Form and AADD Staff Questionnaire

Dear Association on Aging with Developmental Disabilities (AADD) Staff,

My name is Tina Grosso, and I am a doctoral student at Lindenwood University. As part of my doctoral research, I am requesting your voluntary participation in completing a questionnaire regarding the learning needs of older adults with developmental disabilities (DD). Your responses to questions in this questionnaire are extremely valuable to my doctoral research and the exploration of the unique learning need and age-related challenges faced by those aging with DD. This questionnaire is entirely anonymous.

This questionnaire will take approximately one hour to complete. I would be most grateful for your time and participation. If you would like more information, please keep reading.

Questionnaire-Informed Consent

You are invited to participate in a research study conducted by Tina Grosso under the guidance of Dr. Susan Isenberg. The purpose of this exploratory qualitative study is to determine how older adults with DD learn to maintain their independence and successfully age in place. This study will achieve this by exploring the age-related learning needs of older adults with DD and the ways in which such educational needs are best met.

Your voluntary participation will involve the completion of an email questionnaire, distributed by Tina. The amount of time involved in your participation will be approximately one hour for completion of the questionnaire.

There may be certain risks or discomforts associated with this research. They include: participants may feel uneasy or embarrassed about certain topics related to the aging process (e.g., loss of independence issues). In addition, discussions about loss of friends/ loved ones and the grief process may elicit sad feelings. This may be upsetting for some participants.

The possible benefits to you from participating in this research include identifying best practice learning strategies to help foster independence and successful aging in place for people with DD. Participants in this research may also be able to reduce any stigmas or stereotypes that may exist about aging with DD. Participants may also have the opportunity to demonstrate that independent learning (versus dependent learning) leads to independent living (versus dependent living) for those aging with DD.

Your participation is voluntary and you may choose not to participate in this research study or to withdraw your consent at any time. You may choose not to answer any questions that you do not want to answer. You will NOT be penalized in any way should you choose not to participate or to withdraw.

We will do everything we can to protect your privacy. As part of this effort, your identity will not be revealed in any publication or presentation that may result from this study and the information collected will be destroyed upon completion of the study.

If you have any questions or concerns regarding this study, or if any problems arise, you may call the Investigator, Tina Grosso 636.949.4486 or the Supervising Faculty, Dr. Susan Isenberg 636.949.4709. You may also ask questions or state concerns regarding your participation to the Lindenwood Institutional Review Board (IRB) through contacting Dr. Jann Weitzel, Vice President for Academic Affairs at 636-949-4846.

Thank you in advance for your participation in completing this questionnaire.

If you are ready to start the questionnaire, please see attached.

Sincerely,
Tina Grosso

Questionnaire –AADD Staff

1. Job Title:

2. Which AADD Programs/ Services do you facilitate?

3. Years employed at AADD:

4. Number of years working with/ caring for older adults with developmental disabilities (DD):

5. What age-related learning challenges do older adults with DD face?

6. In what ways do you help elderly persons with DD learn to cope with the challenges of aging? Give examples.

7. How do you help older adults with DD learn to address their physical needs (i.e., ADLs and IADLs)?

8. How do you help older adults with DD learn to address their psychosocial needs?

9. What learning strategies do older adults at AADD use to help them maintain their independence?

10. In what ways do AADD's programs and services for seniors prepare older adults with DD for the challenges of aging?

11. It there anything else you think people should understand about older adult learners with DD?

Appendix D

Adult (AADD staff) Consent Form Senior Hot Shots Retirement Support Group Observations

Lindenwood University
School of Education
209 S. Kingshighway
St. Charles, Missouri 63301

Informed Consent for Participation in Research Activities

Exploring How Older Adults Who Qualify for the Association on Aging with Developmental Disabilities (AADD) Programs and Services Learn to Successfully Age in Place

Principal Investigator: Tina Grosso
Telephone: 636-949-4486 E-mail: tgrosso@lindenwood.edu

Participant ______________________________Contact info _________________

---

1. You are invited to participate in a research study conducted by Tina Grosso under the guidance of Dr. Susan Isenberg. The purpose of this exploratory qualitative study is to determine how older adults with developmental disabilities (DD) learn to maintain their independence and successfully age in place. This study will achieve this by exploring the age-related learning needs of older adults with DD and the ways in which such educational needs are best met.

