CULTURAL AND LINGUISTIC ADAPTATION AND VALIDATION OF SAQOL-39 QUESTIONNAIRE FOR TAMIL SPEAKING PERSONS WITH APHASIA

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JUNE, 2026

CERTIFICATE

This is to certify that this dissertation, entitled **"Cultural and Linguistic Adaptation and Validation of SAQOL-39 Questionnaire for Tamil Speaking Persons with Aphasia"** is a bonafide work submitted as part of fulfilment of the degree of Master of Science (Speech Language Pathology) of the student with Registration Number P01II24S123008. This has been carried out under the guidance of a faculty of this institute and has not been submitted earlier to any other university for the award of any other Diploma or Degree.

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CERTIFICATE

This is to certify that this dissertation, entitled **"Cultural and Linguistic Adaptation and Validation of SAQOL-39 Questionnaire for Tamil Speaking Persons with Aphasia"** has been prepared under my supervision and guidance. It is also being certified that this dissertation has not been submitted earlier to any other university for the award of any other Diploma or Degree.

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DECLARATION

This is to certify that this dissertation, entitled **"Cultural and Linguistic Adaptation and Validation of SAQOL-39 Questionnaire for Tamil Speaking Persons with Aphasia"** is the result of my own study under the guidance of Dr. Hema. N, Assistant Professor of Speech Sciences, Department of Speech Language Sciences, All India Institute of Speech and Hearing, Mysuru, and has not been submitted earlier to any other university for the award of any other Diploma or Degree.

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My Amma call You Jesus, My Appa call You Shiva, and some of My friends call You Allah, but to me, ***You are the One known by many names, whose power remains the same across every path.*** Thank you!!!!

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CHAPTER I

INTRODUCTION

1.1 Quality of Life: Conceptual Framework

Quality of Life (QOL) is the individual's perception of their well-being. The two core components of QOL are multidimensionality and subjectivity. Multidimensionality encompasses a wide range of domains, including physical, functional, emotional, and social well-being. It is inferred that aggregating the outcome of these domains can approximate a single QOL index (Stewart et al., 1981). In contrast, subjectivity refers to the notion that QOL can only be comprehended from the individual's perspective.

According to Cella (1994), QOL signifies the extent to which an individual's typical or anticipated level of well-being is impacted by the disease and its intervention. It was highlighted that, in the case of chronic health conditions, the survival rate of the patient or the relief of symptoms alone will not reflect functional recovery. In such circumstances, assessing QOL will become vital as it reflects the impact of illness on everyday functioning.

The World Health Organisation (WHO) defines QOL as the individual perception of their life status within the socio-cultural framework in which they live in relation to their goals, expectations, standards, and concerns. They state that QOL is subjective and also culturally influenced. Persons with similar medical diagnoses may have differences in terms of life satisfaction, depending on various factors such as socioeconomic status, customs, beliefs, support of the family, coping strategy, etc. Therefore, QOL cannot be globally measured based on a conventional biomedical view; rather, it should be designed in such a way that it takes into account the linguistic and socio-cultural context of the targeted population.

Quality of Life (QOL) has recently garnered significant value in the field of health, rehabilitation, and social research areas. It started transcending the conventional biomedical perspective, which generally emphasises medical diagnosis and life expectancy. In contrast, QOL prioritises the individual's perception of their physical health, mental well-being, level of autonomy, interpersonal relationships, environmental factors, and overall life satisfaction. In current healthcare practice, rehabilitation does not just focus on whether the individual is provided treatment for the underlying disease but also emphasises whether the individual is able to lead a satisfying and socially integrated life. As a result, QOL has become a crucial marker of rehabilitation outcome, predominantly in long-term conditions that impede the individual's functionality.

Aphasia is a clinical condition in which QOL is a primary concern, as it can affect the individual's functional capabilities across various domains. Aphasia is an acquired neurogenic language disorder affecting the comprehension and expression of spoken and written modalities, due to brain injury, predominantly in the left hemisphere. Typically occurs due to stroke or cerebrovascular accident, brain injury, brain tumours, brain infections, or progressive neurological conditions. The trajectory of aphasia recovery varies widely. Key predictors include aphasia severity, size, and site of lesion (Benghanem et al., 2019; Hillis et al., 2018; Kristinsson et al., 2022; Plowman et al., 2012; Watila & Balarabe, 2015). The post-onset depression and social isolation following aphasia will have a negative impact on the trajectory of recovery (Hilari & Northcott, 2006; Vickers, 2010).

Stroke or cerebrovascular accident is one of the leading causes of disability worldwide, while aphasia is one of the most disabling consequences. Over the years (1990 -2021), there has been a significant increase in the absolute number of stroke cases, 70% increment in stroke incidence, 44% increment in mortality due to stroke, 86% increment in stroke prevalence, and

32% Disability – adjusted life year (DALY). Globally, 87% of mortality due to stroke and 32% Disability – adjusted life year (DALY) are living in low and low-middle-income countries.

Eastern Europe, Central Asia, and East Asia experienced the highest incidence rates, with the greatest age-standardised incidence rates (ASIR) decline in the high-income Asia Pacific region. Mortality rate declined by 2.60% overall, with an increase in the male mortality and a decrease in female mortality. A notable increase in Disability – adjusted life year (DALY) in the middle socioeconomic status region, where factors such as age and rise in the population have been identified as major contributing factors. Also predicted that in 2035, there will be an increase in stroke cases, along with Age-standardised incidence rates (ASIR) and the age-standardised mortality rate (ASMR) declines

In India, as per the World Health Organization report, 5.8% mortality rate due to stroke. A considerable proportion of individuals who survived a stroke ended up with any variant of aphasia. As language is crucial for day-to-day functional activities, persons with aphasia (PWA) endure frequent frustration due to difficulty in conveying their basic needs, increased dependency, loss, and/or reduced autonomy. These limitations may adversely affect their quality of life (QOL). Communication breakdown will result in reduced self-esteem, social anxiety, feelings of embarrassment and anger, which inevitably makes the person avoid or withdraw from the conversation. Family relationships (spouse, children, caregivers) are also reported to experience burden and emotional stress. Thus, aphasia affects family dynamics along with the individual's QOL.

Traditionally, rehabilitation of aphasia was primarily concerned with impairment-based outcome measures. Professionals tend to track the progress (comparing pre- and post) solely based on language-based screening or diagnostic tests like WAB-R (Kertesz, 2007). Even though these outcome measures are important for making clear clinical diagnoses and planning

interventions, they do not focus on the individual's QOL. An individual may improve in terms of naming and repetition after intervention, but still have difficulty engaging in family discussions, be incapable of resuming their work, and lack self-confidence in decision-making. Therefore, modern rehabilitation has transitioned from a medical model to a participation-based and person-centred model where QOL has gained equal significance. In Western countries, this transition has led to the emergence of standardised health-related and aphasia-specific QOL questionnaires.

1.2 Aphasia and Quality of Life

Quality of life worsens after brain damage resulting from vascular lesions, head injury, or infections. Changes in quality of life (QL) in the poststroke period do not seem to be age- or sex-dependent; instead, they are due to the onset of depression and a low level of reacquisition of motor functions, above all in the upper limbs. QL improves within the family environment.

Aphasia is a loss of language due to injury to the left cerebral hemisphere, and generally causes significant changes in a patient’s self-image and family, social, and work relationships (Hemsley & Code, 1996). The detriment in language skills due to aphasia causes problems in verbal expression, auditory comprehension, reading, and writing. Aphasia is a well-known cause of limitation in communication activities, such as phone conversations or typing text messages. Aphasia will also have relatively little direct impact on the performance of domestic activities of daily living. However, it will particularly affect complex social activities, such as work, community activities, and leisure activities involving other people.

Research has documented high levels of depression and social exclusion (Parr, 2007) and low levels of leisure and other social activities, social contacts, and QoL among patients with aphasia (PWA) (Hilari & Wiggins, et al., 2003). Significant correlations have been found between the degree of aphasia and the social, emotional, mobility, and total scores of QoL,

measured with the Nottingham Health Profile (Franzén-Dahlin et al., 2010). In a population-based study, Lam and Wodchis (2010) found that aphasia exhibited the most significant negative influence on QoL, followed by cancer and Alzheimer's disease. PWA reported significantly worse QoL than non-aphasic patients, since aphasia influenced independence, social relationships, and access to their environment.

The consequences of aphasia are described by analysing the personal accounts of aphasic individuals, relatives, or friends as described by Le Dorze and Brassard (1995). These consequences were classified into three categories: disabilities, handicaps, and coping behaviours. In the first group, language disabilities and aphasia-linked difficulties were included. The handicaps included changes in communication situations, interpersonal relationships, loss of autonomy, and restriction of activities. Coping behaviours, however, were adopted by PWA and their relatives to adjust to the undesired effects of the various disabilities and handicaps they experienced.

1.3 Quality of Life Questionnaire for Persons with Aphasia

Several stroke-specific QoL scales have been developed, but most exclude stroke survivors with aphasia, who are most prone to social isolation and exclusion, due to the difficulties in developing a questionnaire for subjects with severe comprehension and expression deficits. The two paradigms regarding the studies on the impact of aphasia on patients' lives. From a qualitative perspective, ethnographic methods, observations, and analysis of artifacts such as diaries can reflect the everyday experiences of PWA and their social inclusion. However, they do not suggest how patients feel about their QoL. From a quantitative perspective, Hilari et al. (2007) have assessed the QoL of patients with severe aphasia through proxy questionnaires to report on their partners' health-related quality of life (HRQL). In this case, evaluating one's QoL is highly subjective. Information obtained from

QoL measures can help to identify patients' problems, determine treatment priorities, manage interventions, and monitor disease periods (Spaccavento et al., 2013).

Quality of Life Questionnaires in the Global Context (Panuccio et al., 2025) include- Aphasia Communication Outcome Measure (ACOM) (Hula et al., 2015), Aphasia Impact Questionnaire 21 (AIQ) (Swinburn et al., 2019; Yaşar et al., 2022), Aphasic Depression Rating Scale (ADRS) (Benaim et al., 2004), Assessment of Living with Aphasia (ALA) (Guo et al., 2017; Simmons-Mackie et al., 2014), Behavioural Outcomes of Anxiety Questionnaire (BOA)(Eccles et al., 2017), Communication Effectiveness Index (CETI)Lomas et al., 1989; Moretta et al., 2021), Communication Participation Item Bank (CPIB) (Baylor et al., 2017), Conversation and Communication Questionnaire for People with Aphasia (CCQA) (Horton et al., 2020), Decision Making Capacity (DMCA) (Carr, 2023)Measure of Stroke Environment (MOSE) (Babulal & Connor, 2016; Wang et al., 2022), Simple Aphasia Stress Scale (SASS) (Laures Gore & Rice, 2019), Social Activities Checklist (SOCACT) (Aujla et al., 2016), Stroke Social Network Scale (SSNS) (Northcott & Hilari, 2013), Visual Analog Mood Scales (VAMS) (Barrows et al., 2018).

Apart from the above-mentioned Western context, the Quality-of-Life Questionnaire in the Indian Context includes the Stroke and Aphasia Quality of Life Scale-39 (SAQOL-39) in Kannada (Kiran & Krishnan, 2013), Malayalam (Raju & Krishnan, 2015) and Hindi (Mitra & Krishnan, 2015).

1.4 The Stroke and Aphasia Quality of Life Scale - 39

The present study is interested in the Stroke and Aphasia Quality of Life Scale-39 (SAQOL-39) (Hilari et al., 2003). It is a health-related quality-of-life measure after stroke with three domains: physical, psychosocial, and communication. It is an adapted version 4 of the Stroke-Specific Quality of Life Scale (SS-QOL, Williams et al., 1999). It is a self-report

measure for people with stroke and aphasia, typically administered with the help of an interviewer. The SAQOL-39 applies to people who have experienced a stroke, including people with aphasia. It can be used with people with any severity of expressive aphasia. People with receptive aphasia, a score of ≥ 7/15 on the receptive domains of the Frenchay Aphasia Screening Test (FAST) (Enderby et al., 1987) (moderate or mild receptive aphasia), can self-report reliably on the SAQOL-39 (Hilari et al., 2001; 2003). It has three formats (Interviewer format, self-completion form, and Proxy version). The Interviewer format has been designed to be administered by researchers or clinicians who have experience working with people who have had a stroke. It is intended to be interviewer-administered with people with aphasia. This way, people with receptive aphasia can benefit from a multi-modal presentation, i.e., they can read and listen to the questions. People with expressive aphasia can point to their responses. It demonstrates good internal consistency, test–retest reliability, and validity, and adequate responsiveness to changes in a sample of patients with acute and chronic stroke.

Generally, professionals emphasize improving the deficits in persons with aphasia, such as communication, cognition, physical, and psychosocial aspects. The overall health-related quality-of-life disruption caused by aphasia is not very clear, and there are no investigations done in Tamil-speaking individuals with aphasia until now; it is worthy of research. Hence, an attempt is made to adapt the SAQOL–39 into the Tamil language, suiting the aphasia population in Tamil Nadu, a South Indian State of India

1.5 Need for the study

Tamil is a classical Dravidian language and one of India's official languages. It is spoken by approximately 70 to 80 million people in the Indian State of Tamil Nadu and the union territory of Puducherry, and other neighbouring states. There are also immigrants in other nations who speak Tamil.

Considering the incidence and prevalence of aphasia followed by stroke, there may be a significant number of Tamil-speaking persons with aphasia. India has the third–highest stroke prevalence in Asia after China and Japan. Tamil Nadu is considered one of the most highly populated states in India. The stroke incidence has been increasing by degrees (Jebasingh & Sivanesan, 2017).

The primary role of any healthcare professional, including a Speech-language pathologist, is to enhance the quality of life of individuals with aphasia. A speech and language assessment should include screening, diagnostic assessment tools, and questionnaires measuring the quality of life of individuals, which is considered ideal profiling of the persons with aphasia. However, how often quality-of-life measure questionnaires are administered in a clinical setting remains unanswered, leaving the individual's profile incomplete. However, there are few health-related quality-of-life measures in the Indian context.

Concerning all these, irrespective of what type of tool it is, screening, diagnostic, or quality of life, there are ideally two ways: either develop a new measure or adapt the existing ones. The adaptation is preferable because it appears more efficient than developing a new measure. There are numerous quality-of-life measures developed for English speakers that have later been translated into other languages. However, there is a dearth of literature on quality-of-life measures in Tamil-speaking persons with aphasia. Spontaneous translation is not an optimal way to assess quality of life for clinical and research purposes, as it may be subject to variability and is considered invalid.

The Stroke and Aphasia Quality of Life Scale-39 (SAQOL-39) measures health-related quality of life. It is the most widely translated and used quality-of-life measure for persons with aphasia (Panuccio et al., 2025). The tool is validated in over twenty languages (Chinese, Danish, French, Greek, Icelandic, Japanese, Italian, etc), including three Indian languages

(Malayalam, Kannada, and Hindi). Considering all the points, the need for the study is proposed as follows. Firstly, there is a dearth of literature on health-related quality of life measures in the Tamil Language. Secondly, the current literature review stated that SAQOL-39 is the most widely translated and acceptable tool with good validity and reliability (Panuccio et al., 2025). Thirdly, it helps identify the correlation between quality-of-life measures and aphasia severity and post-onset duration, which helps the clinician plan an effective treatment procedure and provides researchers a path to further explore aphasia in Tamil speakers.

1.6 Aim

The present study aims to translate, adapt, and validate the English version of The Stroke and Aphasia Quality of Life Scale-39 (SAQOL-39) in Tamil, a South Indian Language.

1.7 Objectives

1. To translate, adapt, and validate the Stroke and Aphasia Quality of Life Scale (SAQOL-39) (English version) into the Tamil language.

2. To assess quality of life aspects by administering the newly adapted Stroke and Aphasia Quality of Life Scale (SAQOL-39) in Tamil by considering neurotypical individuals and persons with aphasia.

3. To differentiate between neurotypical individuals and persons with aphasia with reference to the scores obtained on administering the Stroke and Aphasia Quality of Life Scale (SAQOL-39) in Tamil.

CHAPTER II

REVIEW OF LITERATURE

Understanding the quality of life (QOL) of individuals with aphasia is a consideration, given the profound and pervasive impact of communication-related impairment across all dimensions of human functioning. The present review examines the available national and international literature pertaining to the impact of aphasia on quality of life, the development and psychometric evaluation of the Stroke and Aphasia Quality of Life Scale – 39 (Hilari et al., 2003), and its cross-cultural and cross-linguistic adaptations, with particular reference to the Indian Context. Literature has been organised thematically, moving from broader conceptual discussions towards increasingly focused empirical evidence directly relevant to the present study.

2.1 Impact of Aphasia on Quality of Life

The consequences of aphasia radiate far beyond language impairment. It causes limitations in communication activities, including telephone conversations, text messaging, and participation in group activities, all of which are integral to contemporary social life. The broader handicaps enumerated by Le Dorze and Brassard (1995) encompass changes in communication situations, disruption of interpersonal relationships, loss of autonomy, and restriction of leisure and work-related activities. These consequences are not static; they interact dynamically with the individual's psychosocial resources, family support, and health environment throughout recovery.

High levels of depression, social exclusion, and reduced social contact among persons with aphasia have been consistently documented in the literature (Hilari & Wiggins et al., 2003; Parr, 2007). Significant correlations have been reported between aphasia severity and scores

on the social, emotional, mobility, and total QOL subscales of the Nottingham Health Profile (Franzén-Dahlin et al., 2010). A large population-based study demonstrated that aphasia has the most negative influence on QOL among all chronic health conditions (Lam et al., 2010).

Berg and colleagues (2003) identified depression onset as a factor negatively affecting the long-term language recovery after aphasia. Social isolation after aphasia compounds psychological deterioration (Hilari & Northcott, 2006; Vickers, 2010). The emotional consequences of aphasia are not merely reactive; they reflect the disruption in communicative self-efficacy. The Research Outcome Measurement in Aphasia (ROMA) Core Outcome Set, developed through international consensus, identified emotional well-being as one of the five core outcome constructs that any aphasia treatment trials must address (Wallace et al., 2022). It addressed the primacy of patient-reported outcomes (QOL) in aphasia research and clinical practice.

2.2 Quality of Life Assessment Tools for Aphasia

The Aphasia Communication Outcome Measure (Hula et al., 2015) employs item response theory modelling to provide a dimensionally calibrated measure of communicative functioning in persons with aphasia, and offers a precise measurement of communicative ability across a wide severity range.

The Aphasia Impact Questionnaire-21 (Swinburn et al., 2019) is a concise patient-reported measure that has been validated in Turkish (Yasar et al., 2022) and reported in the literature to possess good internal consistency ($\alpha = 0.77–0.92$). The Assessment of Living with Aphasia (Mackie et al., 2014) adopts an International Classification of Functioning (ICF)-based framework, measuring life participation rather than symptom severity, and has been validated and shown to be correlated with the SAQOL–39. The Behavioural Outcomes of Anxiety (Questionnaire Eccles et al., 2017) addresses the anxiety dimension of aphasia's

psychological impact, an aspect not fully captured by QOL instruments focused on board well-being. The Communication Participation Item Bank (Baylor et al., 2017) provides a validated measure of communicative participation in social roles. The Stroke Social Network Scale (Northcott & Hilari, 2013) quantifies the social network changes that occur after stroke and aphasia, which is an important mediating variable in QOL outcomes. The Simple Aphasia Stress Scale (Laures-Gore & Rice, 2019) offers a brief measure of aphasia-specific stress, while the Visual Analogue Mood Scales (Barrows et al., 2018) assess the mood status in aphasia through accessible visual analogue formats.

The Systematic review by Panuccio et al. (2025) provided the most comprehensive contemporary mapping of aphasia assessment tools available in the peer-reviewed literature through searches of PubMed, CINHAL, Web of Science, and Scopus up to August 2024. The authors identified 164 validated tools across eight evaluation domains. Of these, 78 were diagnostic tools, 16 were screening instruments, and 65 were outcome measures. Despite this diversity of instruments, SAQOL–39 was identified as the most widely translated and accepted quality-of-life tool for persons with aphasia, with accumulated peer-reviewed validation studies across more than twenty languages and demonstrating a consistently robust psychometric profile.

2.3 The Stroke and Aphasia Quality of Life Scale (SAQOL – 39)

The Stroke and Aphasia Quality of Life Scale – 39 (SAQOL -39) was developed by Hilari et al. (2003) as a health-related quality of life measure specifically designed for stroke survivors with aphasia. It evolved from the earlier Stroke -Specific Quality of Life Scale (Williams et al., 1999), with modifications to render it accessible to individuals with varying degrees of receptive and expressive aphasia. A pilot study first evaluated a modified version of the SS-QOL with persons with aphasia using an increased font size, shortened item stems, and

simplified response forms (Hilari et al., 2001). The initial 53-item SAQOL was subsequently subjected to item reduction and psychometric evaluation in a sample of ninety-five individuals with long-term aphasia, yielding the 39 item version, The SAQOL – 39 demonstrated conceptual clarity and psychometrically robust subdomains, with internal consistency of (Cronbach's $\alpha = 0.74–0.94$), excellent test–retest reliability (ICC = 0.89–0.98), and satisfactory construct validity (corrected domain-total correlations r = 0.38–0.58; convergent validity r = 0.55–0.67; discriminant validity r = 0.02–0.27) alongside minimal respondent burden (Hilari et al., 2003).

The SAQOL – 39 comprises 39 items distributed across three domains: (1) Physical domain (16 items), which covers self-care, mobility, work and upper extremity functions; (2) Communication domain (7 items), which assesses speaking clarity, wordfinding, and the impact of language problems on family and social roles; and (3) Psychosocial domain (16 items) which addresses thinking, personality, mood, energy, social and recreational participation. Each item is rated on a 5-point Likert scale: 1 (couldn't do it all) to 5 (no trouble at all) for the first section of questions, and 1 (definitely yes) to (definitely no) for the second subsection. Three administration formats are available: the interviewer format, the self-completion format, and the proxy version. Individuals with receptive aphasia scoring ≥ 7/15 on the receptive domains of the Frenchay Aphasia Screening Test (FAST; Enderby et al., 1987) have been shown to self-report reliably on the SAQOL-39 (Hilari et al., 2001; 2003). The proxy version enables family members or caregivers to provide surrogate ratings when the patient is unable to participate (Hilari et al., 2007).

2.3 Global Adaptations of the SAQOL – 39

Posteraro and colleagues conducted a two-phase programme of research to develop and standardise the Italian adaptation of the SAQOL-39. The initial study (2004)

employed forward and backward translation procedures followed by cognitive review to ensure item comprehensibility for individuals with varying degrees of aphasia. Sample size: Phase 1 (2004): Not specified; Phase 2 (2006): Multicentre sample across multiple Italian rehabilitation centres. Italian-speaking stroke survivors with post-stroke aphasia; Italy (multicentre). Satisfactory internal consistency values across the four subscale domains in both studies. Construct validity was assessed across multiple rehabilitation centres in the 2006 multicentre study. The multicentre design of the 2006 study strengthened the generalisability of findings and provided normative data for Italian rehabilitation settings, supporting clinicians' interpretation of individual patient scores.

The Greek adaptation of the SAQOL-39 was undertaken in two distinct phases. Kartsona and Hilari (2007) reported the initial cultural adaptation, employing a standard forward-backwards translation methodology and pilot testing with Greek-speaking stroke survivors with aphasia. Greek-speaking stroke survivors with aphasia (2007); broader stroke population including aphasia (2012); Good internal consistency reported in the 2012 SAQOL-39g evaluation. Acceptable test-retest reliability reported in the 2012 study. Four-domain structure replicated in the 2012 study; sensitive to differences in stroke severity and aphasia type. Efstratiadou et al. (2012) conducted the more comprehensive psychometric evaluation of the generic version (SAQOL-39g), confirming sound construct validity and sensitivity to aphasia classification. This two-study programme established the Greek SAQOL-39g as a scientifically rigorous and culturally relevant outcome measure for Greek clinical and research contexts.

Lata-Caneda et al. (2009) reported the cultural adaptation and preliminary validation of the SAQOL-39 into Castilian Spanish for use in Spain. The adaptation followed standard cross-cultural methodology, including forward translation, back-translation, expert committee review, and cognitive interviewing with Spanish stroke survivors with aphasia. Castilian

Spanish-speaking stroke survivors with aphasia in Spain. Satisfactory internal consistency across all four subscales was noted. Initial construct validity analyses were supportive; high completion rates and minimal missing data were reported. The authors emphasised that this adaptation for Spain is distinct from the Chilean Spanish version, given the meaningful linguistic and cultural differences between Spain and Latin America. Researchers are cautioned against applying one Spanish adaptation to another regional context without further validation.

Manders et al. (2010) described the adaptation and psychometric evaluation of a Dutch-language version of the SAQOL-39 specifically developed for use in Belgium. The adaptation involved translation into Belgian Dutch, multidisciplinary team review, and pilot testing with stroke survivors who had aphasia**.** Stroke survivors with aphasia, Belgium (Belgian Dutch-speaking). Satisfactory internal consistency coefficients across the four subscales. High completion rates and minimal missing data with interviewer assistance; acceptability confirmed. Convergent validity was established through correlations with measures of functional communication and psychological well-being. Despite sharing a common language with the Netherlands, Belgian Dutch has distinct regional and cultural characteristics that require separate adaptation, underscoring the importance of culturally specific adaptation even within closely related linguistic communities.

Berg and Haaland-Johansen (2011) presented the Norwegian adaptation of the SAQOL-39, referred to as the SALK-39 developed in collaboration with Statped Nord (Northern State Special Education Service) and Bredtvet Competence Center, as part of a national initiative. The adaptation followed established cross-cultural methodology involving bilingual translation, expert review, and pilot testing with Norwegian stroke survivors with aphasia. Preliminary reliability acceptable. Preliminary validity supported; further psychometric evaluation recommended. The SALK-39 is designed to be interviewer-administered, consistent with the original SAQOL-39 format. Its publication represented a

significant step in enhancing clinical infrastructure for HRQoL assessment in Norwegian aphasia services and enabling Norwegian contributions to international aphasia research.

Gimsujeong and Gimdeokyong (2012) reported the adaptation and psychometric validation of the SAQOL-39 into Korean. The adaptation involved systematic translation, cultural modification, expert review by bilingual clinicians, and cognitive interviewing with target participants like Korean-speaking stroke survivors with aphasia. Adequate internal consistency demonstrated. Construct validity demonstrated through within-scale and external criteria analyses. Cultural modifications were applied particularly to items addressing social roles, family participation, and communication within Korean societal norms, which differ meaningfully from those reflected in the original English version. The Korean adaptation provides the foundation for a validated HRQoL measure in Korean aphasia rehabilitation.

Rodrigues and Leal (2013) undertook the translation and psychometric evaluation of the SAQOL-39 into European Portuguese for use with Portuguese-speaking stroke survivors, including individuals with aphasia. The translation involved forward and backward translation by bilingual professionals, expert committee reconciliation, and cognitive pretesting with individuals with aphasia. Portuguese-speaking stroke survivors, including those with aphasia in Portugal. Satisfactory internal consistency across the physical, psychosocial, communication, and energy subscales. Adequate test-retest reliability over the specified retest interval. Four-subscale structure was preserved; structural validity was supported. Convergent validity was supported through significant correlations with established measures of disability and functional communication. The authors reflected on adjustments made to reflect European Portuguese usage and culturally appropriate activity references. The Portuguese SAQOL-39 provides clinicians and researchers in Portugal and Lusophone countries with a validated, culturally adapted instrument for assessing HRQoL in stroke and aphasia populations.

Diaz et al. (2013) undertook the cultural adaptation and psychometric evaluation of the SAQOL-39 for Spanish-speaking populations within the Chilean context. The adaptation process involved forward and backward translation procedures followed by expert panel review to ensure semantic and cultural equivalence with the original English version. The sample size was not explicitly reported in the available abstract. The Population tested was Stroke survivors, including those with aphasia. Satisfactory internal consistency was reported across subscales. Construct validity was demonstrated through the standard cross-cultural adaptation and preliminary clinical evaluation procedures. The study findings supported the Chilean version's acceptable psychometric properties and clinical utility for measuring HRQoL in Spanish-speaking stroke populations in Chile. The authors noted that linguistic nuances specific to Chilean Spanish required careful consideration to avoid inadequate capture of regional expressions and idiomatic usage relevant to the target population.

Kamiya et al. (2015) reported the Japanese adaptation of the SAQOL-39 and conducted a comparative investigation of HRQoL across different aphasia subtypes. The adaptation involved translation by bilingual speech-language pathologists, expert clinician review, and pre-testing with individuals with post-stroke aphasia, with particular attention to Japanese sociocultural norms. Japanese-speaking stroke survivors with aphasia, categorised by subtype (Broca's, Wernicke's, anomic, and other types). Acceptable internal consistency. Significant differences in HRQoL profiles across aphasia subtypes, particularly in the communication and psychosocial domains, demonstrate sensitivity to aphasia classification. The study demonstrated that the Japanese SAQOL-39 was sensitive to differences in aphasia presentation and type, making it a clinically valuable measure for use in Japanese stroke rehabilitation settings.

Noyan-Erbaş et al. (2016) reported the development and psychometric evaluation of the Turkish-language adaptation of the SAQOL-39. The adaptation process involved forward

translation by bilingual speech-language pathologists, backward translation, expert committee review, and cognitive pretesting with individuals with and without aphasia. Turkish-speaking stroke survivors with aphasia in Turkey. Satisfactory internal consistency across all four subscales. Adequate test-retest reliability over a two-week interval. Expected correlations with measures of disability, aphasia severity, and psychological well-being confirmed. Correlations with disability and aphasia severity measures supported concurrent validity. Cultural modifications were incorporated to ensure item content was appropriate and comprehensible within the Turkish sociocultural context. This study established the Turkish SAQOL-39 as a reliable and valid HRQoL measure for use in Turkish clinical and research settings.

