

Additional Costs of Disability and Their Policy Implications

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1. Introduction

Additional disability costs and social security compensation

People with disabilities incur additional costs that people without disabilities do not. This is to say that given the same income, people with disabilities, compared to those without, have a lower standard of living. Such additional costs come in two types: general additional costs and special additional costs. General additional costs involve items which, while required by people with and without disabilities alike, lead to higher expenditures for those with disabilities. Special additional costs refer to expenses incurred by people with disabilities only. These include costs having to do with special education, care and assistance, and institution-based rehabilitative services.

People with disabilities would have incurred little if any additional cost, had there been in place a complete set of social protection programs designed for them. To be sure, a wide range of benefit schemes—health insurance medical aid benefits, care and assistance subsidies and other various support programs—have been created or expanded in Korea to cover cost needs that are specific to disabled individuals. But the additional costs of disability still remain a strain on people with disabilities.

The need for improvements on financial support for people with disabilities

There are three cash benefit programs—Disability Pension, Disability Allowance, and Child Disability Allowance—intended to help people with disabilities cover their additional costs. However, all these programs as they stand do not fully cover actual additional expenses on disability. Nor do they take into account in any meaningful way the differences in additional costs existing across different types of disability. The 5th Comprehensive Plan on People with Disabilities (2018~2022) has suggested some ways to address such problems. This study, using data from the 2017 Survey of the Living Conditions of People with Disabilities, identifies additional disability costs and the extent to which public programs cover them, and explores factors that should be taken into account in improving financial support for people with disabilities.

2. Additional disability expenses

The additional disability costs of the 9 items listed in the Survey add up to a monthly average of KRW₁₂₄ thousand for 2017, higher than 2011's KRW₁₂₀ thousand, but more or less the same as the 2014 figure. The total additional cost of 8 items—that is, not counting expenses “in preparation for living after parents' death and for old age”—declined in recent years, from KRW₁₁₆ thousand in 2011 to KRW₁₁₁ thousand in 2014, and further to KRW₁₀₆ thousand in 2017. Such a decline may be attributed to the increased coverage and accessibility of social security

programs. But people with disabilities still incur an average additional cost of KRW106 on average a month.

The item linked to the most additional expenses was “health care” (a monthly average of KRW48 thousand). “Assistive devices” was the second-largest item of additional disability expenses in 2011. In more recent years, however, the average monthly additional expenditures on assistive devices have declined rapidly, from KRW22 thousand in 2011 to KRW5 thousand in 2017, presumably an effect of the recent increases in National Insurance coverage for aids and in subsidized provision of assistive devices. Next came “transportation” (KRW16 thousand) and “care and assistance” (KRW16 thousand).

[Table 1] Average additional expenditures on disability (in KRW thousand, %)

	2011	2014	2017	Amount increased or decreased (2011~2017)	Rate of increase or decrease (2011~2017)
Transportation	17.9	19.6	15.7	-2.2	-12.3
Health care	42.0	48.7	48.1	+6.1	+14.5
Child care and education	4.9	3.1	6.3	+1.4	+29.3
Guardian protection and other care services	10.3	10.3	15.6	+5.3	+51.7
Rehabilitation services	1.6	3.4	3.6	+2.0	+126.0
Communications	7.5	7.6	7.5	-0.0	-0.1
Assistive devices (purchase & maintenance)	22.1	14.0	5.3	-16.7	-75.9
Preparation for living after parents' death and for old age	4.2	13.4	17.7	+13.5	+322.3
Other	9.5	3.9	4.2	-5.4	-56.3
Total for 9 categories)	120.0	124.0	124.0	+4.0	+3.3
Total for 8 categories	115.8	110.6	106.3	-9.5	-8.2

Note: 1) From here on, figures are weighted estimates concerning individuals registered as disabled.

2) Costs for 2011 and 2014 are converted to 2017 values using the consumer price index.

3) “Total for 8 categories” counts out “expenses “in preparation for living after parents' death and for old age.”

