

# Translation Using Collaborative Translation Protocols and Initial Validation of the Filipino Version of Stroke Specific Quality of Life Scale for Stroke Survivors



*Angelica Marie V. Mandario, PTRP, MD,  
Gerald Neil S.J. Manalo, MD,  
Marlo Eduardo M. Manalo, RMT, MD,  
Jann Marielle M. Mangali, MD, Erwin T. Manipol, MD,  
Christine Beatrix Y. Manalo, RMT, MD,  
Maria Minerva P. Calimag, MD, PhD, Wennielyn F. Fajilan, PhD,  
Elenita C. Mendoza, LPT, MA,  
John Dale V. Trogo, LPT, MA, Johnny K. Lokin, MD*

## ABSTRACT

**Introduction:** Stroke is a significant public health burden in the Philippines, ranking among the leading causes of death and disability, yet a specific health-related quality of life (HRQOL) assessment tool tailored for Filipino stroke survivors is lacking. This study aimed to address this gap by translating the Stroke-Specific Quality of Life (SS-QOL) questionnaire into Filipino and subsequently validating this new version to provide a culturally relevant and reliable outcome measure for stroke patients in the country.

**Methodology:** A descriptive, cross-sectional design was utilized, involving the translation of the SS-QOL from English to Filipino through Collaborative Translation Protocols, which centered on group consensus. Three Filipino language experts rigorously evaluated the initial translation for linguistic and cultural appropriateness. To assess content and face validity, an expert committee of three neurology consultants provided ratings, which were analyzed using the item-level content validity index (i-CVI). Subsequently, a pilot testing phase was conducted with 10 stroke survivors recruited via purposeful sampling in Metro Manila to evaluate the SS-QOL-Filipino's clarity, layout, understandability and answerability, while also measuring the intraclass correlation coefficient (ICC) to assess consistency and agreement among items.

**Results:** The SS-QOL was successfully forward translated and refined through focused group discussions (FGD) with language experts. The translated questionnaire demonstrated high content validity, with all items achieving an i-CVI of 1.0

✉ Angelica Marie V. Mandario, PTRP, MD  
marie.mandario@gmail.com

<sup>1</sup> Faculty of Medicine and Surgery, University of Santo Tomas, Manila, Philippines

Academic editor: Leilani B. Mercado-Asis

Submitted date: June 12, 2025

Accepted date: September 11, 2025

as rated by neurology experts. Face validity was also established, incorporating minor revisions based on expert feedback. Pilot testing yielded an average measures ICC of 0.761, indicating strong agreement, and responses on a 5-point Likert scale showed the questionnaire was easy-to-very-easy to understand and answer (mode ranging from 3-5).

**Discussion:** This study successfully developed a stroke-specific HRQOL tool for the Philippines, addressing a critical need for objective measures in patient-centered care. The use of Collaborative Translation Protocols ensured the questionnaire's conceptual, linguistic and cultural equivalence, incorporating nuances specific to the Filipino context in areas like eating habits, emotional expressions and technological terms. The high face and content validity, coupled with strong consistency and high understandability observed during pilot testing underscore the SS-QOL-Filipino's suitability for the target population, positioning it as a valuable instrument for both clinical practice and research.

**Conclusion:** The SS-QOL scale was successfully translated into Filipino using Collaborative Translation Protocols and rigorously validated. The SS-QOL-Filipino version demonstrates high content and face validity, strong consistency and excellent understandability and answerability, affirming its status as a reliable and appropriate outcome measure for assessing the QOL among stroke patients in Metro Manila.

**Keywords:** Stroke, collaborative translation protocols, quality of life, stroke specific quality of life scale, Filipino.

## INTRODUCTION

With the Republic of the Philippines being the world's 13th most populous country and a multiethnic population approaching 112 million, the upswing of non-communicable diseases is greatly evident.[1] Based on the 2021 Philippine Statistics Authority, the top three causes of death in the country were ischemic heart diseases, cerebrovascular diseases and COVID-19 virus.[2] One in three Filipinos die prematurely from noncommunicable diseases (NCDs) before the age of 70 with stroke being the third leading cause of mortality and in terms of disease burden. According to the latest Philippine Statistics

Authority (PSA) data published in 2022, stroke deaths in the Philippines reached 68,180 deaths or 9.7% of the total deaths and from being third in the previous year's ranking it showed an increase of 16.6% from 58,476 cases in the same period in 2020. A lot of stroke patients cannot afford the large amount of money needed to provide proper health care. Although there are hospitalization services which the government provides for free, the patients carry the burden of purchasing medicines.[3]

The most common post-stroke complications were post-stroke mood and emotional disturbance which can manifest in a diverse pattern, and early recognition of these emotional disturbances and proper management may improve the patient's quality of life (QOL).[4] Due to these post-stroke complications, clinical trials are promoting patient-centered care such as physical function and QOL which is broadly defined as a range of human experiences associated with one's complete physical, social and emotional well-being. It implies values based on patient satisfaction including its functional level and adaptation to treatment-related symptoms, and measures have been developed to provide a way of determining the impact of health care to people with chronic diseases or those with untreatable diseases. Several generic and disease-specific health-related quality of life (HRQOL) questionnaires are already available whereby generic HRQOL questionnaires are used mostly to compare outcomes across different populations and diseases while disease-specific instruments are preferably used for assessment of distinct states or concerns of specific diagnostic groups.

