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Generative Naming in Korean-English Bilingual Speakers and Assessment Tests for Korean-English Bilingual Speakers with Aphasia

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Generative Naming in Korean-English Bilingual Speakers and Assessment Tests for Korean-English Bilingual Speakers with Aphasia

by

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Thesis

Presented to the Faculty of the Graduate School of

The University of Texas at Austin

in Partial Fulfillment

of the Requirements

for the Degree of

Master of Arts

The University of Texas at Austin

May 2014

Dedication

This thesis is dedicated to my family and friends. Who have supported me over the years with love, patience, and faith that gave me strength.

Acknowledgements

I would like to thank my advisor, Dr. Marquradt, who inspired me to choose my career path and find my passion. I am also grateful for his humor and patience that got me through my graduate school. I would also like to extend my thanks to Dr. Sheng, who provided me with valuable opportunities and her time she spent correcting my thesis.

Abstract

Generative Naming in Korean-English Bilingual Speakers and Assessment Tests for Korean-English Bilingual Speakers with Aphasia

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This present study aimed to: 1) Update and expand the data pool of normal Korean-English speaker's generative naming task from previous data in *Food, Clothes,* and *Animal* categories, 2) analyze the relationship between language proficiencies and total number of words and different categories, and 3) provide easier means of testing Korean-English bilinguals with aphasia through translated standardized tests such as Aphasia Language Performance Scale (ALPS) and Boston Naming Test (BNT). Five additional subjects were added to 25 participants from Kim (2010). The participants were asked to name as many different items as possible in 60 seconds in *Food, Clothes,* and *Animal* category in both English and Korean. The participants generated more items in Korean than in English. A significant negative correlation was observed between number of words generated in Korean and Korean proficiency and between number of category doublets produced and language proficiency difference scores. A significant positive correlation was observed between number of words generated in English and English proficiency. Large differences in the number of words generated were observed between the participants assessed and participants from Kim (2010), indicating education level and field of study impacts generative naming ability.

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Introduction

The purpose of this study is to: 1) Update and expand the data pool of normal Korean-English generative naming in *Food*, *Clothes*, and *Animal* categories, 2) analyze the relationship between language proficiency and total number of words produced in the categories, and 3) provide translated tests for assessing Korean-English bilinguals with aphasia through translated standardized tests such as ALPS and BNT to accompany the generative naming test but provide another means for assessing language proficiency.

Research and interest in bilingualism in the field of speech language pathology has been steadly increasing and, with more people immigrating to the United States, demand for bilingual and multilingual services provided by speech language pathologists is increasing (Amberber & Cohen, 2012). A survey in 2007 revealed that 60 million inhabitants spoke other languages than English at home (*U.S. Census 2011*). More than 45,000 bilingual speakers are in need of new services for communication disorders each year (Paradis, 2001).

According to 2010 U.S. Census, there are 1,706,822 Koreans currently residing in the United States, which makes up 0.5% of U.S. population (*U.S. Census 2010*). The Korean population has been increasing by 500,000 every ten years. Although the total number of Koreans in the United States constitutes a small percentage of the total population, they are a significant and important minority. Most of the Korean population lives in large states, such as California, New Jersey, and New York. Additionally, large name companies such as Samsung, LG, and Hyundai are Korean based and often send workers to the United States. The 1.7 million member Korean population includes elderly individuals, who are at risk of cerebrovascular accidents adding to the number of bilingual people with aphasia. Aphasia is a disorder that

results from damage to a part of the brain that controls language, and may cause impairment in writing, reading, listening, and speaking. The National Institute on Deafness and other Communication Disorders (2007) reported that the US has one million persons with aphasia, with approximately 80,000 individuals acquiring aphasia every year. The number of bilingual speakers with aphasia will increase as the number of bilingual speakers increase, based on immigration trends. However, even with a large Korean-English bilingual population, normative data on language ability is difficult to acquire. Comparison data from neurotypical individuals is needed to establish a bilingual database to serve as a reference for comparison to bilingual Korean-English speakers with aphasia.

Research on elderly bilingual speakers is limited. Most of the bilingualism research focuses on language development. The available research often includes few subjects with differing backgrounds and diverse language abilities.

Research regarding bilingual aphasia is difficult due to limited tools to evaluate bilingual speakers with aphasia. Research on bilingual speakers requires consideration of many different factors; highly variable language proficiency profiles, varations in aphasia severity and type, age of language acquisition, language proficiency in different settings, and the frequency of language use and exposure. The factors that affect the language proficiency of the speaker are important to consider in evaluation of language-impaired speakers.

Studies have demonstrated the bilateral language processing ability of the bilingual brain. Marian, Faroqi-Shah, Kaushanskaya, Blumenfeld, and Sheng (2009) found that early bilinguals show a consistent bilateral dominance for language. Further study has revealed that bilinguals

can activate both hemispheres when performing a face discrimination test, which is usually a right hemisphere dominant task (Marian et al., 2009).

Bialystok (2011) stated that in the bilingual brain, both languages are constantly active; therefore, in order to execute the selected language, a strong suppression mechanism is required. Not only should a mechanism suppress the non-target language, it must handle rapid linguistic processing. The experiments showed that the enhanced executive control for bilinguals were present during the entire life span. The bilingual advantage of the control system is domain-general and spans across the verbal and nonverbal domains, and the effects of this system are present throughout different core components of cogntion (Bialystok, 2011). The use of two languages by the bilingual changes the configuration of the executive network into a brain that executes more efficient processing of both verbal and non-verbal executive control tasks (Bialystok, 2011). Therefore, finding research participants with similar backgrounds, symptoms, and degree of severity is difficult. Additionally, there is a general lack of research subjects who are willing to participate in the testing. Individuals with aphasia often have physical and sensory deficits that limit their participation.

Adequate measurement tools for evaluating bilingual speakers with aphasia are limited. One of the most commonly used tests for the bilingual individuals with aphasia is the *Bilingual Aphasia Test* (BAT; Paradis, 1987). The BAT is a criterion-referenced measure designed to compare the degree of impairment in the languages of bilingual patients. The test includes patient language history, and multiple aspects of expressive and receptive language. An additional subtest is included which assesses the ability to translate between languages at both word and sentence level. The test was constructed so that non-impaired bilingual speakers could score 100% on each test. However, research on how non-impaired bilingual people perform on

the BAT is limited. Manuel-Dupont, Ardila, Rosselli, and Puente (1992) administered the BAT to 17 non-impaired Spanish-English bilingual with their age ranging from 17-35 years. The results showed that there were significant differences between four sections; sentence construction, number of words, morphological opposites, and reading. Additionally, the BAT is very exhaustive, and may affect the performance of the patient. Munoz and Marquardt (2008) administered the BAT to 22 Spanish-English speaking adults between ages 51-77. The results indicated that the group performed better in English than Spanish, which was consistent with language proficiency profiles for the subjects. Additionally, 54 items had a correct response rate that was lower than 70%. From the results, they suggested that the subjects' performance on BAT were influenced by academic experience in Spanish and the influence of English on Spanish.

Anomia, the inability to retrieve intended words during conversation or structured activity, is one of the most common deficits of aphasia (Raymer & Kohen, 2006). However mild the anomia may be, the disability could have a detrimental effect on the patient's academic, professional, and daily life. Importance should be placed on word-retrieval and semantic ability of the patients with aphasia. Treatment studies have largely incorporated training for noun-retrieval impairments in aphasia (Raymer & Kohen, 2006). Generative naming is a critical component in assessing aphasia, and is affected by language proficiency and use (Kohnert, 1998; Kohnert, Hernandaz, & Bates, 1998). Therefore, generative naming tasks could be used as a viable means to assess aphasia.

Studies have shown that generative naming tasks are a very sensitive measure in evaluating cognitive processing deficits of aphasia or dementia. Roberts & Le Dorze (1998) reported that changes in patients in early stages of dementia could be measured by generative

naming. They also indicated that when generative naming was completed in categories, the sensitivity of the task increased. Roberts & Le Dorze (1997) reported that French-English bilingual adult speakers produced similar numbers of responses in both languages in *animal* and *Food* categories. Pena, Bedore, & Zlantic-Giunta (2002) found that Spanish-English bilingual children generated a comparable number of items in different categories (e.g. *Clothing*, *Food*, *Animal*) during generative naming task. Ward, Chu, Vaid, & Heredia (2005) administrated generative naming tasks to adult Chinese-English bilingual speakers, and their results showed that there were substantial overlap in the examplars listed across the sessions.

Generative naming is used in many assessment tests, such as *Boston Diagnostic Aphasia Examination (BDAE)* (Goodglass, Kaply, & Barresi, 2001), the *Arizona Battery for Communication Disorders in Dementia (ABCD)* (Bayles & Tomoeda, 1991), and the *Scales of Cognitive Ability for Traumatic Brain Injury (SCATBI)* (Adamovich & Henderson, 1992). Generative naming also is used to assess and measure improvement in aphasia patients (Wertz, Collins, Weiss, Kurtzke, Freiden, & Brookshire, 1981; Roberts & Le Dorze, 1998) and to demonstrate language decline in dementia (Mack, *et al.* 2005; Roberts & Le Dorze, 1998).

A more efficient means to measure the degree of impairment of variable language domains in English is needed. *The Aphasia Language Performance Scale* (*ALPS*, Keenan & Brassell, 1975) is a 30-minute test including four 10-item scales that measure listening, writing, talking, and reading using a right/partial/wrong scale. The test is a short, simple, easy to administer, and provides standardized scores for estimation of aphasia severity. The tasks are simple enough so that the patients who are non-impaired bilinguals should be able to complete the test with 100% accuracy. Additionally, the short length limits fatigue. The *Boston Naming Test (BNT)* and the *ALPS* were translated in the current study to provide assessment instruments

that could be employed in future studies to test language and specificially naming ability in bilingual English Korean speakers.

The purpose of this thesis is to 1) Update and expand the data pool of normal Korean-English generative naming, 2) analyze the relationship between language proficiency and total number of words produced in generative naming categories, and 3) provide valid and reliable translated tests for Korean-English bilinguals with aphasia .

Method

Subjects:

Language proficiency data for 25 Korean-English bilinguals (13 females and 12 males) were obtained from Kim (2010). Five additional Korean-English bilingual speakers (2 females and 3 males) were tested and added to the data pool to increase the representativeness of the sample. With the added participants, the age range of the combined samples was between 19 and 41 years old (Mean = 27, SD = 6.18). The added participants were students at the University of Texas at Austin, and were living in Austin. The total of 30 combined participants included 20 who were exposed to English for more than 10 years. All 30 subjects were fluent in both English and Korean and had no cognitive language disorders, brain damage, or neurological deficits. The five added participants had more than 15 years of education, and either attended college or were persuing higher degrees.

Participant language proficiency questionnaire:

The participants from Kim (2010) were administered language proficiency measurees. Language proficiency is a critical factor to consider when planning therapy for the bilingual speakers with aphasia, as language proficiency may affect the recovery rate of the language. The participants' language proficiency was determined from questionnaires adopted from Kim (2010). The questionnaires are included as Appendix A. The scales include language history and acquisition, educational history, and language use during the week. The data was self-reported by the participants. In the language proficiency section of the questionnaire, the participants were asked to rate their fluency/language ability by using a 5 point scale. A 1 on the scale indicates that they are non-fluent, while a 5 indicates native fluency. They were asked to rate their fluency

in speaking and listening in formal and informal situations, reading, writing, and their overall ability. The Language Use Questionnaire was developed by Munoz, Marquardt, & Copeland (1999) and was translated into Korean by Kim (2012). The questionnaire was not altered in its administration to the five new participants in order to keep the conditions and questions as identical as possible. Table 1 shows demographic and language proficiency characteristics of the total sample of 30 bilingual participants.

Table 1. Demographic and language proficiency characteristics of Korean-English bilingual participants (new subjects in bold letters).

ID	Age	Gender	Country of Origin	Overall Korean Proficiency	Overall English Proficiency	More than 10 years Exposure to English	Years of Education
1	25	M	Korea	5	3	Yes	20
2	32	M	Korea	5	3	Yes	22
3	28	F	Korea	5	4	Yes	22
4	30	M	Korea	5	3	Yes	21
5	35	M	Korea	5	3	Yes	22.5
6	31	M	Korea	5	3	No	20
7	30	F	Korea	5	4	Yes	21
8	41	F	Korea	5	3	Yes	29
9	38	M	Korea	5	3	Yes	26
10	30	M	Korea	5	3	Yes	21
11	31	M	Korea	4	2	Yes	24
12	23	F	Korea	4	3	Yes	17
13	21	F	Korea	5	3	No	17
14	23	M	Korea	5	4	Yes	16
15	21	F	Korea	5	3	No	15
16	24	F	Korea	5	4	Yes	17
17	23	M	Korea	5	4	No	17
18	19	M	Korea	5	3	No	15
19	21	F	United States	5	4	Yes	16
20	21	F	Korea	5	4	No	15
21	23	F	United States	5	2	Yes	23
22	25	F	Korea	5	3	Yes	21
23	20	M	Korea	4	4	No	17
24	21	F	Korea	5	4	Yes	15
25	41	F	Korea	5	3	Yes	20
26	**30**	**F**	**Korea**	**4**	**2**	**No**	**25**
27	**26**	**M**	**Korea**	**5**	**4**	**Yes**	**20**
28	**19**	**F**	**United States**	**4**	**5**	**Yes**	**15**
29	**26**	**M**	**Korea**	**4**	**5**	**Yes**	**17**
30	**33**	**M**	**Korea**	**5**	**3**	**No**	**20**

Table 2 and Table 3 show the mean language proficiency ratings for English and Korean for the participants from Kim (2010) and for the total 30 participants included in the study.

Table 2. Mean language proficiency ratings for participants from Kim (2010)

	Listening and Speaking in Casual Conversation	Listening and Speaking in Formal Conversation	Literacy (Writing and Reading)
English	3.8 (0.72)	3.5 (0.58)	3.74 (0.49)
Korean	4.98 (0.10)	4.78 (0.45)	4.76 (0.45)

Table 3. Mean language proficiency for total participants (N = 30). .

	Listening and Speaking in Casual Conversation	Listening and Speaking in Formal Conversation	Literacy (Writing and Reading)
English	3.78 (.8)	3.53 (.64)	3.8 (.57)
Korean	4.87 (.39)	4.6 (.66)	4.65 (.45)

The results show that the majority of the participants were more fluent in Korean than English in listening and speaking in both formal and informal conversation, reading, and writing.

Procedures:

The participants were asked to participate in two one-hour long sessions at least 6 days apart. The days between the two tests ranged from six to 20 days. Procedures from Kim (2010) were used to obtain the generative naming for the five participants in English and Korean. They were given one of two test orders. One order began with Korean, the other with English. The instructions were provided in the language of the task. For both tasks, the participants were given a minute to produce as many words as possible for each category. The categories were *Food*, *Clothes*, and *Animals*. The generative naming tasks are shown in Table 3. The instructions were repeated if the participant requested. The participants were administered a practice task

with the *color* category in order to ensure that they understood the procedures.If the participant finished before the time elapsed, they were given verbal encouragement such as “You still have time” or “You can say any word you like!” in order to promote word generation. Once they were finished with the second session, they were given 15 dollars as compensation.

Table 4. Items of the category fluency task

Category	English	Korean
Food	Tell me all the foods you know. You have one minute. Are you ready? Start now.	귀하가 알고 있는 모든 음식들의 이름을 일분 동안 말해 주십시오. 준비되셨습니까? 시작하십시오.
Clothes	Tell me all of the clothes you can think of. You have one minute. Are you ready? Start now.	귀하가 생각할 수 있는 모든 옷들의 이름을 일분 동안 말해 주십시오. 준비되셨습니까? 시작하십시오.
Animals	Tell me all the animals you can think of. You have one minute. Are you ready? Start now.	귀하가 생각할 수 있는 모든 동물들의 이름을 일분 동안 말해 주십시오. 준비되셨습니까? 시작하십시오.

The data was obtained by the author, who is a Korean-English bilingual graduate student attending the Master’s program at University of Texas at Austin. The investigator lived in the United States for more than 10 years and was proficient in both English and Korean. The self-rated Korean and English proficiency (using the same Questionnaire that was administered to the participants) of the author was 5 in English and 4.5 in Korean.

