사회복지학석사학위논문

Factors Associated with Social Welfare Service Utilization among Individuals with Developmental Disabilities

발달장애인의 사회복지서비스 이용 예측요인

2012년 8월

서울대학교 대학원

사회복지학과

김 준 영

Factors Associated with Social Welfare Service Utilization among Individuals with Developmental Disabilities

발달장애인의 사회복지서비스 이용 예측요인

지도교수 강 상 경

이 논문을 사회복지학석사 학위논문으로 제출함

2012년 4월

서울대학교 대학원

사회복지학과

김 준 영

김준영의 사회복지학석사 학위논문을 인준함

2012년 6월

위 원 장 김혜란 (인)

부 위 원 장 유조안 (인)

위 원 강 상 경 (인)

Factors Associated with Social Welfare Service Utilization among Individuals with Developmental Disabilities

JUNE YUNG KIM

A DISSERTATION

SUBMITTED TO THE DEPARTMENT OF SOCIAL WELFARE AND THE COMMITTEE ON THE GRADUATE SCHOOL IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF ART IN SOCIAL WELFARE

SEOUL NATIONAL UNIVERSITY

APRIL 2012

Abstract

Factors Associated with Social Welfare Service Utilization among Individuals with Developmental Disabilities

Kim, June Yung

Department of Social Welfare

The Graduate School

Seoul National University

The paradigm of self-determination has influenced the institutionalized system of support for individuals with disabilities, reflecting the voice of the target population in the design and direction of policies and prohibiting disability-based discrimination in all areas of society. Under this new paradigm, individuals with disabilities take more responsibility for adjusting the necessary services to their needs. The new arrangement, however, is unlikely to provide the same amount of benefits for individuals with developmental disabilities. This might be the result of the fact that the arrangement was primarily focused on individuals with physical disabilities, thereby alienating individuals with developmental disabilities with other particular needs. Individuals with developmental disabilities have a

continuous need for social welfare services and support as they are limited in their capacity for self-care. However, little attention has been paid to this vulnerable population both in practice and policy. Much less research has examined the utilization of social welfare services that address the need for support among individuals with developmental disabilities throughout their lives.

The purpose of the present study was to investigate the relationship between the social welfare service use and the predisposing, enabling, and need factors among individuals with developmental disabilities in Korea. This study adopted the Gelberg-Andersen Behavioral Model for Vulnerable Populations (Gelberg, Andersen & Leake, 2000) as a theoretical framework to guarantee a comprehensive, systematic approach in identifying contributing factors associated with their service use. A population referred to as individuals with developmental disabilities does not necessarily share common properties, which might affect them differently in actualizing the service use. Accordingly, this study further explored variations in the relationships among contributing factors and the social welfare service use by subordinate type of developmental disabilities and age group among individuals with developmental disabilities.

Based on the objectives of the research, the current study aimed to answer the following questions:

1. What are the predisposing, enabling, and need factors predicting the social welfare service utilization among individuals with developmental disabilities?
2. Do the factors that predict the social welfare service utilization of individuals with developmental disabilities vary by subordinate type of developmental disabilities, i.e., autistic disorders and intellectual disabilities?
3. Do the factors that predict the social welfare service utilization of

individuals with developmental disabilities vary by age group, i.e., minors below the age of 19 and adults 19 and over?

In order to empirically examine the research hypotheses, the present study employed secondary data from the '2011 Policy Design on Supporting People with Developmental Disabilities and Their Families through Need Assessment and Field Research', Korea's first nationally representative survey on individuals with developmental disabilities. Under the supervision of Ministry of Health and Welfare, the data were collected by one-on-one, face-to-face interviews with caregivers of individuals with developmental disabilities. The sample comprised 1,500 individuals with developmental disabilities in all ages ranging from 3 to 77; those below the age of 19 accounted for 33% (495 cases) and those 19 and older for 67% (1,005 cases). As for subordinate types of individuals with developmental disabilities, 80.4% had intellectual disabilities (1,206 cases) and 19.6% had autistic disorders (294 cases). Descriptive analysis was conducted using the SPSS 19.0 statistical package. Structural equation modeling was performed to examine contributing factors that affect the social welfare service use among individuals with developmental disabilities, and multi-group analysis was conducted to explore within-group variations in predictors of the use of those services, using AMOS 18.0 software.

The major findings of the current research are as follows. First, age was identified as a predisposing factor significantly associated with the social welfare service utilization among individuals with developmental disabilities. Living condition and informal social support from individuals with disabilities were significant enabling factors predicting the service use. Perceived need for care, subordinate types of developmental disabilities, and disability grade were important need factors in their access to the community-based care system. This indicates that younger age, living with family, having social relationships with

friends with disabilities, more needs for formal support, autistic disorders, and more severe levels of disabilities were associated with the use of more care services among individuals with developmental disabilities in Korea. Second, the findings of the data analysis using multi-group structural equation modeling indicated significant variations in the paths that determine the social welfare service utilization across subordinate types of developmental disabilities. Particular paths, including national basic livelihood security recipient status, perceived need for services and disability grade, were found to be responsible for group variations. Third, significant variations in the paths determining the use of formal care services across age groups were identified. Specifically, there were age group differences in size or direction of influence of age, education, and dual diagnosis on the service use by individuals with developmental disabilities.

The present study was the first attempt to adopt the Gelberg-Andersen Behavioral Model for Vulnerable Populations (Gelberg et al., 2000) as a theoretical framework to guarantee a holistic and systematic approach in identifying contributing factors predicting the social welfare service utilization among individuals with developmental disabilities in Korea. As demonstrated in the research findings, the present study validated the applicability of the behavioral model of service utilization to this vulnerable population. In addition, this study provided empirical evidence for the development and provision of social welfare services tailored to address the varied, particular needs of the target population by exploring variations in the factors that affect the service utilization across individuals with autistic disorders and individuals with intellectual disabilities, as well as minors and adults with developmental disabilities. The findings of the current research carry significant implications for building an empirical foundation for future research and related policy designs for social welfare services for individuals with developmental disabilities in Korea, as the study utilized a nationally representative sample of the vulnerable population and thus achieved

high generalizablity.

The current research used secondary data from the Survey on Individuals with Developmental Disabilities, which was based on registered individuals with developmental disabilities in the National Disability Registration Database, so that unregistered individuals were not taken into consideration. The use of social welfare services among individuals with developmental disabilities is likely determined by caregivers in terms of the nature of disabilities, such as a lack of self-determination skills in the process of managing independent living. Also, the service provision factor in the structural domain is expected to significantly predict their access to formal care services. Due to the limitation of employing secondary data, these factors could not be included in the research model. Future research might provide more validated findings by employing more structured, specified survey items. Through a longitudinal approach, future research would be able to estimate time-varying effects of contributing factors that predict the use of social welfare services.

Keywords: Individuals with Developmental Disabilities, Social Welfare Service Utilization, the Gelberg-Andersen Behavioral Model for Vulnerable Populations, Variations by Subordinate Type of Developmental Disabilities and Age Group, Structural Equation Modeling, Multi-Group Analysis

Student Number: 2010-20129

CONTENTS

TABLES

FIGURES

CHAPTER 1. INTRODUCTION

1.1. Problem Statement

The institutionalized system of support for individuals with disabilities in Korea was established by the Special Education Promotion Act of 1977, which was the first legal recognition of individuals with disabilities in Korea. The subsequent enactment of the Welfare Law for the Physically or Psychologically Disabled of 1980 contributed toward building up a comprehensive legal foundation for individuals with disabilities. Through the full amendments, the Welfare Law for Persons with Disabilities was instituted in 1989 (Yoo & Chun, 2008). The paradigm of self-determination has influenced the subsequent legal changes, reflecting the voice of the target population in the design and direction of policies and prohibiting disability-based discrimination in all areas of society. For example, the 2007 Amendments of the Welfare Law for Persons with Disabilities, the Anti-discrimination Against and Remedies for Persons with Disabilities Act of 2008, and the Personal Assistance for Persons with Disabilities Act of 2011 all advocated for the extension of the rights of individuals with disabilities (J. Kim, 2008).

The social welfare service system has enabled individuals with disabilities to fully participate in society and secure equal status. More specifically, the system has allowed individuals with disabilities to decide what the necessary services are for themselves. Under this new paradigm, individuals with disabilities take bigger responsibility for adjusting the necessary services to their needs with improved flexibility (Park & Kim, 2010).

The new arrangement, however, is unlikely to provide the same amount of benefits for individuals with developmental disabilities (J. Kim, 2008); in the

community of individuals with disabilities, those with developmental disabilities are marginalized. For example, the need for rehabilitative therapeutic services among individuals with autistic disorders is considerable due to the nature of the disability, which involve limited capacity for activities of daily living- only 10.2% among individuals with developmental disabilities are capable of managing independent living (Cho et al., 2011). However, the proportion of individuals with autistic disorders not utilizing rehabilitation services due to cost is relatively high (49.1%) compared to the rate of individuals with disabilities in general (15.9%) (Kim et al., 2012). Those receiving the national basic livelihood security among individuals with intellectual disabilities are comparatively high: 33.0% are recipients of public benefits, while the percentage of individuals with disabilities in general is 16.9% (Kim et al., 2012). Further, the Korean media portrays individuals with developmental disabilities as dependent, passive entities. This might be the result of the fact that the arrangement was primarily planned for individuals with physical disabilities, excluding individuals with developmental disabilities with particular needs (J. Kim, 2008).

Developmental disabilities bear more severe conditions than many other disabilities and feature a lack of self-determination skills in the process of managing independent living, which emphasizes the importance of having individuals with developmental disabilities benefit from the arrangement; however, little attention has been paid to this vulnerable population both in practice and policy. Much less research has examined access to social welfare services that address the need for support among individuals with developmental disabilities throughout their lives.

A few recent studies appreciated the importance of understanding the use of social welfare services among individuals with developmental disabilities, furthering the knowledge in order to improve quality of life for the population. Kim, Yoo, and Choi (2011), for example, specifically explored the need for care services

among infants with developmental disabilities in their research; however, Korean studies in the field are still limited to providing general information of the current utilization rate, the need for formal service, and the satisfaction level of the service utilization experience. Understanding contributing factors that predispose, enable, and necessitate individuals with developmental disabilities to use social welfare services carries significant implications for determining policies and practices that ensure the relevant social welfare services are provided to the target population. Unfortunately, the relationship between contributing factors and the service utilization among individuals with developmental disabilities has not yet been examined.

The present study aims to investigate the relationship between the social welfare service utilization and the predisposing, enabling, and need factors among individuals with developmental disabilities in Korea. This study adopts the Gelberg-Andersen Behavioral Model for Vulnerable Populations (Gelberg et al., 2000) as a theoretical framework to guarantee a comprehensive, systematic approach for identifying contributing factors associated with their service use.

A population referred to as individuals with developmental disabilities does not necessarily share common properties, which might affect them differently in actualizing the service use. Accordingly, this study further explored variations in the relationships among contributing factors and the social welfare service use by subordinate type of developmental disabilities and age group among individuals with developmental disabilities.

Examining social welfare services for individuals with developmental disabilities in Korea is an important task in securing essential support for the vulnerable population in the community. In other words, investigating the current status of the formal care system for individuals with disabilities in which those with developmental disabilities participate as the major consumers might help to provide an empirical ground for the design and delivery of effective, efficient and

equitable social welfare services.

1.2. Research Questions

The purpose of the present study is to understand the influence of the predisposing, enabling, and need factors among individuals with developmental disabilities in actualizing the social welfare service utilization, and to explore disability subtype and age group variations by identifying significantly different pathways into formal care services. The research used the Gelberg-Andersen Behavioral Model for Vulnerable Populations (Gelberg et al., 2000) with an adaptation to reflect data from the '2011 Policy Design on Supporting People with Developmental Disabilities and Their Families through Need Assessment and Field Research'.

The current research contributes to the Korean literature on individuals with developmental disabilities by offering fundamental knowledge on their service use. Expected are the following contributions. First, the present study is the first attempt to utilize the behavioral model of service utilization suggested by Andersen and his colleagues (Andersen, 1995; Andersen & Newman, 1973; Gelberg et al., 2000) for individuals with developmental disabilities in Korea, expanding the applicability of the model into the Korean welfare context for individuals with disabilities. Second, by exploring differences in potential factors associated with the service utilization by subordinate type of developmental disabilities and age group, this study might provide empirical evidence for the development and provision of social welfare services addressing varied, particular needs of the population. Third, as the study examines the use of the social welfare services provided by the Korean Ministry of Health and Welfare under the relevant laws, research findings might suggest substantial implications for the design and direction of policies for individuals with developmental disabilities. Lastly, since

this study utilizes a nationally representative sample, its findings will have high generalizability.

Based on the objectives of the research, the current research aims to answer the following questions:

[Research Question 1] What are the predisposing, enabling, and need factors predicting the social welfare service utilization among individuals with developmental disabilities?

[Research Question 2] Do the factors that predict the social welfare service utilization of individuals with developmental disabilities vary by subordinate type of developmental disabilities, i.e., autistic disorders and intellectual disabilities?

[Research Question 3] Do the factors that predict the social welfare service utilization of individuals with developmental disabilities vary by age group, i.e., minors below the age of 19 and adults 19 and over?

CHAPTER 2. INDIVIDUALS WITH DEVELOPMENTAL DISABILITES AND RELATED SOCIAL WELFARE SERVICES

This chapter consists of two parts. First, it discusses definitions and characteristics of individuals with developmental disabilities. Second, it explains social welfare services for individuals with developmental disabilities in Korea.

2.1. Individuals with Developmental Disabilities

The U.S. Developmental Disabilities Assistance and Bill of Rights Act of 2000 defines 'developmental disabilities' as "severe, chronic disabilities attributable to mental and/or physical impairment, which manifest before the age of 22 and are likely to continue indefinitely". Developmental disabilities result in substantial limitations in three or more areas: self-care, receptive and expressive language, learning, mobility, self-direction, capacity for independent living and economic self-sufficiency, as well as the continuous need for individually planned and coordinated services.

In Article 1 of the Developmental Disabilities Assistance Act of Japan, 'developmental disabilities' are defined as disabilities involving brain dysfunction and/or symptoms like those of autism, Asperger's disorder, pervasive developmental disorders, learning disorders, and attention-deficit and behavior disorders, all of which generally manifest at younger ages (as cited in Lee, 2012).

In Korea, the term 'developmental disability' was originally used in reference to autistic disorder prior to the 2007 amendments of the Welfare Law for

Persons with Disabilities; however, Article 2 of its enforcement decree authorized a revised definition of ‘developmental disability’. The 2007 Amendments replaced the term ‘developmental disability’ with ‘autistic disorder’ and the term ‘mental retardation’ with ‘intellectual disability’, which thus modified the definition of ‘developmental disability’ to include autistic disorder and intellectual disability as subordinate types.

According to Article 2 of the Enforcement Decree of the Welfare Law for Persons with Disabilities, ‘individuals with intellectual disabilities’ are those who are inefficient or inadequate in self-care and/or social functioning due to a generalized delay or impairment in the development of cognitive and adaptive abilities. ‘Individuals with autistic disorders’ refers to those in need of continuous assistance due to symptoms of childhood autism or atypical autism such as lack of speech, disturbed motor behaviors, poor self-care, and failure to relate to others .

The present study adopts the definition of ‘developmental disabilities’ delineated in the Korean Welfare Law for Persons with Disabilities. Namely, individuals with developmental disabilities are conceptualized to include individuals with autistic disorders and individuals with intellectual disabilities.

As of August 2011, a total of 180,869 individuals were registered as individuals with developmental disabilities in Korea (Ministry of Health and Welfare [MOHW], 2011). Individuals with autistic disorders counted for 8.6% (n = 15,498) and individuals with intellectual disabilities for 91.4% (n = 165,371). The age of individuals with developmental disabilities ranged from 3 to 77; the number of minors below the age of 19 was 50,196 (28.8%) and that of adults 19 and over was 130,673 (72.2%). Table 2-1 provides the distribution information on the age of individuals with developmental disabilities (see Appendix A for further description of the characteristics of individuals with developmental disabilities in Korea).

[Table 2-1] Distribution Information on the Age of Individuals with Developmental Disabilities

Disability Types	N (%)	Mean (SD)	MIN	MAX	Skewness (SD)	Kurtosis (SD)
Developmental Disabilities	180,869 (100)	31.26 (15.83)	3	77	.399 (.01)	-.658 (.01)
Autistic Disorders	15,498 (8.6)	15.24 (6.41)	4	48	.723 (.02)	1.212 (.04)
Intellectual Disabilities	165,371 (91.4)	32.76 (15.62)	3	77	.310 (.01)	-.666 (.01)

Note. The table presents the analytic results of data from the '2011 Policy Design on Supporting People with Developmental Disabilities and Their Families through Need Assessment and Field Research'. Weighted values are provided.

The prevalence of autistic disorder in Korea is estimated to be about 4.5 per 10,000 (Kim et al., 2012). Autism is diagnosed by a combination of three criteria: impaired interactions; impaired communication; and restricted, repetitive, and stereotyped behavior patterns (American Psychiatric Association [APA], 2000). In Korea, it was reported that 77.7% of individuals with autistic disorders possessed intellectual development below the norm (Kim et al., 2012).

In Korea, about 0.3% of the general population is affected by a generalized impairment in the development of cognitive and social functioning (Kim et al., 2012). Primary features of mental retardation, or intellectual disorders, include low scores on formal intelligence tests, impaired functioning in performing the life tasks expected of someone of that same age, and development of the disorder before the age of 18 (APA, 2000; Kanaya, Sculling & Ceci, 2003; Roinson, Zigler & Gallagher, 2001 as cited in Nevid, Rathus & Greene, 2006).

As both intellectual disability and autistic disorder fall under disability grade 3, individuals with developmental disabilities are evaluated to engage in severe dysfunction according to the Welfare Law for Persons with Disabilities. A description of disability grade among individuals with developmental disabilities is presented in Table 2-2.

[Table 2-2] Disability Grade among Individuals with Developmental Disabilities

	Intellectual Disabilities	**Autistic Disorders**
Grade 1	Those whose intellectual quotient and social quotient scores are 34 and below, indicating that maintenance of a daily life and social adjustment are notably difficult, requiring assistance for the entire span of their life.	Those diagnosed with pervasive developmental disabilities (or autistic disorder) by the criteria of International Classification of Disease, 10th Version (henceforth ICD-10), showing generalized delay or impairment in development and having intellectual quotient scores below 70 and GAS[1] scores below20.
Grade 2	Those whose intellectual quotient and social quotient scores range from 35 to 49, indicating their possible ability to perform simple activities for maintaining daily life, possibly capable of uncomplicated jobs not requiring special skills.	Those diagnosed with pervasive developmental disabilities (or autistic disorder) by the criteria of ICD-10, showing generalized delay or impairment in the development and having intellectual quotient scores below 70 and GAS scores from 21 to 40.
Grade 3	Those whose intellectual quotient and social quotient scores range from 50 to 70, possible candidates for social and vocational rehabilitation through training.	Those having disabilities similar to grade 2 disabilities, but having intellectual quotient scores of 71 and above and GAS scores from 41 to 50.

Source: Ministry of Health and Welfare (2012). Assessment Criteria of Disability Grade (http://www.mw.go.kr).

[1] The Global Assessment Scale (Endicott, Spitzer, Fleiss & Cohen, 1976) is a 100-point single-item global scale used to evaluate psychological symptoms, social and vocational functioning of people with disabilities (Lee, Cho & Kwon, 2006).

With respect to behavioral characteristics, developmental disabilities among various disabilities involve severe difficulties in activities of daily living (ADL) and instrumental activities of daily living (IADL); all individuals with autistic disorders and 96.9% of individuals with intellectual disorders require assistance from others to manage activities of daily living, compared to 84.0% of individuals with disabilities in general needing such assistance (Kim et al., 2012). In addition, individuals with autistic disorders require an average of 6.5 assistance hours a day for maintenance of daily living, whereas those with intellectual disorders require 3.4 (Cho et al., 2011).

2.2. Social Welfare Services for Individuals with Developmental Disabilities

It is challenging to define 'social welfare service', since it is referred to variously as social service, human service, personal social service, and social care (D. Kim, 2012). Social welfare service includes services that are immaterial and socio-psychological, and its conceptualization is changeable to reflect the times and the societal context (Baek, 1994). Thus, defining 'social welfare service' requires thorough consideration of its historical context in society.

