

COMMUNICATION STRATEGIES IN PERSONS WITH APHASIA

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APRIL, 2018

CERTIFICATE

This is to certify that this dissertation titled “**Communication Strategies in Persons with Aphasia**” is a bonafide work in partial fulfilment for the degree of **Masters in Sciences (Speech-Language Pathology)** of the student (**Reg. no.: 16SLP011**). This study has been carried out by a faculty of this institute and has not been submitted earlier in any other institute for the award of any diploma or degree.

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This is to certify that the dissertation titled “**Communication Strategies in Persons with Aphasia**” has been prepared under my guidance and supervision. It is also certified that this dissertation has not been submitted earlier to any other university for award of any diploma or degree.

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DECLARATION

This is to certify that this dissertation titled “**Communication Strategies in Persons with Aphasia**” is the result of my own study under the guidance of Dr. S.P. Goswami, Professor, Speech Pathology, and Head of Tele-Centre for Persons with Communication Disorders, All India Institute of Speech and Hearing, Mysore. This study has not been submitted earlier in any other university for the award of any other diploma or degree.

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April, 2018.

**DEDICATED TO
MY MOTHER
AND BROTHER.**

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Develop an attitude of gratitude, and give thanks for everything that happens to you, knowing that every step forward is a step toward achieving something bigger and better than your current situation. - Brian Tracy

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CHAPTER I

INTRODUCTION

Communication in persons with aphasia is restricted to a minimum use of gestures and even lesser words while talking to their caregiver, spouse or even family (LeDorze & Bassard, 1993; Darrigrand, Dutheil, Michelet, Rereau, Rousseaux & Mazaux, 2010). Clinical observations clearly show that the communication of persons with aphasia happens much differently than that of normal speakers (Klippi, 1991). The limited contribution of a person with aphasia in a conversational discourse is due to the lack of the verbal ability that facilitates an adequate level of communication. Also, the secondary consequences associated with aphasia further limit the individual from making attempts to communicate. Few studies done previously have strictly focused on looking at the conversational-communicative behaviours in persons with aphasia. Most of these studies highlight the fact that speech-language therapy need not only focus on the linguistic aspects but also on the whole communicative aspect to make life easier for person/s with aphasia (PWAs). Some studies have indicated that conversational abilities are preserved in persons with aphasia, mostly at a global-gross level. For example, in a study done by Schienberg and Holland (1980), it was found that two Wernicke's Aphasia patients had preserved their ability of conversational turn-taking skills. On similar lines, a study conducted by Prinz (1980) showed that aphasic individuals were able to make requests by using both verbal and non-verbal strategies. Different aspects of communication like conversational repair strategies used by PWA have also been studied. Lubinski, Duchan and Weitzner-Lin (1980) conducted a case study and found that the PWA was able to use varied conversational repair strategies in the case of a communication breakdown. Newhoff, Tonkovich, Schwartz and Burgress

(1982) also found that persons with aphasia were able to use communicative strategies in the situation of a communication breakdown. Similar studies has also been conducted by Linebaugh, Marguiles and Mackisack (1985). All most all of these studies have focused on conversation of persons with aphasia with a conversation partner, with a speech language pathologist or another medical professional. Klippi (1991) studied conversational strategies used by PWA in a group setting, and found that (1) severity of aphasia did not have an impact on the conversational ability, at the chronic stages of aphasia, and (2) verbal avoidance usually might be linked to the negative attitude to the whole disorder, or the pre morbid communicative role the PWA played. In a similar study carried out by Ulatowska, Allard, Reyes, Ford and Chapman (1992), showed that conversational abilities are preserved in PWA mostly in the chronic stages and this preservation of the range of most speech acts could be because, these speech acts can be expressed using very simple language – one word or small phrases. The study also goes to show that if a PWA is paired off with, or is in a situation with a neurotypical individual, the latter tends to take the lead role during discourse tasks.

Need for the study:

Various individualistic studies (Schienberg & Holland, 1980; Lubinski, 1980; Klippi, 1991; Ulatowska et al. 1992) have shown that conversational abilities are preserved in PWAs to various extents – mostly at a global level. Through Ulatowska et al.’s study (1992), it is implied that the neuro-typical individual would take a lead role during conversation with a PWA, it is however relevant to know what the conversational strategies are that the PWAs would use in such a communicative situation when in comparison to being paired off with another PWA. There are very few studies that have focused on assessing the communication strategies or conversational abilities of PWAs, if they have to communicate with another PWA. Such a study would provide insight

into assessment and management of PWAs primarily in a way that would focus on what communicative abilities are still intact than lost. It would also help in forming management plans where the focus could be on enabling the PWA to communicate as a whole, along with the focus on structured linguistic tasks, especially while working in a group therapy setting.

Studies on similar lines in the Indian sub context are sparse. And although, the above mentioned studies provide vast information that can be successfully utilized, cultural and linguistic variations in the Indian population, justifies the need to extend a similar discourse elicitation study.

Aim of the study:

The aim of the study is to qualitatively analyse the conversational interaction between persons with aphasia in different settings.

Objectives of the study:

1. To note the types and frequency of occurrence of different verbal/non-verbal communication strategies used by a person with aphasia with an acquainted person.
2. To note the types and frequency of occurrence of different verbal/non-verbal communication strategies used by a person with aphasia with an unacquainted person.
3. To note the types and frequency of occurrence of different verbal/non-verbal communication strategies used by a person with aphasia with another person with aphasia.

CHAPTER II

REVIEW OF LITERATURE

Communication can be simply put as the act of conveying a certain message across to another individual or a group. Communication in its many forms involves the basic steps of formation of communicative intent, message configuration, encoding and transmission, receiving of the message signal by the communication partner/s, decoding and then interpretation to make sense of the message. Communication forms the basis for interaction between individuals where contribution from both the sender and receiver takes place. Broadly classified, communication can be either verbal communication or non-verbal communication. Verbal communication is when spoken or written words are used to express one's ideas or thoughts, while, non-verbal communication is any other means of communication other than verbal modes. For example, the usage of facial expressions, gestures, touch, body language, eye contact, etc. forms means of non-verbal communication.

In everyday living, an individual uses a healthy mixture of both verbal and non-verbal means of communication to interact with his/her environment. This is because, many times, verbal communication, although the more formidable way of communicating, may not necessarily allow the receiver/s to comprehend the message to its highest capacity. As our basic habit of interaction depends so largely on successful transmitting and obtaining of messages, communication thus forms an incredibly prominent and significant part of our lives.

2.1 Communication changes in PWAs

Daily communication in persons with aphasia is immediately affected following stroke or any other insult to the brain regions responsible for speech and language skills. The communication is affected to varying degrees as no two PWA are alike in their lesion extent and site, former speech and language skills or personality. PWAs face a more drastic effect of the communication disorder because of varying other factors like the PWAs pre-morbid communication personality and traits, comorbid depression, low self-perception in relation to the disorder, the brunt of the disorder that the family and loved ones face, etc. Banking on the change in quality of life, a PWA feels his relationships with family members and friends is different following the condition as the ability to communicate has drastically changed. It also affects the way the PWA behaves in any social situation from thenceforth. However, these persons learn to communicate eventually in their own way by using a combination of varied verbal and non-verbal communicative strategies.

2.2 Effect of personality traits, mood and depression on the communication in PWAs

Robinson, Starr, Kenneth and Price (1983) found that there are significant mood variations in persons with acquired neurological impairment, especially in persons with stroke. The lesion being in the left frontal lobe can cause more severe depressive symptoms than a brain lesion elsewhere. Other factors that they found influenced the depression was the degree of intellectual capability, the type and quality of social backing the PWA got and the PWA's age. Greenop, Almeida, Hankey, Van Bockxmeer, and Lautenschlager (2009) reported that there are certain pre-morbid characteristics that can influence the communicative personality of the PWA. These traits were reported to be a pre-morbid characteristic of being moody, of being easily agitated, etc. they showed that traits of neuroticism and low agreeableness like

egocentric, antagonistic, sceptical behaviours, etc. lead to similar symptoms post morbidly in PWAs and this caused negative impacts on the PWAs rehabilitation outcomes, relations with family and friends and eventually the quality of life. Pre-morbid personality traits in PWAs are affected by their disorder and the cause of the communication disorder can show varied patterns of changes. Shehata, El Mistikawi, Risha, and Hassan (2015) found that individuals who have suffered a stroke and sustain a comorbid symptom of aphasia have high tendencies of developing depression in relation to the way their life has changed completely. They go on to say that aphasia might not be the only condition in persons post stroke leading to depression. They also found that more of a psychotic personality trait was common in the individuals who had aphasia. This can lead to further debilitating effects as it will affect their recovery period.