Data Analysis

The Korean data was translated into English for comparison. Overlapping items were excluded from the total count. Following the rules adapted from Kim (2010), some words were omitted due to repetition and irrelevance. The rules for omission were adapted from Kim (2010) to maintain reliability and continuity (See Table 4). Participant responses were translated and coded by the author. To estimate intrajudge reliability, responses from two participants were translated and coded a second time. Intrajudge reliably was 100%. Kim's data was translated by two independent coders. Korean data was translated by a Korean native speaker with a graduate degree, and English data was translated by Korean-American with a college degree. Their transcription reliability was computed for 12% of the data and was 100% for Korean and 96% English.

Word category assignments:

The Korean words produced by the participants were translated into English to compare the words directly with results from he English generative naming task. Translation was aided by the *dictionary.com* and the *Naver online Korean-English dictionary*. The homogenization rules were used to reduce the number of doublets in each category. The rules were adapted from Seleznvea (2008). Following Kim (2010), the adjective reduction rule was removed from rules by Seleznvea (2008). The rule dictated that only the noun should be taken into consideration, since the Korean food names are often described as nouns with adjectives and were considered as separate semantic concepts. For example, *pickled fish cake* is different from *sautéed fish cake.* Table 5 includes the list of the rules.

Exclusionary rules and category error assignments were determined. Inaccuracy codes and redundancy codes from Selezneva (2008) were adopted as well. The codes contained language error, non-word error, and category error. If the participants code-switched, named non-existent words, or provided non-category items, the word was considered inaccurate and was omitted. If the item was a superordinate term to the following words, the response was considered redundant and was omitted. For example, if the participant said '*pants, jeans, denim'*, pants were interpreted as a superordinate term and omitted from the data. The rules are described in Table 6. Table 7 shows the words that were omitted from the data of the five subjects of the current study.

Table 5. Summary of the rules for translation, homogenization, and category membership (Kim 2010)

Rule	Description	Examples
Translation		
Korean to English language	All translations were made based on the researcher's judgment of common American-English labels for all semantic concepts taken from the above listed sources.	In Korean: "*나시/티*" was translated as "thank top" (American-English dialect).
Homogenization		
Plurality marking	All subordinate lexical items that were named in plural form(s) were changed into their singular form(s). This rule did not apply to the superordinate items named.	In English: "*birds*" became "*bird*" In Korean: this rule was applied after the items named in Korean were translated to English language, thus it did not apply to the Korean items.
Gender marking	ANIMALS: Items in English were transcribed as male, female, or genderless animal labels. Items in Korean which had gender marking inflections were translated as male and female forms and transcribed as two separate semantic items. Items in Korean which lacked gender marking were transcribed as the English genderless equivalent. Note: Only cats were not distinguished by gender. FOOD: All gender marking forms were collapsed into the semantic concept they represented. CLOTHES: This rule did not apply to this category.	ANIMALS: In English: form-"*rooster*" (male), "*hen*" (female), "*chicken*" (neutral label). In Korean: "*수탉*" (rooster), "*암탉*" (hen), "*병아리*" (chicken). FOOD: All "*chicken, hen, and rooster*" were collapsed into "*chicken*."
Diminutive reduction	All items containing diminutive forms were reduced to their uninflected noun form.	*"Kitties*" was reduced to cat and "*야옹이, 강아지*" (*kitties, doggies*) were reduced to "*cat, dog.*"
Word order	Items that were longer than one word and contained qualitative descriptions of the whole item itself, were transcribed with (1) the description of the item, then (2) the main item; however, if the descriptor words were	Main item description: The item "mini skirt" was transcribed as "mini skirt" because the word "mini" describes the main item-"skirt." A part of the main item description: the item "*long sleeve*

Table 5 (continued)

	describing a part of the main item, the word order was switched to state the (1) main item, (2) the word "with," (3) the part of the main item the description was attributed to, and (4) the descriptor words.	*shirt*" was changed to "*shirt with long sleeves*" because the word "long" is describing not the main item, which is "shirt," but a part of the main item- "sleeves."
Word variants	Lexical items, named in either language, that portrayed a clear semantic concept but did not match the common term for that concept, were given a commonly used lexical label for the corresponding semantic concept.	In English: "*training wear*" was changed to a "*sportswear*".
Semantic completion	If an item, named in either language, was followed by one or more feature descriptions of that item (without stating the main item along with the descriptions), all descriptions were attributed to the item named immediately before the stated features. The named features were then transcribed with the initial item label added to the feature description.	In English: "*long, short pants*" were changed to "*long pants, short pants*."
Reduction of non-content words	Utterances accompanying the main items (content word) that did not contribute to the meaning or description of the main item were deleted.	In English: "*all kinds of vegetables*" was reduced to "*vegetables*." In Korean: "각종 전" (all kinds of pan-fried food) was changed to "전" (pan-fried food).
Category Membership		
	Examples of Included Items	**Examples of Excluded Items**
Food	All raw and cooked food items (e.g. potato, mashed potato), recipe ingredients (e.g. baking soda), names of prepared dishes (e.g. mixed vegetables and rice), and superordinate food category labels (e.g. deli) were accepted.	Chinese buffet
Clothes	Categories of undergarments, outerwear, casual wear, formal wear, and shoes were included. This category	Accessories such as glasses, jewelry, hair care, and bags. Gear such as space gear, diving gear

Table 5 (continued)

	also included clothing garments from any time period, cultural clothing items, belts, and headwear. Active wear and swimwear such as bathing suits, swim trunks, and flip-flops were accepted.	(including footwear), beach accessories (e.g. towel, sunscreen), and specific weather related accessories (e.g. umbrella, sunglasses) were excluded.
Animals	All animal labels (including "*people*" and "*apes*"). Adult and child forms of the same animal type (cat, kitten or cow, calf) were counted as separate semantic concepts.	Mythological creatures (e.g. "*dragon*") and proper names (e.g. "*Shamu*") were excluded.

Table 6. Summary of the error codes

Error Codes	Description	Example
Inaccuracy Codes		
Language error (LE)	Use of the wrong language in a category (code-switching)	Naming Korean items when asked to name items in English and vice versa.
Non-Word error (NE)	A non-existent word (neologism)	"*Dumbler*" in the food category.
Category error (CE)	An item in the target language that does not belong in the target category.	"*Dragon*" (a mythological creature) as an animal.
Redundancy Codes		
Repeated Word (RW)	Repetitions of an already named item within a category.	"C*at, dog, horse, cat.*" The repetition of the word "*cat*" is a repeated word error.
Superordinate Category (SC)	The superordinate category named to trigger the subordinate items in that category. An item is assumed to be a trigger only if that item is a superordinate category name; and it is followed by the subordinate items belonging to that superordinate category within the next 2 item names.	In the string "*vegetables, carrot, cucumber, squash,"* the word "*vegetables*" is considered an error; however if the order was "*vegetables, fish, meat, carrot, cucumber,"* the word "*vegetables*" was not followed by the subordinate items in that category within the next two words, thus it is not an error and is counted as correct.

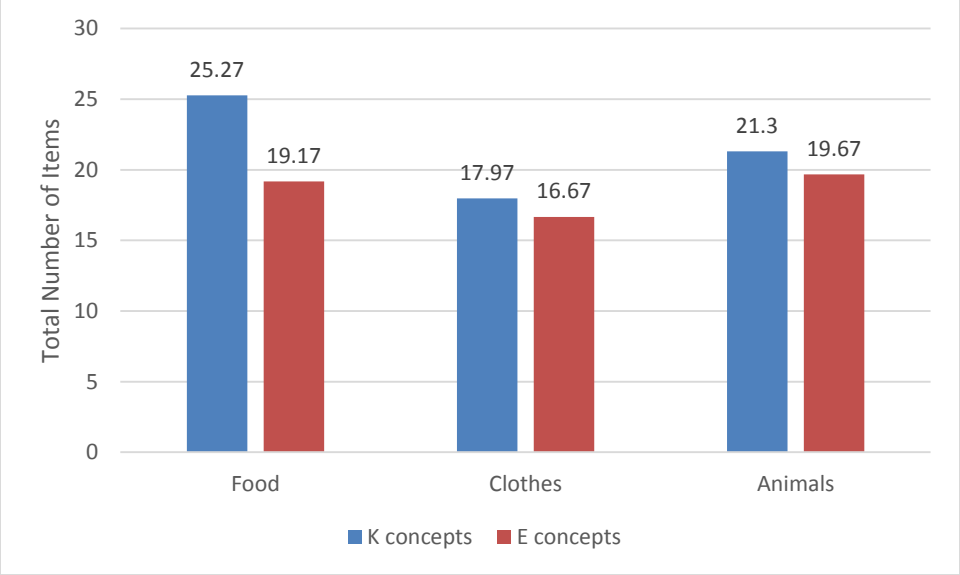
Table 7. Omitted words after the rules were applied

Participant	English	Korean
KE1	n/a	BBQ(RW)
KE2	n/a	Gyoja(RW)
KE3	Flip flops (RW), cardigan(RW), t-shirt(RW), rainboots(CE), tank top(RW), biscuits(SC), rice cake(SC), fruit(SC), chicken(RW), sunglasses(CE), pants(SC)	Shirt(SC), Sushi rolls(RW), alcohol(SC), blouse(SC)
KE4	sunglasses	Sunglasses
KE5	Baby horse(RW), female cow(RW), bear(SC), hair pins(CE), hair band(CE), hiking gear(CE)	Shamu(NE), ski gear(CE)

Results:

Figure 1 shows the average number of concepts produced by the 30 participants. The *Food* category had the largest number of concepts (Mean = 40.3) and the least number of overlapping items (Mean = 3.87). In contrast, the *Clothes* category had the least number of concepts (Mean = 27.1), and *Animals* had the largest number of overlapping items (Mean = 10.17). This could be due to the different varieties of foods between American and Korean cultures compared to variety of clothes and animals. Overall, participants generated more Korean concepts than English concepts. The mean number of total items 64.5 for Korean 55.5 for English.

Figure 1. Mean number of items named in each category for Korean and English



Pearson product moment correlation coefficients were calculated to determine the relationship between items generated in all three categories in both English and Korean (See Table 8). The correlation between the total number of items named in English and Korean was significant (r = .876, df = 28; r critical = .374). Correlation analysis for the items in English and

Korean in three categories, *Food, Clothes*, *Animals*, were statistically significant (r = 0.814, p<.05; 0.796, p<.05; and .87, p<.05 respectively).

Table 8. Pearson product moment correlation coefficients for the total number of items produced in Korean and English.

	Food	Clothes	Animals	Total
Correlation between Korean and English	0.815 (p<.05)	0.796 (p<.05)	0.870 (p<.05)	0.876 (p<.05)

Pearson product moment correlation coefficients also were computed for different category pairs for both languages: *Food* and *Clothes, Food* and *Animals*, and *Clothes* and *Animals* (See Table 9). The correlation analysis in Korean showed significant correlations between the total number of concepts generated for *Food* and *Clothes, Food* and *Animals*, and *Clothes* and *Animals*. Analysis between the categories in English revealed significant correlations between the numbers of items named in the categories of *Food* and *Clothes*, *Clothes* and *Animals*, and the categories of *Food* and *Animals*.

Table 9. Pearson product moment correlation coefficients for the total numbers of items produced between the three main categories in each language.

Correlation	Food/Clothes	Food/Animals	Clothes/Animals
Korean	0.919 (p<.05)	0.831 (p<.05)	0.855 (p<.05)
English	0.881 (p<.05)	0.880 (p<.05)	0.843 (p<.05)

Two-way analyses of variance with repeated measures were used to determine the effects of category and the language on the total number of items generated and the interaction between language and category. The results of the two-way ANOVA revealed a significant effect for language (F=4.27; df=1,174; p<.05) and category (F=3.88; df=2,174; p<.05) but not the interaction between language and category (F=1.129; df=2,174; p>0.05).

For the post-hoc analysis, one way ANOVAs were applied to examine the differences in the number of items named within categories for the two languages and between categories in different languages. Results of the one-way ANOVA tests are shown in Table 10. One way ANOVA compared the number of items in Korean and the number of items in English within the same category. The results showed a significant difference in the categories of *Food* ($F=4.620$; $df=1,58$; $p<0.05$), which indicated that significantly more words were produced in Korean than in English. In contrast, the differences between words produced in English and Korean in *Clothes* and *animals* category did not show asignificant difference.

A second one way ANOVA analysis compared the number of items in each category within the same language with different pairs: *Food* and *Clothes*, *Clothes* and *Animals*, and *Animals* and *Food*. Significant difference between the *Food* and *Clothes* category pairs in Korean was observed ($F=8.278$; $df=1,58$; $p<.05$). No significant differences were found in any other category combination in either language. Thus, participants generated similar numbers in all categories in English, but the number of names generated in Korean for *Food* and *Clothes* category was significantly different.

Table 10. Post-hoc comparisons for categories in Korean and English.

Factor Combinations		***F* value**	***P* value**
Korean Food to	English Food	4.620	0.036
Korean Clothes to	English Clothes	.350	.556
Korean Animals to	English Animals	.429	.514
Korean Food to	Korean Clothes	8.278	.006
Korean Clothes to	Korean Animals	2.466	.121
Korean Animals	Korean Food	2.264	.138
English Food to	English Clothes	.971	.329
English Clothes to	English Animals	1.378	.245
English Animals	English Food	.034	.854

The relationship between language proficiency and the total number of items produced in each category was examined. The expectation is that participants with greater proficiency in a language will generate more words in categories in that language. The results showed that the participants as a whole produced more words in Korean than English, and had greater proficiency in Korean than English. Based on these results, a significant correlation between language proficiency and the words generated by the participants was expected.

Pearson product moment correlation coefficients were used to investigate the relationship language proficiency in Korean and total number of items produced in Korean in each of the three categories (*Food, Clothes*, and *Animals*). The results are presented in Table 11. The results showed that there was a strong negative correlation between Korean proficiency in *Food* and *Clothes* category, while there was a moderate positive correlation between Korean proficiency and *Animal* category. This result differs from results from Kim (2010), shown in Table 12 below.

The difference between data from Kim (2010) and the updated data were due to the results from newly added participants. The newly added participants generated more than twice the average number of words produced in the word generation tasks than previous participants (Table 12). This could be because the majority of the current study's participants' majors were audiology and speech language pathology, which might have exposed them to the language tasks such as generative naming tasks. They also were young; their ages ranged between 17-30 years. They were also highly educated, as four out of five participants held a bachelor's degree, and three were pursuing Master's degree or higher. Although one of the participant's English proficiency was low (2), she was pursuing a PhD in speech language pathology. With the exception of this participant, the participant's rating of their English ability was 3 and above with Korean proficiency rated as 3.5 and above. This finding also could be due to a ceiling effect. The

1-5 scale provides a limited range of language proficiency, which may not have been sufficient to capture the level of language proficiency for some of the highly educated subjects.

Table 11. Pearson product moment correlation coefficients for language proficiency and the number of items produced in each category.

Proficiency	Food	Clothes	Animals
Korean	-0.499 ($p<0.05$)	-0.518 ($p<0.05$)	-0.397 ($p<0.05$)
English	0.459 ($p<0.05$)	0.517 ($p<0.05$)	0.529 ($p<0.05$)

Table 12. Pearson product moment correlation coefficients for overall language proficiency and the number of items produced in each category (Kim, 2010).

Proficiency	Food	Clothes	Animals
Korean	0.079 ($p>0.05$)	0.003 ($p>0.05$)	-0.051 ($p>0.05$)
English	0.386 ($p>0.05$)	0.593 ($p<0.05$)	0.586 ($p<0.05$)

The correlation between participant's overall language proficiency in English and the number of items produced in each category was calculated. The results showed that there was a high positive correlation between participants' English proficiency and the number of words produced ($r = 0.459, 0.517, 0.529$ $p>.5$ respectively).

Table 13. The average number of words produced in Korean between the new participants and old participants.

	Food	Clothes	Animals
New Participants	47.2	32.6	36.6
Kim's Participants	20.88	15.04	18.24

The difference between language proficiency was calculated by subtracting English proficiency from Korean proficiency. With the exception of two subjects, who demonstrated higher proficiency in English than Korean, the difference score of the participants' scores were positive. The difference in the proficiency is shown below in Table 13.

The number of words that are repeated were calculated by counting the equivalent in both languages. For example, if the participant named "tank top, sweater, maxi skirt" in English and ", 스웨터(sweater), 바지(pants)" in Korean, the number of doubles was calculated as two, since the equivalent words were *tank top,* and *sweater*. The total number of doublets were calculated by adding the doublets across the three categories.