2. a) Your participation will involve:

   Voluntary participation in a Senior Hotshot Retirement Support Group observation, conducted by Tina.

   b) The amount of time involved in your participation will be:

   Approximately 2-4 hours for the observations (depending on how long the group meets for, usually from 10 a.m. – 2 p.m.).

3. There may be certain risks or discomforts associated with this research. They include: participants may feel uneasy or embarrassed about certain topics related to the aging process (e.g., loss of independence issues). In addition, discussions about the loss of

friends/ loved ones and the grief process may elicit sad feelings. This may be upsetting for some participants. Feelings of frustration about the aging process may also arise (e.g., frustrated that they can no longer work or live alone, and/or frustrations with memory loss etc.).

4. The possible benefits to you from participating in this research include identifying best practice learning strategies to help foster independence and successful aging in place for people with DD. Persons aging with DD will have an opportunity to voice their opinions about the aging process and their age-related learning needs. Participants in this research may also be able to reduce any stigmas or stereotypes that may exist about aging with DD. Participants may also have the opportunity to demonstrate that independent learning (versus dependent learning) leads to independent living (versus dependent living).

5. Your participation is voluntary and you may choose not to participate in this research study or to withdraw your consent at any time. You may choose not to answer any questions that you do not want to answer. You will NOT be penalized in any way should you choose not to participate or to withdraw.

6. We will do everything we can to protect your privacy. As part of this effort, your identity will not be revealed in any publication or presentation that may result from this study, and the information collected will be destroyed upon completion of the study.

7. If you have any questions or concerns regarding this study, or if any problems arise, you may call the Investigator, Tina Grosso 636.949.4486 or the Supervising Faculty, Dr. Susan Isenberg 636.949.4709. You may also ask questions of or state concerns regarding your participation to the Lindenwood Institutional Review Board (IRB) through contacting Dr. Jann Weitzel, Vice President for Academic Affairs at 636-949-4846.

I have read this consent form and have been given the opportunity to ask questions. I will also be given a copy of this consent form for my records. I consent to my participation in the research described above.

________________________________ ________________________________
Participant's Signature Date Participant’s Printed Name

________________________________ ________________________________
Signature of Principal Investigator Date Investigator Printed Name

Adult (with DD but no guardian) Consent Form - Sr. Hotshot Retirement Support Group Observations

Lindenwood University
School of Education
209 S. Kingshighway
St. Charles, Missouri 63301

Informed Consent for Participation in Research Activities

Exploring How Older Adults Who Qualify for the Association on Aging with Developmental Disabilities (AADD) Programs and Services Learn to Successfully Age in Place

Investigator: Tina Grosso
Telephone: 636-949-4486 E-mail: tgrosso@lindenwood.edu
Participant__________________________ Contact info_____________________________

We are doing a study to find out how you learn to stay active, healthy, and independent as you get older.

We are asking you to help because we do not know very much about your learning needs as you age.
If you agree to be in our study, we will ask you to participate in Senior Hotshot Retirement Support Group observations, conducted by Tina. Each observation will last between 2-4 hours.
What we learn in this research may help other older adults with developmental disabilities (DD).
You may ask us questions at any time.
There is no right or wrong way to behave during the observations because this is not a test. We just want to see what learning activities you do at The Senior Hotshot Retirement Support Group, and how you learn.
If you sign this paper, it means you have read and/or have been told about our study and you want to be in it. If you do not want to be in the study, do not sign the paper. Being in the study is up to you, and no one will be upset if you do not sign the paper, or if you change your mind later.

