Public Health and Healthcare

RESEARCH ARTICLE

Health Literacy in Older Korean Adults and Disability Severity Relationship

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Abstract

Background: While previous research support that individual's health status influence health literacy levels as the level of understanding of health information correlates with the ability to manage one's health status, there has been limited research investigating the relationship between health literacy and disabilities among older adults. To close the research gap, this study aimed to investigate (1) the level of health literacy and (2) factors associated with it among older Korean adults with disability.

Methods: A sample of 212 older adults aged 60 and over with disabilities was recruited using a convenience sampling strategy in Busan, South Korea. Health literacy was measured using Chew et al.'s 16-item self-report measure. Andersen's behavioral model was used as the theoretical framework.

Results: Overall, participants reported low levels of health literacy. The participants' level of education and income were positively associated with health literacy levels, while disability and depression severity levels were negatively associated with health literacy.

Conclusions: Our findings indicate that educational interventions to increase the health literacy are needed and should target those with a higher level of disability and depression, as well as a lower level of income in order to achieve health equity and justice among older adults with disabilities in South Korea.

Key Words: Health literacy, Korean, older adults, disability, health disparity, health justice

Introduction

Health literacy is the ability to access, understand, and use health-related information to make appropriate health decisions [1-3]. It is a significant factor related to various health outcomes, especially health disparities as difficulty in understanding health-related information or lack of skills to make appropriate health decisions can serve as barriers to practicing healthy behaviors or usage of needed healthcare services [4-8]. Health literacy levels have also been associated with health status, physical function, education level, and socioeconomic status [9] While it is known that health literacy levels are impacted by an individual's health status as the level of understanding of health information correlates with the ability to manage one's health status, there has been limited research investigating the relationship between health literacy and disabilities within elderly adults, although there has been limited research exploring health literacy in individuals with disabilities.

For example, Briggs and colleagues found that participants with chronic back pain reported adequate generic health literacy levels [10]. Van der Heide, Heijmans, Schuit, Uiters, and Rademakers also found that individuals with chronic illnesses or disabilities reported adequate to high health literacy levels [11]. Similarly, other researchers found that participants with spinal cord injury reported high average levels of literacy [12]. In contrast, Chen, Xiao, and De Bellis found that first-time

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Received: Nov 17, 2020; **Accepted:** Nov 23, 2020; **Published:** Nov 26, 2020

stroke survivors demonstrated low health literacy regarding strokes and stroke treatment [13]. This potentially suggests that individuals who have had time to learn about their disability or illness may report higher health literacy levels than those who have only just started presenting with their disability or illness.

While these studies show a link between health literacy and disabilities, it is unknown if this relationship would generalize to older populations with disability. However, past research suggests that low health literacy is a concern among older adults. According to previous research, only 3% of older adults, 65 and older, in the United States (U.S.) had proficient health literacy skills [2]. Moreover, low health literacy was found to affect over 50% of adults aged 65 and older [14] and, in a study of Canadian adults by the Canadian Council on Learning, [15] only 40% of the sample population possessed the requisite level of health literacy (i.e., a score of 275 out of 500). Furthermore, only 12% of older adults were found to have the required health literacy level to maintain their health and wellbeing [15, 16]. This is concerning given the high prevalence of disabilities and chronic illnesses within older adults, [17] a population in need of adequate health literacy levels. Therefore, a better understanding of the health literacy levels of older adults with disabilities is needed. The present study seeks to do so within a population of older Korean adults.