Calis et al. (2016) independently developed and evaluated an alternative Turkish adaptation of the SAQOL-39, providing a second distinct validated instrument for Turkish-speaking stroke and aphasia populations. This adaptation arose separately from the primary Turkish version, employing expert translation, back-translation, expert panel review, and pilot testing with Turkish stroke survivors. Sample size: N = 40 patients with aphasia. Turkish-speaking stroke survivors with aphasia in Turkey. Adequate internal consistency for the overall scale and individual subscales. Satisfactory test-retest reliability reported. Correlations with the Ege Aphasia Test, Barthel Index, GHQ-12, and Brunnstrom Recovery Stages confirmed construct validity. Validated against established neurological and rehabilitation outcome measures. The existence of two separately validated Turkish adaptations of the SAQOL-39 reflects the broader international commitment to patient-centred outcome measurement. Both versions are listed in the official SAQOL-39 translation registry maintained by City, University of London, and researchers are encouraged to review both prior to selecting an instrument for their specific clinical or research context.

Guo et al. (2016, 2017) undertook a two-phase investigation of the SAQOL-39 in Singapore's linguistically diverse, multicultural population. Multicultural stroke survivors were

tested across English, Mandarin, Malay, and Tamil language versions in Singapore. The internal consistency across all four linguistic groups was acceptable (specific values not reported in available text). Acceptable validity and reliability confirmed across multiple language groups in the 2016 study. The 2017 study confirmed sufficient responsiveness to detect clinically meaningful changes in HRQoL over the course of rehabilitation. Together, these studies provided robust evidence for the psychometric adequacy of the SAQOL-39 in multicultural Asian settings and demonstrated the feasibility of deploying a single adapted instrument across diverse linguistic groups within a single country.

Qiu et al. (2019) conducted a comprehensive study evaluating the psychometric properties of the Chinese-language adaptation of the generic version of the SAQOL-39 (SAQOL-39g) for use with Mandarin-speaking stroke survivors in mainland China. The adaptation incorporated standard forward-backwards translation methodology, reconciliation by bilingual experts, and cognitive interviewing with Mandarin-speaking stroke survivors in mainland China. Satisfactory internal consistency indices were reported across domains. Satisfactory test-retest reliability reported (specific values not available in abstract). Confirmatory factor analysis confirmed the four-factor structure of the original instrument. The results demonstrated that the Chinese SAQOL-39g possessed satisfactory reliability and validity, and the four-factor structure of the original instrument was maintained. The Chinese version is a reliable and valid tool suitable for assessing HRQoL in stroke patients within mainland Chinese healthcare and research contexts.

Van Ewijk and colleagues conducted a comprehensive three-phase programme of research to develop and validate the Dutch (Netherlands) adaptation of the SAQOL-39, designated the SAQOL-39NL, by considering 47 adults with chronic aphasia (main validation). Dutch-speaking stroke survivors with aphasia and a broader generic stroke population; Netherlands. Cronbach's alpha: $\alpha = 0.89$ for the total scale; 0.84–0.91 across the four domains,

demonstrating good internal consistency. ICC (test-retest reliability): ICC = 0.90 for the total scale; 0.70–0.93 across domains, reflecting excellent to good test-retest reliability. Moderate intercorrelations between domains confirmed internal structural validity; no floor or ceiling effects were observed. Convergent validity r = 0.45 with established HRQoL measures. The third study (Raven-Takken et al., 2020) found that individuals with aphasia who scored≥7/15 in the receptive domains of the FAST could reliably self-report on the SAQOL-39NLg, providing important clinical guidance on when proxy-report should be considered. Collectively, this body of work established the SAQOL-39NL as a robustly validated and clinically applicable measure for Dutch stroke and aphasia populations.

Azizbeigi-Boukani et al. (2020) reported the development and psychometric validation of the Persian (Farsi) version of the SAQOL-39 for use with Persian-speaking stroke survivors with aphasia in Iran. The adaptation adhered to internationally recognised guidelines encompassing forward translation by two independent bilingual translators, synthesis, backward translation, expert committee review, and cognitive pretesting. Persian-speaking stroke survivors with post-stroke aphasia in Iran. Satisfactory internal consistency for each of the four subscales. Adequate test-retest reliability reported. Evidence of convergent and discriminant validity through expected patterns of correlation with related measures. Concurrent validity was supported through correlation with related HRQoL and aphasia severity instruments. Cultural modifications were made to specific items to reflect the Iranian sociocultural context, including culturally congruent references to daily activities, social participation, and family roles within Iranian society. The Persian SAQOL-39 contributes to the broader international literature on the cross-cultural adaptability of the scale.

Kariyawasam et al. (2020) reported the cultural adaptation and preliminary validation of the proxy-rated Sinhala-language version of the SAQOL-39g for use in Sri Lanka. A proxy version was selected, given the high prevalence of moderate-to-severe receptive aphasia in the

clinical population. The adaptation involved translation into Sinhala, back-translation, expert panel review, and pretesting with proxy respondents (typically family caregivers) of stroke survivors with aphasia. Proxy respondents (family caregivers) of Sinhala-speaking stroke survivors with aphasia in Sri Lanka. Acceptable internal consistency reported in preliminary validation. Content validity established; preliminary acceptability confirmed. Cultural adaptations aligned items with Sri Lankan sociocultural values, familial roles, and daily living practices. The Sinhala proxy SAQOL-39g represents an important step toward equitable HRQoL assessment in South Asian aphasia populations and demonstrates the feasibility of proxy-report applications in culturally diverse, lower-resourced settings

Yolwong et al. (2023) conducted a pilot study examining the Thai-language adaptation of the SAQOL-39g, referred to as the SAQOL-39gTH, for use with Thai-speaking stroke survivors, including individuals with aphasia. As a pilot study, the work represented an initial investigation into feasibility and preliminary psychometric properties. The sample size was a small pilot sample (specific N not reported). Thai-speaking stroke survivors, including individuals with aphasia, from Thailand. Preliminary evidence of internal consistency (specific values not reported). Preliminary feasibility supported and acceptable item completion rates reported. The pilot study identified areas requiring further refinement, including the clarification of specific items and the development of supporting pictographic materials to assist individuals with aphasia. The SAQOL-39gTH represents an emerging contribution to HRQoL assessment for Thai aphasia populations and lays the groundwork for a rigorous full validation study.

Sommer et al. (2024) presented the development and psychometric evaluation of the Danish adaptation of the SAQOL-39g, referred to as the SAQOL-39gDK. The process followed COSMIN guidelines and entailed forward translation, synthesis, back-translation, expert committee review, and pre-testing with Danish stroke survivors, including individuals

with aphasia. Danish-speaking stroke survivors, including those with aphasia, Denmark. High internal consistency across subscales, Satisfactory test-retest reliability over a two-week interval. Factor structure analyses broadly supported the original four-domain model. Certain items required modification to align with Danish cultural norms and the Danish healthcare system. The SAQOL-39gDK contributes to validated HRQoL assessment for Danish-speaking stroke and aphasia populations and enables cross-national research comparisons.

Python et al. (2025) reported the cultural adaptation and psychometric validation of the French-language version of the SAQOL-39, termed the SAQOL-39F, specifically designed for French-speaking adults with chronic aphasia. The adaptation followed internationally recognised guidelines, incorporating iterative translation, expert consensus, and qualitative cognitive interviews with individuals with aphasia. French-speaking adults with chronic post-stroke aphasia; France and French-speaking Switzerland. Test-retest reliability assessed; specific values not available in abstract. Construct validity: Factor structure consistent with the original English version. Concurrent validity was assessed and reported as supportive. The authors noted the unique challenges of adapting a self-report instrument for individuals with aphasia in a French-speaking context, including the need to simplify vocabulary without compromising conceptual equivalence. The SAQOL-39F fills a critical gap in the availability of validated HRQoL measures for French-speaking aphasia populations**.**

2.4 Indian Adaptations of the SAQOL – 39

The Kannada trans adapted version of SAQOL-39 was administered in 32 aphasic individuals in different hospitals and rehabilitation centres across Karnataka, and results revealed good acceptability, excellent test-retest reliability (ICC = 0.8), and high internal consistency (Cronbach's $\alpha = 0.9$), confirming its validity and reliability. Authors stated that the

Kannada version of SAQOL–39 helps measure the severity of quality of life in Kannada-speaking individuals with aphasia (Kiran & Krishnan, 2013).

Adapting and validating the Stroke and Aphasia Quality of Life Scale-39 (SAQOL-39) in 48 Malayalam-speaking individuals with aphasia post-onset over 6 months. Results revealed excellent psychometric properties, including high test-retest reliability (ICC = 0.91) and internal consistency (Cronbach's α = 0.98), with minimal missing data. The investigators concluded that the SAQOL-39 Malayalam version is a valid, reliable, and socio-culturally acceptable tool for measuring quality of life in persons with aphasia who speak Malayalam, also facilitating cross-cultural and cross-linguistic comparisons (Raju & Krishnan, 2015).

The Stroke and Aphasia Quality of Life Scale-39 (SAQOL-39) was adapted and validated in 84 Hindi-speaking persons recruited from central northern India who had aphasia to assess the quality of life. Results revealed that Hindi SAQOL-39 showed high test–retest reliability (ICC = 0.9) and internal consistency (Cronbach's α = 0.98) with minimal modifications. Thus, researchers concluded that it is a valid, reliable, robust measure for assessing quality of life and facilitates cross–cultural and cross-linguistic comparisons (Mitra & Krishnan, 2015).

Collectively, these studies highlight the importance of developing and standardizing quality of life measures in regional Indian languages for persons with aphasia. This underscores the need to extend such efforts to other underrepresented Indian languages, enabling broader cross-cultural and cross-linguistic comparisons.

CHAPTER III

METHOD

The aim of the present study is to culturally and linguistically adapt and validate the Stroke and Aphasia Quality of Life Scale – 39 (SAQOL- 39) for Tamil-speaking persons with aphasia.

3.1 Research Design

The study employed a descriptive research design, as the primary objective of the study was to adapt and preliminarily validate a health-related quality-of-life questionnaire for a specific linguistic and cultural group. In addition to that, a standard group comparison method was also employed to compare the performance of the neurotypical individuals (control group) with that of persons with aphasia (clinical group) on the Tamil version of SAQOL – 39 to ensure that the adapted tool is sensitive enough to detect meaningful differences between those two groups.

The study adopted a cross-sectional design, and purposive sampling was used to recruit participants. It allowed inclusion of participants who closely matched the predefined inclusion criteria, as the clinical group required participants with specific diagnoses, linguistic backgrounds and post-onset duration, which contributed to the study's internal validity.

3.2 Participants

The total sample size for this study comprised 45 participants, divided into two distinct groups. Group I – Control Group, consisted of 30 participants with no earlier history of speech, language, hearing, neurological or psychological disorders. Group II – Clinical group, consisted of 15 participants with a provisional diagnosis of aphasia following a cerebrovascular accident or stroke. The age range across both groups was 18 to 80 years.

Table 3.1 Demographic details of the Group I (Neurotypical Individuals)

Sl. No	Age/Sex	Education level	Language status
1.	20/M	Diploma	Bilingual
2.	22/M	UG	Bilingual
3.	25/M	UG	Bilingual
4.	21/F	Diploma	Bilingual
5.	28/F	12th	Bilingual
6.	30/F	UG	Bilingual
7.	34/M	Diploma	Bilingual
8.	35/M	PG	Bilingual
9.	37/M	UG	Bilingual
10.	39/F	12th	Bilingual
11.	31/F	UG	Bilingual
12.	40/F	10th	Bilingual
13.	45/M	UG	Bilingual
14.	48/M	Diploma	Bilingual
15.	50/M	10th	Bilingual
16.	42/F	UG	Bilingual
17.	50/F	10th	Bilingual
18.	49/F	PG	Bilingual
19.	55/M	Diploma	Monolingual
20.	57/M	UG	Bilingual
21.	60/M	12th	Monolingual
22.	53/F	PG	Bilingual

23.	51/F	PG	Bilingual
24.	58/F	UG	Bilingual
25.	65/M	12th	Monolingual
26.	63/M	Diploma	Monolingual
27.	71/M	UG	Bilingual
28.	69/F	12th	Monolingual
29.	65/F	Diploma	Monolingual
30.	60/F	12th	Monolingual

Note: Education levels are abbreviated as: UG - Undergraduate; PG – Postgraduate; Monolingual L1 – Tamil; Bilingual L1- Tamil, L2-English.

Table 3.2 Demographic details of Group II (persons with aphasia)

Sl. No	**Age/Sex**	**Education Level**	**AQ score**	**Aphasia type**	**Aphasia Severity**	**Duration of illness (months)**	**Language Status**
1.	20/M	UG	58	Broca's	Moderate	3	Bilingual
2.	34/M	UG	84	Anomic	Mild	5	Bilingual
3.	30/F	Diploma	81	Transcortical Motor	Mild	4	Bilingual
4.	38/M	Diploma	77	Wernicke's	Mild	6	Bilingual
5.	25/F	PG	63	Conduction	Moderate	3	Bilingual
6.	39/M	UG	77	Broca's	Mild	5	Bilingual
7.	44/M	12th	72	Anomic	Moderate	6	Monolingual
8.	47/F	UG	78	Broca's	Mild	3	Bilingual
9.	53/M	12th	61	Transcortical Motor	Moderate	5	Bilingual

10.	55/M	UG	79	Wernicke's	Mild	4	Bilingual
11.	60/M	UG	55	Broca's	Moderate	6	Bilingual
12.	70/M	12th	66	Conduction	Moderate	5	Monolingual
13.	65/F	12th	74	Anomic	Moderate	3	Monolingual
14.	73/M	Diploma	78	Broca's	Mild	6	Monolingual
15.	75/M	10th	59	Broca's	Moderate	4	Monolingual

Note: Education levels are abbreviated as: UG - Undergraduate; PG – Postgraduate; Monolingual L1 – Tamil; Bilingual L1- Tamil, L2-English

3.3 Participant Selection

3.3.1 Ethical Considerations

Ethical clearance for this study was obtained in accordance with the guidelines stipulated by the Ethical Committee for Bio-Behavioural Sciences for human subjects (Basavaraj & Venkatesh,2009) set by the All India Institute of Speech and Hearing (AIISH), Mysore, with the reference number SH/IRB/M.5/SLP.07/2025-2026 dated 11.03.2026 (Appendix A).

Prior to their enrollment in the study, all participants, where applicable, and their family members or caregivers were provided with detailed information about the study, including its nature, purpose and procedures. This information was communicated both verbally and in writing through a consent form prepared in their native language in accordance with AIISH ethical guidelines.

The consent form (Appendix B) explicitly stated that participation was solely voluntary and that participants had the right to withdraw from the study at any point. Given that the clinical group comprised individuals with aphasia, special care was taken to ensure that the consent process was accessible. The study was noninvasive and used only standardized

assessment and screening tools, thus posing no risk to the participants' physical or psychological aspects. Strict confidentiality was maintained throughout the study.

3.3.2 Source of Participants

The participants were recruited from hospitals and rehabilitation centres located across Tamil Nadu. Data were collected through home visits, hospital visits, and rehabilitation centres. Offline face-to-face administration was used throughout the study. Participants were included in the study only after fulfilling the predefined inclusion criteria. The criteria are listed in the following subsections.

3.3.3 Inclusion Criteria for Group I Clinical Group (Persons with aphasia)

- Participants were diagnosed with aphasia, either fluent or non-fluent, resulting from a history of cerebrovascular accident (CVA) or stroke. The diagnosis was provided through the administration of the WAB-R Tamil version (Hema & Vasuprada, 2023) (Unpublished ARF Project) by the researcher, with reference to the relevant radiological investigations, such as MRI or CT scans of the brain by the neurologist.
- The post-onset duration at the time of participation was three to six months.
- No other associated disorders like dementia or other psychological illnesses.

3.3.4 Inclusion Criteria for Group II Control Group (Neurotypical Individuals)

- Participants with no history or self-reported complaints of speech, language, hearing, or other communication disorder were recruited based on a semi-structured interview conducted by the researcher before enrollment.
- No history of sensory, motor, or cognitive impairment.
- Cognition was recorded as normal as per the Montreal Cognitive Assessment (MOCA) Tamil version (Arathi et al., 2025) administered.

- All participants were screened using the A WHO Ten-Question Disability Screening Checklist (Singhi, Kumar, Prabhjot & Kumar, 2007) to ensure the absence of significant disability across domains, including hearing, intelligence, motor functions, and behavioural and emotional functioning.

3.3.5 Common Inclusion Criteria for Both Groups

- Age range between 18 and 80 years
- Tamil as the first language (L1) and primary means of daily communication, and able to read and write. Both monolingual and bilingual participants were eligible, provided that Tamil was their (L1). Second languages (L2 and/or L3) included English, Hindi, and/or Kannada.
- A minimum of 10 years of formal education, irrespective of the medium of instruction.
- All the participants were right-handers.
- Middle socioeconomic status as determined by the Modified Kuppuswamy socioeconomic scale (Saleem & Jan, 2021).
- Participants with any kind of sensory deficits were excluded.

3.4 Materials

The following tools were used in this study:

- Informed Consent Form (as per All India Institute of Speech and Hearing, Mysore, ethical committee guidelines for Bio-behavioural Sciences for human subjects (2009)
- General Information Sheet.
- Western Aphasia Battery, WAB-R Tamil (Hema & Vasupradha, 2023) (Unpublished ARF Project).
- Modified Kuppuswamy socioeconomic scale (Saleem & Jan, 2021).

- A WHO Ten-Question Disability Screening Checklist (Singhi, Kumar, Prabhjot & Kumar, 2007).
- The Stroke and Aphasia Quality of Life Scale (SAQOL–39) (Hilari et al., 2003) was used as a source for adaptation.
- SAQOL – 39 Tamil version, the adapted version.

3.5 Assessment Procedure

The study was conducted in four distinct phases.

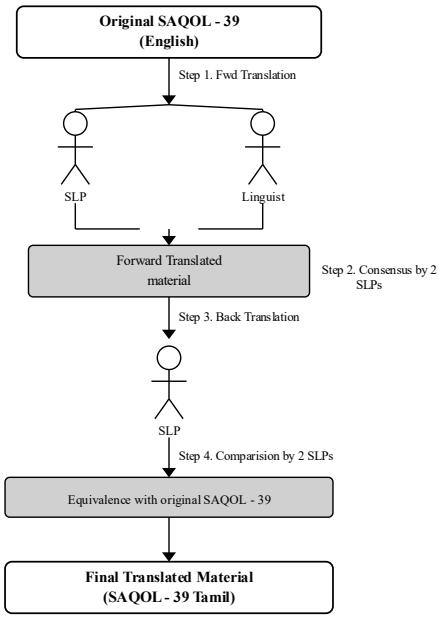
3.5.1 PHASE I: Adaptation of the Stroke and Aphasia Quality of Life questionnaire – 39 (SAQOL – 39) to Tamil Language

The first phase of the study involved the systematic translation and cultural adaptation of the Stroke and Aphasia Quality of Life Scale- 39 (SAQOL–39) from English (Appendix C) (the source language) into Tamil (the target language).

Formal Permission to translate and validate the Stroke and Aphasia Quality of Life Scale- 39 (SAQOL–39) was obtained from the original copyright holder, Professor Katerina Hilari, through an email dated 29th May 2025 (Appendix D).

The Translation followed the Brislin Method (1970) of cross-cultural adaptation, which is a widely recognised framework for adapting health-related tools across linguistic and cultural boundaries. It involves a structured series of steps designed to ensure that the translated version is not merely a literal linguistic conversion, but a meaningful and culturally equivalent rendering of the original version. The translation process is depicted in Figure 3.1.

Figure 3.1: Flowchart showing the steps of the Brislin (1970) method of adaptation



Step 1: Forward Translation

In the initial direct translation, the SAQOL–39 was translated from English to Tamil independently by two professional experts. The first translator was a qualified Speech Language Pathologist, and the second translator was a professional holding a Master's degree in Linguistics. Both are native Tamil speakers with demonstrable proficiency in Tamil literacy. Both translators worked independently, without consultation, to produce two separate Tamil versions of the SAQOL–39. This parallel independent translation process helped to prevent shared errors or biases that might arise from a single translator's interpretation.

Each item in the SAQOL–39 was translated using one of the three approaches, depending on the nature of the item:

1. Direct translation: English test items were translated into Tamil, retaining the semantic concepts and linguistic structure of the actual test items/stimuli.

2. Direct translation replacing concepts: Semantic concepts were replaced while maintaining the linguistic structure of the actual test items/stimuli.

3. Introduction of new words or phrases: Both the semantic concepts and linguistic structures were replaced with new phrases and words.

Step 2: Expert Panel Review

Following the completion of the forward translation, both Tamil versions were reviewed by an expert panel comprising three Speech-Language Pathologists. Each with a minimum of five years of clinical experience. All three panel members were native Tamil speakers with proficiency in Tamil Literacy.

The expert panel examined both the translations side by side and in comparison, with the original version of SAQOL – 39, identifying any discrepancies between the two translated versions, evaluating the cultural appropriateness and clinical meaningfulness of each translated item, and arrived at a consensus version both linguistically accurate and culturally appropriate for the Tamil-speaking population in Tamil Nadu. During the expert panel review, all three panel members stated that all questions were appropriate except the Self Care item (SC1). All three unanimously recommended modifying the Self Care item (SC1) question (preparing food) to eating food, as the panel collectively stated that the act of preparing food is not a reliable or culturally appropriate indicator for the target population. Based on this expert consensus, the SC1 question was revised from “preparing food” to “eating food,” while other questions remain unchanged. The expert panel discussion resulted in a refined, consensus Tamil translation of the SAQOL–39 that incorporated the best elements of both the forward translations.

Step 3: Blind Back Translation

The consensus Tamil version of the SAQOL–39 resulted from the expert panel review, was subjected to blind back translation. In this step, a Speech Language Pathologist who was a native speaker of Tamil but had not been involved in either of the two earlier steps, translated the consensus Tamil version of the SAQOL–39 into English without access to the original English version of the SAQOL–39.

Step 4: Comparison and Final Adaptation

In the final step, the researcher compared the blind back-translated English version systematically with the original SAQOL – 39 (Hilari et al., 2003), item by item, to identify any errors or conceptual mismatches that occurred during the forward translation and/or the consensus process.

When discrepancies were identified, the relevant items were revisited and modified in consultation with the expert panel and translators until an equivalence between the original version and the back-translated versions was achieved.

The Final Tamil version covered all three domains of the SAQOL – 39

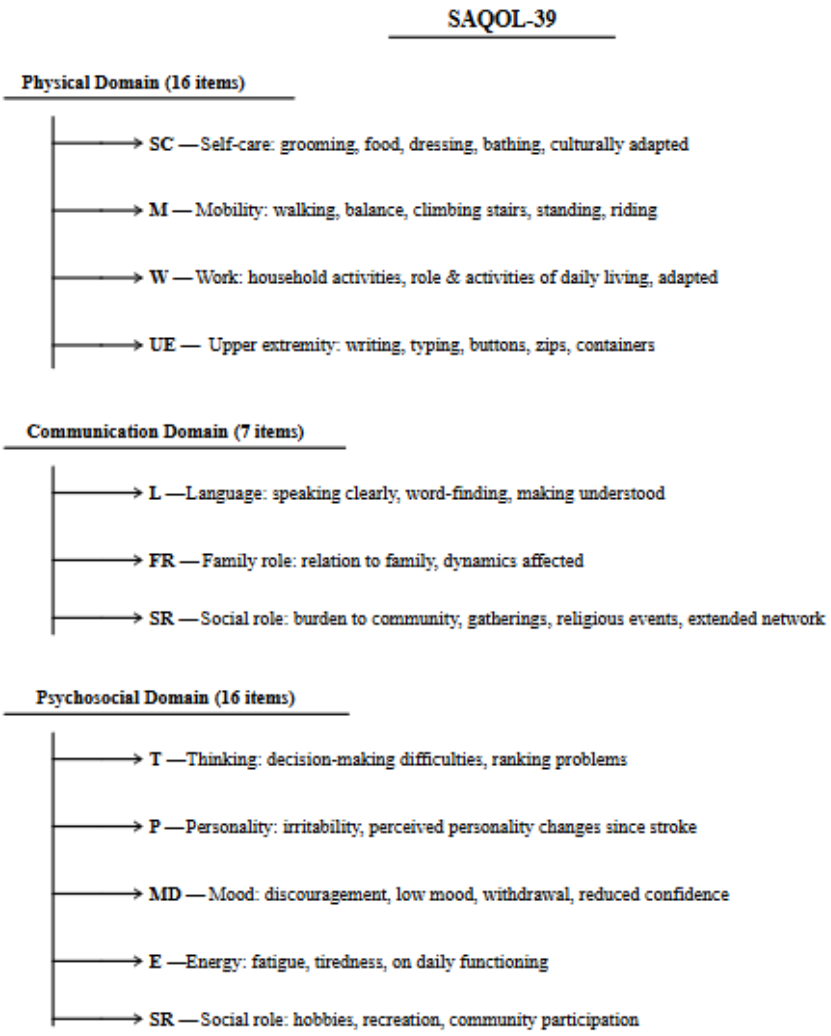
(1) Physical domain (16 questions)
(2) Communication domain (7 questions) and
(3) Psychosocial domain (16 questions). This ensured the completeness and the preservation of the multidimensional nature of the SAQOL – 39

3.5.2 PHASE II: Incorporation of the Socio-Cultural and Linguistic Modification

The second phase focused on ensuring that the Tamil version of the SAQOL–39 was not merely a linguistically accurate translation but also a culturally sensitive and contextually appropriate instrument for use with Tamil-speaking persons with aphasia. This phase involved a careful review of each item in the scale from the perspectives of the socio-cultural context of

Tamil Nadu, including its linguistic conventions, cultural practices, social norms, and everyday living conditions. The Tamil version of the SAQOL–39 comprises three domains and a total of 39 items. The structure of the SAQOL-39 (original version) scale is depicted in Figure 3.2.

Figure 3.2 Conceptual Framework of the Stroke and Aphasia Quality of Life Scale – 39



Each item in the Tamil version of the SAQOL–39, scored using a 5-point Likert scale. For items in the Physical and Communication Domains, the response options were 1 = Could not do it at all; 2 = A lot of trouble; 3 = Some trouble; 4 = A little trouble; 5 = No trouble at all. For items in the Psychosocial domain, the response options were: 1 = Definitely yes; 2 =

Mostly yes; 3 = Not sure; 4 = Mostly no; 5 = Definitely no. Mean Score, Physical score, Communication score, and Psychosocial score are computed from the Tamil version of the SAQOL–39. Higher scores indicate better quality of life across all domains.

3.5.3 PHASE III: Content Validation of the Tamil SAQOL – 39

The third phase of the study involved a systematic evaluation of the content validity of the adapted Tamil version of the SAQOL–39. Content validation was done by a panel of three Speech Language Pathologists who had not been previously involved in the translation or adaptation process. All three validators were native Tamil Speakers with Proficiency in Tamil Literacy, and each had a minimum of five years of clinical experience.

Each validator independently rated all 39 items of the Tamil SAQOL–39 using a 5-point rating scale adapted from the Aphasia Treatment Manuals (Goswami et al., 2010). The rating scale ranged from 1 (very poor) to 5 (excellent), with validators asked to rate each item on 10 parameters: simplicity, familiarity, presentation, relevance, accessibility, flexibility, feasibility, scoring pattern, and scope of practice as mentioned in Table 3.3. The Validators were also asked to provide written comments and suggestions for any items they considered as unclear, ambiguous, culturally inappropriate, or otherwise in need of modification. Items that received lower ratings were flagged for revision. The final content-validated Tamil SAQOL-39 was taken forward for empirical validation in the next phase.

Table 3.3

Definitions of Parameters of Content Validity

Sl No	Parameter	Definition
1.	**Simplicity**	Test stimuli are comprehensible
2.	**Familiarity**	Stimuli are familiar

3.	**Presentation**	The number of stimuli present in each subsection is placed appropriately
4.	**Relevance**	The test stimuli are culturally and linguistically appropriate.
5.	**Accessibility**	The test material is user-friendly
6.	**Flexibility**	The stimuli can be easily modifiable
7.	**Feasibility**	The test material is viable/ effective
8.	**Scoring pattern**	The scoring pattern is followed in the resource material applicable.
9.	**Scope of practice**	The test material is within the profession's scope of practice or the personal scope of practice
10.	**Coverage of parameters**	The resource material contains the essential language components to be treated.

3.5.4 PHASE IV: Validation of the Tamil SAQOL – 39 on Clinical (persons with aphasia) and Control (neurotypical individuals) groups.

The fourth and final phase of the study involved the administration of the content-validated Tamil SAQOL – 39 to both groups of participants, Group I (n = 30) and Group II (n = 15), in order to evaluate its psychometric properties.

Pre – Assessment Procedure

Before administering the Tamil SAQOL – 39, the researcher conducted an initial assessment session, which began by signing the informed consent form and completion of a detailed case history, which included demographic details, languages known, handedness,

educational background, and occupational history, information about hearing, vision, and relevant medical and neurological history.

For participants in the clinical group, in addition to the case history information, information was gathered with the active involvement of the participant's caregiver or family member, where necessary, given the communication difficulties associated with aphasia. This included detailed information about the nature of the stroke, post-onset duration, relevant radiological findings, and the participant's current level of functioning across communication and daily living domains.

Following this, WAB-R Tamil (Hema & Vasupradha, 2023) was administered to all participants in the clinical group to confirm the diagnosis of aphasia, classify its type (fluent or nonfluent), and establish the severity of aphasia as measured by the Aphasia Quotient (AQ).

For the Control group, the MoCA Tamil (Arathi et al., 2025) and the WHO Ten-Question Disability Screening Checklist (Singhi et al., 2007) were administered to verify eligibility.