4) Figures presented in this study are average additional costs of disability for all registered disabled persons; figures in the Survey of the Living Conditions of People with Disabilities are average additional costs for people with disabilities who actually incurred them

Source: Authors' calculations based on the 2017 Survey of the Living Conditions of People with Disabilities (Ministry of Health and Welfare & Korea Institute for Health and Social Affairs)

3. The level of compensation for additional costs of disability

Several benefit programs are in place to compensate for the additional costs of disability. Child Disability Allowance is for children with disabilities under 18 years of age. Supplementary Disability Pension Benefit is paid to adults aged 18 and older with severe disabilities (disabilities of Grades 1~2 or multiple disabilities of Grade 3). Disability Allowance provides benefits to adults with mild disabilities in an amount ranging from KRW20 thousand to KRW200 thousand a month. How much these benefit programs cover actual disability expenses varies widely in a range between 7.8 percent and 127.8 percent, depending on age, severity of disability, and income level. The allowance programs cover over 80 percent of additional expenses incurred by people with disabilities who are regarded as poor (therefore in receipt of Basic

Social Security benefits), with some of them getting compensated for more than 100 percent. However, a compensation rate of over 100 percent is not necessarily considered to be excessive when it is applied, as it is here, to the actual additional costs reported in a survey by low-income people with disabilities, who with their limited financial leverage are likely to incur—and therefore report—less additional costs than their wealthier counterparts. The level of compensation is far lower for people with disabilities who are near-poor (ranging between 30.3–64.9 percent), as they incur more additional costs but receive a smaller amount of benefit. The compensation rate is lower still for people with disabilities whose income is higher than the near-poverty line, who are eligible only for Disability Pension.

[Table 2] Level of compensation for additional costs of disability (in KRW thousand, %)

Benefit type	Age	Degree of disability	Income level	Benefit amount	Average additional expense	Compensation rate
Child Disability Allowance	Under 18	Severe	Poor	200	249.0	80.3
			Near-poor	150	387.3	38.7
		Mild	BSS recipients	100	111.2	89.9
			Near-poor	100	154.1	64.9
Supplementary Disability Pension Benefit	18–64	Severe	Poor	80	78.8	101.5
			Near-poor	70	228.2	30.7
			Above near-poor	20	257.1	7.8
	65 and older	Severe	Poor	80	70.4	113.6
			Near-poor	70	209.1	33.5
			Above near-poor	40	168.9	23.7
Disability Allowance	18–64	Mild	Poor	40	31.3	127.8
			Near-poor	40	92.1	43.4
	65 and older	Mild	Poor	40	44.6	89.7
			Near-poor	40	83.1	48.1

Note: 1) Benefit amounts are as set by the respective programs; average additional expenses are as reported by individuals 2017 Survey of the Living Conditions of People with Disabilities.

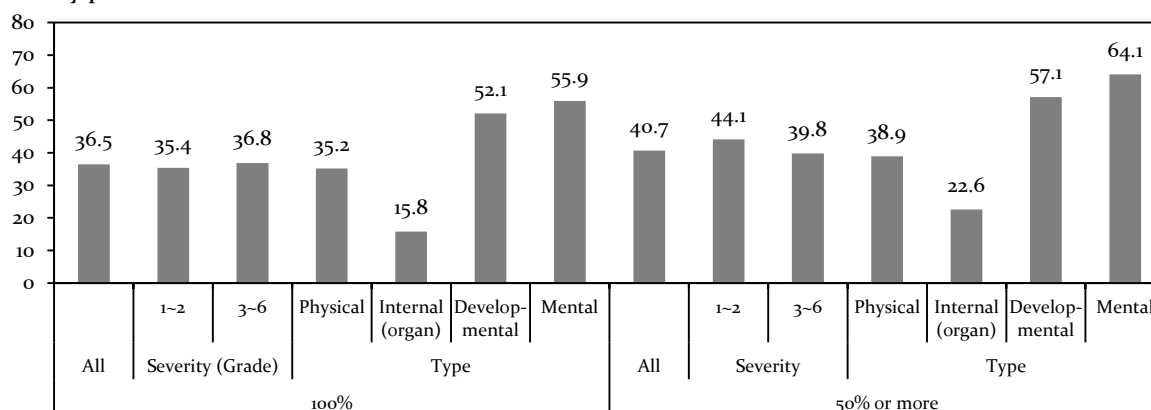
2) From here on, average additional expense does not factor in the item “in preparation for living after parents’ death and for old age.

3) Here people living above the near-poverty line are those who belong to the bottom 70-percent income group who are neither poor nor near poor.

Source: Authors’ calculations based on the 2017 Survey of the Living Conditions of People with Disabilities (Ministry of Health and Welfare & Korea Institute for Health and Social Affairs)

Those whose additional disability costs were fully covered by the benefit programs accounted for 36.5 percent of people with disabilities; 40.7 percent were those with 50 percent or more of their additional costs covered by the benefit programs. At the individual level at least, the extent to which these benefit programs cover additional disability costs does not vary much with disability severity. This is because, if people with severe disabilities in general incur more additional costs than do those with mild disabilities, the amount of benefits also increases with the severity of disability. With the type of disability, however, the share of those whose additional disability expenses were fully compensated for by the benefit programs varied widely. For example, it was only 15.8 percent for those with internal disabilities, substantially lower than for people with other types of disability. The proportion of people who were 100-percent compensated for their additional disability expenses was high in those with developmental disabilities or mental impairments—disabilities of Grades 1 through 3, which are classified as severe.