While there has been limited research on health literacy in the elderly population of Korea, previous research has suggested that this population suffers from low health literacy. Using a nationwide survey, Jeong and Kim found that a high proportion of Korean older adults (61%) have low health literacy [18]. Only 15.5% of the total Korean populations are aged 65 years or older [19]. However, the rate of registered disabled population aged 65 or over is 48.3% and this age group projected to increase at a higher rate than their counterparts [19]. Given that 90% of the elderly population in Korea reported having at least one chronic disease, which has been linked to a greater likelihood of developing a disability, [17] low health literacy may be highly detrimental to this population and may lead to health disparities. From the authors' knowledge, this is the first study to examine the health literacy among older adults with disability. Thus, the current study aimed to explore health literacy among older Korean adults with disabilities by (1) investigating the level of health literacy within this group and (2) identifying factors associated with health literacy to inform the development of interventions aimed to improve the health literacy of groups at risk of having low health literacy.

Conceptual Framework

The present study utilized the Andersen's Model of Health Service Utilization [20] as a conceptual framework. While this theory was originally developed to explain health service utilization, [21] it has been used with the older adult and general Korean adult population to explain health literacy due to the close relationship between health literacy and health service use [22, 23]. The model suggests that determinants of health literacy can be categorized as predisposing, enabling, and need factors. Predisposing factors include demographic characteristics such as age, social determinants such as ethnicity, as well as health beliefs related to health and use of health services. Enabling factors are comprised of financial and institutional/organizational determinants including income, health insurance status, and having a regular source of care. Finally, need factors assess an individual's perceived or assessed need for health services, such as the individual's perception of health status or having a chronic illness. Based on Andersen's theoretical framework and a literature review of health literacy research, several predisposing (gender, having a spouse, and years of having disability), enabling (levels of education, monthly income, and social support), and need (self-rated health status, depression, and disability severity) factors were chosen.

Methods

Research Design and Data Collection

The present study used a cross-sectional survey research method. A convenience sample was recruited from Busan Metropolitan City, the second largest city in Korea. Participants were recruited from a population of community-dwelling adults aged 18 and older with disabilities living at home. These participants have previously participated in a government-sponsored program for the disabled. Of the 538 adults with disabilities recruited, 212 participants aged 60 and over were selected for this study. The survey was conducted from August to October 2013 and assessed for demographics, health accessibilities, types of disability, and health literacy levels. For participants with writing difficulties, either the interviewers or the participant's guardian helped the participant respond to survey items. Participants reported a range of disabilities that included physical disabilities (36.8%), brain lesions (39.2%), and/or hearing impairment (7.7%). The study was approved by the University of Minnesota Institutional Review Board.

Instruments

Dependent Variable: Chew, Bradley, and Boyko's 16-item health literacy instrument (Table 3) was used to measure health literacy [24]. The 16 questions were based on five domains of health literacy (navigating the health care system, completing medical forms, following medication instructions, interacting with providers, and reading appointment slips) and were developed based on data from a qualitative study of patients with limited health literacy [24]. These health literacy questions were translated into Korean using a back-translation method. The 16 items had a reliability of Cronbach's alpha of .783 with each item measured on a 5-point Likert scale (1= never to 5= always). The average of the 16 items was calculated with higher scores indicating a higher level of health literacy.

Independent Variables: Andersen's behavioral model [20] was used as the theoretical framework to guide the predictors chosen in the present study. The following variables were

explored: (1) predisposing factors of gender, years with disability, and marital status; (2) enabling factors of education, monthly income level, and social support; and (3) need factors of disability severity, self-rated health status, and depression. Among these independent variables, gender (female or male), marital status (married or not married), and disability severity (low or high) were coded dichotomously, with the reference groups defined as being male, not having a spouse, and having less severe disability, respectively. Disability severity was originally measured on a scale ranging from 1 (most severe) to 6 (least severe). In Korea, those reporting disability levels of 1 to 3 are considered to have more severe disabilities and receive government support. Therefore, the variable was dichotomized so that those reporting disability levels of 1 to 3 were considered as having high severity of disability, while those reporting disability levels of 4 to 6 were considered as having low severity of disability. The number of years with disability was analyzed as a continuous variable and was computed by deducting the age the participant reported first having a disability from their current age at the time of the study.