Table 14. Number of doublets in each category with difference in proficiency scores (with participants of current study highlighted).

ID	Food	Clothes	Animals	Total	Difference in Proficiency
1	3	5	6	14	2
2	1	7	7	15	2
3	6	8	11	25	1
4	3	2	7	12	2
5	0	1	5	6	2
6	2	7	8	17	2
7	4	7	11	22	1
8	2	8	4	14	2
9	2	7	8	17	2
10	5	8	10	23	2
11	1	5	11	17	2
12	2	4	6	12	1
13	1	8	7	16	2
14	0	5	6	11	1
15	4	8	9	21	2
16	7	9	9	25	1
17	4	6	10	20	1
18	0	6	4	10	2
19	1	4	7	12	1
20	4	3	8	15	1
21	0	3	7	10	3
22	3	6	7	16	2
23	4	8	7	19	0
24	0	9	11	20	1
25	4	5	6	15	2
26	**13**	**21**	**19**	**53**	**2**
27	**8**	**15**	**28**	**51**	**1**
28	**9**	**13**	**26**	**48**	**-1**
29	**14**	**14**	**17**	**45**	**-1**
30	**9**	**14**	**23**	**46**	**2**
Mean	2.52	5.96	7.68	16.16	1.433
SD	1.941546	2.162961	2.073065	6.177572	0.898

Pearson product moment correlation coefficient were calculated in order to investigate the relationship between the proficiency difference scores and the number of doublets produced in the categories of *Food, Clothes, Animals*, and the total number of doublets. The results are

shown in Table 14. The correlation analysis showed that there was a significant correlation between the proficiency score difference and the total number of doublets produced. The correlations were negative and significant; reductions in the difference in language proficiency between English and Korean yielded increases in the total number of translational equivalents for the participants.

Table 15. Pearson product moment correlation coefficients for participants' proficiency difference scores and the number of category doublets

	Food	Clothes	Animals	Total
Proficiency	-0.492 ($p<0.5$)	-0.323 ($p<0.5$)	-0.434 ($p<0.5$)	-0.449 ($p<0.5$)

Translation of the Aphasia Language Performance Scales

Tests in addition to generative naming may serve to supplement assessment paradigms for aphasia. One of the most widely used tests to assess bilingual speakers with aphasia is the *Bilingual Aphasia Test (BAT).* However, the long administration time often makes the test difficult to administer. A reliable and rapid means to measure the degree of impairment in bilingual speakers is needed. *The Aphasia Language Performance Scales (ALPS*) is a 30 minute test that includes four 10 item scales in listening, writing, talking, and reading. The ALPS is easy to administer and tasks should be produced without error by unimpaired speakers.. The ALPS was translated into Korean to provide a convenient means to assess Korean-English bilingual speakers with aphasia.

The ALPS test was translated and is included in Appendix C. The translation was completed by the author. Online resources such as *Naver online Korean-English dictionary* and *dictionary.com* were used as references for accurate translation. The test items and the instructions were described as closely as possible to the English version. However, due to language difference, some items were modified or revised.

For example, in Reading 8 – Comprehension of a fourteen-word confusing instruction, the direction asks the patient to "show which words in this sentence begin with the first letter of the alphabet." Direct translation of this direction was impossible since Korean does not have the concept of the alphabet. Therefore, the participant was asked to show the word that starts with the first consonant in Korean.

Writing 4 also was modified, since there is no concept of alphabet in Korean. The item asks the patient to write down the first four letters of the alphabet. Similar to Reading 8, the

patient was asked to write down the first four consonants of the Korean. Instructions such as "disregard capitalization" was omitted in the Korean instruction, as Korean does not have any capitalization.

Boston Naming Test (BNT) also was translated as means to provide a second test for naming. The BNT could also be used as a comparison with the generative naming tasks.

Discussion

The purpose of this study was to increase a generative naming bilingual database to serve as a reference for comparison to bilingual speakers with aphasia. The results showed that while English proficiency is significantly related to category generative naming ability, a significant negative correlation between Korean proficiency and category generative naming was observed. Correlation coefficients between differences in proficiency and the number of doublets produced were negative, indicating that the smaller the difference in proficiency, the greater the number of doublets produced.

The first goal of this study was to expand the data base for Korean-English generative naming developed by Kim (2010). Five additional participants were administered the tasks from the Kim study. The total number of items from the Kim study and the five participants of this study in *Food, Clothes,* and *Animals* categories in English and Korean were compared. More words were produced in Korean than in English in all categories. *Clothes* had the fewest words generated while *Food* had the most across both languagess. This finding may be due to the small number of variants of words in the *Clothes* category. The overall proficiency of the participants for the two groups combined was higher for Korean than in English.

The second goal of this study was to analyze the relationship between language proficiency and the words produced in the generative naming tasks. The relationship between the total number of words generated between English and Korean, and the relationship between proficiency and the total words produced was analyzed. The prediction was that the higher the proficiency, the greater number of words generated.

The Pearson product moment correlation analysis revealed that there was a significant relationship between numbers of words generated in Korean and in English across all categories. Additionally, there was a significant relationship between language proficiency and the number of items produced in each category. The results showed that there was negative relationship between Korean proficiency and the number of words produced, while a positive relationship between English proficiency and the number of words produced was observed. The relationship between proficiency and words produced in Korean did not follow the expectation that the higher the proficiency the greater the number of words produced.

The third goal of the thesis was to provide an easier means of testing Korean-English bilinguals. The variability of the results that was caused by the additional five participants to the data pool shows the difficulty of acquiring a homogenesous sample. Therefore, it is critical for the research community to have the means to test patients fast and efficiently. Currently, the most widely used bilingual test for assessment of aphasia is Bilingual Aphasia Test (BAT), which is exhaustive, but produces errors for neurotypical speakers (Munoz & Marquardt, 2003). The BAT takes a long time to administer and may not be suitable for participants who tire easily, and the procedures may be difficult for untrained SLPs to administer. Therefore, atranslated *Aphasia Language Performance Scale* (ALPS) was included as a more rapid and easier way to assess bilingual speakers with aphasia. The translated ALPS takes less than an hour to administer, and the tasks are easy enough for non-impaired people to score 100%. ALPS is also easier to administer and score than BAT. Additionally, the translated Boston Naming Test (BNT) was added to provide a second test for naming and as a comparison with the generative naming tasks provided in this study.

The limitation of this study is the possible lack of reliability of the ALPS test. Since the test was developed in the 1975, the ALPS lacks the evidence of reliability that is more readily available for other translated measures. Although the tasks are simple, the translation may have affected the validity and reliability of the test. For example, a study by Keklikoglu, Selcuki, and Keskin (2009) reevaluated with the translated Western Aphasia Battery (WAB)-Turkish 20 patients previously tested with the Frenchay Aphasia Screening Test-Turkish (FAST) and the Gulhane Aphasia Test (GAT). The WAB is a widely used assessment tool for aphasia and has been known to have a high reliability. However, the results showed that the WAB-Turkish classified two patients who tested normal on FAST test as having aphasia. The reliability of the translated ALPS requires additional study

The variability of the self-rating scales that were used for this study may not serve as an adequate predictor of a speakers performance on the tasks. For example, one of the participants who was added to the study was pursuing a PhD in speech language pathology. She had recently moved from Korea to the United States. Her perception of her English proficiency might have been under-estimated because she was surrounded by other English speakers. Additionally, the complexity of her work might have added to her lower perception, since it requires higher language ability than everyday language tasks, which might have made her feel that her language ability was inadequate. The self-rating scale of 1-5 also may have produced a ceiling effect, where people with higher than average proficiency may have been rated equivalent to people with average proficiency.

In conclusion: (1) The average number of words generated was higher in Korean than English, (2) There is a negative relationship between language proficiency and number of words generated in each category in Korean, but positive for English, (3) The relationship between

proficiency and words generated is affected by the participant's language background, and in order to offset these effects, more participants are required to build a more representative sample.

For future studies, a relationship between severity of aphasia, language proficiency, and generative naming should be explored further. The severity of the aphasia of the subjects could be tested using the provided translated ALPS and BNT, and their language proficiency could be measured by the previously developed questionnaires. Additionally, a comparison study between the translated ALPS and translated versions of more widely used standardized aphasia assessment tests such as *Western Aphasia Battery* (WAB) should be undertaken to evaluate the reliability and validity of the translated ALPS test. Further research will provide more insight on the relationship between the language skills and history of bilingual speakers and aphasia severity.

Appendix A: Language Use Questionnaire

Language Use Questionnaire

This questionnaire is related to the amount of English and your other language Korean you have been exposed in your life. Please cross the box that best describe the percentage of English or Korean you have been exposed in the given age range. If you were exposed only to one language in a specific age range, please select the 100% box for that language.

본 설문지는 귀하께서 지금까지 영어와 다른 언어인 한국어에 노출된 정도를 조사하기 위해 실시됩니다. 제시된 특정 연령 기간에 따라 귀하께서 지금까지 영어와 한국어에 노출된 비율에 X 표시는 해 주세요. 만약 특정 연령 기간에 특정 한 언어에만 노출되셨다면, 그 언어의 100% 박스에 X 표시를 해주세요.

Directions: From the following age ranges please select which language you heard, spoke and read the most. For example, if you indicate you heard English 75% of the times between the age ranges 6-9, it means that you heard Korean the remaining 25% of the times.

다음에 제시된 특정 연령 기간에 따라 귀하께서 어떤 언어를 가장 많이 듣고, 말하고, 읽었는지 나타내 주십시오. 예를 들어, 만약 귀하께서 6-9 세 사이에 영어를 75% 들었다면, 이것은 귀하께서는 동일한 연령 기간에 한국어를 25% 들었음을 의미합니다.

	LANGUAGE YOU HEARD THE MOST				
	Korean 100%	25 English/75 Korean	50/50	75 English/25 Korean	English 100%
Age					
0-3	☐	☐	☐	☐	☐
3-6	☐	☐	☐	☐	☐
6-9	☐	☐	☐	☐	☐
9-12	☐	☐	☐	☐	☐
12-15	☐	☐	☐	☐	☐
15-18	☐	☐	☐	☐	☐
18-21	☐	☐	☐	☐	☐
21-24	☐	☐	☐	☐	☐
24-27	☐	☐	☐	☐	☐
27-30	☐	☐	☐	☐	☐
30 and up	☐	☐	☐	☐	☐

	LANGUAGE YOU SPOKE THE MOST				
	Korean 100%	25 English/75 Korean	50/50	75 English/25 Korean	English 100%
Age					
3-6	☐	☐	☐	☐	☐
6-9	☐	☐	☐	☐	☐
9-12	☐	☐	☐	☐	☐
12-15	☐	☐	☐	☐	☐
15-18	☐	☐	☐	☐	☐
18-21	☐	☐	☐	☐	☐
21-24	☐	☐	☐	☐	☐
24-27	☐	☐	☐	☐	☐
27-30	☐	☐	☐	☐	☐
30 and up	☐	☐	☐	☐	☐
	LANGUAGE YOU READ THE MOST				
	Korean 100%	25 English/75 Korean	50/50	75 English/25 Korean	English 100%
Age					
3-6	☐	☐	☐	☐	☐
6-9	☐	☐	☐	☐	☐
9-12	☐	☐	☐	☐	☐
12-15	☐	☐	☐	☐	☐
15-18	☐	☐	☐	☐	☐
18-21	☐	☐	☐	☐	☐
21-24	☐	☐	☐	☐	☐
24-27	☐	☐	☐	☐	☐
27-30	☐	☐	☐	☐	☐
30 and up	☐	☐	☐	☐	☐

Directions: From the following age ranges please indicate which language gave you the most confidence when speaking, hearing and reading it. Confidence does not mean the language you used the most. It means the language that gave you the most self-confidence when speaking, listening or reading. For example, it might be possible that between 9-12 years of age you heard English at school and Korean at home. However, you felt more self-confident when hearing Korean than English. If you were exposed to only one language in a specific age, answer for the exposed language only.

다음에 제시된 특정연령 기간에 따라 귀하께서 어떤 언어를 말하고, 듣고, 읽을 때 가장 자신감 있는지 나타내 주십시오. 자신감은 그 언어를 가장 많이 사용 하였음을 의미하지 않습니다. 그것은 귀하께서 그 언어를 말하고, 듣고, 읽을 때 스스로 가장 자신 있게 사용 할 수 있음을 의미합니다. 예를 들어, 귀하께서 9-12 세 사이에 학교에서는 영어를 들으시고, 집에서 한국어를 들었지만, 귀하께서는 영어보다는 한국어를 들을 때 더 자신감이 있으셨을 수 있습니다. 귀하께서 어느 특정 연령 기간에 오직 한 언어에만 노출되셨다면, 그 노출된 언어만 나타내 주십시오.

		CONFIDENCE IN HEARING				
		Not confident	25% confident	50% confident	75% confident	Strong confident
Age	**Language**					
3-6	**English**	☐	☐	☐	☐	☐
	Korean	☐	☐	☐	☐	☐
6-9	**English**	☐	☐	☐	☐	☐
	Korean	☐	☐	☐	☐	☐
9-12	**English**	☐	☐	☐	☐	☐
	Korean	☐	☐	☐	☐	☐
12-15	**English**	☐	☐	☐	☐	☐
	Korean	☐	☐	☐	☐	☐
15-18	**English**	☐	☐	☐	☐	☐
	Korean	☐	☐	☐	☐	☐
18-21	**English**	☐	☐	☐	☐	☐
	Korean	☐	☐	☐	☐	☐
21-24	**English**	☐	☐	☐	☐	☐
	Korean	☐	☐	☐	☐	☐
24-27	**English**	☐	☐	☐	☐	☐
	Korean	☐	☐	☐	☐	☐
27-30	**English**	☐	☐	☐	☐	☐
	Korean	☐	☐	☐	☐	☐
30 and up	**English**	☐	☐	☐	☐	☐

	Korean	☐	☐	☐	☐	☐
		CONFIDENCE IN SPEAKING				
		Not confident	**25% confident**	**50% confident**	**75% confident**	**Strong confident**
Age	**Language**					
3-6	**English**	☐	☐	☐	☐	☐
	Korean	☐	☐	☐	☐	☐
6-9	**English**	☐	☐	☐	☐	☐
	Korean	☐	☐	☐	☐	☐
9-12	**English**	☐	☐	☐	☐	☐
	Korean	☐	☐	☐	☐	☐
12-15	**English**	☐	☐	☐	☐	☐
	Korean	☐	☐	☐	☐	☐
15-18	**English**	☐	☐	☐	☐	☐
	Korean	☐	☐	☐	☐	☐
18-21	**English**	☐	☐	☐	☐	☐
	Korean	☐	☐	☐	☐	☐
21-24	**English**	☐	☐	☐	☐	☐
	Korean	☐	☐	☐	☐	☐
24-27	**English**	☐	☐	☐	☐	☐
	Korean	☐	☐	☐	☐	☐
27-30	**English**	☐	☐	☐	☐	☐
	Korean	☐	☐	☐	☐	☐
30 and up	**English**	☐	☐	☐	☐	☐
	Korean	☐	☐	☐	☐	☐

		CONFIDENCE IN READING				
		Not confident	25% confident	50% confident	75% confident	Strong confident
Age	Language					
6-9	English	☐	☐	☐	☐	☐
	Korean	☐	☐	☐	☐	☐
9-12	English	☐	☐	☐	☐	☐
	Korean	☐	☐	☐	☐	☐
12-15	English	☐	☐	☐	☐	☐
	Korean	☐	☐	☐	☐	☐
15-18	English	☐	☐	☐	☐	☐
	Korean	☐	☐	☐	☐	☐
18-21	English	☐	☐	☐	☐	☐
	Korean	☐	☐	☐	☐	☐
21-24	English	☐	☐	☐	☐	☐
	Korean	☐	☐	☐	☐	☐
24-27	English	☐	☐	☐	☐	☐
	Korean	☐	☐	☐	☐	☐
27-30	English	☐	☐	☐	☐	☐
	Korean	☐	☐	☐	☐	☐
30 and up	English	☐	☐	☐	☐	☐
	Korean	☐	☐	☐	☐	☐

Directions: For activity, include what you are engaged in (e.g., breakfast, work, etc.). For partners, include who is interacting with you in the given activity (e.g., mother, grandfather, siblings, etc.). For language(s), use **K** for Korean, **E** for English, **B** for both.