In Korea, the term 'social welfare service' has been commonly used to mean a professional, therapeutic service that rehabilitates individuals to live a normal life, intervening based on professional knowledge and skills (Nam & Cho, 1995). It was conceptualized narrowly as referring to direct personal help for community living and activities of individuals and families with weak social functioning (Jang, 1990). Recently, though, as policies pertaining to job creation in the social service sector have been established, a new approach toward social welfare service has begun to dominate; social welfare service has been newly interpreted in a broad sense as requiring an interdisciplinary approach (Kang et al., 2009). Within this context, Lee, Kim, Yeo, Kang, and Nam (2006) defined 'social welfare service' as an integrated, non-profitable, and inter-personal intervention aiming to improve quality of life by increasing opportunities for community participation, including health, education, childcare, daycare, and counseling services.

According to the Korean Social Security Act, social welfare service together with social insurance and public assistance constitutes the social security system. The definition of 'social welfare service' delineated in the Social Security Act is as follows:

> ‘Social security’ refers to social insurance, public assistance, social welfare service, and the related welfare system provided to protect individuals from social problems, such as illness, disability, aging, unemployment, and death, and to resolve problems of poverty with an aim to increase quality of life. ‘Social welfare service’ refers to the support system that provides counseling, rehabilitation, vocational training, and the use of social welfare institutions for individuals who require national, provincial/state and private assistance with an aim to enable individuals to live a normal life. ‘Related welfare system’ refers to a diverse welfare system that secures a life with human dignity in all areas of society, or health, residence, education, and employment. (art. 3)

Similarly, the Social Security Act defines ‘social welfare service’ as a type of service that aims to solve all the necessary problems of individuals in need and rehabilitate them to participate in community, not provided in the form of cash benefit (Kang et al., 2007).

When aiming to understand the social welfare service utilization among individuals with developmental disabilities in Korea, it is necessary to include particular services directly related to the target population and to define social welfare services, reflecting the current status of the Korean formal care system. With regard to social welfare services in place for individuals with disabilities in Korea, there are 15 services headed by Ministry of Health and Welfare, 12 implemented by other government ministries, 4 carried out according to municipal ordinances, 12 independently operated by private agencies, and 18 introduced after 2006 as decentralized programs (D. Kim, 2012).

Individuals with developmental disabilities, substantially limited in their capacity for independent living during their lifespan, have a continuous need for support. In the present study, targeting those who are identified as having issues in

development, ‘social welfare service’ is used to refer to care services provided by publicly funded institutions for individuals with developmental disabilities. In other words, social welfare services for individuals with developmental disabilities are the care services delineated in the Welfare Law for Persons with Disabilities (Y. Kim, 2008), namely community rehabilitation service, day care service, physical activity service, residential care service, group home service, respite service, and independent living housing service. Also included is community welfare service, of which individuals with developmental disabilities are the major consumers though not specified in Welfare Law for Persons with Disabilities, as well as the personal assistance service put in place by the Personal Assistance of the Disabled Act.

Table 2-3 provides the list of social welfare services directly related to individuals with developmental disabilities in Korea.

[Table 2-3] Social Welfare Services for Individuals with Developmental Disabilities

Type	Title	Social Welfare Services
Home Assistance Services	**Community Rehabilitation Service**	· Services necessary for community living of individuals with developmental disabilities, including counseling, treatment, vocational rehabilitation, community adjustment training, as well as programs to increase disability awareness in the community · 191 institutions nationwide (as of December, 2010)
	Community Welfare Service	· Comprehensive welfare services, provided by community welfare institutions to prevent and resolve community welfare problems. · 425 institutions nationwide (as of December, 2010)
	Day Care Service	· Services aiming to reduce the care burden of families with relatives that have disabilities by providing care services during the daytime for individuals with disabilities who are unable to maintain daily life without support. · 443 institutions nationwide (as of December, 2010)
	Physical Activity Service	· Services aiming to rehabilitate individuals with disabilities through physical activities and the recuperation of physical functioning. · 27 institutions nationwide (as of December, 2010)

	Personal Assistance Service	· Services aiming to improve the quality of life of individuals with disabilities by facilitating their independent living and reducing the burden of informal care for their families by providing assistance to individuals with disabilities who have difficulty with activities of daily living due to physical and mental disabilities. · Personal Assistance Services are for the registered individuals with disabilities aged 6 to 64, and are provided by personal care services, home help services, private services, and home-based nursing services, to name a few. The extent of personal assistance is decided by a review of the status and grade of disability. · FY 2011 budget of KRW 1.929 trillion
Residence Assistance Service	**Residential Care Service**	· Services which provide residential care and rehabilitation services, such as educational, vocational, physical and psychosocial rehabilitation programs for those who require continuous care. · 452 institutions nationwide (as of December, 2010): 40 for individuals with physical disabilities, 14 for individuals with visual disabilities, 10 for individuals with auditory/linguistic disabilities, 196 for individuals with intellectual disabilities, 10 for infants with disabilities, and 182 sanatoriums for individuals with severe disabilities.
	Group Home Service	· Services that provide rehabilitation programs to train individuals for independent living in a home-like environment while residing in a supportive community. · 589 institutions nationwide (as of December, 2010)
	Respite Service	· Services offered by institutions for individuals with disabilities that provide residential care for a certain period of time with rehabilitation services such as counseling as well as physical, vocational, and psychosocial rehabilitation programs. · 103 institutions nationwide (as of December, 2010)
	Independent Living Housing Service	· Services aiming to enhance the social integration of residential care service users by training them to maintain independent living in a community and by providing housing services where individuals can experience independent living and participate in social activities. · Centers with a capacity for 5 persons or less and providing residential services for less than 3 years.

Note. The table is a summary of information on social welfare services provided in the '2011 policy Design on Supporting People with Developmental Disabilities and Their Families through Need Assessment and Field Research'.

CHAPTER 3. THEORETICAL BACKGROUND

3.1. Theoretical Framework

Knowledge to date is limited in regard to contributing factors associated with the use of social welfare services among individuals with developmental disabilities in Korea. By employing a theoretical framework, the present research will likely provide insights into ways of improving quality of life for the target consumers as it takes a comprehensive, systematic approach toward understanding potential predictors on the service use. The Behavioral Model of Service Utilization (Andersen, 1995; Andersen & Newman, 1973), usually known as the Andersen Behavioral Model, has been broadly applied as a theoretical framework in various areas of service literature.

The Andersen Behavioral Model, looking at the service use as a performed 'behavior' of service utilization, identifies potential factors that promote or impede actualizing one's help-seeking behavior. The conceptual framework developed by Andersen and his colleagues (Andersen, 1995; Andersen & Newman, 1973; Gelberg et al., 2000) is a holistic model that takes into account personal and environmental dimensions in understanding the decision-making process of the service utilization (Andersen & Newman, 1973). The Andersen Behavioral Model has been dominant in the service literature due to its applicability to analyzing secondary data composed of service-related, interdisciplinary variables (Wolynsky, 1994 as cited in Lim & Yoon, 2009). For examining contributing factors associated with the service use of individuals with developmental disabilities, it is meaningful to employ the Andersen Behavioral Model as a holistic, systematic process for identifying major predictors that facilitate or hinder the social welfare service

utilization behavior (Andersen, 1995).

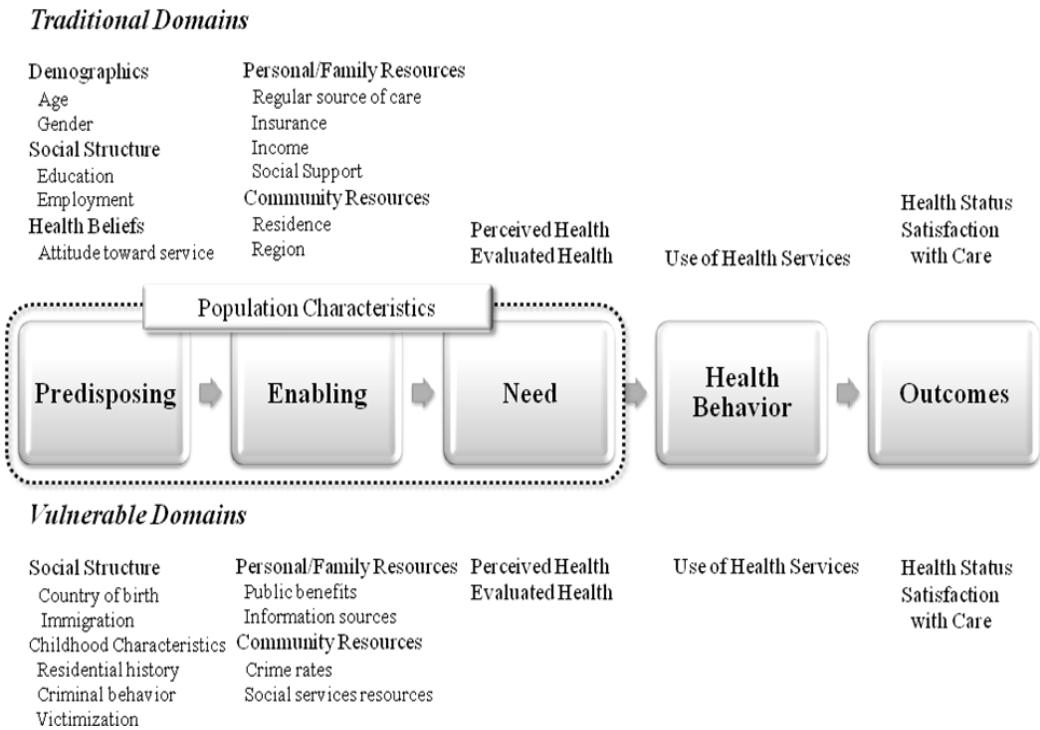
The Andersen Behavioral Model was first introduced in the late 1960s to assist with investigating equity issues of the health service system (Andersen, 1968 as cited in Kim, 2006). Individuals' service utilization behavior, according to the model, is predicted as a function of the predisposing, enabling, and need factors (Andersen, 1995). Namely, the Andersen Behavioral Model classifies determinants of the service utilization into three categories: the predisposing factors, i.e., individual characteristics that contribute toward the service utilization behavior prior to the need for services to take place; the enabling factors, which facilitate the service utilization behavior and promote access to service; and the need factors. All of these are considered in the model to affect the use of services (Andersen, 1995; Andersen & Newman, 1973).

The Andersen Behavioral Model has been expanded through a diversity of research (Andersen, 1995; Gelberg et al., 2000). The health care system that affects the service utilization behavior was incorporated into the original model in the 1970s, and was updated to evaluate the satisfaction of service consumers. During the 1980s, the Andersen Behavioral Model was extended to assess health status as the outcomes of the service utilization, and was employed as a conceptual framework to examine the effectiveness and efficiency of the service system. Subsequently, the model was adapted to acknowledge aspects of the external environment, such as physical, political, and economic elements, as important determinants of the service use. By the 1990s, the Behavioral Model had evolved to become a holistic and systematic model with an emphasis on its dynamic nature (Andersen, 1995).

Gelberg and Andersen recently modified the behavioral model of service utilization to include factors determining the service utilization of vulnerable populations, such as the impoverished, the homeless, immigrants, children and adolescents, the elderly, and individuals with physical or mental disabilities

(Gelberg et al., 2000; Stein, Andersen & Gelberg, 2007). Vulnerable individuals have not received equal opportunities, as they occupy a lower class of social structure due to the fragile characteristics present among them; accordingly, the Gelberg-Andersen Behavioral Model for Vulnerable Populations was designed to incorporate particular vulnerabilities in addition to the traditional contributing factors for the service use by the general population. The assumption that permeates the revised model is that the factors which make a certain group of people vulnerable might also have an impact on their use of services and support (Aday, 1994; Gelberg et al., 2000; Stein et al., 2007; Stein, Andersen, Koegel & Gelberg, 2000).

The Gelberg-Andersen Behavioral Model for Vulnerable Populations divides contributing factors of the service use of vulnerable populations into two domains: traditional and vulnerable (Gelberg et al., 2000; Stein et al., 2007). This model emphasizes socio-structural characteristics among the predisposing factors and the enabling resources for the vulnerable domain (Gelberg et al., 2000). The predisposing domain includes socio-structural factors and childhood characteristics that predispose vulnerable individuals to utilize services, in addition to the traditional predisposing factors such as age, gender, health belief, education, and employment status. Personal resources, including income, social support, and other community resources constitute the traditional enabling domain, whereas the vulnerable enabling domain includes public benefits, information resources, crime rates, and social services resources. With regard to the need domain, this model acknowledges the importance of specifying attributes which define certain groups of people as vulnerable, suggesting the perceived and evaluated needs be included in both the traditional and vulnerable spheres. The outcomes domain incorporates satisfaction with the service utilization experience, and the perceived and evaluated health status, embracing the traditional and vulnerable domains. The Gelberg-Andersen Behavioral Model for Vulnerable Populations is presented in Figure 3-1.



[Figure 3-1] The Behavioral Model for Vulnerable Populations (Gelberg, Andersen & Leake, 2000)

The current study on the social welfare service utilization of individuals with developmental disabilities employs the Gelberg-Andersen Behavioral Model for Vulnerable Populations (Gelberg et al., 2000) as a theoretical framework. This conceptual framework is a revised version of the Andersen Behavioral Model (Andersen, 1995, Andersen & Newman, 1973); the original Andersen Model, widely used in studies on the health service utilization in general populations, has been extended to other types of service utilization in a diversity of contexts (Calsyn & Winter, 1999), such as social service for the elderly, the homeless, and

immigrants. Various areas of service literature have recently applied the revised Andersen Behavioral Model in a specialized way to investigate the service use of vulnerable populations (Gelberg et al., 2000; Judith, Andersen & Gelberg, 2007; H. Kim, 2012).

There has been no research, though, investigating the potential determinants of the service use among individuals identified as having specific vulnerabilities in developmental issues in Korea. Therefore, the present study contributes toward the literature on individuals with developmental disabilities as it represents the first attempt to validate the applicability of the Andersen Behavioral Model in this population.

3.2. The Andersen Behavioral Model in Social Welfare Service Research

The Andersen Behavioral Model (Andersen, 1995; Andersen & Newman, 1973) has been extensively used to examine the factors associated with the service utilization behavior among a diversity of populations, and its applicability has constantly been improved (Calsyn & Winter, 1999).

Many studies have investigated potential factors related to caregivers in actualizing the service use of the elderly (Bass & Noelker, 1987; Biegel & Bass, 1993; Calsyn & Winter, 1999; Hong, 2009; Lee, 2004; Song, 2003). Lee (2004), for example, examined the effects of family caregivers on actualizing the community service utilization of the impaired elderly in Korea. Her findings suggested that the access of the elderly with impaired functioning to community services was significantly associated with the higher education and lower instrumental support of family caregivers as well as lower monthly household income. Hong (2009) used the latent class analysis to classify the service utilization patterns among the informal caregivers of a community of older adults into three categories: multiple service users, selective in-home service users, and light service users. Based on the findings of the study, which further examined potential factors associated with the differentiation of the service utilization, implications reflecting the particular needs of each group of caregivers have been discussed. Lee, D. (2011) examined factors that predispose, enable, and necessitate the elderly in Korea to use welfare services, which were conceptualized as social welfare and political welfare services. The findings of the study indicated that the factors determining the service use varied across particular types of social welfare service. Age in the predisposing domain, as well as income and health insurance in the enabling domain, were significantly associated with both types of welfare services, while marital status among the predisposing factors and place of residence among the

enabling factors were found to be significantly related to social welfare services. Lee, D. (2011) also found that the living situation in the enabling domain and perceived health status in the need domain were significant predictors of the political welfare service utilization among older adults in Korea.

The conceptual framework developed by Andersen and his colleagues (Andersen, 1995; Andersen & Newman, 1973; Gelberg et al., 2000) has been used in areas of the service use literature for the immigrant population (H. Kim, 2012; Kim & Lee, 2010; O. Lee, 2011). For example, Kim and Lee (2010) applied the Andersen Model to female immigrants in Jeolla Nam province to understand their social welfare service utilization behavior. Specifying social welfare services as public assistance service and counseling service, they examined potential contributing factors associated with each type of service and comprehensive social services. Family income and social support in the enabling domain were found to significantly influence both types of social services and comprehensive social services. Lee, O. (2011), in his research, identified contributing factors that explain the social welfare service utilization behavior of immigrant wives residing in Busan, Woolsan, and Gyoungsang Nam province. His findings showed that language difficulty among the need factors, as well as education and duration of marriage among the predisposing factors, had significant associations with individuals' use of social welfare services. Employing a nationally representative sample, Kim, H. (2012) examined potential predictors in actualizing the utilization behavior of adjustment assistance and family assistance services among foreign spouses of multicultural families in Korea. She furthered her study by exploring the differences in predictors on the service utilization behavior of each type of service by foreign spouses' gender and country of origin. Research findings identified various predictors dependent on the type of social services, and found determinants of the utilization behavior of adjustment assistance and family services differed by spouses' gender and country of origin.

Researchers in the service literature on individuals with disabilities have also employed the Andersen Behavioral Model as a theoretical framework. Yoo and Chun (2008) used a nationally representative sample of individuals with disabilities and examined contributing factors associated with their social welfare service utilization. Their research findings identified a perceived need for service as the predictor of the service use with the strongest explanatory power. Disability type was also found to significantly explain the service utilization behavior of individuals with disabilities. Choi and Chun (2010) revised the Andersen model in the view of the social model of disability to investigate potential predictors of community rehabilitation service use. Accordingly, a disability grade variable was incorporated as a need factor in their research, whereas Yoo and Chun (2008) included the variable in the predisposing domain; however, the findings of these two studies were consistent in that disability grade was found to be one of the major factors significantly influencing the service utilization behavior among individuals with disabilities. They also showed an interesting research result – namely, that the age of individuals with disabilities was negatively associated with the volume of the social welfare service use. Kang and Park (2011) analyzed a sample of visually impaired individuals collected via snowballing sampling with an aim to examine contributing factors in actualizing personal assistance service use. Research findings suggested that the disability grade of individuals with visual impairments and the physical care burden of their caregivers in the need domain had significant associations with their service utilization behavior. Kang and Park (2011), in their study, concluded that the current personal assistance system for individuals with visual disabilities is relatively equitable.

As argued above, it has been substantiated that the Behavioral Model of Service Utilization suggested by Andersen and his colleagues (Andersen, 1995; Andersen & Newman, 1973; Gelberg et al., 2000) is advantageous in systematically examining the utilization behavior of various types of services

among wide range of service consumers. The present research aims to identify the factors that predispose, enable, and necessitate individuals with developmental disabilities to utilize social welfare services. By employing the Gelberg-Andersen Behavioral Model for Vulnerable Populations (Gelberg et al., 2000), this study contributes to the base of developmental disability research in Korea.

CHAPTER 4. LITERATURE REVIEW

4.1. Literature on Social Welfare Service Utilization of Individuals with Developmental Disabilities

Individuals with developmental disabilities are likely to experience severe conditions. These individuals generally lack the self-care and self-determination skills required to manage independent living. In this sense, not only individuals with developmental disabilities themselves but also families with relatives who have developmental disabilities are identified as vulnerable populations who are constantly exposed to challenges in every aspect of daily living.

A large portion of the Korean literature on the service utilization of individuals with developmental disabilities is related to special education and therapeutic services; few researchers have examined the social welfare service utilization of the population. Moreover, researchers who attempted to understand the use of social welfare services among individuals with developmental disabilities have limited their studies to providing a general understanding of the formal care system and the current service need. Cho (2004), in her research, assessed the need for social welfare services among parents with children who have developmental disabilities in Chungcheong Nam province. She identified the shortage of service provision as one of the dominant issues in the social welfare service utilization and suggested the expansion of care services in the community. Park (2010) explored the need for formal care services in her research on the future outcome of parents whose children have autism spectrum disorders in Seoul. Her study found that research participants asked for an increase in community activities in which children with developmental disabilities might participate when they grow up,

specifically the expansion of vocational training, higher educational program, physical activities, and residential care services; however, research findings were limited to descriptive information, and the study sample was constrained to a relatively small region. Recently, Kim et al. (2011) investigated the current service market for infants with developmental disabilities, utilizing a nationally representative sample. Findings revealed that the awareness of social welfare services and the need for service use among parents with infants with developmental disabilities did not reach the level that researchers had expected. Also, unique, varied needs among infants with developmental disabilities were identified in accordance with individual characteristics, such as age and disability grade. Among infants with developmental disabilities and their families, the service utilization was found to differ by socio-structural factors, such as income, living situation and residential region. These studies succeeded in providing an overall understanding of the current supporting system by depicting the service utilization of individuals with developmental disabilities; however, it remains unanswered what factors might determine the utilization behavior of individuals with developmental disabilities.