Education was coded categorically, with categories ranging from 1 (no previous schooling) to 5 (graduated from at least college or higher). Similarly, monthly income level was measured categorically, with categories ranging from 1 (monthly income less than $500) to 6 (monthly income more than $2,500). Additionally, self-rated health status was measured on a 5-point Likert scale ranging from 1 (very poor) to 5 (very good). Depression was measured using the sum of the 10-item shortened Center for Epidemiologic Studies–Depression scale (CESD) [25]. Responses were measured on a 4-point Likert scale from 0 (rarely or none of the time) to 3 (all of the time). Based on the CESD report, a sum of 10 or higher indicated depression; Cronbach's α was .758. Social support was assessed by the mean score of the 8-item Duke-UNC Functional Social Support Questionnaire [26] Each item was measured on a 5-point Likert scale (1 = not at all to 5 = always); Cronbach's α was .876.

Data Analysis

Univariate and bivariate analyses were used to explore the sample's sociodemographic characteristics and determine health literacy levels. Analysis of variance (ANOVA) and t-test analyses were used to examine whether there were differences between predisposing, enabling, and need factors in response to health literacy questions. Ordinary least squares regression analysis was used to estimate effects of the chosen predictors on health literacy. IBM SPSS 20.0 software package was used for all statistical analyses.

Results

Sociodemographic Characteristics and Health Literacy

About 60% of the participants were men (n=126; women n=86). A majority of the participants (66.0%) reported having a spouse (n=140; no spouse n=72). Approximately 18% reported having never attended school (n=38), 31% reported having graduated from elementary school (n=65), 22% from middle school (n=46), 24% from high school (n=51), and 5% from college or higher (n=10). There were significant differences in mean health literacy scores between education levels (F=4.89, p<.001). Approximately a third (30.6%) of the sample reported monthly incomes less than $500, another third (34.7%) reported monthly incomes between $500 and $1,000, while the remainder reported monthly incomes over $1,000. Of the third that reported monthly incomes over $1,000, 15% reported monthly incomes between $1,000 and $1,500, 9% reported between $1,500 and $2,000, 6% reported between $2,000 and $2,500, and 5% reported monthly incomes over $2,500. Health literacy levels differed significantly between different income groups (F=2.57, p=.02).

The majority of the participants (72.14%) reported having a high disability severity level. Approximately 10% of the participants reported their disability level as 1 (most severely disabled), 33% as level 2, 28% as level 3, 10% as level 4, 12% as level 5, and 5% as level 6 (least severely disabled). Therefore, approximately 72% of the sample reported a severe level of disability (level 1 to 3). The average health literacy score for participants with more severe disability was significantly lower than that of the participants with less severe disability levels (F=5.46, p=.02). The participants reported a wide range of disability including brain lesions (39.2%), physical disability (36.8%), hearing impairment (7.7%), language disorder (4.8%), kidney failure (4.3%), vision impairment (3.8%), and others (3.4%) (Table 1). The average number of years reported of having a disability was 21.32 years (SD = 19.52). In regards to self-reported health status, a small percentage (1.42%) of the participants reported their health status as 'very poor' and 'very good' (4.27%). In contrast, approximately half of the participants reported having 'fair' health status. The average depression score was 15.6 and the average social support score was 3.12.

Level of Health Literacy

Average health literacy overall was 3.03, indicating that participants sometimes have difficulty recognizing their own health problems, and have limited knowledge about help-seeking resources, services, and available treatment. Only 23.11% of participants reported that appointment slips were often or always written in a way that was easy for them to read and understand. Similarly, only 24.53% of participants reported that medical forms were often or always written in a way that was easy for them to read and understand. Additionally, approximately 22% of the participants reported that medication labels were written in a way that was often or always easy for them to read and understand. Moreover, 23% of the participants reported that patient educational materials were often or always written in a way that was easy for them to read and understand. More than one third (37.74%)

Table 1: Sociodemographic characteristics of the sample (N=212)