활동 (Activity) 항목에는 귀하께서 어떤 활동에 참여하시는지 나타내 주십시오 (예를 들어, 아침, 직장 등). 파트너(Partner(s)) 항목에는 귀하께서 어떤 활동에 참여하시는 동안 어떤 상대와 대화하시는지 나타내 주십시오 (예를 들어, 어머니, 할아버지, 형제자매 등). 언어 (Language(s)) 항목에는 한국어를 사용하시면, "K", 영어를 사용하시면, "E", 두 언어를 모두 사용하시면, "B"를 표시해 주십시오.

Home Language Profile/Routine: During Week

Time	Activity	Conversation Partner(s)	Language(s)	
			Partner	Participant
7am			K E B	K E B
8am			K E B	K E B
9am			K E B	K E B
10am			K E B	K E B
11am			K E B	K E B
12pm			K E B	K E B
1pm			K E B	K E B
2pm			K E B	K E B
3pm			K E B	K E B
4pm			K E B	K E B
5pm			K E B	K E B
6pm			K E B	K E B
7pm			K E B	K E B
8pm			K E B	K E B
9pm			K E B	K E B
10pm			K E B	K E B
11pm			K E B	K E B

Directions: For activity, include what you are engaged in (e.g., breakfast, work, etc.). For partners, include who is interacting with you in the given activity (e.g., mother, grandfather, siblings, etc.). For language(s), use **K** for Korean, **E** for English, **B** for both.

활동 (Activity) 항목에는 귀하께서 어떤 활동에 참여하시는지 나타내 주십시오 (예를 들어, 아침, 직장 등). 파트너(Partner(s)) 항목에는 귀하께서 어떤 활동에 참여하시는 동안 어떤 상대와 대화하시는지 나타내 주십시오 (예를 들어, 어머니, 할아버지, 형제자매 등). 언어 (Language(s)) 항목에는 한국어를 사용하시면, "K", 영어를 사용하시면, "E", 두 언어를 모두 사용하시면, "B"를 표시해 주십시오.

Home Language Profile/Routine: Weekend

Time	Activity	Conversation Partner(s)	Language(s)	
			Partner	Participant
7am			K E B	K E B
8am			K E B	K E B
9am			K E B	K E B
10am			K E B	K E B
11am			K E B	K E B
12pm			K E B	K E B
1pm			K E B	K E B
2pm			K E B	K E B
3pm			K E B	K E B
4pm			K E B	K E B
5pm			K E B	K E B
6pm			K E B	K E B
7pm			K E B	K E B
8pm			K E B	K E B
9pm			K E B	K E B
10pm			K E B	K E B
11pm			K E B	K E B

Directions: Write the age intervals (in years) when your parents have lived in the countries stated below. If they have lived all their life in one country please indicate which country.

귀하의 부모님께서 아래에 제시된 나라들에서 살아온 나이 기간을 (년) 적어주십시오. 귀하의 부모님께서 한 나라에만 평생 살아오셨다면, 그곳이 어떤 나라인지 나타내 주십시오.

	Father	**Mother**
United States		
Other country _____		
All their life in South Korea		
Not applicable		

Please rate the ability of the following people in each language. Specify the other language Korean.

아래의 가족들의 각 언어 능력을 평가해 주십시오. 다른 언어 한국어를 상세히 나타내 주십시오.

		Proficiency rating				
		Not confident	**25% confident**	**50% confident**	**75% confident**	**Strong confident**
	Language					
Mother	**English**	☐	☐	☐	☐	☐
	Korean	☐	☐	☐	☐	☐
Father	**English**	☐	☐	☐	☐	☐
	Korean	☐	☐	☐	☐	☐
Siblings	**English**	☐	☐	☐	☐	☐
	Korean	☐	☐	☐	☐	☐

II. Educational History:

How many years of education have you had? _____

What was the language you used at school during:	**Korean**	**English**	**Both**
Elementary?	1	2	3
High school?	1	2	3
College?	1	2	3
Which language did you prefer to speak at school during:			
Elementary?	1	2	3
High school?	1	2	3
College?	1	2	3
What language did Korean students speak at school during:			
Elementary?	1	2	3
High school?	1	2	3
College?	1	2	3

Were you taught in any additional languages? YES NO

If so, which language(s)?

Have your language use patterns changed in the last five years? If yes, How?

Language Ability Rating

I would like to understand how comfortable you are in English and Korean. Please circle the number that best represents your ability to communicate in each speaking and listening situation. Numbers range from **1** (non-fluent, only know several words or a few simple sentences) to **5** (fluent, completely comfortable with skills like a native speaker).

이번 항목은 귀하께서 영어와 한국어를 얼마나 편하게 사용하는지 이해하기 위하여 실시됩니다. 각 언어로 말하고 들을 때 귀하의 의사소통 능력을 가장 잘 나타내는 숫자를 표시해 주십시오. 숫자들은 1 (전혀 유창하지 않을 때, 단지 몇 개의 단어나 약간의 단순 문장들만 알 때)에서 5 (유창할 때, 영어가 모국어인 사람들처럼 그 언어를 사용하는 것이 완벽하게 편안할 때)로 분포되어 있습니다.

	Non-				Native
English	fluent				Fluency
Overall ability	1	2	3	4	5
Speaking in casual conversations	1	2	3	4	5
Listening in casual conversations	1	2	3	4	5
Speaking in formal situations	1	2	3	4	5
Listening in formal situations	1	2	3	4	5
Reading	1	2	3	4	5
Writing	1	2	3	4	5

Korean	Non-fluent				Native Fluency
Overall ability	1	2	3	4	5
Speaking in casual conversations	1	2	3	4	5
Listening in casual conversations	1	2	3	4	5
Speaking in formal situations	1	2	3	4	5
Listening in formal situations	1	2	3	4	5
Reading	1	2	3	4	5
Writing	1	2	3	4	5

Appendix B: Interview tracks used for the odd and even groups of participants

Track 1 – Session 1

Thanks for volunteering for our study. This is the first session and it will take about forty minutes.

I'm going to ask you to do several things in English and then you'll switch to Korean with someone else. We're studying vocabulary and language and so the tasks include vocabulary tasks. All your responses will be audiotaped. Do you have any questions?

The first task is to name all of the items you can think of in a certain category. You will have one minute for each one. Let's go through an example first.

Name all of the colors you can think of. You will have one minute. Are you ready*? (Wait for response.)* Start now.

Do you have any questions? Now let's begin.

Task	**Date**	**Examiner**
Tell me all of the clothes you can think of. You have one minute. Are you ready? Start now.		
Tell me all of the animals you would find at the zoo. You have one minute. Are you ready? Start now.		
Tell me all the foods you know. You have one minute. Are you ready? Start now.		
Tell me all of the animals you could find at a farm. You have one minute. Are you ready? Start now.		

Ok, now we're done with the English portion of this session. Do you need a break? *Take break if needed.*

We are now going to begin the Korean portion of this session. The first task is to name all of the items you can think of in a certain category. You will have one minute. Let's begin.

지금부터는 한국어 부분을 시작하겠습니다. 이번 과제도 귀하가 생각할 수 있는 특정 범주의 모든 대상들의 이름을 일분 동안 나열하는 것입니다. 시작하겠습니다.

Task	Date	Examiner
Tell me all the foods you can eat for lunch. You have one minute. Are you ready? Start now. 귀하가 생각할 수 있는 점심에 먹을 수 있는 모든 음식들의 이름을 일분 동안 말해 주십시오. 준비되셨습니까? 시작하십시오.		
Tell me all the clothes you wear when it is hot outside. You have one minute. Are you ready? Start now. 귀하가 생각할 수 있는 더울 때 입을 수 있는 모든 옷들의 이름을 일분 동안 말해 주십시오. 준비되셨습니까? 시작하십시오.		
Tell me all the animals you can think of. You have one minute. Are you ready? Start now. 귀하가 생각할 수 있는 모든 동물들의 이름을 일분 동안 말해 주십시오. 준비되셨습니까? 시작하십시오.		
Tell me all the clothes you wear when it is cold outside. You have one minute. Are you ready? Start now. 귀하가 생각할 수 있는 추울 때 입을 수 있는 모든 옷들의 이름을 일분 동안 말해 주십시오. 준비되셨습니까? 시작하십시오.		
Tell me all the foods you can eat at a birthday party. You have one minute. Are you ready? 귀하가 생각할 수 있는 생일파티에서 먹을 수 있는 모든 음식들의 이름을 일분 동안 말해 주십시오. 준비되셨습니까? 시작하십시오.		

Those are all the tasks for today. Thanks again for your participation.

Pay them.

Track 1 – Session 2

Thanks for volunteering for the study. This session should take no more than twenty minutes. We'll do many of the same things as before.

본 연구에 참여 해 주셔서 감사합니다. 이번 세션은 약 20 분이 소요될 것입니다. 이번 세션에서는 첫 번째 세션과 동일한 여러 가지 과제들을 수행할 것입니다.

The first task is to name all of the items you can think of in a certain category. You will have one minute for each task. Let's begin.

첫 번째 과제는 귀하가 생각할 수 있는 특정 범주의 모든 대상들의 이름을 일분 동안 나열하는 것입니다.

Task	**Date**	**Examiner**
Tell me all of the animals you would find at the zoo. You have one minute. Are you ready? Start now. 귀하가 생각할 수 있는 동물원에서 찾을 수 있는 모든 동물들의 이름을 일분 동안 말해 주십시오. 준비되셨습니까? 시작하십시오.		
Tell me all the foods you know. You have one minute. Are you ready? Start now. 귀하가 알고 있는 모든 음식들의 이름을 일분 동안 말해 주십시오. 준비되셨습니까? 시작하십시오.		
Tell me all of the clothes you can think of. You have one minute. Are you ready? Start now. 귀하가 생각할 수 있는 모든 옷들의 이름을 일분 동안 말해 주십시오. 준비되셨습니까? 시작하십시오.		
Tell me all of the animals you could find at a farm. You have one minute.		

Are you ready? Start now. 귀하가 생각할 수 있는 농장에서 찾을 수 있는 모든 동물들의 이름을 일분 동안 말해 주십시오. 준비되셨습니까? 시작하십시오.		

We are now going to begin the English portion of this session. The task is to name all of the items you can think of in a certain category. You will have one minute. Let's begin.

Task	**Date**	**Examiner**
Tell me all the clothes you wear when it is cold outside. You have one minute. Are you ready? Start now.		
Tell me all the foods you can eat for lunch. You have one minute. Are you ready? Start now.		
Tell me all the clothes you wear when it is hot outside. You have one minute. Are you ready? Start now.		
Tell me all the foods you can eat at a birthday party. You have one minute. Are you ready? Start now.		
Tell me all the animals you can think of. You have one minute. Are you ready? Start now.		

Those are all the tasks for today. Thanks again for your participation.

Pay them.

Track 2 – Session 1

Thanks for volunteering for our study. This is the first session and it will take about an hour and a half.

본 연구에 참여 해 주셔서 감사합니다. 이번 세션은 첫 번째 세션이며, 약 40 분이 소요될 것입니다.

I'm going to ask you to do several things in Korean and then you'll switch to English with someone else. We're studying vocabulary and language and so the tasks include vocabulary tasks and storytelling. All your responses will be audiotaped. Do you have any questions?

귀하께서는 첫 번째 세션에서 한국어로 몇 가지 질문에 대답할 것이며, 그 다음 영어로 전환하여 질문에 대답 할 것이십니다. 본 연구는 특정 언어에서의 어휘 능력을 조사하고 있으며, 따라서 질문 과제들은 어휘 항목들로 구성되어 있습니다. 귀하의 모든 대답들은 녹음될 것입니다. 질문 있으십니까?

The first task is to name all of the items you can think of in a certain category. You will have one minute for each one. Let's go through an example first.

첫 과제는 귀하가 생각할 수 있는 특정 범주의 모든 대상들의 이름을 일분 동안 나열하는 것입니다. 먼저 연습을 해 보겠습니다.

Name all of the colors you can think of. You have one minute. Are you ready? *(Wait for response.)* Start now.

귀하가 알고 있는 모든 색깔의 이름을 일분 동안 말해 주십시오. 준비되셨습니까? 시작하십시오.

Do you have any questions? Now let's begin.

질문 있으십니까? 시작하겠습니다.

Task	Date	Examiner
Tell me all of the clothes you can think of. You have one minute. Are you ready? Start now. 귀하가 생각할 수 있는 모든 옷들의 이름을 일분 동안 말해 주십시오. 준비되셨습니까? 시작하십시오.		
Tell me all of the animals you would find at the zoo. You have one minute. Are you ready? Start now.		

귀하가 생각할 수 있는 동물원에서 찾을 수 있는 모든 동물들의 이름을 일분 동안 말해 주십시오. 준비되셨습니까? 시작하십시오.		
Tell me all the foods you know. You have one minute. Are you ready? Start now. 귀하가 알고 있는 모든 음식들의 이름을 일분 동안 말해 주십시오. 준비되셨습니까? 시작하십시오.		
Tell me all of the animals you could find at a farm. You have one minute. Are you ready? Start now. 귀하가 생각할 수 있는 농장에서 찾을 수 있는 모든 동물들의 이름을 일분 동안 말해 주십시오. 준비되셨습니까? 시작하십시오.		

Ok, now we're done with the Korean portion of this session. Do you need a break? *Take a break if needed.*

지금까지 이번 세션의 한국어 부분은 모두 끝났습니다. 잠시 휴식이 필요하십니까?

We are now going to begin the English portion of this session. The first task is to name all of the items you can think of in a certain category. You will have one minute. Let's begin.

Task	**Date**	**Examiner**
Tell me all the foods you can eat for lunch. You have one minute. Are you ready? Start now.		
Tell me all the clothes you wear when it is hot outside. You have one minute. Are you ready? Start now.		
Tell me all the animals you can think of. You have one minute. Are you ready? Start now.		
Tell me all the clothes you wear when it is cold outside. You have one minute. Are you ready?		

Start now.		
Tell me all the foods you can eat at a birthday party. You have one minute. Are you ready? Start now.		

Those are all the tasks for today. Thanks again for your participation.

Pay them.

Track 2 – Session 2

Thanks for volunteering for the study. This session should take no more than half an hour. We'll do many of the same things as before.

The first task is to name all of the items you can think of in a certain category. You will have one minute for each task. Let's begin.

Task	Date	Examiner
Tell me all of the animals you would find at the zoo. You have one minute. Are you ready? Start now.		
Tell me all the foods you know. You have one minute. Are you ready? Start now.		
Tell me all of the clothes you can think of. You have one minute. Are you ready? Start now.		
Tell me all of the animals you could find at a farm. You have one minute. Are you ready? Start now.		

This is the end of the English portion of this session.

We are now going to begin the Korean portion of this session. The first task is to name all of the items you can think of in a certain category. You will have one minute. Let's begin.

지금부터는 이번 세션의 한국어 부분을 시작하겠습니다. 이번 과제도 귀하가 생각할 수 있는 특정 범주의 모든 대상들의 이름을 일분 동안 나열하는 것입니다. 시작하겠습니다.

Task	Date	Examiner
Tell me all the clothes you wear when it is cold outside. You have one minute. Are you ready? Start now. 귀하가 생각할 수 있는 추울 때 입을 수 있는 모든 옷들의 이름을 일분 동안 말해 주십시오. 준비되셨습니까? 시작하십시오.		

Tell me all the foods you can eat for lunch. You have one minute. Are you ready? Start now. 귀하가 생각할 수 있는 점심에 먹을 수 있는 모든 음식들의 이름을 일분 동안 말해 주십시오. 준비되셨습니까? 시작하십시오.		
Tell me all the clothes you wear when it is hot outside. You have one minute. Are you ready? Start now. 귀하가 생각할 수 있는 더울 때 입을 수 있는 모든 옷들의 이름을 일분 동안 말해 주십시오. 준비되셨습니까? 시작하십시오.		
Tell me all the foods you can eat at a birthday party. You have one minute. Are you ready? Start now. 귀하가 생각할 수 있는 생일파티에서 먹을 수 있는 모든 음식들의 이름을 일분 동안 말해 주십시오. 준비되셨습니까? 시작하십시오.		
Tell me all the animals you can think of. You have one minute. Are you ready? Start now. 귀하가 생각할 수 있는 모든 동물들의 이름을 일분 동안 말해 주십시오. 준비되셨습니까? 시작하십시오.		

Those are all the tasks for today. Thanks again for your participation.

Pay them.