Studies recently conducted on the service use of individuals with disabilities provide some general hints about factors that may potentially be associated with the service utilization behavior of those who are identified as having issues in development. Yoo and Chun (2008) as well as Choi and Chun (2010) examined factors associated with the social welfare service utilization of individuals with disabilities, employing the Andersen Behavioral Model as a theoretical framework. In Yoo and Chun's study (2008), disability was conceptualized as impairments of internal organs and external organs and mental disabilities, whereas Choi and Chun (2010) conceptualized a disability variable as physical disabilities and mental disabilities. In both studies, the disability variable was found to significantly influence the service use of individuals with disabilities. Furthermore, Yoo and

Chun (2008) found that gender, age, presence of spouse and health status were associated with the social welfare service use of individuals with disabilities, whereas Choi and Chun (2010) identified age, education, disability grade, health status, satisfaction on leisure activity, personal assistance and social support as key factors in disabled individuals' involvement in the care service system.

A few qualitative studies have explored the experience of the social welfare service utilization among individuals with developmental disabilities in Korea. Kim and Park (2008), in their research on different experiences of self-determination practiced by individuals with intellectual disabilities living in different types of residential homes, discussed important theoretical and practical implications for the field of care services for individuals with developmental disabilities. For example, their research findings revealed the possibility and significance of reflecting the voices of service consumers in service development and evaluation.

The contributions of previous studies are significant as they provide an empirical foundation for the service utilization behavior of the population as well as a fundamental understanding of the current support system; however, they still have some limitations.

Previous studies assessed the service utilization rate or the need for formal support without attempting to examine contributing factors that might influence the actualization of the vulnerable populations' help-seeking behavior. Kim et al. (2011) attempted to understand the relationships between socio-demographic factors and the social welfare service utilization by employing a nationally representative sample of infants with developmental disabilities. As they limited their study to conducting descriptive statistical analysis on the service use by demographic factors, only a general understanding of the formal welfare system was acquired.

Some studies provided comparatively validated findings by applying a theoretical framework in understanding the key factors connecting individuals with

disabilities to relevant services in community(e.g., Choi & Chun, 2010; D. Kim, 2012; Yoo & Chun, 2008); however, since individuals with all types of disabilities were treated as a group sharing common properties, these studies failed to reveal the unique service utilization behavior of individuals with developmental disabilities, presumably different from those with physical impairments or other types of mental disabilities.

In regard to research participants, studies on social welfare service for individuals with developmental disabilities have been limited. In many cases, either individuals with autistic disorders or individuals with intellectual disabilities have been the sole focus of service studies, whereas some studies have treated them as a homogenous population, failing to take into account differences in the service use across subordinate types of developmental disabilities. Thus, researchers may provide unreliable implications for the design and provision of services by failing to consider the whole picture of the current care system for individuals with developmental disabilities or failing to address the unique traits of each disability type.

Given the limitations, the current research aims to examine the predisposing, enabling, and need factors associated with the social welfare service utilization among individuals identified as having particular vulnerabilities in developmental issues. Furthermore, it attempts to explore differences in the relationship between potential determinants and the social welfare service utilization behavior across individuals with autistic disorders and individuals with intellectual disabilities, as well as minors and adults among individuals with developmental disabilities. This study applies the Gelberg-Andersen Behavioral Model for Vulnerable Populations as a comprehensive, systematic conceptual framework to a nationally representative sample of individuals with developmental disabilities in Korea.

4.2. Factors Associated with Social Welfare Service Utilization among Individuals with Developmental Disabilities

It is likely that the service utilization behavior varies across different vulnerable populations. As there is a dearth of literature on the social welfare service use of individuals with developmental disabilities in Korea, this section refers to relevant literature on the service utilization behavior of a diverse vulnerable population in order to help adequately understand the factors that predispose, enable, and necessitate individuals with developmental disabilities to access a social welfare service system.

4.2.1. Predisposing Factors

The predisposing factors are individual characteristics that contribute to the service utilization behavior prior to the need for service use to take place. Generally included in the predisposing domain for service studies are demographic factors such as age and gender as well as social structure variables, usually measured by education level and employment status (Andersen & Newman, 1973).

Age is incorporated in most service studies as a demographic factor associated with the service utilization behavior. In the studies conducted by Yoo and Chun (2008) as well as Choi and Chun (2010), the younger individuals with disabilities were found to be more likely to utilize social welfare services. Kang and Park (2010), on the other hand, did not replicate these findings, reporting that the older a visually impaired individual was, the higher their utilization rate of personal assistance services would be.

Differences by age in the service utilization behavior might be accounted for by differences in types of disabilities or in the availability of care services;

however, the majority of the service literature made no attempt to explain how the age difference in the social welfare service use occurs, and failed to observe the relations between age and other potential factors of the service utilization. Thus, it is important to further the relevant knowledge by exploring the interactive role of age with other potential predictors of individuals with developmental disabilities, in addition to examining the main effect of age on the social welfare service use. In other words, it is meaningful to explore the different pathways of minors and adults to a formal care system among individuals with developmental disabilities.

A large portion of the service literature has generally indicated gender as a crucial factor in predicting the help-seeking behavior; the significant differences between women and men have been widely reported in previous literature on the service use of vulnerable populations (e.g., Albizu-Garcia, Alegria, Freeman & Vera, 2001; Hong, 2009; Kang & Park, 2010; H. Kim, 2012; Lim & Yoon, 2004; Mitchell & Krout, 1998; Yoo & Chun, 2008), suggesting that the particular ways in which males and females perceive the need for service use are reflected as a gender difference. Although studies have generally documented that women are more likely to use services, research findings on the social welfare service use by individuals with disabilities remain inconclusive. For example, Yoo and Chun (2008) found that women were more likely than men to seek social welfare services, whereas Kang and Park (2010) found that males reported more personal assistance service use among individuals with visual disabilities. Choi and Chun (2010), in their study on the service use of individuals with disabilities, found that men were more likely to use community rehabilitation services, while women were more likely to utilize community welfare services. Though these findings were not statistically significant, they suggest the importance of understanding gender effects in the service utilization behavior of individuals with disabilities, specifically in the use of care services by individuals with developmental disabilities.

Education is also a widely used variable as one of the predisposing factors in the Behavioral Model of Service Utilization (Andersen, 1995; Gelberg et al., 2000). Education has been generally understood as an indication of individuals being empowered to better handle challenges (Lazarus & Folkman, 1984; Nogard & Rodgers, 1997). Kim, H. (2012), in her research on the service utilization patterns among foreign spouses of multicultural families, suggested that education influenced awareness about available services, which in turn enhanced the actualization of the service utilization behavior. In the studies of Yoo and Chun (2008) as well as Choi and Chun (2010) on the service utilization behavior among individuals with disabilities, a positive association was found between education and the service use, though the relation was not statistically significant. These findings require furthering the knowledge on whether the education factor works as a proxy variable to control for the resources of individuals with developmental disabilities in Korea.

4.2.2. Enabling Factors

The enabling factors facilitate the service utilization behavior, enhancing the access to social welfare services. Personal and family resources such as income, health insurance, and social support have been included as the enabling factors in the literature on the service use (Kahng, 2010). In addition, the receipt of public benefits is employed as a particular personal resource of vulnerable populations in the Gelberg-Andersen model since this factor provides a means to access a social welfare service system (Gelberg et al., 2000). A significant positive association between the receipt of public benefits and the social welfare service utilization behavior has been found in service studies on vulnerable populations (Choi & Chun, 2010; H. Kim, 2012).

Findings have been inconclusive on the issue of how income influences the social welfare service utilization behavior. Mitchell and Krout (1998) reported

a significant positive association between family income and the social welfare service use, whereas studies performed by Bass and Noelker (1987), Hong (2009), and Lee (2010) found inconsistent findings in regard to whether individuals from a lower-income family were more likely to seek social welfare services. On the other hand, findings on the welfare service utilization of individuals with disabilities in Korea, including Choi and Chun's study (2010), reported that low income led to delays in seeking care services. These findings imply that the level of the service utilization will diminish as family income increases, when the income level is employed as a qualification of service eligibility. Therefore, it would be beneficial to empirically examine whether such a possibility applies to the social welfare utilization behavior of individuals with developmental disabilities.

Findings of studies on the social welfare service utilization behavior have generally shown a higher rate of the service use by research participants reported of living without family. Mitchell and Krout's study (1998) yielded consistent findings on the association that the elderly who lived alone were more likely to utilize more in-home services. Korean literature on the service use of individuals with disabilities also replicated the findings that family members normally take the responsibility to provide informal care, which leads to a reduction of the utilization level of formal services in the community (D. Kim, 2012; Lee, 2009; Park, 2003). Thus, individuals with developmental disabilities living with family are expected to be less likely than those living without family to seek social welfare services.

Social support, or the quality and extent of social relationships, is another enabling factor widely adopted as a resource to enhance the social welfare service utilization (Andersen, 1995). For example, informal social support from friends or neighbors was found to be an important factor associated with the service utilization (Bass & Noelker, 1987; H. Kim, 2012; Kim, 2006; Lee, 2004). According to Logan and Spitze (1994), the role of social support in the service utilization behavior of vulnerable populations might be hypothesized in two ways

based on the nature of the services available. In some cases, social networks work to link individuals with relevant services in the community. In other cases, social support serves as an alternative to fill unmet needs for services. Korean research on the social welfare service use of vulnerable populations found that social support functions as an enabling resource to connect the potential consumers to formal care, enhancing the access to welfare service system (Baek & Yoon, 2007; H. Kim, 2012; Kim, 2006; Kim & Lee, 2010).

4.2.3. Need Factors

The Need for care has been found to be significant in predicting the service utilization behaviors of a diverse group of vulnerable populations (Andersen & Aday, 1978; Gelberg et al., 2000; H. Kim, 2012; Yoo & Chun, 2008). Studies on the service utilization of vulnerable populations have measured the need factors in various ways, including perceived need for services, activities of daily living (ADL), instrumental activities of daily living (IADL), language difficulty, disability grade and dual diagnosis (Choi & Chun, 2010; Hong, 2009; Kang & Park, 2010; D. Kim, 2012; Lee, 2004; Lee, 2010; Park, 2003; Yoo & Chun, 2008).

Though the predisposing and enabling conditions are assumed, it is the perceived need for care that actualizes the service utilization behavior (Andersen & Newman, 1973). Recognition of the need for service use has been found to significantly predict the utilization behavior of health and mental health services (Andersen & Aday, 1978; Denktas, Koopmans, Birnie, & Bonsel, 2009; Fiscella, Franks, Doescher, & Saver, 2002; Katburg, 2002; Leclere, Jensen & Biddlecom, 1994; Wan & Odell, 1981 as cited H. Kim, 2012). In fact, Kim, H. (2012), among Korean researchers on vulnerable populations' service use, reported that the perceived need factor was the strongest determinant of the service use by immigrants.

A formal, professional assessment of service needs should also be

acknowledged in help-seeking behavior as it determines the nature of the service. Various Korean studies on the service use of individuals with disabilities showed that those with more severe levels of disabilities utilized more services (Choi & Chun, 2010; Jung, 2007; D. Kim, 2012; Seok, Kim, & Kim, 2008). In addition, having severe disabilities among the elderly was found to be a significant predictor of the service use (Baek & Yoon, 2007; Bass & Noelker, 1987; Choi, 2009); however, the service utilization behavior of those who have received a dual diagnosis, among individuals with disabilities, was not significantly different from those who had no disabilities other than main dysfunction (Choi & Chun, 2010; D. Kim, 2012). This warrants a further examination of the effect of dual diagnosis on help-seeking behavior among individuals with developmental disabilities.

The Gelberg-Andersen Behavioral Model for Vulnerable Populations (Gelberg et al., 2000) acknowledges the importance of specifying attributes, which defines certain population as vulnerable. Studies on the service utilization behavior of individuals with disabilities in Korea showed that a disability variable was found to have a significant influence on access to supportive services (Choi & Chun, 2010; Hong, 2009; D. Kim, 2012; Lee, 2004; Yoo & Chun, 2008). Identification of issues in development was reported to be an important step in the utilization of social welfare services for individuals with developmental disabilities (Hierbert-Murphy, Trute, & Wright, 2008). Thus, a diagnosis of developmental disabilities, namely autistic disorders or intellectual disabilities, is expected to be a necessary step in accessing community-based care services in Korea. More specifically, it might be hypothesized that individuals with autistic disorders consume more formal supportive services as they are in need of more assistance than those with intellectual disabilities (Cho et al., 2011; Kim et al., 2012).

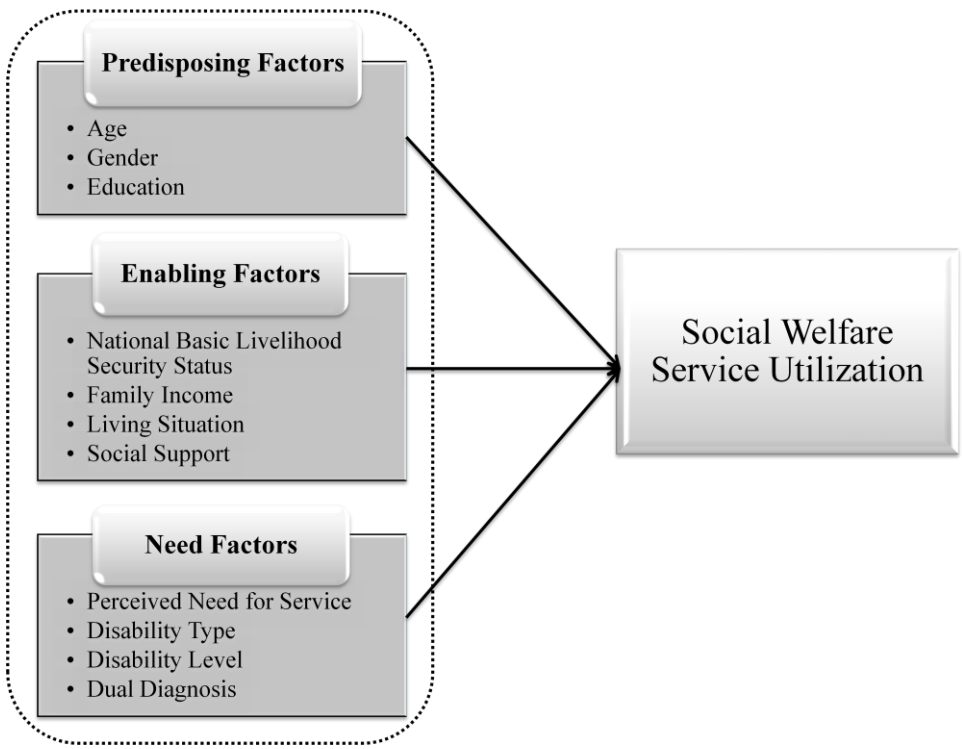
Under the Welfare Law for Persons with Disabilities of Korea, autistic disorders and intellectual disabilities are referred to as developmental disabilities; however, it is difficult to consider those referred to as individuals with

developmental disabilities as a homogenous group. Individuals with autism and those with intellectual disabilities are diagnosed based on distinctive criteria (APA, 2000) engaging in different behavioral characteristics (Kim et al., 2012) In other words, individuals with autistic disorders and those with intellectual disabilities do not necessarily share common predispositions, resources, or needs, which might affect them differently in actualizing the service use. This suggests that there might be significant subordinate disability type variations in predictors of the social welfare service utilization. Examining the relationships between subordinate types of developmental disabilities and other factors involved in the process of entry to care services for individuals with developmental disabilities is critical in determining policies and practices that ensure the provision of relevant services to the target consumers, thoroughly addressing the unique needs of each group. In this respect, the present study aims to understand different pathways to the care system among individuals with autistic disorders and individuals with intellectual disabilities in addition to examining the important role played by the comprehensive properties of developmental disabilities in the service utilization behavior.

CHAPTER 5. RESEARCH MODEL AND HYPOTHESES

5.1. Research Model

The present study aims to examine potential factors associated with the social welfare service utilization behavior of individuals with developmental disabilities in Korea. The Gelberg-Andersen Behavioral Model for Vulnerable Populations (Gelberg et al., 2000) was employed as a theoretical framework and modified to reflect data from the '2011 Policy Design on Supporting Individuals with Developmental Disabilities and Their Families through Need Assessment and Field Research'.



[Figure 5-1] Conceptual Model for Social Welfare Service Utilization

5.2. Research Hypotheses

The Gelberg-Andersen Behavioral Model for Vulnerable Populations was applied as a conceptual framework to guarantee a holistic and systematic approach in understanding the predisposing, enabling, and need factors associated with the social welfare service utilization among individuals with developmental disabilities in Korea. Given the exploratory nature of the present study as well as the limited knowledge on associations among potential factors and the social welfare service use of the target population, specific hypotheses were formulated based on the social welfare service literature for a diverse vulnerable population.

[Research Question 1]

What are the predisposing, enabling, and need factors predicting the social welfare service utilization among individuals with developmental disabilities?

[Hypothesis 1-1]

Predisposing factors will be significantly associated with the social welfare service utilization among individuals with developmental disabilities.

[Hypothesis 1-1-1] Age of individuals with developmental disabilities will be negatively associated with the social welfare service utilization.

[Hypothesis 1-1-2] Females will use more social welfare services than males.

[Hypothesis 1-1-3] Education of individuals with developmental disabilities will be positively associated with the social welfare service utilization.

[Hypothesis 1-2]

Enabling factors will be significantly associated with the social welfare service utilization among individuals with developmental disabilities.

[Hypothesis 1-2-1] Recipients of National Basic Livelihood Security will use more social welfare services.

[Hypothesis 1-2-2] Income will be negatively associated with the social welfare service utilization.

[Hypothesis 1-2-3] Individuals living without family will use more social welfare services than individuals living with family.

[Hypothesis 1-2-4] Social support will be positively associated with the social welfare service utilization.

(a) social support from individuals with disabilities

(b) social support from individuals without disabilities

[Hypothesis 1-3]

Need factors will be significantly associated with the social welfare service utilization among individuals with developmental disabilities.

[Hypothesis 1-3-1] Perceived need for services will be positively associated with the social welfare service utilization.

[Hypothesis 1-3-2] Disability grade will be negatively associated with the social welfare service utilization.

[Hypothesis 1-3-3] Individuals with autistic disorders will use more social welfare services than individuals with intellectual disabilities

[Hypothesis 1-3-4] Individuals with a dual diagnosis will use more social welfare services.

[Research Question 2]

Do the factors that predict the social welfare service utilization of individuals with developmental disabilities vary by subordinate type of developmental disabilities?

[Hypothesis 2]

Factors predicting the social welfare service utilization will vary by subordinate type of developmental disabilities, i.e., individuals with autistic disorders and individuals with intellectual disabilities.

[Research Question 3]

Do the factors that predict the social welfare service utilization of individuals with developmental disabilities vary by age group?

[Hypothesis 3]

Factors predicting the social welfare service utilization will vary by age group, i.e., minors below the age of 19 and adults 19 and over.

CHAPTER 6. RESEARCH METHOD

6. 1. Research Procedure and Sampling

The present research employed data from the '2011 Policy Design on Supporting People with Developmental Disabilities and Their Families through Need Assessment and Field Research', Korea's first nationally representative survey on individuals with developmental disabilities. The study was conducted with the purpose of investigating the current status and needs of individuals with developmental disabilities and their families in order to develop comprehensive policies addressing the varied and particular needs and to thereby help maintain community living for the span of their life (Cho et al., 2011). The study is composed of five major parts: three quantitative studies, i.e., Main Survey on Individuals with Developmental Disabilities, Supplementary Survey on Employment Status of Individuals with Developmental Disabilities, and Survey of General Perceptions on Individuals with Developmental Disabilities; and two qualitative studies, i.e., Content Analysis on Images of Individuals with Developmental Disabilities in the Korean Media, and the Focused Group Interview on Related Professionals and Caregivers. The current research used data taken from the main survey.