[Figure 1] Proportion of people with disabilities whose additional costs are fully (or half) covered by publicly provided benefits



Note: 1) “100%” refers to the proportion of people with disabilities whose additional costs are fully covered by publicly provided benefits.

- 2) Physical (external)—physical, brain lesion, visual, hearing, speech, and facial
- 3) Internal (organ)—kidney, cardiac, hepatic, respiratory, intestinal-urinary, and epileptic
- 4) Developmental—intellectual and autistic
- 5) Mental—mental

Source: Authors’ calculations based on the 2017 Survey of the Living Conditions of People with Disabilities (Ministry of Health and Welfare & Korea Institute for Health and Social Affairs)

4. Factors to be considered in considering a differential support scheme

This study now looks at the extent to which additional disability costs varies with age, income level, disability type, and disability severity, and with different combinations of these factors.

The additional costs of disability for children under 18 are averaged at KRW378 thousand a month, much higher than the average amount incurred by people with disabilities who are 18 or older. The gap is attributed to expenses on transportation, child care and education and institution-based rehabilitative services. The difference in additional costs between people aged 18-64 and those 65-plus is not so great as to require differential benefit levels for these two age groups.

[Table 3] Additional costs of disability, by age group (in KRW thousand)

	59.5	49.2	188.7	15.8	20.2	10.7	9.9	24.2	378.2
	15.8	46.5	0.3	11.6	4.3	7.9	4.1	3.6	94.1
	12.5	49.8	0.0	19.9	1.6	6.9	6.3	3.4	100.4

Source: Authors’ calculations based on the 2017 Survey of the Living Conditions of People with Disabilities (Ministry of Health and Welfare & Korea Institute for Health and Social Affairs)

Additional costs of disability, by income level

Although higher income levels do not necessarily lead to higher additional costs of disability, clear differences do exist between the 1st~2nd quintiles, the 3rd~4th quintiles, and the 5th quintile. However, differences in income level translate into differences not so much in needs as in expenditures. While low-income people with disabilities, limited as they are in financial resources, are likely to spend less than they need to on disability-related expenditure items, their high-income counterparts are likely to incur additional disability costs beyond needs.

[Table 4] Additional costs of disability, by income level (in KRW thousand)

1 st quintile	2 nd quintile	3 rd quintile	4 th quintile	5 th quintile
74.4	72.9	113.7	113.6	158.3

Note: Income levels are based on estimates of equivalized current household income.

Source: Authors' calculations based on the 2017 Survey of the Living Conditions of People with Disabilities (Ministry of Health and Welfare & Korea Institute for Health and Social Affairs)

Higher severity of disability tends to associate with higher additional costs. The average additional cost of disability was especially high for people with disabilities of Grade 1 (KRW380 a month). The difference the severity of disability gives rise to in additional costs is more obvious between Disability Grades 1~2 and Disability Grades 3~6 than between Disability Grades 1~3 and Disability Grades 4~6.

[Table 5] Additional costs of disability, by disability severity (in KRW thousand)

Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grades 1~2	Grades 3~6	Grades 1~3	Grades 4~6
380.3	203.4	89.9	62.9	74.7	50.4	255.9	68.6	176.4	62.1

Source: Authors' calculations based on the 2017 Survey of the Living Conditions of People with Disabilities (Ministry of Health and Welfare & Korea Institute for Health and Social Affairs)

Additional costs of disability, by disability type

Additional costs varied greatly across the 4 types into which this study sorted the 15 disabilities listed in the Act on Welfare of Persons with Disabilities. Internal disabilities and developmental disabilities were found to exact high additional costs. External disabilities and mental impairments were associated with much less additional costs.

[Table 6] Additional costs of disability, by disability type (in KRW thousand)

Physical disabilities			Mental disabilities		
Subtotal	External disabilities	Internal disabilities	Subtotal	Developmental disabilities	Mental impairments
101.2	92.5	240.3	141.5	176.6	65.0

Source: Authors' calculations based on the 2017 Survey of the Living Conditions of People with Disabilities (Ministry of Health and Welfare & Korea Institute for Health and Social Affairs)

Additional costs of disability, by disability type and disability severity

Looking at the effect of the combination of "severity" and "type", two key characteristics of disability, this study found that additional costs varied greatly depending on the severity of disability for those with external disabilities. The differences were less pronounced in the case of people with internal disabilities. This suggests that the differences in additional costs between different degrees of disability vary with types of disability.