2.3 Effect of Spouse/family's outlook on communication personality in PWAs

When an individual is diagnosed with aphasia, the spouse and immediate family members are the ones who are also affected to a great degree. Their perception of this individual is changed and they can sometimes feel burdened by how this condition might not resolve at all. These feelings and emotions can be hard to mask and can very directly affect the way the PWA will improve in terms of communication and life participation. There also is a vice versa effect where the communication impairment causes a change in that way the PWA deals with everyone around him/her. Le Dorze and Brassard (1995) report that the language changes caused in the PWA post morbidly are one of the major causes for handicap and it negatively influences their communication situations and relationships. Family and friends of these PWAs also face challenges like reduction and change in the communication with the PWAs, change in relationships and even the responsibilities. Croteau and Le Dorze (2001) compared

various factors between spouses of PWAs and spouses of persons with no aphasia. They found that the spouses of PWAs used less constructive terms to describe their better halves, the spouses (both male and female) judged their PWAs to be lower than before in achieving even simple everyday tasks, lower than before in forms of being persistent with any activity and reported that endurance was very poor. The spouses also reported that the PWAs did not have the usual neatness and order in their life and in general the spouses felt that the PWAs sought a sympathy from everyone they met. The spouses and family members undergo a change in the way their life is led from the post morbid complications in the PWA. Michallet, Tétréault and Le Dorze (2003) explain how spouses of PWAs found that their lifestyle was more stressful when they significant other was diagnosed as having aphasia. These sources of stress was mainly from the drastic change in communication, interpersonal relationships, responsibilities and even finances. These spouses also faced various adaptation changes like fatigue, discouragement, anxiety, loss of privacy, social isolation and burden. Threats (2010) says that the family also faces a “third party disability” (based on the ICF). The care givers have changes in body strength, face difficulties in communication with the PWA, mobility issues are always present in many of the individuals, to meet even simple everyday tasks and demands become difficult and major areas in social and community life are drastically affected. These changes cause the spouses and family members to feel the actual brunt of the disorder and cause gradual physical and emotional changes in them.

2.4 Obstacles to work and social relationships as a consequence of aphasia

Because of the drastic changes that goes through in the life of the PWA, it is difficult to have them go back to being involved in the society and going back to work as though nothing ever happened. Just as the perception of the spouses and family members

towards the PWA changes, so also, the perception of the society towards these individuals change. There are various obstacles that these individuals can face in a full reintegration into the society. Garcia, Barrette and Laroche (2000) found that there are various environmental factors and barriers that the PWA him/herself feel, the speech-language pathologist reports and potential employers have regarding the PWA getting back to a job. These barriers throughout all reports were mostly social and security issues, dealing with new individuals or customers on a daily basis and productivity. Brown, McGahan, Alkhaledi, Seah, Howe and Worrall (2006) report that the participation of the PWA is affected by three main environmental factors, which are, people based environmental factors, physical based environmental factors and business or organization based environmental factors. Some important barriers reported by the PWAs and the employers were the lack of aphasia's awareness in the general people, the willingness of the co-workers to accommodate the deficits of the PWA and the difficulties that will be faced in making the changes in policies and procedures at the board of organizations.

2.5 Living with aphasia and its consequences

For a PWA, his/her whole life has now changed since the onset of the disorder. They have to now learn to accommodate their deficits, the way their spouses and family members now think of them and how these family members need to make other adjustments just to help look after and provide for them. In the initial stages, the PWA is usually always taken care of and there are many friends and relatives who are constantly visiting them, speech language and even physiotherapy might be going on very frequently with scheduled visits to the hospital. But as time passes, the PWA also has to get along with the fact that his caregivers will get tired and might exhibit symptoms of the same, friendships might not be like before, and that going back to

work will prove more than difficult. Considering all these factors, a PWA has to live with quite a few consequences of the disorder. Shadden (2005) states that being diagnosed with a communication disorder like aphasia, is like losing one selves identity. And the PWA has to live with that for the rest of their life. However, considering other aspects of the pre-morbid personality like self-efficacy and empowerment, communication personalities (extrovert/introvert), how the PWA responds to challenges and how they perceive help from others should be taken up to ease the life participation of these PWAs. The author also goes to say that through very practical therapy for the PWA, identity renegotiation can be carried out. Parr (2007) in her study on 20 PWAs following stroke, found that the social exclusion is the most common experience that this group of individuals face in varied settings. This social exclusion has been reported to occur at three levels, i.e., infrastructural (limited access to a job, health care amenities, communication, locations of resources, etc.), interpersonal (poor relationships with family, friends, workmates, neighbours, etc.), and personal (alienation, loss of identity, hopelessness, passivity, diminished self-esteem, etc.). The PWAs could feel this way because they think they are now a part of that one group of society whom they themselves, pre-morbidly thought of as an excluded group.

2.6 Communication and communication strategies in PWAs

Most PWAs start speech language therapy along with other forms of therapy during the rehabilitation phase. Many of the PWAs and the family members are confused as to what speech language therapy entails and expect their verbal output to be back to the exact same level it was pre-morbidly. For such individuals, it is marginally more difficult to explain the realities of aphasia and its recovery patterns. However, most PWAs tend to pick up certain other ways of communicating if at all, they are not able to communicate verbally. These other ways of communicating might be verbal or non-

verbal strategies that they would have learnt either in their speech language therapy classes or in more naturalistic settings like when they are at home. Larkins and Webster (1981) report that PWAs predominantly develop the use of gestures as a form of non-verbal communication. The PWAs in their study use more gestures when they were communicating in a dyadic situation paired off with another PWA. This was in comparison to the other dyadic situation of PWA with neuro-typical individual, where the PWA used lesser gestures. The authors say that the difficulty the PWAs know they have, leads them to develop the use of such other forms of communication in order to get their ideas and thoughts across. Various studies have also shown that the PWAs use different strategies of communication when in group situations. They might interact to the best they can or even refuse to interact freely. Klippi (1991) showed that PWAs had many variations when taking part in a group activity. Their extent of involvement and communicative profiles were all different from one another. The severity of aphasia did not matter, especially in a chronic stage, instead, the PWAs used various compensatory and discursive strategies in order to communicate. She reports that the pre-morbid personalities of the PWA plays a huge role in influencing the communicative behaviour post morbidly. The author opines that in order to have a better communicative profile, the PWA has to learn various discursive strategies along with linguistic strategies. Simmons-Mackie and Kagan (1999) in their study report that PWAs can communicate fairly well with even 'good' and 'poor' conversation partners, even in chronic stages. The conversation partners were neuro-typical individuals who used varied strategies with the PWAs like accommodating their disability, clarifying the answer given by the PWA a few times, acknowledging their contribution to the conversation by nodding head or encouraging them to go on. It was found that the PWAs were better able to use discursive strategies to communicate when their disability was accommodated and their

communication was acknowledged. Comparatively, when multiple clarifications were asked off of the PWA, they felt low and dejected about their disorder. This was because they themselves perceived that the conversation partner did not trust their information because of the disorder. Communication in PWAs happen in the following ways and it is best to use the facilitating strategies to help develop an overall form of communication.

2.7 What do PWAs want?

What a PWA wants in terms of communication, relationships, friendships, work related, lifestyle, etc. is a topic that needs to be adressed more often, especially from the perspective of every single PWA. Therapuetic approaches should be based also from the PWAs' point of view. Worrall, Sherratt, Rogers, Howe, Hersh, Ferguson and Davidson (2011) reported the wants and needs of 50 aphasic participants through semi-structured interviews. They found that the PWAs wanted or needed the following: return to their pre-morbid life, communication (and not just for means of daily living but also for giving opinions and commenting), information (continual information on what is new in the rehabilitation of PWAs and other comorbid issues), speech therapy that is relevant to the different stages going on in their life, control and independence (with walking, driving, Bible study classes, travelling by public transport, etc.), dignity and respect, social time, leisure time and a job, contribution to the society (in the form of talking about their disorder and helping others) and better physical health. Dalemans, De Witte, Wade and Van Den Heuvel (2010) in their study report of what PWAs think regarding social participation. They (PWA) feel that the characteristics of the social activity is not as important as the engagement in said activities. They know their verbal output is affected and hence cannot exactly excerpt information from, but would like to contribute to a conversation, most PWAs would want to work and contribute to the

society in many ways. Finally they report that although the PWAs feel stigmatised, they would like to be respected as much as the next person.

2.8 Re-integration of PWAs

As highlighted in fair detail, above, many PWAs want the exact same thing. Although, all the wants, needs and demands of every PWA cannot exactly be met to a full capacity, the professionals involved in their rehabilitation, should not stop trying to make their quality of life better than it is. Thus it is imperative that the goals for aphasia rehabilitation be more holistic and not focused on any single function or any single task within a domain. More importantly, the caregivers and the spouses of the PWAs have to be relentlessly reminded of how to facilitate the communication in their PWAs. Purdy and Hindenlang (2005) conducted a study where care givers of PWAs in chronic stages had group training sessions on various ways to continually adapt the lifestyle of the PWA to help make them feel as involved in the society as possible. When the care givers were later given questionnaires and these were analysed, it was found that there was a high communicative success with the PWAs. The spouses, family members and caregivers were more confident in using various facilitating strategies for better lifestyle in their PWAs. While considering a holistic approach, Hersh, Worrall, Howe, Sherratt Davidson (2012) in their study have formulated a model for therapy approach for the PWAs. They say that the therapy goals have to be 'SMARTER', an acronym that stands for Shared, Monitored, Accessible, Relevant, Transparent, Evolving and Relationship-centred. The authors talk about 'SMARTER' being holistic approach which is importantly, patient centred. They suggest that 'SMART' (acronym: Specific, Measureable, Achievable, Realistic and Time-bound) goals have to be carried out in a 'SMARTER' way. Patient centered goals for therapy can give a clearer picture as to what the PWA is expecting from therapy and how the professionals can help him

achieve it to a realistic level. Along with the therapy that will be provided for the PWAs, there also has to be constant instruction to the spouses, care givers and family members regarding what has to be expected from the PWA at the different stages of rehabilitation and in general at the different stages of life, post morbidly. Considering these various factors, ultimately, the quality of life and life participation of the PWAs can be greatly improved especially when the rehabilitation is planned and carried out in a systematic and all-inclusive approach.