The stroke-specific quality of life (SS-QOL) is a specific and clinically relevant HRQOL measure for assessing post-stroke patients. It is a multifaceted patient-reported outcome measure used to assess the HRQOL issues relevant to post-stroke patients and the specific aspects of functioning. The scale consists of 49 questions that are grouped into 12 domains. Other countries like Denmark, Nigeria, Mexico and Germany have used and examined the validity of the SS-QOL scale.[5]

Because Filipinos have a high risk of stroke, evaluation of reliability and validity of the SS-QOL questionnaire is an important health objective. The researchers aim to adapt the use of these questionnaires in the Philippine setting by translating the SS-QOL in Filipino and validating the SS-QOL-

Filipino version using the Collaborative Translation Protocols. The Collaborative Translation Protocols involves a group of people in which the members are knowledgeable about the study and questionnaire, together with knowledge about the cultural and linguistic skills needed to translate the questionnaire into its target language. This type of translation protocol allows social interaction between its members making them able to verbalize their thoughts and make decisions on mutual consensus during the meeting.[6]

As the Philippines rapidly progresses toward better population health and improved QOL for patients, this study can serve as a basis for a valid and appropriate outcome measurement tool. Although HRQOL is already used in the Philippines, there are no specific tools available for stroke patients. This study can be a source of a specific tool for stroke patients in assessing their QOL since the general HRQOL is not geared towards a specific disease. Using the SS-QOL will give health practitioners and patients specific outcomes that will cater to their needs.

**METHODOLOGY**

For the study design, a descriptive, cross-sectional research design was used as the method of choice in the study. The study population and setting includes stroke survivors in private and public hospitals and rehabilitation centers in Metro Manila who were recruited as participants. Inclusion and exclusion criteria are listed in Table 1.[7,8]

A purposeful/judgmental sampling design was used to gather the needed number of participants which were endorsed by medical experts in private and public hospitals and rehabilitation centers in Metro Manila. For the pilot testing, 10 participants were deemed adequate to give insights and ensure that the pre-final version of the SS-QOL-Filipino keeps its equivalence as per the previous SS-QOL translation studies.[9,10]



**Figure 1:** Schematic Diagram of the Study Procedure Showing the Process of Development and Validation of the SS-QOL Filipino Questionnaire

The researchers translated the Filipino version of the SS-QOL scale for stroke survivors using Collaborative Translation Protocols. The study was performed as shown in Figure 1. Translation-validity study was conducted to translate and validate the Filipino version of the SS-QOL scale. Following approval from the University of Santo Tomas Graduate School Ethics Review Committee (USTGS-ERC), the author of the original SS-QOL was contacted through email for permission to translate the scale into the Filipino language. The researchers then translated the SS-QOL questionnaire from English to Filipino using the collaborative translation protocols wherein it involves a group translating the text together, basing their decisions on a consensus. This type of translation was continued up to the succeeding steps

**Table 1:** Inclusion and Exclusion Criteria

Inclusion Criteria	Exclusion Criteria
Aged 18 and above	History of prior stroke with persistent deficit
Clinically diagnosed with acute stroke	Dysphasia or aphasia significant enough such that meaningful communication cannot be established
Able to return for follow-up 1 month after stroke	Significant comorbidities that likely affect HRQOL (eg, Class III or IV heart failure, preexisting musculoskeletal diseases)
Functionally literate in Filipino	

of evaluation and finalization of the questionnaire, and the translation evaluation process was based on guidelines from Sentro sa Salin at Araling Salin of the University of Santo Tomas, College of Education. For the Filipino language expert evaluation, three language experts, who are knowledgeable of the English-speaking culture but are native speakers of the Filipino language were sought from the said institution.

The tool and guidelines used for technical translation and evaluation was based on the proposed evaluation tool of the Komisyon sa Wikang Filipino (as of March 2021) adapted by the UST Sentro sa Salin at Araling Salin. Based on the total scores in the evaluation tool used by language experts, an online FGD (Zoom meeting) was planned where it involved the three language experts from the UST Sentro sa Salin at Araling Salin as well as the researchers. The meeting identified and resolved inadequate expressions or concepts of the translation and came up with the pre-final version of the Filipino SS-QOL questionnaire. For the assessment of content validity, an expert committee in the field of medicine, specifically neurology was formed and consisted of three neurology consultants from the University of Santo Tomas, Faculty of Medicine and Surgery. The decision to have this expert committee was based on previous SS-QOL translations. The medical experts were given informed consent for participating as evaluators in the research and their ratings and comments were gathered through Google forms, which were composed of each item in both the SS-QOL English and SS-QOL Filipino. Each item was rated by medical experts as to its relevance (1-not relevant, 2-somewhat relevant, 3-quite relevant, 4-highly relevant) in order to measure the content validity through item level content validity index (i-CVI).[11] After which, a pilot testing was conducted with 10 stroke survivors to ensure that the instrument is applicable and readable for the target population. The goals of pilot testing were to evaluate the layout, clarity of instructions, responses, items and time spent on completion. This ensures that the adapted version is still retaining its equivalence in an applied situation. The pilot testing protocol that the study followed was based on the pilot testing process of research entitled "Validation of the MD Anderson Symptom Inventory Head-and-Neck—Filipino (MDASI—HN—F): clinical utility of symptom screening among patients with head-and-neck

cancer". The reason for utilizing this approach was due to its structured and objective type of evaluation. The pilot testing was also carried out through online Google forms which were composed of three parts. First, patients were asked to read the informed consent, affirm their decision to participate in the study and provide their data for demographics. Next, patients were asked to view and fill out the SS-QOL Filipino questionnaire. Subsequently, after accomplishing the questionnaire, patients were asked to evaluate the questionnaire according to ease or difficulty in understanding and answering, using the Likert scale from 1–5 (1 being very unsatisfactory; 2 unsatisfactory; 3 neutral; 4 satisfactory; 5 very satisfactory). Revisions were made by researchers and experts according to the recommendations of participants.[12] The ICC was then measured for the degree of agreement among the comprehensive rating scores given by the pilot participants.[13] Finally, after considering responses and comments in the pilot testing and ICC, further revisions to the SS-QOL Filipino were made and a final version was accomplished.