Pre – Test Instructions

The researcher explained to each participant that the questionnaire consisted of 39 questions designed to assess their quality of life across physical, communication, and psychosocial domains following stroke. The researcher read each question aloud, and the patient had to respond based on their personal experiences after a stroke over the past week. The responses were recorded on a 5-point Likert scale ranging from 1 = could not do it at all to 5 = no trouble at all. They were also reassured that there were no right or wrong answers, and honest responses reflecting their true experiences were encouraged. The researcher can use gestures and repetitions to facilitate comprehension without influencing the response. Sufficient time was provided to each participant to give their responses

Administration of the Tamil SAQOL – 39

The SAQOL–39 Tamil version was administered to all 45 participants through a face-to-face interview by the researcher, who is familiar with both the aphasia assessment and the Tamil SAQOL – 39. Before beginning the administration, participants were provided with an orientation to the scale, including the explanation of its purpose, the nature of the questions, and the response options. All responses were recorded directly on the SAQOL–39 scoring sheet by the researcher.

Test- Retest Reliability Administration

To assess the test–retest reliability of the Tamil SAQOL–39, a subset of 7 participants from the control group was re-administered the scale, 2 weeks after the first administration.

Statistical Analysis

All collected data were entered into a coded data sheet and subjected to statistical analysis using IBM SPSS (Statistical Package for the Social Sciences package, version 20). Appropriate descriptive and inferential statistical procedures were applied to evaluate the psychometric properties of the adapted scale.

CHAPTER IV

RESULTS

SAQOL – 39 was a widely accepted and used health-related quality of life questionnaire. The primary purpose of the present study was to adapt this questionnaire to the Tamil language and assess the quality of life of individuals by administering the newly adapted SAQOL – 39 Tamil version across two groups (Control vs Clinical group) and to differentiate the two groups with reference to the scores obtained on SAQOL – 39 Tamil. The results of this study are documented under the following headings: (1) Descriptives of Group I and Group II, (2) Content Validation of SAQOL – 39, (3) Descriptives for SAQOL – 39 Tamil Domains scores, (4) Internal Consistency of the Tamil SAQOL – 39, (5) Test of Normality, (6) Item-Level Analysis: Response Distribution Across Groups, (7) Test – Retest Reliability and (8) Correlational Analysis.

4.1 Descriptive Statistics of Group I and Group II

The present study recruited a total of 45 participants distributed across two groups. Group I (neurotypical individuals, n = 30) and Group II (persons with aphasia, n =15). The mean age for Group I was 45.77 (SD = 15.08), and for Group II was 48.53 years (SD = 17.67). The two groups were reasonably well matched in terms of age, which is important to ensure that any observed differences in quality-of-life scores are attributable to the presence of aphasia rather than age – related differences.

Regarding sex distribution, Group I comprised 15 males and 15 females, and Group II comprised 11 males and 4 females**.** Educational attainment was comparable across groups, with participants averaging approximately 11 to 12 years of formal schooling. All participants were right-handed and fell within the middle socioeconomic stratum determined by the Modified Kuppuswamy Socioeconomic Scale (Saleem & Jan, 2021). This homogeneity in

socioeconomic background is particularly important for interpreting quality-of-life scores, since economic resources and social support networks are closely tied to socioeconomic status, which can exert a significant independent effect on how individuals perceive and report their well-being.

In Group II, nine participants presented with eight non-fluent aphasia and seven with fluent aphasia. The mean Aphasia Quotient (AQ) scores for Group II (persons with aphasia) derived from WAB- R Tamil (Hema & Vasuprada, 2023) were 70.80 (SD = 9.53), reflecting the heterogeneity that is characteristic of any clinical aphasia sample. All participants were between three to six months post – onset duration at the time of data collection, a window that captures the early subacute phase during which initial spontaneous recovery largely plateaued and individuals were beginning to engage more in structured rehabilitation.

4.2 Content Validation of SAQOL – 39

The content validation process involved three Speech Language pathologists who were native Tamil speakers with a minimum of five years of clinical experience. These validators rated all 39 items of the Tamil SAQOL–39 on a 5-point Likert scale, adapted from the Aphasia Treatment Manuals (Goswami et al., 2010). The rating scale ranged from 1 (very poor) to 5 (excellent), with validators asked to rate each item on 10 parameters: simplicity, familiarity, presentation, relevance, accessibility, flexibility, feasibility, scoring pattern, and scope of practice. The ratings obtained for each of the three domains of the SAQOL–39 are presented in Tables 4.1, 4.2, and 4.3 below.

All three validators gave consistently high ratings, indicating a higher degree of inter-validator agreement regarding the quality of the adapted items. As a result, the translated test was adapted, validated, and further administered to participants across both groups. The adapted SAQOL – 39 Tamil is given in detail in the (Appendix E).

Table 4.1

Content Validation scores by the expert panel for the Physical domain

	Simplicity			**Familiarity**			**Presentation**			**Relevance**			**Accessibility**			**Flexibility**			**Feasibility**			**Scoring pattern**			**Score of practice**			**Coverage of parameters**		
	C1	C2	C3	C1	C2	C3	C1	C2	C3	C1	C2	C3	C1	C2	C3	C1	C2	C3	C1	C2	C3	C1	C2	C3	C1	C2	C3	C1	C2	C3
SC1	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
SC4	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5
SC5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5
M1	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5
M4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
M6	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
M7	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
M8	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
M9	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
W1	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
W2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
UE1	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5
UE2	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5

UE4	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5
UE5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5
UE6	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5

Note: C1- Content validator 1, C2- Content validator 2, C3- Content validator 3, SC- Self-care, M- Mobility, W- Work, UE- Upper extremity

Table 4.2

Content Validation scores by the expert panel for the Communication domain

	Simplicity			**Familiarity**			**Presentation**			**Relevance**			**Accessibility**			**Flexibility**			**Feasibility**			**Scoring pattern**			**Score of practice**			**Coverage of parameters**		
	C1	C2	C3	C1	C2	C3	C1	C2	C3	C1	C2	C3	C1	C2	C3	C1	C2	C3	C1	C2	C3	C1	C2	C3	C1	C2	C3	C1	C2	C3
L2	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5
L3	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5
L5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5
L6	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
L7	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5
FR9	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
SR8	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4

Note: C1- Content validator 1, C2- Content validator 2, C3- Content validator 3, L- Language, FR- Family role, SR- Social role.

Table 4.3

Content Validation scores by the expert panel for the Psychosocial domain

	Simplicity			**Familiarity**			**Presentation**			**Relevance**			**Accessibility**			**Flexibility**			**Feasibility**			**Scoring pattern**			**Score of practice**			**Coverage of parameters**		
	C1	C2	C3	C1	C2	C3	C1	C2	C3	C1	C2	C3	C1	C2	C3	C1	C2	C3	C1	C2	C3	C1	C2	C3	C1	C2	C3	C1	C2	C3
T4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
T5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
P1	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5
P3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
MD2	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5
MD3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
MD6	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5
MD7	3	4	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3
E2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
E3	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5
E4	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5
E4	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5
FR7	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5	4	4	5

SR1	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
SR4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
SR5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
SR7	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4

Note: C1- Content validator 1, C2- Content validator 2, C3- Content validator 3, T- Thinking, P- Personality, MD- Mood, E- Energy, SR- Social role

4.3 Descriptive Statistics for SAQOL – 39 Tamil Domain scores

Following the administration of the Tamil SAQOL – 39 Tamil to all 45 participants, descriptive statistics were performed for domain scores and the overall mean score. These are presented separately for the two groups in Table 4.4. and also in a Line graph depicting the comparison of SAQOL-39 domain scores between persons with aphasia (PWA, n=15) and neurotypical individuals (NT, n=30) in Figure 4.1. The SAQOL – 39 Tamil is scored on a 5-point Likert scale, with higher scores reflecting better Quality of Life. Domain scores are expressed as the mean of the items within that domain.

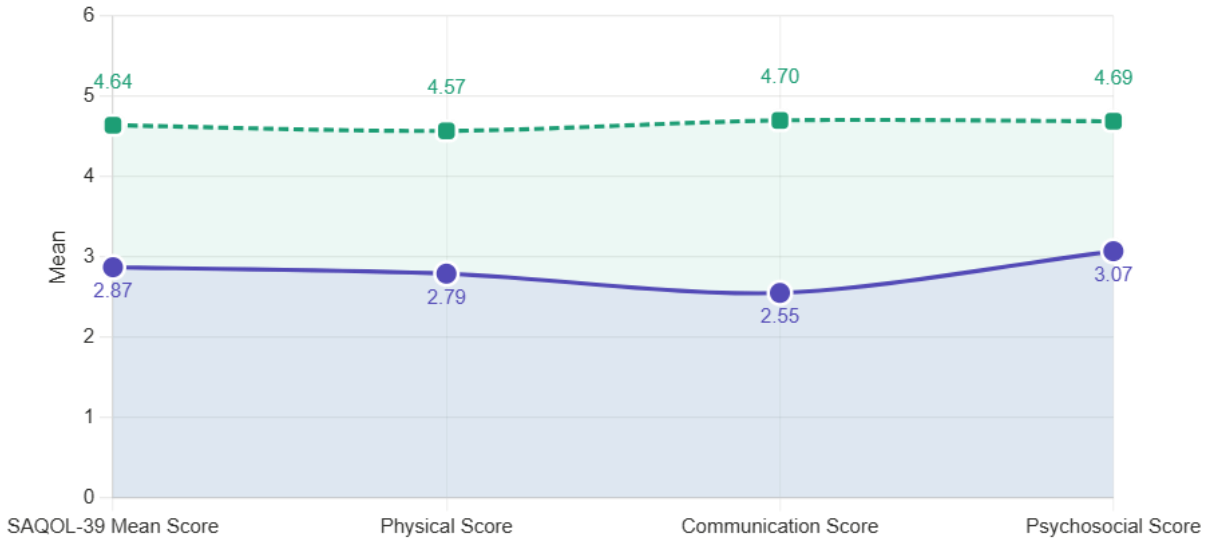
Table 4.4

Descriptives for Tamil SAQOL – 39 domain scores and Mean scores

Domain	Group	Mean	Median	Standard Deviation
SAQOL-39 Mean score	PWA	2.87	2.7	0.80
	NTI	4.64	5.0	0.58
Physical	PWA	2.79	2.68	1.04
	NTI	4.57	5.0	0.75
Communication	PWA	2.55	2.42	0.84
	NTI	4.70	5.0	0.53
Psychosocial	PWA	3.07	2.93	0.88
	NTI	4.69	5.0	0.53

Note: PWA- persons with aphasia, NTI- Neurotypical Individuals.

Figure 4.1 Line graph depicting the descriptives for Tamil SAQOL – 39 domain scores and Mean scores



The descriptive data revealed a clinically meaningful pattern, in which Group I (neurotypical individuals- NTI) consistently scores in the upper range of all three domains, and the overall scores indicate that almost all participants endorsed high levels of quality of life across all areas of functioning assessed by the SAQOL – 39 Tamil. This ceiling effect is not due to the scale being insensitive, but because these individuals are genuinely not experiencing the physical, communicative, or psychosocial difficulties that the scale is designed to detect.

In contrast, Group II (persons with aphasia- PWA) scores substantially lower across all domains. The mean Physical score was 2.79, indicating that persons with aphasia are experiencing considerable difficulty. The Communication domain showed the lowest mean score of 2.55, indicating that communication-related quality of life was the most severely affected area. The Psychosocial domain showed a slightly higher mean score of 3.07 than the Physical and Communication scores, though it remained far below the scores of neurotypical individuals. The range of scores within Group II (persons with aphasia) was considerably wider

than that of Group I (neurotypical individuals), further confirming the heterogeneity and reflecting the clinical reality that aphasia is a highly heterogeneous disorder.

4.4 Internal Consistency of the Tamil SAQOL – 39

Internal consistency was assessed using Cronbach's alpha. It is generally reported that reliability and good internal consistency are suggested by using Cronbach's alpha coefficient above 0.70 (Nunnally, 1978). To be considered reliable for clinical use, the coefficient value should be between 0.8 and 0.85 or higher (Rosenthal & Rosnow, 1991).

Cronbach's alpha was computed for each domain and for the scale as a whole, based on the responses of all 45 participants. The results are presented in Table 4.5

Table 4.5

Cronbach's alpha coefficients for Tamil SAQOL – 39 domains and total score

Domains	**Total no of items**	**Cronbach's alpha coefficient value**
Physical	16	0.94
Communication	7	0.90
Psychosocial	16	0.89
Overall	39	0.95

The internal consistency results are exceptionally strong. The overall Cronbach's alpha for the Tamil SAQOL–39 was 0.95, indicating excellent reliability at the scale level. All three domain-level Cronbach's alpha were 0.94 for the Physical domain, 0.90 for the Communication domain, and 0.89 for the Psychosocial domain**.** The Cronbach alpha values are consistent with the internal consistency values reported for the original SAQOL – 39 and for other validated adaptations of SAQOL – 39.

4.5 Test of Normality

Before selecting the appropriate statistical test, the normality of the data was examined using the Shapiro-Wilk test, which is considered more suitable for a smaller sample size. The results are tabulated in Table 4.6.

Table 4.6

Normality test results

Variable		**Shapiro-Wilk**		
	Group	Statistic	Df	Sig.
SAQOL-39 Mean score	PWA	0.974	15	0.908
	NT	0.669	30	0.000
Physical score	PWA	0.974	15	0.916
	NT	0.633	30	0.000
Communication score	PWA	0.973	15	0.894
	NT	0.594	30	0.000
Psychosocial score	PWA	0.971	15	0.873
	NT	0.599	30	0.000

Note: PWA = Persons with Aphasia; NT = Neurotypical Individuals

The results indicated that while the persons with aphasia group showed no significant departure from normality across all domain scores ($p > .05$), the neurotypical individual group demonstrated significant violations of the normality assumption across all variables ($p < .05$). Since the assumption of normality was not met for both groups and the data were ordinal (Likert scale responses), a parametric test such as the independent–samples t–test was deemed inappropriate. Consequently, the Mann-Whitney U test, a robust nonparametric alternative that makes no assumption of normality, was used to compare median domain scores and overall scores between the two groups. The results of this analysis are tabulated in Table 4.6.

Table 4.6

Mann-Whitney U test comparing Tamil SAQOL scores between two groups and the mean ranks of both groups

Variable	**Mann-Whitney U test**	**Z**	***p* value**
SAQOL-39 Mean Score	22.00	-5.118	< 0.001
Physical Score	42.00	-4.651	< 0.001
Communication Score	8.50	-5.565	< 0.001
Psychosocial Score	27.50	-5.027	< 0.001

Note: PWA = Persons with Aphasia; NTI = Neurotypical Individuals

The Mann-Whitney U test results were unambiguous across all three domains and the overall scale; the differences in median scores between Group I (persons with aphasia) and Group II (neurotypical individuals) were statistically significant (p<0.001), which reflects an absolute separation between the two groups with no overlap.

The findings provide very strong evidence of known-groups validity. The Tamil SAQOL – 39 was able to perfectly discriminate between Group I (neurotypical individuals) and Group II (persons with aphasia), with Group II consistently reporting substantially lower quality of life across all domains. The Communication domain showed the largest group difference, with PWA receiving a mean rank of 8.57 compared to 30.22 for NTI (a difference of 21.65 rank points), suggesting this was the area of greatest disparity between the two groups. The Psychosocial domain showed the second-largest difference, with PWA receiving a mean rank of 9.83 compared to 29.58 for NTI (a difference of 19.75 rank points), reflecting notable difficulties in psychosocial functioning among PWA. The Physical domain showed the third largest difference, with PWA receiving a mean rank of 10.80 compared to 29.10 for NTI (a

difference of 18.30 rank points). The Overall Mean score reflected a similarly large disparity, with PWA receiving a mean rank of 9.47 compared to 29.77 for NTI (a difference of 20.30 rank points).

This ordering is clinically intuitive: communication, the defining impairment in aphasia and most profoundly affected, while psychosocial wellbeing, though clearly and significantly impaired, showed the smallest difference between the groups, perhaps reflecting the resilience and adaptation strategies that some individuals with aphasia develop over time.

4.6 Item- Level Analysis: Response Distribution Across Groups

The distribution of responses to individual items across two groups was examined through crosstabulation. This item-level analysis provides a better understanding of precisely which activities and life areas are most and least affected in persons with aphasia, and how the pattern of difficulty compares to that of neurotypical individuals.

4.6.1 Physical Domain

Across the three self-care items (SC1, SC4, SC5), there was a significant difference between the two groups. 20 to 40% of PWA reported being unable to complete self-care tasks. The highest percentage of total inability was on SC5 (40%), followed closely by SC4 (33.3%). Across these items, an additional 26.7% to 40% of PWA endorsed either “A lot of trouble” or “Some trouble”, indicating that the vast majority of the PWA group experienced meaningful functional limitation in self-care. In contrast, 70% of NTI participants consistently endorsed no trouble on all three items, and none reported being completely unable to perform any self-care task. These findings point to self-care as a domain of significant and widespread difficulty for individuals with aphasia in comparison to the control group.

Mobility items (M1, M4, M6, M7, M8, M9) revealed intergroup differences, the control group consistently falling at the ‘no difficulty’ end of the distribution. The biggest differences

were on M4 and M8, with 40% and 46.7% of PWA saying they could not do these tasks at all, and an additional 46.7% and 33.3% saying they had “A lot of trouble”, leaving less than 10% of PWA able to perform these tasks without difficulty. M7 was equally striking, with 53.3% of PWA saying “A lot of trouble”. M9 was relatively exceptional within the subdomain, with 46.7% of PWA reporting “No difficulty”, but this was considerably lower than the 73.3% in the control group. This is in contrast to the whole subdomain, where 66.7% of the control group reported no mobility-related difficulty on each item. This finding underscores the extent of mobility limitations experienced by individuals with aphasia.

Work items (W1 and W2) followed the general pattern of the Physical Domain, but with slightly less extreme differentiation than mobility. For W1, 33.3% of PWA reported “No trouble” in performing the working task. For W2, the same proportion did so, which was higher than those seen for mobility and self-care tasks, and were significantly lower than the 66.7% and 70% of the control group who reported “No difficulty” on W1 and W2, respectively. The difficulty was widespread among PWA in all categories, with 13.3% to 20% endorsing “A lot of trouble” and another 6.7% to 13.3% reporting “Some trouble”. These results demonstrate that some individuals with aphasia retain relatively better working ability, but the majority continue to experience difficulties that meaningfully distinguish them from neurotypical individuals.

Upper extremity items (UE1, UE2, UE4, UE5, UE6) revealed a ceiling effect across all five items, with 76.7% of the neurotypical individuals reporting “No trouble”. In PWA, the distributions were very different and, in some cases, skewed towards the most severe end of the scale. UE6 was the most extreme item, with 53.3% of PWA unable to complete the task at all and only 6.7% reporting “No difficulty”. UE1 was also close, with 467% of PWA reporting they were unable to do so. For UE2, UE4, and UE5, the PWA group had more varied responses, with 33.3%, 26.7%, and 20% reporting complete inability, and a good proportion reporting

moderate difficulty. These results suggest a large, clinically significant deficit in upper extremity function in individuals with aphasia compared to the control group. Item-level analysis of the 16 items in the SAQOL-39 Tamil physical domain is illustrated using box plots with overlaid individual data points in Figures 4.2–4.17.

Figure 4.2 Box plot representation of Physical Domain Item SC1 with individual data points in PWA and NT groups.

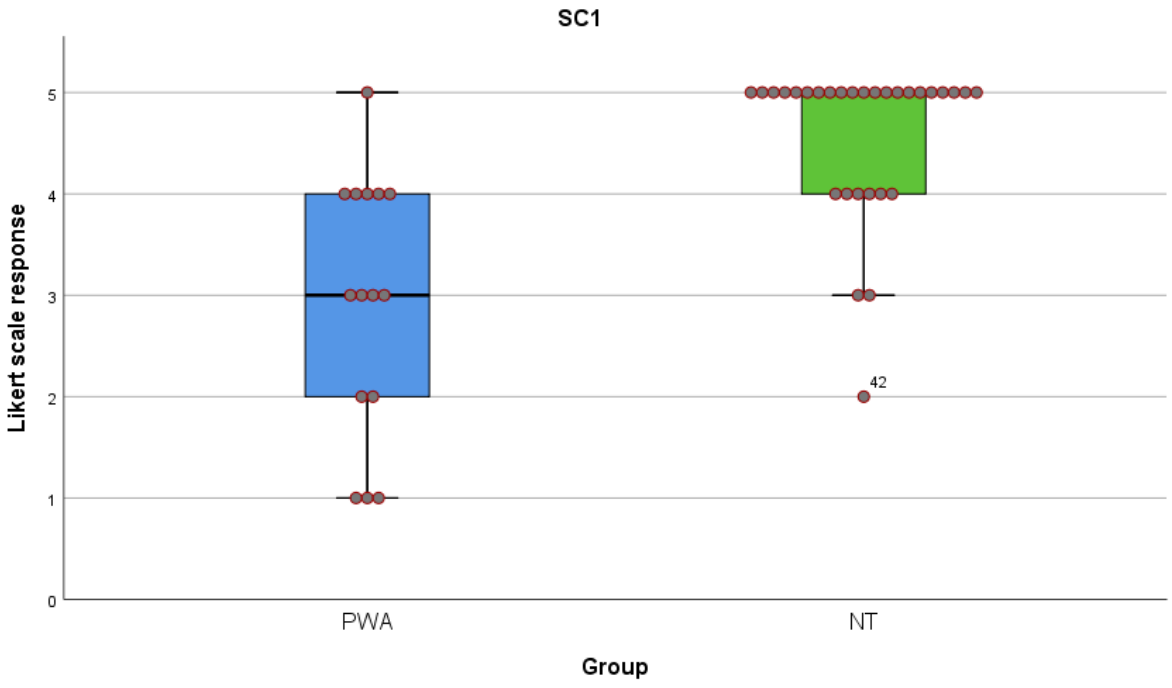


Figure 4.3 Box plot representation of Physical Domain Item SC4 with individual data points in PWA and NT groups.

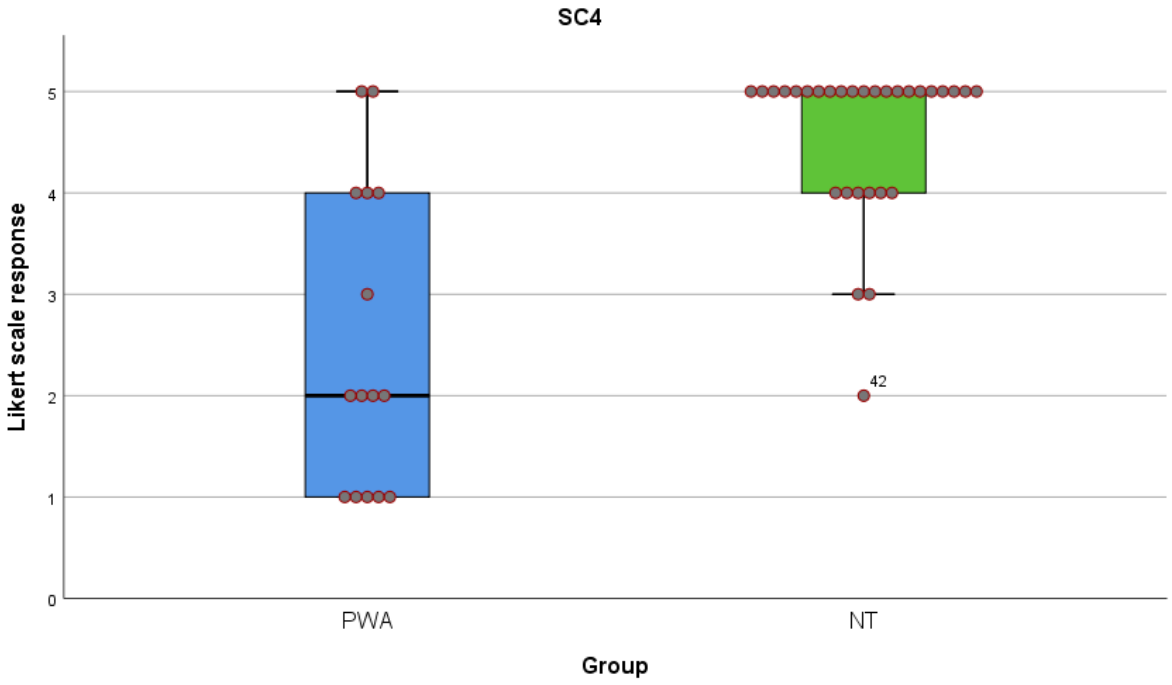


Figure 4.4 Box plot representation of Physical Domain Item SC5 with individual data points in PWA and NT groups.

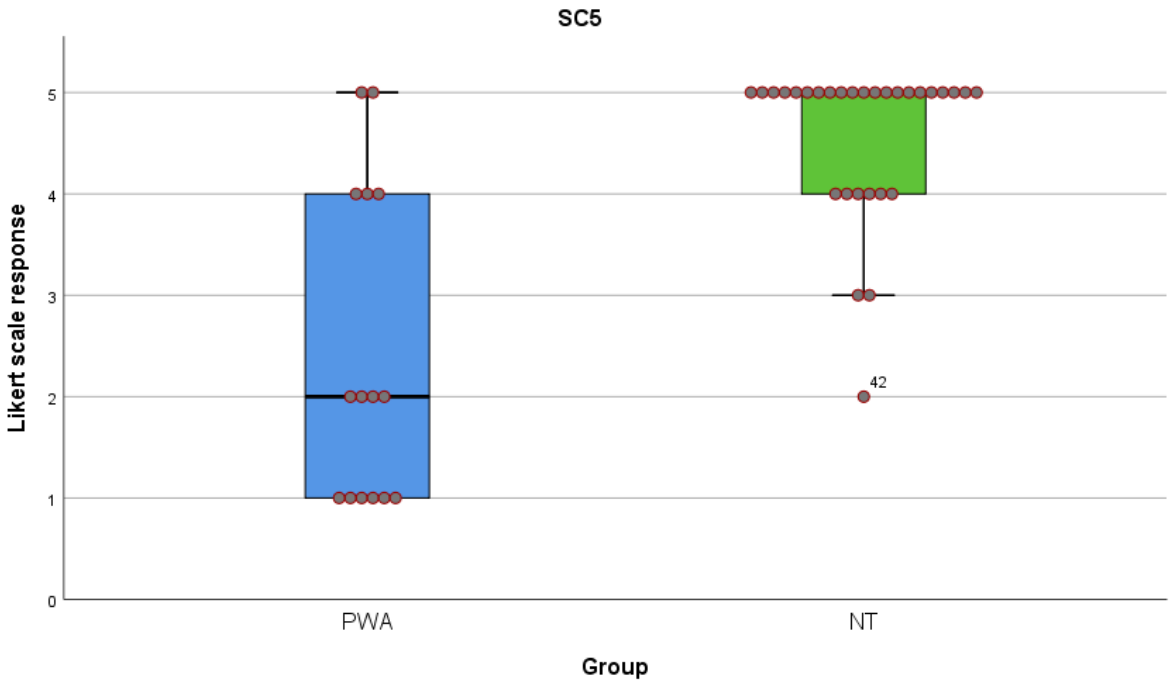


Figure 4.5 Box plot representation of Physical Domain Item M1 with individual data points in PWA and NT groups.

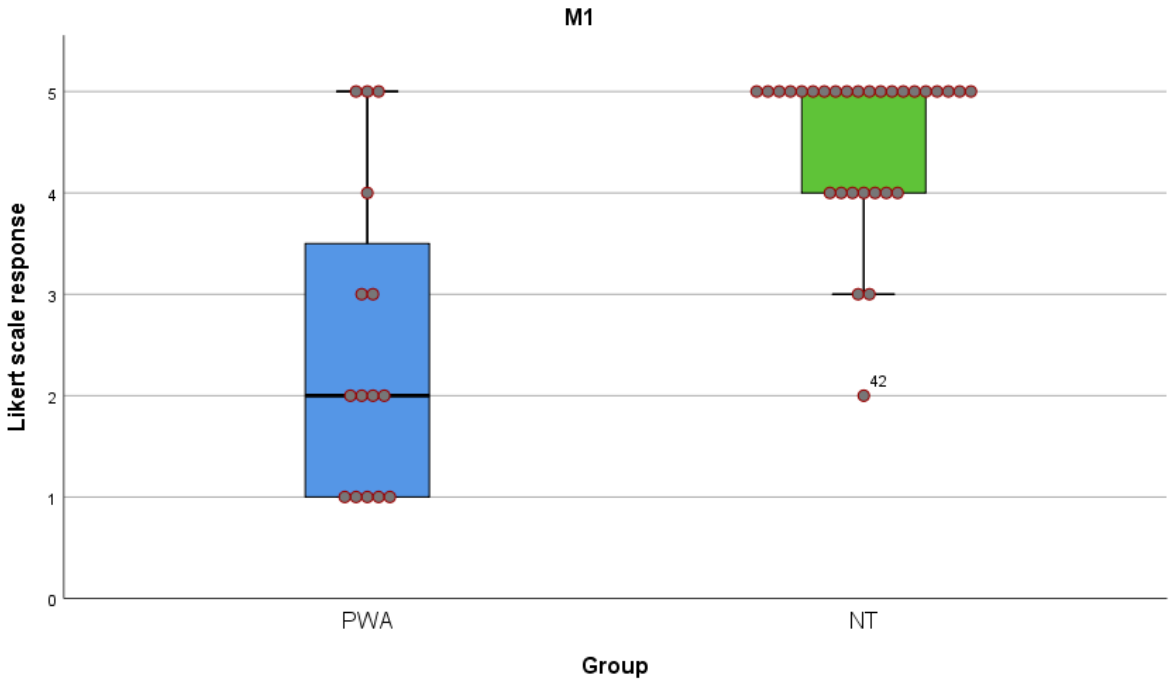


Figure 4.6 Box plot representation of Physical Domain Item M4 with individual data points in PWA and NT groups.