CHAPTER III

METHOD

The aim is to study the type and frequency of communication strategies that PWAs uses in different communicative situations. The study adapted the following four steps.

Step 1: Selection of participants

Step 2: Eliciting the discourse sample

Step 3: Transcribing the discourse sample

Step 4: Qualitative analysis of the sample obtained

The operational variables that have been used in this study were:

Acknowledgements: Utterances like ‘mhmm’, ‘okay’, ‘head nods’, etc. These moves by the listener are when there is an acknowledgement of contribution to the conversation.

Congruent Overlap: When the utterances of one speaker overlaps with the utterances of the other speaker.

Accommodation: When one communication partner accommodates the disability of the other communication partner (PWA) by allowing them to use modes like drawing, simple actions and gestures, spelling, etc. to deliver their message.

Clarification Sequences: A move that has one communication partner repeatedly clarifying the information the PWA provides in the communicative situation (Simmons et. al. 2010).

Active Roles in conversation were of three types:

Opening Move: This indicates a participant starting a new topic or introducing a new cycle of discussion during the communicative situation.

Reopening Move: The initiator adds to, changes or self corrects their opening move. This can give an idea of how they are aware of their speech language disorder and how they adapt to accommodate it.

Bound Opening: Requesting for any clarifications or repetitions of utterances or even addition of more information, from the listener to the speaker.

Reactive roles of conversations were classified into two types:

Continuing Move: The participant wants to extend, expand or even argue on the topic. This can give an idea about how the speaker can maintain the topic of conversation and how they can develop it.

Minimal Utterance: Verbal or non-verbal, direct reactions to the questions asked. These utterances have minimal information.

Any other strategies used were classified under an “Others” category, consisting of:

Deviant Conversational Moves: Any metalinguistic deviations when the PWA has not understood the topic, when the PWA is not able to answer right then but uses circumlocutions to finally arrive at intended answer.

Others: Any other moves noticed, that are difficult to define. For example: incomplete or unintelligible utterances. (Klippi, 1991)

Step 1: Selection of Participants

For this study, a total of seven participants were enrolled who were then paired into eleven dyads. From this, four participants were aphasics (both fluent and non-fluent

aphasics) who were diagnosed using the Western Aphasia Battery (WAB) – with a scoring of >50 on the aphasia quotient (AQ) who are receiving/not receiving speech language therapy with Kannada as L1 (first language/mother tongue). The post stroke duration in all aphasic participants was more than three months and there were no signs of Dementia, at the time of recording the sample. Important and relevant medical data was recorded. Different details pertaining to the participants' aphasia like, site of lesion, type of treatment being taken (speech-language therapy, physical therapy, occupational therapy, etc.) Demographics that are relevant were noted, like, education, languages known, handedness, vocation, family status and so on. Details of the aphasic participants is given in Table 1, below.

Inclusion Criteria for PWAs:

- Individuals diagnosed as aphasia with an aphasia quotient of >50 on the Western Aphasia Battery. The diagnosis of the type and severity of aphasia was labelled by Speech -Language Pathologist.
- Post stroke duration of over three months.
- Individuals having Kannada as first language or as mother tongue.

Exclusion Criteria for PWAs:

- Individuals with deficits of memory, like Dementia.
- Individuals with any other health complications like hearing sensitivity issues, degenerative conditions, etc.

Three neuro-typical, acquainted (an individual who has previously interacted with a PWA) and unacquainted (an individual who has never met any PWA) individuals were also taken as participants for the study. Details of the neuro-typical individuals are given in Table 2. Participants were paired into groups of two/conversational dyads. The

grouping was done in such a way that each PWA was paired with an acquainted conversation partner, an unacquainted conversation partner and another PWA. The details of pairing are given in the Tables:

<p>SITUATION 1: (Six participants) Four PWAs with two acquainted conversational partners.</p>	<p>SITUATION 2: (Six participants) Four PWAs with two unacquainted conversational partners.</p>	<p>SITUATION 3: (Four participants) PWAs paired with the other PWAs.</p>
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At the beginning of the study, a total of eight participants were enrolled for three discourse situations (four PWAs and four neurotypical). The total number of dyads thus, decided were 24 in number. However, due to participant attrition, a total of seven participants and eleven dyads were taken up for the study.

Step 2: Eliciting the Sample

Before collection of data, the aim of the study, procedure, and duration of testing was explained to the participants (and caregivers). Prior written consent was taken from the participants (and caregivers) for participation in the study (Appendix I). All the participant's communicative interactions were carried out in a noise free, quiet environment, at a clinical set up. Spontaneous speech was the task taken up to elicit discourse. The sessions were audio-video recorded for ease of analysis. The participants were instructed regarding the activities to be carried out during the conversation and the recording was ended when the participants felt they had 'finished' getting to know each other. The video samples ranged from 3.45 minutes to 32.17 minutes.

Two simple discourse tasks based on spontaneous speech/conversation were used to elicit the discourse sample (Appendix II).

Table 1: Demographic details of PWAs

Sl. No	PWA	Age/Sex	Type of Aphasia	Cause of Aphasia	WAB – AQ	Language	Profession
1.	DP	36 years/ Female	Anomic Aphasia	CVA	78.3	Kannada	Home maker
2.	AN	27 years / Female	Conduction Aphasia	TBI	74.8	Kannada	Sales & Marketing
3.	AK	54 years / Male	Anomic Aphasia	CVA	76.6	Kannada	Industrial worker
4.	CH	52 years / Male	Anomic Aphasia	CVA	74.8	Kannada	Self Business

Table 2: Demographic details of neuro-typical participants.

Sl. No.	Participant	Age/Sex	Language	Profession	Status
1.	GW	55 years/Female	Kannada	Home Maker	Acquainted
2.	NG	57 years/Female	Kannada	Anganwadi Worker	Acquainted
3.	SN	38 years/Male	Kannada	College Lecturer	Unacquainted

1. *Stroke Story and Coping:* The participants were asked to engage in a general conversation to talk about the stroke story and pre morbid conditions both in terms of lifestyle and language aspects.
2. *Demographics:* The participants were also asked to engage in a conversation about the basic demographics concerning themselves. They were prompted and asked simple questions by the acquainted or unacquainted conversation partner and made to provide as much information as possible.

Step 3: Transcribing the data

The audio-video recorded data was then transcribed orthographically. This was done in the following steps;

- Using a clearly defined protocol (Appendix III), the video sample was transcribed by the researcher.
- Different coding was used like ‘A1’ for Anomic participant 1, ‘A2’ for Anomic participant 2, C1 for Conduction participant 1 and so on. Initials of the name of each participant was also used as a code during transcription (ex: AN, DP, SN, etc.), for ease of analysis. Appropriate punctuations was added whenever necessary.
- The English gloss of the transcribed utterances, was also provided.
- The transcribed data was evaluated by another speech-language pathologist and any differences in the interpretation was sorted by a consensus between the two professionals.
- The usage of different types, frequency of occurrence, deviancies in conversational strategies used by the PWA throughout the whole session was noted and analysed. The analyses of every session was compared to see if, PWAs are using varied strategies during communication with an acquainted conversation partner, an unacquainted conversation partner and with another PWA.

Step 4: Qualitative analysis of the data

The discourse data was qualitatively analysed for different strategies used by PWAs to converse and convey their ideas among the varied settings. Cohesion between the utterances and coherence were also analysed. Verbal behaviours in the recording were

categorized into active conversation (initiating) and reactive conversation (responding and maintaining) roles. The usage of different types, frequency of occurrence, deviancies in conversational strategies used by the PWA throughout the whole session was noted and analysed.

CHAPTER IV

RESULTS AND DISCUSSION

The aim was to study the type and frequency of communication strategies that PWAs uses in different communicative situations.

The results of the current study showed that all the PWAs participated in different capacities and different manners in the communication environment. Some participants showed more of conversation initiating roles, while some participants were comfortable in just coming up with answers to the questions they were asked or simply continuing the conversation that was already going on.

The participants were grouped into dyads across three discourse situations

Situation (1): Four PWAs with two acquainted conversational partners.

Situation (2): Four PWAs with two unacquainted conversational partners.

Situation (3): PWAs paired with the other PWAs.

Throughout the whole study, the communication strategies were broadly studied under two types (1) active- reactive roles and (2) 'tokens' to encourage conversation. The number of strategies used by each PWA and neuro-typical individual in the various discourse situations is given in Table 4 and 5.

When the PWAs were paired off with the neuro-typical individuals, i.e. the acquainted and unacquainted participants, it was very clear that the neuro-typical individuals took a lead in the conversation. All three neuro-typical individuals showed more of active roles, especially opening moves in comparison to the other strategies. The reopening moves they used seemed to be more of the probing type, where specific answers were expected from the PWAs.