The outcomes to be measured included the language expert evaluation, content validity (i-CVI) from the comments and ratings of medical experts and ICC. Moreover, understandability and answerability were recorded through a 5-point Likert scale based on the patient's responses in the pilot testing form. The demographics of patients were also collated and summarized, wherein the content of the demographics was based on the study of Lo, which is a Chinese version of the SS-QOL. The data collection method was a survey questionnaire (SS-QOL Filipino) which followed a structured approach and was precisely worded with a range of predetermined responses that the respondents can select, and since stroke patients' QOL is the main outcome of interest of the study, the mode of administration was self-administered through an online platform.

For the study's statistical analysis, content validity was measured through the item relevance ratings of medical experts. Analysis was done using i-CVI. Items with i-CVI higher than 0.80 were accepted, while those lower were subjected to discussion by the experts on whether to include the item or not. [11] The result of this process produced a complete translated version of the questionnaire. For the pilot testing, descriptive statistics was conducted

to summarize the participants' demographic and clinical characteristics. Moreover, ICC was calculated for the degree of agreement among scores produced by the pilot participants using IBM® SPSS® software. An ICC cutoff value was set at >0.40-0.60 (moderate agreement).[14] Finally, understandability and answerability of the SS-QOL Filipino were measured through a 5-point Likert scale found in the pilot testing form. The mode of responses was calculated and a score of ≥3 was deemed acceptable.

**RESULTS**

Researchers forward translated the SS-QOL. The translation was further assessed by three Filipino language experts from the University of Santo Tomas Sentro sa Salin at Araling Salin. Items which obtained technical comments or a total score of 0-4 from the Language Expert Evaluation were subjected to FGD along with the researchers. Subsequently, three neurologists from the University of Santo Tomas Hospital were recruited to assess the face and content validity of the translated questionnaire. See Table 2 for the language experts' focus group discussion results.

See Table 3 for the item relevance rating of neurology experts on the forward translated SS-QOL. Test on content validity of the forward translated SS-QOL is shown in Table 3. Three neurology experts rated the questions according to relevance. All translated items have an i-CVI of 1.0 thus rendering all items accepted.

See Table 4 for the test on face validity of the forward translated SS-QOL scale. Following content validity by medical experts, another revision was made after holding a FGD with the said experts for face validity. Table 4 summarizes the discussion and subsequent revision of each item.

See Table 5 for the demographic profile of participants for pilot testing. Table 5 summarizes participants for pilot testing. A total of 10 respondents answered the pilot version of the SS-QOL-F and the questionnaire on understandability and readability.

According to Landis and Koch, an ICC of >0.4 to 0.6 is considered moderate agreement.[14] The results yielded 0.761 in average measures ICC which is considered a strong agreement. In the 5-point Likert scale on understandability and readability, The mode for each item ranges from 3-5. Two comments were also noted.

**Table 2:** Language Experts Focus Group Discussion Results

Item	Comments
1	The experts suggest that when translating, it should be complete, especially when a questionnaire is a standard.
2	Similar to item 1, translation should be complete. Also, one expert suggests "ma-stroke", which is more fluid and a better term.
3	No major modification
4	Experts decided to use "mahirap gawin" to signify that this will be the middle ground. Also, one expert suggests "medyo kayang gawin" in order to have a transition from a positive to negative answer. Experts agreed to use "kayang-kayang gawin" as the translation to parallel it with the other extreme which is "hindi na kayang gawin".
5	No major modification
6	Since this was translated from American English, the group concluded that the meaning is the use of utensils and used "paggamit ng kubyertos".
7-11	No major modification
12	The word "bahagi" was used instead of "panig" since the word "panig" can be an idiomatic expression in Filipino, which can mean social or political perspective. It cannot be used directly for visual concept. Also, the word "kapaligiran" was used since it possibly translates to visual field.
13-14	No major modification
15	"Ipaunawa" was used because it means "the ability to explain clearly". The tone of the word is not imposing or insisting compared to "ipaintindi" which was originally used.
16	"Bumuo ng salita" was used considering that stroke patients may have aphasia which may impair speech.
17	Same concept as item 15

(continued)