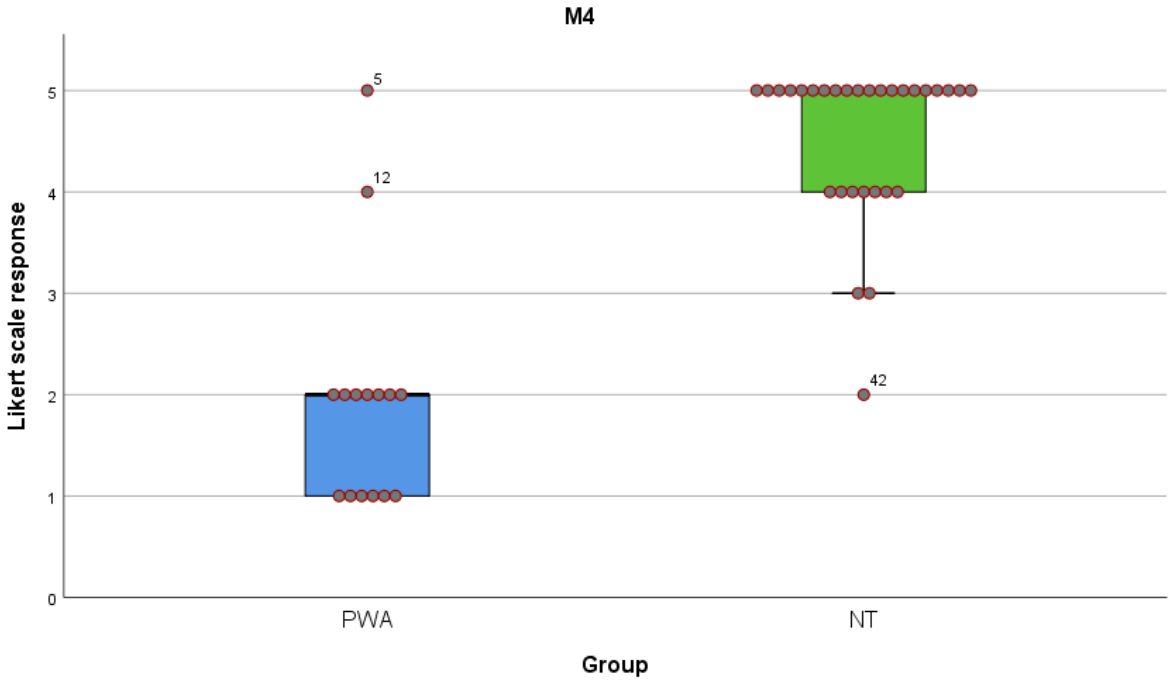


Figure 4.7 Box plot representation of Physical Domain Item M6 with individual data points in PWA and NT groups.

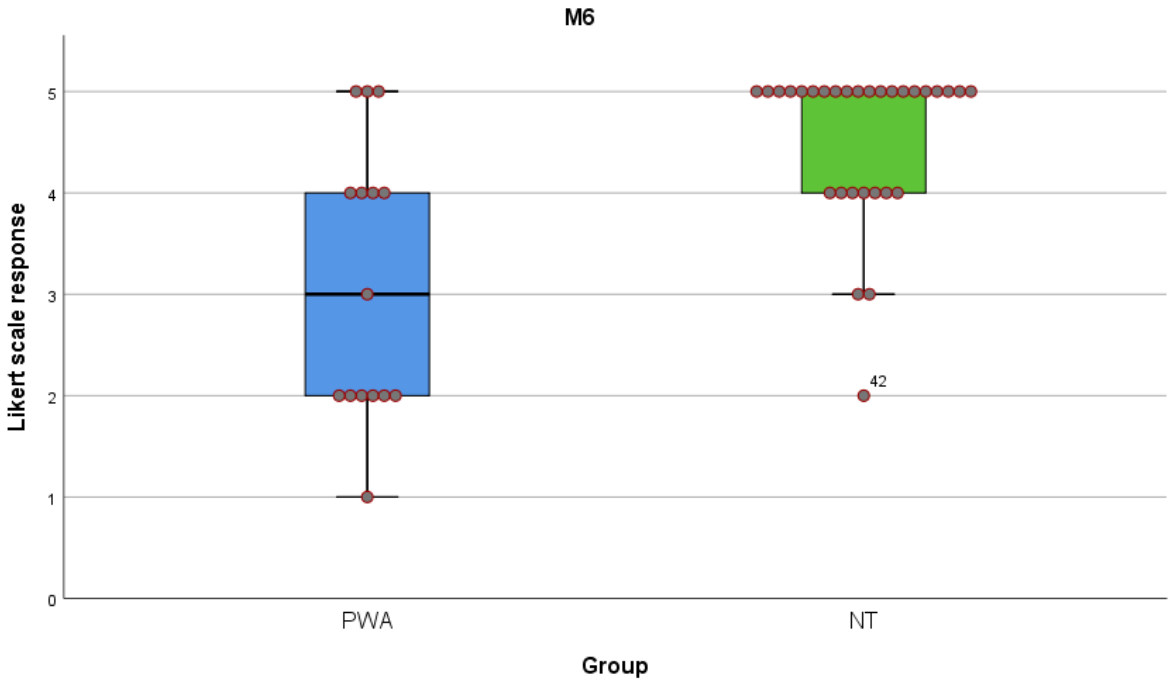


Figure 4.8 Box plot representation of Physical Domain Item M7 with individual data points in PWA and NT groups.

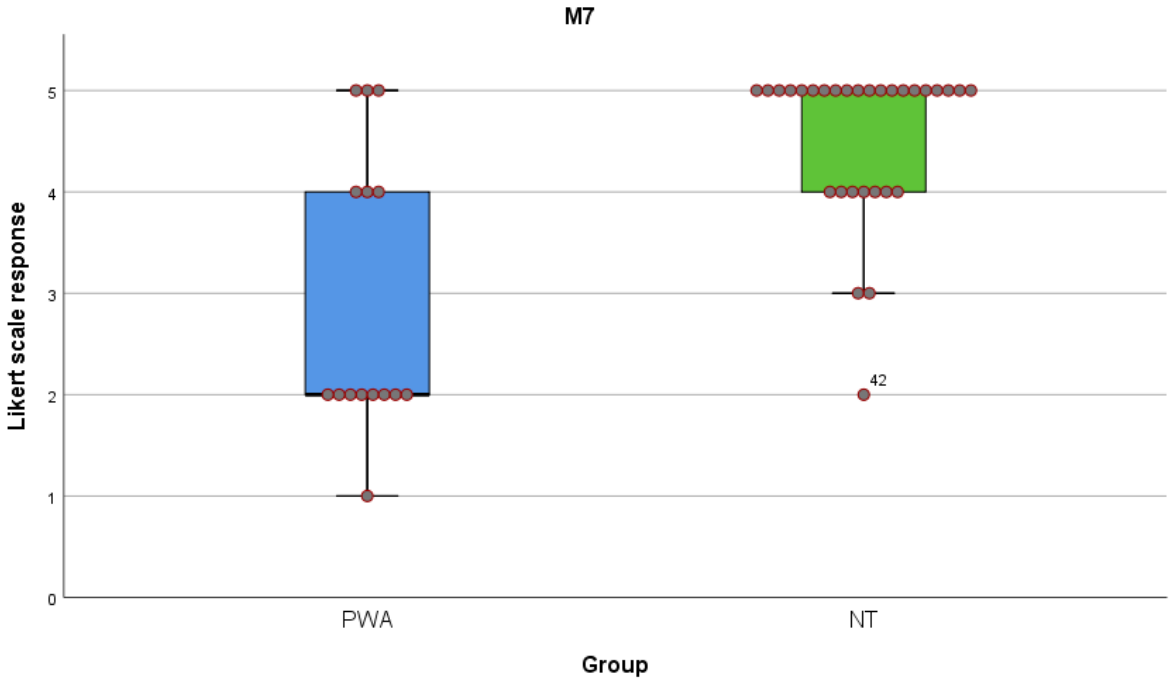


Figure 4.9 Box plot representation of Physical Domain Item M8 with individual data points in PWA and NT groups.

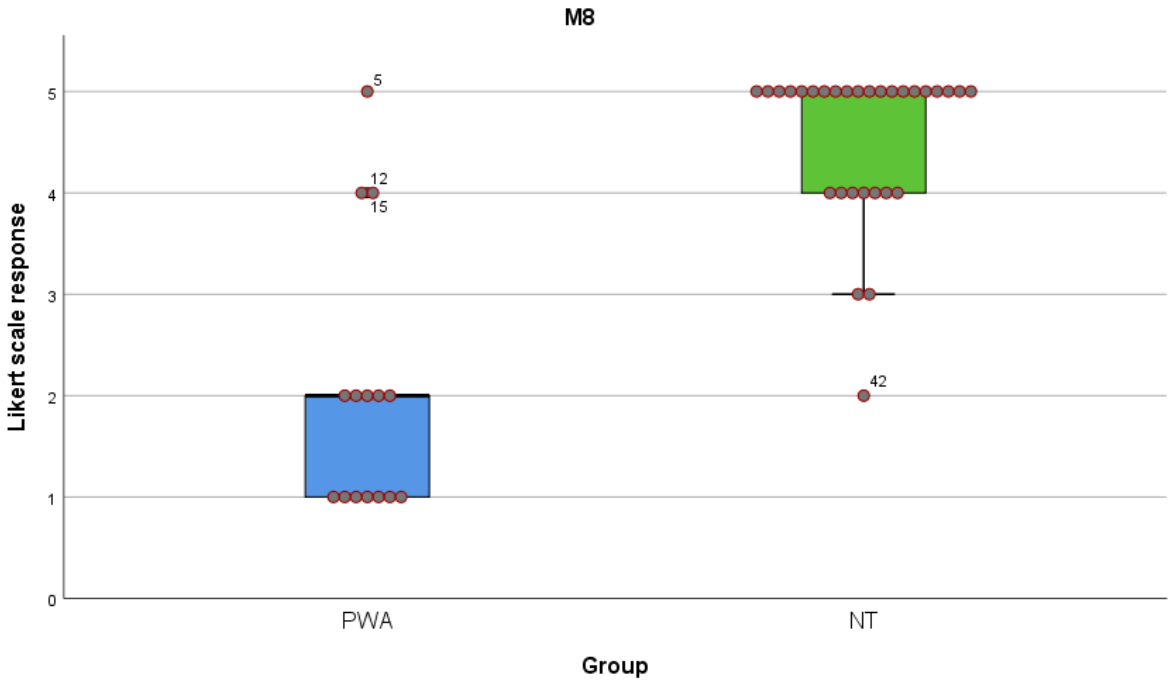


Figure 4.10 Box plot representation of Physical Domain Item M9 with individual data points in PWA and NT groups.

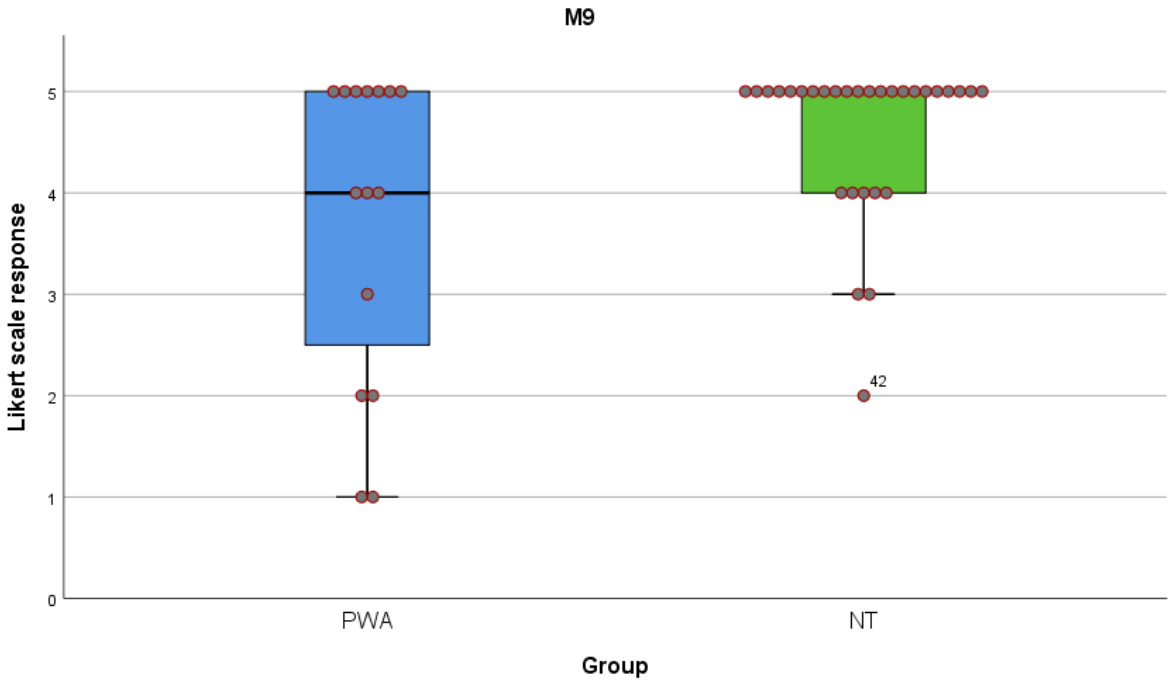


Figure 4.11 Box plot representation of Physical Domain Item W1 with individual data points in PWA and NT groups.

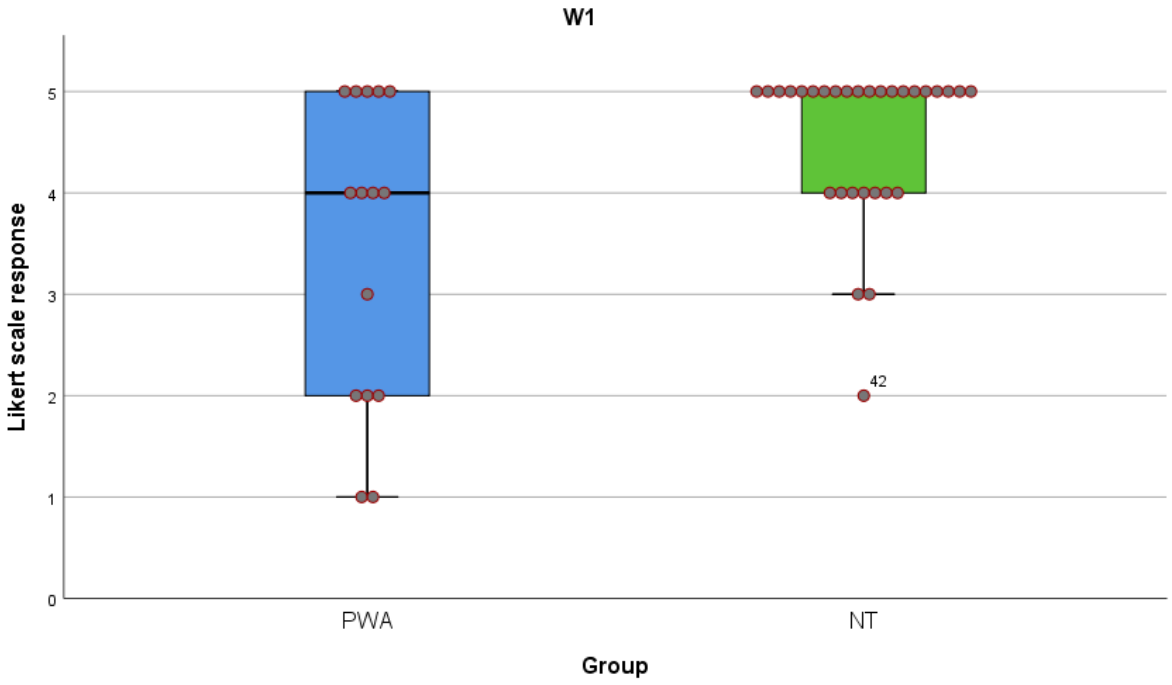


Figure 4.12 Box plot representation of Physical Domain Item W2 with individual data points in PWA and NT groups.

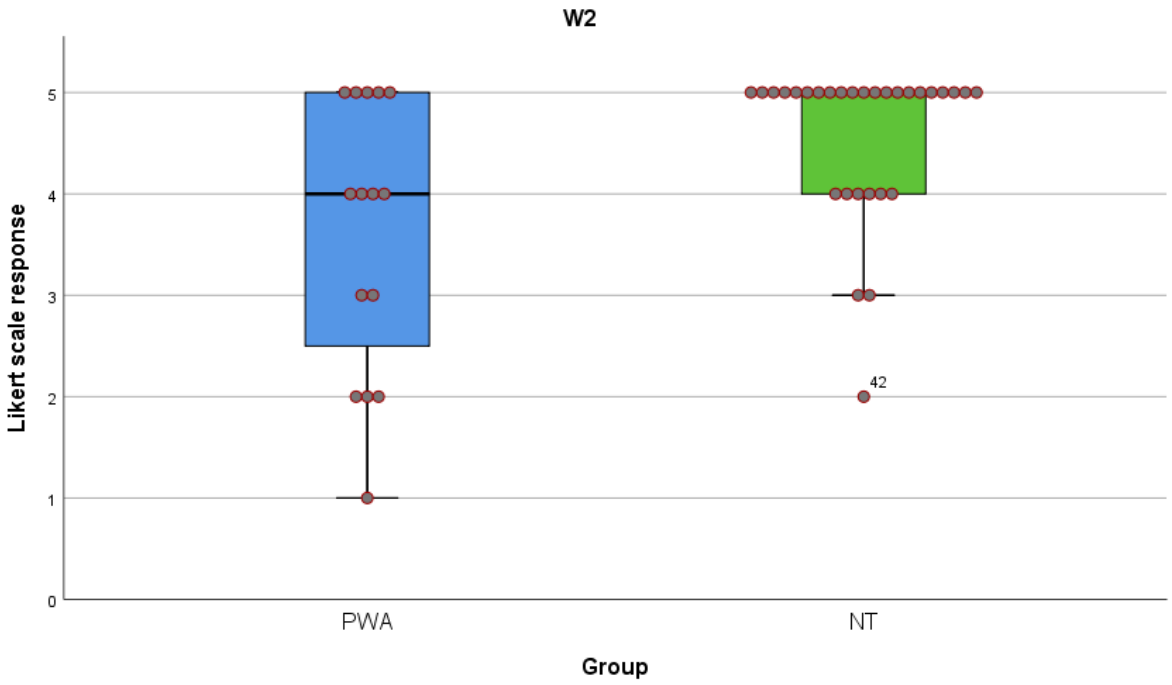


Figure 4.13 Box plot representation of Physical Domain Item UE1 with individual data points in PWA and NT groups.

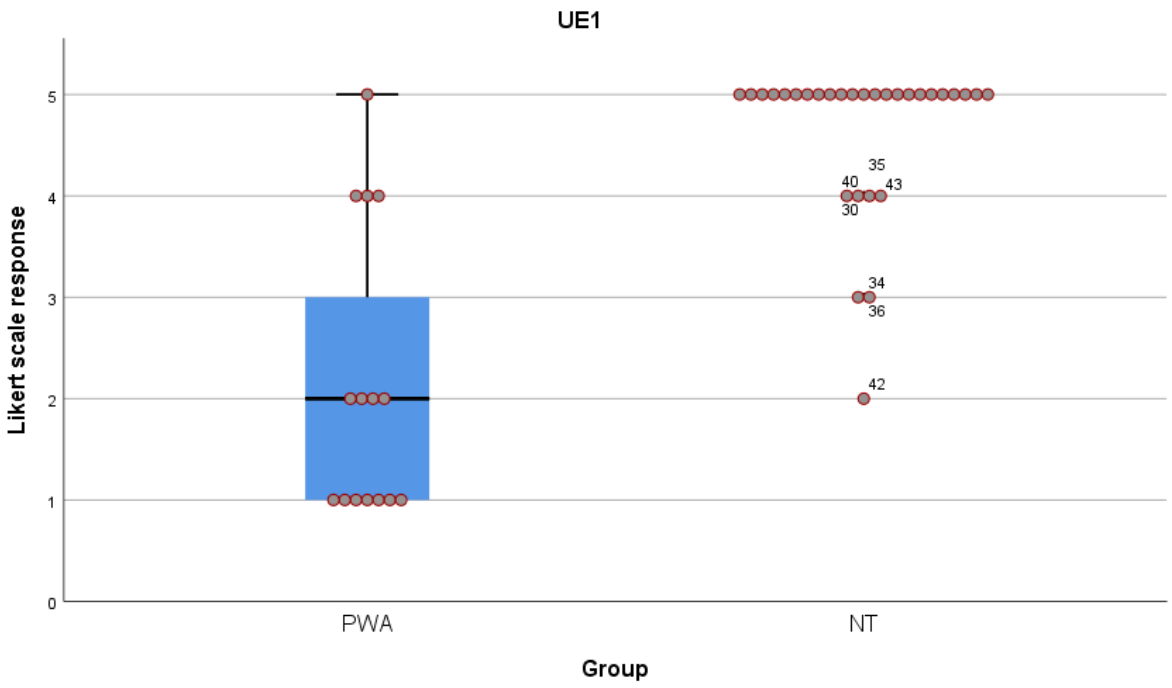


Figure 4.14 Box plot representation of Physical Domain Item UE2 with individual data points in PWA and NT groups.

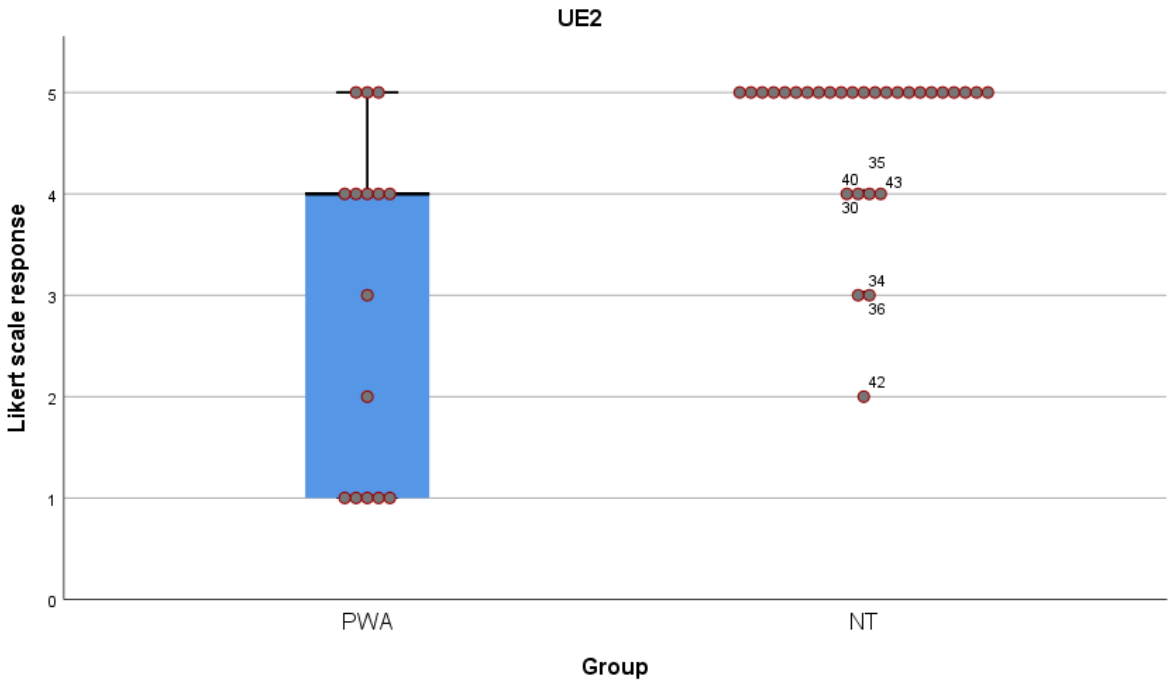


Figure 4.15 Box plot representation of Physical Domain Item UE4 with individual data points in PWA and NT groups.

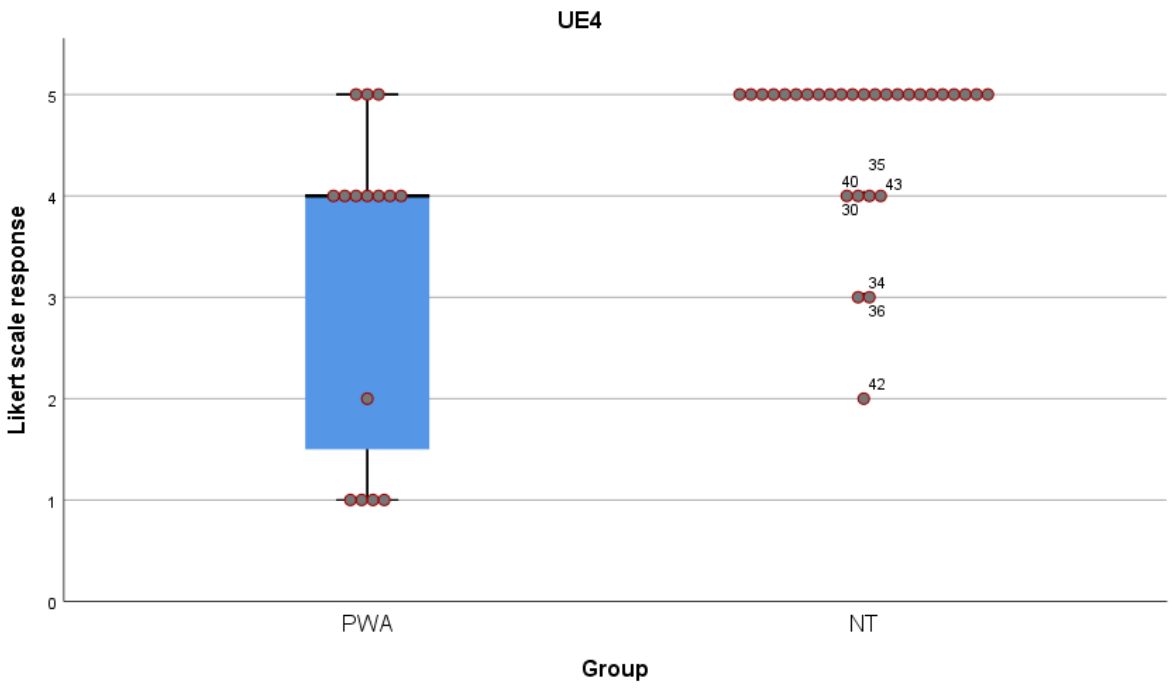


Figure 4.16 Box plot representation of Physical Domain Item UE5 with individual data points in PWA and NT groups.

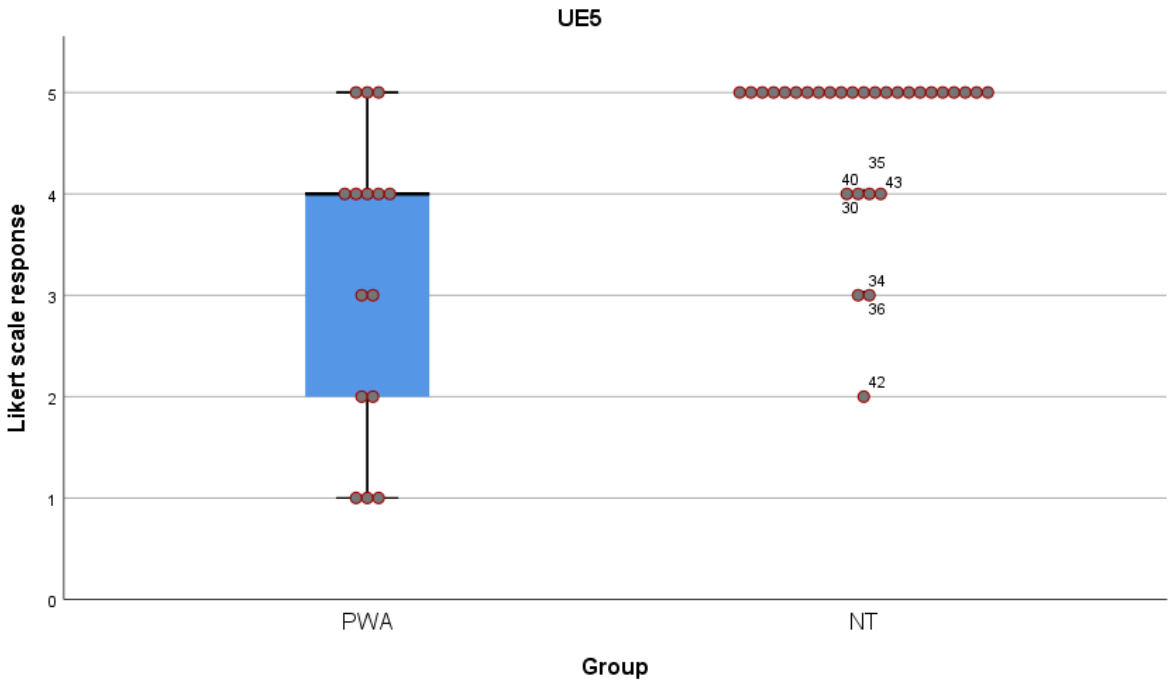
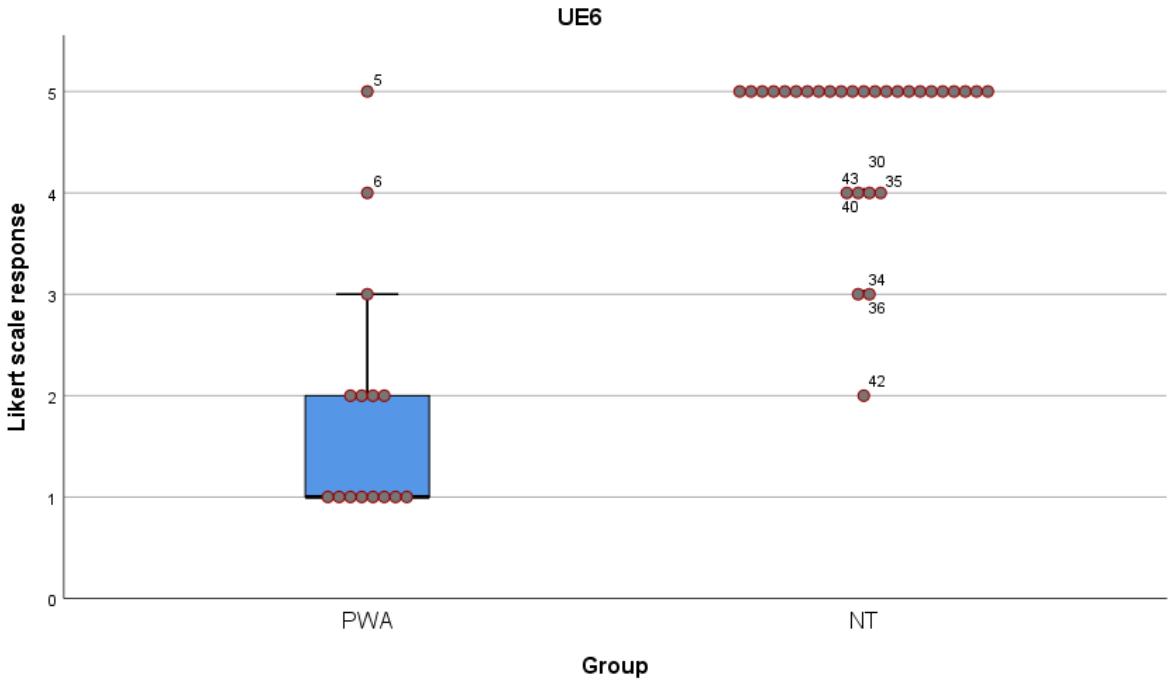


Figure 4.17 Box plot representation of Physical Domain Item UE6 with individual data points in PWA and NT groups.