Variable	Category	N	%[a]	Health Literacy		
				M	SD	F
Gender	Men	126	59.43	3.04	0.60	0.183
	Female	86	40.57	3.01	0.49	
Having a spouse	Not having a spouse	72	33.96	2.93	0.46	3.686
	Having a spouse	140	66.04	3.08	0.60	
Education (Graduated from) (N=210)	No school	38	18.10	2.75	0.52	6.693***
	Elementary school	65	30.95	2.98	0.42	
	Middle school	46	21.90	3.00	0.50	
	High school	51	24.29	3.26	0.65	
	College or higher	10	4.80	3.42	0.56	
Monthly income level (N=196)	Less than $500	60	30.61	2.96	0.43	2.765*
	$500~$1,000	68	34.69	2.90	0.48	
	$1,000~$1,500	29	14.80	3.12	0.68	
	$1,500~$2,000	17	8.67	2.92	0.57	
	$2,000~$2,500	12	6.12	3.21	0.75	
	More than $2,500	10	5.10	3.46	0.67	
Self-rated health status (N=211)	Very poor	9	4.27	3.22	0.31	0.319
	Poor	79	37.44	3.00	0.58	
	Fair	105	49.76	3.03	0.52	
	Good	15	7.11	3.05	0.83	
	Very good	3	1.42	2.92	0.48	
Type of Disabilities (N=209)	Brain lesions	82	39.23	3.03	0.59	1.085
	Physical disability	77	36.84	3.12	0.56	
	Hearing impaired	16	7.66	2.85	0.56	
	Language disorders	10	4.78	2.90	0.38	
	Kidney failure	9	4.31	2.82	0.45	
	Visually impaired	8	3.83	2.84	0.58	
	Others	7	3.35	3.15	0.45	
Level of Disabilities (N=201)	1 (most severely disabled)	21	10.45	2.67	0.54	2.716*
	2	67	33.33	3.04	0.53	
	3	57	28.36	3.01	0.59	
	4	21	10.45	3.11	0.32	
	5	24	11.94	3.24	0.61	
	6 (less severely disabled)	11	5.47	3.18	0.73	
Severity of disability (N=201)	More severe (1,2,3)	145	72.14	2.97	0.57	5.463*
	Less severe (4,5,6)	56	27.86	3.18	0.54	
		M	SD	Correlation with HL		
Years with disability (N=196)		21.32	19.52	-0.10		
Social support		3.12	0.85	0.03		
Depression (N=211)		15.60	5.43	-0.15*		
Total Health literacy		3.03	0.56	1.00		

a. Valid percent; *p<.05, **p<.01, ***p<.001

of the participants reported they never or occasionally had difficulty understanding hospital or clinic signs, and 41.98% of participants reported that they never or occasionally had difficulty understanding appointment slips. About one third (33.02%) of the participants reported that they never or occasionally had difficulty understanding and filling out medical forms, understanding directions on medication bottles (34.91%), and understanding the written information given to them by their health care providers (34.43%). Almost half of the participants (46.23%) reported they never or occasionally had difficulty understanding written instructions needed to get to clinic appointments on time.

Approximately one-third of the participants (36.79%) reported that they never or occasionally have problems completing medical forms because of difficulty understanding the instructions. Additionally, 28.3% of the participants reported that they often or always have problems learning about their medical condition because of difficulty understanding written information about their medical conditions, while 18.4% of the participants were often or always unsure on how to take their medication(s) correctly because of problems understanding instructions on the label. More than 70% of the participants reported that they never, occasionally, or only sometimes felt confident filling out medical forms by themselves, and they never, occasionally, or only sometimes felt they are able to follow the instructions on the medication label. Almost 70% of the participants always, often, or sometimes needed to have someone (a family member, friend, hospital/clinic worker, or caregiver) help them read hospital materials. (Table 2)

Factors Associated with Health Literacy

As shown in Table 3, none of the predisposing factors (i.e., gender, years with disability, and having a spouse) were significantly related to health literacy, after controlling for the other variables. In contrast, most enabling factors were found to be significantly associated with health literacy, excluding