Table 4: Types of communication moves used by PWAs

Participant	Discourse Situation	Active Roles			Reactive Roles		Others	
		O	R	B	C	M	D	Others
AN	(1)	9	2	-	33	8	-	1
	(2)	7	2	4	35	10	1	3
	(3)	35	21	13	29	-	-	-
DP	(1)	0	0	1	23	27	23	1
	(2)	2	0	0	18	21	17	-
	(3)	4	2	1	7	8	2	1
AK	(1)	0	0	0	4	12	12	9
	(2)	2	0	0	10	17	5	7
	(3)	4	0	0	4	12	3	4
CH	(1)	5	-	-	22	9	-	-
	(2)	7	6	1	37	13	-	-
	(3)	10	7	1	23	17	-	-

***Note:** **O**=Opening Moves; **R**=Reopening Moves; **B**=Bound Openings; **C**=Continuing Moves; **M**=Minimal Utterances and **D**=Deviances.

The neuro-typical individuals also used strategies like acknowledgments, accommodations and clarification sequences to encourage the PWA to continue speaking and to get them to provide appropriate information. The acquainted participants tended to use more of clarification sequences, which could also seem like not trusting the PWAs' information, conversely, the unacquainted participant used more of acknowledgements and accommodations.

Table 5: Tokens of communication encouragement used by PWAs

Participant s	Discourse Situations	Strategies/Tokens to Encourage Conversation			
		Acknowledge -ments	Accommod at-ion	Congruent Overlaps	Clarificatio n Sequences
AN	(1)	17	0	5	3
	(2)	23	0	7	1
	(3)	57	28	17	14
DP	(1)	0	0	3	2
	(2)	13	0	0	0
	(3)	14	3	4	3
AK	(1)	3	0	0	0
	(2)	18	0	0	1
	(3)	26	1	2	0
CH	(1)	8	0	0	0
	(2)	13	0	11	0
	(3)	21	4	0	2

The communication profiles of each PWA during the recording sessions were as follows:

1. Participant AN

The participant AN was diagnosed as having Conduction Aphasia after a Traumatic Brain Injury and her AQ score was determined to be 74.8. AN pre-morbidly, was working at an automobile company in the post of a mechanical consultant. She had completed her diploma studies and was planning on pursuing higher education so that

she could get a better job elsewhere. At home, she used to be a very chirpy personality, always enjoying the company of her parents and sibling. She had many hobbies like singing, dancing, embroidery, cooking, etc. which she mostly used to do with her father. With her friends, she always had places to go, trips to take, going out for various recreational activities like going to the movies, impromptu picnics, etc. She was very interactive at all times. She was completely independent with her daily activities and liked completing her chores on time, liked taking walks to spend some alone time, liked providing for the family both in terms of financial support and emotional, as reported. AN was pre-morbidly an extrovert in personality, she could engage in conversation well even with strangers and this sort of behaviour was also carried on to the communication interactions recorded as a part of this study. Throughout, AN seemed to be more of an active communication partner in comparison to the other PWAs participants. Her conversation consisted of many active communication roles, predominantly opening moves and reopening moves. She asked and delved into her communication partner's lifestyle and everyday activities by asking new questions and refining her questions to facilitate the partners to answer extra clearly. As explained, AN was an extrovert and the similar attitude was noted in all the three discourse situations. Apart from these opening roles, out of her total moves, there seemed to be fewer moves that were reactive, in the form of minimal utterances. These were only noticed on questions where exactly one precise answer was needed. For example: "Have you eaten breakfast today?" was answered with a "Yes". AN had a large number of continuing moves where she would go on to describe few events in fair detail or add on to the topic of conversation by bringing in more information. For example: if asked about her hobbies she would go on to explain hobbies she pursued pre-morbidly and what she engages in at the present time. She would then continue this strategy into asking the

communication partner a related question, waiting for an answer. AN also showed many instances where she used strategies like acknowledgements, accommodations and few clarification sequences. When her partners, especially in discourse situation three, had pauses to think of answers, continued the conversation by sometimes giving irrelevant information and used circumlocutions, she encouraged their speech output by using various accommodations and acknowledgments. For example, when paired with DP,

AN: /ni:vu nimma *free time* alli yen yen maDthira?/

DP: /na:nu ha:Du keLthini, TV noDthini. Munche na:nu adu...[points to cloth/dress] idu maDthide, um...idu...

AN: /yen adu?/ /dress na stitching maDthidra?/

DP: /ila ila/

AN: /ok yochne maDbiT heLi, a:rama:gi/

Her usage of these strategies showed that her communication partners were encouraged to provide more information on the topic being discussed, making the communication environment more conducive. In terms of non-verbal strategies, AN used simple actions and gestures to facilitate her communication. Simple actions were in the form of pointing differentially for indicating ‘here’, ‘close by area’, and ‘another State’, counting of fingers to help her say the days of the week and the number of days she attended therapy sessions, etc. was seen in the three discourse situations across various communication partners. For example: in discourse situation (2) when AN was paired with SN

SN: /ni:vu yelli *work* maDtidri?/

AN: /na:nu munche *TVS company* dali *work* maDthide. amele tripur ge hode [points to indicate far away]

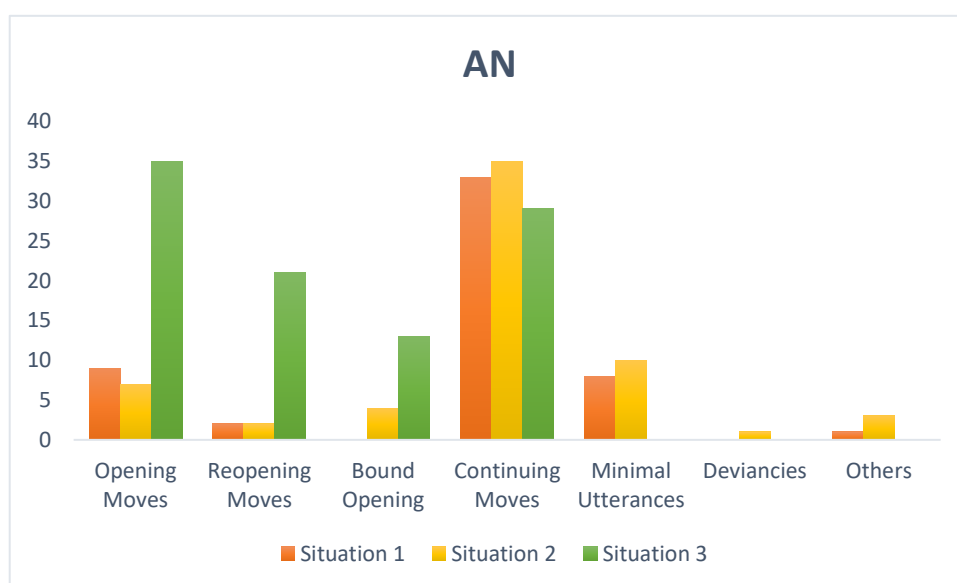
In another discourse situation;

DP: /ni:vu illi class ge barthira?/

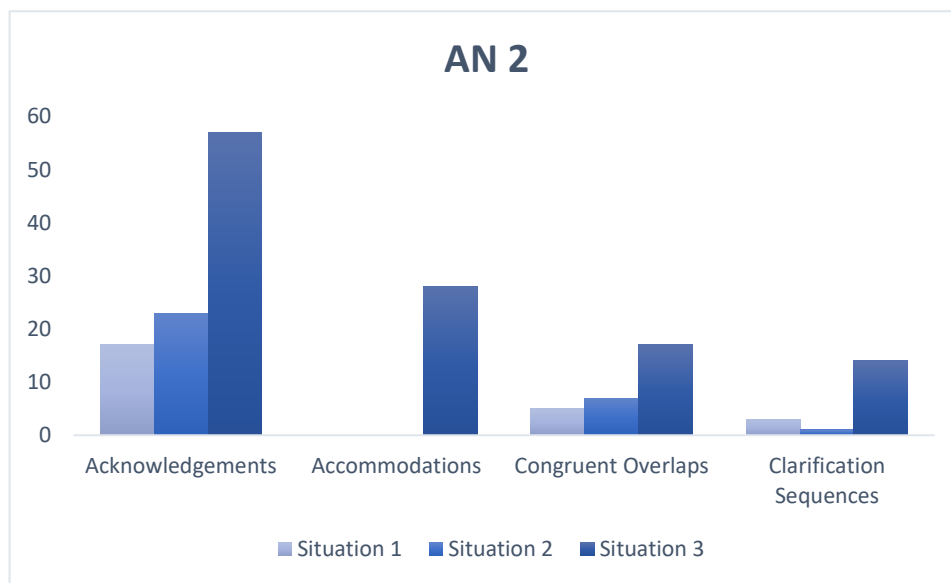
AN: /haan na:nu illi [counting on fingers] *Monday, Tuesday...illa, Tuesday* barala bare *Monday, Wednesday* mathe *Friday* barthini. ni:vu?/ ...