4.6.2 Communication Domain

In the Language items (L2, L3, L5, L6, and L7), the control group showed a significant ceiling effect, with 73.3% of participants reporting "No trouble" on all language items. The contrast within PWA was striking; none of the participants reported being able to perform items L2, L3, L5, or L7 without any difficulty, and only 13.3% were able to do so on L6. Difficulty was widely distributed across the PWA group, with items L2 and L3 each having 40% of PWA endorsing "A lot of trouble" and another 6.7% to 13.3% reporting complete inability. These results suggest that language, the main domain of impairment in aphasia, is challenging for the PWA group in a range of linguistic tasks, from comprehension to expression, but is largely unproblematic for the control group.

Items from the Communication Domain (SR8) related to reading showed large group differences following the overall pattern for the communication subdomain, similar to the clear separation evident across functional communication items. In PWA, 40% "Definitely yes" and another 46.7% "Mostly yes" for SR8, 86.7% of PWA claimed significant difficulty, and FR9

had 80% of PWA answering “Definitely yes” or “Mostly yes”. In contrast, 73.3% of the control group responded “Definitely no”, and none endorsed an affirmative response. Only 6.7% of PWA responded “Mostly no,” and a further 6.7% indicated uncertainty, suggesting that it is both prevalent and severe across the PWA group. These findings highlight the extent to which aphasia affects not only expressive communication but also the family role.

Groups were clearly separated by functional communication items obtained through FR9. 80% of PWA answered “Mostly yes” or “Definitely yes”, indicating a strong perception of functional communication difficulties, “Definitely no: for 73.3% of the control group had no affirmative responses. The remaining 13.3% of PWA answered “Not sure”, and only 6.7% responded “Mostly no”. . Item-level analysis of the 7 items in the SAQOL-39 Tamil physical domain is illustrated using box plots with overlaid individual data points in Figures 4.18–4.24.

Figure 4.18 Box plot representation of Communication Domain Item L2 with individual data points.

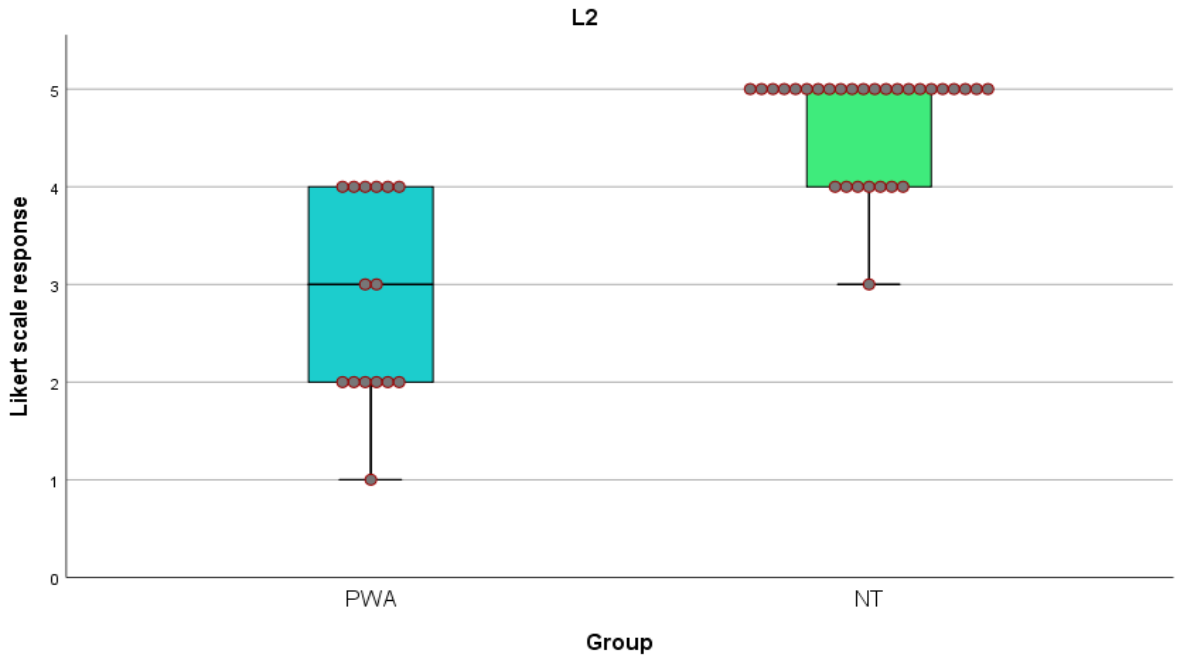


Figure 4.19 Box plot representation of Communication Domain Item L3 with individual data points in PWA and NT groups.

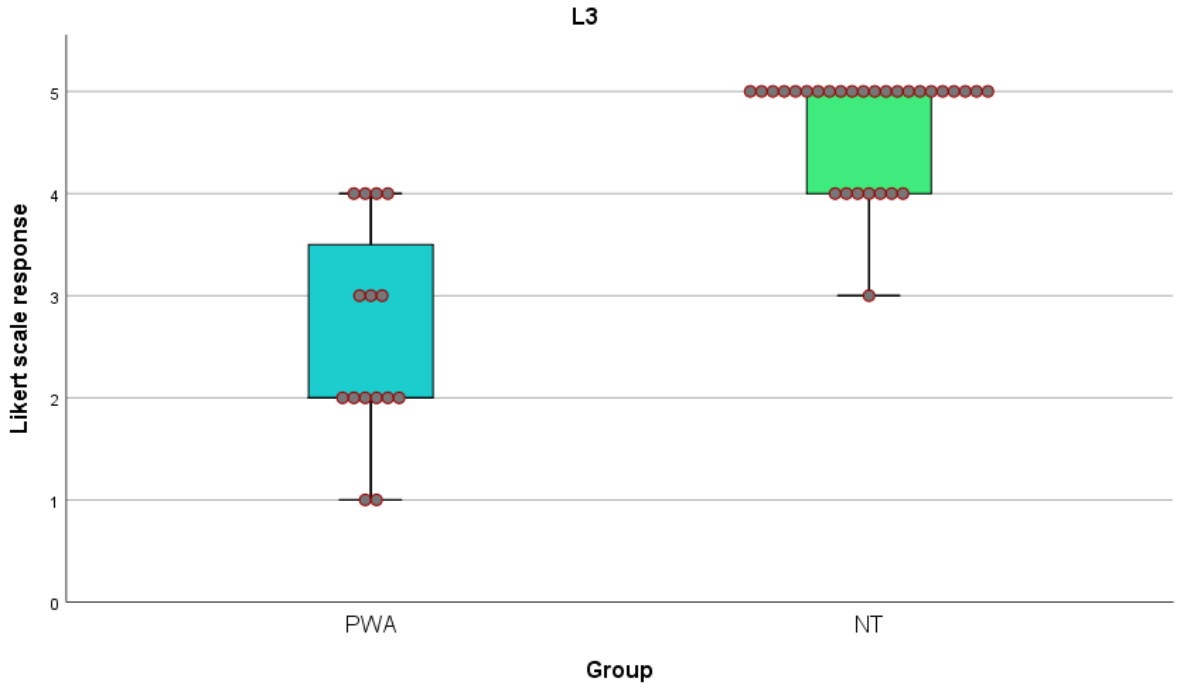


Figure 4.20 Box plot representation of Communication Domain Item L5 with individual data points in PWA and NT groups.

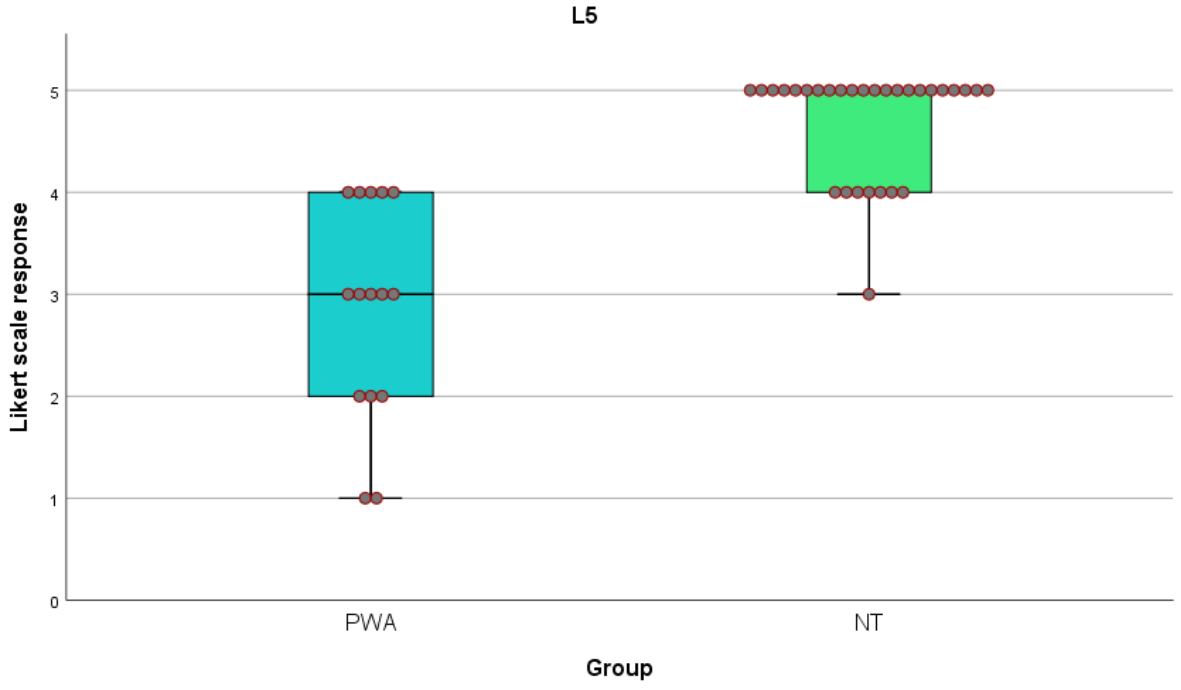


Figure 4.21 Box plot representation of Communication Domain Item L6 with individual data points in PWA and NT groups.

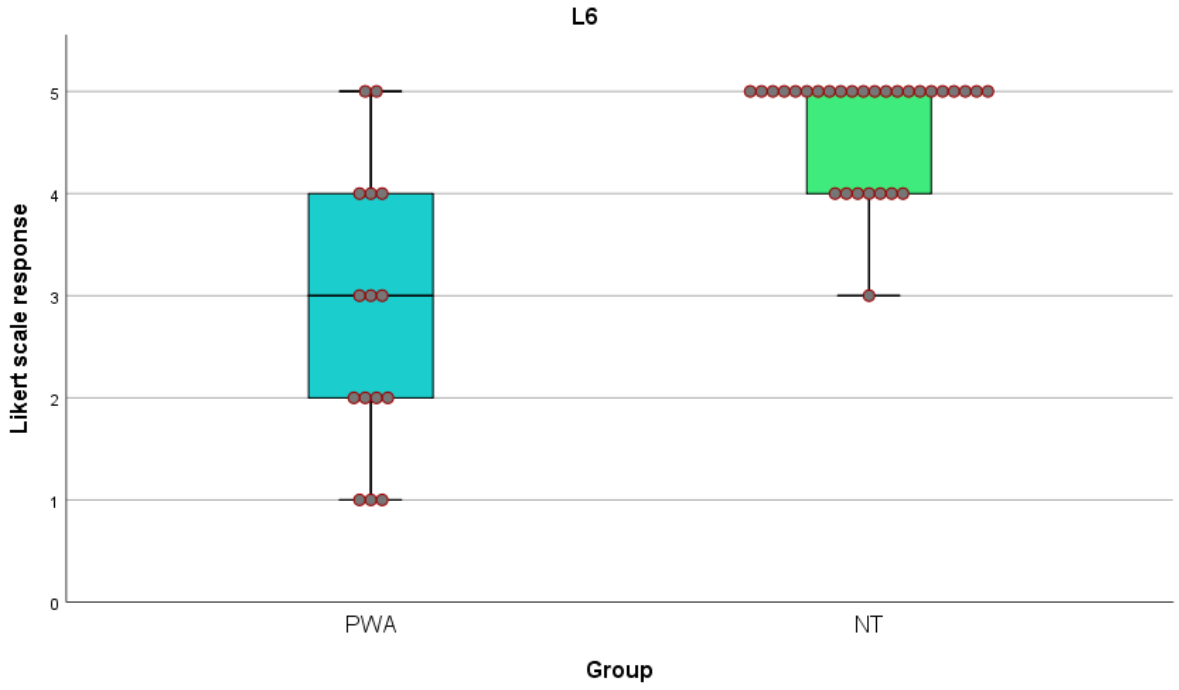


Figure 4.22 Box plot representation of Communication Domain Item L7 with individual data points in PWA and NT groups.

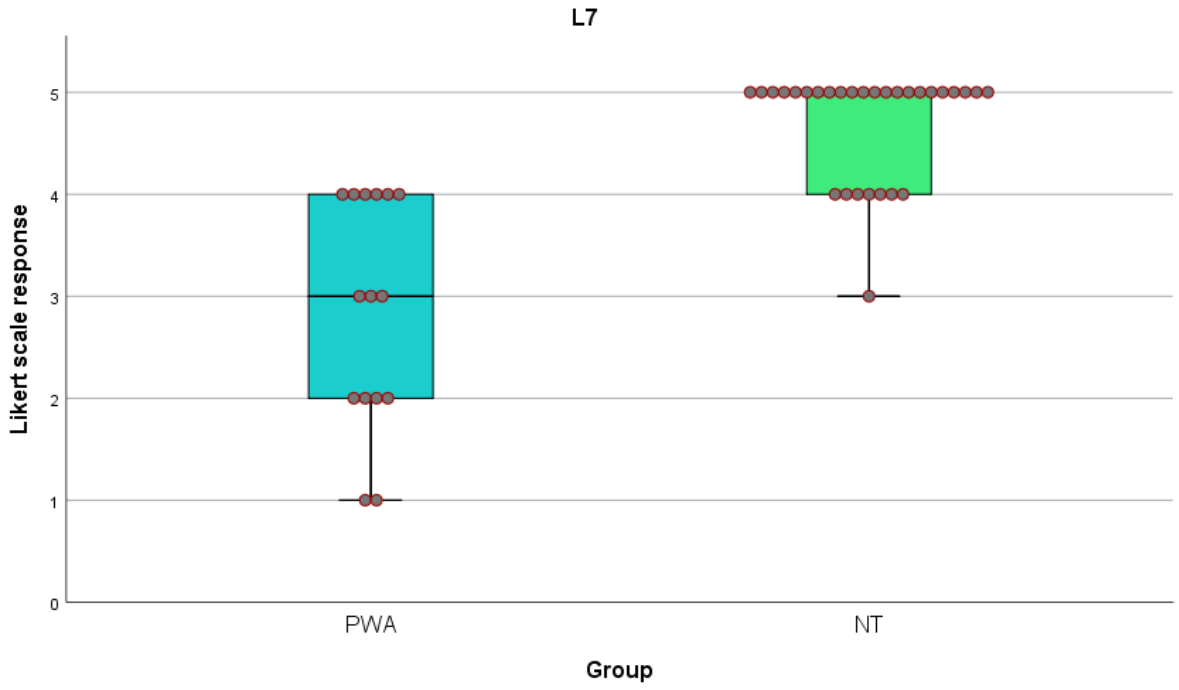


Figure 4.23 Box plot representation of Communication Domain Item FR9 with individual data points in PWA and NT groups.

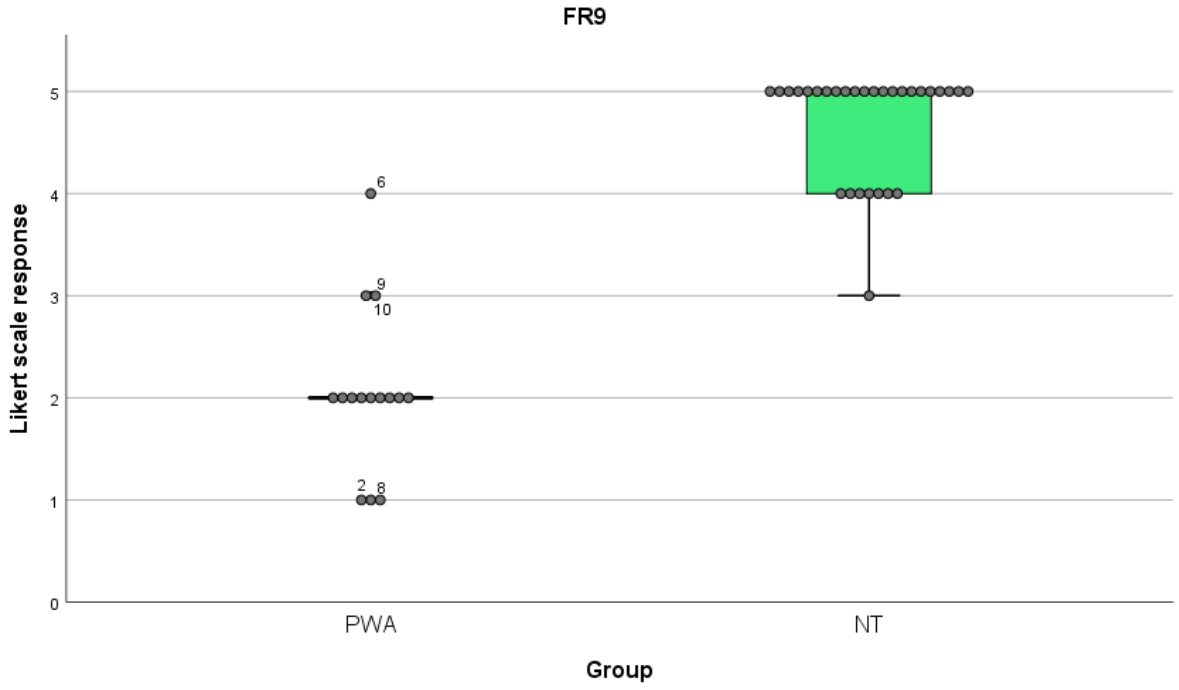
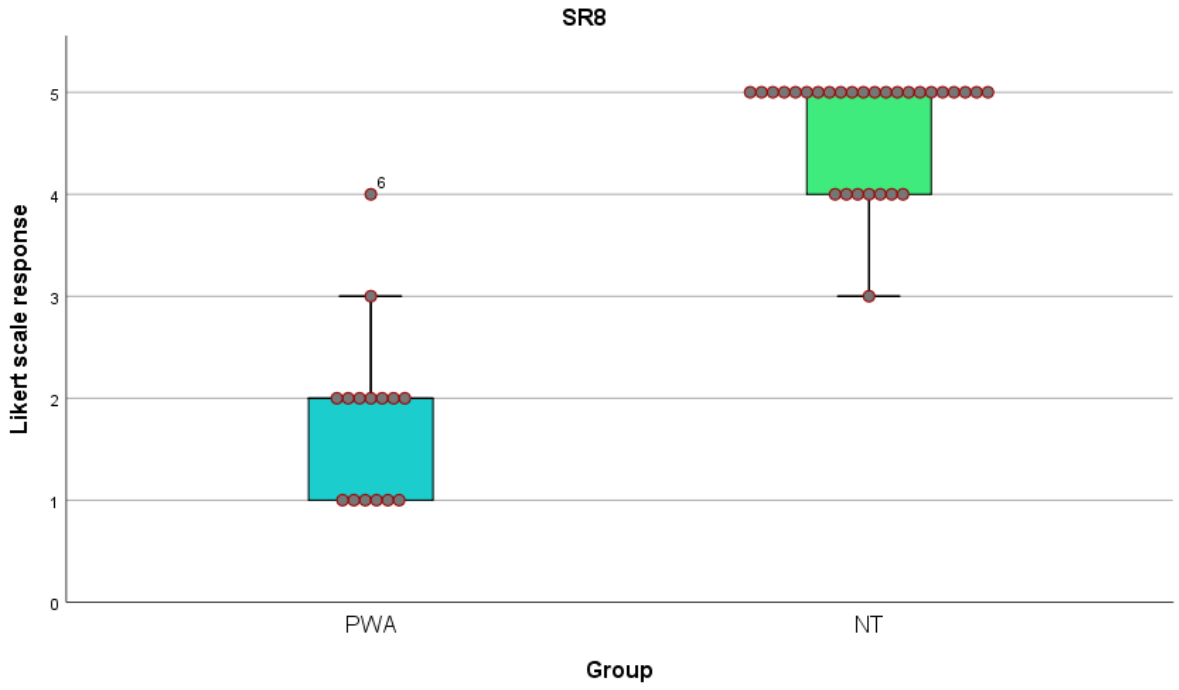


Figure 4.24 Box plot representation of Communication Domain Item SR8 with individual data points in PWA and NT groups.



4.6.3 Psychosocial Domain

Thinking-related items (T4, T5) showed a somewhat more heterogeneous distribution within the PWA group compared with other psychosocial domains. On T4, 60% of PWA endorsed “Mostly no”, and on T5, 26.7% endorsed the same, showing that a large proportion of individuals with aphasia do not think there are large cognitive barriers on these specific items. However, T4 and T5 were answered “Definitely yes” or Mostly yes” by 33.3% and 53.3% of PWA, respectively. This suggests that cognitive difficulties are still a major concern for a large part of the group. Again, NTI participants were clustered at the “Definitely no” end, with 70% and 73% endorsing this response on T4 and T5, respectively. The relative variability in the PWA group for these items may reflect the heterogeneity of cognitive sequelae associated with aphasia.

Personality (P1, P3) and Mood discouragement (MD2, MD3, MD6, MD7) were consistently high in rates of affirmative endorsement among PWA, 53.3% on P1 and 53.3% on P3 answered “Definitely yes” or “Mostly yes”, in contrast to 73.3% of NTI participants who answered “Definitely no” on both items. The dependency items were even more impressive. On MD7, 73.35% of PWA endorsed affirmative responses, and a similar pattern was observed for MD2 (73.3%). These data indicate that most individuals with aphasia identified significant needs for help and altered daily routines. These results suggest that the psychosocial impact of aphasia extends beyond communication; it also affects emotional well-being and personality.

Energy items (E2, E3, E4) and social role items within the Psychosocial Domain (SR1, SR4, SR5, SR7) showed a mixed, yet clinically meaningful pattern among PWA. The spread of responses on energy items was relatively muted, 46.7% of PWA endorsed “Definitely no” on E2 and 33.3% on E3 and E4, suggesting that, though fatigue and energy limitations exist, they are not universally reported as barriers. The social role item SR7, ratified by 86.7% of

PWA. “Definitely yes” or “Mostly yes” was the highest rate of positive agreement for any psychosocial item, while SR1 and SR5 each were 33.3% in the same direction. NTI participants responded “Definitely no” 73.3% of the time across all items in this subdomain, highlighting the extent to which aphasia disrupts meaningful participation in social roles and community life beyond the communication impairment itself. Item-level analysis of the 16 items in the SAQOL-39 Tamil Psychosocial domain is illustrated using box plots with overlaid individual data points in Figures 4.25–4.40.

Figure 4.25 Box plot representation of Psychosocial Domain Item T4 with individual data points in PWA and NT groups.

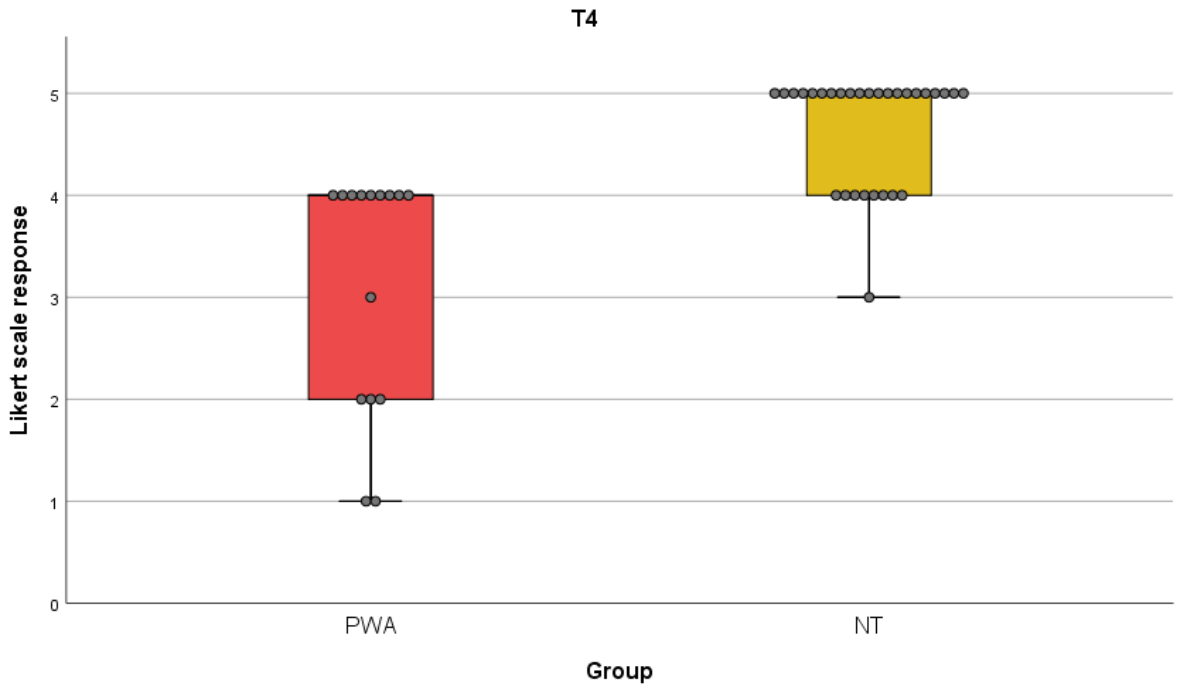


Figure 4.26 Box plot representation of Psychosocial Domain Item T5 with individual data points in PWA and NT groups.

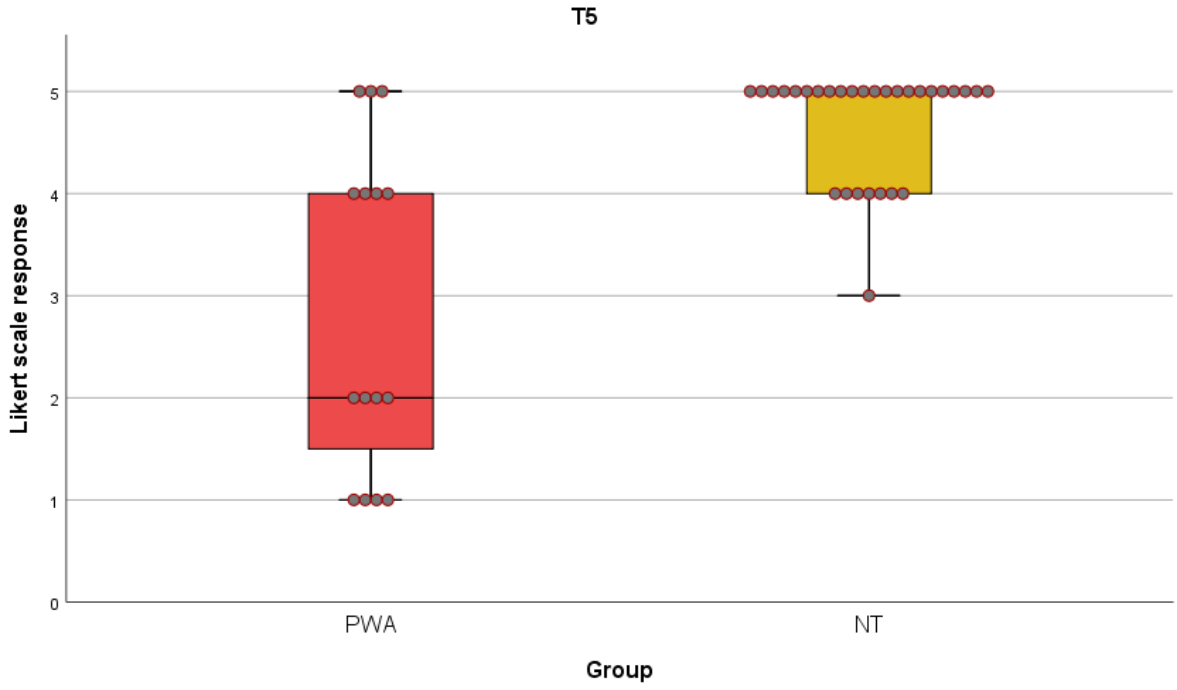


Figure 4.27 Box plot representation of Psychosocial Domain Item P1 with individual data points in PWA and NT groups.