Table 2: Responses to health literacy items

Health Literacy (16 items)	Never	Occasionally	Sometimes	Often	Always	Mean	SD
	N (%)	N (%)	N (%)	N (%)	N (%)		
How often are appointment slips written in a way that is easy to read and understand?	21	63	79	20	29	2.87	1.15
	(9.91)	(29.72)	(37.26)	(9.43)	(13.68)		
How often are medical forms written in a way that is easy to read and understand?	27	77	56	28	24	2.74	1.18
	(12.74)	(36.32)	(26.42)	(13.21)	(11.32)		
How often are medication labels written in a way that is easy to read and understand?	35	67	63	16	31	2.72	1.25
	(16.51)	(31.60)	(29.72)	(7.55)	(14.62)		
How often are patient educational materials written in a way that is easy to read and understand?	33	66	64	25	24	2.72	1.20
	(15.57)	(31.13)	(30.19)	(11.79)	(11.32)		
How often are hospital or clinic signs difficult to understand?*	29	51	84	28	20	3.19	1.13
	(13.68)	(24.06)	(39.62)	(13.21)	(9.43)		
How often are appointment slips difficult to understand?*	24	65	73	33	17	3.22	1.09
	(11.32)	(30.66)	(34.43)	(15.57)	(8.02)		
How often are medical forms difficult to understand and fill out?*	29	41	70	48	24	3.01	1.19
	(13.68)	(19.34)	(33.02)	(22.64)	(11.32)		
How often are directions on medication bottles difficult to understand?*	30	44	74	45	19	3.10	1.16
	(14.15)	(20.75)	(34.91)	(21.23)	(8.96)		
How often do you have difficulty understand written information your health care provider (like a doctor, nurse, nurse practitioner) gives you?*	32	41	78	46	15	3.14	1.13
	(15.09)	(19.34)	(36.79)	(21.70)	(7.08)		
How often do you have problems getting to your clinic appointments at the right time because of difficulty understanding written instructions?*	34	64	67	31	15	3.34	1.13
	(16.04)	(30.19)	(31.60)	(14.62)	(7.08)		
How often do you have problems completing medical forms because of difficulty understanding the instructions?*	26	52	72	42	20	3.10	1.14
	(12.26)	(24.53)	(33.96)	(19.81)	(9.43)		
How often do you have problems learning about your medical condition because of difficulty understanding written information? *	27	47	78	44	16	3.12	1.11
	(12.74)	(22.17)	(36.79)	(20.75)	(7.55)		
How often are you unsure on how to take your medication(s) correctly because of problems understanding written instructions on the bottle label?*	32	61	80	26	13	3.34	1.07
	(15.09)	(28.77)	(37.74)	(12.26)	(6.13)		
How confident are you filling out medical forms by yourself?	27	57	69	34	25	2.87	1.18
	(12.74)	(26.89)	(32.55)	(16.04)	(11.79)		
How confident do you feel you are able to follow the instructions on the label of a medication bottle?	28	37	86	32	29	2.99	1.19
	(13.21)	(17.45)	(40.57)	(15.09)	(13.68)		
How often do you have someone (like a family member, friend, hospital/clinic worker, or caregiver) help you read hospital materials?*	28	37	73	51	23	2.98	1.18
	(13.21)	(17.45)	(34.43)	(24.06)	(10.85)		
Health Literacy (mean of 16 items)						3.03	0.56

*Reversed coding items when calculating HL.