The non-verbal strategies that AN used were only to facilitate her verbal output and not as a form to compensate for it. The number of opening moves and reopening moves that AN had could be linked to various factors, like the severity and type of aphasia she was diagnosed with, the pre-morbid personality she had and her willingness to get better and be a complete participant in the society. This is supported by Klippi (1991) who also links similar findings to the participants' pre-morbid lifestyle and extrovert type of personality. However, AN's opening moves were not coherent with the flow of the conversation. Although she stuck to the topics that was explained to her, she had opening moves where there was no actual link to the previous utterances. This impairment in her pragmatic skills could be linked to her aetiology i.e. traumatic brain injury (TBI). This is supported by the findings from Angeleri et al., 2008 who state that in individuals with TBI, having a language impairment, both comprehension and production of varied pragmatic phenomenon are affected. The communication wants and needs of the participant AN are largely focused on her getting a job that is comparable to her previous one and being able to sustain herself, providing for the family, for herself and for proving she can accomplish all of this in the close future. AN faces various communication demands, the biggest one being the demand to have to be able to have good communicative skills in order to get the job position she really

desires. Her communication wants, needs and demands are the largest for the work place and comparatively lesser for friends and family. But her capability to get the job position she wants is also based on the potential barriers that the society, in this case the working class has, regarding aphasia. As explained in the study by Brown et al., 2006 these barriers could mostly be misconceptions and negative attitudes. Other barriers distinguished by Garcia, Barrette, & Laroche, (2000) were related to working conditions, possible use of electronic tools, type of communication tasks, awareness of the disorder, realities of the job description, socio-economic support, etc. and considering the educational qualification that AN has and the type of job she is after, these will be very real hurdles for her to face to get a job even though her communication skills have improved so healthily. And although AN spends less time with her family due to her living conditions, which leads to lesser interaction with them and could mean lesser support in various capacities, AN still is highly motivated to get back into being a part of the working class of individuals. And similar outlook is got from her when she is participating in all three discourse situations.



Graph 1: Frequency of communication moves by PWA 1 in all three discourse situation



Graph 2: Frequency of tokens of communication encouragement used by PWA 1

2. Participant AK

The participant AK was diagnosed with Anomic Aphasia, post stroke, with an AQ of 76.6. AK, pre-morbidly, used to work in a factory where he had to operate heavy machinery. His parents used to stay with him and he had the sole income for the household. He seemed to like his job and took part in the social environment as often as he could, but usually with his family. He didn't otherwise have much time to spend with his wife and children as he used to work long hours. AK had just few friends and spent comparatively little time with them. In social situations, AK participated 'appropriately' and didn't engage himself too much as reported. His family members also reported at AK pre-morbidly was someone who also used to get frustrated quickly, was moody, but they report that this was not very frequently seen. Post morbidly, AK stopped working and has been at home for a year, his wife has had to start working and his parents had to move to his brother's house. AK's wife, assuming that it is unintentional, has kept reminding him that he needs to start working soon, as managing the finances on her income alone is proving to be very difficult. As reported, AK gets

very worked up and frustrated with this, other emotional outbursts too have been observed especially in relation to his communication handicap and right hemiparesis. In regard to AK's communication interactions observed, although his AQ on the WAB-K was determined to be 76.6, he showed comparatively, the poorest communication skills throughout the discourse situations. The majority of his responses could be categorized as reactive moves out of which, minimal utterances were predominant. For example:

AN: /sir ni:vu ivathu he:g idira?/

AK: /haan chanagidini/ [head nod]

AN: /u:Ta maDkonbiT bandra?/

AK: /haan haudu u:Ta aitu/

In another conversation excerpt,

AN: /uh.. niv munche yen kelsa maDthidri?/

AK: /umm...ila...na:nu munche, haan adu, *fac... factory ali work* maDthide/

The questions directed to AK throughout the interaction sessions were restricted to 'yes/no' and direct 'what' questions as he didn't elaborate on the answers even when given an opportunity. This was especially observed in discourse situations (2) and (3) where he was asked questions like "Did you eat breakfast today?" or "How did you come to the session?" or "What was your profession?", etc. to which AK responded very directly and did not add anything to the information given (as revealed in the examples above). Also observed in discourse situation (1) was how he had responses like "I don't know" which was then classified into the 'others' category. For example:

NR: /haan, ma:te yar yar idare mane ali?/

AK: /hmm...namma mane...hmm haudu...hmm...2...ila gothilla/ [head nod, smile]

NR: /ynapiskoLi, nim manejali yar idare anta gothilva?/

AK: [head nod, smile] /gothilla kaNo/

NR: /sari aitu, nimma makaLa hesaru heLi?/ /nima makaLa hesaru gothu nimge, thumba pri:ti alva nimge aur mele/

AK: /haudu...hmm...makaLu... [head nod] gothilla, ila gothilla/ [smile]

Nevertheless, AK did use just a few opening moves, especially when in situations (2) and (3) i.e. pairing with another PWA and unacquainted communication partner. When the partner asked him to ask back similar questions, he did so and then did not probe further. For example:

AN: /aitu, iga niv nange keLi, nan yel work maDthide anta?/

AK: /haan, nivu yeli work maDthidri?/

In another discourse situation

SN: /okay so nivu munche *factory* ali work maDthidri, ali chanagitha?/

AK: /haan haudu/ [head nod]

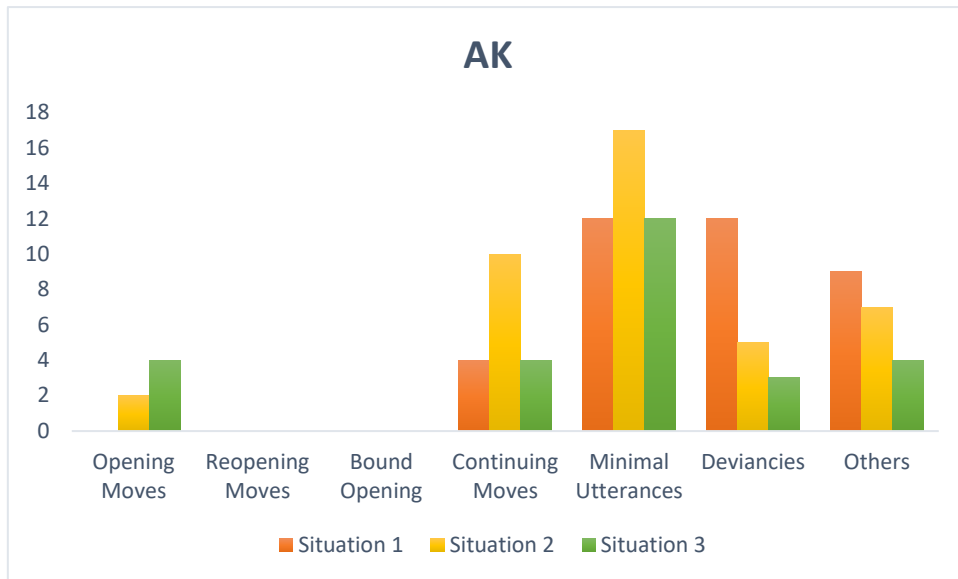
SN: /so iga niv keLi nanage yenadru/

AK: /haan nim *worku* yenu?/

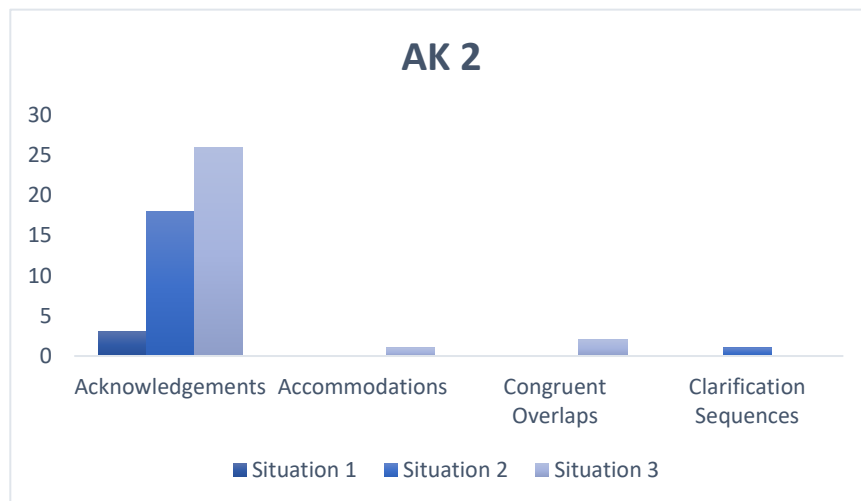
As shown in the examples, AK did not try to add more information to the conversation and was mainly using opening moves when prompted by the communication partners. However, AK used many acknowledgements during the communication session. Mostly seen in discourse situations (2) and (3), when the partners went on, to themselves elaborate on the simple questions that AK had asked them, it was noted that