Participant's Signature _______________________________ Date _________________

Investigator's Signature ______________________________ Date ____________

Guardian Consent Form - Sr. Hotshot Retirement Support Group Observations

Lindenwood University
School of Education
209 S. Kingshighway
St. Charles, Missouri 63301

Informed Consent for Guardians to Sign for
Developmentally Disabled Adults Participation in Research Activities

Exploring How Older Adults Who Qualify for the Association on Aging with Developmental Disabilities (AADD) Programs and Services Learn to Successfully Age in Place

Principal Investigator: Tina Grosso
Telephone: 636-949-4486 E-mail: tgrosso@lindenwood.edu

Participant _______________________________ Parent Contact info ______________

Dear guardian,

1. Your developmentally disabled adult is invited to participate in a research study conducted by Tina Grosso under the guidance of Dr. Susan Isenberg. The purpose of this exploratory qualitative study is to determine how older adults with developmental disabilities (DD) learn to maintain their independence and successfully age in place. This study will achieve this by exploring the age-related learning needs of older adults with DD and the ways in which such educational needs are best met.

2. a) Your developmentally disabled adult participation will involve:

   Voluntary participation in a Senior Hotshot Retirement Support Group observation, conducted by Tina.

   b) The amount of time involved in your developmentally disabled adult's participation will be:

   Approximately 2-4 hours for the observation (depending on how long the program lasts – usually from 10 a.m. – 2 p.m.).

3. There may be certain risks or discomforts to your developmentally disabled adult associated with this research. They include: participants may feel uneasy or embarrassed about certain topics related to the aging process (e.g., loss of independence issues). In addition, discussions about the loss of friends/ loved ones and the grief process may elicit sad feelings. This may be upsetting for some participants. Feelings of frustration about the aging process may also arise (e.g., frustrated that they can no longer work or live alone, and/or frustrations with memory loss etc.).

4. The possible benefits to your developmentally disabled adult from participating in this research include: identifying best practice learning strategies to help foster independence and

successful aging in place for people with DD. Persons aging with DD will have an opportunity to voice their opinions about the aging process and their age-related learning needs. Participants in this research may also be able to reduce any stigmas or stereotypes that may exist about aging with DD. Participants may also have the opportunity to demonstrate that independent learning (versus dependent learning) leads to independent living (versus dependent living).

5. Your developmentally disabled adult's participation is voluntary and you may choose not to let your developmentally disabled adult participate in this research study or to withdraw your consent for your developmentally disabled adult's participation at any time. Your developmentally disabled adult may choose not to answer any questions that he or she does not want to answer. You and your developmentally disabled adult will NOT be penalized in any way should you choose not to let your developmentally disabled adult participate or to withdraw your developmentally disabled adult.

6. We will do everything we can to protect your developmentally disabled adult's privacy. As part of this effort, your developmentally disabled adult's identity will not be revealed in any publication or presentation that may result from this study, and the information collected will be destroyed upon completion of the study.

7. If you have any questions or concerns regarding this study, or if any problems arise, you may call the Investigator, Tina Grosso 636.949.4486 or the Supervising Faculty, Dr. Susan Isenberg 636.949.4709. You may also ask questions of or state concerns regarding your participation to the Lindenwood Institutional Review Board (IRB) through contacting Dr. Jann Weitzel, Vice President for Academic Affairs at 636-949-4846.

I have read this consent form and have been given the opportunity to ask questions. I will also be given a copy of this consent form for my records. I consent to my developmentally disabled adult's participation in the research described above.

____ ________________________________
Parent's/Guardian's Signature Date Parent's/Guardian's Printed Name

____
Developmentally Disabled Adult's Printed Name

____ ________________________________
Signature of Investigator Date Investigator Printed Name

Appendix E

Focus Group Questions –The Association on Aging with Developmental Disabilities (AADD) Senior Hotshot Retirement Support Group Participants

Demographic Questions
Ages:

Years at AADD:

Which AADD programs are you in?