오늘세션이 모두 끝났습니다. 다시 한번 저희 연구에 참여해주셔서 감사합니다.

Appendix C : Translated ALPS

Listening – 1. Recognizing Own Name. Score

듣기 - 1. 이름 기억하기. 점수

Stimulus

자극제

When a patient is looking away from you, call his NAME once or twice. Do not touch him or give him other cues.

환자가 다른 곳을 보고 있을 때 이름을 한번이나 두 번 부릅니다. 환자를 만지지 마시고 다른 힌트/큐를 주지 마세요.

Correct

알맞은 행동.

Patient looks toward you or answers. 1

환자가 당신을 보거나 대답 합니다.

Errors

틀린 행동.

Fails to show recognition that he is being called. Looks in wrong direction to find you.

불렸다는 사실을 모릅니다. 딴 곳을 보고 당신을 찾습니다.

Prompt

프롬트

Repeat the stimulus a third time.

한번 더 이름을 부르세요.

Correct following prompt ½

프롬트 후에 맞는 행동

Error 0

틀린 행동

Note; Obviously, no scoring should be attempted while the patient is asleep. However, a comatose patient or one who does not respond to your calling his name should be scored 0. If the patient is inattentive, secure his attention before presenting item 2.

참고: 환자가 자고 있을 때는 점수를 매기지 마십시오. 하지만, 혼수 상태에 있는 환자가 이름에 대답을 하지 않는다면 0 점을 주십시오. 환자의 정신에 딴 곳에 있으면 환자를 주목하신 후에 아이템 2 로 가시길 바랍니다.

Listening – 2. Following simple imprecise instruction.

듣기 -2. 부정확한 지시 따르기.

Stimulus
자극제

When you have patient's attention ask, "Can you move your hands alright? Show me." Do not look at his hands or your own in a manner that will cue him.

환자의 주목을 받은 후, "손을 움직일 수 있으십니까? 보여주세요." 라고 물으십쇼. 환자의 손을 보지 마시고 힌트를 줄 수 있는 행동을 하지 마십쇼.

Correct
맞는 행동

Shows comprehension by demonstrating ability or limitations with one or both hands. 1
이해와 시범이 가능하다는 증거로 한 손 아니면 두 손을 보여줍니다.

Errors
틀린 행동

Fails to show by voice or gesture that he understood question.
말이나 행동으로 질문을 이해했다는 것을 보여주지 않습니다.

Prompt
프롬트

Repeat the stimulus
자극제를 다시 한번 반복하십쇼.

Correct following prompt ½
프롬트 후에 맞는 행동

Error 0
틀린 행동

Listening – 3. Following simple more precise instruction. Score

듣기 – 3. 간단한 지시 따르기.

Stimulus

자극제

Tell the patient “good now listen. Let me see you … put your hand on your head.” do not look towards his hand or his head.

환자에게 지시하십시오: “잘 들으세요. 머리에 손을 올려 주십시오.” 환자의 머리나 손을 .

Correct

맞는 행동.

Patient places hand(s) on top, back, front of or side of his head.

환자가 손을 머리에 갇다 댑니다 (앞, 뒤, 옆도 괜찮습니다).

Errors

틀린 행동.

Any failure to show comprehension, by not following instruction, or by doing something extraneous with hands.

지시를 따르지 않거나 손으로 딴짓을 합니다.

Prompt

프롬트

Repeat the stimulus.

자극제를 한번 더 반복하십쇼.

Correct following prompt ½

프롬트 후에 맞는 행동

Error 0

틀린 행동

Note : some patients will attempt to follow the instruction with the paralyzed hand. If this happens, tell the patient to use his good hand.

참고: 가끔식 환자들은 마비된 손으로 지시를 따르려 합니다. 이럴 경우에는 환자한테 마비되지 않은 손을 쓰라고 지시하십시오.

Listening – 4. Pointing to particular single object.

듣기 – 4. 물건 하나 가리키기.

Stimulus
자극제

Tell the patient “Now I want you to point to some things. I’ll name something and you point to it…point to my coat (or dress, or shirt.”
“물건을 가리켜 주십시오. 제가 물건 하나를 지목하면 가르쳐 주십시오. 제 코트(드레스, 셔츠)를 가리키십시오.”라고 환자에게 말하십시오.

Correct
맞는 행동

Patient points to the object named.
환자가 지목한 물건을 가리킵니다.

Errors
틀린 행동

Failure to follow instructions. No attempt to point; points to own coat, etc.
지시를 따르지 않습니다. 가리키려고 하지 안습니다. 환자가 자기의 코트, 등을 가리킵니다.

Prompt
프롬트

Repeat the stimulus.
자극제를 한번 더 반복하십쇼.

Correct following prompt ½
프롬트 후에 맞는 행동

Error 0
틀린 행동

Note: if you are uncertain whether the patient is pointing correctly, ask him to touch the object named.
참고: 만약 환자가 무엇을 기리키는지 잘 모르겠으면 물건을 손을 대라고 지시 하십시오.

Listening – 5. Pointing to Two Objects in Series.

듣기 – 5. 물건 두 개를 순서대로 가리키기.

Stimulus

자극제

Tell the patient “Now I will name more than one thing. Listen to all of it before you point. Ready? Point to your leg and the chair (or table).”

환자에게 말하십시오: “이제 제가 물건 두 개를 말하겠습니다. 가리키기 전에 지시를 끝날 때까지 들어주세요. 준비되셨습니까? 당신의 다리, 다음 의자(아니면 책상)을 가리키세요”

Correct

맞는 행동

Patient points to both objects named, though not necessarily in the order given.

환자가 물건 두 개의 이름을 말합니다. 순서는 상관없습니다.

Errors

틀린 행동

Fails to follow instructions: points to examiner’s leg, omits one object, points to additional object, etc.

지시를 따르지 못합니다. 물건 하나를 까먹습니다. 다른 물건을 가리킵니다, 등.

Prompt

Repeat the stimulus.

자극제를 한번 더 반복하십쇼.

Correct following prompt ½

프롬트 후에 맞는 행동

Error 0

틀린 행동

Note: some patients will repeat the stimulus instruction. However, score pointing responses only, and ignore verbal response.

참고: 가끔 식 환자가 지시를 말로 반복할 수 있습니다. 이럴 때는 행동만 점수를 주고, 말은 무시하십시오.

If the patient begins to point to objects before you have named them both, stop and explain again that he must wait until you finish.

만약 환자가 말이 끝나기 전에 물건을 가리키면, 멈추고 지시가 끝날 때까지 기다리라고 지시하십시오.

If you are uncertain whether his pointing is correct you may ask him to show you again.

만약 환자가 무엇을 가리키는지 모르겠으면 반복하라고 지도 해도 괜찮습니다.

Listening – 6. Pointing to three objects in series.

듣기 -6. 순서대로 물건 가리키기.

Stimulus
자극제

Again, remind the patient to wait until your instructions are complete. When you have his attention, tell him, “Now, point to the wall...the floor...and your arm.’
화낮에게 지시가 끝날 때까지 기다리라고 상기십시오. 환자의 주목을 받으면 이렇게 말하십시오
“벽.. 바닥……당신의 팔을 가리키십시오.”

correct
맞는 행동

Patient points to all three objects, though not necessarily in the order given.
환자가 물건 3 개를 가리킵니다. 순서는 상관없습니다.

Errors
틀린 행동

Fails to follow instructions: does not point to all three objects.
지시를 따르지 않습니다. 물건들을 가리키지 않습니다.

Prompt
프롬트

Repeat the stimulus.
자극제를 한번 더 반복하십쇼.

Correct following prompt ½
프롬트 후에 맞는 행동

Error 0
틀린 행동

Note: some patients will repeat the stimulus instruction. However, score pointing response only, and ignore verbal response.
참고: 환자가 지시를 말로 반복할 수 있습니다. 하지만 환자가 가리킬 때만 점수를 매기시고 말로 대답을 하면 무시하십시오.

Listening – 7 pointing to three objects in specified order.

timulus
자극제

Remind the patient to wait for the complete instruction. Say, “Ready? Show me a table and the ceiling in the room…but first I want you to point to your foot.”

환자한테 질문이 끝날 때까지 기다리라고 상기시켜주십시오. 환자에게 말하십시오:
"준비되셨습니까? 책상과 천장을 가리키세요……하지만 먼저 당신의 발을 가리키세요"

Correct
맞는 행동

Patient points to all three objects, beginning with his foot.
환자가 발을 먼저 가리키고 나머지 물건들을 가리킵니다.

Error
틀린 행동

Any failure to follow instructions precisely.
지시를 따르지 않았습니다.

Prompt
프롬트

Repeat the stimulus.
자극제를 한번 더 반복하십쇼.

Correct following prompt ½
프롬트 후에 맞는 행동

Error 0
틀린 행동

Note: some patients will repeat the stimulus instruction. However, score pointing response only, and ignore verbal response.
참고: 환자가 지시를 말로 반복할 수 있습니다. 하지만 환자가 가리킬 때만 점수를 매기시고 말로 대답을 하면 무시하십시오.

Listening – 8. Following brief three-stage instruction.

듣기 – 8. 간단한 3 단계 지시 따르기.

Stimulus

자극제

Place the following objects so the patient can see and move them easily. From the patient's left, place money (penny, nickel, dime, quarter, piece of paper (letter size), pencil and keys. Tell the patient, "listen carefully, because this may be difficult. Ready? Put the dime next to the keys and put the quarter with it then cover them all with the paper."

다음 물건들을 환자 앞에 놓으십시오. 환자의 왼쪽부터 동전(미국 돈이 없으면 10 원, 50 원, 100 원, 500 원을 놓으십시오), 종이 한 장 (A4 용지), 연필, 그리고 열쇠를 놓으십시오. 다음 환자에게 말하십시오, "다음 지시는 어려울 수 있으니까 잘 들어주세요. 준비되셨습니까? 열쇠 옆에 50 원을 놓으시고, 500 원도 같이 갖다 놓은 다음 종이로 덮으세요."

Correct

맞는 행동

Patient follows instructions. (He may pick up dime and quarter together. Or self-correct an error).

환자가 지시를 따릅니다. (50 원과 500 원을 같이 들어도 됩니다. 자기 수정을 해도 됩니다.)

Errors

틀린 행동

Fails to do as instructed: puts all the money with there keys, covers unmade objects with the paper, omits or changes any part of the instruction.

지시를 따르지 않습니다. 열쇠를 모든 동전이랑 같이 두거나, 종이를 따른 데 두기, 아니면 지시를 생략하거나 바꿉니다.

Prompt

프롬트

Repeat the stimulus.

자극제를 한번 더 반복하십쇼.

Correct following prompt ½

프롬트 후에 맞는 행동

Error 0

틀린 행동

Listening – 9. Following a four-stage instruction.

듣기-9. 4 단계 지시 따르기

Stimulus

자극제

Return the objects to their original positions. Continue to encourage the patient and remind him to wait for the complete instructions. Tell him, “count out 35 cents and give it to me then put the nickel under the paper and stack the penny on top.”

물건들을 제자리에 갖다 놓으세요. 환자를 격려시켜주고 지시가 끝날 때까지 기다려 라고 한번 더 상기 시키십시오. 환자에게 말하십시오: ‘저한테 600 원을 주시고난뒤 50 원을 종이 밑에 두고 10 원을 위에 두세요.”

Correct

맞는 행동

Patient follows instructions exactly.

환자가 지시를 그대로 따릅니다.

Errors

틀린 행동

Fails to follow instructions: counts out more or less than 35 cents, put penny under paper, etc.

지시를 따르지 않습니다: 600 원이 아니거나 10 원을 종이 밑에 둡니다, 등등.

Prompt

프롬트

Repeat the stimulus.

자극제를 한번 더 반복하십쇼.

Correct following prompt ½

프롬트 후에 맞는 행동

Error 0

틀린 행동

Listening – 10. Following confusing series of instructions.

듣기 – 10. 햇갈리는 지시 따르기.

Stimulus

자극제

Return the objects to their original positions. Remind the patient again to listen to the complete instruction before responding, then say, “knock on the table two times then three times and pick up the keys and the pencil and give me the one you write with.’

물건들을 제자리에 두십시오. 환자한테 지시가 끝날 때까지 기다려 라고 한번 더 상기시켜 주십시오. 환자한테 말하십시오: “책상을 두 번 두드리신 다음 세 번 더 두드리시고 열쇠와 연필을 집으시고 글을 적을 때 쓸수 있는걸 저한테 주십시오.”

Correct

맞는 행동

Patient follows instructions. (Knocking must be a pattern of two, then three.)

환자가 지시를 따릅니다. (책상을 두 번, 다음 3 번 두드려야 합니다.)

Errors

틀린 행동

Failure to follow instructions: knocking not in pattern of two then three, hand keys and pencil to examiner, etc.

지시를 따르지 않습니다: 책상을 두 번 그 다음 세 번 두드리지 않거나, 열쇠랑 연필을 시험관한테 줍니다, 등.

Prompt

프롬트

Repeat the stimulus.

자극제를 한번 더 반복하십쇼.

Correct following prompt ½

프롬트 후에 맞는 행동

Error 0

틀린 행동

Talking – 1. Imitating vowels.
말하기 -1. 모음 따라 하기.

Stimulus
자극제

Explain to the patient he is to try to imitate some sounds. Be sure he is watching your mouth. And tell him, "Make some sounds for me. Say ahh. Like this, ahh. You try it." After he has attempt the sound whether successful or not, tell him "now try ooh. Round your lips and say ooh." After he as attempted this, successful or not, tell him "now say ee. Smile and say ee."
환자한테 따라 말하라고 하십시오. 환자가 당신의 입을 보고 있는 것을 확인하십시오. 그 다음 환자한테 말하십시오 " 따라 말하세요. '아~' 라고 말하세요. 이렇게요, '아~'. 해보세요." 환자가 시도한 다음 (맞거나 틀리거나 상관없습니다) 이렇게 말하세요 "자 이제 '오~' 라고 하세요. 입을 오므리고 '오~' 라고 하세요." 환자가 이걸 시도하고 나면 이렇게 말하세요 (맞거나 틀리거나 상관없습니다), "이제 '이~' 라고 해보세요. '이~"".

Correct
맞는 행동

Patient produces at least of two of the vowels.
환자가 소리를 2 개 이상 낼 수 있습니다.

Errors.
틀린 행동.

Produces fewer than two of the given vowels; produces unstable vowels, as /o-a/ or /i-u/; produces vowels only in combination with consonants.
소리를 하나만 낼 수 있습니다, 불안정한 모음을 냅니다 /오-아/ 아니면 /이-우/; 자음이 있어야만 모음을 낼 수 있습니다.

Prompt
프롬트

Repeat the stimulus.
자극제를 한번 더 반복하십쇼.

Correct following prompt. ½
프롬트 후에 제대로 알맞은 행동을 합니다.

Error. 0
틀린 행동

Note: self-corrections are counted correct
참고: 자기 수정은 맞는 행동에 속합니다.

Talking – 3. Naming Numbers.
말하기 -3. 숫자 말하기.

Stimulus
자극제

Show three fingers or hold three of the patient's fingers. Ask "how many fingers am I holding up?" following his response, repeat, using two fingers.
시험관의 손가락 세 개 아니면 환자의 손가락 세 개를 환자에게 보여주세요. 환자에게 물으십시오; "제가 지금 손가락 몇 개를 들고 있습니까?" 환자의 대답 후 손가락 두 개로 지시를 한번 더 반복하십시오.

Correct
맞는 행동

Patient names both three and two; may count up to correct number or self-correct an error.
환자가 3 개, 그 다음 2 개라고 대답합니다. 숫자를 헤아려서 맞춰도 되고 자기 수정도 괜찮습니다.

Errors
틀린 행동

Fails to name or count up to both numbers correctly.
숫자를 헤아리지 못하거나 해답을 주지 못합니다.

Prompt
프롬트

Show fingers again and say "let's count them. One, two, ___." Leave pause for patient to complete; then "one, ___."
손가락들을 한번 더 보여주고 "같이 세아려 봅시다. 하나, 둘, ___" 환자가 대답할 수 있도록 잠시 침묵을 합니다. 그 다음 "하나, ____" 라고 말합니다.

Correct following prompt. ½
프롬트 후에 제대로 알맞은 행동을 합니다.

Error. 0
틀린 행동

Talking -4 Naming objects
말하기 – 4. 물건 이름 말하기.