AK used quite a few ‘mm-hmm’s and ‘head nods’ to encourage them to provide more information. The use of these strategies also seemed like AK was trying to avoid the communicative interaction with the communication partner and hence encouraged them to continue speaking. Among these strategies, acknowledgments were however used more than clarifications or accommodations in all three situations. He used very few non-verbal strategies comprising of actions, gestures, etc. due to limited movement in his right limbs, post stroke. However, he used a fair number of head nods, as a form of facilitating his information and also as a form of acknowledgement of the communication partner’s information. But also one simple action used throughout the situations was the use of gesture ‘no/I don’t know’. AK pre-morbidly could have been called an ambivert in regard to his communicative personality. However, post morbidly, this has changed as he feels the burden of the demands and wants, rooting from the family’s emotional and financial needs, and hence more or less feels constantly dejected about his disorder. There are various conditions that the spouses and immediate family members can face as a consequence of their beloved being diagnosed with aphasia and these can in turn, form barriers for the PWA to overcome his disposition and influence his recovery (Shehata, El Mistikawi, Risha, & Hassan, 2015; Threats, 2010). And hence, in the case of AK it affects his communicative personality as seen in the various discourse situations, AK seems like he wants to engage in the situation, wants to add his bit to the discussion but is held back by his own prejudice towards his current abilities. Dalemans, De Witte, Wade, & Van Den Heuvel, (2010) quote findings in relation to this characteristic trait that AK feels. They describe that a PWA does want to take part in communication situations, would like to contribute his/her own bit of information, would like to enquire what the discussion is, but are held back because of the disorder and how they feel about it and gradually develop more and more negative

feelings about it when nothing is done to encourage them to participate in any way they can. Also, the self-perception AK has towards his disorder, with the added effect from the family makes him doubt his abilities and hence leading him to not participate in the communication situation. This is supported by evidence from Babbitt and Cherney (2015) and Schipper, Visser-Meily, Hendrikx, and Abma (2011) who state that based on the difficulties that the PWA encounter, the confidence that they possess is gradually affected. AK is reportedly dejected about the way his communication abilities and lifestyle has changed so abruptly and spends lot of time alone. This could even be seen in the communication setting where AK wanted to wind up quickly. PWAs can develop depression post morbidly (Sinyor, 1986) and various factors such as the stress the spouse and family goes through as third party influences of the disorder, can affect the way the PWA begins to see himself (Thompson, Sobolew-Shubin, Graham, & Janigian, 1989), but along with this certain factors like pre-morbid irritable behaviours, moodiness, non-agreeing behaviours, etc., certain pre-morbid traits of the PWAs can also lead to depression post morbidly (Greenop, Almeida, Hankey, Van Bockxmeer, & Lautenschlager, 2009). As the communicative demands, needs and wants of the participant AK stems largely from familial responsibilities, his participation in the society thus depends first and foremost on fulfilling these perceived necessities and only then to allow himself to be an active part of various social situations. Based on the type of communicative interaction seen in the situation (1), it seems like he will need constant support and structured rehabilitation to even help accept, and work on the disposition he and his family have towards his disorder and hence resulting handicap (Greenop et al., 2009), and to work towards an overall better quality of life and thus life participation.



Graph 3: Frequency of communication moves used by PWA (2).



Graph 4: Frequency of tokens of communication encouragement used by PWA (2).

3. Participant DP

Participant DP was diagnosed with Anomic Aphasia after a surgery (re-exploration of left temporal craniotomy). On evaluation she had an AQ of 78.3. DP led a regular lifestyle like any other person until she was diagnosed with ovarian cancer at the age of 20 years. She was hospitalized frequently and underwent multiple surgeries and was medicated since then. She did not get much of a chance to finish her college education in a normal manner and hence did not have many friends or even social relationships

from that point of time. She was not allowed to go out for any social meet and greets because of her medical condition. Since her sickness, she has learnt to stay indoors and passes time by watching TV or helping her mother in cooking. Pre-morbidly, she used to enjoy stitching activities and embroidery but now has stopped doing these activities since many years. She has been spending time with family and they take trips to various places to keep DP cheerful and take her mind off of her medical issues. Since she has been diagnosed, it was both reported and then observed that she is tired and dejected most times, and this is mostly during the latter half of the day. From the time when there has been gradual improvement in language skills, she seems marginally more interested in communicating with others around. However, this also is when she is asked a question or when someone initiates the conversation. In the same way, DP had varying communication capacities based on the discourse situations during recordings. In situation (1), she mainly used reactive moves where very few were continuing moves, and minimal utterances were predominant. Questions were asked about her family, her hobbies, her recent vacation trips, etc. to which most of her answers were cued by the acquainted participant or were simple minimal utterances. For example:

GW: /maneali yar yar idare heLu/

DP: /umm...maneali, appadzi, amma, aNNa idare/

GW: /aNNa idara?/ /ynapsko!/ /ninage aNNa idara?/

DP: /haan ila...umm...maneali thama idane/

Many utterances were cued by the acquainted partner and DP did not respond until she was cued. These instances, where DP expected the acquainted participant to cue her or even answer on her behalf were categorised into deviances. During analysis it was also noted that DP did not have any active moves when paired with the acquainted partner.

In situations (2) and (3), DP was an active communication partner using few opening moves along with the predominance in reactive moves. However, even in these situations, DP needed to be prompted by the partner to ask her similar questions. The opening moves were mostly related and restricted to the communication partners' family, work and hobbies, and this was mostly seen in discourse situation (3). For example:

AN: /so i:ga niv keLi nanage/

DP: [smiles] /yen anta keLi?/

AN: /nan yen keLde alla hange yenadru keLi/

DP: /friends idara nimg?/

AN: /haan haudu idare, nanage friends jothe tirgodu andre thumba ishTa/ /yavaga chance siguthe nan hogthide, but i:ga ashTu hogake a:gala alva/.

DP: /hmm...innu heLi avar bage/

Along with the few opening moves, she used continuing moves to add on information to the answers she provided and was also able to form questions that made the communication partner answer about their lifestyle in a more detailed manner. She comparatively used only few tokens to encourage conversation from the communication partner. Most of these however consisted of acknowledgments and congruent overlaps. The acknowledgements were well placed throughout the communication setting and she encouraged the partner to converse more. The few congruent overlaps were observed when she tried to ask more about particular topics or when she wanted to shift the topic of conversation. For example:

AN: /haan nanu munche friends jothe ride ge hogthide, amele nav yella bere bere jagake trips [overlap by DP] hogthidvi ille u:r ali navu filams noDake hogthidvi amele restaurants ge nu hogthidvi/

DP: [overlapping utterance] /filams yella noDthirlilla?/

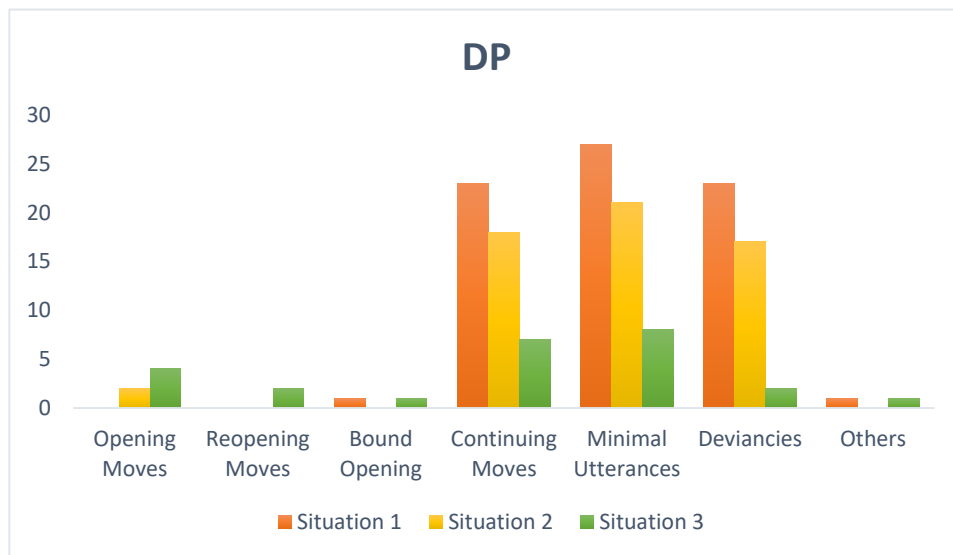
The use of non-verbal strategies was in terms of simple actions of differential pointing to indicate ‘near’ and ‘far’ off places, and this was observed only in situations (2) and (3). For example:

AN: /nim mane ille idena? maisur alli?/

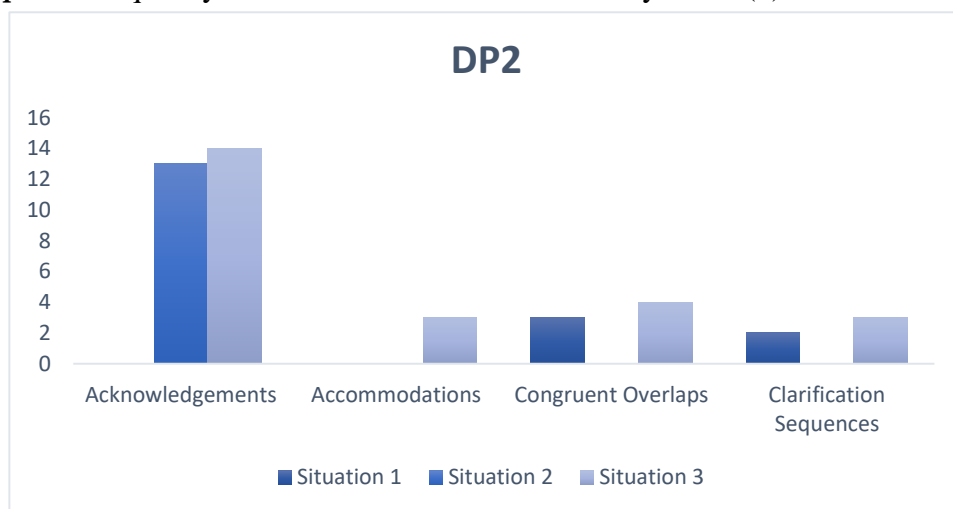
DP: /nam mane davanagere al ide [gestures far away with hand] illi nanvu...uh...nan chikamma mane ali idivi/ /ili barbek alla [points to here] therapy klasge, adake/.