1. What is the hardest part about growing old?

2. How do you keep active and healthy?

3. How do you stay safe living at home?

4. What is your favorite way to learn? (Prompt: learning in groups or alone, hand-on learning?)

5. Which AADD programs do you enjoy most?

6. Besides AADD, where else to you learn about aging?

7. What other programs/ services would help you?

Appendix F

Focus Group Informed Consent Form – Adults with DD but no guardian

Lindenwood University
School of Education
209 S. Kingshighway
St. Charles, Missouri 63301

Informed Consent for Participation in Research Activities

Exploring How Older Adults Who Qualify for the Association on Aging with Developmental Disabilities (AADD) Programs and Services Learn to Successfully Age in Place

Principal Investigator: Tina Grosso
Telephone: 636-949-4486 E-mail: tgrosso@lindenwood.edu

Participant ___________________________ Contact info ________________________

You are invited to participate in a research study conducted by Tina Grosso under the supervision of Dr. Susan Isenberg.

We are doing a study to find out how you learn to stay independent as you age.

We want to find out what you find hardest about growing older.

We also want to find out how you learn to stay active, healthy, and independent (in your own home).

We would like to invite you to take part in a focus group, led by Susan. The focus group will last approximately 1 hour.

3. It is possible that you will feel sad or embarrassed about certain topics related growing old (e.g., loss of independence, retiring, losing friends, and/or family members). This may be upsetting and/or frustrating for you.

4. The possible benefits to you from participating in this study include: understanding how you learn to stay active, healthy, and independent as you age. You can also share your opinions about getting older, and maybe reduce any negative images people have about aging with developmental disabilities (DD).

5. You may choose not to participate in this research study or to withdraw at any time. You do not have to answer any questions that you do not want to answer. You will

NOT be punished in any way if you choose not to take part or if you leave the study at any time.

6. We will do everything we can to protect your privacy. Your name will not be put in any publication or presentation about this study. The information we collect will also be destroyed when the study is finished.

7. If you have any questions about this study, you may call:
Tina Grosso at 636.949.4486
Dr. Susan Isenberg at 636.949.4709, and/or
Lindenwood Institutional Review Board (IRB) - Dr. Jann Weitzel at 636-949-4846.

If you sign this paper, it means you have read / have been told about our study and you want to be in it. If you do not want to be in the study, do not sign the paper. Being in the study is up to you, and no one will be upset if you do not sign the paper, or if you change your mind later.

I have been asked if I have any questions. I will be given a copy of this consent form for my records.

______________________________ ______________________________
Participant's Signature Date Participant's Printed Name

______________________________ ______________________________
Signature of Principal Investigator Date Investigator Printed Name

Focus Group Informed Consent Form – AADD Staff

Lindenwood University
School of Education
209 S. Kingshighway
St. Charles, Missouri 63301

Informed Consent for Participation in Research Activities

Exploring How Older Adults Who Qualify for the Association on Aging with Developmental Disabilities (AADD) Programs and Services Learn to Successfully Age in Place

Principal Investigator: Tina Grosso
Telephone: 636-949-4486 E-mail: tgrosso@lindenwood.edu

Participant ___________________ Contact info __________________________________

---

1. You are invited to participate in a research study conducted by Tina Grosso under the guidance of Dr. Susan Isenberg. The purpose of this study is to determine how older adults with developmental disabilities (DD) learn to maintain their independence and successfully age in place. This study will achieve this by exploring the age-related learning needs of older adults with DD and the ways in which such educational needs are best met.

2. a) Your participation will involve:

Voluntary participation in a focus group, led by Susan.

b) The amount of time involved in your participation will be:
Approximately one hour for the focus group.