Stimulus (for items 4 and 5)
자극제 (아이템 4 &5)

"I want you to look at some things now and tell me what they are." Show each of the following and ask, "What do you call this?"
"물건 몇 개를 보여드리겠습니다. 이름이 뭔지 말해주세요." 물건을 각각 보여주고 환자에게 물으십시오: "이건 뭐라고 부르죠?"

a. Money (coins) 동전
b. Paper (1 sheet, letter size) 종이 (a4 용지)
c. Watch (on examiner's arm, taken from pocket or pocket book) (손목시계)
d. Keys (on ring or holder) 열쇠
e. Coat (or shirt, or dress) 코트 (셔츠, 드레스)
f. Light (빛)

Correct
맞는 행동

Patient names three of the six with reasonably good articulation. Common alternate names, such as coins or change for money, are acceptable. Self-corrections are counted correct. (1)
환자가 3 가지 물건들의 이름을 좋은 발음으로 명명합니다. 흔한 따른 단어를 쓴다 해도 괜찮습니다 (치마 아니면 드레스). 자기 수정도 괜찮습니다.

Errors
틀린 행동

Fails to name at least three of the objects with intelligible articulation.

Prompt
프롬트

If patient names fewer than five objects correctly, show again those not named and say as needed.
환자가 5 개 이하로 맞추면 물건들을 다시 보여주고 다음을 말하십시오;

You spend your ____.
당신은 ___ 을 씁니다.
Give me a sheet of ____.
____ 한 장 주세요.
There is a second hand on my _____.
제 손이 ___에 올려져 있습니다.
Open the lock with a ____.
___로 문을 엽니다.

I can button up my ____.

나는 나의 ____ 잠글 수 있습니다.

Turn on the _____.

____를 켜주세요.

Correct following prompt. 프롬트 후에 제대로 알맞은 행동을 합니다.	½
Error. 틀린 행동	0

Example : if a patient names only two of the six objects correctly without prompting, then offer prompts on the remaining four items. If he the names one or more of the remaining objects correctly he has earned ½ point for item 4.

참고: 만약 환자가 2 개를 맞췄지만 4 개를 틀렸다면 나머지 4 개만 프롬트를 주세요. 그이 4 개 중에 하나를 맞추었다면 .5 점을 줍니다.

Talking - 5 Naming objects
말하기 – 5: 물건 이름 맞추기.

Stimulus (stimulus for item 4 is simultaneously stimulus for item 5).
자극제 (4 번 자극제랑 동일합니다)

Correct
맞는 행동

Patient names five of the six with reasonably good articulation.
환자가 5/6 개 물건의 이름을 좋은 발음으로 맞출 수 있습니다.

Error
틀린 행동

Fails to name at least five of the six with intelligible articulation.
환자가 <5 개 물건의 이름을 좋은 발음과 함께 맞출 수 있습니다.

Prompt
프롬트

See prompt for item 4.
아이템 4 번의 프롬트를 보십시오.

Correct following prompt. ½
프롬트 후에 제대로 알맞은 행동을 합니다.

Error. 0
틀린 행동

Example: suppose a patient names money, watch, and coat without prompting. If he names paper and keys following the prompt he will have earned 1 point for item 4 and .5 point for item 5.
참고: 만약에 환자가 지시 전에 물건의 이름을 말하면은 물건당 .5 포인트를 주세요.

Talking – 6. Speaking in phrases.
말하기 – 6. 구절로 말하기.

Stimulus (for items 6 and 7)
자극제 (아이템 6 이랑 7)

Using previous six objects, show each and ask “what do you do with __?” and name each object as you show it.
저번에 쓴 여섯 가지 물건을 쓰십시오. 각각 물건을 환자에게 보여주면서 “___으로는 뭘 할 수 있죠?” 라고 물으십시오. 빈칸에는 각각 물건의 이름을 넣으십시오.

a. Money
   돈
b. Paper
   종이
c. Watch
   손목시계
d. Keys
   열쇠
e. Coat
   코트
f. Light
   불빛

Correct
맞는 행동

Patient produces two normally constructed verb phrases or sentences, which are specific answers to the questions, with reasonably clear articulation, e.g., spend it or buy things.
환자의 대답이 문장 2 개 이상이고 문법이 맞고 질문에 해당합니다. 예: 돈을 씁니다.

Errors
틀린 행동

Nonspecific answers, such as ‘look at it’ or ‘hold it’. Which could apply to almost small object. Grammatically incomplete response, such as “spend” or “write.” Associational responses, such as, “on your arm” or “in the ignition.”
구체적인 대답이 아닙니다. 예를 들면 ‘볼 수 있습니다. 들고 있을 수 있습니다.’ 같은 건 다른 물건에게 해당할 수 있습니다. 문장이 문법에 맞지 않습니다 예: “쓰다. 적다.” 아니면 연상되는 문장, 예를 들면 “팔에 씁니다.” “시동할 수 있습니다.” 같은 것도 틀렸다고 합니다.

Prompt
프롬트

If patient produces fewer than four correct phrases, show again the objects not correctly responded to and give phrases to imitate:

환자의 맞는 문장이 4 개 이하라면, 틀린 물건들을 보여주며 다음과 같이 말합니다:

a. Money. Spend it. Say, spend it.
   돈. 쓸 수 있습니다. 쓸 수 있습니다 라고 말해주세요.
b. Paper. Write on it.
   종이. 적을 수 있습니다.
c. Watch. Tell time.
   손목시계. 시간을 알 수 있습니다.
d. Keys. Lock a door.
   열쇠. 문을 잠글 수 있습니다.
e. Coat. Wear it.
   코트. 입을 수 있습니다.
f. Light. Turn it on.
   빛. 켤 수 있습니다.

Correct following prompt. ½

프롬트 후에 제대로 알맞은 행동을 합니다.

Error. 0

틀린 행동

Talking – 7 speaking in phrases
말하기 – 7. 구절로 말하기.

Stimulus
자극제

Stimulus for item 7 is simultaneously stimulus for item 6.
아이템 6 의 자극제랑 동일합니다.

Correct
맞는 행동

Patient produces four phrases or sentences: normally constructed, intelligible, specific answers to the questions.
환자가 4 구절을 말할 수 있습니다: 알아들을 수 있고, 문법이 맞고, 질문에 해당하는 대답을 합니다.

Errors
틀린 행동

Fails to produce at least four correct phrases or sentences.
맞는 구절을 4 개이상 제공하지 않았습니다.

Prompt
프롬트

See prompt for item 6
아이템 6 의 프롬트를 보세요.

Correct following prompt. ½
프롬트 후에 제대로 알맞은 행동을 합니다.

Error. 0
틀린 행동

Talking – 8. Speaking in simple sentences.
말하기 -8. 간단한 문장 말하기.

Stimulus
자극제

Say to the patient: “I am going to do some things now. Watch, and when I finish, tell me what you see me do. Try to use complete sentences – as much as you can, complete sentences.” Following each of the actions below, ask, “What did I do?”
환자에게 말합니다: “제가 몇 가지 행동을 할겁니다. 잘 보시고, 제가 끝내면, 제가 뭘 했는지 말씀해주세요. 완벽한 문장으로 대답해주시기 바랍니다.” 그 다음 밑에 적힌 행동을 하시고 각각이 끝날 때 마다 이렇게 물으세요; “제가 뭘 했지요?”

a. Place the money under the paper.
   돈을 종이 위에 두세요.
b. Change your watch to the other arm (or pocket).
   손목시계를 딴 손목에 채우세요.
c. Put the keys in your pocket (or purse or box.)
   열쇠를 주머니에 (상자나 지갑)에 넣으세요.
d. Place the paper on the table.
   종이를 책상 위에 올리세요.

Correct
맞는 행동

Patient produces at least three normally constructed, complete intelligible descriptions, such as “put the money under the paper” or covered the change with the paper.” The subject “you” may be omitted. Minor articulatory errors may be ignored.
환자가 문법이 맞고 알아들을 수 있는 문장들을 적어도 3 개 이상 말할 수 있습니다. 예를 들면 “돈을 종이 위에 올렸습니다” 아니면 “돈을 종이로 덮었습니다.” “당신이”는 대답에 있어도 없어도 됩니다. 간단한 발음 실수는 무시하십시오.

Errors
틀린 행동

Grammatically incomplete responses, such as, “money under paper” incomplete descriptions, lacking object names, such as “you hid it.” Or “put it under the paper.” Unintelligible attempts.
문법이 틀린 완벽하지 못한 문장들. 예를 들면 “종이 밑에 돈” 같은 문장은 틀린 겁니다. 물건의 이름을 포함해야 합니다. 예를 들면 “숨겼습니다.” “그걸 종이 밑에 넣었습니다.” 같은 것도 틀린 겁니다. 못 알아들을 수 있는 문장도 틀린 문장들입니다.

Prompt
프롬트

Correct following prompt. ½
프롬트 후에 제대로 알맞은 행동을 합니다.

Error. 0

틀린 행동

Talking -9: Speaking in Compound sentences
말하기-9: 화합문장으로 말하기

Stimulus
자극제

"I'm going to do two things together. Wait until I finish and then describe all that I do." Demonstrate each of the following, slowly. Each pause…is for a full second. After each compound action ask, "What did I do?"
"제가 지금부터 두 가지 행동을 하겠습니다. 제가 다하기 전까지 기다려 주세요." 다음 행동을 천천히 보여주십시오. "…"가 보일 때는 1 초동안 가만히 있으십시오. A,b,c,d 행동을 각각 한 다음 "제가 뭘 했나요?" 라고 무르십시오.

a. Pick up and count coins a loud…put coins in pocket (or purse or box).
   동전들을 집고 말로 동전을 셉니다…동전들을 주머니에 넣으세요 (지갑이나 상자도 괜찮습니다)
b. Tear up some paper …throw it away
   종이를 찢으세요…그 다음 버리십시오.
c. Rub your nose …pat your head.
   코를 비비세요…머리를 만지십시오.
d. Knock on table twice…snap your finger
   책상을 두 번 두드리십시오…손가락으로 닥 소리를 네세요.

Correct
맞는 행동

Patient produces at least two normally constructed, complete, intelligible descriptions, such as, "counted the money and put it in your pocket." The initial "you" may be omitted. Minor articulatory errors may be ignored.
환자가 위에 지시 중에 2 개 이상을 알맞고, 맞고, 알아 들을 수 있는 문장으로 대답합니다. 예: 돈을 센 다음 주머니에 넣었습니다. 처음에 "당신"은 없어도 됩니다. 작은 오류들은 무시해도 됩니다.

Errors
틀린 행동.

Grammatically incomplete responses, such as, "counted money, put in pocket." Incomplete descriptions such as;"you put your money in your pocket" or descriptions lacking object names, such as "you counted it then you hid it." unintelligible or severely distorted attempts.
틀린 문법이 문장에 있습니다. 예를 들면 "돈 세기, 주머니 넣기" 같은 건 틀린 거라고 봅니다. 완벽한 문장이 아닙니다 "당신이 당신의 돈을 주머니에 넣었습니다." 아니면 물건 이름이 없는 문장이나 ("그걸 세가 주머니에 넣었습니다") 심각하기 왜곡된 문장은 틀린 거라고 봅니다.

Prompt:
프롬트

If patient produces fewer than two correct responses, demonstrate again those actions which resulted in errors, and say for the patient to repeat:
만약 환자의 맞는 문장이 2 개 이하라면, 맞추지 못한 행동들을 다시 한번 보여주며 다음 문장들을 말하세요

You counted the money and put it in your pocket.
당신은 돈을 세고 주머니에 넣었습니다.

You tore up the paper and threw it away.
당신은 종이를 찢은 다음 버렸습니다.

You rubbed your nose and patted your head.
당신은 코를 비빈다음 머리를 만졌습니다.

You knocked on the table and snapped your fingers.
당신은 책상을 두드린 다음 손으로 딱 소리를 냈습니다.

Correct following prompt ½
프롬트 후에 맞추었다면 ½ 점을 주십시오.

Error 0
틀린 대답

Note: after prompting, if patient produces a differently worded sentence, but one which is otherwise correct, count it correct.
참고: 프롬트 후에 대답이랑 뜻은 같지만 문장이 다르다면, 맞다고 치세요.

Talking 10 – Speaking in connected sentences
말하기 10 – 이어진 문장으로 말하기

Stimulus
자극제

Ask the patient one or more questions which are likely to elicit a lengthy response. You might say, “I want you to tell me now as much as you can about how you got sick. Tell me everything you can about what you can remember.” If he gives a brief response, ask him to tell more details, or ask question such as “what happened then?” You may ask other questions concerning the details of work he has done or about something important which as happened to him—anything which you feel may get a multiple sentence response from him.
환자에게 대답이 문장 하나 이상이 될 정도인 문제를 물어보십시오. 예를 들면 “어떻게 아프시게 되셨어요?”라고 물어보셔도 됩니다. 만약 대답이 짧다면 “그 다음 어떻게 됐나요?” 라고 물어보셔도 됩니다. 질문과 연관된 질문을 물어보십시오. 최대한 많은 문장으로 대답하게 하십시오.

Correct
맞는 문장

Patient produces a series of four connected sentences, normal in articulation, grammar, and word-choice. Make allowance for the patient’s own dialect and educational background.
환자가 문장을 네 개 이상 이어서 말할 수 있습니다. 어휘, 문법, 그리고 발음이 다 맞아야 합니다. 방언이랑 환자의 교육배경이랑 연관된 단어, 문법, 발음은 맞다고 칩니다.

Errors
틀린 대답

Misarticulations, wrong words, excess hesitancies or stuttering, inappropriate grammar.
틀린 발음, 단어, 오랜 망설임, 발 더듬임, 틀린 문법.

Prompt
프롬트

There is no prompt for this item.
이 질문은 프롬트가 없습니다.

Correct
맞는 대답

A series of two correct, connected sentences.	½
이어진 문장 2 개	½

Error
틀린 대답

Fewer than two good sentences	0
맞는 문장이 2 개 이하입니다	0

The reading scale
읽기 시험

The reading scale is the third scale presented. In general, it parallels the listening scale. In this scale, time to follow a printed instruction was chosen as being roughly equivalent to giving him a second chance to hear a spoken instruction. Because the items are timed, it is especially important in this scale that you do your best to explain how to respond before you present the stimulus material for the patient to read. If you show him a sentence to read, and are still explaining what you want him to do, there can be no way to effectively time his response.

ALPS 의 세 번째 시험은 읽기시험 입니다. 듣기시험이랑 비슷합니다. 이번 시험의 시간제한은 듣기 시험에서 두 번째 들었을 경우에 걸릴 시간 정도 입니다. 시간 제한 있는 시험이기 때문에 문제를 주기 전에 환자가 지시를 이해할 수 있도록 확실하게 설명해주십시오.

This scale is designed to test reading comprehension. A pencil and a piece of paper are needed for ITEM 1, the printed Reading Cards are used for Items 2-10. The patient is not required to read aloud. He is required to follow the written instruction or show he understands the direction. The examiner should not read the test item aloud or give any active help. Correct or self-corrected responses which are within the specified time limits are scored 1 point. Correct responses after prompting are scored ½ point.

이 시험은 읽고 이해하기 능력을 보는 시험입니다. 종이랑 연필은 읽기 1 에 필요하고, 읽기 2-읽기 10 은 미리 인쇄한 카드가 필요합니다. 환자는 카드를 소리를 내서 읽지 않아도 됩니다. 환자는 카드를 이해했다는 것만 보여주면 됩니다. 맞는 대답이나 스스로 고친 대답은 1 점이고, 프롬트 후에 맞는 대답은 ½ 점을 줍니다.

Acceptable prompts
괜찮은 프롬트

1. Allowing extra time to study the printed card
   환자에게 카드를 읽을 시간을 더 줍니다.
2. In the case of a quick incorrect response, suggesting that the patient re-examine the card carefully. A correct response following either prompt is scored ½ point.
   대답이 빨랐지만 틀렸다면 카드를 다시 한번 더 보라고 합니다. 이 다음 맞췄다면 ½ 점을 줍니다.

Unacceptable prompt:
안돼는 프롬트

1. Reading key words or the entire item aloud to patient.
   환자에게 대답의 단어를 읽어줍니다.

Reading -1. Recognizing own name.
읽기 -1. 자신의 이름 알아보기.

Stimulus
자극제

With patient watching, print his last name in block capitals. Ask “is this right, MR. _____?” if his response is vague, you may add, “is this somebody’s name? Whose name is it?”
환자가 보고 있을 때 그/그녀의 이름을 커다랗게 적습니다. 환자에게 “이게 맞습니까? ___님?” 이라고 물으십시오. 만약 환자의 대답이 애매하다면 “이건 이름인가요? 누구의 이름이죠?” 라고 물으십시오.