The survey was based on the number of registered individuals with developmental disabilities in the National Disability Registration Database. A total of 180,869 individuals were identified as having developmental disabilities as of August 2011 (MOHW, 2011). The data were collected from October 17th to November 28th, 2011 by Nielsen Korea under the supervision of Ministry of Health and Welfare. The survey was conducted by one-on-one, face-to-face

interviews with 1,500 caregivers of individuals with developmental disabilities. Systematic stratified cluster random sampling was utilized to adjust the sample data to reflect distributions of individuals with developmental disabilities in Korea; disability grade and residential regions were categorized for disability subtypes as in the population. The sample comprised 1,500 individuals with developmental disabilities in all ages, ranging from 3 to 77; those below the age of 19 accounted for 33% (495 cases) and those 19 and older for 67% (1,005 cases). As for subordinate types of individuals with developmental disabilities, 80.4% had intellectual disabilities (1,206 cases) and 19.6% had autistic disorders (294 cases). The current research is relatively capable of drawing accurate findings as it employs a nationally representative data of individuals with developmental disabilities in Korea, aiming to identify contributing factors associated with the social welfare service use by this vulnerable population with a specific focus of exploring disability type and age group variations in predictors.

6.2. Measurement of the Variables

6.2.1. Endogenous Variable: Social Welfare Service Utilization Behavior

As individuals with developmental disabilities, who are substantially limited in self-care, require extensive supportive services to address their developmental problems, the focal service for these individuals might be social welfare service. In the present study, home assistance services and residence assistance services mainly constitute social welfare service for individuals with developmental disabilities, following the Welfare Law for Persons with Disabilities. Specifically, social welfare service for individuals with developmental disabilities is conceptualized as community rehabilitation, community welfare, day care, physical activity, personal assistance, residential care, group home, respite and independent living housing services.

The present research adopted the conceptualization of the service use as a performed behavior, or the experience of the service utilization (Andersen & Newman, 1973). For the social welfare service utilization, respondents were asked to report whether individuals with developmental disabilities had used the social welfare service provided by the Korean Ministry of Health and Welfare. In this research, the utilization behavior of nine types of services was measured as a dichotomous variable: those who had never used the service were coded as ‘0’, and those who had were coded as ‘1’. For analysis, a count of services in use was used.

6.2.2. Exogenous Variables

1) Predisposing Factors

Included in the research model as the predisposing factors are age and gender for demographic characteristics of individuals with developmental disabilities, and education for social structure attributes – all of which have been found to be significant predictors of the service utilization. Age, measured as a continuous variable ranging from 3 to 77, was included in the research model. Gender of individuals with developmental disabilities was incorporated into the model as a dummy variable, male coded as '1' and female as '0'. Education was adopted from the recorded types of relevant education and the specific situation, namely, 'currently attending', 'dropped out', 'graduated', and 'temporarily absent'. These two qualitative variables in the original survey were coded as a continuous variable to indicate 'years of education', considering that it might offer better, more detailed information on the predisposition of individuals with developmental disabilities to seek help (Han, 2008; D. Kim, 2012). More specifically, a value of '0' was assigned if the person with developmental disabilities was a preschooler or had never received any education. Those who were attending or had dropped out of elementary school were assigned '3'; those who had graduated from elementary school '6'; those who were attending or had dropped out of middle school '8'; those who had graduated from middle school '9'; those who were attending or had dropped out of high school '11'; those who had graduated from high school '12'; those who were attending, had dropped out of, or were temporarily absent from community college '13'; those who had graduated from community college '14'; those who were attending, had dropped out of, or were temporarily absent from college/university, '15'; and those who had graduated from college/university '16'.

2) Enabling Factors

Personal or community resources that enhance the access of individuals with developmental disabilities to the formal care system were conceptualized as the enabling factors. Recipient status of public benefits, family income, living situation,

and informal social support were included in the study model. A dichotomous variable was created for National Basic Livelihood Security recipient status, with a value of '1' if the person reported being a recipient and '0' otherwise. Family income was measured as a continuous variable. Due to the significant positive skewness, log transformed values of family income were used for analysis. Living situation was a dichotomous variable assessing whether an individual with developmental disabilities was living with family or not. If they did live with family, '1' was coded, and if not, then '0'. Two variables related to perceived social support from individuals with disabilities and those without disabilities were specified. Research participants were asked whether the individual with developmental disabilities had a close friend within each social network based on the rationale that a social network was an indication of the influence of how the need is met (Perscosolido, Wright, Alegria, & Vera, 1998; Thoits, 1995; Kouzis & Eaton, 1998 as cited in Albizu-Garcia et al., 2001).

3) Need Factors

In the research model, included as an immediate influence on the service utilization behavior (Andersen, 1995; Andersen & Newman, 1973; Gelberg et al., 2000) are measures of subjective need for service use, subordinate types of developmental disabilities, objectively evaluated disability grade, and dual diagnosis. Perceived service need was measured by the amount of items on the list of social welfare services provided by Ministry of Health and Welfare (i.e., community rehabilitation, community welfare, day care, physical activity, personal assistance, residential care, group home, respite, and independent living housing services), for which the respondent reported an unmet need. The Gelberg-Andersen Behavioral Model for Vulnerable Populations suggests that the conditions which make a certain group of people vulnerable be included in the model as a need factor (Gelberg et al., 2000). Therefore, a measure of disability types was included in the

research model as a dummy, which was obtained by asking respondents to choose from the options of subordinate types of developmental disabilities. Individuals with autistic disorders were coded as ‘0’, and those with intellectual disabilities were coded as ‘1’. Another variable incorporated into the research model as a need for care was the objectively appraised disability grade. The variable was measured by recording the grade of disability as registered in the National Disability Registration Database (MOHW, 2011). The officially diagnosed disability grade of registered individuals with developmental disabilities ranged from 1 to 3, from the severest to the moderate grade of disability. A yes/no question was used to ask participants if the individuals with developmental disabilities had any other kind of disability simultaneously. If the answer was yes, ‘1’ was coded, and if not, ‘0’ was coded.

[Table 6-1] Variables in the Research

Variable Type	Variable Name	Measurement
Endogenous Variable	Social Welfare Service Utilization	Total score of services in use
Predisposing Factors	Age	Age in years
	Gender	0 = Female 1 = Male
	Education	0 = Preschoolers or Lack of schooling 3 = Attending or Having Dropped out of Elementary of School 6 = Having Graduated from Elementary School 8 = Attending or Having Dropped out of Middle School 9 = Having Graduated from Middle School 11 = Attending or Having Dropped out of High School 12 = Having Graduated from High School 13 = Attending, Having Dropped out of, or Being Temporarily Absent from Community College 14 = Having Graduated from Community College 15 = Attending, Having Dropped out of, or Being Temporarily Absent from College/University 16 = Having Graduated from College/University
Enabling Factors	National Basic Livelihood Security Status	0 = Non- recipients 1 = Recipients

	Income	Family income (ln)
	Living Situation	0 = Living without family 1 = Living with family
	Social Support (a) from individuals with disabilities (b) from individuals without disabilities	0 = Don't have 1 = Have
Need Factors	Perceived Need for Services	Total score of services in need
	Subordinate Types of Developmental Disabilities	0 = Autistic disorders 1 = Intellectual Disabilities
	Disability Grade	1 = Disability Grade 1 2 = Disability Grade 2 3 = Disability Grade 3
	Dual Diagnosis	0 = Don't have 1 = Have

6.3. Data Analysis Procedure

The aim of the present research is to identify factors associated with the social welfare service utilization among individuals with developmental disabilities in Korea with the specific focus of exploring disability type and age variations in predictors. Data taken from the '2011 Policy Design on Supporting People with Developmental Disabilities and Their Families through Need Assessment and Field Research' were analyzed according to the procedures presented in this section.

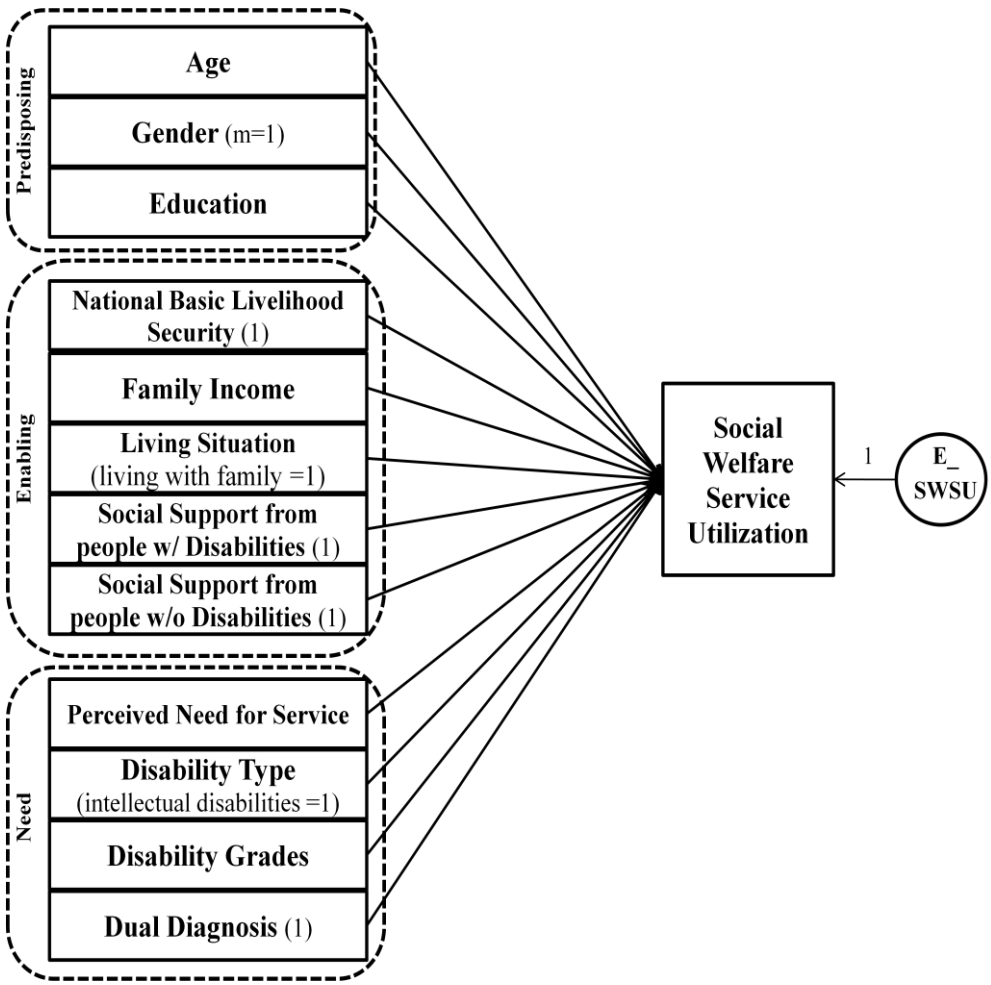
First, descriptive analyses were performed to identify characteristics of individuals with developmental disabilities in Korea and their social welfare service utilization behavior. The weighted values were reported along with descriptive statistics to estimate the characteristics of the national population from the sample employed in the present study. Examined in this step as well were missingness, normality of data, and multicollinearity to observe whether distributions of study data were adequate for analysis with structural equation modeling (Bae, 2009).

Second, data analysis using structural equation modeling was conducted to examine the effects of the predisposing, enabling, and need factors on the social welfare service utilization behavior of individuals with developmental disabilities. In structural path modeling, a general rule of thumb is that statistically insignificant paths are fixed to improve the research model (Schmacker & Lomax, 1996 as cited in Ju, 2010). In the present study, correlation paths among exogenous variables that were not statistically significant with $p > .05$ were fixed at zero, with the ultimate research objective of exploring within-group variations in predictors on the social welfare service utilization.

Third, multi-group analysis using structural equation modeling was conducted to explore whether the factors predicting the social service utilization

among individuals with developmental disabilities vary across subordinate disability types and age groups.

In sum, the present study examined missingness and normality of data in order to understand data distributions, followed by structural equation modeling and multi-group structural equation modeling. Descriptive analysis was conducted using the SPSS 19.0 statistical package. Structural equation modeling and multi-group analysis were performed using the AMOS 18.0 software.



Note. Correlation paths among exogenous variables are not illustrated

[Figure 6-1] Structural Path Model for Service Utilization

Structural equation modeling is an *a priori* method (Kline, 2005); it is empirically examined in data analysis using structural equation modeling whether the hypothesized relationships among study variables derived from a theory are supported by the study data. By providing indices for the overall model fit, data analysis using structural equation modeling enables researchers to develop a research model that better fits the study data (Bae, 2009). For research focused specifically on examining whether path coefficients vary across groups, data analysis using structural equation modeling makes it possible to identify paths that are significantly different between groups by providing information on the statistical significance of the variations of path coefficients across groups (Kline, 2005). In addition, structural equation modeling is an advanced statistical approach to overcome limitations of traditional regression modeling with its assumption that exogenous variables are correlated (Bae, 2009). Due to these advantages, structural equation modeling is considered an appropriate statistical method for the present research with the aims to identify the relationships among the predisposing, enabling, need factors and the social welfare services use among individuals with developmental disabilities and to explore differences in such relationships across subordinate disability types and age groups.

The Full Information Maximum Likelihood (FIML) estimation is used in SEM analysis, estimating parameters and missing values with the Missing at Random assumption (Little & Rubin, 1987 as cited in Jeon & Kahng, 2006). The fit of models were examined using the chi-square statistic, the Root Mean Square Error of Approximation (RMSEA), the Incremental Fit Index (IFI), and Comparative Fit Index (CFI), or indicators recommended by Hu and Bentler (1999). As the chi-square statistic is affected by the larger sample size and thus is more likely to reject the model despite slight differences between observed and predicted covariances (Kline, 2005), it is commonly suggested that studies using SEM analysis offer other indicators and thresholds for the fit of models along with the

chi-square statistic. An RMSEA value of less than .06 indicates goodness of fit between the hypothesized model and the observed model (Hu & Bentler, 1999). As for IFI and CFI, values that exceed .90 are considered acceptable (Hu & Bentler, 1999).

CHAPTER 7. RESEARCH FINDINGS

This chapter reports the findings of the data analysis. It presents descriptive statistics of the study variables used for the present research. Furthermore, it reports the results of data analysis using structural equation modeling as well as multi-group structural equation modeling to test the proposed hypotheses.

7.1. Descriptive Statistics of the Study Variables

The descriptive statistics of the predisposing, enabling, and need factors of individuals with developmental disabilities are illustrated in Table 7-1, 7-2, and 7-3, respectively, including frequencies, percentages, means, and standard deviations for which the weighted values are reported to estimate the characteristics of the national population from the sample employed in the present study.

Among the predisposing factors, the mean age of individuals with developmental disabilities was 31.26 (SD = 15.89) with the range from 3 to 77. Specifically, the 10-19 year old age group (*n* = 383, 25.5%) composed the largest group, followed by the 20-29 year old group (*n* = 338, 22.5%), the 30-39 year old group (*n* = 256, 17.1%) , the 40-49 year old group (*n* = 211, 14.1%), the 50-59 year old group (*n* = 147, 9.8%), the 3-9 year old group (*n* = 112, 7.5%), the 60-69 year old group (*n* = 39, 2.6%), and the 70-77 year old group (*n* = 14, .9%).

In terms of gender, the sample comprised more males (*n* = 967, 64.5%) compared to females (*n* = 533, 35.5%).

[Table 7-1] Predisposing Factors

Variables	Frequency		Percentage		Mean (SD)	
	Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted
Age						
3-9	112	10,222	7.5	5.7		
10-19	383	39,974	25.5	22.1		
20-29	338	39,999	22.5	22.1	31.26	29.27
30-39	256	34,567	17.1	19.1	(15.89)	(15.89)
40-49	211	28,730	14.1	15.9		
50-59	147	20,104	9.8	11.1		
60 -69	39	5,297	2.6	2.9		
70-77	14	1,976	.9	1.1		
Total	1,500	180,869	100.0	100.0		
Gender						
Male	967	111,513	64.5	61.7		
Female	533	69,356	35.5	38.3		
Total	1,500	180,869	100.0	100.0		
Years of Education						
0	238	29915	15.9	16.5		
3	279	29484	18.6	16.3		
6	141	19283	9.4	10.7		
8	167	19772	11.1	10.9	7.08	7.10
9	118	15619	7.9	8.6	(4.52)	(4.50)
11	136	15466	9.1	8.6		
12	353	44605	23.5	24.7		
13	20	2087	1.3	1.2		
14	34	3460	2.3	1.9		
15	8	533	.5	.3		
16	6	644	.4	.4		
Total	1,500	180,869	100.0	100.0		

Note. 0 = Preschoolers or Lack of schooling; 3 = Attending or Having Dropped out of Elementary of School; 6 = Having Graduated from Elementary School; 8 = Attending or Having Dropped out of Middle School; 9 = Having Graduated from Middle School; 11 = Attending or Having Dropped out of High School; 12 = Having Graduated from High School; 13 = Attending, Having Dropped out of, or Being Temporarily Absent from Community College; 14 = Having Graduated from Community College; 15 = Attending, Having Dropped out of, or Being Temporarily Absent from College/University; 16 = Having Graduated from College/University

The mean years of schooling of individuals with developmental disabilities was 7.08 (SD = 4.52), indicating that the average education level of the study sample ranged from having graduated from elementary school to attending or having dropped out of middle school. Specifically, those who had graduated from high school (*n* = 353, 23.5%) consisted the largest group, followed by those who were attending or had dropped out of elementary school (*n* = 279, 18.6%), preschoolers or those who had never received education (*n* = 238, 15.9%), and those who were attending or had dropped out of middle school (*n* = 167, 11.1%). In addition, 9.4% (*n* = 141) had graduated from elementary school, 9.1% (*n* = 136) were attending or had dropped out of high school, 7.9% (*n* = 118) had graduated from middle school, 2.3% (*n* = 34) had graduated from community college, 1.3% (*n* = 20) were attending, had dropped out of, or were temporarily absent from community college,.5% (*n* = 8) were attending, had dropped out of, or were temporarily absent from college/university, and .4% (*n* = 6) had graduated from college/university.

[Table 7-2] Enabling Factors

Variables	Frequency		Percentage		Mean (SD)	
	Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted
National Basic Livelihood Security Status						
Recipient	533	69,356	35.5	38.3		
Non-recipient	967	111,513	64.5	61.7		
Total	1,500	180,869	100.0	100.0		
Family Income (in KRW 10,000)						
Below 100	776	75,636	38.4	41.8	181.84 (145.76)	171.37 (144.45)
100-199	466	56,476	31.1	31.2		
200-299	271	28,555	18.1	15.8		
300 and more	154	15,636	10.3	8.6		
Missing	33	4,566	2.2	2.5		
Total	1,500	180,869	100.0	100.0		

Living Situation						
Living w/o Family	248	31,032	16.5	17.2		
Living w/ Family	1,252	149,837	83.5	82.8		
Total	1,500	180,869	100.0	100.0		
Social Support Individuals w/ Disabilities						
Yes	456	57,096	31.1	68.4		
No	1,033	123,773	68.9	31.6		
Social Support Individuals w/o Disabilities						
Yes	293	35,400	19.5	19.6		
No	1,207	145,469	80.5	80.4		
Total	1,500	180,869	100.0	100.0		

In terms of national basic livelihood Security recipient status among the enabling factors, 35.5% of individuals with developmental disabilities were reported to be recipients of public benefits (n = 533) while the rest (n = 967, 64.5%) were reported to be non-recipients.

The mean level of monthly household income was 1,818,400 KRW (SD = 1,457,600). Specifically, those earning below 100 (in 10,000 KRW) composed the largest group (n = 776, 38.4%), followed by those earning between 100 and 199 (n = 466, 31.1%), 200 and 299 (n = 271, 18.1%), and 300 and more (n = 154, 10.3%).

In terms of living situation, 16.5% of individuals with developmental disabilities were reported to live without family (n = 248), while the majority (n = 1,252, 83.5%) were reported to live with family.

Among individuals with developmental disabilities, those who have social relationships with individuals with disabilities were 456 in number, consisting 31.1%, while those who do not have such relationships were 1,033 in number, consisting 68.9%. Concerning social relationships with individuals without disabilities, only 19.5% of individuals with developmental disabilities had social relationships with individuals without disabilities, while the majority (n = 1,207, 80.5%) did not have such relationships.