3. There may be certain risks or discomforts associated with this research. They include: you may feel uneasy or embarrassed about certain topics related to the aging process (e.g., loss of independence issues). In addition, discussions about the loss of friends/ loved ones and the grief process may elicit sad feelings. This may be upsetting for some participants. Feelings of frustration about the aging process for those you care for may also arise (e.g., frustrated that they can no longer work or live alone, and/or frustrations with memory loss etc.).

4. The possible benefits to you from participating in this research include identifying best practice learning strategies to help foster independence and successful aging in place for people with DD. Persons aging with DD will have an opportunity to voice their opinions about the aging process and their age-related learning needs. Participants in this

research may also be able to reduce any stigmas or stereotypes that may exist about aging with DD. Participants may also have the opportunity to demonstrate that independent learning (versus dependent learning) leads to independent living (versus dependent living).

5. Your participation is voluntary and you may choose not to participate in this research study or to withdraw your consent at any time. You may choose not to answer any questions that you do not want to answer. You will NOT be penalized in any way should you choose not to participate or to withdraw.

6. We will do everything we can to protect your privacy. As part of this effort, your identity will not be revealed in any publication or presentation that may result from this study, and the information collected will be destroyed upon completion of the study.

7. If you have any questions or concerns regarding this study, or if any problems arise, you may call the Investigator, Tina Grosso 636.949.4486 or the Supervising Faculty, Dr. Susan Isenberg 636.949.4709. You may also ask questions of or state concerns regarding your participation to the Lindenwood Institutional Review Board (IRB) through contacting Dr. Jann Weitzel, Vice President for Academic Affairs at 636-949-4846.

I have read this consent form and have been given the opportunity to ask questions. I will also be given a copy of this consent form for my records. I consent to my participation in the research described above.

____________________________________ ____________________________________

Participant's Signature Date | Participant’s Printed Name

____________________________________ ____________________________________

Signature of Principal Investigator Date | Investigator Printed Name

Focus Group Informed Consent Form – Guardian

Lindenwood University
School of Education
209 S. Kingshighway
St. Charles, Missouri 63301

Informed Consent for Guardians to Sign for
Developmentally Disabled Adults Participation in Research Activities

Exploring How Older Adults Who Qualify for the Association on Aging with Developmental Disabilities (AADD) Programs and Services Learn to Successfully Age in Place

Principal Investigator: Tina Grosso
Telephone: 636-949-4486 E-mail: tgrosso@lindenwood.edu

Participant ____________ Parent Contact info ________________________________

Dear guardian,

1. Your developmentally disabled adult is invited to participate in a research study conducted by Tina Grosso under the guidance of Dr. Susan Isenberg. The purpose of this exploratory qualitative study is to determine how older adults with developmental disabilities (DD) learn to maintain their independence and successfully age in place. This study will achieve this by exploring the age-related learning needs of older adults with DD and the ways in which such educational needs are best met.

2. a) Your developmentally disabled adults participation will involve:

Voluntary participation in a focus group, led by Susan.

b) The amount of time involved in your developmentally disabled adult's participation will be:
Approximately one hour for the focus group.

There may be certain risks or discomforts to your developmentally disabled adult associated with this research. They include: participants may feel uneasy or embarrassed about certain topics related to the aging process (e.g., loss of independence issues). In addition, discussions about the loss of friends/ loved ones and the grief process may elicit sad feelings. This may be upsetting for some participants. Feelings of frustration about the aging process may also arise (e.g., frustrated that they can no longer work or live alone, and/or frustrations with memory loss etc.).

The possible benefits to your developmentally disabled adult from participating in this research include: identifying best practice learning strategies to help foster independence and successful aging in place for people with DD. Persons aging with DD will have an opportunity to voice their opinions about the aging process and their age-related learning needs. Participants in this research may also be able to reduce any stigmas or stereotypes that may exist about aging with DD. Participants may also have the opportunity to demonstrate that independent learning (versus dependent learning) leads to independent living (versus dependent living).