**Table 2:** Language Experts Focus Group Discussion Results (continued)

Item	Comments
18-19	No major modification
20	"Hagdan" was preferred over "hagdanan" in Filipino language.
21	Revised to "Nahirapan ka bang maglakad o gumamit ng wheelchair na kinakailangan mong huminto at magpahinga?" to focus on the difficulty in walking, not difficulty in stopping when walking.
22	"Manatiling nakatayo" was used because it is interpreted as remaining or keeping the standing position.
23	The tense was changed from "pagkaupo" to "pagkakaupo".
24-29	No major modification
30	The spelling of "zipper" is retained in Filipino translations since there is no translation for this word. No need to italicize but should be hyphenated when foreign words are used.
31	No major modification
32	Similar to item 1, translation should be complete and "ma -stroke" was used because it is more fluid and a better term.
33-36	No major modification
37	One expert suggested "naging mainitin ang ulo"
38	One expert suggested "n awalan ako ng pasensya sa ibang tao".
39	One suggested "ugali" since there is a connotation in Filipino of "ugali" which is pertaining to personality.
40	"Pag-asa" is better because it has something to do with the future. "Nawawalan" instead of "nawalan" because "nawalan" is absolute when compared to 'discouraged'
41	No major modification
42	First translation does not capture the deliberate aspect of "I didn't join".
43-48	No major modification
49	"Kapwa" was chosen to point out the concept of socialization.
50	Since 'withdrawn' is a direct term, "p agkailang" was chosen over "para akong malayo" because it is direct unlike "malayo" which may mean a physical or relational distance.
51	"Mababa ang kumpiyansa" was chosen over "maliit ang tiwala" because "maliit ang tiwala" is too literal and it is not usually used in conversations.
52-53	No major modification
54	"Madalas na magpahinga" was used instead to be in line with "rest often".
55	No major modification
56	Similar to Item 1, "ma -stroke" was used because it is more fluid and a better term. In connection with item 57, terms used in this item can be easily distinguished from one another to emphasize the degree of severity.
57	"A lot worse than before" was translated to "lubhang lumala" to define the extremeness of the first choice. "Lumala" was added in between "lubhang lumala" and "medyo lumala". "Medyo lumala" was used as a translation to "a little worse than before" since it is less severe than "umala". "Katulad lang ng dati" was retained from the first translation.
58	"Sigla ng katawan" was chosen because it is clearer, and it became more specific by adding the word "katawan".
59-64	Construction is changed and patterned with item 58 for uniformity.
65	"Pagugugali" was changed to 'ugali' The construction of the sentence was paralleled with number 58 for consistency.
66-67	Construction is changed and patterned with item 58 for uniformity.
68	Construction patterned with number 58. Also, "p aggawa ko ng mga bagay bagay" is changed to "pagsilbihan" since "paggawa" sounds too literal and has a different connotation.
69	Similar concepts with item 68. Also, the word "ko" after "kaibigan" is removed since it is already pragmatic.
70	"Ang pangkalahatang kalidad ng buhay ko ay" is changed to "Sa pangkalahatan, ang kalidad ng buhay ko ay"

**Table 3:** Item Relevance Rating of Neurology Experts on the Forward Translated SS-QoL

Item	Item Relevance Rating				I-CVI	Decision
	Not Relevant	Somewhat Relevant	Quite Relevant	Highly Relevant		
	<b>Frequency</b>					
1	0	0	1	2	1.0	Accepted
2	0	0	2	1	1.0	Accepted
3	0	0	1	2	1.0	Accepted
4	0	0	1	2	1.0	Accepted
5	0	0	1	2	1.0	Accepted
6	0	0	2	1	1.0	Accepted
7	0	0	1	2	1.0	Accepted
8	0	0	1	2	1.0	Accepted
9	0	0	1	2	1.0	Accepted
10	0	0	2	1	1.0	Accepted
11	0	0	1	2	1.0	Accepted
12	0	0	1	2	1.0	Accepted
13	0	0	1	2	1.0	Accepted
14	0	0	1	2	1.0	Accepted
15	0	0	1	2	1.0	Accepted
16	0	0	1	2	1.0	Accepted
17	0	0	1	2	1.0	Accepted
18	0	0	1	2	1.0	Accepted
19	0	0	2	1	1.0	Accepted
20	0	0	1	2	1.0	Accepted
21	0	0	2	1	1.0	Accepted
22	0	0	1	2	1.0	Accepted
23	0	0	1	2	1.0	Accepted
24	0	0	1	2	1.0	Accepted
25	0	0	2	1	1.0	Accepted
26	0	0	1	2	1.0	Accepted
27	0	0	1	2	1.0	Accepted
28	0	0	2	1	1.0	Accepted
29	0	0	1	2	1.0	Accepted
30	0	0	2	1	1.0	Accepted
31	0	0	2	1	1.0	Accepted
32	0	0	2	1	1.0	Accepted
33	0	0	2	1	1.0	Accepted
34	0	0	2	1	1.0	Accepted
35	0	0	1	2	1.0	Accepted
36	0	0	1	2	1.0	Accepted
37	0	0	1	2	1.0	Accepted
38	0	0	2	1	1.0	Accepted
39	0	0	1	2	1.0	Accepted
40	0	0	1	2	1.0	Accepted
41	0	0	2	1	1.0	Accepted

(continued)