[Table 7-3] Need Factors

Variables	Frequency		Percentage		Mean (SD)	
	Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted
Perceived Need for Service						
None	516	63,674	34.4	35.2		
One Type	449	54,055	29.9	29.9		
Two Types	239	28,662	15.9	15.8	1.62	1.68
Three Types	116	13,998	7.7	7.7	(2.13)	(2.10)
Four Types	56	6,363	3.7	3.5		
Five Types	26	3,019	1.7	1.7		
Six Types	16	1,687	1.1	.9		
Seven Types	7	830	.5	.5		
Eight Types	14	1,483	.9	.8		
Nine Types	61	7,098	4.1	3.9		
Disability Type						
Autistic disorders						
Intellectual	294	15,498	19.6	8.6		
Disabilities	1,206	165,371	80.4	91.4		
Total	1,500	180,869	100.0	100.0		
Disability Grade						
Grade 1	457	53,046	30.5	29.3		
Grade 2	515	63,027	34.3	34.8		
Grade 3	528	64,796	35.2	35.8		
Total	1,500	180,869	100.0	100.0		
Dual Diagnosis						
Yes	174	21,755	11.6	12.0		
No	1,326	159,114	88.4	88.0		
Total	1,500	180,869	100.0	100.0		

Regarding the perceived need for social welfare services among need factors, 34.4% of research participants reported that individuals with developmental disabilities were not in need of any service (n = 516), while 29.9% reported that they were in need of at least one type of services (n = 449). While 15.9% reported the need for two types of services (n = 239), 7.7% indicated the need for three types (n = 116). In addition, research participants perceived that 3.7% of individuals with developmental disabilities needed four types of services (n = 56), 1.7% needed five types of services (n = 26), 1.1% needed six types of services (n = 16), .5% needed

seven types of services (*n* = 7), .9% needed eight types of services (*n* = 14), and 4.1% needed all nine types of services (*n* = 61).

Individuals with autistic disorders were 294 in number, consisting 19.6%, while those with intellectual disabilities were 1,206 in number, consisting majority of individuals with developmental disabilities (80.4 %). Concerning the severity of disability, disability grade 1, or the most severe group (*n* = 457, 30.5%), make up a slightly smaller number compared to disability grade 2 (*n* = 515, 34.4%) and disability grade 3 (*n* = 528, 35.2%). As for receiving a dual diagnosis, 11.6% of individuals with developmental disabilities (*n* = 174) were reported to have other disabilities in addition to autistic disorders or intellectual disabilities while the majority (*n* = 1,326, 88.4%) did not have comorbid disabilities.

Table 7-4 presents the characteristics of the social welfare service use among individuals with developmental disabilities. In terms of the use of social welfare services, 72.0% of research participants responded that individuals with developmental disabilities had never utilized any of formal care services (*n* = 1080), while 23.6% reported the experience of using one type of care services (*n* = 354). In addition, 3.9% reported that individuals with developmental disabilities had used two types of such services (*n* = 58), while .4% and .1% reported the experience of using three (*n* = 6) and four types (*n* = 2) of services, respectively.

[Table 7-4] Social Welfare Service Utilization

Variables	Frequency		Percentage		Mean (SD)	
	Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted
Social Welfare Services in Use						
None	1,080	131,950	72.0	73.0		
One Type	354	41,486	23.6	22.9	.33	.31
Two Types	58	6,380	3.9	3.5	(.58)	(.57)
Three Types	6	865	.4	.5		
Four Types	2	188	.1	.1		
Total	1,500	180,869	100.0	100.0		

7.2. Data Examination

For data analysis using structural equation modeling, missingness, normality of data, multicollinearity of study variables were examined (Bae, 2009).

Table 7-5 provides missing rate and normality information assessed by skewness and kurtosis for the predisposing, enabling, and need factors as well as the social welfare service utilization. Missing data might reflect loss of information, and thus ignoring them would bias analytic results. However, Cohen and Cohen (1983) suggested that it is acceptable for data analysis to have 5 - 10% of missing data on study variables (as cited in Ju, 2010). In the current study data, monthly household income was the only variable found to have missing values, with 2.2% missing rate, which suggests that data analysis with structural equation modeling is reasonable.

[Table 7-5] Missing Rate and Normality of the Study Variables

Variables		*N*	Missing Rate (%)	Skewness (SD)	Kurtosis (SD)
Predisposing Factors	Age	1,500	.00	-.23(.07)	-1.29 (.13)
	Gender	1,500	.00		
	Education	1,500	.00		
Enabling Factors	National Basic Livelihood Security	1,500	.00	2.44(.07)	11.67(.13)
	Family Income	1,477	2.2		
	Living Situation	1,500	.00		
	Social Support	1,500	.00		
Need Factors	Perceived Need for Service	1,500	.00	2.10(.07)	4.31(.13)
	Disability Type	1,500	.00		
	Disability Grade	1,500	.00		
	Dual Diagnosis	1,500	.00		
Service Utilization	Social Welfare Service Utilization	1,500	.00	1.86(.07)	4.00(.13)

Structural equation modeling generally utilizes the Full Information Maximum Likelihood (FIML) estimation, by which parameters and missing values are estimated based on the Missing at Random assumption, which considers values as dependent on other values available in the data (Little & Rubin, 1987 as cited in Jeon & Kahng, 2006). When using FIML estimation, the study data should follow a multivariate normal distribution. Therefore, skewness and kurtosis of each continuous variable of the current study were evaluated in order to determine multivariate normality of data (Kline, 2005). Monthly household income showed normality problem with the significant positive skewness (11.67, SD =.13), and thus log transformed values of monthly household income were used for analysis. The remaining variables did not violate a normality assumption, as absolute value of skewness was less than 3 and that of kurtosis was less than 10 (Y. Lee, 2011).

The correlation matrix of the study variables is presented in Table 7-6. The correlation matrix displays the presence of relations as well as size and direction of correlations among variables (Guilford, 1957; Choi, 2008; Cho, 2010 as cited in Y. Lee, 2011). Correlation coefficients with absolute values greater than .85 indicate the existence of high collinearity (Kline, 2005). When inter-correlations among study variables are considerably high, research findings might be biased due to the disability of variables to measure different socio-psychological construct (Ju, 2010). However, the correlation coefficients in the current study did not indicate the presence of high multicollinearity among variables.

[Table 7-6] Pearson Correlation Coefficients

	1	2	3	4	5	6	7	8	9	10	11	12	13
1 AP	1												
2.GP	-.103***	.1											
3.EP	-.103***	.036	1										
4.NS	.310***	-.102***	-.036	1									
5.FI	-.388***	.088***	.138***	-.088***	1								
6.LS	-.220***	-.004	.112***	.004	.297***	1							
7.SWD	-.161***	.015	.081***	-.015	.039	-.061**	1						
8.SOD	-.016	.014	.043	-.014	.051	.043	.286***	1					
9.NEED	-.093***	.056**	.019	-.056**	.022	.071***	.036	-.008	1				
10.DT	.431***	-.198***	.013	.198***	-.309***	-.138***	.020	.019	-.129***	1			
11.DG	.171***	-.003	.099***	.003	-.085***	.035	.010	.196***	-.062**	.102***	1		
12.DD	.055**	-.031	.028	.031	-.075***	-.074***	-.113***	-.094***	.040	.053**	-.083	1	
13.USE	-.175***	.056**	.029	-.056**	.083***	-.086***	.115**	-.029	.085***	-.118***	-.195***	.034	1

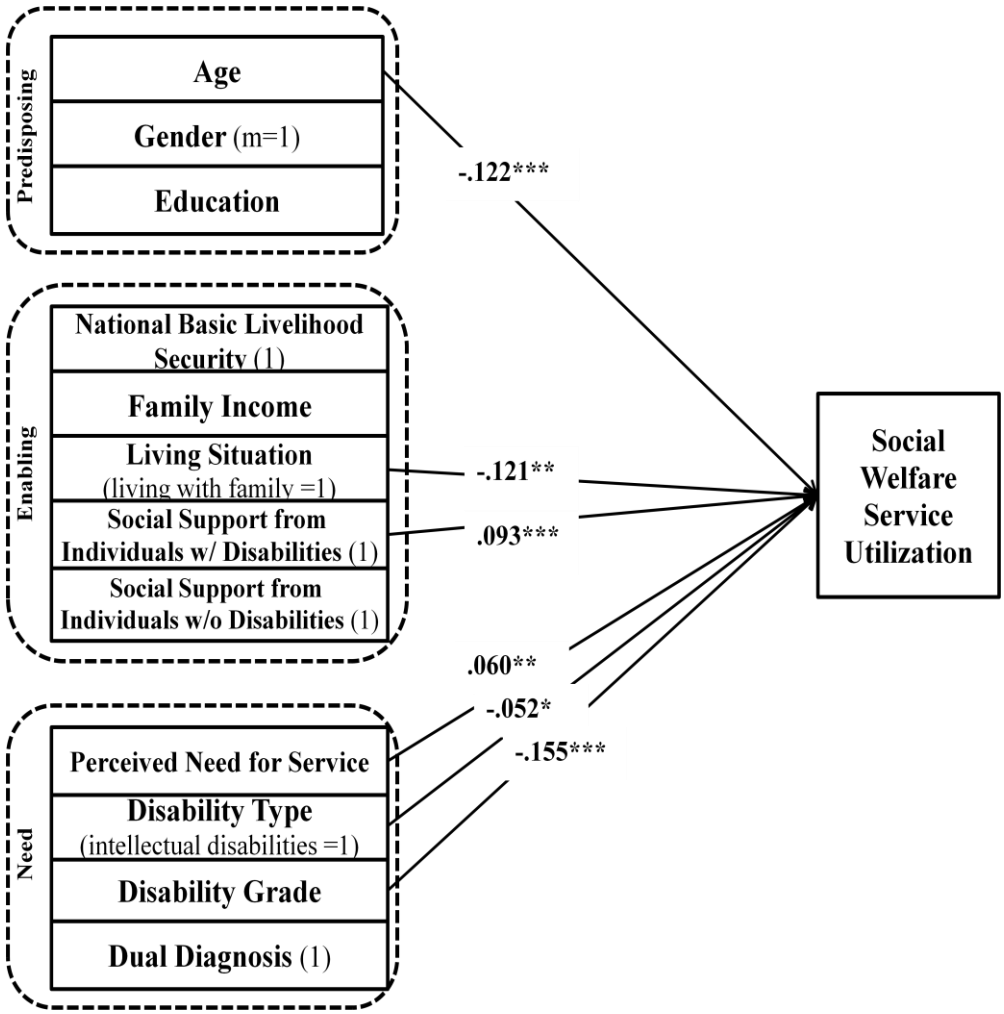
Note. AP: age of individuals with developmental disabilities; GP: gender of individuals with developmental disabilities; EP: education of individuals with developmental disabilities; NS: National Basic Livelihood Security Status of individuals with developmental disabilities; FI: family income; LS: living situation; SWD: social support from individuals with disabilities; SWD: social support from individuals without disabilities; NEED: perceived need for service; DT: disability types; DG: disability grade: DD: dual diagnosis; USE: social welfare service utilization.

$^{*}p < .10$, $^{**}p < .05$, $^{***}p < .01$ (two-tailed test)

7.3. Structural Equation Modeling for Social Welfare Service Utilization

Data analysis using structural equation modeling was conducted to examine relationships among the predisposing, enabling, need factors and the social welfare service utilization behavior among individuals with developmental disabilities. The results are displayed in Figure 7-1. Standardized coefficients are reported.

The full model with hypothesized relationships among the study variables was developed based on the Gelberg-Andersen Behavioral Model for Vulnerable Populations (Gelberg et al., 2000). In order to test the fit of the research model, there is a need to measure the degrees of freedom (Bae, 2008). In structural paths modeling, a general rule of thumb is that statistically insignificant paths are fixed to improve model fit or to increase the degrees of freedom. However, if the paths are conceptually significant for research hypotheses or theoretically suggested for the study model, exceptions are applied and researchers keep the paths in the study model (Schmacker & Lomax, 1996 as cited in Ju, 2010). In the present study, fixed at zero were correlation paths among exogenous variables which were not statistically significant with $p > .05$, with the ultimate research objectives of exploring within-group variations in predictors on the social welfare service utilization. Namely, to measure the degree of fit of the study model, the full model was trimmed by fixing insignificant correlation paths at zero, and the χ^2 of the trimmed model was compared against that of the full path model. The χ^2 difference of 29.516 with 25 degrees of freedom was not statistically significant at $p > .05$, supporting the invariance between the full path model and the trimmed model.



Note. Standardized coefficients are reported. Correlation paths among exogenous variables are not illustrated.

χ^2 = 29.704 (*df* = 25), $p < .001$, RMSEA = .011, IFI = .997, CFI = .997

* $p < .10$, ** $p < .05$, *** $p < .01$

[Figure 7-1] Structural Model for Social Welfare Service Utilization

The trimmed model with hypothesized relationships among the variables specified based on the Gelberg-Andersen Behavioral Model for Vulnerable Populations was empirically tested for the goodness of fit with the data employed. The chi-square

statistic of 29.704 (df = 25) was statistically significant at p < .001; however, other indicators and thresholds for the fit of models recommended by Hu and Bentler (Hu & Bentler, 1999) were referred, since the chi-square statistic is affected by the larger sample size and more likely to reject the model in spite of slight differences between observed and predicted covariances (Kline, 2005). The fit indices indicated that the study model fit the data optimally, with the RMSEA value of .011 being less than .06 while the IFI value of .997 and the CFI value of .997 exceeding .90 (Hu & Bentler, 1999).

[Table 7-7] Predictors of Service Utilization of Individuals with Developmental Disabilities (N = 1,500)

Paths	Social Welfare Services				
	B	***SE B***	β	***C.R.***	***p***
Predisposing Factors					
Age	-.004	.001	-.122	-4.055	***
Gender (m = 1)	.032	.031	.027	1.056	ns
Education	.005	.005	.036	.003	ns
Enabling Factors					
National Basic Livelihood Security status (1)	.034	.033	.029	1.031	ns
Family Income (ln)	.028	.023	.038	1.239	ns
Living Situation(w/family=1)	-.189	.042	-.121	-4.538	***
Social Support from Individuals with Disabilities (1)	.117	.033	.093	3.491	***
Social Support from individuals without Disabilities (1)	-.032	.039	-.022	-.822	ns
fNeed Factors					
Perceived Need	.016	.007	.060	2.403	**
Disability Type	-.076	.042	-.052	-1.827	*
Disability Grade	-.111	.019	-.155	-5.965	***
Dual Diagnosis (i.d.=1)	.055	.046	.030	1.214	ns

Note. m = male; w/family = living with family; i.d. = intellectual disabilities

*p < .10, ** p < .05, *** p < .01, ns (not significant) > .10

As presented in Table 7-7, among the predisposing factors, age of individuals with developmental disabilities was the only demographic factor that was significantly associated with their social welfare service utilization behavior. The younger individuals with developmental disabilities were more likely than the older individuals to seek care services from a formal welfare system (b = -.004, $p < .01$). Other factors that predispose individuals with developmental disabilities to use social welfare services, such as gender and education level, were not found to have significant associations (b = .032, not significant [ns]; b = .005, ns).

Among the enabling factors, living situation and social relationship with individuals with disabilities were found to be significant predictors of the access to a care system for individuals with developmental disabilities. Those living without family were more likely than those living with family to be involved in a social welfare system (b = -.189, $p < .01$). Having social relationships with individuals with disabilities facilitated the utilization behavior of social welfare services (b = .117, $p < .01$) while having social relationships with individuals without disabilities did not influence the social welfare service utilization behavior at a statistically significant level (b = -.032, ns). Receiving public benefits and family income were not significantly associated with the social welfare service utilization (b = .034, ns; b = .028, ns).

Among the need factors, perceived need for service, disability type, and disability grade were significantly associated with the social welfare service utilization by individuals with developmental disabilities. Perceived need for social welfare service was positively associated with the utilization behavior of formal care services (b = .016, $p < .05$). Subordinate types of developmental disabilities were found to have a marginally significant association with the social welfare service use (b = -.076, $p < .10$). Individuals with autistic disorders were more likely than those with intellectual disabilities to use social welfare services. Those who

were evaluated to have more severe levels of disabilities, or lower disability grades, were more likely to use care services in community than those who were assessed to have a less severe level of disability (b = -.111, $p < .01$). Dual diagnosis, however, did not have a significant effect on the service utilization behavior of individuals with developmental disabilities (b = .055, ns), indicating that in terms of social welfare service utilization, it does not matter whether individuals with developmental disabilities are diagnosed with autistic disorders or intellectual disabilities simultaneously with other types of disabilities.

The value of the squared multiple correlations of the structural paths model was .088, indicating that the predisposing, enabling, and need factors explained about nine percents of the variance in the social welfare service utilization behavior of individuals with developmental disabilities. Among the contributing factors, disability grade in the need domain (β = -.155), followed by age of individuals with developmental disabilities (β = -.122), was the strongest predictor of social welfare service utilization. Individuals with different types of developmental disabilities also differed in the social welfare service utilization behavior, though the effect size was smaller (β = -.052). Further analyses were performed to explore within-group variations in factors that contributed to the social welfare service utilization behavior, with the rationale that the service utilization behavior varies between individuals with autistic disorders and those with intellectual disabilities as well as between minors and adults with developmental disabilities.

7.4. Multi-group Structural Equation Modeling

To examine whether parameter estimates in the structural model vary across disability subtypes and age groups, cross-group invariance testing with structural equation modeling was performed. Data analysis using multi-group structural equation modeling follows procedures of measurement invariance testing and structural invariance testing, factor structure variation testing across groups was considered unnecessary in the present study as the research model is composed of observed variables. Structural path invariance testing was conducted to explore whether variations in factors that contribute to the social welfare service utilization exist across subordinate types of developmental disabilities and age groups.

7.4.1. Examining Variations by Subordinate Type of Developmental Disabilities in Social Welfare Service Utilization

Individuals with autistic disorders were more likely than individuals with intellectual disabilities to utilize more social welfare services, as it was empirically supported in previous SEM analysis that subtypes of developmental disabilities had a marginally significant effect on their service utilization behavior (b = -.076, *p* = .068). To explore whether other predictors of the social welfare service utilization by individuals with developmental disabilities differ by subordinate disability types, analysis using multi-group structural equation modeling was performed between individuals with autistic disorders (294 cases) and individuals with intellectual disabilities (1,206 cases).

Structural path invariance testing across subordinate types of developmental disabilities was conducted, comparing the χ^2 of the constrained model, in which the structural paths were fixed to be equal across disability subtypes, with that of the unconstrained baseline model, in which all the paths were estimated freely. As shown in Table 7-8, the χ^2 difference of 23.061 with 11

degrees of freedom was statistically significant at $p < .05$, indicating that structural paths across individuals with autistic disorders and those with intellectual disabilities were not invariant. Namely, the predictors of the social welfare service utilization behavior differed by subordinate type of developmental disabilities. As the inequality of structural paths between subordinate disability types was supported, post-hoc analyses to identify particular paths responsible for group variations were conducted.

[Table 7-8] Result of Structural Path Invariance Testing across Subordinate Types of Developmental Disabilities

Model	χ^2 (*df*)	$\Delta\chi^2$ (*df*)	RMSEA	IFI	CFI
Baseline Model	69.605 (44)		.020	.939	.983
Constrained Model	92.666 (55)	23.061(11)**	.021	.929	.975

** $p < .05$

To identify coefficients that accounted for group variations by disability types, each structural path was released for free estimation, examining the χ^2 difference from the constrained model to the partially constrained model. As the results of multi-group structural equation modeling are summarized in Table 7-9, three paths were found to have significant differences in χ^2, indicating national basic livelihood security status, perceived need for services, and disability grade were responsible for group variations. In other words, there were disability subtype differences on size or direction of influence of receipt of public benefits, perceived need for care, and disability grade on the social welfare service utilization by individuals with developmental disabilities.