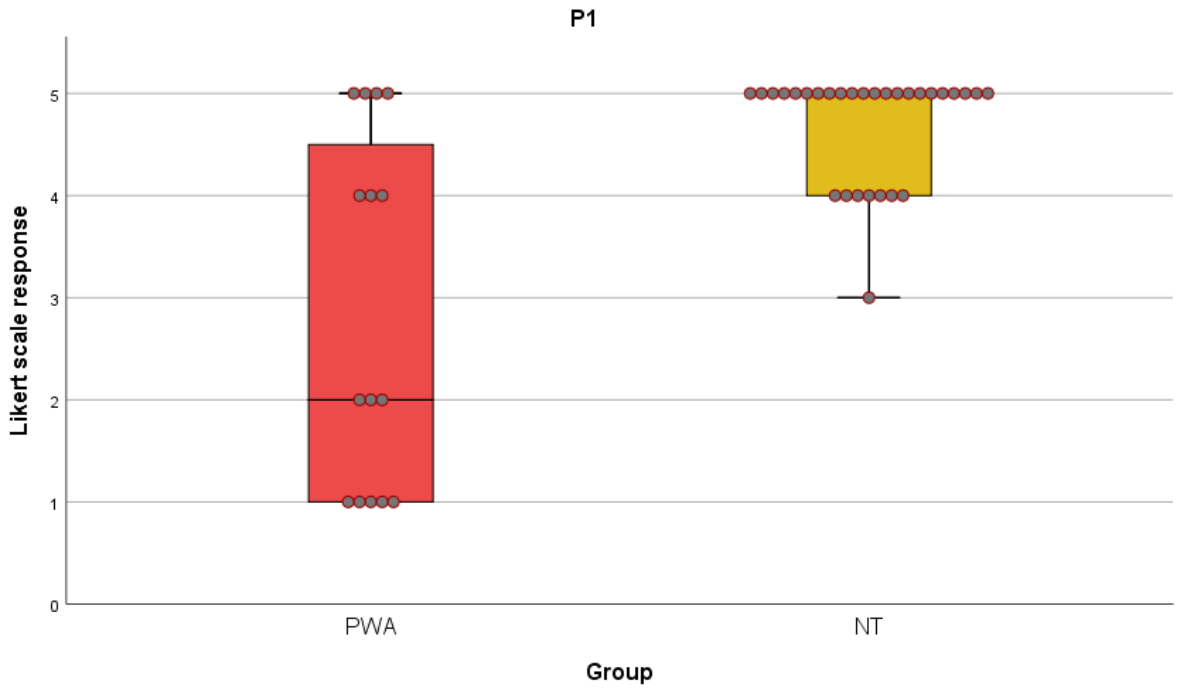


Figure 4.28 Box plot representation of Psychosocial Domain Item P3 with individual data points in PWA and NT groups.

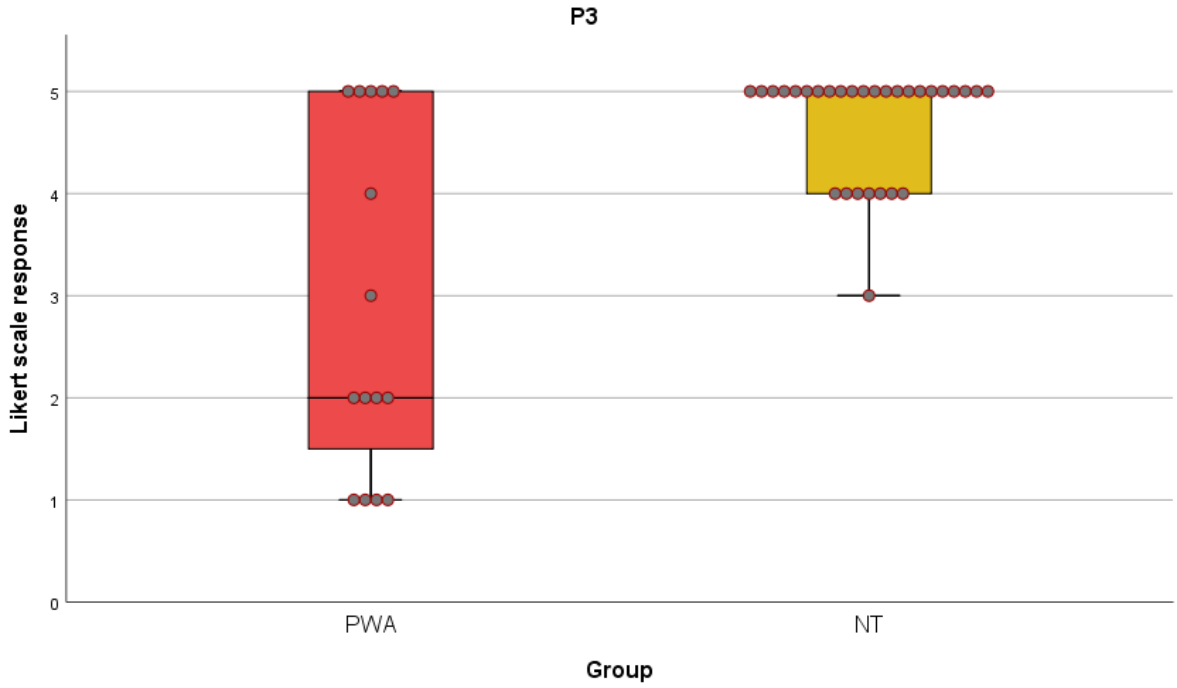


Figure 4.29 Box plot representation of Psychosocial Domain Item MD2 with individual data points in PWA and NT groups.

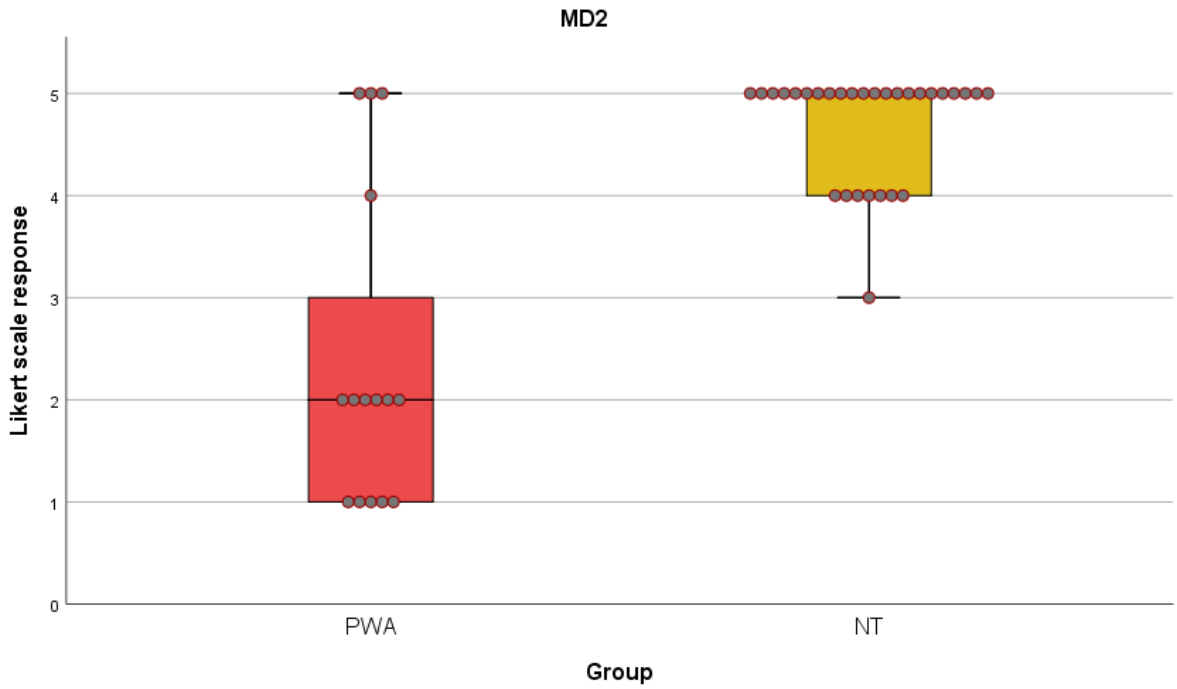


Figure 4.30 Box plot representation of Psychosocial Domain Item MD3 with individual data points in PWA and NT groups.

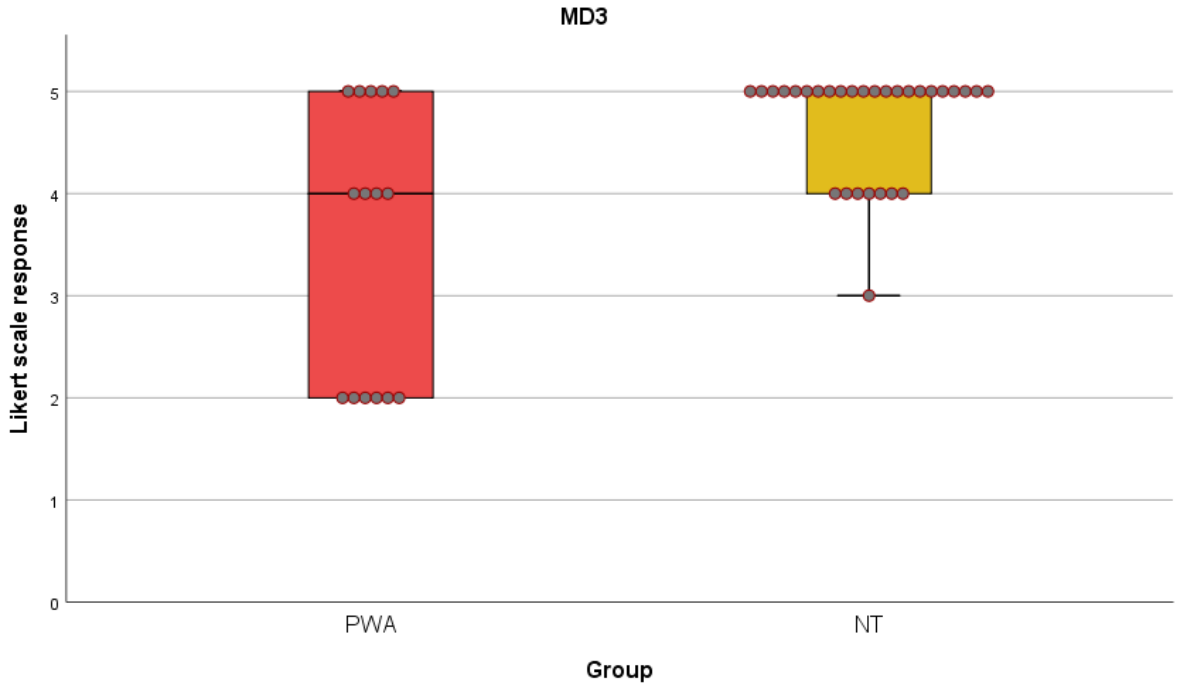


Figure 4.31 Box plot representation of Psychosocial Domain Item MD6 with individual data points in PWA and NT groups.

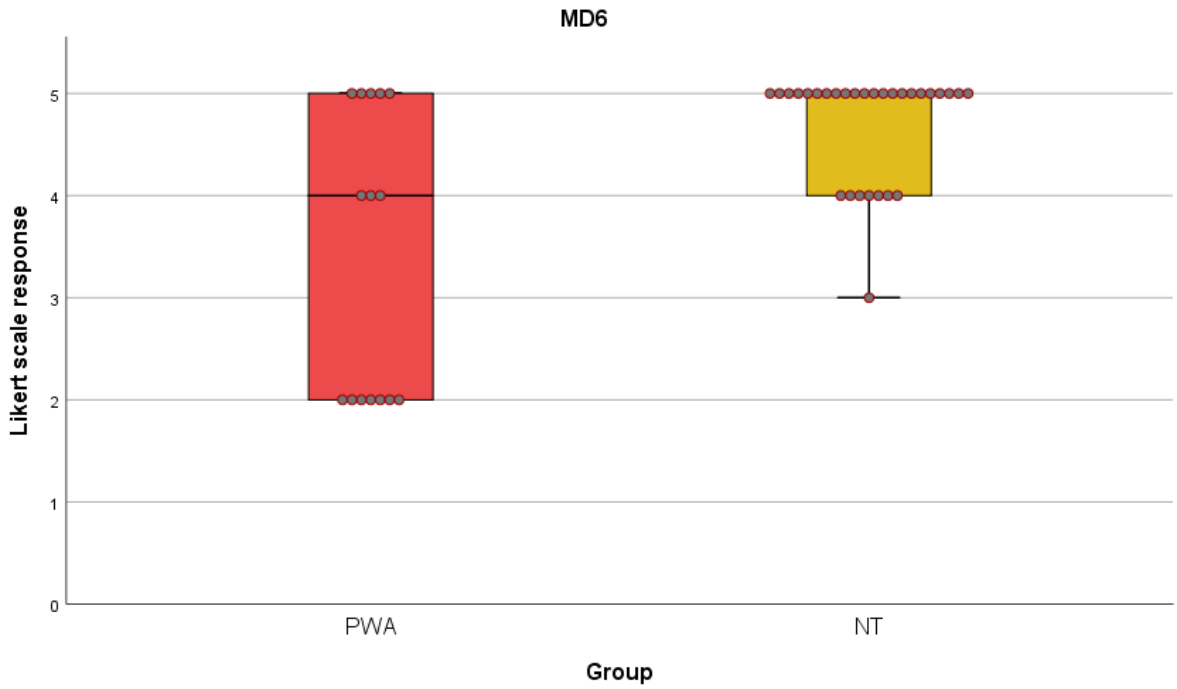


Figure 4.32 Box plot representation of Psychosocial Domain Item MD7 with individual data points in PWA and NT groups.

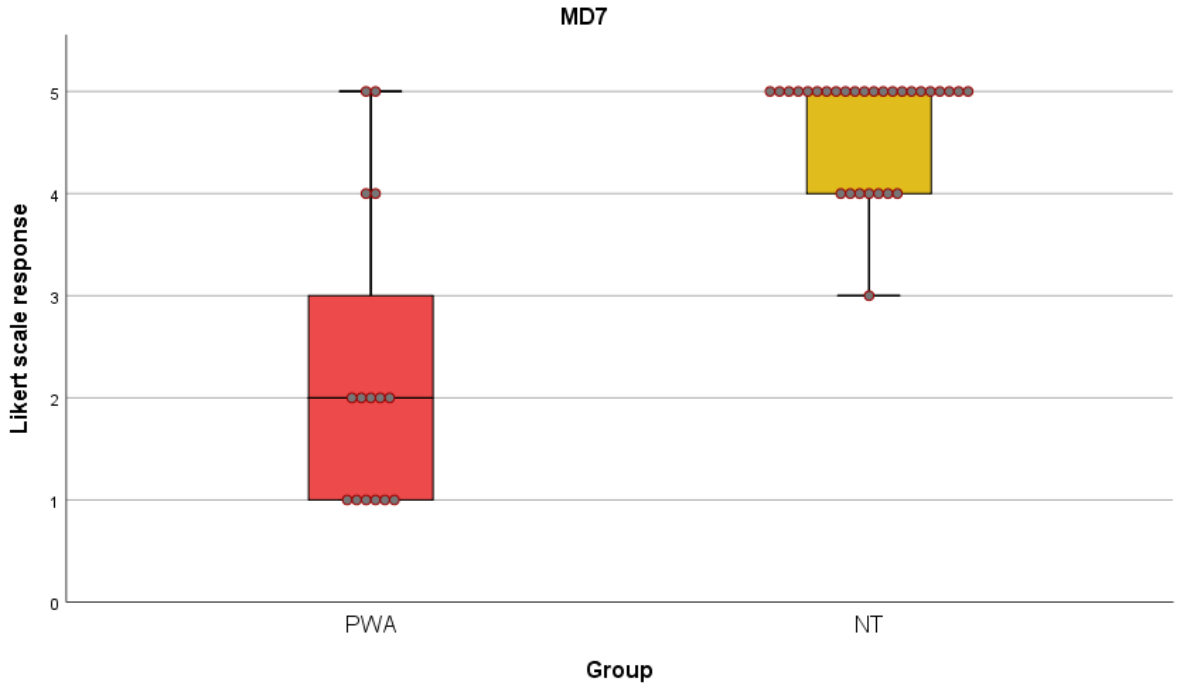


Figure 4.33 Box plot representation of Psychosocial Domain Item E2 with individual data points in PWA and NT groups.

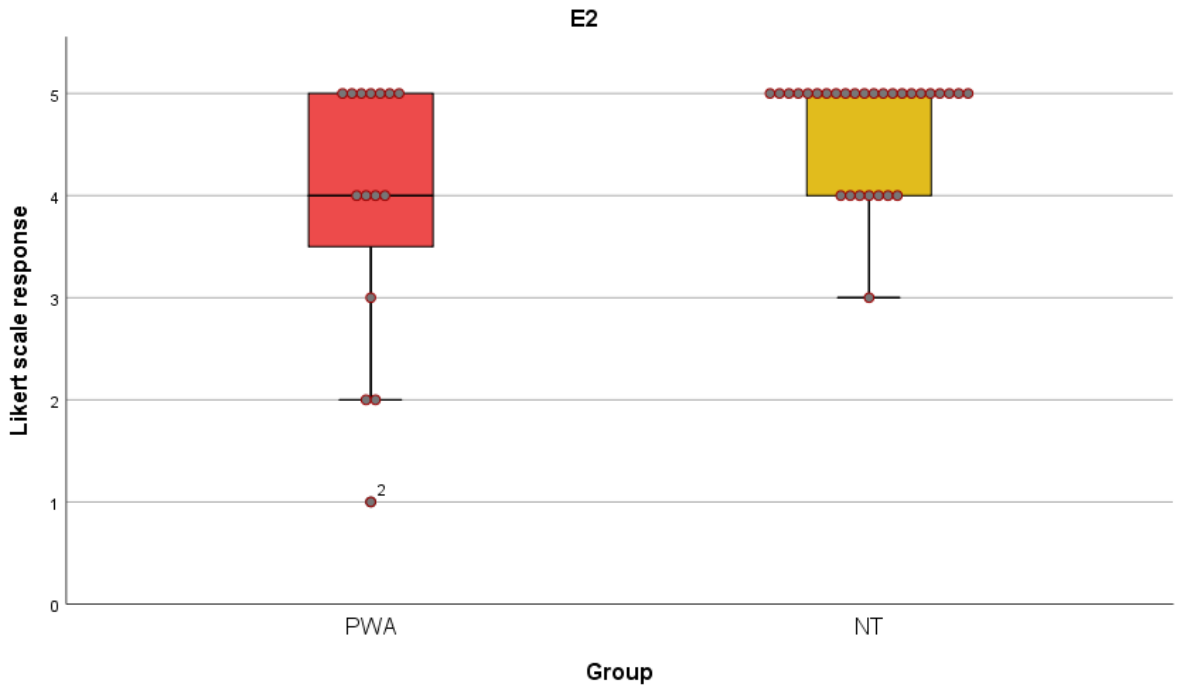


Figure 4.34 Box plot representation of Psychosocial Domain Item E3 with individual data points in PWA and NT groups.

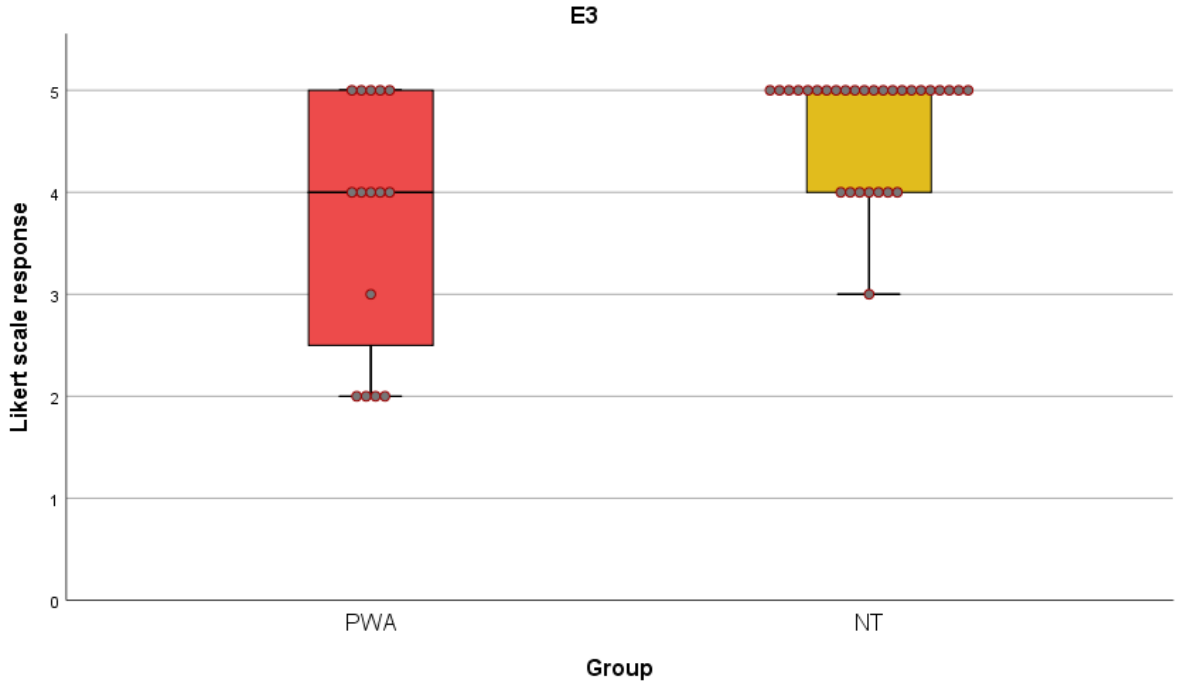


Figure 4.35 Box plot representation of Psychosocial Domain Item E4 with individual data points in PWA and NT groups

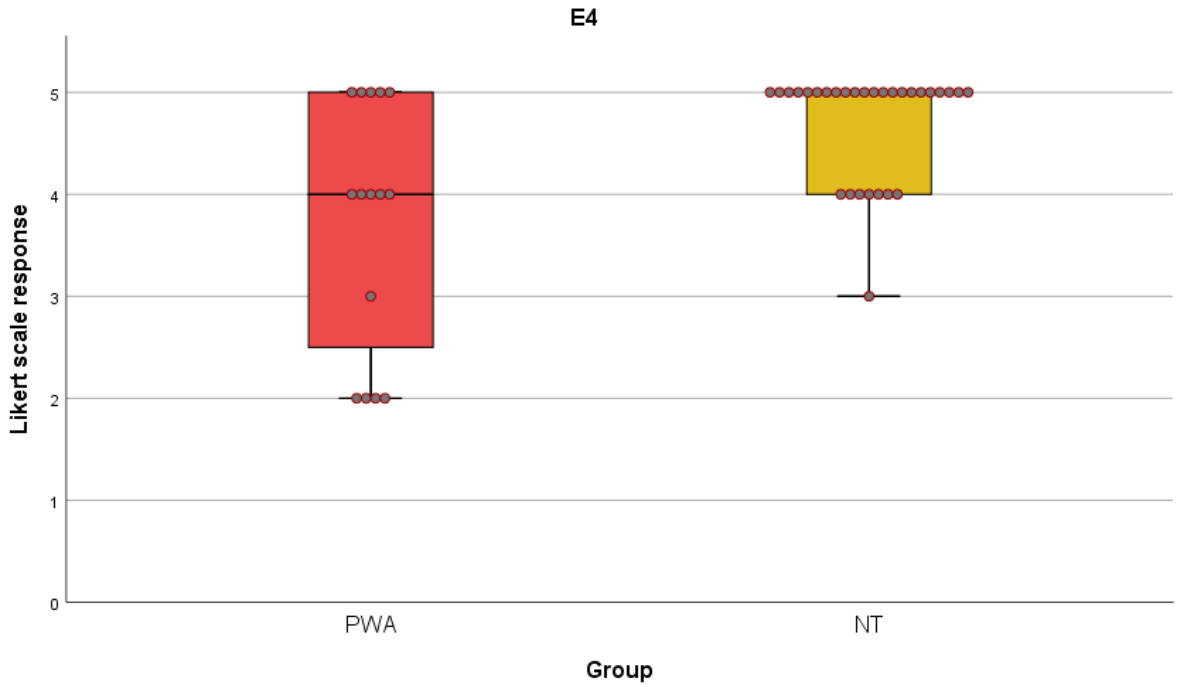


Figure 4.36 Box plot representation of Psychosocial Domain Item FR7 with individual data points in PWA and NT groups

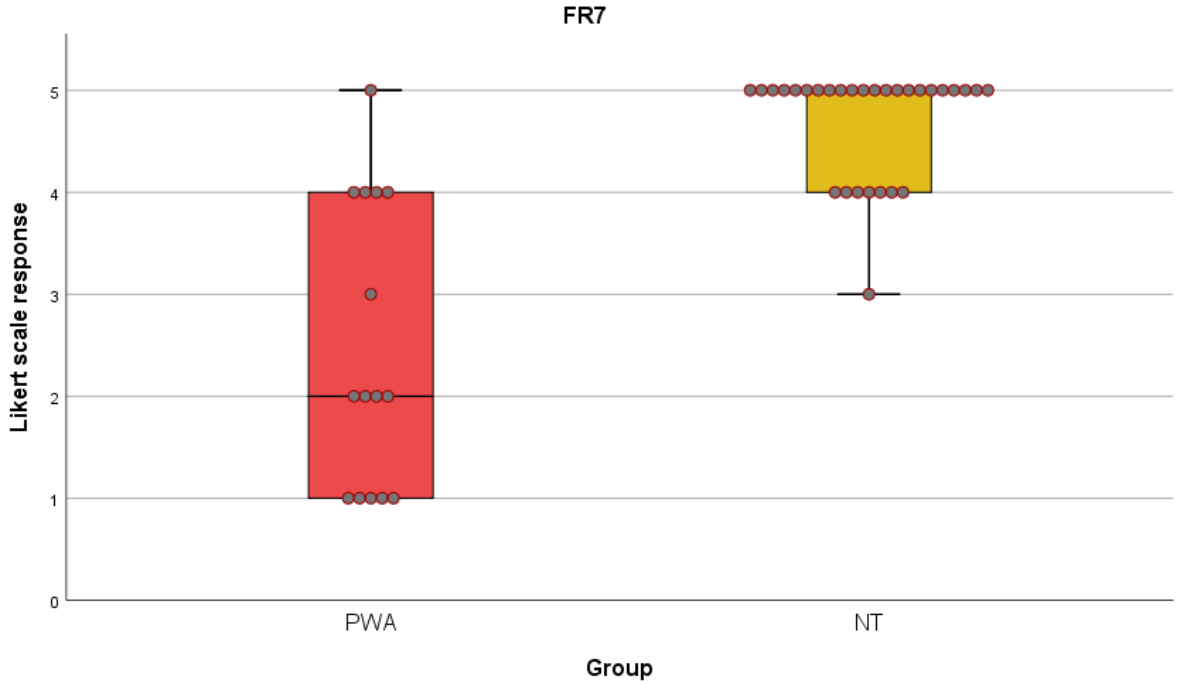


Figure 4.37 Box plot representation of Psychosocial Domain Item SR1 with individual data points in PWA and NT groups

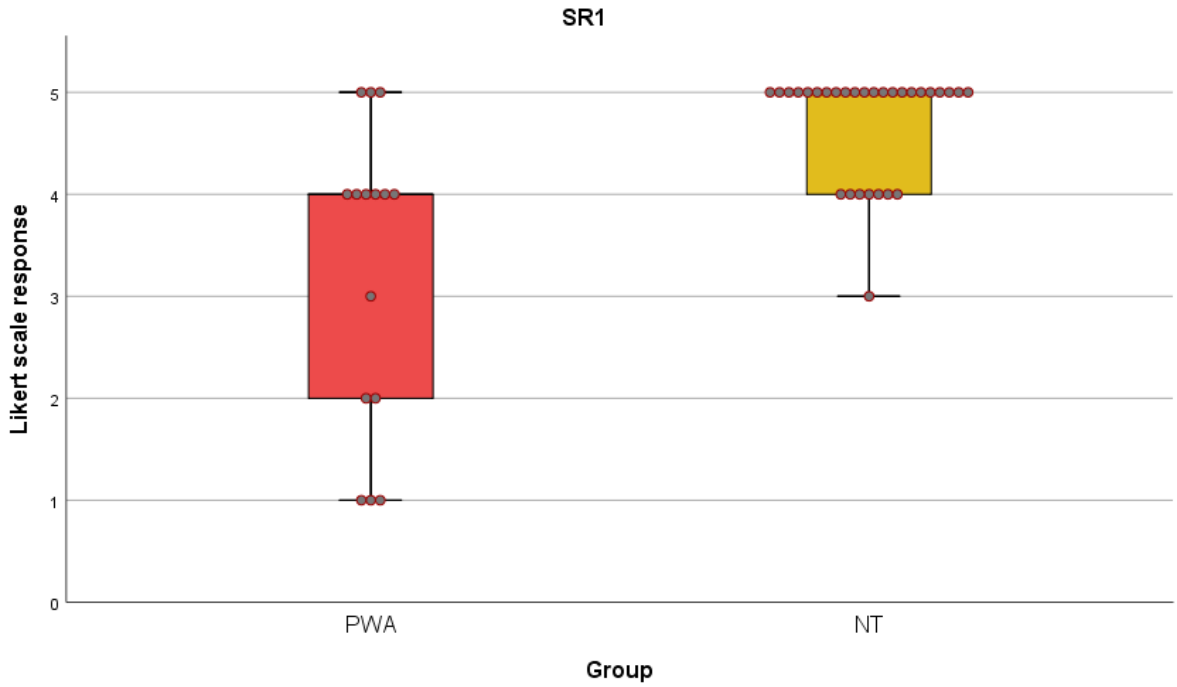


Figure 4.38 Box plot representation of Psychosocial Domain Item SR4 with individual data points in PWA and NT groups