**Table 3:** Item Relevance Rating of Neurology Experts on the Forward Translated SS-QoL (continued)

Item	Item Relevance Rating				I-CVI	Decision
	Not Relevant	Somewhat Relevant	Quite Relevant	Highly Relevant		
	Frequency					
42	0	0	1	2	1.0	Accepted
43	0	0	2	1	1.0	Accepted
44	0	0	1	2	1.0	Accepted
45	0	0	1	2	1.0	Accepted
46	0	0	1	2	1.0	Accepted
47	0	0	1	2	1.0	Accepted
48	0	0	2	1	1.0	Accepted
49	0	0	1	2	1.0	Accepted
50	0	0	1	2	1.0	Accepted
51	0	0	1	2	1.0	Accepted
52	0	0	1	2	1.0	Accepted
53	0	0	1	2	1.0	Accepted
54	0	0	2	1	1.0	Accepted
55	0	0	2	1	1.0	Accepted
56	0	0	1	2	1.0	Accepted
57	0	0	1	2	1.0	Accepted
58	0	0	2	1	1.0	Accepted
59	0	0	2	1	1.0	Accepted
60	0	0	2	1	1.0	Accepted
61	0	0	2	1	1.0	Accepted
62	0	0	1	2	1.0	Accepted
63	0	0	1	2	1.0	Accepted
64	0	0	1	2	1.0	Accepted
65	0	0	1	2	1.0	Accepted
66	0	0	2	1	1.0	Accepted
67	0	0	1	2	1.0	Accepted
68	0	0	2	1	1.0	Accepted
69	0	0	2	1	1.0	Accepted
70	0	0	1	2	1.0	Accepted

**Table 4:** Test on Face Validity of the Forward Translated Stroke-Specific Quality of Life Scale

Item	Major comments among three medical experts
1	No major modification
2	Revised from " <i>nahhirapan sa tiyak na gawain</i> " to " <i>nahhirapan sa isang gawain</i> " because the latter is very literal and specific.
3	No major modification
4	Revised from " <i>mahirap gawin</i> " to " <i>medyo mahirap gawin</i> ". Also, it was noted that translation of the choices in this 5-point Likert scale should not only be verbatim, but also as a whole scale or gradation.
5	No major modification
6	Revised to " <i>Nahirapan ka bang kumain, halimbawa, sa pagsubo, pagnguya o paglunok?</i> ". It was noted that " <i>pagsubo</i> " already includes the act of getting the food and putting it into the mouth.
7	No major modification

(continued)

**Table 4:** Test on Face Validity of the Forward Translated Stroke-Specific Quality of Life Scale

Item	Major comments among three medical experts
8	Revised to “ <i>Nahirapan ka bang maligong mag-isa</i> ” to emphasize the capability to take a bath by herself/himself.
9	No major modification
10	Added “ <i>tablet, laptop o iba pang gadget</i> ” because in the present the gadgets used for watching are not limited to television compared to when the original version was made (1999).
11-13	No major modification
14	Added “ <i>cellphone</i> ” because of the same reason as item 10
15	Revised to “ <i>Nahirapan ba ang ibang tao na maunawaan and sinasabi mo?</i> ” because the original version focuses more on the other people having trouble understanding.
16	No major modification
17	Revised to “ <i>Kailangan mo bang ulitin ang sinasabi mo upang maunawaan ka ng iba?</i> ” because of the same reason as item 15
18-25	No major modification
26	Revised to “ <i>Nahirapan ka bang gawin ang mga dati mong ginagawa?</i> ” because adding “ <i>mong</i> ” is a more appropriate translation.
27	Added “ <i>mag -type o mag -text</i> ” because of the same reason as item 10
28-36	No major modification
37	Revised to “ <i>Naging iritable ako</i> ” because “ <i>iritable</i> ” is a common term used by Filipinos
38-70	No major modification

**Table 5:** Demographic Profile of the Participants in Pilot Testing

DEMOGRAPHICS	
<b>Total Number of Respondents</b>	<b>10</b>
<b>Gender</b>	
Male	2
Female	8
<b>Age</b>	
18-35	1
36-55	5
>56	4
<b>Civil Status</b>	
Single	2
Married	6
Widowed	2
<b>Educational Attainment</b>	
Primary	0
Secondary	1
Tertiary	7
Graduate School	2
<b>Type of Stroke</b>	
Ischemic	5
Hemorrhagic	2
Both	2
Unrecalled	1

**DISCUSSION**

Quality of life encompasses an individual’s physical, social, and emotional well-being. As today’s clinical practice is based on evidence-based interventions, knowing the state of a patient’s quality of life allows a more holistic view of a patient and, thus, allows more patient-centered care. As such, it is integral to have a valid and appropriate objective measure to further knowledge and research on the most effective treatments. HR-QOL measures are being developed to determine the impact of a condition on their general health status, as well as their overall satisfaction and effectiveness of their corresponding interventions. With stroke being one of the leading causes of death and one of the top five diseases with the greatest burden in the Philippines.[15] Stroke survivors deal with varying degrees of physical and psychosocial challenges that greatly impact their quality of life. Despite its prevalence, there were no tools specifically developed to measure the quality of life of these patients in the Philippines. As per the researchers’ objectives, the SS-QOL scale was translated into Filipino and validated to act as the objective quality of life measure for stroke survivors in the Philippine setting.

The SS-QOL was previously developed in 1999 as a reliable, valid, and responsive measure of

stroke-specific HRQOL across the range of stroke symptoms and severity.[7] It has already been translated and validated to various languages. Though the study mostly utilized the previously published SS-QOL translation studies as a guide, key differences are present. Firstly, this study's scope reaches only up to the pilot testing. Next, the profile of this study's sample differed from other studies in terms of the size (10 patients; 2 males, 8 females). One was from 18-35 age group, five were from the 37-55 age group, and four were older than 56. Two were single, six were married, and two were widowed. For educational attainment, one finished secondary, seven finished tertiary, and two attended graduate school. Five experienced ischemic stroke, two experienced hemorrhagic, two had both types, and one could not recall the type of stroke. Additionally, the expert committee composed of three experts specializing in neurology was based on the translation methods applied for the SS-QOL German,[16] Igbo,[10] and French.[9] It has been recommended, however, by one of the experts not to limit the specialty of the expert panel to neurology and to consider other specialties of medicine that would be dealing with stroke survivors (e.g. Family Medicine, Internal Medicine). As it is not included in the scope of the study, the researchers did not add or delete any part of the questionnaire.