[Table 7] Additional costs of disability, by disability type and disability severity (in KRW thousand)

		Physical disabilities		Mental disabilities	
		External disabilities	Internal disabilities	Developmental disabilities	Mental impairments
Severe and mild 1	Grades 1~2	269.4	245.2	262.3	97.3
	Grades 3~6	64.5	234.3	53.4	54.5
Severe and mild 2	Grades 1~3	189.0	223.8	176.6	65.0
	Grades 4~6	56.0	272.3	-	-

Note: Grades 4~6 are not applicable to mental impairments.

Source: Authors' calculations based on the 2017 Survey of the Living Conditions of People with Disabilities (Ministry of Health and Welfare & Korea Institute for Health and Social Affairs)

Additional costs of disability, explained by different combinations of sliding benefit scale factors

[Table 8] Additional costs of disability explained by different combinations of sliding benefit scale factors

	Model 0	Model 1	Model 2	Model 3	Model 4
Income level	Basic social security benefit recipients; near-poverty; above near-poverty; top 30 percent				
Age group	3 age groups	2 age groups	3 age groups	3 age groups	2 age groups
Disability grade	Grades 1~2, 3~6	Grades 1~2, 3~6	Grades 1~3, 4~6	Grades 1~2, 3~6	Grades 1~2, 3~6
Disability type	No classification	No classification	No classification	4 categories	4 categories
Interaction effect	No	No	No	No	Disability grade x disability type
Adjusted R-squared (absolute value)	0.0963	0.0951	0.0729	0.1005	0.1043
Adjusted R-squared (relative value)	100.0	98.8	75.7	104.4	108.3

Note: 1) 3 age groups are "under 18," "18-64," and "65 and older"; 2 age groups are "under 18" and "18 and older"

2) 4 disability types are external, internal, developmental and mental disabilities.

3) Estimates are based on OLS regressions.

Source: Source: Authors' calculations based on the 2017 Survey of the Living Conditions of People with Disabilities (Ministry of Health and Welfare & Korea Institute for Health and Social Affairs)

Now this study examines the extent to which different combinations of individual-level factors explain additional disability costs of disability, and suggests which of these combinations should be taken into account implementing a sliding benefit scale for people with disabilities.

Model 0, mirroring to some extent the current benefit structure, comprises of four income groups and three age groups and defines disability Grades 1~2 as severe. Model 1 is the same as Model 0, except that it has two age groups instead of three. Model 2 differs from Model 0 in that in it severe disability means disabilities of Grades 1~3. Model 3 represents a sliding scale which considers the four disability types separately.

Model 1 generates little improvement in explanatory power over Model 0, meaning that it is of limited use to implement age-based differentials in disability benefits for those aged 18~64 and those 65 and over. Also, as this study finds that Model 2's explanatory power is substantially lower in that of Model 0, it would be reasonable to maintain the current standard by which to differentiate severe and mild disabilities. Model 3 is high in explanatory power, suggesting that benefit levels that are set according to the severity of disability would better cover actual additional costs.

Model 4 has two age groups, defines disabilities of Grades 1 and 2 as severe, and takes into account, in addition to the four disability types, even the interactive effects of severity and type as identified in Table 7. Here the explanatory power is much larger than in Model 0, which means the sliding benefit scale as suggested in Model 4 would be the one that better reflect the reality of actual additional costs.

5. Policy implications

The extent to which additional disability costs is compensated for varies widely with disability type, age and disability severity, with a little over one-third of all those with disabilities receiving full compensation for their actual additional expenses. There is a need to increase cash benefits for people with disabilities in near-poor families and those with internal

disabilities, two groups who this study finds are poorly compensated for the additional costs they incur. However, by how much to increase compensation benefits should be decided based on close consideration of the fact that of late the actual additional costs have been trending downward. Also, the differential benefits so decided will have to be made subject to adjustment in amounts reflecting ongoing changes in actual additional costs incurred.

Policymakers need to consider the fact that additional disability costs vary according to disability type, which the current compensation scheme does not take into account. Decisions as to how much to increase compensation benefits for people with severe disabilities should be made considering their disability types, as, as this study found, the extent to which additional costs of disability differ across disability severity categories. Also, the reported additional costs that vary according to disability severity and disability type suggest that those who should first be considered for increased compensation benefits are people with severe and mild internal disabilities, severe external disabilities, or severe developmental disabilities.

The current compensation benefit system, segmented as it is into three different programs (Child Disability Allowance, Supplementary Disability Pension Benefit and Disability Allowance) leaves its policy objectives unfocused, with its impact felt less than intended among people with disabilities. The integration of the separate benefit programs will help make benefit levels more flexible and better differentiated according to actual additional costs incurred.