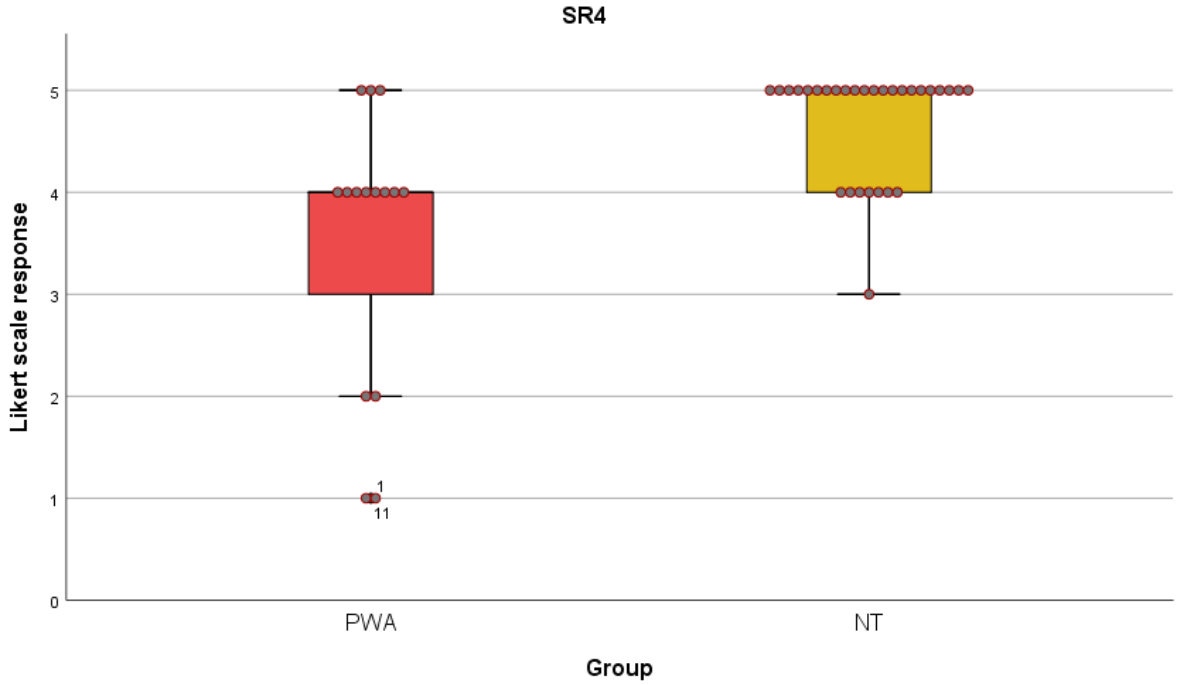


Figure 4.39 Box plot representation of Psychosocial Domain Item SR5 with individual data points in PWA and NT groups

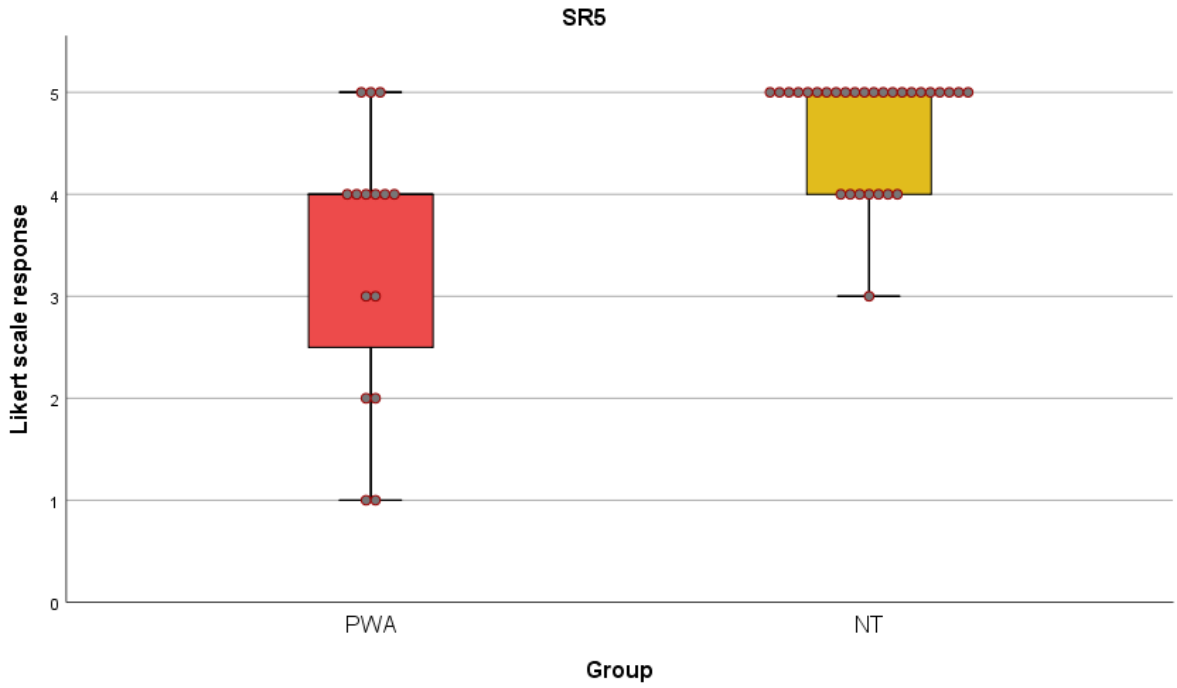
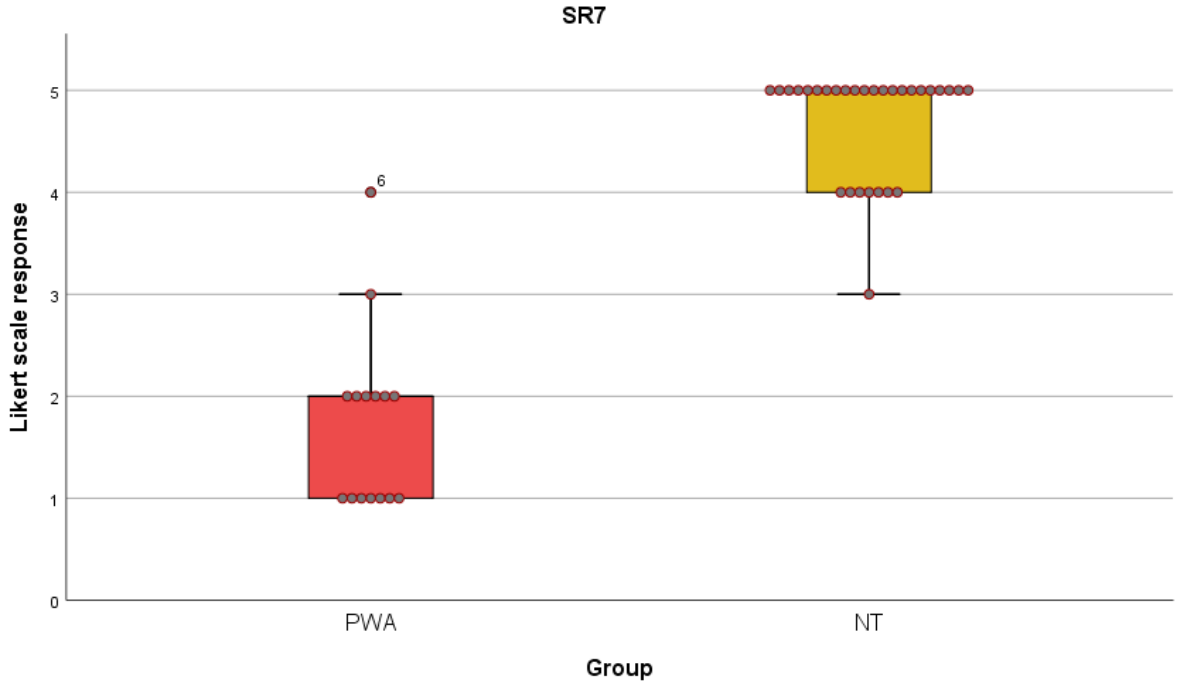


Figure 4.40 Box plot representation of Psychosocial Domain Item SR7 with individual data points in PWA and NT groups



4.7 Test – Retest Reliability

A subsample of 7 participants was readministered the SAQOL–39 Tamil one week after the first administration. The test- retest reliability was evaluated using the Intraclass Correlation Coefficient (ICC), which measures the proportion of total score variability that is attributable to true between-person differences (rather than measurement error). ICC values above 0.70 are generally considered strong, so reliability and internal consistency are considered good qualities. The results of the test – retest reliability analysis are tabulated in Table 4.6.

Table 4.6

Test- Retest reliability of Tamil SAQOL – 39 (ICC values, n = 7)

Domains	**ICC**
Physical	0.94

Communication	0.91
Psychosocial	0.92
Overall	0.96

The test-retest reliability results are very encouraging. The overall ICC for the Tamil SAQOL-39 was 0.96, 0.94 for the Physical domain, 0.91 for the Communication domain, and 0.92 for the overall scores, reflecting excellent score stability across the two administrations separated by a week to two weeks. At the domain level, ICC values ranged from 0.91 for the Communication domain to 0.94 for the Physical domain.

4.8 Correlational Analysis

To examine how the Tamil SAQOL – 39 scores relate to other clinically relevant variables. Spearman's rank correlation analyses were conducted within Group II (persons with aphasia). Correlations between the Tamil SAQOL–39 mean score, across domain scores, and the Aphasia Quotient (AQ) scores were done. The results are tabulated in Table 4.7

Table 4.7

Spearman's rho correlations between Tamil SAQOL – 39 mean scores, across domain scores, and Aphasia Quotient

Variable	Statistic	AQ Score	Mean Score	Physical Score	Communication Score	Psychosocial Score
AQ score	Correlation coefficient	1.000	0.705**	0.413	0.994**	0.673**
	Sig. (2-tailed)		0.003	0.126	0.000	0.006
	N	15	15	15	15	15

Mean score	Correlation coefficient	0.705**	1.000	0.857**	0.685**	0.902**
	Sig. (2-tailed)	0.003	.	0.000	0.005	0.000
	N	15	15	15	15	15
Physical score	Correlation coefficient	0.413	0.857**	1.000	0.381	0.631*
	Sig. (2-tailed)	0.126	0.000	.	0.161	0.012
	N	15	15	15	15	15
Communication score	Correlation coefficient	0.994**	0.685**	0.381	1.000	0.665**
	Sig. (2-tailed)	0.000	0.005	.161	.	0.007
	N	15	15	15	15	15
Psychosocial score	Correlation coefficient	0.673**	0.902**	0.631*	0.665**	1.000
	Sig. (2-tailed)	0.006	0.000	0.012	0.007	.
	N	15	15	15	15	15

*Note: ** p < .01 (2-tailed). * p < .05 (2-tailed). AQ = Aphasia Quotient*

The correlational analyses revealed that the Communication domain of the Tamil SAQOL-39 showed the strongest and most statistically significant correlation with the Aphasia Quotient ($\rho = .994$, $p < .001$), indicating that persons with less severe aphasia (higher AQ) tended to report markedly better communication-related quality of life. This near-perfect correlation provides strong convergent validity evidence, confirming that the Communication domain of the Tamil SAQOL-39 is measuring the same underlying construct as the WAB-R Tamil AQ. This is theoretically expected, as both instruments directly assess language functioning, and the strength of this association suggests that the Tamil SAQOL-39 Communication domain is highly sensitive to the degree of language impairment.

The overall Tamil SAQOL-39 mean score also correlated strongly and significantly with the AQ ($\rho = .705$, $p = .003$), suggesting that aphasia severity is an important determinant of quality of life more broadly, extending beyond the communication domain alone. This indicates that individuals with more severe aphasia experience wide-ranging reductions in quality of life across multiple functional areas, and that the Tamil SAQOL-39 as a whole instrument is responsive to the degree of language impairment.

The Psychosocial domain showed a moderately strong and statistically significant correlation with the AQ ($\rho = .673$, $p = .006$), indicating that aphasia severity also meaningfully influences psychosocial quality of life, encompassing mood, energy, personality, and social participation. This finding suggests that individuals with more severe aphasia are at greater risk of psychosocial difficulties and that language impairment severity should be considered when evaluating psychosocial outcomes in this population.

Interestingly, the Physical domain showed a moderate but non-statistically significant correlation with the AQ ($\rho = .413$, $p = .126$), suggesting that physical functioning is relatively independent of aphasia severity in this sample. This is clinically plausible, as physical recovery and language recovery following left-hemisphere stroke do not necessarily follow the same trajectory. Motor and physical impairments are governed by lesion characteristics and rehabilitation factors that may be distinct from those influencing language recovery. Overall, these findings indicate that aphasia severity, as measured by the WAB-R Tamil AQ, is most strongly associated with communication-related quality of life ($\rho = .994$, $p < .001$), followed by overall quality of life ($\rho = .705$, $p = .003$) and psychosocial functioning ($\rho = .673$, $p = .006$), all reaching statistical significance at the 0.01 level. The Physical domain alone did not show a significant relationship with aphasia severity ($\rho = .413$, $p = .126$). Collectively, these results support the construct validity of the Tamil SAQOL-39 and underscore aphasia severity as a key determinant of quality of life in persons with aphasia.

CHAPTER V

DISCUSSION

The present study aimed to adapt the Stroke and Aphasia Quality of Life Scale-39 (SAQOL-39) into Tamil and to evaluate the psychometric properties in a sample comprising neurotypical individuals and persons with aphasia. The SAQOL-39, originally developed by (Hilari et al., 2003). It has been recognised as one of the most comprehensive and aphasia-friendly tools for assessing health-related quality of life (HRQoL) following stroke. Adapting such an instrument into Tamil, one of the oldest and most widely spoken classical languages of South Asia, addresses a longstanding gap in the availability of the validated aphasia-specific HRQoL measures for Tamil-speaking populations. The findings of the study are discussed in the context of the existing literature on the SAQOL-39, cross-linguistic adaptation methodology, and the quality-of-life profile of PWA. It is discussed under the following headings: participant characteristics, content validation, psychometric properties, group-level differences, item-level findings, and correlational analyses.

5.1 Participant Characteristics

The study recruited 45 participants distributed across two groups: The control group (n=30) and the clinical group (n=15). The mean age of the neurotypical group was 45.77 years (SD=15.08), while the persons with aphasia group had a mean age of 48.53 years (SD=17.67). Age-related differences in quality-of-life perception have been well documented (Astrom et al., 1992; Hilari et al., 2003), as a mismatched age could plausibly be attributed to ageing rather than to the neurological sequelae of stroke and aphasia.

The distribution of educational attainment was also reasonably equivalent, with participants in both groups averaging approximately 11 to 12 years of formal education. Educational level is a known confound in self-report quality-of-life measures, as individuals

with higher education may demonstrate greater health literacy and a more nuanced understanding of questionnaire items. Homogeneity in education minimises this source of bias. Furthermore, all participants were classified in the middle socioeconomic stratum according to the Modified Kuppuswamy Socioeconomic Scale (Saleem & Jan, 2021). This is particularly important given that socioeconomic status exerts a robust and independent effect on perceived quality of life, and controlling for this variable strengthens the internal validity of between-group comparisons.

Within the clinical group, nine participants presented with non-fluent aphasia and six with fluent aphasia. The mean Aphasia Quotient (AQ) derived from the WAB-R Tamil (Hema, 2023) was 52.3 (SD=18.6), indicating a moderate degree of aphasia severity with considerable variability, consistent with reports in the aphasia literature describing the inherently heterogeneous nature of this acquired communication disorder. All clinical participants were between three to six months post-onset, situating data collection within early subacute phase of recovery. This window is particularly meaningful clinically because the initial spontaneous recovery has largely stabilised by this point, allowing the obtained SAQOL-39 Tamil scores to reflect the more enduring quality-of-life consequences of aphasia rather than acute fluctuations (Laska et al., 2001).

5.2 Content validation

The content validation of the SAQOL-39 Tamil was conducted by three certified Speech Language Pathologists who are native Tamil speakers with a minimum of five years of clinical experience. Expert validators rated all 39 items across ten parameters: simplicity, familiarity, presentation, relevance, accessibility, flexibility, feasibility, scoring pattern, scope of practice and coverage of parameters using a 5-point Likert scale adapted from the Aphasia Treatment Manual (Goswami et al., 2010). The ratings obtained were uniformly high across all

three domains (Physical, Communication, and Psychosocial), with near-perfect inter-validator agreement.

High content validity ratings across all domains confirm that the translated and adapted items were perceived by experienced clinicians as linguistically natural, culturally appropriate and clinically meaningful for Tamil-speaking populations. These findings align with the cross-linguistic adaptation guidelines proposed by Guillemin et al. (1993), who emphasised that translated health measures must undergo rigorous expert review to ensure that items retain conceptual equivalence with the original SAQOL-39 version. The absence of any item-level disagreement among validators lends confidence that the SAQOL-39 Tamil is a culturally valid instrument.

5.3 Descriptive Findings and Group-Level Quality of Life Profiles

Descriptive analysis of domain scores revealed a clinically meaningful and theoretically consistent pattern. Neurotypical participants scored consistently in the upper range across all domains (Mean score: M = 4.64; Physical: M = 4.57; Communication: M = 4.70; Psychosocial: M = 4.69), reflecting a ceiling effect attributable not to scale insensitivity but to the genuine absence of physical, communicative, or psychosocial difficulties that the scale was designed to capture (Hilari et al., 2003).

In contrast, persons with aphasia returned substantially lower scores across all domains. The Communication domain demonstrated the lowest mean score of 2.55, which is clinically significant: aphasia, by its definition, is a language disorder, and communication-related quality of life represents the domain most directly and severely disrupted by the condition (Code et al., 2016). This finding is consistent with reports by Cruice et al. (2011), who noted that communication difficulties constitute the most salient and self-identifying source of reduced well-being in PWA.

The wider score distributions observed within the clinical group, compared to the neurotypical group, affirm the well-established heterogeneity of aphasia as a clinical syndrome. Different individuals with aphasia present distinct lesion profiles, aphasia subtypes, premorbid functioning levels and coping resources, all of which can influence quality of life trajectories in divergent ways. This variability underscores the value of an individually administered HRQoL measure, the SAQOL-39 Tamil, which can capture not only group-level patterns but also the nuanced, patient-specific quality-of-life profile essential for person-centred rehabilitation planning (Hilari & Byng, 2009).

5.4 Internal Consistency

Internal consistency, assessed via Cronbach's alpha, yielded excellent values of 0.95 for the overall scale, 0.94 for the Physical domain, 0.90 for the Communication domain, and 0.89 for the Psychosocial domain. All values exceeded the threshold of 0.85 recommended for instruments intended for clinical use (Rosenthal & Rosnow, 1991) and substantially surpassed the commonly accepted minimum criteria of 0.70 (Nunnally, 1978).

These findings are directly comparable to the internal consistency values reported for the original English SAQOL-39, for which Hilari et al. (2003) reported Cronbach’s alpha values ranging from 0.87 to 0.95 across domains. The SAQOL-39 Tamil alpha coefficients fall within the same range, providing reassuring evidence that the adapted instrument preserves the structural coherence of the original scale. The strong domain-level alpha values indicate that items within each domain are measuring a single, coherent underlying construct a prerequisite for the meaningful and interpretable use of domain scores in clinical and research settings. The high overall alpha of 0.95 further supports the use of the Tamil SAQOL-39 as a global measure of post-stroke quality of life in Tamil-speaking populations.

The Communication domain alpha of 0.9 is notable, given that this domain contains only seven items and Cronbach's alpha is sensitive to the number of items in a scale (Cortina, 1993), which adds to the strong item-level coherence within the domain. This has important clinical implications; even a relatively brief assessment of communication-related quality of life within this domain can yield reliable, reproducible scores, making it suitable for clinical screening.

5.5 Group Differences: Known-Groups Validity

The Mann-Whitney U test was selected, given violations of normality in the neurotypical group and the ordinal nature of the Likert-scale data, which revealed highly significant differences between the two groups across all domains and the overall mean score (all $p < .001$). For all comparisons, the control group had higher mean ranks than the clinical group, and between-group rank differences were large (overall mean score = 20.30 rank points; Communication = 21.65, Psychological = 19.75 and Physical = 18.30).

The results provide strong evidence of known groups validity, one of the most basics form of construct validity in clinical measurement (Portney &Watkins, 2009). The SAQOL-39 Tamil distinguished well between a clinical group expected to have poor quality of life and a control group expected to have high quality of life, with perfect rank order separation and effect sizes suggesting a practically significant difference rather than just a statistically detectable difference. These findings mirror the known-groups validity results reported for the original English SAQOL-39 (Hilari et al., 2003).

The sequencing of group differences at the domain level is interpretable in terms of theory and clinical significance. The Communication domain showed the greatest rank difference (21.65), consistent with the centrality of communication impairment in defining the experience of aphasia (Code et al., 2016). The Psychosocial domain was the next highest

difference (19.75), reflecting the heavy psychosocial burden of aphasia, including depression, withdrawal, loss of self-confidence and disruption of social and family roles (Cruice et al., 2011). The Physical domain had the third largest group difference (18.30), consistent with the co-occurrence of motor and physical impairments in left-hemisphere stroke, but suggesting that physical recovery may be somewhat more independent of communication recovery (Hilari et al., 2003).

5.6 Item Level Analysis

5.6.1 Physical Domain

The results from the Physical domain (e.g., self-care, mobility, working, and upper extremity function) are consistent with a large body of evidence indicating that stroke-related neurological damage results in widespread motor and functional deficits beyond the primary language system (Crary et al., 2013; Hilari et al., 2012). The difficulty reported by PWA across self-care and mobility items in the present study is similar to prior work showing that post-stroke disability often impairs activities of daily living (Langhorne et al., 2011; Salter et al., 2008). In the PWA group, 53.3% of participants reported complete inability to perform upper extremity tasks. Extreme ceiling effects were observed in the neurotypical group, with 70% of the participants reporting no difficulty on all physical items. This pattern is consistent with established clinical observations of the frequent association of hemiparesis and limb apraxia with aphasia after left-hemisphere stroke, making upper-limb tasks such as fine-motor manipulation excessively difficult (Donkervoort et al., 2006; Smania et al., 2006). The relatively better-preserved working performance in some PWA may indicate residual function in those with subcortical or mild cortical involvement; however, the majority still performed below the level of the control group.

5.6.2 Communication Domain

Communication domain resembles the core of aphasia as a language disorder (Damasio, 1992; Robey, 1998) and was among the most clinically salient in the data. The universal endorsement of language difficulty across L2, L3, L5, L6 and L7 items among PWA and the fact that no participant reported performance without difficulty, fits with the prior quality of life and functional communication research documenting pervasive linguistic breakdown across both expressive and receptive modalities (Hilari et al., 2003; Ross & Wertz, 2003). The family role (80% of PWA endorsed an affirmative response on FR9) is consistent with SAQOL-39 validation studies, which reported that family role is one of the most severely affected domains in chronic aphasia (Hilari et al., 2012; Vickers, 2010). The social item SR8 showed that 86.7% of PWA agreed with the statement that they had great difficulty, suggesting that aphasia significantly impacts participation in social settings. This result corroborates studies that have shown reduced social engagement and communicative role restriction is one of the most pervasive consequences of aphasia (Cruice et al., 2003; Parr, 2007). The absence of effects in the control group across all communication items supports the specificity of these difficulties to acquired language disorder rather than to ageing or general health-related factors, a distinction with important implication for differential diagnosis and participant recruitment participant recruitment in aphasia research (Doesborgh et al., 2004).

5.6.3 Psychosocial Domain

The psychosocial findings make a significant contribution to a view of aphasia as a condition with consequences extending well beyond communication impairment, a view increasingly highlighted in contemporary person-centred aphasia research (Brown et al., 2010; Simmons-Mackie & Damico, 2007). The heterogeneity seen on thinking and cognition items is consistent with the recognised diversity of cognitive sequelae in aphasia, such that deficits in attention, memory and executive function are seen in some but not all individuals, indicative of differences in lesion extent, location and time since stroke (Murray, 2012; Purdy, 2002).

High degrees of positive endorsement of personality and mood items P1 and P3 (53.3% each) and Mood items MD2 and MD7 (73.3%) are consistent with results from the aphasia literature indicating that depression, emotional dysregulation and increased reliance on caregivers are common psychosocial sequelae that significantly diminish quality of life (Code & Herrmann, 2003; Kauhanen et al., 2000). As the highest affirmative endorsement across the entire psychosocial domain, the rate of endorsement on social role item SR7 was the most remarkable finding at 86.7%. This item exemplifies the tremendous disruption to social participation, role identity and community integration that characterises chronic aphasia (Cruice et al., 2003; Parr, 2007). Importantly, the control group reported consistently high rates of "Definitely no" responses across all psychosocial items (73.3%), confirming that the psychosocial burden observed among PWA is due to acquired neurological and communicative changes rather than normal ageing processes. These findings have direct implications for service planning, supporting recommendations that aphasia rehabilitation and support programmes explicitly attend to psychosocial well-being, social identity, and participation alongside linguistic recovery (Holland & Beeson, 1999; Simmons-Mackie et al., 2014).

5.7 Test-Retest Reliability

Test-Retest reliability was assessed in a sub-sample of seven participants retested on the SAQOL-39 Tamil after 1 week, and excellent values were obtained: ICC = 0.96 for the overall scale, 0.94 for the Physical domain, 0.91 for the Communication domain and 0.92 for the Psychosocial domain. All values exceeded the threshold of 0.70, which is generally considered to indicate good reliability (Koo & Mae, 2016), and approach the benchmark of 0.90 or above that is preferred for clinical measurement tools.

The result supports the temporal stability of SAQOL-39 Tamil scores during a one-week interval, suggesting the adapted instrument generates consistent and reproducible scores

when administered to the same individuals under similar conditions. This is a key characteristic for any clinical instrument used to track patient outcomes over time. The high ICCs are consistent with the test-retest reliability reported for the original SAQOL-39 (Hilari et al., 2003) and endorse the robustness of the adapted Tamil version. The stability of scores over the week further supports the validity of adaptation of the Tamil version of SAQOL-39, that it did not introduce an ambiguity or inconsistency of item interpretation, as lower ICC values would be expected in case of unstable or poorly worded items.

5.8 Convergent Validity

Spearman's rank correlation analyses found a pattern of associations between SAQOL-39 Tamil and the Aphasia Quotient derived from the WAB-R (Hema & Vasupradha,2023) within the clinical group, and they were statistically significant and theoretically interpretable. The Communication domain was almost perfectly correlated with AQ ($\rho = .994$, $p < .001$), suggesting that individuals with less severe aphasia reported significantly better communication-related quality of life. These results provide strong evidence of convergent validity for the Communication domain of the SAQOL-39 Tamil and confirm that it is measuring the same underlying construct as the WAB-R Tamil AQ.

The overall mean score was strongly positively correlated with the AQ ($\rho = .705$ $p = .003$), suggesting that aphasia severity is a broad determinant of quality of life extending well beyond the Communication domain. This is consistent with the conceptualisation of the SAQOL-39 Original version (Hilari et al., 2003), as a multidimensional HRQoL instrument in which impairment severity is an important upstream determinant of outcomes in Physical, Communication and Psychosocial domain.

There was also a moderately strong, statistically significant correlation between the Psychosocial domain and AQ ($\rho = .673$, $p = .006$), suggesting that those with more severe

aphasia have a greater psychosocial burden. These results are consistent with the hypothesis that greater communication impairment is associated with greater social withdrawal, reduced participation and increased psychosocial distress (Kauhanen et al., 2000; Cruice et al., 2011).

No statistically significant correlations were found between the Physical domain and AQ ($\rho = .413$, $p = .126$), but this does not imply that the physical quality of life is unrelated to aphasia, but rather that physical recovery followed a trajectory that was relatively independent of language recovery in this sample. This is clinically plausible as trajectories of physical and motor recovery may co-occur within the same individual and are governed by overlapping neurological and rehabilitative processes (Kwakkel et al., 2003). Thus, the significant correlation of the Physical domain is a dissociation of construct validity and not a measurement failure.

CHAPTER VI

SUMMARY AND CONCLUSION

6.1 SAQOL-39 adaptation summary

The present study aimed to translate, culturally adapt, and validate the Stroke and Aphasia Quality of Life Scale (SAQOL-39) into Tamil, a classical Dravidian language spoken by approximately 70 to 80 million people in the Indian state of Tamil Nadu, the union territory of Puducherry, and other neighbouring states. The SAQOL-39 was initially developed by Hilari et al. (2003) as a health-related quality of life (HRQoL) measure for individuals who have had a stroke, including those with aphasia. It consists of 39 items across three domains: the Physical (16 items), Communication (7 items), and Psychosocial (16 items), with responses on a five-point Likert scale with higher scores indicating better quality of life.

The study was undertaken to bridge the gap in the availability of validated HRQoL measures specifically developed for Tamil-speaking persons with aphasia. India has one of the highest burdens of stroke in Asia, and Tamil Nadu is one of the most stroke-affected states in India (Jebasingh & Sivanesan, 2017), but the availability of linguistically and culturally appropriate outcome measures for this population has been significantly limited. The SAQOL-39 has been validated in more than twenty languages, including three Indian languages: Hindi (Mitra & Krishnan, 2015), Kannada (Kiran & Krishnan, 2013), and Malayalam (Raju & Krishnan, 2015), but not in Tamil.