Your developmentally disabled adult's participation is voluntary and you may choose not to let your developmentally disabled adult participate in this research study or to withdraw your consent for your developmentally disabled adult's participation at any time. Your developmentally disabled adult may choose not to answer any questions that he or she does not want to answer. You and your developmentally disabled adult will NOT be penalized in any way should you choose not to let your developmentally disabled adult participate or to withdraw your developmentally disabled adult.

We will do everything we can to protect your developmentally disabled adult's privacy. As part of this effort, your developmentally disabled adult's identity will not be revealed in any publication or presentation that may result from this study, and the information collected will be destroyed upon completion of the study.

7. If you have any questions or concerns regarding this study, or if any problems arise, you may call the Investigator, Tina Grosso 636.949.4486 or the Supervising Faculty, Dr. Susan Isenberg 636.949.4709. You may also ask questions of or state concerns regarding your participation to the Lindenwood Institutional Review Board (IRB) through contacting Dr. Jann Weitzel, Vice President for Academic Affairs at 636-949-4846.

I have read this consent form and have been given the opportunity to ask questions. I will also be given a copy of this consent form for my records. I consent to my developmentally disabled adult's participation in the research described above.

________________________________ ________________________

Parent's/Guardian's Signature Date Parent's/Guardian's Printed Name

____

Developmentally Disabled Adult's Printed Name

________________________________ ________________________

Signature of Investigator Date Investigator Printed Name

Focus Group Informed Assent Form – Older Adult with DD and Guardian

Lindenwood University
School of Education
209 S. Kingshighway
St. Charles, Missouri 63301

Informed Assent for Participation in Research Activities

Exploring How Older Adults Who Qualify for the Association on Aging with Developmental Disabilities (AADD) Programs and Services Learn to Successfully Age in Place

Investigator: Tina Grosso
Telephone: 636-949-4486 E-mail: tgrosso@lindenwood.edu
Participant ____________________ Contact info ____________________________

We are doing a study to find out how you learn to stay active, healthy, and independent as you get older.

We are asking you to help because we do not know very much about your learning needs as you age.
If you agree to be in our study, we will ask you to participate in a focus group, conducted by Tina and Susan. Each focus group will last between 2-4 hours.
What we learn in this research may help other older adults with developmental disabilities (DD).
You may ask us questions at any time.
There are no right or wrong answers because this is not a test. We just want to find out what you find hardest about getting older, and how you learn to keep healthy, and stay independent.
If you sign this paper, it means you have read and/or have been told about our study and you want to be in it. If you do not want to be in the study, do not sign the paper. Being in the study is up to you, and no one will be upset if you do not sign the paper, or if you change your mind later.

Older Adult with DD Signature ____________________________ Date ________________

Guardian's Informed Consent Form is on File: Yes ☐ No ☐ *(If no, obtain one before proceeding.)*
Investigator's Signature ____________________________ Date ________________

Appendix G

Interview Questions – AADD Staff and Stakeholders

1. What does one need to know in order to help older adults with DD live independently and successfully age in place?

2. What age-related learning challenges do older adults with DD face?

3. In what ways do you help elderly persons with DD learn to cope with the challenges of aging?

4. How do you help older adults with DD learn to address their physical needs (i.e., ADLs and IADLs)?

5. How do you AADD help older adults with DD learn to address their psychosocial needs?

6. What learning strategies help adults with DD live independently and successfully age in place?

7. In what ways do AADD's programs and services for seniors prepare older adults with DD for the challenges of aging?

8. Are there any ways in which AADD's programs and services for seniors do not prepare older adults with DD for the challenges of aging?