More of the same simple hand gestures were used throughout the sessions albeit not very frequently, but DP tended to use these gestures to compensate for her naming deficit most times, not exactly to facilitate her conversation. Throughout her adulthood period, DP unfortunately has not had many instances and opportunities to have a social life. She has not been with friends, has not attended college regularly enough to pick up social norms in that specific condition and, has spent most of her time in and out of hospitals. This has gradually led to her feeling disappointed and depressed about her health condition. Lampic, Von Essen, Peterson, Larsson and Sjöden (1996) in their study support this finding that frequent hospitalization can lead to increased anxiety and symptoms of depression. This line of thought now affects her communication and even her linguistic profile or personality. As observed in the recordings, when DP was seemingly tired, she felt low and refused to participate further in the conversation. Robinson, Starr, Kubos, and Price (1983) in their study have also added that how in PWA and in individuals having had a stroke, depression symptoms and mood disorders

can develop and this can prevent them from wanting to take part in social communication situations. In DP, there are chances it could maybe be moodiness or maybe tiredness that prevents her from participating more. For DP, her social interactions and hence life participation for now, is limited to her interactions with the family, extended family and neighbourhood. Because of her limited exposure to various social situations, DP's therapy focus regarding life participation can be for better involvement within the family, where her mother does not become a communication surrogate for her but instead will allow her to actually engage in the few varied state of affairs and contribute her part to the conversational interaction.



Graph 5: Frequency of communication moves used by PWA (3).



Graph 6: Frequency of tokens of communication encouragement used by PWA (3).

4. Participant CH

The participant CH, pre-morbidly was a part of the working class of individuals having the sole income for his household. He has two children who are reportedly very dear to him, with whom he used to spend good quality time before. CH's parents continue to live with him and the wife is now working so as to add an income to the overall finances. CH has started working again but has been advised to take it slowly and not to overindulge in his work. He is a small businessman and is able to provide for the family. CH is someone who enjoys annual trips to various famous, historic places. He and his friends used to plan trips and take their families along to northern India, Kerala, Goa, etc. for week long vacations. He used to also like spending quality time with his friends and made sure he met them frequently. CH however reported that after the stroke he is not able to indulge as before in all such activities, even the quality time he had with his children has reportedly reduced. In light of his pre-morbid communication personality, CH was always an introvert. He reportedly made just a few friends and preferred to stick by them. He also will keep to himself unless forcefully involved into the conversation. During the communication recordings, CH showed more of reactive role than an active role throughout the sessions, in all the three discourse situations. His responses were predominated by appropriate minimal utterances, and he was comfortable in not asking the communication partner more questions. For example:

SN: /ni:vu yen kelsa maDthidri?/ /igu work maDthira?/

CH: /haan nanu kelsake hogthini, andre a: chocolate paper irathe alva, adna togonDu marthivi/

In another discourse situation,

AN: /ni:vu illi therapy ge barthidra?/ /inu barthira, yen stop maDidira?/

CH: /barthidvi, kelu deusa raja thogonDidvi, i:ga mathe *join* a:gbeku/

In situations (1) and (3) he had a fair number of minimal utterances and few continuing moves as well. The questions by the communication partner were limited to direct manner of questioning as CH tended to give very simple direct answers and did not expand on the information in relation to any of the answers that he provided (as observed in the examples specified above). It was also observed that in these situations he used just few active moves where there was almost an equal number of opening and reopening moves. Most questions that he asked at first, he almost always asked again by clarifying to the communication partner, what kind of answer it was that he was looking for.

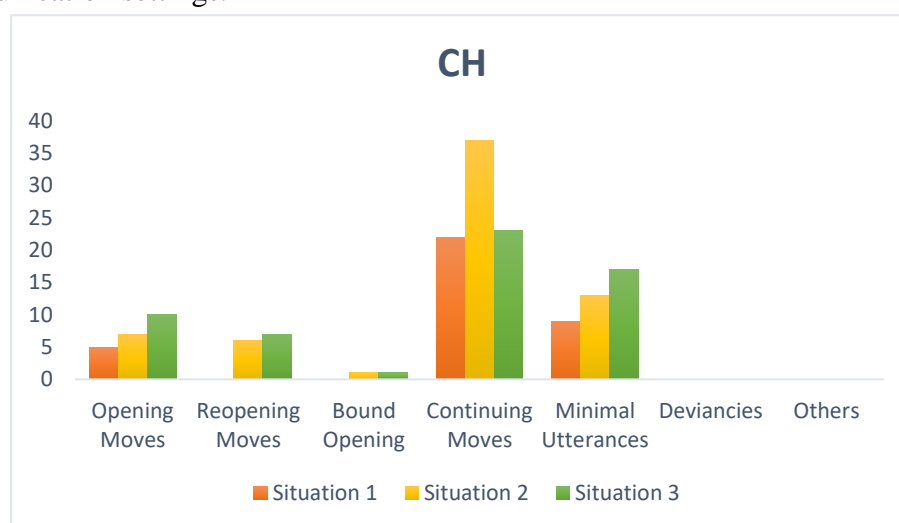
CH: /niv barthira illi?/

AN: /haan ige madam class ge kardidare alva adeke bande/

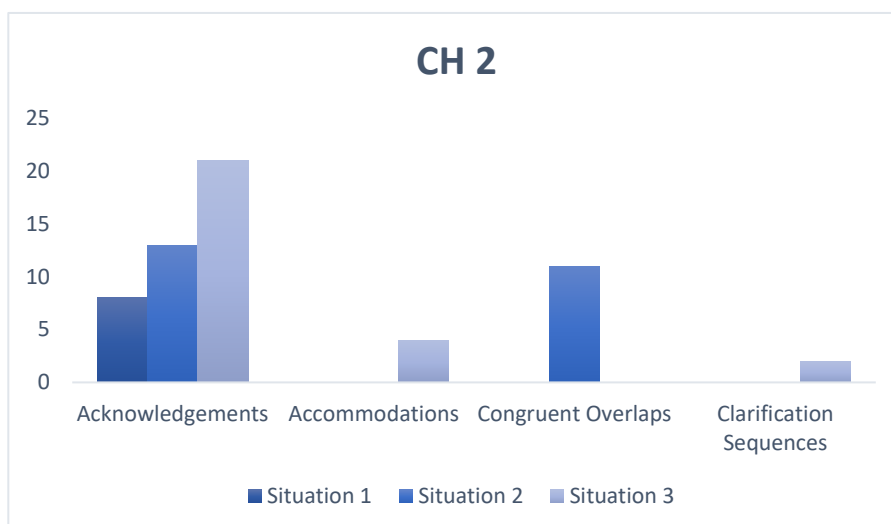
CH: /ila, therapy ignu thogothira?/

In situation (2), even though CH predominantly used reactive moves, he also had a fair number of opening and reopening moves. It was observed that for a specific topic that the unacquainted communication partner initiated, he was able to participate and contribute more details to the conversation. For example, when SN came to the topic of family excursions or outings, CH was able to provide a fairly good amount of information and even asked SN questions about his family journeys. Throughout, CH used few acknowledgements and clarification sequences in the three discourse situations. These also were mostly observed in situations (2) and (3). However, it was noted that CH almost, did not use any evident non-verbal strategies. He preferred to keep his hands by himself and answered questions directly or initiated by asking very simple direct questions himself. In relation to social interactions, CH has reported

participated in very limited situations. He prefers not to engage himself too much, for example even when the family goes out to attend wedding ceremonies, CH will only speak a limited amount and prefers to stay silent. His wife usually compensates for this and speaks with others explaining that CH should not be taken as a rude personality. Friends, relatives and importantly family members report on how much the PWA has changed in terms of personality and how they refuse to communicate or engage in the social situation because they feel they do not know how to and feel their skills are so much more inadequate in comparison to their loved ones (Davidson, Howe, Worrall, Hickson, & Togher, 2008; Parr, 2007). CH's communication personality is restricted to minimum conversation during work and at home. Whenever he does meet friends, it is usually a short meet and he does not talk as much as he used to pre-morbidly. Reportedly, he is ashamed or nervous that he will not be able to get his thoughts across (Parr, 2007). In his situation, helping him change the attitude he has towards his disorder will assist a great deal to improve his communicative personality, to at least bring it much closer to what it was pre-morbidly. The use of these conversation moves and strategies to facilitate his current level of communication and conversational skills can probably aid him in developing better intention to communicate in more different communication settings.