[Table 7-9] Structural Parameter Estimates of Subordinate Types of Developmental Disabilities

Model	Unstandardized Coefficients (Standardized Coefficients)		χ^2 (*df*)	$\Delta\chi^2$
Constrained Model	Autistic disorders (*n* = 294)	Intellectual disabilities (*n* = 1,206)	92.666 (55)	
Age	-.005 (-.038)	-.005*** (-.133)	92.482 (54)	0.184
Gender (m=1)	-.066 (-.036)	.047 (.042)	91.617 (54)	1.049
Education	.004 (.029)	. 006 (.048)	92.273 (54)	0.393
National Basic Livelihood Security Status (1)	-.214** (-.127)	.073** (066)	88.778 (54)	3.888**
Family Income (ln)	-.090 (-.078)	.042* (.060)	92.554 (54)	0.112
Living Situation (w/family=1)	-.027 (-.010)	-.203*** (-.145)	91.241 (54)	1.425
Social Support from Individuals with Disabilities (1)	.080 (.054)	.130*** (.109)	92.348 (54)	0.318
Social Support from Individuals without Disabilities (1)	.083 (.047)	-.050 (-.036)	92.624 (54)	0.042
Perceived Need for Service	.045** (.162)	.006 (.021)	87.044 (54)	5.622**
Disability Grade	-.230*** (-.276)	-.084*** (-.123)	87.008 (54)	5.658**
Dual Diagnosis (i.d.=1)	-.089 (-.036)	.088 (.052)	91.732 (54)	0.934

Note. m = male; w/family = living with family; i.d. = intellectual disabilities

$^{*}p < .10$, $^{**}p < .05$, $^{***}p < .01$

The effect of receipt of national basic livelihood security on the service use behavior of individuals with developmental disabilities differed significantly across subordinate types of developmental disabilities. Among individuals with autistic disorders, those who did not receive national basic livelihood security were more likely to use social welfare services than those who received such benefits (b = -.214, $p < .05$). For individuals with intellectual disabilities, however, recipients of

the public benefits were more likely to utilize social welfare services than non-recipients of the public benefits (b = .073, $p < .05$).

Perceived need for services was found to be interacting with subtypes of developmental disabilities. The effect of perceived need for services was statistically strong for individuals with autistic disorders (β = .162, $p < .05$), while it remained insignificant for individuals with intellectual disabilities (β = .021, $p > .05$). In other words, though individuals with both types of developmental disabilities in need of service were more likely to utilize care services, perceived need for service was a significant predictor among individuals with autistic disorders while the effect was insignificant among individuals with intellectual disabilities.

The effect of disability grade on the social welfare service utilization behavior varied across subordinate types of developmental disabilities. Both individuals with autistic disorders (b = -.230, $p < .01$) and individuals with intellectual disabilities (b = -.084, $p < .01$), whose disability grade was lower, or more severe, were more likely to seek more care services in community though the effect was comparatively smaller for individuals with intellectual disabilities (β = -.123) than those with autistic disorders (β= -.276).

Some paths from the predisposing, enabling, and need factors to the social welfare service utilization behavior differed across subordinate types of developmental disabilities though the group variations were not significant at $p > .05$. For example, the effect of age varied across secondary types of developmental disabilities in that among individuals with intellectual disabilities, the younger individuals (b = -.005. $p < .01$) were more likely to use services while the effect was not significant for individuals with autistic disorders (b = -.005, $p > .10$).

Monthly household income yielded interesting findings. Concerning individuals with autistic disorders, those whose family income was lower were

more likely to use more social welfare services (b = -.090, $p > .10$) whereas, for individuals with intellectual disabilities, those whose family income were higher were more likely to utilized more care services in community (b = .042, $p < .10$). However, the effect was significant only for individuals with intellectual disabilities.

Living situation also had a different effect on two groups. Among individuals with intellectual disabilities, living without family (b = -.203, $P < .01$) was associated with the social welfare service use while the effect was not significant for individuals with autistic disorders (b = -.027, $p > .10$).

For both individuals with autistic disorders and those with intellectual disabilities, those who received social support from friends with disabilities were more likely to use more services. However, the effect was insignificant for individuals with autistic disorders (b = .080, $p > .10$) while the effect was significant for those with intellectual disabilities (b = .130, $p < .01$).

7.4.2 Examining Variations by Age Group in Social Welfare Service Utilization

The younger individuals with developmental disabilities were more likely to utilize care services in community than the older individuals, as it was empirically supported in previous SEM analysis that age was identified as a strong predictor of the service utilization behavior ($\beta = -.122$, $p < .01$). To explore whether other predictors of the social welfare service utilization behavior of individuals with developmental disabilities differ by age group, multi-group structural equation modeling was carried out between minors below the age of 19 (495 cases) and adults 19 and older (1,005 cases) among individuals with developmental disabilities.

Structural path invariance testing was conducted, comparing the χ^2 of the constrained model with that of the baseline model to examine the structural

path invariance across age groups of individuals with developmental disabilities. As presented in Table 7-10, the χ^2 difference of 26.713 with 12 degrees of freedom was statistically significant at $p < .05$, indicating that structural paths across minors and adults were not invariant. In other words, predictors of the social welfare service utilization behavior differed by age group among individuals with developmental disabilities. As the result indicated the inequality of structural paths between age groups, post-hoc analyses were conducted to identify particular paths responsible for group variations.

[Table 7-10] Result of Structural Path Invariance Testing across Age Groups

Model	χ^2 (*df*)	$\Delta\chi^2$ (*df*)	RMSEA	IFI	CFI
Baseline Model	197.622 (50)		.044	.947	.944
Constrained Model	224.335 (62)	26.713(12)**	.042	.941	.938

** $p < .05$

To identify coefficients that accounted for age group variations, each structural path was released for free estimation, examining the χ^2 difference from the constrained model to the partially constrained model. As the results from multi-group analysis are summarized in Table 7-11, three paths were found to have significant difference in χ^2, indicating that age group variations were present on these coefficients. Specifically, there were age group differences on size or direction of influence of age, education level, and dual diagnosis on the social welfare service utilization among individuals with developmental disabilities.

[Table 7-11] Structural Parameter Estimates of Age Groups

Model	Unstandardized Coefficients (Standardized Coefficients)		χ^2 (*df*)	$\Delta\chi^2$
Constrained Model	Minors (*n* = 495)	Adults (*n* = 1,005)	224.335 (62)	
Age	.009 (.052)	-.001 (-.019)	216.914 (61)	7.421***
Gender (m=1)	.010 (.007)	.026 (.024)	224.333 (61)	0.002
Education	-.026 (-.146)	.017*** (.149)	210.187 (61)	14.148***
National Basic Livelihood Security Status (1)	.017 (.012)	.055 (.052)	224.300 (61)	0.035
Family Income (ln)	-.043 (-.042)	.059** (.091)	221.747 (61)	2.588
Living Situation (w/family=1)	-.094 (-.040)	-.218*** (-.167)	223.281(61)	1.054
Social Support from Individuals with Disabilities (1)	.066 (.048)	.155*** (.131)	222.917 (61)	1.418
Social Support from Individuals without Disabilities (1)	.014 (.009)	-.067 (-.049)	224.101 (61)	0.234
Perceived Need for Service	.023* (.079)	.012 (.044)	224.04 (61)	0.295
Disability Type	-.072 (-.054)	-.057 (-.030)	224.207 (61)	0.128
Disability Grade	-.132** (-.158)	-.115*** (-.176)	224.284 (61)	0.051
Dual Diagnosis (i.d.=1)	-.132 (-.058)	.135** (.086)	218.115 (61)	6.220**

Note. m = male; w/family = living with family; i.d. = intellectual disabilities

$^{*}p < .10$, $^{**}p < .05$, $^{***}p < .01$

The influence of age on the social welfare service utilization behavior of individuals with developmental disabilities was not significant for minors or adults though a statistically significant difference was found on the path. Among minors, those who were older were more likely to use more services (b = .009, $p > .05$) whereas among adults, those who were younger were more likely to use more services (b = -.001, $p > .05$).

Education level determined the service utilization differently for minors and adults. Among the group below the age of 19, those who were less educated were more likely to use more social welfare services though the effect (b = -.026) was insignificant at p > .05. For the group aged 19 and older, those who were highly educated were more likely to utilize social welfare services and the effect (b = .017) was significant at $p < .01$.

Dual diagnosis was found to be an interesting need factor interacting with age, as its effects on the social welfare service utilization behavior was statistically strong for adults 19 and over ($\beta = .086$, $p < .05$), while for those below the age of 19, it was negatively associated with the service utilization however at insignificant level ($\beta = -.058$, $p > .05$).

Several paths from the predisposing, enabling, and need factors towards the social welfare service utilization differed across age groups though the group variations were not significant at $p > .05$. For example, monthly household income yielded an interesting finding. For minors, those from lower household income family were more likely to use social welfare services (b = -.043, $p > .10$) while for adults, those from higher household income family were more likely to use care services in community (b = .059, $p < .05$). However, the effect was significant only for the adult group.

Living situation also differed by age group though the difference was insignificant. Among adults, living without family (b = -.094, $p > .10$) was associated with the service use while the effect was not significant for minors (b = -.218, $p < .01$).

Social support received from individuals with disabilities was another factor that affected two groups differently. For both minors and adults, those who had social relationships with friends with disabilities were more likely to use services though the effect was insignificant for minors (b = .066, $p > .10$) while the effect was significant for adults (b = .155, $p < .01$).

The opposite trend was observed for the effect of perceived need for service. The effect was significant only for minors in that those who perceived the need for more service were more likely to utilize services (b = .023, $p < .10$) whereas the effect was insignificant for the adults (b = .012, $p > .10$).

With regard to disability grade, its effect was much stronger for adults ($\beta = -.176$, $p < .01$) than minors ($\beta = -.158$, $p < .05$) though the group difference was not significant.

CHAPTER 8. CONCLUSION

This chapter analyzes the research findings in relation to the given hypotheses. In addition, the implications and limitations of the present study are discussed.

8.1. Summary of Findings

Individuals with developmental disabilities have the continuous need for care services and support as they are substantially limited in their capacity for self-care. Understanding what factors predispose, enable, and necessitate individuals with developmental disabilities to utilize social welfare services is important in determining which policies and practices ensure the delivery of relevant care services to the target population. Those referred to as individuals with developmental disabilities do not necessarily share common properties, and their service utilization behavior may be affected differently.

The present study aimed to examine the relationships among the predisposing, enabling, and need factors and the social welfare service utilization behavior of individuals with developmental disabilities in Korea with a specific focus of exploring differences in predictors by subordinate disability type and age group. The Gelberg-Andersen Behavioral Model for Vulnerable Populations (Gelberg et al., 2000) was employed as a theoretical framework in analyzing data from the '2011 Policy Design on Supporting People with Developmental Disabilities and Their Families through Need Assessment and Field Research'.

To accomplish the objectives of the current research, data analysis using structural equation modeling was performed. As a result, major predisposing, enabling, and need factors were found to have significant associations with the social welfare service utilization behavior among individuals with developmental

disabilities. Further, differences were observed in the associations between contributing factors and the social welfare service utilization behavior across those with autistic disorders and those with intellectual disabilities, as well as minors and adults among individuals with developmental disabilities. The summary of the research findings is presented in Table 8-1.

[Table 8-1] Summary of Testing the Hypotheses

Q1. What are the predisposing, enabling, and need factors predicting the social welfare service utilization among individuals with developmental disabilities?		
H1-1	Predisposing factors will be significantly associated with the social welfare service utilization among individuals with developmental disabilities.	Partially supported
h1-1-1	Age of individuals with developmental disabilities will be negatively associated with the social welfare service utilization.	supported
h1-1-2	Females will use more social welfare services than males.	rejected
h1-1-3	Education of individuals with developmental disabilities will be positively associated with the social welfare service utilization.	rejected
H1-2	Enabling factors will be significantly associated with the social welfare service utilization among individuals with developmental disabilities.	Partially supported
h1-2-1	Recipients of National Basic Livelihood Security will use more social welfare services.	rejected
h1-2-2	Income will be negatively associated with the social welfare service utilization.	rejected
h1-2-3	Individuals living without family will use more social welfare services than individuals living with family.	supported
h1-2-4	Social support will be positively associated with the social welfare service utilization. (a) from individuals with disabilities (b) from individuals without disabilities	(a) supported (b) rejected

H 1-3	Need factors will be significantly associated with the social welfare service utilization among individuals with developmental disabilities.	Partially supported
h1-3-1	Perceived need for services will be positively associated with the social welfare service utilization.	supported
h1-3-2	Disability grade will be negatively associated with the social welfare service utilization.	supported
h1-3-3	Individuals with autistic disorders will use more social welfare services than individuals with intellectual disabilities.	supported
h1-3-4	Individuals with a dual diagnosis will use more social welfare services.	rejected

Q2. Do the factors that predict the social welfare service utilization of individuals with developmental disabilities vary by subordinate type of developmental disabilities?

H 2	Factors predicting the social welfare service utilization will vary by subordinate type of developmental disabilities, i.e., individuals with autistic disorders and individuals with intellectual disabilities.	supported

Q3. Do the factors that predict the social welfare service utilization of individuals with developmental disabilities vary by age group?

H 3	Factors predicting the social welfare service utilization will vary by age group, i.e., minors below the age of 19 and adults 19 and over.	supported

8.1.1. The Relationships among Predisposing, Enabling, Need Factors and Service Utilization Behavior

Research Question 1 examined the relationships of the predisposing, enabling and need factors with the social welfare service utilization behavior among individuals with developmental disabilities. Hypothesis 1-1 covered the associations between the predisposing factors and the service use. Age of individuals with developmental disabilities was found to have a significant association with the social welfare service utilization, supporting Hypothesis 1-1-1.

Age was found to have a significant negative association with the social welfare service use of individuals with developmental disabilities (b = -.004, p < .01). The younger individuals with developmental disabilities were found to be more likely than the older individuals with developmental disabilities to seek care services. Other predisposing factors, such as gender and education, were not found to have significant associations with the utilization behavior of social welfare service. Thus, Hypotheses 1-1-2 and 1-1-3 were not supported.

Hypothesis 1-2 covered the associations between the enabling factors and the service use. Living situation and social support from individuals with disabilities were identified to be significant predictors of the social welfare service use, supporting Hypotheses 1-2-3 and 1-2-4a.

Living situation was found to have a significant negative association with the social welfare service use of individuals with developmental disabilities (b = -.189, p < .01). Those living without family were more likely than those living with family to be involved in a social welfare system. Social support from individuals with disabilities was found to have a significant positive association with the social welfare service use of individuals with developmental disabilities (b = .117, p < .01). Having social relationships with individuals with disabilities functioned as a facilitator to utilize social welfare services. Other enabling factors, such as national basic livelihood security recipient status, monthly household income, and social support from individuals without disabilities were not identified as significant predictors of the social welfare service use. Thus, Hypotheses 1-2-1, 1-2-2 and 1-2-4b were not supported.

Hypothesis 1-3 covered the associations between need factors and the service use. Perceived need for services, subordinate types of developmental disabilities, and disability grade were found to have significant associations with the social welfare service use. Therefore, Hypotheses 1-3-1, 1-3-2 and 1-3-3 were supported.

Perceived need for care was found to have a significant positive association with the social welfare service use of individuals with developmental disabilities (b = .016, $p < .05$). More need for services was significantly associated with the use of more care services. Subordinate types of developmental disabilities were found to have a marginally significant association with the social welfare service use (b = -.076, $p < .10$). Individuals with autistic disorders were more likely than those with intellectual disabilities to utilize care services in community. Disability grade was found to have a significant negative association with the social welfare service use of individuals with developmental disabilities (b = -.111, $p < .01$). Those who were evaluated to have a more severe levels of disabilities, or lower disability grades, were more likely to use social welfare services than those who were assessed to have a less severe level of disability; however, dual diagnosis was not identified to be a significant predictor of the social welfare service use, rejecting Hypothesis 1-3-4.

8.1.2. Variations by Subordinate Type of Developmental Disabilities in Social Welfare Service Utilization

Research Question 2 covered the interaction effect of subordinate types of developmental disabilities with other contributing factors in determining the utilization behavior of social welfare service. Findings of data analysis using multi-group structural equation modeling indicated significant variations in paths determining the social welfare service utilization across subordinate disability types, supporting Hypothesis 2. Particular paths, such as national basic livelihood security status, perceived need and disability grade were found to be responsible for group variations. In other words, there were disability subtype differences in size or direction of influence of receipt of public benefits, perceived need for care, and disability grade on the social welfare service utilization by individuals with developmental disabilities.

8.1.3. Variations by Age Group in Social Welfare Service Utilization

Research Question 3 covered the interaction effect of age group with other contributing factors in affecting the utilization behavior of social welfare service. Findings of data analysis using multi-group structural equation modeling indicated significant differences in paths determining the social welfare service utilization across age groups, supporting Hypothesis 3. Particular paths, such as age, education, and dual diagnosis, were found to be responsible for group variations. In other words, there were age group differences in size or direction of influence of age, education and dual diagnosis on the social welfare service utilization by individuals with developmental disabilities.

8.2. Discussions

In the present study, potential factors that predispose, enable, and necessitate individuals with developmental disabilities to use social welfare services were examined. The research model with hypothesized relationships among the variables specified according to the Gelberg-Andersen Behavioral Model for Vulnerable Populations was empirically tested for the goodness of fit with nationally representative data of individuals with developmental disabilities in Korea. The fit indices indicated that the model fit the data optimally. In this respect, the current research validated the applicability of the Gelberg-Andersen Behavioral Model to this vulnerable population.

Major contributing factors, especially the particular vulnerabilities present among individuals with developmental disabilities in Korea were found to be significantly associated with their social welfare service utilization.

Age, in the predisposing domain, was found to have a significant effect on the service use of individuals with developmental disabilities, indicating that the older individuals were more likely than the younger individuals to use fewer services, replicating the findings of previous service research (Choi & Chun, 2010; Kim & Kim, 2008; Seok et al., 2008; Yoo & Chun, 2008). This finding might be better understood in light of the argument of Cho et al. (2012) that 72.8% of adults among individuals with developmental disabilities responded that they did not utilize any of the community-based care services, which empirically supports the huge void in the Korean formal care system for adults among individuals with developmental disabilities.

With regard to living situation in the enabling domain, this study replicated the findings of previous literature on the service use of individuals with disabilities in that those living without family were more likely to use services than those living with family (D. Kim, 2012; Lee, 2009; Mitchell & Krout, 1998; Mui &

Burnett, 1994; Park, 2003). This might be explained by Park (2003)'s assertion that as family members normally offer informal care to relatives with disabilities, as an alternative to the formal support, it is unnecessary for individuals with disabilities living with family to pursue access to the formal care system. Interestingly, this finding contradicts the hypothesis of Gelberg et al., (2000) that the presence of a caregiver enables the service utilization. Social support coming from individuals with disabilities positively affected the utilization behavior of social welfare services among individuals with developmental disabilities. This finding is consistent with previous Korean literature on the service utilization of vulnerable populations (Choi & Chun, 2010; H. Kim, 2012; Kim & Lee, 2010) in its claim that informal social networks function as enabling resources to link potential consumers with relevant services in the community.

Subjective need for care was found to serve as an immediate determinant of the formal care service utilization, consistent with previous studies on a diverse service use (Andersen & Aday, 1978; Denktas et al., 2009; Fiscella et al., 2002; Katburg, 2002; Leclere, Jense & Biddlecom, 1994; Wan & Odell, 1981 as cited in H. Kim, 2012). Analyses on the relationships of the social welfare service utilization with identification of issues in development and the evaluation of disability grade replicated findings of previous Korean literature on the service use of individuals with disabilities (Choi & Chun, 2010; D. Kim, 2012; Jung, 2007; Kang & Park, 2011; Seok et al., 2008). Disability grade was negatively associated with the service use in that those who have more severe dysfunction were more likely to utilize more social services. This might be due to the fact that the care services available in the community are generally implemented to promote rehabilitation and social participation of the consumers, and thus those with more severe disabilities in need of physical, vocational, and psychosocial rehabilitation are more likely to seek formal care.

Variations in paths determining the social welfare service utilization

across subordinate disability types and age groups among individuals with developmental disabilities were explored. Data analysis using multi-group structural equation modeling revealed that individuals with autistic disorders and individuals with intellectual disabilities as well as minors and adults among individuals with developmental disabilities take different pathways to formal systems of support.

More specifically, differences by subordinate type of developmental disabilities were found in size or direction of influence of public benefits, perceived need for care, and disability grade on the formal care service use among individuals with developmental disabilities. Autistic disorders and intellectual disabilities are referred to as developmental disabilities according to the Welfare Law for Persons with Disabilities of Korea; however, it is hard to consider the population as a homogenous group as they involve distinctive disability features (APA, 2000; Cho et al., 2011; Kim et al., 2012; Nevid, Rathus, & Greene, 2006), which are assumed to affect them differently in actualizing the community-based care service use.