Correct
맞는 대답

Within 10 seconds patient shows by word or action that he recognizes his name.
환자가 10 초 안에 스스로의 이름을 알아봅니다.

Errors
틀린 행동

Failure to focus on name. Failure to show recognition within 10 seconds.
환자가 주목하지 않습니다. 10 초안에 스스로의 이름을 인식했다는 걸 보여주지 않습니다.

Prompt
프롬트

a. Allow more than 10 seconds or if response was quick but wrong
   만약에 대답이 빨랐지만 틀렸다면 10 초이상 이간을 주십시오.
b. Suggest patient look at word again
   환자한테 한번 더 보아 라고 지시합니다.

Correct following prompt ½
프롬트 후에 맞는 대답

Error 0
틀린 대답

Note; prompts throughout reading scale are similar to above prompt. Your judgment must determine how much “more time” to allow for accurate but slow reading.
참고: 읽기 시험들의 프롬트들은 다 위의 프롬트랑 비슷합니다. 환자가 맞는 대답을 찾을 때 가지 얼마나 시간이 더 필요한지는 당신의 판단에 맞기십시오.

Reading 2. Recognition of numerals.
읽기 -2. 숫자 인식하기

Stimulus
자극제

Show numerals: 3, then 5, then 2. With each one ask, “how many is this?” depending on which ever way he responds more easily say “tell me,” or say, “Show me with your fingers.”
숫자들을 보여주십시오 : 3, 그 다음 5, 그 다음 2. 각 숫자마다 “이 숫자가 뭐지요?” 라고 물어봅니다. 대답은 말이나 손가락으로 보여주어도 됩니다.

Correct
맞는 대답

Answers or holds up appropriate number of fingers for each numeral, within 1 seconds.
1 처알맞은 대답을 하거나 숫자에 맞는 만큼의 손가락을 듭니다.

Errors
틀린 대답

Identifies one or more numbers incorrectly. Does not respond within 10 seconds.
숫자 한개이상을 틀립니다. 10 초안에 대답하지 않습니다.

Prompt
프롬트

a. Allow more than 10 seconds, or if response was quick but wrong,
   만약에 대답이 빨랐지만 틀렸다면 10 초이상 이간을 주십시오.
b. Suggest patient look at numerals again
   숫자를 한번 더 보라고 지시하십시오.

Correct following prompt ½
프롬트 후에 맞췄습니다.

Error 0
틀린 대답

Note: a slow response to the first numeral and rapid responses to the other numerals indicates the patient did not understand at first what to do. This response is usually scored 1. Also, if a patient says the wrong number name, but shows the correct quantity on his fingers, count his response correct.
참고: 만약 환자가 첫 번째 숫자는 늦게 말했지만 다른 숫자들은 빨리 대답했다면, 환자가 처음에 지시를 못 알아들었다고 보십시오. 이런 경우에는 환자는 1 점을 받습니다. 만약 환자가 숫자를 말로는 틀렸지만 손가락으로 맞췄다면 맞는다고 치십시오.

Reading 3. Recognition of nouns
읽기 3. 명사 인식하기.

Stimulus
자극제

Explain, “Now I’m going to show you some words. These will name parts of your body. You don’t have to read them out loud. Read them to yourself if you like, but then SHOW me what they mean. “Show me this on you” as you show each of the nouns.

환자에게 설명하십시오 “이제 제가 몇 가지 명사들을 보여주겠습니다. 이 이름들은 당신의 몸 부분들에 대한 겁니다. 조용히 읽어도 돼지만 어딘지 저한테 보여주세요. 각 명사를 읽은 후에 환자에게 “이건 당신 몸의 어느 부분입니까?’ 라고 물으십시오.

a. Hand
   손
b. Foot
   발
c. Knee
   무릎
d. Shoulder
   어깨

Correct
맞는 대답

Patient shows at least 3 of the body parts, each within 10 seconds.
환자가 10 초안에 3 가지 이상의 몸 부분을 맞게 보여줍니다.

Errors
틀린 대답

Fails to indicate at least three items correctly. Reads words aloud without also indicating the body part. Does not respond within 10 seconds to each word.

3 개 이해를 맞춥니다. 10 초이상 걸립니다. 단어를 읽지만 보여주지 않습니다.

Prompt
프롬트

If response to first word is inadequate, demonstrate matching patient’s hand to the word”hand” before presenting other words. For additional errors:

만약 첫 번째 대답이 틀렸다면, 환자의 ‘손’ 단어 후에 환자의 손을 지목하세요. 만약 다른 단어들을 틀리게 말했다면 이렇게 하십시오;

a. Allow more than 10 seconds for each response, or if response was quick but wrong,
   만약 대답은 빨랐지만 틀렸다면 10 초이상 시간을 주십시오.
b. Suggest patient look at words again
   단어를 한번 더 보여주십시오.

Correct following prompt 프롬트 후에 맞는 행동	½
Error 틀린 대답	0

Reading 4. Comprehension of a three-word sentence.
읽기-4. 3 단어 문장 이해하기

Stimulus
자극제

Explain, “The card will have a short sentence on it. It will tell you to do something. You may read it to yourself, but then do what the sentence says. “Show the sentence: make a fist.”
“이 카드에는 지시가 적혀있습니다. 적혀진 지시를 따라주세요. 지시를 보여주세요; “주먹을 쥐세요”

Correct
맞는 행동

Patient follows instruction or shows clearly he understands it, within 10 seconds. 1
10 초안에 환자가 지시를 따릅니다.

Errors
틀린 행동

Fails to show comprehension. Fails to respond within 10 seconds.
10 초안에 이해했다는 걸 보여주지 않습니다.

Prompt
프롬트

a. Allow more than 10 seconds, or if response was quick but wrong,
   10 초이상 시간을 주십시오
b. Suggest patient look at sentence again
   만약 대답이 빨랐지만 틀렸다면 환자에게 한번 더 보라고 지시하십시오.

Correct following prompt ½
프롬트 후에 맞는 행동

Error 0
틀린 행동

Note: if patient attempts to use paralyzed hand, indicate his good hand and tell him to use that one. However, this does not affect scoring.
참고: 만약 환자가 마비된 손을 쓰려고 한다면 말 듣는 손을 쓰라고 하십시오. 이건 해답이랑 상관이 없습니다.

Reading -5. Comprehension of a Seven-Word question.
읽기 -5. 7-단어 문제 이해하기

Stimulus
자극제

Explain that the next item will be a question. The patient can read it to himself, but he is to tell or show you the answer. “What’s the answer to this?” show the sentence: how many ears does a man have?
환자에게 다음 문장은 문제라고 말씀을 하십시오. 환자가 스스로 읽어도 돼지만 대답은 꼭 당신에게 말이나 손을 보여줘야 합니다. 이 문장을 보여주십시오 “인간은 귀가 몇 개가 있습니까?”

Correct 1
맞는 대답

Patient says “two “or holds up two fingers, within 10 seconds.
10 초안에 환자가 “2 개”라고 대답을 하거나 손가락 두 개를 보여줍니다.

Errors
틀린 대답

Only touches ears rather than indicating quantity. Fails to give correct answer within 10 seconds
10 초안에 대답을 하지 않거나 귀만 만지고 숫자 2 라는 걸 보여주지 않습니다.

Prompt
프롬트

a. Allow more than 10 seconds or if response was quick but wrong.
   10 초이상 시간을 줍니다.
b. Suggest patient read sentence again.
   만약 대답을 빨리 했지만 틀렸다면 문장을 다시 한번 읽으라고 지시하십시오.

Correct following prompt ½
프롬트 후에 맞는 행동

Error 0
틀린 행동

Reading 6. Comprehension of a Ten-word sentence
읽기 6. 10 단어 문장 이해하기.

Stimulus
자극제

Explain that the next time will tell him to do something. He may read it to himself, and then he should do what the sentence says. Show the sentence: show what you do if your nose starts to itch.
환자에게 다음지시는 행동으로 보여줘야 한다고 말씀하십시오. 환자가 스스로 읽어도 돼지만 대답은 꼭 당신에게 말이나 손을 보여줘야 합니다. 다음 문장을 보여주십시오 “만약에 당신의 코가 간지럽다면 어떻게 해야 합니까?”

Correct
맞는 대답

Patient rubs, scratches or pulls on his nose within 10 seconds.
10 초안에 환자가 코를 긁거나 비빕니다.

Errors
틀린 대답

a. Only touches his nose; in any way shows he does not understand.
   코를 만지기만 하거나 문장을 인식하지 못합니다.
b. Does not respond within 10 seconds.
   10 초안에 대답하지 않습니다.

Prompt
프롬트

a. Allow more than 10 seconds, or if response was quick, but wrong
   10 초이상 시간을 주십시오
b. Suggest read sentence again.
   만약 대답을 빨리 했지만 틀렸다면 문장을 다시 한번 읽으라고 지시하십시오.

Correct following prompt ½

프롬트 후에 맞는 행동

Error 0

틀린 행동

Reading -7. Comprehension of an eight-word confusing instruction
읽기-7. 8 단어 문장 이해하기.

Stimulus
자극제

Tell the patient again to look carefully at the next sentence and do just what it says .show the sentence: point to the second word in this sentence.
환자에게 다음 문장을 자세히 보고 지시를 따르라고 하십시오. 문장을 보여주십시오; “이 문장의 두 번째 단어를 가리키십시오.”

Correct
맞는 행동

Patient points to the word “to” within 10 seconds
10 초안에 환자가 ‘문장의’을 가리킵니다.

Errors
틀린 행동

Fails to point to “to” within 10 seconds
10 초안에 ‘문장의’을 가리키지 않습니다.

Prompt
프롬트

a. Allow more than 10 seconds, or if response was quick, but wrong
   10 초이상 시간을 주십시오
b. Suggest read sentence again.
   만약 대답을 빨리 했지만 틀렸다면 문장을 다시 한번 읽으라고 지시하십시오.

Correct following prompt ½
프롬트 후에 맞는 행동

Error 0
틀린 행동

Note: if pointing is vague, ask patient to show more exactly what he means. If he then points precisely to “to”, you must judge whether he really understood within the time limits, or not, to determine score.
참고: 만약 가리키는 게 애매하다면, 다시 한번 더 보여주라고 부탁하십시오. 이다음 ‘단어의’을 가리키신다면 환자의 대답이 틀렸는지는 당신의 분별에 맞기십시오.

Reading – 8. Comprehension of a fourteen-word confusing instruction
읽기-8. 14 단어 지시 이해하기.

Stimulus
자극제

"Look at the next sentence carefully now, and do just what it says." Show the sentence: show which words in this sentence begin with the first letter of the alphabet.
다음문장을 자세히 보시고 하라는 데로 따르세요. 문장을 보여주십시오 "다음문장을 자세히 보시고 하라는 데로 따르세요. 문장을 보여주십시오 "문제를 다 읽을 때까지 가만히 기다려 주십시오. 이 카드에 첫 번째 자음으로 시작하는 단어를 가리켜 주십시오."

Correct
맞는 대답

Patient points to the word alphabet or the initial a of the alphabet within 15 seconds.
15 초 안에 환자가 '가리켜'를 가리킵니다.

Errors
틀린 대답

Points to second A of the alphabet or to other words in the sentence fails to respond within 15 seconds.
다른 단어들을 가리키거나 15 초안에 대답을 하지 않습니다.

Prompt
프롬트

a. Allow more than 15 seconds, or if response was quick, but wrong
   15 초이상 시간을 주십시오
b. Suggest read sentence again.
   만약 대답을 빨리 했지만 틀렸다면 문장을 다시 한번 읽으라고 지시하십시오.

Correct following prompt ½

프롬트 후에 맞는 행동

Error 0

틀린 행동

Reading 9. Comprehension of a three-stage complex instruction.
읽기 9. 복잡한 3 단계 지시 이해하기.

Stimulus
자극제

Remind the patient that he may read the next item to himself, but he must read it carefully and do just what it says. Show the sentence: follow only the first and third of the following directions: a. hold up one finger, b. touch your nose, c. put your hand down beside you.
환자에게 다음 문장을 자세히 보고 지시를 따르라고 하십시오. 문장을 보여주십시오. “첫 번째랑 세 번째 지시만 따르십시오. A. 손가락 하나를 보여주십시오 B. 코를 만지십시오. C. 손을 다리 옆에 두십시오.”

Correct
맞는 행동

Patient raises one finger, then puts either hand down beside him, within 20 seconds.
20 초 안에 환자가 손가락 하나를 보여준 다음 손을 다리 옆에 둡니다.

Error
틀린 해답

Touches his nose. Fails to complete response within 20 seconds.
환자가 코를 만집니다. 20 초안에 행동을 끝내지 못합니다.

Prompt
프롬트

a. Allow more than 20 seconds, or if response was quick, but wrong
   20 초이상 시간을 주십시오
b. Suggest read sentence again.
   만약 대답을 빨리 했지만 틀렸다면 문장을 다시 한번 읽으라고 지시하십시오.

Correct following prompt ½
프롬트 후에 맞는 행동

Error 0
틀린 행동

Note: if patient self-corrects an error, the response is considered correct.
참고: 실수를 스스로 고쳤으면 맞는 거라고 봅니다.

Reading 10. Comprehension of a short paragraph instruction.
읽기 10. 구절 읽고 이해하기.

Stimulus
자극제

Remind the patient to read carefully and then follow the printed instructions. Show the paragraph: tell the number of times the letter “z” appears in the next sentence. When you are satisfied that you have done that correctly, then tell how many times the letter “c” appears in the first sentence.
환자에게 다음 문장을 자세히 보고 지시를 따르라고 하십시오. 문장을 보여주십시오. “다음 문장에 ‘카’ 가 몇 번 쓰였는지 말씀하십시오. 맞췄다고 생각되시면 첫 번째 문장에 다가 몇 번이나 쓰였는지 말씀해주십시오.”

Correct
맞는 행동

Patient indicates with speech or gesture there are no zs and one c, within 45 seconds.
45 초 안에 환자가 말이나 손가락으로 카는 한번도 일어나지 않았고 다는 하나밖에 없다고 대답합니다.

Prompt
프롬트

a. Allow more than 45 seconds, or if response was quick, but wrong
   45 초이상 시간을 주십시오
b. Suggest read sentence again.
   만약 대답을 빨리 했지만 틀렸다면 문장을 다시 한번 읽으라고 지시하십시오.

Correct following prompt ½
프롬트 후에 맞는 행동

Error 0

틀린 행동

Writing Scale
적기 시험

The last scale in the ALPS is the Writing scale. It is generally parallel to the Talking scale, and should offer few special problems of presentation. As in the talking scale, each writing scale item has its individual prompt, which is to be given only after the complete item has been presented.
ALPS 의 마지막 시험은 적기 시험입니다. 말하기 시험이랑 비슷하고, 특별한 문제가 몇 개 있습니다. 말하는 시험이랑 비슷하게, 각 시험들은 다른 프롬트가 있습니다. 프롬트는 시험문제를 먼저 끝낸 다음 줄 수 있습니다.

Many patients may be writing left-handed for the first time because of a paralyzed right side. Do not count off for uncoordinated writing if it is recognizable. Allow adequate time for writing each part of an item. For instance, the patient should have time to write 4 before being asked to write the 2 in Item 2. He should finish his attempts at one word in Item 4-6 before another is presented.
많은 환자들은 오른쪽 마비 때문에 처음으로 왼쪽 팔로 글을 적을 수 있습니다. 꾸불꾸불한 글자는 알아볼 수 있는 하에 맞는다고 칩니다. 환자가 글자를 적기 위한 적당한 시간을 주십시오. 예를 들면, 적기 2 에 환자가 2 를 적기 전에 4 를 적을 수 있는 시간이 필요합니다. 적기 4-6 에는 환자가 첫 번째 단어를 먼저 끝낸 다음, 다음 단어를 보여주십시오.

Writing 1 Copying a circle
적기 1: 동그라미 만들기.

Stimulus
자극제

Place the writing pad before the patient. At the top of the pad draw a circle about 3” in diameter. Say, “Here is a circle. You make one like it,” and give him a pencil.
환자 앞에 종이를 주십시오. 종이 위에 직경 3 인치 동그라미를 그리십시오. 환자에게 말하십시오 “여기엔 동그라미가 있습니다. 똑같은걸 하나 그려주세요.” 환자에게 연필을 주십시오.