The study used a descriptive cross-sectional research design with purposive sampling. The study recruited 45 participants. Group I consisted of 30 neurotypical individuals (control group) and Group II consisted of 15 persons with aphasia (clinical group) following cerebrovascular accident. All participants were native Tamil speakers, aged between 18 and 80

years, right-handed, had a minimum of 10 years of formal education, and were classified in the middle socioeconomic stratum according to the Modified Kuppuswamy Socioeconomic Scale (Saleem & Jan, 2021). Ethical clearance was obtained from the Ethical Committee for Bio-behavioural Sciences at All India Institute of Speech and Hearing, Mysore.

The study was undertaken in four systematic phases. Phase I involved the linguistic translation of the SAQOL-39 from English into Tamil. The cross-cultural adaptation was carried out using the Brislin (1970) method. This included independent forward translation by two bilingual professionals, consensus review by an expert panel, blind back translation, and final comparison with the source document. The important change was made at this time: SC1 item was changed from ‘preparing food’ to ‘eating food’ as the expert panel unanimously agreed that food preparation does not constitute a culturally valid indicator of functional independence for the target Tamil-speaking population. Phase II was socio-cultural and linguistic fine-tuning of the translated items to ensure contextual appropriateness. Phase III was a formal content validation by three independent, experienced Speech-Language Pathologists who were native Tamil speakers. Phase IV involved administering the validated Tamil version of SAQOL-39 to all 45 participants and a psychometric evaluation, including assessments of internal consistency, test-retest reliability, known-groups validity, and convergent validity.

The content validity ratings of the ten parameters (simplicity, familiarity, presentation, relevance, accessibility, flexibility, feasibility, scoring pattern, scope of pattern, and coverage of parameters) by the three expert validators were high for all three domains, with almost perfect agreement among the validators. The internal consistency was excellent, with Cronbach's alphas of 0.95 for the total scale, 0.94 for the Physical domain, 0.90 for the Communication domain, and 0.89 for the Psychosocial domain. All values were well above the minimum criterion of 0.70 recommended by Nunnally (1978) and the clinical benchmark of 0.85 or above recommended by Rosenthal and Rosnow (1991).

The Shapiro-Wilk normality test indicated a significant violation of the normality assumption for the neurotypical group. The Mann-Whitney U test was used for between-group comparisons. Results showed significant between-group differences for persons with aphasia and neurotypical individuals on all four measures (mean score, Physical, Communication, and Psychosocial score) at $p < 0.001$. The largest difference in rank was observed in the Communication domain (21.65 rank points), followed by the overall mean score (20.30), the psychosocial domain (19.75), and the physical domain (18.30), providing clear evidence for known-group validity.

Test-retest was assessed using the Intraclass Correlation Coefficient (ICC) in a subsample of seven participants of the control group who were retested after one week. Results showed excellent test-retest reliability for the overall scale (ICC = 0.96), Physical (ICC = 0.94), Communication (ICC = 0.91), and Psychosocial (ICC = 0.92) domains. These values show excellent temporal stability of scores.

Convergent validity was assessed by correlating the domain scores of the Tamil SAQOL-39 with the Aphasia Quotient (AQ) of the WAB-R Tamil (Hema & Vasupradha,2023) using Spearman's rank correlations in the clinical group. The Communication domain correlated nearly perfectly with AQ ($\rho = .994$, $p < .001$), the overall mean score had a strong, significant correlation ($\rho = .705$, $p = .003$), and the Psychosocial domain had a moderately strong, significant correlation ($\rho = .673$, $p = .006$). There was no significant correlation in the Physical domain with AQ ($\rho = .413$, $p = .126$), which was considered clinically plausible as physical and language recovery trajectories after left-hemisphere stroke may be independent.

The following are conclusions drawn from the results of this study: Firstly, Brislin's (1970) framework, the stringent multi-stage process, expert panel consensus and blind back

translation ensured that SAQOL-39 Tamil had high-quality conceptual and semantic equivalence.

Second, the psychometric properties of the SAQOL-39 Tamil are excellent. The internal consistency coefficients (Cronbach's $\alpha = 0.89$ to 0.95) and test-retest reliability values (ICC = 0.91 to 0.96) were comparable to or higher than those reported for the original version English SAQOL-39 (Hilari et al., 2003) and its validations in Hindi (Mitra & Krishnan, 2015), Kannada (Kiran & Krishnan, 2013), and Malayalam (Raju & Krishnan, 2015) and several international adaptations (Panuccio et al., 2025).

Third, the SAQOL-39 Tamil has excellent known-groups validity as it can meaningfully and significantly differentiate between people with aphasia and neurotypical individuals. The scale is particularly sensitive to communication related to quality of life, which is theoretically consistent with the nature of aphasia as a language disorder.

Fourth, the Communication domain of the Tamil SAQOL-39 shows strong convergent validity with the Aphasia Quotient of the WAB-R Tamil (rho = .994, $p < .001$), confirming that it measures the same underlying construct as the diagnostic instrument. This near-perfect association validates the Communication domain as a very sensitive clinical indicator.

Fifth, aphasia has a pervasive multidimensional impact on quality of life across the domains of Physical, Communication, and Psychosocial functioning, with communication and psychosocial functioning most severely impacted. These results are consistent with the literature on aphasia and quality of life (Cruice et al., 2011; Hilari et al., 2003; Lam & Wodchis, 2010).

Sixth, the Tamil version of the SAQOL-39 is linguistically and culturally appropriate and clinically relevant for use with Tamil-speaking stroke survivors, including those with aphasia.

6.2 Clinical Implications

The present study has important clinical implications for clinical practice in Speech Language Pathology, as follows:

The SAQOL-39 Tamil addresses a significant gap in the clinical assessment toolkit available to Speech Language Pathologists working with Tamil-speaking stroke survivors in India. They can incorporate this validated HRQoL measure into routine clinical practice as the primary health care provider responsible for the assessment and rehabilitation of persons with aphasia. Inclusion of the Tamil SAQOL-39 in the standard assessment battery, together with diagnostic tools such as the WAB-R (Hema & Vasupradha, 2023), would provide clinicians with a comprehensive person-centred profile that extends beyond impairment-level language scores to better reflect the lived experience across physical, communicative, and psychosocial domains.

The domain-level scores of the SAQOL-39 Tamil can aid prioritisation of therapeutic goals from a rehabilitation planning perspective. The finding that the Communication domain shows the lowest mean scores and the largest group differences stresses the importance of communicative functioning as a rehabilitation focus. Moreover, the substantial psychosocial burden reported in the clinical group, particularly regarding mood disruption, dependency, and decreased social involvement, provides strong evidence for the inclusion of psychosocial support and counselling in aphasia rehabilitation programs. This is consistent with life participation approaches to aphasia rehabilitation recommended by Mackie et al. (2014).

The SAQOL-39 Tamil is also an outcome measure to assess change during the rehabilitation process. Its high test-retest reliability (overall ICC = 0.96) indicates it yields stable, reproducible scores and is therefore useful for assessing change over time and intervention effectiveness. The existence of a validated responsive HRQoL measure in Tamil

within a healthcare setting, where evidence-based practice is gaining importance, helps to ensure the quality of clinical audit and service evaluation.

Furthermore, the tool facilitates more meaningful conversations with clients and families about quality-of-life priorities and rehabilitation goals, thereby supporting shared decision-making. In the clinical group of the present study, family relations and social roles were among the most severely affected dimensions, with >80% of PWA endorsing significant difficulty in family roles.

6.3 Limitations of the study

1. The clinical sample size (n=15) was small, yet the findings are consistent with those of similar validation studies. Future research should include larger samples.
2. Duration was limited to post-onset (three to six months); only the early subacute recovery phase was captured, not the acute or chronic presentations. Longitudinal studies across all stages of recovery are needed to assess the scale's sensitivity to change over time.
3. Convergent validity was established solely through correlation with the WAB-R Tamil AQ, as no other Tamil-validated HRQoL tools are currently available.
4. The study did not include people with severe receptive aphasia who are unable to self-report; a proxy version would greatly enhance the instrument's clinical usefulness.

6.4 Future Directions

1. Representative normative data should be generated across diverse geographic, rural, and semi-urban Tamil-speaking populations. This would increase the clinical relevance of the SAQOL-39 Tamil for practising Speech-Language Pathologists.

2. Longitudinal studies identify predictors of outcomes because quality-of-life trajectories and the scale's responsiveness to change become evident by tracking SAQOL-39 scores from acute onset to the chronic phase.
3. With reference to the psychosocial and clinical correlates, future studies should explore associations between Tamil SAQOL-39 scores and variables including depression, anxiety, caregiver burden, and community participation. Such findings would guide the development of targeted psychosocial rehabilitation programmes for Tamil PWA.
4. A proxy version of SAQOL-39 Tamil can be validated for quality of life in patients with severe receptive aphasia who are unable to self-report.
5. The sensitivity of the instrument to change subsequent to specific treatments can be explored, as it would support as an outcome measure in clinical trials.

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APPENDIX A

ETHICAL CONSENT CERTIFICATE

All India Institute of Speech and Hearing
(An autonomous Institute under the
Ministry of Health and Family Welfare, Govt. of India)
Center of Excellence - Assessed & Accredited by NAAC with 'A' Grade
ISO 9001:2015 Implemented Institute
Manasagangothri, Mysuru-570006

ಅಖಿಲ ಭಾರತ ವಾಕ್ ಮತ್ತು ಶ್ರವಣ ಸಂಸ್ಥೆ
ಮಾನಸಗಂಗೋತ್ರಿ, ಮೈಸೂರು-570006
अखिल भारतीय वाक् श्रवण संस्थान
मानसगंगोत्री, मैसूरु - 570 006

INSTITUTE REVIEW BOARD (IRB) APPROVAL FOR BIO-BEHAVIOURAL RESEARCH PROPOSAL INVOLVING HUMAN SUBJECTS AT AIISH

AIISH Institute Review Board (IRB)

Ref: SH/IRB/M.S/SLP.07/2025-26 **Date: 11.03.2026**

Title of the Dissertation	: Cultural and Linguistic Adaptation and Validation of SAQOL-39 Questionnaire for Tamil Speaking Persons with Aphasia.
Name of the Student	: Ms. Aswitha A
Guide	: Dr. Hema N
Co-Guide (if any)	: NIL
Proposed Duration of the Project	: 06 months
Source of funding	: Non-funded Master's dissertation
Estimated budget	: Nil
Reference Number of the Project	: Nil
Date on which the IRB meeting was held	: 05.03.2026
A clear statement of the decision reached IRB meeting (In the event of the proposal is not approved, a statement of reasons for the same must be indicated)	: **APPROVED**
Advice & suggestions (if any)	: Nil

Signature & Name of the Member Secretary-IRB
Dr. Animesh Barman
Professor of Audiology
All India Institute of Speech and Hearing, Mysuru-570006

Phone : 0821-2502000 / 2502100 Toll Free No. 18004255218 Fax : 0821-2510515
e-mail : director@aiishmysore.in / @aiishmysuruofficial, @aiishmysuru
website : www.aiishmysore.in

APPENDIX B

PARTICIPANT CONSENT FORM

தெரிவிக்கப்பட்ட சம்மதப் பத்திரம் (Informed Consent)

இந்த ஆய்வின் நடைமுறைகள் குறித்து எனக்கு தெளிவாக விளக்கப்பட்டுள்ளது. இந்த ஆய்வில் நான் பங்கேற்பதால் ஏற்படக்கூடிய சாத்தியமான பயன்கள் மற்றும் அபாயங்கள் குறித்து நான் புரிந்துகொண்டுள்ளேன். நான் விரும்பாத பட்சத்தில் இந்த ஆய்வில் பங்கேற்க மறுக்கும் உரிமையும், எப்போது வேண்டுமானாலும் எந்த காரணமும் சொல்லாமல் என் சம்மதத்தை திரும்பப்பெறும் உரிமையும் எனக்கு உள்ளதை அறிந்திருக்கிறேன்.

இந்த ஆய்வில் பங்கேற்பதன் மூலம் ஆய்வுக் குழுவினரால் மேற்கொள்ளப்படும் மதிப்பீடுகளுக்காக கூடுதல் நேரம் ஒதுக்க வேண்டி இருக்கும் என்பதையும், இந்த மதிப்பீடுகள் எனக்கு நேரடி நன்மை அளிக்காமல் இருக்கக்கூடும் என்பதையும் நான் அறிந்திருக்கிறேன்.

மேற்கண்ட விதிமுறைகள் மீறப்பட்டதாக நான் நினைத்தால், எந்தவித சிக்கலும் இன்றி AIISH நிறுவனத்தின் நெறிமுறை குழு தலைவருக்கு எழுதுவதற்கான உரிமை எனக்கு உள்ளது. இதனால் எனக்கு வழங்கப்படும் சிகிச்சை அல்லது சேவைகளில் எந்த பாதிப்பும் இருக்காது.

நான், _____, மேற்கண்ட விவரங்களை முழுமையாக புரிந்துகொண்டு, இந்த ஆய்வு/திட்டத்தில் பங்கேற்க என் சம்மதத்தை அளிக்கிறேன்.

பெற்றோர் / பாதுகாவலர் கையொப்பம் **சாட்சி கையொப்பம்:**

(பெயர் மற்றும் முகவரி) (சாட்சி பெயர்)

ஆய்வாளர் கையொப்பம்:

பெயர் மற்றும் பதவி

தேதி:

APPENDIX C

SAQOL-39 ENGLISH (Hilari et al., 2003)

Name/ID:_____ d.o.b.:_____ Δ:_____ Date:_____

SAQOL-39g Scoring Sheet

DURING THE PAST WEEK (Repeat as in SAQOL-39)

Item ID	How much trouble did you have (Repeat before each item or as necessary)	Couldn't do it at all	A lot of trouble	Some trouble	A little trouble	No trouble at all	Domain scores		
							Physical	Comm.	Psycho-social
SC1.	preparing food?	1	2	3	4	5			
SC4.	getting dressed?	1	2	3	4	5			
SC5.	taking a bath or shower?	1	2	3	4	5			
M1.	walking? (If respondent can't walk, circle 1 and go to question M7)	1	2	3	4	5			
M4.	keeping your balance when bending over or reaching?	1	2	3	4	5			
M6.	climbing stairs?	1	2	3	4	5			
M7.	walking without stopping to rest or using a wheelchair without stopping to rest?	1	2	3	4	5			
M8.	standing?	1	2	3	4	5			
M9.	getting out of a chair?	1	2	3	4	5			
W1.	doing daily work around the house?	1	2	3	4	5			
W2.	finishing jobs that you started?	1	2	3	4	5			
UE1.	writing or typing, *i.e. using your hand to write or type*?	1	2	3	4	5			
UE2.	putting on socks?	1	2	3	4	5			
UE4.	doing buttons?	1	2	3	4	5			
UE5.	doing a zip?	1	2	3	4	5			
UE6.	opening a jar?	1	2	3	4	5			
L2.	speaking?	1	2	3	4	5			
L3	speaking clearly enough to use the phone?	1	2	3	4	5			
L5.	getting other people to understand you?	1	2	3	4	5			
L6.	finding the word you wanted to say?	1	2	3	4	5			
L7.	getting other people to understand you even when you repeated yourself?	1	2	3	4	5			

DURING THE PAST WEEK:

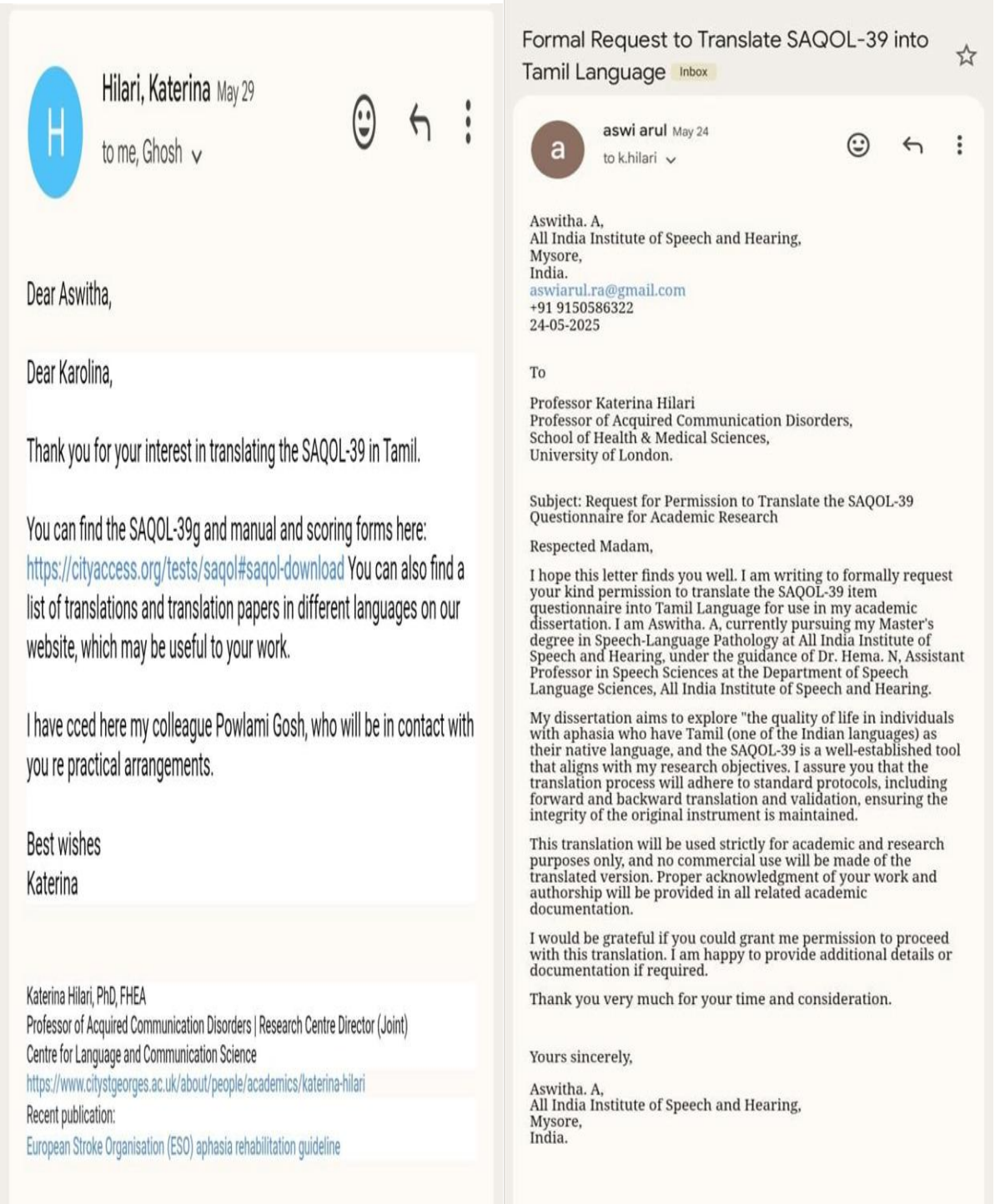
Item ID	Did you (Repeat before each item or as necessary)	Definitely yes	Mostly yes	Not sure	Mostly no	Definitely no	**Physical**	**Comm.**	**Psycho-social**
T4.	have to write things down to remember them, *(or ask somebody else to write things down for you to remember)?*	1	2	3	4	5			
T5.	find it hard to make decisions?	1	2	3	4	5			
P1.	feel irritable?	1	2	3	4	5			
P3.	feel that your personality has changed?	1	2	3	4	5			
MD2.	feel discouraged about your future?	1	2	3	4	5			
MD3.	have no interest in other people or activities?	1	2	3	4	5			
MD6.	feel withdrawn from other people?	1	2	3	4	5			
MD7.	have little confidence in yourself?	1	2	3	4	5			
E2.	feel tired most of the time?	1	2	3	4	5			
E3.	have to stop and rest often during the day?	1	2	3	4	5			
E4.	feel too tired to do what you wanted to do?	1	2	3	4	5			
FR7.	feel that you were a burden to your family?	1	2	3	4	5			
FR9.	feel that your language problems interfered with your family life?	1	2	3	4	5			
SR1.	go out less often than you would like?	1	2	3	4	5			
SR4.	do your hobbies and recreation less often than you would like?	1	2	3	4	5			
SR5.	see your friends less often than you would like?	1	2	3	4	5			
SR7.	feel that your physical condition interfered with your social life?	1	2	3	4	5			
SR8.	feel that your language problems interfered with your social life?	1	2	3	4	5			
	SAQOL-39g Mean score	Add all items and divide by 39							
	Physical score	(SC items + M items + W items + UE items) / 16							
	Communication score	(L items + FR9 + SR8) / 7							

	Psychosocial score	(T items + P items + MD items + E items + FR7 + SR1+SR4+SR5+SR7) / 16	

1. During administration: For each item, circle number that correspondents to respondent's choice
2. To calculate domain scores: Transfer each number to shaded area in same row. Average shaded boxes per column to calculate domain scores

APPENDIX D

MAIL CORRESPONDENCE FOR APPROVAL



Hilari, Katerina May 29

to me, Ghosh

Dear Aswitha,

Dear Karolina,

Thank you for your interest in translating the SAQOL-39 in Tamil.

You can find the SAQOL-39g and manual and scoring forms here: https://cityaccess.org/tests/saqol#saqol-download You can also find a list of translations and translation papers in different languages on our website, which may be useful to your work.

I have cced here my colleague Powlami Gosh, who will be in contact with you re practical arrangements.

Best wishes
Katerina

Katerina Hilari, PhD, FHEA
Professor of Acquired Communication Disorders | Research Centre Director (Joint)
Centre for Language and Communication Science
https://www.citystgeorges.ac.uk/about/people/academics/katerina-hilari
Recent publication:
European Stroke Organisation (ESO) aphasia rehabilitation guideline

Formal Request to Translate SAQOL-39 into Tamil Language Inbox

aswi arul May 24

to k.hilari

Aswitha. A,
All India Institute of Speech and Hearing,
Mysore,
India.
aswiarul.ra@gmail.com
+91 9150586322
24-05-2025

To

Professor Katerina Hilari
Professor of Acquired Communication Disorders,
School of Health & Medical Sciences,
University of London.

Subject: Request for Permission to Translate the SAQOL-39 Questionnaire for Academic Research

Respected Madam,

I hope this letter finds you well. I am writing to formally request your kind permission to translate the SAQOL-39 item questionnaire into Tamil Language for use in my academic dissertation. I am Aswitha. A, currently pursuing my Master's degree in Speech-Language Pathology at All India Institute of Speech and Hearing, under the guidance of Dr. Hema. N, Assistant Professor in Speech Sciences at the Department of Speech Language Sciences, All India Institute of Speech and Hearing.

My dissertation aims to explore "the quality of life in individuals with aphasia who have Tamil (one of the Indian languages) as their native language, and the SAQOL-39 is a well-established tool that aligns with my research objectives. I assure you that the translation process will adhere to standard protocols, including forward and backward translation and validation, ensuring the integrity of the original instrument is maintained.

This translation will be used strictly for academic and research purposes only, and no commercial use will be made of the translated version. Proper acknowledgment of your work and authorship will be provided in all related academic documentation.

I would be grateful if you could grant me permission to proceed with this translation. I am happy to provide additional details or documentation if required.

Thank you very much for your time and consideration.

Yours sincerely,

Aswitha. A,
All India Institute of Speech and Hearing,
Mysore,
India.

APPENDIX E

SAQOL-39 TAMIL VERSION

பெயர்: _____ பிறந்த தேதி: _____ தேதி: _____

கடந்த ஒரு வாரத்தில்

	உங்களுக்கு எவ்வளவு சிரமம் இருந்தது (ஒவ்வொரு கேள்விக்கும் முன் இதை மீண்டும் சொல்லவும் அல்லது தேவைப்பட்டால் சொல்லவும்)	மொத்தமாக செய்ய முடியவில்லை	ரொம்ப சிரமம் இருந்தது	சில சிரமம் இருந்தது	கொஞ்சம் சிரமம் இருந்தது	எந்த சிரமமும் இல்லை	Domain Scores		
							Physical	Comm	Psycho social
SC1	உணவு சாப்பிடுவதற்கு?	1	2	3	4	5			
SC4	ஆடை உடுத்துவதற்கு?	1	2	3	4	5			
SC5	குளிப்பதற்கு?	1	2	3	4	5			
M1	நடப்பதற்கு? (பதில்அளிப்பவர் நடக்க முடியாவிட்டால், 1 என்பதை சுற்றி, கேள்வி M7-க்கு செல்லவும்)	1	2	3	4	5			
M4	தடுமாறாமல் குனிவதற்கு அல்லது பொருட்களை எட்டி எடுப்பதற்கு?	1	2	3	4	5			
M6	படி ஏறுவதற்கு?	1	2	3	4	5			
M7	ஓய்வு இல்லாமல் நடப்பதற்கு அல்லது ஓய்வு இல்லாமல் சக்கரநாற்காலி உபயோகிப்பதற்கு?	1	2	3	4	5			
M8	நிற்பதற்கு?	1	2	3	4	5			
M9	நாற்காலியில் இருந்து எழுவதற்கு?	1	2	3	4	5			
W1	வீட்டில் தினசரி வேலைகளை செய்வதற்கு?	1	2	3	4	5			
W2	தொடங்கிய வேலைகளை முடிப்பதற்கு?	1	2	3	4	5			
UE 1	கையை பயன்படுத்தி எழுதுவதற்கு அல்லது தட்டச்சு பயன்படுத்துவதற்கு?	1	2	3	4	5			
UE 2	சாக்ஸ் அணிவதற்கு?	1	2	3	4	5			
UE 4	பட்டன் போடுவதற்கு?	1	2	3	4	5			
UE 5	ஜிப் போடுவதற்கு?	1	2	3	4	5			
UE 6	ஜாடியை திறப்பதற்கு?	1	2	3	4	5			
L2	பேசுவதற்கு?	1	2	3	4	5			
L3	கைபேசியில் தெளிவாக பேசுவதற்கு?	1	2	3	4	5			
L5	மற்றவர்கள் உங்களைப் புரிந்து கொள்ள வைப்பதற்கு?	1	2	3	4	5			
L6	நீங்கள் சொல்ல விரும்பும் வார்த்தையைக் கண்டுபிடிப்பதற்கு?	1	2	3	4	5			
L7	நீங்கள் மீண்டும் மீண்டும் சொல்லிய போதும், மற்றவர்கள் உங்களைப் புரிந்து கொள்ளுவதற்கு/	1	2	3	4	5			

கடந்த ஒரு வாரத்தில்

	நீங்கள் (ஒவ்வொரு கேள்விக்கும் முன் இதை மீண்டும் சொல்லவும் அல்லது தேவைப்பட்டால் சொல்லவும்)	நிச்சயமாக ஆம்	பெரும்பாலும் ஆம்	உறுதியாக தெரியவில்லை	பெரும்பாலும் இல்லை	நிச்சயமாக இல்லை			
T4	விஷயங்களை நினைவில் வைத்துக்கொள்ள எழுத வேண்டியிருந்ததா (அல்லது மற்றொருவரை எழுத சொல்ல வேண்டியிருந்ததா)?	1	2	3	4	5			
T5	முடிவெடுக்க கஷ்டப்பட வேண்டியிருந்ததா?	1	2	3	4	5			
P1	எரிச்சலாக உணர்ந்தீர்களா?	1	2	3	4	5			
P3	உங்களின் குணம் மாறியதாக நினைத்தீர்களா?	1	2	3	4	5			
MD2	எதிர்காலத்தை நினைத்து நம்பிக்கை இல்லாமல் உணர்ந்தீர்களா?	1	2	3	4	5			
MD3	மற்றவர்களின் மீது அல்லது அவர்களின் செயல்களின் மீது ஆர்வம் இல்லாமல் இருந்ததா?	1	2	3	4	5			
MD6	மற்றவர்களிலிருந்து விலகிப்போன மாதிரி உணர்ந்தீர்களா?	1	2	3	4	5			
MD7	உங்கள் மீது குறைந்த நம்பிக்கையோடு இருந்தீர்களா?	1	2	3	4	5			
E2	பெரும்பாலான நேரமும் சோர்வாக உணர்ந்தீர்களா?	1	2	3	4	5			
E3	பகலில் அடிக்கடி தாங்கள் செய்யும் வேலையை நிறுத்தி ஓய்வெடுக்க வேண்டி இருந்ததா?	1	2	3	4	5			
E4	செய்ய விரும்பியதைச்செய்ய மிகவும் சோர்வாக உணர்ந்தீர்களா?	1	2	3	4	5			
FR7	உங்கள் குடும்பத்துக்கு ஒருசுமையாக இருப்பதாக உணர்ந்தீர்களா?	1	2	3	4	5			
FR9	உங்கள் மொழிப் பிரச்சினைகள் உங்கள் குடும்ப வாழ்க்கையில் தலையிடுவதாக உணர்ந்தீர்களா?	1	2	3	4	5			
SR1	விரும்புவதைவிட குறைவாகவே வெளியே சென்றீர்களா?	1	2	3	4	5			
SR4	விரும்புவதைவிட உங்கள் பொழுதுபோக்குகளை குறைவாகவே செய்தீர்களா?	1	2	3	4	5			
SR5	விரும்பும் அளவுக்கு உங்கள் நண்பர்களை சந்திக்க முடியவில்லை என்று உணர்ந்தீர்களா?	1	2	3	4	5			
SR7	உங்கள் உடல் நலம் உங்கள் சமூக வாழ்க்கைக்கு தடையாக இருந்ததாக உணர்ந்தீர்களா?	1	2	3	4	5			
SR8	உங்கள் மொழி பிரச்சினைகள் உங்கள் சமூக வாழ்க்கைக்கு தடை ஏற்படுத்தியதாக உணர்ந்தீர்களா?	1	2	3	4	5			
	SAQOL – 39 Mean score	Add all items and divide by 39							
	Physical Score	(SC items + M items + W items+ UE items) / 16							
	Communication score	(L items + FR9 + SR8) / 7							
	Psychosocial score	(T items + P items + MD items + E items + FR7 + SR1 + SR4 + SR5 + SR7) / 16							