9. Any other comments?

Appendix H

Interview Informed Consent – AADD Staff and Stakeholders

Lindenwood University
School of Education
209 S. Kingshighway
St. Charles, Missouri 63301

Informed Consent for Participation in Research Activities

Exploring How Older Adults Who Qualify for the Association on Aging with Developmental Disabilities (AADD) Programs and Services Learn to Successfully Age in Place

Principal Investigator: Tina Grosso
Telephone: 636-949-4486 E-mail: tgrosso@lindenwood.edu

Participant ________________ Contact info ________________________

---

1. You are invited to participate in a research study conducted by Tina Grosso under the guidance of Dr. Susan Isenberg. The purpose of this exploratory qualitative study is to determine how older adults with developmental disabilities (DD) learn to maintain their independence and successfully age in place. This study will achieve this by exploring the age-related learning needs of older adults with DD and the ways in which such educational needs are best met.

2. a) Your participation will involve:

Voluntary participation in a 1:1 interview/ conversation with Tina.

b) The amount of time involved in your participation will be:
Approximately one hour for the interview.

3. There may be certain risks or discomforts associated with this research. They include: participants may feel uneasy or embarrassed about certain topics related to the aging process (e.g., loss of independence issues). In addition, discussions about the loss of friends/ loved ones and the grief process may elicit sad feelings. This may be upsetting for some participants. Feelings of frustration about the aging process may also arise (e.g., frustrated that they can no longer work or live alone, and/or frustrations with memory loss etc.).

4. The possible benefits to you from participating in this research include identifying best practice learning strategies to help foster independence and successful aging in place for people with DD. Persons aging with DD will have an opportunity to voice their opinions about the aging process and their age-related learning needs. Participants in this

research may also be able to reduce any stigmas or stereotypes that may exist about aging with DD. Participants may also have the opportunity to demonstrate that independent learning (versus dependent learning) leads to independent living (versus dependent living).

5. Your participation is voluntary and you may choose not to participate in this research study or to withdraw your consent at any time. You may choose not to answer any questions that you do not want to answer. You will NOT be penalized in any way should you choose not to participate or to withdraw.

6. We will do everything we can to protect your privacy. As part of this effort, your identity will not be revealed in any publication or presentation that may result from this study, and the information collected will be destroyed upon completion of the study.

7. If you have any questions or concerns regarding this study, or if any problems arise, you may call the Investigator, Tina Grosso 636.949.4486 or the Supervising Faculty, Dr. Susan Isenberg 636.949.4709. You may also ask questions of or state concerns regarding your participation to the Lindenwood Institutional Review Board (IRB) through contacting Dr. Jann Weitzel, Vice President for Academic Affairs at 636-949-4846.

I have read this consent form and have been given the opportunity to ask questions. I will also be given a copy of this consent form for my records. I consent to my participation in the research described above.

___________________________	___________________________
Participant's Signature Date	Participant's Printed Name
___________________________	___________________________
Signature of Principal Investigator Date	Investigator Printed Name

Vitae

Tina Grosso earned her Bachelor of Science Degree in Psychology (`06) and her Master's Degree in Gerontology (`09) from Lindenwood University. She began working at Lindenwood University in 2009 as an Executive Assistant and Adjunct Professor of Gerontology. Over the past couple of years she has worked with Lindenwood's Gerontology Program as an Instructor, teaching the following courses (at both the St. Charles and Belleville campus locations): Psychology of Aging, Physical Aspects of Aging, Social Aspects of Aging, Multi-disciplinary Geriatric Assessment, Counseling Older Adults, Mental Health Issues in the Elderly, and Literature in Aging.

Ms. Grosso founded Lambda Upsilon, Lindenwood University's Sigma Phi Omega Chapter, National Academic and Professional Honors Society in Gerontology, serving as the Faculty Advisor. Ms. Grosso also volunteers for the Alzheimer's Association, St. Louis Chapter as a Support Group Facilitator and Community Outreach Educator. Her areas of expertise include AD, DD, and the dual diagnosis of AD and DD.

Ms. Grosso is currently pursuing a Doctor of Education Degree in Instructional Leadership (Andragogy Emphasis) from the Lindenwood University School of Education. She anticipates completion in 2015. Ms. Grosso lives in St. Charles, Missouri with her family and their menagerie of pets.