Correct
맞는 행동

Patient copies recognizable circle. May be shaky or uncoordinated.
환자가 동그라미를 그립니다. 선이 꾸불꾸불 해도 괜찮습니다.

Errors
틀린 행동

Fails to produce recognizable circle for whatever reason.
동그라미를 그리지 못합니다.

Prompt
프롬트

Place his pencil point on your line and ask him to trace over your circle.
환자의 연필을 당신의 동그라미 위에 올려놓고 따라 그려 라고 말하십시오.

Correct follow prompt. ½
프롬트 후에 맞는 행동

Traces recognizable circle.
동그라미를 그립니다.

Error 0
틀린 행동

Writing 2. Copying numerals.
적기 2. 숫자 따라 적기.

Stimulus
자극제

In figures about an inch high, write a 7, and say “here’s a number 7. Make a 7.” And gesture at the paper below your numeral. When he as copied it, say, “now make a 6, like this,” and write a 6 in the same manner.
1 인치 정도의 숫자 7 을 적으십시오. “여기에 7 이 있습니다. 7 을 적으세요.” 종이 밑을 가리키십시오. 환자가 숫자를 적은 후, 숫자 6 을 적으십시오. 환자에게 말하십시오 “여기에 6 이 입니다. 6 을적으세요.”

Correct
맞는 행동

Patient copies both numerals recognizably, even if shaky or uncoordinated.
환자가 숫자 2 개를 적습니다. 선이 꾸불꾸불 해도 괜찮습니다.

Errors
틀린 행동

Fails to produce both numerals recognizably.
숫자를 적지 못합니다.

Prompt
프롬트

Put his pencil on each figure and tell him to trace over your numbers.
환자의 연필을 당신의 숫자 위에 위에 올려놓고 따라 그려 라고 말하십시오.

Note: you may be facing the patient or sitting across the table corner from him. You should, however, write so that he can see the numerals right side up as you form them. You can manage this with a little practice.
참고: 환자를 보고 있어도 괜찮고 옆에 있어도 괜찮습니다. 하지만 환자가 숫자를 제대로 볼 수 있도록 적어야 합니다.

Writing 3. Recalling written numerals
적기 3: 숫자 적기.

Stimulus
자극제

Show four fingers sand say, “Make a number 4” show two fingers and say “make a number 2”.
손가락 네 개를 보여주고 “숫자 4 를 적으십시오” 라고 말하십시오. 다음, 손가락 2 개를 보여준 다음 “숫자 2 를 적어주세요” 라고 말하십시오.

Correct
맞는 행동

Patient writes both numerals legibly. If he starts to write words rather than numerals, point to other numerals, and reinstruct.
환자가 숫자 2 개를 다 적을 수 있습니다. 만약 ‘이’ 나 ‘사’를 적는다면 숫자를 보여주고 다시 적으라고 하세요.

Errors
틀린 대답

Fails to produce both numerals recognizably.
숫자 2 개를 적지 못합니다.

Prompt
프롬트

Write the 4 and/or the 2 and ask patient to copy
숫자 4 나 2 를 적으시고 환자한테 적으라고 하십시오.

Correct following prompt ½
프롬트 후에 맞는 행동

Error 0
틀린 행동

Writing 4. Writing A to D
적기 4: 가에서 라까지 적기.

Stimulus
자극제

Tell the patient, “Now let’s try something else. This time, write the first four letters of the alphabet...” if he appears unsure or confused about your instructions, you may continue, “the alphabet. H-I-J-K-L-M. The first four letters of the alphabet.”
환자에게 말하십시오 “ 다른 거 몇 가지를 해봅시다. 첫 네 개 자음을 적어주세요.” 만약 환자가 헷갈려 한다면 “마,바,사,아 같이 첫 네 개 자음을 적어주세요 적어주세요.”

Correct
맞는 행동

The patient writes or prints ABCD. May be capitals or lower case or both.
환자가 가나다라를 적을 수 있습니다.

Errors
틀린 행동

Perserates in writing numerals. Writes incorrect letters. Fails to write all four letters in normal order.
계속 숫자만 적습니다. 틀린 한글을 적습니다. 한글을 순서대로 적지 않습니다.

Prompt
프롬트

Write and name A,b,__,__. Ask patient to write the next two letters.
가, 나, ___,___ 를 적으십시오. ‘가,나’라고 말하시고 다음 한글 두 개를 적으세요.

Correct following prompt ½
프롬트 후에 맞는 행동

Error 0
틀린 행동

Writing 5. Writing words spelled aloud.
적기 5. 들은 단어 적기.

Stimulus
자극제

Ask the patient to write each of the following words as you show the object, name it, and spell it aloud once or twice:
환자에게 다음 단어들을 적으라고 말하십시오. 각 단어를 두 번 말하시고 물건도 같이 보여주십시오.

a. Key, K-E-Y.
열쇠. 이영, 열, 리을, 시옷, 오, 이.
b. Pen, P-E-N.
팬. 피읖, 애, 니은.
c. Dime, D-I-M-E.
백 원. 비읍, 애, 기역, 이영, 우, 어, 니은.
d. Paper, P-A-P-E-R.
종이. 지을, 오, 이영, 이영, 이.

Correct
맞는 대답

Patient writes at least three words with correct or self-corrected spelling.
자가 단어들 3 개 이상 적습니다. 스스로 고쳤다면 맞는다고 칩니다.

Errors
틀린 대답

Fails to write three words correctly.
단어들을 못 적습니다.

Prompt
프롬트

For words missed; name word again, write or print it clearly for patient to study for five seconds, remove word and ask patient to write it.
만약 단어를 틀리게 적었다면은, 한번 더 읽어주십시오. 아니면 단어를 적으시고 5 초동안 보여준 다음 다시 적으라고 말하십시오.

Correct following prompt ½
프롬트 후에 맞는 행동

Error 0
틀린 행동

Writing 6. Writing words to dictation.
적기 6. 단어 적기.

Stimulus
자극제

Ask patient to write each of the following words as you show object and name it.
환자에게 다음 물건들을 보여주시고 이름을 말한 다음 적으라고 말하십시오.

a. Nose
   코
b. Watch
   손목시계
c. Mouth
   잎
d. Fingers
   손가락

Correct
맞는 대답

Patient writes at least three words with correct or self-corrected spelling.
환자들이 적어도 세 개 이상 맞는 단어들을 적었습니다. 스스로 고쳤다면 맞는다고 칩니다.

Errors
틀린 대답

Fails to write three words correctly
세 개 이하의 단어들을 적습니다.

Prompt
프롬트

For words missed: name and spell aloud once or twice.
만약 단어를 적지 않았다면 단어들을 한번 더 말하십시오.

Correct following prompt ½
프롬트 후에 맞는 행동

Error 0
틀린 행동

Writing 7. Writing phrase-length answers.
적기 7. 구절 적기.

Stimulus
자극제.

"I asked you three questions before but this time I'd like you to write your answers. Remember to write a complete answer. What do you do with a ___?" show each object and name it.
"이미 이 세 질문들을 물었지만, 이번엔 대답을 적어주세요. 완벽한 문장으로 적어주세요. ___로 뭐를 할 수 있죠?" 각각 물건을 보여주고 이름을 말하십시오.

a. Money
   돈
b. Paper
   종이
c. Watch
   손목시계
d. Keys
   열쇠

Correct
맞는 대답

Patient writes at least two explicit verb phrases with normal grammar and reasonably good spelling. Complete sentences are acceptable, but not required.
환자가 문장을 2 개 이상 적습니다. 문법이 알맞고, 동사, 명사를 제대로 적습니다. 완벽한 문장은 괜찮지만 꼭 필요하지 않습니다.

Errors
틀린 대답

Imprecise responses, such as, "hold it," or "put it in your pocket" one word responses, such as, "write." Illegible or nonsense responses. Failure to produce two normal phrases.
확실하지 않는 대답, 예를 들면 "손에 쥡니다" 아니면 "주머니에 넣어요". 대답이 단어 하나 (예: 적기"), 알아볼 수 없는 대답, 알아들을 수 없는 대답. 제대로 된 문장 2 개이상을 못 적습니다.

Prompt
프롬트

Ask patient to write phrases to dictation.
환자에게 밑의 문장들을 말해주면서 적으라고 합니다.

a. Money. Spend it .write, spend it.
   돈. 쓸 수 있습니다. 쓸 수 있습니다를 적으세요.
b. Paper. Write on it. Write, write on it.
   종이. 위에 적을 수 있습니다. 위에 적을 수 있습니다를 적으세요.

c. Watch. Tell time. Write, tell time.
   손목시계. 시간을 말해줍니다. 시간을 말해줍니다를 적으세요.
d. Keys. Unlock a door. Write, unlock a door.
   열쇠. 문을 열수 있습니다. 문을 열수 있습니다를 적으세요.

Correct following prompt ½

프롬트 후에 맞는 행동

Error 0

틀린 행동

Writing 8. Writing simple sentences
적기 8. 간단한 문장 적기.

Stimulus
자극제.

"I'm going to do some things now like I did before. This time write complete sentences each time." Do each of the following and ask, "What did I do?"
"이젠 제가 이미 몇 번 한 행동을 또 할겁니다. 이번에는 완벽한 문장들을 적어주세요." 밑에 적힌 행동을 각각 한 다음 "제가 방금 뭘 했지요?" 라고 물으세요.

a. Put the money under the paper.
   돈을 종이 밑에 둡니다.
b. Change your watch from one arm (or pocket) to the other
   손목시계를 한 손목에서 다른 손목(아니면 주머니)으로 옮깁니다.
c. Put your keys in your pocket (or purse or box)
   열쇠를 주머니에 넣습니다 (가방, 아니면 상자도 괜찮습니다.)
d. Pick up the paper and place it on the table (or desk)
   종이를 들고 책상 위에 놓으십시오.

Correct
맞는 대답

Patient writes at least two normally constructed descriptive sentences, complete in vocabulary and grammar. Allowance should be made for patient's dialect and educational background. Minor misspelling sand errors of punctuation or capitalizations should be ignored. The subject 'you' may be omitted.
환자가 문법이랑 어휘에 알 맞는 문장을 적습니다. 환자의 방언이나 교육배경을 고려하십시오. 작은 문법 어휘 오류는 무시하십시오. '당신이'는 없어도 괜찮습니다.

Errors
틀린 대답

Failure to write at least two normally constructed, complete descriptive sentences.
제대로 된 문장을 2 개를 적지 못합니다.

Prompt
프롬트

For each action missed, dictate a sentence to be written as follows:
틀린 행동마다 다음의 문장들을 말해주십시오:

a. Put the money under the paper.
   돈을 종이 밑에 넣었습니다.
b. Moved your watch to the other arm (or pocket).
   손목시계를 다른 손목으로 옮겼습니다 (아니면 주머니)
c. Put the keys in your pocket (or purse or box).
   열쇠를 당신의 주머니에 넣었습니다 (가방 아니면 상자)

d. Put the paper on the table
종이를 책상 위에 놓았습니다.

Correct following prompt 프롬트 후에 맞는 행동	½
Error 틀린 행동	0

Writing 9. Writing compound sentences.
적기 9. 혼합 문장 적기.

Stimulus (simultaneously for items 9 and 10)
자극제 (적기 9 랑 적기 10)

This time I will do two things together…when I finish write down what you see me do. Try to write a complete sentence each time. Do each of the following and ask "what did do?" (Note at each…, pause one full second).
"이번에는 제가 두 가지 행동을 할 것입니다…제가 행동을 끝내면 제가 뭘 했는지 적어주세요. 문장을 하나 이상 적어 주기 바랍니다." 밑에 행동들을 하고 "제가 뭘 했지요?" 라고 물으십시오. (…은 1 초동안 기다립니다)

a. Pick up and count the coins aloud…put the coins in your pocket (or purse or box).
동전들을 세아립니다…동전들을 주머니에 넣으십시오(가방이나 상자도 괜찮습니다)
b. Take a piece of tablet paper, tear it up…wad up the paper and throw it away.
종이 한정을 찢으십시오…종이를 같이 모아서 버리십시오.
c. With one index finger rub the bridge of your nose two or three times…pat the top of your head.
두 번째 손가락으로 코를 두세 번 비비십시오…당신의 머리를 토닥이십시오.
d. Knock on the table twice…snap your fingers.
책상을 두 번 두드리십시오…손으로 딱 소리를 내십시오.

Correct
맞는 대답

Patient writes at least two complete, specific sentences (subject may be understood). Make allowance for patient's dialect and educational background.
환자가 적어도 완벽한 문장을 2 개 적습니다. 환자의 방언이나 교육배경을 고려하십시오

Errors:
틀린 대답

Failure to write at least two acceptable sentences. Grammatically incomplete sentences such as "counted coins and put in pocket." Incomplete descriptions, such as, you threw it away or knocked on the table.
환자가 문장을 2 개이상 적지 못합니다. 문법상으로 완벽하지 문장 "돈 세고 주머니 넣다", 완벽하지 않는 문장, 예를 들면 버리다 아니면 책상 두들이기.

Prompt
프롬트

If the patient fails to produce three correct descriptions, repeat the first action which resulted in an error and dictate a sentence to be written as follows:
만약 환자가 문장 3 개이상을 적지 못한다면, 첫 번째로 틀린 행동들을 다시 한번 하십시오. 그 다음 해당하는 문장을 말하십시오.

a. You counted the money and put it in your pocket (or purse or box).
당신은 돈을 세고 주머니에 넣었습니다 (가방 아니면 상자)
b. You tore up some paper and threw it away
종이를 찢은 다음 버렸습니다.

c. You rubbed your nose and patted your head
당신은 코를 비빈다음 머리를 토닥였습니다.

d. You knocked on the table and snapped your fingers.
당신은 책상을 두드리고 손가락으로 딱 소리를 냈습니다.

Correct following prompt 프롬트 후에 맞는 행동	½
Error 틀린 행동	0

Writing 10. Writing compound sentences.
적기 10. 복잡한 혼합문장 적기.

Stimulus
자극제.

(given for item 9)
적기 9 랑 동일합니다.

Correct
맞는 행동.

Patient write at least three complete, specific sentences. (same criteria as for item 9)
환자가 완벽하고 자세한 문장 3 개를 적습니다. (적기 9 랑 동일합니다.)

Errors
틀린 대답.

Failure to write at least 3 acceptable sentences. (specific errors described in item 9)
환자가 알 맞는 문장 3 개이상 적지 않았습니다. (틀린 오답은 적기 9 에 적혀있습니다)

Prompt
프롬트

(given for item 9)
(적기 9 랑 동일합니다)

Correct following prompt ½
프롬트 후에 맞는 행동

Error 0
틀린 행동

Appendex D: Translated Boston Naming Test

Standard Form

Item	Response	Correct Response	Latency Seconds	Stimulus Cue	Phonemic Cue	Error Code(s)	Multiple Choice
Bed 침대							
Tree 나무							
Pencil 연필							
House (Home) 집							
Whistle 호루라기							
Scissors (shears) 가위							
Comb 빗							
Flower 꽃							
Saw 톱							
Toothbrush 칫솔							
Helicopter 헬리콥터							
Broom 빗자루							
Octopus 문어							
Mushroom 버섯							
Hanger 옷걸이							
Wheelchair 휠체어							
Camel 낙타							
Mask 마스크							
Pretzel							

프렛젤							
Bench 벤치							
Racquet 라켓							
Snail 달팽이							
Volcano 화산							
Seahorse 해마							
Dart 다트							
Canoe 카누							
Globe 지구본							
Wreath 화환							
Harmonica 하모니카							
Rhinoceros 코뿔소							
Acorn 도토리							
Igloo 이글루							
Stilts 죽마							
Dominoes 도미노							
Cactus 선인장							
Escalator 에스컬레이터							
Harp 하프							
Hammock 해먹							
Knocker 문고리							
Pelican 펠리칸							

Stethoscope 청진기							
Pyramid 피라미드							
Muzzle 포구							
Unicorn 유니콘							
Funnel 깔때기							
Accordion 아코디언							
Noose 올가미							
Asparagus 아스파라거스							
Compass 나침판							
Latch 걸쇠							
Tripod 삼각대							
Scroll 스크롤							
Tongs 집게							
Sphinx 스핑크스							
Yoke 멍에							
Trellis 격자							
Palette 팔레트							
Protractor 각도기							
Abacus 주판							

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