With regard to the utilization behavior of social welfare services throughout the individual's lifespan, differences in size or direction of influence of age, education, and dual diagnosis were identified across minors and adults with developmental disabilities. Kahng (2010), in his research on the association between the trajectory of outpatient medical service use and its predictors, argued that various bio-psycho-social characteristics among research participants of different ages might lead to varied and unique pathways to the medical service system (Laslett, 1989; Neugarten, 1996). In this respect, variations in paths determining the social welfare service utilization across age groups among individuals with developmental disabilities might be attributable to distinctive physical health conditions as well as psychological and social properties shared within each age group.

Since the current research was designed as an exploratory study, more specific mechanisms should be identified in future research in relation to the social welfare service utilization with disability subtype and age as well as other contributing factors.

8.3. Research Implications

Based on the research findings of the present study, this chapter discusses implications for theory and for social welfare practice and policy.

8.3.1. Theoretical Implications

One of the major contributions of the present research is that hypothesized relationships among the variables developed based on the Gelberg-Andersen Behavioral Model for Vulnerable Populations were empirically tested with the study data. The current research was the first attempt to apply the behavioral model of service utilization to individuals with developmental disabilities in Korea. As research findings of the present study demonstrated that major contributing factors as well as particular vulnerabilities present among individuals with developmental disabilities in Korea were significantly associated with their service use, the applicability of the behavioral model of service utilization to this vulnerable population was validated.

Second, the present study provided empirical evidence for differences in relationships among contributing factors and the service utilization behavior across subordinate types of developmental disabilities and age groups. Individuals with particular needs go through different help-seeking processes; however, previous research for the service use of individuals with disabilities treated target consumers as a homogenous group and failed to consider unique pathways to formal services across subgroups. The current study, which investigated within-group variations among individuals with developmental disabilities, might help researchers and policymakers to take a proactive approach toward the varied conditions of the target population in the development and provision of related social welfare services.

Third, previous literature on the service use among individuals with developmental disabilities was mostly relevant to special education, whereas research on social welfare service is scarce. The present study contributes to the limited knowledge on the current care system for individuals with developmental disabilities by examining data on the utilization behavior of social welfare services provided by the Korean Ministry of Health and Welfare under the relevant laws in force.

Lastly, existing research was limited with regard to the study sample; however, this study employed a nationally representative sample of individuals with developmental disorders in all ages and thus achieved generalizability.

8.3.2. Practice and Policy Implications

The present study identified characteristics (e.g., predisposition, resources, and needs) among individuals with developmental disabilities which actualize the use of community-based supportive services. This might carry significant implications for policy development and practical intervention to ensure that the relevant care services are provided to the target population. Furthermore, research findings on differences in relationships between contributing factors and the service use by disability subtype and age group might help social welfare practitioners and policymakers to address the varied and specific help-seeking processes. Implications for social welfare practice and policy are specified as follows.

First, social welfare intervention is called for on the national level with information campaigns to raise awareness about social welfare services for individuals with developmental disabilities. Although the current study sample is composed of registered individuals with developmental disabilities who have received a formal diagnosis to provide direction for possible intervention, findings of the research showed that social welfare services are underutilized: 72% of individuals with developmental disabilities do not use any of formal care services,

which suggests that policymakers and the related practitioners should be attentive to the voice of potential consumers who ascribe their non-utilization behavior mainly to a lack of information (Cho et al., 2011).

Government should establish plans to enhance awareness regarding the available community-based support for individuals with developmental disabilities and to create links between diagnostic services and the formal care system. Making the relevant information available via Internet-based and printed forms would also increase the accessibility. In addition, government should educate professionals involved in diagnosis to play a gatekeeper role, referring patients to relevant social welfare services and presenting information on social welfare services that are available in the community (Hiebert-Murphy, Trute & Wright, 2008).

Second, the current research demonstrated that social support from individuals with disabilities was significantly associated with the social welfare service utilization. This implies that social relationships with those who share common needs function to encourage active participation in a community-based support system.

Among individuals with developmental disabilities in Korea, attention on the movement towards self-help groups has been increasing. Those involved in self-support group activities advocate for their own rights and practice self-determination, reflecting a voice of their own in the design and direction of the relevant policies. In New Zealand, about 60 self-help groups named ‘People First’ have been established since the first self-advocacy conference of individuals with developmental disabilities in 1983 (Lee, 2012). In Japan, the self-supportive activities of individuals with developmental disabilities were initiated in the 1990s, and now there are more than 240 active groups (Lee, 2012). In this respect, social welfare practitioners and the related professionals should assume an appropriate role as supportive persons and assist individuals with developmental disabilities to take bigger responsibilities in adjusting the necessary services to their needs.

Third, disability grade was a strong determinant of the service utilization behavior among individuals with developmental disabilities, a comparatively accurate reflection of the current service system that those with more severe disabilities are given higher priority due to the limited resources; however, access to care services should be ascertained with consideration of the varied characteristics within the group referred to as individuals with developmental disabilities, beyond assessments that apply objective criteria. Among individuals with autistic disorders, those with disability grade 2 perceived that they need 13 hours of personal assistance per day, which is approximately equivalent to that required by those with disability grade 1 among individuals with intellectual disabilities (Cho et al., 2011).

Thus, it is recommended that relevant services be provided with careful consideration of behavioral characteristics and perceived need for care in accordance with specific types of disabilities. Ongoing systematic need assessment might help to address the opinion of individuals with developmental disabilities in the service development and provision. The Survey on Individuals with Disabilities, which is conducted every three years based on Article 31 of the Welfare Law for Persons with Disabilities, might be an appropriate means to build such an empirical foundation.

Fourth, paths from contributing factors toward the social welfare service use were found to vary across age groups. The current support system is largely children-oriented with the nature of the disability. According to Article 3 of Act on Special Education for Disabled Persons, etc of Korea, special education and related services are offered free of charge to school-age children. In collaboration with schools, community organizations provide substantial social welfare services to the target population; however, when individuals with developmental disabilities become adults, they become practically invisible to the community since they have nowhere to go, to spend time, to relate to others or to work; as discussed previously,

there is a huge gap in the Korean formal care system for adults with developmental disabilities. Thus, it is suggested that policymakers place higher priority on understanding the current status of the adult group of individuals with developmental disabilities. Thorough evaluation of the service utilization rate at the local government level is recommended, offering adults with developmental disabilities referrals to the relevant care services in the community.

In the Korean social security system, the legal grounds for social welfare service are weaker than that of social insurance and public assistance (Yoon & Yi, 2010). Thus, it is considered essential to establish legal stability in the social welfare service utilization as Korean society is experiencing lively expansion of the social welfare service sector.

8.4. Limitation of the Study and Directions for Future Research

Regardless of the research implications, there are some limitations of the study that should be addressed in future research. First, the present study did not take into account the characteristics of caregivers. Access to formal care services for individuals with developmental disabilities is likely determined by caregivers in terms of the nature of developmental disabilities, such as limited self-care skills, poor communication ability, and failure to relate to others. In the literature on the service use of the elderly (sometimes with impairments) (Bass & Noelker, 1987; Hong, 2009; Lee, 2004; Logan & Spitze, 1994; Song, 2003), caregiver factors have been considered crucial in actualizing the help-seeking behavior; however, as the data used for analysis was limited in information related to the main caregivers, the present study did not control for their influence on access to a formal care system. It is recommended that future studies include family-related factors, beyond living situation with family.

Second, the current research was unable to assess provider factors due to the limitation of employing secondary data. According to Han (2008), service provision factor in the structural domain was reported to significantly influence the use of service in areas of literature on health service (Kim, 1999; Lee, 2007; Lee, 2004). The inclusion of the provider factor is expected to increase the explanatory power of the research model of the social welfare service use by individuals with disabilities. Therefore, it is suggested that future research examine the effects of both consumer and provider factors in the service utilization with data analysis using hierarchical linear modeling.

Third, as most items were dichotomous or constructed based on an evaluation of related professionals, the present study was unable to sufficiently secure measurement validity. Hence, more specified and standardized items are

suggested to be employed in future research.

Fourth, the present study focused on the volume of social welfare service in understanding the service utilization behavior of individuals with developmental disabilities. To more thoroughly grasp a systematic picture of the service utilization behavior of the vulnerable population in the Korean context of the social welfare system, a comprehensive approach considering qualitative aspects of the social welfare service use, such as expense of the service utilization, is encouraged in addition to the quantitative understanding (Kim, Choi, & Lee, 2008). This might provide directions for polices that secure the quantitative and qualitative dimensions of equity in social welfare service delivery.

Fifth, associations between the social welfare service use and contributing factors were examined without considering the time-varying effects of such variables as social support and perceived need for service in the current cross-sectional study. Relationships among study variables should be more accurately identified in future research through a longitudinal approach.

Lastly, the present research employed data taken from the Survey on Individuals with Developmental Disabilities, which was based on the number of registered individuals in the National Disability Registration Database. However, unregistered individuals with developmental disabilities are assumed to be highly excluded from the benefits of a community-based formal care system. In this respect, more comprehensive, accurate understanding, such as the complete enumeration survey on these vulnerable individuals according to Article 18 of the Welfare Law for Persons with Disabilities, is encouraged to advocate for the potential users.

To sum up, consideration of the suggestions for future research stated above might contribute toward the development of effective, efficient and equitable social welfare policies and ensure that relevant care services are provided to the target population.

REFERENCES

Act on Special Education for Disabled Persons, ETC. L. No. 11384 (2012).

Aday, L. A. (1994). Health status of vulnerable population. *Annual Review of Public Health, 15*, 487-509.

Albizu-Garcia, C. E., Alegria, M., Freeman, D., & Vera, M. (2000). Gender and health services use for a mental health problem. *Social Science & Medicine, 53*, 655-878.

American Psychiatric Association. (2000). *DSM-IV-TR: Diagnostic and statistical manual of mental disorders* (4th ed., Text Revision). Washington, DC: Author.

Andersen, R. M. (1995). Revisiting the behavioral model and access to medical care: Does it matter? *Journal of Health and Social Behavior, 36*, 1-10.

Andersen, R. M., & Aday, L. A. (1978). Access to medical care in the U. S.: Realized and potential. *Medical Care, 16*(7), 533-546.

Andersen, R. M., & Newman, J. F. (1973). Societal and individual determinants of medical care utilization. *Milbank Memorial Fund Qaurterly, 51*(1), 95-124.

Bae, B. R. (2008). *AMOS 19.0 Structural equation modeling* (2nd ed.). Seoul: Cheongram.

Bae, H. S. (2011). A study on older adults' use of social services by types of elderly households and factors affecting service utilization. *Social Science Research Review, 27*(3), 1-24.

Baek, H. Y., & Yoon, M. S. (2007). The effects of service access on social welfare service utilization among the elderly. Proceedings from Korean Social Welfare Studies '07: *The International Conference on Theory and Practice of Social Welfare: A Global Perspective*. Seoul.

Baek, J. M. (1994). *A study of developing a model on the role sharing between state and private sectors in social services and its' application to the case of Korea*. Unpublished doctoral dissertation. Seoul National University, Seoul.

Bass, D. M., & Noelker, L. S. (1987). The Influence of family caregivers on elder's use of in-home services: An expanded conceptual framework. *Journal of Health and Social Behavior, 28*(2), 184-196.

Biegel, D. E., & Bass, D. M. (1993). Predictors of in-home and out-of-home service use by family caregivers of alzheimer's disease patients. *Journal of Aging and Health, 5*(4), 419-438.

Calsyn, R. J., & Winter, J. P. (1999). Predicting specific service awareness dimensions, *Research on Aging, 21*(6), 762-779.

Cho, H. S., Kahng, S. K., Kim, Y. D., Kim. J. W., Park, H. C., Yoon, M. S.,…Cho, S. W. (2011). *2011 Policy design on supporting people with developmental disabilities and their families through need assessment and field research*. Retrieved from Ministry of Health and Welfare website: http://www.mw.go.kr/front/jb/sjb030301vw.jsp?PAR_MENU_ID=03&MENU_ID=030503&page=1&CONT_SEQ=274226

Cho, M. S. (2004). *The study on the social welfare need of the parents with mental retardation and development disability in Choong Nam area*. Unpublished master's thesis. Korea Nazarene University, Cheon-an.

Choi, S. A. (2009). A comparative study on factors of social welfare service utilization between general and low-income group. *Korean Journal of Social Welfare Studies, 40*(3), 213-242.

Choi, Y. K., & Chun, D. I. (2010) A study on predictive factor of rehabilitation center service utilization. *Journal of Community Welfare, 34*(9), 281-306.

Developmental Disabilities Assistance and Bill of Rights Act of 2000, Pub. L. No. 106-402, § 114 Stat. 1683-1684 (2000).

Enforcement Decree of Welfare Law for Persons with Disabilities, No. 23986 (2012).

Gelberg, L., Andersen, R. M. & Leake, B. D. (2000). The behavioral model for vulnerable populations: Application to medical care use and outcomes for homeless people. *Health Services Research, 34*(6), 1273-1302.

Han, K. H. (2008). *A study on effects of insurance status on health care utilization: focused on the person with disability.* Unpublished master's thesis. Seoul National University, Seoul.

Hierbert-Murphy, D., Trute, B., & Wright, A. (2008). Patterns of entry to community-based services for families with children with developmental disabilities: implications for social work practice. *Children & Family Social Work, 13*(4), 423-432.

Hong, S. I. (2009). Understanding patterns of service utilization among informal caregivers of community older adults. *The Gerontologist, 50*(1), 87-99.

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*(1), 1-55.

Jang, I. H. (1990*). Introduction to Social Welfare*, Seoul: Seoul National University Press.

Jeon, H. S., & Kahng, S. K. (2006). The trajectory of body mass index and health trajectory among older adults: Examining longitudinal relationships and predictive factors using latent growth curve modeling. *Korean Journal of Social Welfare Studies, 39*, 131-158.

Ju, K. H. (2010). *Social participation activity level and quality of life for the participating elderly in Korea: Focusing on gender and age differences*. Unpublished doctoral dissertation. Seoul National University, Seoul.

Judith A. S., Andersen. R. M., & Gelberg, L. (2007). Applying the Gelberg-Andersen behavioral model for vulnerable populations to health

services utilization in homeless women. *Journal of Health Psychology, 12*(5). 791-804.

Jung, B. O. Factors affecting care center service use among children with disabilities. *Korea Journal of Child Care and Education, 49*, 151-173.

Kahng, S. K. (2010). The trajectory of outpatient medical service use and its predictors: focusing on age variations. *Korean Journal of Social Welfare Studies, 62*(3), 83-108.

Kang, H. G., Noh, D. M., Park, S. G., Kang, B. G., Lee, S. W., Cho, W. I., & Lee, B. H. (2007). *A study on social service expansion strategies: need assessment for main social services and related policy development*. Ministry of Health and Welfare.

Kang, H. G., Park, S. G., Goh, G. H., Kim, E. J., Kim, E. J., & Park, S. H. (2009). *Assessment on the current status of social service provision and development of enhancement strategies: focusing on private sector*. Korea Institute for Health and Social Affairs.

Kang, W. J., & Park, K. S. (2011). The factors influencing utilization of the personal assistance services for the visually impaired people. *Health and Social Welfare Review, 31*(2), 146-179.

Kim, D. R. (2012). *A study on factors on service use utilizing a classification of social welfare services: focusing on welfare services for disabled people*. Unpublished doctoral dissertation. Inje University, Gimhae.

Kim, H. M. (2012). *Factors associated with service utilization patterns among foreign spouses of mulicultural families in Korea*. Unpublished doctoral dissertation. Seoul National University, Seoul.

Kim, J. H., Yoo, K. M., & Choi, E. S. (2011). *Analysis on needs for service and service market among individuals with developmental disabilities: focused on infants with developmental disabilities*. Korea Disabled People's Development Institute.

Kim, J. W. (2008). A study on the issues of participation of people with intellectual disabilities in research process in Korea. *Korean Journal of Social Welfare, 60*(3), 83-106.

Kim, N. H. (2006). *Factors influencing service use and recovery among individuals with drug dependency*. Unpublished master's thesis. Seoul National University, Seoul.

Kim, S. G., & Lee, J. J. (2010). The effect of linguistic ability and social support on adjustment among women of multicultural families in Korea. *Korean Journal of Family Welfare, 15*(1), 5-20.

Kim, S. H., Byeon, Y. C., Son, C. G., Lee, Y. H., Lee, M. K., Kang, D. W.,…Lee, S. W. (2012). *2011 Survey on individuals with disabilities.* Retrieved from Ministry of Health and Welfare website: http://www.mw.go.kr/front/jb/sjb030301vw.jsp?PAR_MENU_ID=03&MENU_ID=031604&BOARD_ID=1003&BOARD_FLAG=04&CONT_SEQ=270741&page=1

Kim, T. I., Choi, Y. Y., & Lee, K. H. (2008). Analysis on the differences in medical service usage in terms of income levels. *The Korean Social Security Association, 24*(3), 53-75.

Kim, Y. D. (2008). Recent trends and alternatives of Korean social welfare service policies: integration of market and anti-market schemes. *Korean Journal of Social Welfare Studies, 36*, 5-28.

Kim, Y. D., Lee, B. S. & Kang, H. S. (2009). The study on the perception types of the service users with intellectual disability on the relationships with their service workers, *Korean Journal of Social Welfare Studies, 40*(4), 231-257.

Kim, Y. D., & Park, S. K. (2008) Differences on self-determination experiences of the intellectually disabled people according to livings in the different types of residential homes. *Korean Journal of Social Welfare, 60*(4), 79-

103.

Kline, R. B. (2005). *Principles and practice of structural equation modeling*. New York, NY: Guilford Press.

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York, NY: Springer.

Lee, B. J., Kim, Y. S., Yeo, Y. J., Kang, H. G., & Nam, C. S. (2006). Suggestions for improving social protection system in Korea: Experiences and forecasts. Proceedings from the Presidential Committee on Job Strategy '06: *The International Symposium on National Employment Strategy and its Vision for Job Creation*. Seoul.

Lee, D. H. (2011). *Factors on utilization of welfare service for elderly: focused on service type classification.* Unpublished master's thesis. University of Seoul, Seoul.

Lee, I. J. (2004). Utilization among family caregivers of the impaired older persons. *Korean Journal of Social Welfare, 56*(3), 183-205.

Lee, J. M., & Lee, S. Y. (2006). Factors affecting the elderly's preference for utilization of community care services, *Journal of Welfare for the Aged, 32*, 203-222.

Lee, J. Y., Cho, M. J., & Kwon, J. S. (2006). Global assessment of functioning scale and social and occupational functioning scale. *Korean College of Neuropsychopharmacology, 17*(2), 122-127.

Lee, M. J. (2012). Understanding self-help group of individuals with developmental disabilities and the relevant issues. Proceedings from Korea Academy of Disability and Welfare '12: *The Spring Conference on Life with Human Dignity for Individuals with Developmental Disabilities*. Osong.

Lee, O. B. (2011*). A study on factors that affect use of social welfare services by immigrant women married to Korean men*. Unpublished doctoral

dissertation, Kyungsung University, Busan.

Lee,Y. K. (2010). Factors of long term care service use by the elderly. *Health and Social Welfare Review, 29*(1), 213-235.

Lee, Y. R. (2011). *The effects of parental socioeconomic factors and neighborhood environments on young adolescents' health behaviors*. Unpublished master's thesis, Seoul National University, Seoul.

Lim, J. G. (2008). A study on factors of elderly residential care service utilization for using decision tree regression. *Korea Journal of Social Welfare, 60*(3), 129-150.

Lim, Y. O., & Yoon, H. S. (2009). Longitudinal study on factors affecting older adults' welfare service utilization. *Journal of the Korean Gerontological Society, 29*(3), 1063-1085.

Logan, J. R., & Spitze, G. (1994). Informal support and the use of formal services by older americans. *Journal of Gerontology: Social Science, 49*(1), S25-S34.