Table 3: Multiple regression on health literacy (N=170)

Independent Variables	Health Literacy		
	B	β	t
Predisposing factors			
Gender (Ref=Men)	0.118	0.106	1.385
Years with disability	-0.001	-0.045	-0.562
Having a spouse (Ref=No)	0.073	0.063	0.801
Enabling factors			
Education	0.153	0.318	3.965***
Monthly income level	0.070	0.184	2.357*
Social support	-0.002	-0.002	-0.029
Need factors			
Severity of disability (Ref=less severe)	-0.212	-0.169	-2.366*
Self-rated health status	-0.046	-0.058	-0.769
Depression	-0.018	-0.177	-2.290*
Constant	2.905		
R^2(Adjusted R^2)	.229 (.185)		
F	5.272***		

*p<.05, **p<.01, ***p<.001

social support. Of the significant factors, both level of education (β=.318, p<.001) and monthly income (β=.184, p=.020) were positively related to health literacy. Among the need factors, depression (β=-.177, p=.023) and disability severity (β=.169, p=.019) had a significant negative relationship with health literacy levels. These results suggest that health literacy levels tended to be higher among participants who are more highly educated, have higher monthly incomes, have less severe disabilities, and report lower depression levels.

Discussion

The current study aimed to explore health literacy levels of older Korean adults with disabilities and to identify relevant health literacy factors within this specific population. Overall, older adults with disabilities demonstrated lower health literacy levels (M = 3.03) than what past research looking at older adults without disabilities has found (M = 9.17),(27) even though the same health literacy instrument was used for both studies [20].

The current study suggested differences across health literacy domains because some domains reported higher average scores than others. Among the individual items, highest average health literacy levels were reported in getting to clinic appointments on time and taking medicine correctly (i.e., at the correct time and with the correct dosage). However, participants reported having more difficulty understanding and reading medication labels and patient educational materials-both of which address functional health literacy. One possibility for the difference in health literacy levels between the different domains could be due to differences in threshold of skills or knowledge required. For example, tasks such as getting to appointments or taking medicine generally involve more straightforward and direct instructions, and generally use more lay language. Whereas medication labels and patient education materials may be more challenging because of their inclusion of more health-related words. While there has not been any research exploring any differences in threshold of skills and knowledge required accomplishing specific health literacy tasks, future research may find it of interest to further explore the further. Regardless, the results indicate that just relaying on an average health literacy score may lead to loss of nuance where participants, even if they have low average health literacy scores, may still demonstrate high literacy based on specific tasks. This can be seem in the differences in average health literacy levels across the different domains. Therefore, it is possible that some domains of health literacy require a greater threshold of skills or knowledge than others. For example, it is likely that most people would have more difficulty understanding medication labels as they may require specialized knowledge uncommon in the general public, particularly with older adults with disabilities. This suggests that average health literacy levels will only give an overall idea of an individual's health literacy and that this global health literacy level may not extend to the more specific health literacy domains.

The current study also explored determinants of health literacy for this specific population. The non-significant finding regarding the predisposing factors was somewhat surprising, as past research has provided support for age and marital status as significant predisposing factors in Korean adults [23]. However, it must be considered that the present study specifically looks at older adults, which the previous study did not. It is possible that while gender is significantly related to health literacy levels in younger adults, this relationship becomes less significant in older adults, although further research is needed to understand why. As there has not been any previous research looking at the relationship between the number of years with disability and health literacy, further research is needed to see if this result will be replicated in similar or different populations.

Among enabling factors, education and monthly income level were both positively related to health literacy, which reflects previous research [9, 18, 27-29]. As health literacy is highly related to literacy skills and, given the strong relationship between income levels and highest-level education achieved, it is understandable why education and income levels are significantly related to health literacy. Unlike predisposing factors, enabling factors are malleable and can be addressed. One consideration for future researchers may be to develop tailored health literacy interventions for populations with low education levels or lower income levels. As education and income may be proxies for any number of underlying mechanisms (e.g., education as proxy for reading comprehension skills; income as proxy for access to health material and knowledge), further research is needed to understand why income and education are significantly related to health literacy levels. However, to improve the efficacy of any such program, the reasons why these factors are significantly related to health literacy should be further explored.