To translate the questionnaire, the researchers focused on a conceptual rather than literal translation and the usage of natural and socially acceptable language for the Filipino audience. Though it is generally practiced, the usual backtranslation method in translation studies would not be able to grasp the equivalence in meaning and concept of certain texts, especially in source materials where idioms and colloquial language are used. As such, they utilized the Collaborative Translation Protocol (CTP), translating the source text (the SS-QOL) via a group discussion and based the final translation on the group's consensus. With this, a more natural and less strained environment for discussion is created with different individuals with different skills and disciplinary expertise involved in the translation process.[6]

The researchers were able to establish face validity with minor revisions once the medical experts specializing in neurology reviewed, evaluated, and commented on each item to ensure that the items appeared to measure what it intended to measure

just from the overall face of the questionnaire. High content validity was also noted among the neurology experts via assessment of item level content validity index (i-CVI). Given that it met the minimum quality requirement for an instrument, the translated questionnaire was established as a valid outcome measure tool for SS-QOL.

To make it further suitable for the target population, great care was placed into translating the SS-QOL to Filipino to represent any cultural, psychological, social, and idiomatic discrepancies that could affect its overall appropriateness and readability. The group made it so that the tone, style, tenses, and overall context of each item were revised as necessary to make them suitable for their respective domains. One example of this would be Item number 6 in the translated questionnaire, wherein it was clarified by the neurology experts during the group discussion that, instead of cutting a food with a knife when eating, Filipinos would usually bite the food directly to cut it, sometimes even opting out of using utensils at all and using their hands to eat (*nagkakamay*). Furthermore, they even mentioned that the use of "*kutsara't tinidor*" is more common among the Filipinos rather than "*kubyertos*." Based on these comments, "*paggamit ng kubyertos*" was removed and replaced with the terms "*pagsubo at paglunok*." as it already includes the act of getting the food and putting it in the mouth. As such, the final revision for Item number 6 reads as "*Nahirapan ka bang kumain, halimbawa, sa pagsubo, pagnguya o paglunok?*" Another such dilemma was also encountered in Item number 39. The term "*ugali*" pertained to an individual's personality instead of "*pagkatao*" given that the latter term could refer to the overall identity of the individual. In Item number 40, "*pag-asa*" was used instead of "*pinanghinaan ng loob*" since the term could also have something to do with the future and the latter term was not conversational to fulfill the cultural aspect. "*Kapwa*" was also chosen in Item number 49 to further focus on the concept of socialization.

The use of figurative concepts was also analyzed since some of the items in the questionnaire made use of phrases that could pertain to something other than its intended meaning or interpretation. As such, idiomatic expressions were deemed appropriate instead of using the literal translation. In Item number 12, "*bahagi*" was used instead of "*panig*" as the language experts advised that the

latter term could have been pertaining to a social or political perspective instead of visual concepts as intended. In Item number 37, "*naging iritable ako*" was initially replaced with "*naging mainitin ang ulo*" given that the first translation was a subject of concern upon discussion with the language experts. However, upon discussion with the neurology experts, they advised to revise it back to the initial translation as it was a common conversational term used by Filipinos. Item number 38's sentence style for the phrase "*Naging maikli ang pasensya ko sa iba*" also proved to be of concern during the group discussion, as it could be directly translated into "My patience is short." As such it was suggested that a more idiomatic approach to translation be taken. Furthermore, "*ibang tao*" was used instead of "*iba*" since the former terminology pertains more to another personality and a person's relationship with other people. Thus, the final revision for the item was listed as "*Nawalan ako ng pasensya sa ibang tao.*" The term "*ipaunawa*" was used instead of "*ipaintindi*" in Items number 15 and 17, as the tone of the word would be less imposing or insisting. In Item number 50, the word "*pagkailang*" was used instead of "*para akong malayo*" as it would be more direct to match the word "withdrawn," an already direct term. Furthermore, in the same item, given the more negative tone and overall sense of the item, "*ibang tao*" was used instead of "*kapwa*" which has a more positive and personal tone.

Some of the items were revised based on the context the possibility of a neurological disease or entity. The term "*mag-isa*" was added to item number 8 to highlight the item's ability to assess the post-stroke patient's capability to take a bath by themselves, as noted in the FGD with neurology experts. Hemianopsia was a possible entity that was considered in the revision of Item number 12. Aphasia, a disorder which presents with speech disturbances, was also considered for Item number 16, thus, "*bumuo ng salita*" was used to better assess for this condition. The medical concept being considered in Item number 21 was revised to focus more on the difficulty in walking, based on the previous translation drafts of the questionnaire.