Ministry of Health and Welfare (2011). *Statistics of individuals with disabilities*. Retrieved from http://www.mw.go.kr/front/jb/sjb030301ls.jsp?PAR_MENU_ID=03&MENU_ID=031604

Ministry of Health and Welfare (2012*). The criteria of disability grade assessment* (No. 2012-60). Retrieved from http://www.mw.go.kr/front/jb/sjb0402vw.jsp?PAR_MENU_ID=03&MENU_ID=030402&BOARD_ID=220&BOARD_FLAG=03&CONT_SEQ=272637&page=1

Mitchell, J., & Krout, J. A. (1998). Discretion and service use among older adults: the behavioral model revisited. *The Gerontologist, 38*(2), 159-168.

Mui, A. C., & Burnett, D. (1994). Long-term care service use by frail elders: Is ethnicity a factor? *The Gerontologist, 32*(2), 190-198.

Nam, S. J., & Cho, H. S. (1995). *Introduction to Social Welfare*. Paju: Nanam.

Nevid, J. S., Rathus, S. A. & Greene,B. (2006). *Abnormal psychology in a changing world*. Upper Saddle River, NJ: Pearson Prentice Hall.

Nogard, T. M., & Rodgers, W. L. (1997). Patterns of in-home care among elderly black and white Americans. *The Journals of Gerontology, 52*(B), 93-101.

Park, H. S. (2010). *Parents' expectations and support needs about the future outcome of children with autism spectrum disorders*. Unpublished master's thesis. Ewha Woman's University, Seoul.

Park, K. S.(2003). Factors influencing utilization of the social services for the elderly. *Korean Journal of Social Welfare, 55*, 283-307.

Park, S. K., & Kim, Y. D. (2010). The Study on the Perception Types of the Service Practitioners Working for Intellectually Disabled People on the Relationships with their Service Users. *Korean Journal of Social Welfare, 62*(1), 367-389.

Personal Assistance of the Disabled Act, L. No. 10518 (2011).

Seo, S. J., Cho, S. H., & Shim, M. S. (2011). An empirical analysis on welfare service utilization for the disabled: using Seoul welfare panel study. *Korea Journal for Governance, 18*(3), 193-215.

Seok, J. E., Kim, G. Y., & Kim, K. H. (2008). Analysis of gender gap of public welfare expenditures on disabled persons. *Korean Journal of Women's Studies, 24*(4), 102-139.

Shim, M. S. (2011). A study on factors affecting welfare service utilization for the elderly. *The Korean Journal of Public Administration, 45*(4), 203-229.

Social Security Act, L. No. 9932 (2010).

Song, D. Y. (2003). Factors affecting family caregivers' preference for utilization of community eldercare services. *Korean Journal of Social Welfare, 53*, 105-128.

Stein, J. A., Andersen., R. M., & Gelberg, L. (2007). Applying the Gelberg-

Andersen Behavioral Model for Vulnerable Population to health service utilization in homeless women. *Journal of Health Psychology, 12*(5), 791-804.

Stein, J. A., Andersen., R. M., Koegel, P., & Gelberg, L. (2000). Predicting health service utilization among homeless adults: A prospective analysis. *Journal of Health Care for the Poor and Underserved, 11*, 212-230.

Welfare Law for Persons with Disabilities, L. No. 11240 (2012).

Yoo, H. S., & Chun, D. I. (2008). A study in factors affecting utilization and access of disability service. *Journal of Rehabilitation Research, 12*(1), 1-17.

Yoon, S. Y., & Yi, M. G.(2010). The analysis of state disability policy budget in the past thirty years: focused on the adequacy of budget scale and change of disability policy paradigm. *Journal of Rehabilitation Research, 14*(2), 115-140.

APPENDIX A. DIFFERENCES IN STUDY VARIABLES BY DISABILITY SUBTYPE AND AGE GROUP

[Table A1] Differences in Study Variables by Subordinate Type of Developmental Disabilities

Category		Total (*N* = 1,500)	Autistic Disorders (*n* = 294)	Intellectual Disorders (*n* = 1,206)	χ^2 / *t*
Social Welfare Service Utilization		.33 (sd=.58)	.47 (sd=.67)	.30 (sd=.55)	4.067***
Age		31.26 (sd=15.89)	15.50 (sd=6.81)	32.50 (sd=15.64)	-28.722***
Gender	*Male*	64.5 (n=967)	83.7 (n=246)	59.8 (n=721)	58.888***
	Female	35.5 (n=533)	16.3 (n=48)	40.2 (n=485)	
Education		7.08 (sd=4.52)	6.96 (sd=4.58)	7.10 (sd=4.51)	-.492
Public Benefit Status	*Recipient*	35.5 (n=533)	16.3 (n=48)	40.2 (n=485)	58.888***
	Non -recipient	64.5 (n=967)	83.7 (n=246)	59.8 (n=721)	
Family Income		181.84 (sd=145.76)	263.83 (sd=147.91)	161.46 (sd=137.91)	11.186***
Living Situation	*Living w/o family*	16.5 (n=248)	6.1 (n=18)	19.1 (n=230)	28.721***
	Living w/ family	83.5 (n=1,252)	93.9 (n=276)	80.9 (n=976)	
Social Support from individuals w/ disabilities	*Yes*	31.1 (n=467)	29.3 (n=86)	31.6 (n=381)	.604
	No	68.9 (n=1033)	70.7 (n=208)	68.4 (n=825)	
Social Support from individuals w/o disabilities	*Yes*	19.5 (n=293)	18.0 (n=53)	19.9 (n=240)	.528
	No	80.5 (n=966)	82.0 (n=241)	80.1 (n=966)	
Perceived Need for Services		1.62 (sd=2.13)	2.18 (sd=2.46)	1.48 (sd=2.02)	4.474***
Disability Grade	*Grade 1*	30.5 (n=457)	39.5 (n=116)	28.3 (n=341)	15.968***
	Grade 2	34.3 (n=515)	33.0 (n=97)	34.7 (n=418)	
	Grade 3	35.2 (n=528)	27.6 (n=81)	37.1 (n=447)	
Dual Diagnosis	*Yes*	11.6 (n=174)	8.2 (n=24)	12.4 (n=150)	4.212**
	No	88.4 (n=1,326)	91.8 (n=270)	87.6 (n=1,056)	

*$p < .10$, **$p < .05$, ***$p < .01$

[Table A2] Differences in Study Variables by Age Group

Category		Total (N = 1,500)	Minors (n = 495)	Adults (n = 1,005)	χ^2 t
Social Welfare Service Utilization		.33 (sd=.58)	.44 (sd=.67)	.27 (sd=.53)	4.776***
Age		31.26 (sd=15.89)	12.83 (sd=4.01)	37.50 (sd=12.96)	-55.133***
Gender	*Male*	35.5 (n=967)	70.7 (n=350)	61.4 (n=617)	12.560***
	Female	64.5 (n=533)	29.3 (n=145)	38.6 (n=388)	
Education		7.08 (sd=4.52)	5.56 (sd=3.75)	7.82 (sd=4.68)	-10.079***
National Basic Livelihood Security Status	*Recipient*	35.5 (n=533)	29.3 (n=145)	38.6 (n=388)	12.560***
	Non-recipient	64.5 (n=967)	70.0 (n=350)	61.4 (n=617)	
Family Income		181.84 (sd=145.76)	227.78 (sd=144.56)	158.87 (sd=4.51)	8.753***
Living Situation	*Living w/o family*	16.5 (n=248)	8.9 (n=44)	20.3 (n=204)	31.286***
	Living w/ family	83.5 (n=1,252)	91.1 (n=451)	79.7 (n=801)	
Social Support from individuals w/ disabilities	*Yes*	31.1 (n=467)	40.4 (n=200)	26.6 (n=267)	29.616***
	No	68.9 (n=1,033)	59.6 (n=295)	73.4 (n=738)	
Social Support from individuals w/o disabilities	*Yes*	19.5 (n=293)	22.2 (n=110)	18.2 (n=183)	3.398*
	No	80.5 (n=1,207)	77.8 (n=385)	81.8 (n=822)	
Perceived Need for Services		1.62 (sd=2.13)	2.00 (sd=2.34)	1.44 (sd=1.99)	4.617***
Subordinate Types of Developmental Disabilities	*Autistic Disorders*	19.6 (n=294)	42.8 (n=212)	8.2 (n=82)	252.960***
	Intellectual Disorders	80.4 (n=1,206)	57.2 (n=283)	91.8 (n=923)	
Disability Grade	*Grade 1*	30.5 (n=457)	37.0 (n=183)	27.3 (n=274)	21.649***
	Grade 2	34.3 (n=515)	35.2 (n=174)	33.9 (n=341)	
	Grade 3	35.2 (n=528)	27.9 (n=138)	38.8 (n=390)	
Dual Diagnosis	*Yes*	11.6 (n=174)	9.5 (n=47)	12.6 (n=127)	3.193*
	No	88.4 (n=1,326)	90.5 (n=448)	87.4 (n=878)	

*p < .10, **p < .05, ***p < .01

[Table A3] Service Utilization Rates by Social Welfare Service Type

Social Welfare Services	Mean (SD)	
	Unweighted	Weighted
Community Rehabilitation Service	.1227 (.33)	.1179 (.32)
Community Welfare Service	.0540 (.23)	.0518 (.22)
Day Care Service	.0380 (.19)	.0385 (.19)
Physical Activity Service	.0127 (.11)	.0100 (.10)
Personal Assistance Service	.0053 (.07)	.0055 (.07)
Residential Care Service	.0080 (.09)	.0085 (.09)
Group Home Service	.0027 (.05)	.0030 (.05)
Respite Service	.0427 (.20)	.0428 (.20)
Independent Living Housing Service	.0447 (.21)	.0404 (.20)

APPENDIX B.

2011년 발달장애인 실태조사 (Korean Version)

● 내생변수

[서비스 이용 경험] 다음은 정부에서 장애인에게 제공하는 주요시설 및 서비스에 대한 질문입니다. 각각의 프로그램에 대하여 귀하의 보호를 받고 있는 장애인의 이용경험을 모두 응답해주십시오.

서비스	(모두) 현재 이용하는 서비스
① 장애인복지관	①
② 지역사회복지관	②
③ 주간보호	③
④ 장애인체육관	④
⑤ 단기 보호	⑤
⑥ 공동 생활 가정 (그룹홈)	⑥
⑦ 자립생활 체험홈	⑦
⑧ 장애인 생활시설	⑧
⑨ 장애인활동보조서비스	⑩

● 외생변수

1. 선행요인

[성별] 장애인의 성별은 무엇입니까?

1) 남자 2) 여자

[연령] 장애인의 출생년월은 언제입니까? 주민등록상의 생년월을 기입해 주세요.

□□□□ 년 □□ 월 | 만 □□ 세

[교육수준] 장애인의 최종학력은 무엇입니까?

학교	졸업여부
1) 미취학(만 7세 미만) **갈 것** 2) 무학(만 7세 이상)	1) 비해당
3) 초등학교 4) 중학교 5) 고등학교 6) 대학(3년제 이하) 7) 대학(4년제 이상) 8) 대학원 이상	2) 재학 3) 중퇴 4) 졸업 (수료포함) 5) 휴학

2. 자원요인

[수급여부] 장애인의 국민기초생활보장수급 여부 및 형태는 무엇입니까?

1) 수급대상아님

2) 일반수급가구(의료·교육·자활특례제외)

3) 조건부수급가구

4) 의료·교육·자활특례

[소득] 장애인의 가구원 전부가 지난 1년간 버는 돈(총 가구소득)은 월평균 얼마입니까?

						월평균 만원

[가족과 동거] 장애인은 현재 어디에서 생활하고 계십니까?

1) 단독거주

2) 가족과 동거

3) 공동생활가정 (그룹홈)

4) 자립생활 체험홈 (적을 것:_____)

5) 병원

6) 단기보호시설

7) 기타

[사회적 지지-장애인 친구/비장애인 친구] 장애인은 친한 친구가 있습니까? 있다면 몇 명입니까?

구분	유무 및 친구 수
① 장애를 가진 친구	1. 있다 (_____ 명) 2. 없다
② 장애가 없는 친구	1. 있다 (_____ 명) 2. 없다

3. 욕구요인

[서비스 이용에 대한 인지된 욕구] 다음은 정부에서 장애인에게 제공하는 주요시설 및 서비스에 대한 질문입니다. 각각의 프로그램에 대하여 귀하의 보호를 받고 있는 장애인의 필요여부를 모두 응답해 주십시오.

서비스	(모두) 필요한 서비스
① 장애인복지관	①
② 지역사회복지관	②
③ 주간보호	③
④ 장애인체육관	④
⑤ 단기 보호	⑤
⑥ 공동 생활 가정 (그룹홈)	⑥
⑦ 자립생활 체험홈	⑦
⑧ 장애인 생활시설	⑧
⑨ 장애인활동보조서비스	⑨

[장애유형] 장애유형 1) 지적장애 2) 자폐성 장애

[장애등급] 장애등급 1) 1급 2) 2급 3) 3급

[중복장애] 장애인은 지적장애, 자폐성 장애 이외에 국가에 등록된 다른 중복 장애가 있습니까?

1) 예 2) 아니오

국문초록

발달장애인의 사회복지서비스 이용 예측요인

서울대학교 대학원

사회복지학과

김 준 영

장애인의 자립생활 및 차별금지와 관련된 내용이 보다 확대되는 등 장애인의 선택과 자기결정을 강조한 패러다임의 변화가 법제도를 통해 구체화되면서, 국내 장애인 복지서비스는 일방적으로 주어지는 공급자 위주의 체제에서 당사자가 선택하고 결정하는 이용자 중심의 체제로 변화해왔다. 하지만 이러한 장애인 복지패러다임의 변화와 제도적인 발전이 발달장애인에게까지 영향력을 미친다고 보기는 어렵다. 이는 발달장애인들이 갖는 기본적인 욕구가 특수함에도 불구하고, 다수의 목소리를 내어온 신체 장애인에 가려져온 결과로 볼 수 있다. 전 생애기간 동안 타인의 돌봄을 필요로 하는 발달장애인의 욕구에 부응하는데 필수적인 사회복지서비스 이용에 관한 학술적 관심이 부족한 실정에 그 심각성이 더한다.

본 연구는 앤더슨의 서비스이용 행동모형(Andersen, 1995;

Andersen & Newman, 1973)을 취약한 집단의 서비스 이용을 이해하고 그 예측요인을 검증하는데 적용되어온 '취약계층을 위한 서비스이용 행동모형'(Gelberg, Andersen & Leake, 2000)을 바탕으로, 국내 발달장애인의 사회복지서비스 이용 및 서비스 이용에 영향을 주는 요인을 통합적이고 체계적으로 검증하는데 목적이 있다. 발달장애인 내에서도 다양하게 존재하는 복지 욕구는 서비스 이용 행동을 실현화하는데 있어서 다른 형식으로 영향을 미칠 수 있다. 이에, 본 연구에서는 한발 더 나아가 발달장애의 하위 장애유형에 속하는 자폐성장애인과 지적장애인의 사회복지서비스 이용의 차이, 그리고 생애주기에 있어서 성인기 이전과 성인기에 있는 발달장애인의 사회복지서비스 이용의 차이에 대해서 탐색하였다.

본 연구의 목적을 달성하기 위해 설정한 연구문제는 다음과 같다. 첫째, 발달장애인의 사회복지서비스 이용의 예측요인(선행요인, 자원요인, 욕구요인)은 무엇인가? 둘째, 사회복지서비스 이용의 예측요인은 발달장애 하위유형(지적장애 및 자폐성장애) 간에 차이가 있는가? 셋째, 사회복지서비스 이용의 예측요인은 성인기 이전의 발달장애인과 성인기의 발달장애인 간에 차이가 있는가?

본 연구에서는 연구문제 및 가설의 검정을 위하여 보건복지부에서 시행한 '2011년 발달장애인 활동지원 등을 위한 욕구조사 및 정책과제 수립연구'를 통해 발달장애인의 보호자 1,500명을 대상으로 수집된 발달장애인 실태조사의 이차 자료를 활용하였다. 연구자료의 발달장애 하위장애 유형별 구성은 지적장애가 80.4%(1206명), 자폐성장애가 19.6%(294명)이다. 3-77세에 걸친 발달장애인 표본의 33%(495명)가 성인기 이전의 생애주기에 있으며 77%(1005명)가 성인기에 있었다. 기초 기술통계 분석을 위해 SPSS 19.0 통계패키지를 사용하였고, AMOS 18.0을

활용하여 구조방정식 모형을 통해서 발달장애인의 사회복지서비스 이용의 예측요인을 검증하였고, 다중집단분석을 통해 서비스 이용 예측경로에서 발달장애 하위유형 간, 연령 집단 간에 어떠한 차이를 보이는지를 탐색하였다.

주요한 연구결과를 살펴보면 다음과 같다. 첫째, 선행요인 중에서는 연령이, 자원요인 가운데는 가족과의 동거 여부와 장애인 친구로부터의 사회적 지지가, 욕구요인에서는 서비스에 대한 인지된 욕구와 발달장애 하위유형, 그리고 장애등급이 발달장애인의 사회복지서비스 이용을 유의하게 예측하는 요인으로 나타났다. 즉, 발달장애인의 연령이 어리고, 가족과 동거하고 있으며, 장애인 친구와 사회적 관계를 형성하고 있으며, 서비스에 대한 인지된 욕구가 높고, 지적장애보다 자폐성장애를 가지고 있는 경우에, 그리고 장애 등급이 높을수록 (장애정도가 심할수록) 사회복지서비스를 보다 더 많이 이용하는 것으로 확인되었다. 둘째, 발달장애 하위유형 간 사회복지서비스 이용의 예측요인은 자폐성장애인과 지적장애인 간에 국민기초생활보장 수급 여부, 서비스에 대한 인지된 욕구, 장애유형의 경로에서 유의하게 차이가 있는 것으로 나타났다. 셋째, 연령 집단 간 사회복지서비스 이용의 예측요인은 성인기 이전의 발달장애인과 성인기의 발달장애인 간에 연령, 교육, 이중진단의 경로에서 유의하게 차이가 있는 것으로 나타났다.

이상의 연구결과를 통해 본 연구는 국내에서 최초로 발달장애인을 대상으로 취약계층을 위한 서비스이용 행동모형을 적용하여 그들의 사회복지서비스 이용의 예측요인을 통합적이고 체계적으로 검증 가능하다는 것을 보여주었다. 이는 서비스이용 행동모형의 적용 대상의 확대를 시도하였다는 점에서 의의를 가진다. 그리고 발달장애인의 하위 범주에

속하는 지적장애인과 자폐성장애인, 그리고 성인기 이전과 성인기 발달장애인의 사회복지서비스 이용 및 예측 요인의 차이를 살펴봄으로써 다채로운 욕구에 유연하게 부합하는 사회복지서비스 개발 및 전달에 실증적인 근거를 제공하였다. 본 연구에서는 전국대표 발달장애인표본을 활용하여 연구의 결과를 일반화할 수 있어, 향후 발달장애인 사회복지서비스 관련 연구 및 정책 수립의 근간을 제공하였다는 점에서 의의가 크다.

본 연구는 전국 등록장애인 현황 명부를 모집단으로 취한 발달장애인 실태조사의 자료를 활용하여, 비등록 장애인을 고려하지 못하고 있다. 여러 장애유형 중에서도 특히 자기표현 및 자기결정 능력에 제한을 보이는 발달장애인의 사회복지서비스 이용은 보호자 요인을 통해 유의하게 설명되는 부분이 있다. 또한 지역사회 자원변수 등의 공급자 요인 또한 이용자 요인과 더불어 취약계층이 공적인 돌봄 서비스를 이용하는데 영향을 미칠 것이다. 그러나 이 역시 이차자료의 한계로 본 연구모형에 포함하지 못하였다. 양적 및 질적 형평성을 기반한 사회복지서비스 제공방안을 도출하는 근거를 마련할 수 있도록 후속연구에서는 서비스 이용행동의 질적인 차원을 측정하는 등 보다 구조화된 설문지를 구성하여 발달장애인의 사회복지서비스 이용을 이해해야 할 것이다. 또한, 종단적 접근을 통해 사회적 지지 및 인지된 욕구 등의 시변변수들의 특성을 감안한 보다 타당한 결과를 이끌어 낼 수 있기를 기대한다.

주요어: 발달장애인, 사회복지서비스 이용, 취약계층을 위한 서비스이용행동모형, 발달장애 하위유형 및 연령 집단 간 차이, 구조방정식, 다중집단분석

학 번: 2010-20129