For need factors, both depression level and disability severity were related to health literacy, as those who reported lower depression levels or less severe disabilities reported higher health literacy levels. This is consistent with previous research that found similar relationships between health literacy and both physical functioning and depression levels, such that health literacy levels were found to be higher in those who reported better physical functioning and mental health [7, 27, 30-32].

The present study also explored the relationships between health literacy, global and specific physical functioning and found similar findings regarding the relationship between health literacy and physical functioning as in Wolf and colleagues' study [32]. Instead of disability severity, Wolf and colleagues operationalized physical functioning as self-rated physical function. Thus, Wolf and colleagues looked at global functioning rather than the more specific and severe aspect of physical functioning that the present study examined, as operationalized by disability severity [32]. This suggests that the relationship between physical functioning and health literacy may be similar regardless of the type of physical function explored. This also indicates that interventions may not need to be tailored regarding type of physical functioning. However, further research is needed to better understand the mechanisms behind these relationships.

Study Limitations

The current study has several limitations. First, the study looked at older adults with disabilities as an aggregated group and did not focus on subgroups of each type. Thus, future studies should consider studying whether similar results would be found in older adults with different types of disabilities. For example, previous research has found that those with intellectual disabilities generally report low health literacy levels [33-35]. Also, the present study only sampled participants from one city in Korea using a convenient sampling strategy, and the results may not generalize to all older adults with disabilities in Korea or other countries. Thus, future research should examine culture-specific factors that may significantly influence health literacy levels to better understand potentially extant contextual factors. Furthermore, the present study was unable to provide any conclusions regarding causal direction or underlying mechanisms of the relationship between health literacy and its determinants. While the present study provides critical information regarding populations of interest and factors that can be targeted and modified, more nuanced information is needed for the development of effective interventions.

Implications for Practice and Policies

Despite the limitations, the present study provides much needed information on the health literacy levels of an at-risk and vulnerable population that has yet to be explored. Thus, the present study serves as a starting point upon which future research can build. Particularly, the present information can inform the work of health care providers. Given that health literacy is highly related to accessibility to health care information and the utilization of health care services, the effort to increase health literacy among these vulnerable populations could help decrease health inequities and injustice. For health care practitioners working with older Korean adults with disabilities, it would be important to keep in mind this population's lower health literacy and its possible effects on treatment and course of care. Moreover, while the present study found that average global health literacy was not critically low in this population, this was not representative of specific health literacy domains. Therefore, as evidenced by the specific domain scores, results indicate that specific domains, such as understanding doctor instructions, may benefit from greater attention. This suggests that focusing on global health literacy could potentially lead to practitioners overlooking specific areas of health literacy that need improvement. Thus, health care providers should keep in mind that their patients may benefit from more specific education on certain tasks. Providers should also assess their patients' health literacy in specific domains rather than just global health literacy.

Additionally, our findings identified specific groups that may benefit from targeted interventions (i.e., low-income older adults with more severe disabilities) as well as specific factors that can be targeted to improve health literacy levels in this population (i.e., education). This information can help inform the care that providers give to their patients. For example, practitioners should be aware that older populations with more severe disabilities and depression and lower income and education levels might have lower health literacy and more difficulty navigating their healthcare. However, future researchers aiming to better understand health literacy within older Korean adults with disabilities should endeavor to gain a more accurate understanding of areas that remain unexplored as well as the areas that can be targeted and prioritized to improve the care that nurses and nurse practitioners can provide to their patients.

Human Subjects Approval Statement

The study was approved by the University of Minnesota Institutional Review Board.

Conflict of Interest

The authors declare that they do not have a conflict of interest.

Acknowledgement

The study was funded by the Rehabilitation Center of Busan Metropolitan City in Korea. We appreciate its generous support for the study and the Korean older adults who participated in this study.

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Citation: Kim YS, Lee HY, Park K, Park BH, Zhou A (2020) Health Literacy in Older Korean Adults and Disability Severity Relationship. Public Health Healthc 2(2): 001-009.