There was also the consideration of using more conversational and familiar Filipino terminology. This was best exemplified by Item number 51, in which the concern was that the original translations, though correct in the literal meaning, sounded

unnatural when used in a typical conversation ("*Maliit ang tiwala*"). As such, the final revision was written as "*Mababa ang kumpiyansa.*" "*Medyo mahirap gawin*" was used for the quantifier instead of "*mahirap gawin*" given that "*medyo*" is a common conversational term. During the discussion for the translation for Item number 10, it was brought up by the medical experts that technology has evolved since the original version's writing (1999). Thus, besides considering the original English question ("Did you have trouble seeing the television well enough to enjoy the show?") in mind, as per the comments made, the researchers added the terms "*tablet, laptop o iba pang gadget.*" Though directly borrowed, the English terms added were retained as it is customary in language translation of words relating to technology. The same reasoning was applied to Items number 14 (added "*cellphone*") and 27 (added "*mag-type o mag-text*").

Grammatical revisions were also established for uniformity. The tenses and sentence construction in Items number 59 to 65 were revised to be patterned after Item number 58. The same could be said for sentence construction in Items number 67 to 69. In Item number 70, the group decided to revise "*Ang pangkalahatang kalidad ng buhay ko ay...*" to "*Sa pangkalahatan, ang kalidad ng buhay ko ay...*"

A form of cognitive debriefing employed for this study was to measure the SS-QOL-Filipino's understandability (*kakayahang maintindihan ang tanong*) and answerability (*kakayahang sagutin ang tanong*) among the representatives of the target population and target language group to determine if the respondents understand the questionnaire in the same way the original SS-QOL would have been understood. Understandability was measured based on the ease of understanding the question and answerability was measured based on how easily the question was answered. Based on the answers of the 10 respondents who have answered all 62 items of the SS-QOL-Filipino as Filipino readers, the average mean for understandability and answerability responses is 4.05, which indicates that the translation was easy (*madaling maintindihin/sagutin*) to very easy (*napakadaling maintindihin/sagutin*) to understand and answer. Comments made were more on the applicability of the questions and the very content of the questionnaire. Some noted comments include: Item number 27 ("*Nahirapan ka bang magsulat o mag-type?*") "*Mahirap – Dahil*

*mahirap pang ipihit ang aking kamay”*; Item number 42 (*“Hindi na ako sumasama sa paglilibang ng pamilya ko.”*) *“Mahirap – Remember I’m single!!!”*

To check for consistency and agreement among the questionnaire items, ICC was assessed. Once subjected to IBM SPSS software, the obtained ICC was 0.761, indicating a strong agreement among raters and high similarity between values from the same group.[14] An ICC of >0.4 to 0.6 would indicate moderate agreement.

Overall, the SS-QOL-Filipino has been shown to have high relevance (strong face and content validity), with items that are easy to very easy to understand and answer, and with excellent consistency and agreement among its items.

## CONCLUSION

The English version of SS-QOL was successfully forward translated to the Filipino language using the Collaborative Translation Protocol. The translation was then evaluated by three Filipino language experts from the University of Santo Tomas Sentro sa Salin at Araling Salin. For the face validity, the concerns and suggestions raised by medical experts during the FGD were incorporated in the revised questionnaire.

The translated Filipino version of SS-QOL showed high content validity among the three experts in the field of neurology. Pilot testing was done to a desired population in which the results yielded a strong agreement on ICC. Therefore, the Filipino version of SS-QOL is a validated outcome measure tool in assessing the QOL among stroke patients in Metro Manila.

## ACKNOWLEDGEMENT

The researchers would like to thank Dr. Eva Irene Y. Maglonzo, Dr. Ida Marie Tabangay-Lim and Dr. Warren R. Bacorro for providing group assistance and technical expertise to accomplish the study. The group also expresses their gratitude particularly to Dr. Johnny K. Lokin, Dr. Encarnita Ampil, Dr. Alejandro Diaz and Dr. Joseree-Ann Catindig for assisting the

group with the dissemination of questionnaires and for providing their expertise. The researchers would also like to thank the stroke patients for allowing the group to obtain their data. This study is dedicated to them and would not have been possible without their participation, trust and willingness to share their experiences—making this meaningful contribution to stroke care in the Philippines.

## DISCLOSURE AND CONFLICT OF INTEREST

No conflicts of interest were presumed to occur between the investigators, participants and publication.

## AUTHORS CONTRIBUTION:

1. Research Project: A. Conception, B. Organization, C. Execution
  2. Statistical Analysis: A. Design, B. Execution, C. Review and Critique
  3. Manuscript Preparation: A. Writing the First Draft, B. Review and Critique.
- Angelica Marie V. Mandario, PTRP. MDa: 1A, 1B, 1C, 2A, 2B, 2C, 3A, 3B  
 Gerald Neil SJ. Manalo. MD: 1A, 1B, 1C, 2A, 2B, 2C, 3A, 3B  
 Marlo Eduardo M. Manalo, RMT. MD: 1A, 1B, 1C, 2A, 2B, 2C, 3A, 3B  
 Jann Marielle M. Mangali. MD: 1A, 1B, 1C, 2A, 2B, 2C, 3A, 3B  
 Erwin T. Manipol. MD: 1A, 1B, 1C, 2A, 2B, 2C, 3A, 3B  
 Christine Beatrix Y. Manalo, RMT. MD: 1A, 1B, 1C, 2A, 2B, 2C, 3A, 3B  
 Maria Minerva P. Calimag, MD, PhD: 1C, 2B, 2C, 3B  
 Wennielyn F. Fajilan, PhD: 1A, 1B, 1C, 2A, 2B, 2C, 3B  
 Elenita C. Mendoza, LPT, MA: 1A, 1B, 1C, 2A, 2B, 2C, 3B  
 John Dale V. Trogo, LPT, MA: 1A, 1B, 1C, 2A, 2B, 2C, 3B  
 Johnny K. Lokin, MD: 1A, 1B, 1C, 2A, 2B, 2C, 3B

## REFERENCES

1. WPRO | Noncommunicable diseases. (2025, Dec 4). Retrieved from: <https://www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases>
2. Causes of Deaths in the Philippines (Preliminary): January to November 2021 [Internet]. 2022 [cited 2024]. Available from: <https://psa.gov.ph/content/causes-deaths-philippines-preliminary-january-november-2021>
3. Navarro JC, Baroque AC 2nd, Lokin JK, Venketasubramanian N. The real stroke burden in the Philippines. *Int J Stroke* [Internet]. 2014;9(5):640–1. Available from: <http://dx.doi.org/10.1111/ij.s.12287>
4. Kim JS. Post-stroke mood and emotional disturbances: Pharmacological therapy based on mechanisms. *J Stroke* [Internet]. 2016;18(3):244–55. Available from: <http://dx.doi.org/10.5853/jos.2016.01144>
5. Pedersen SG, Heiberg GA, Nielsen JF, Friberg O, Stabel HH, Anke A, et al. Validity, reliability and Norwegian adaptation of the Stroke-Specific Quality of Life (SS-QOL) scale. *SAGE Open Med* [Internet]. 2018;6:2050312117752031. Available from: <http://dx.doi.org/10.1177/2050312117752031>
6. Taherdoost H. Validity and reliability of the research instrument; How to test the validation of a questionnaire/survey in a research. *SSRN Electron J* [Internet]. 2016;5(3) Available from: <http://dx.doi.org/10.2139/ssrn.3205040>
7. Williams LS, Weinberger M, Harris LE, Clark DO, Biller J. Development of a stroke-specific quality of life scale. *Stroke* [Internet]. 1999;30(7):1362–9. Available from: <http://dx.doi.org/10.1161/01.str.30.7.1362>. PMID: 10390308.
8. Williams LS, Weinberger M, Harris LE, Biller J. Measuring quality of life in a way that is meaningful to stroke patients. *Neurology* [Internet]. 1999;53(8):1839–43. Available from: <http://dx.doi.org/10.1212/wnl.53.8.1839>. PMID: 10563636
9. Legris N, Devilliers H, Dumas A, Carnet D, Charpy J-P, Bastable P, et al. French validation of the stroke specific quality of life scale (SS-QoL). *NeuroRehabilitation* [Internet]. 2018;42(1):17–27. Available from: <http://dx.doi.org/10.3233/NRE-172178>
10. Odetunde MO, Odole AC, Odunaiya NA, Odetunde NA, Okoye EC, Mbada CE, et al. Cross-cultural adaptation and validation of the Igbo language version of the stroke-specific quality of life scale 2.0. *Pan Afr Med J* [Internet]. 2020;37:111. Available from: <http://dx.doi.org/10.11604/pamj.2020.37.111.19557>. PMID: 33425144; PMCID: PMC7755362.
11. Zamanzadeh V, Ghahramanian A, Rassouli M, Abbaszadeh A, Alavi-Majd H, Nikanfar A-R. Design and implementation content validity study: Development of an instrument for measuring patient-centered communication. *J Caring Sci* [Internet]. 2015;4(2):165–78. Available from: <http://dx.doi.org/10.15171/jcs.2015.017>
12. Bacorro WR, Sy Ortin TT, Suarez CG, Mendoza TR, Que JC. Validation of the MD Anderson Symptom Inventory-Head-and-Neck-Filipino (MDASI-HN-F): clinical utility of symptom screening among patients with head-and-neck cancer. *BMJ Support Palliat Care* [Internet]. 2017;7(2):140–9. Available from: <http://dx.doi.org/10.1136/bmjspcare-2014-000787>
13. Lo SHS, Chang AM, Chau JPC. Establishing equivalence of a Chinese version of the stroke specific quality of life measure for stroke survivors. *Disabil Rehabil* [Internet]. 2017;39(11):1079–86. Available from: <http://dx.doi.org/10.1080/09638288.2016.1178348>
14. Landis JR, Koch GG. The measurement of observer agreement for categorical data. *Biometrics* [Internet]. 1977;33(1):159–74. Available from: <http://dx.doi.org/10.2307/2529310>
15. Loo KW, Gan SH. Burden of stroke in the Philippines. *Int J Stroke* [Internet]. 2013;8(2):131–4. Available from: <http://dx.doi.org/10.1111/j.1747-4949.2012.00806.x>
16. Ewert T, Stucki G. Validity of the SS-QOL in Germany and in survivors of hemorrhagic or ischemic stroke. *Neurorehabil Neural Repair* [Internet]. 2007;21(2):161–8. Available from: <http://dx.doi.org/10.1177/1545968306292255>



**Open Access** This article is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License, which permits use, share — copy and redistribute the material in any medium or format, adapt — remix, transform, and build upon the material, as long as you give appropriate credit, provide a link to the license, and indicate if changes were made. You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use. You may not use the material for commercial purposes. If you remix, transform, or build upon the material, you must distribute your contributions under the same license as the original. You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits. The images or other third party material in this article are included in the article's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this license, visit <https://creativecommons.org/licenses/by-nc-sa/4.0/>.