Graph 7: Frequency of communication moves used by PWA (4).



Graph 8: Frequency of tokens of communication encouragement used by PWA (4).

Across all the communication settings and discourse situations, it was observed that all the PWA predominantly used the continuing moves most often, followed by minimal utterances and the opening moves. All the PWAs also tended to use acknowledgements most to encourage conversation. This can help in understanding that the PWAs found it easier to participate in the communication setup when they only had to answer the questions that were asked to them instead of having to formulate topics and initiate conversation themselves. These types of communication ‘moves’ and tokens of conversation encouragement can not only be adapted into the speech and language therapy that the PWA has to undergo, but can also be used in various ways during the acute care/hospitalization period. The speech language pathologist deputed to the acute care unit can help the PWA to use these minimal utterances or continuing moves along with varied non-verbal strategies to facilitate clearer communication and the professionals dealing with PWAs in the acute stages can be instructed to not only watch out for but also encourage use minimal utterances and continuing utterances during that period. And looking at the communication profiles described above can lead to one very obvious inference that each PWA is different, in forms of communication wants,

needs and demands. And more importantly, what needs to be adapted from this is the fact that each PWA being different in their communication profiles, as they are, need modified and accommodating therapy approaches that have to be patient-centred. Leach et al., (2010) report of how persons with aphasia have shown improvements not only in their linguistic profiles but also considerable progress in their community participation itself after following a patient-centred approach in forming therapy goals, when compared to goals that were therapist controlled and therapist led. In the study by Worrall et al., (2011), PWAs have reported various factors that they wish to be taken up as leading aspects in therapy, these were, returning to a pre-stroke life quality in terms of communication, mobility, complete information on their communication difficulty, quality services especially in terms of speech-language therapy and physiotherapy, control and independence for most tasks of daily living, dignity and respect, social leisure and work, contribution to the society, etc. If the specialists working with PWAs can make sure these aspects are taken as a determining factors in formation of therapy goals then there are more than the usual chances that the PWAs will have better life participation and will be better able to deal with their disorders in terms of acceptance instead of the constant disposition they have towards it. Even though the families and spouses of the PWAs in the current study have been living with the disorder for quite some time, it is still however of utmost importance that they undergo frequent preferably group training programs in order to help them constantly cope with and accommodate their significant other's disorder. Going through such training or visits to centres that can help, can allow the family members, near and dear ones to be accommodating to even the slightest of improvements that can be seen in the PWA instead of continuously being dejected about how much in their life has changed. Purdy and Hindenlang (2005) have stated very similar results from their study where

caregivers, spouses and immediate family members were educated on how to frequently acknowledge and accommodate the competence of the PWA. They found that group settings to help the family members cope with the symptoms of aphasia and to especially learn ways to help their PWA accept themselves, are very empowering and this in turn can benefit the PWA in the overall outlook he/she has towards the disorder. With the spouse and family member training and the patient – centred approach to therapy involving the focus on expanding continuing moves at first and gradually working more on opening and reopening moves and teaming these up with non-verbal gestures to facilitate the verbal output, any PWA is bound to make much better progress in terms of linguistic skills, communicative outlook, perception of his/her own disorder and this can ultimately help in better participation of said PWAs in the society.

CHAPTER V

SUMMARY AND CONCLUSION

The present study intended to qualitatively analyse the strategies (both verbal and non-verbal) used by PWAs in different communication settings.

To achieve this, a total of eight participants were informed regarding and then enrolled for the study. Out of these eight participants, five participants were PWAs with an AQ score >50 diagnosed using the WAB, and three participants were neuro-typical individuals, all of them in the age range of 25 – 55 years. The neuro-typical participants were classified as acquainted (an individual who has previously interacted with a PWA) and unacquainted (an individual who has never met any PWA) participants. All the participants were then divided into groups of two to form conversational dyads. Each of these dyads were created based on pairings for three different discourse situations.

<p>SITUATION 1: (Six participants) Four PWAs with two acquainted conversational partners.</p>	<p>SITUATION 2: (Six participants) Four PWAs with two unacquainted conversational partners.</p>	<p>SITUATION 3: (Four participants) PWAs paired with the other PWAs.</p>
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Out of the possible 24 dyads that were formed, only 11 dyads, formed by seven participants, were taken for this study because of subject attrition due to various reasons. From the seven, four participants were PWAs (three Anomic Aphasia and one Conduction Aphasia). Two simple discourse tasks based on Spontaneous Speech/Conversation were used to elicit the discourse sample.

1. *Stroke Story and Coping*: The participants were asked to engage in a general conversation to talk about the stroke story and pre morbid conditions both in terms of lifestyle and language aspects.
2. *Demographics*: The participants were also asked to engage in a conversation about the basic demographics concerning themselves. They were prompted and asked simple questions by the acquainted or unacquainted conversation partner and made to provide as much information as possible.

The communication sessions were audio-video recorded for further analysis. These samples were then transcribed and the usage of different types, frequency of occurrence, deviancies in conversational strategies used by the PWA throughout the whole session was noted and analysed. The analyses of every session was compared to see if, PWAs are using varied strategies during communication with an acquainted conversation partner, an unacquainted conversation partner and with another PWA.

On analyses, it was found each PWAs used a varied combination of active and reactive moves, tokens to encourage conversation and non-verbal gestures. The pre-morbid personality traits of the PWAs like extrovert, introvert and ambivert influenced their use of conversation moves. These types of communication ‘moves’ and tokens of conversation encouragement can not only be adapted into the speech and language therapy that the PWA has to undergo, but can also be used in various ways during the acute care/hospitalization period. The speech language pathologist working in the acute care unit can help the PWA to use these minimal utterances or continuing moves along with varied non-verbal strategies to facilitate clearer communication. The professionals dealing with PWAs in the acute stages should not only watch out for, but also encourage use minimal utterances and continuing utterances during that period. There are many factors affecting the use of these strategies in various communication setting, mainly

being the communication wants, needs and demands from self, family, work place and society. These can play, and did play a major role in influencing the communication of the PWAs in the sessions recorded and overall this was the report given by the caregivers/family members too. Considering all these factors, it is important that the rehabilitation for the PWAs should be centred on the specific snags that each individual PWA faces as a part of his daily life. Speech and language therapy should involve the focus on expanding continuing moves at first and gradually working more on opening and reopening moves and teaming these up with non-verbal gestures to facilitate the verbal output. Along with this, it is of utmost importance to train the caregivers, spouses and immediate family members regularly, especially in group settings can help them constantly cope with and accommodate their significant other's disorder. This can ultimately help the PWA with his/her self-perceptions, moods, neuroticism type of behaviour and more importantly with the communication and betterment of lifestyle and thus aid in being a fuller participant in the society.

However, the major drawback of this study would be that highlighting the use of these communication strategies – both verbal and non-verbal in varied communication settings, especially in acute care and in speech language therapy sessions, is limited by the fact that these results were based only on four subjects in three different discourse situations. It is hence further warranted to carry out similar studies with a larger number of participants who are aphasic and then generalize the results appropriately.

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APPENDIX I

CONSENT FORM

ALL INDIA INSTITUTE OF SPEECH AND HEARING
MANASAGANGOTTHRI, MYSORE – 570006

Consent letter for Research paper

Title: COMMUNICATION STRATEGIES IN PERSONS WITH APHASIA

Participant Information

Participant's Name:

Age/ Gender:

Native Language:

Brief description of the study

The study aims to probe and study the different types of communication strategies (verbal and non-verbal) that a person with aphasia would use in order to get across his/her message when he/she does not have a caretaker to act as a communication surrogate. This study will help use such varied and valid strategies in the form of therapy, to help the person with aphasia develop holistic communication skills.

Informed consent

I have been informed about the aims, objectives and the procedures of the study. I have understood that my participation will be audio-video recorded for the sake of further processing and analysis. I understand that I have a right to refuse to participate in the study. I have had the opportunity to ask questions about it and any questions that I have asked have been answered to my satisfaction. I consent voluntarily to participate in this study.

I, _____, the
undersigned, give my consent to be a participant of this investigation.

Signature of the participant/caregiver
(Name and Address)

Signature of the Investigator:
Name and Designation:
Date:

APPENDIX II

INTERVIEW FORMAT

The researcher will record the communicative ability of A1/B1 when paired with a partner (A2/B2, Acquainted person or unacquainted person). It help gauge the communicative ability of the PWA when paired off with different communication partners. It will also help to understand what verbal or non-verbal strategies the PWA will use in order to meaningfully convey his message to the partner. The communication partner will try to create opportunities to elicit complete and meaningful responses from the PWA.

The researcher will follow the role of a passive observer either present or not present in the same room.

For the participant (PWA), this scenario will demonstrate that without the help of the speech language pathologist or a caregiver, how well you are able to communicate your idea/need/want/message using different communication strategies. This can further help augment a plan for the gradual facilitation of verbal communication.

Introductory and demographics conversation:

Hello.

How are you today? What is your name?

Have you eaten your breakfast/lunch as yet? What did you eat? Can you tell me a little about how it is usually made?

How did you get here? Did you know how to ride/drive before? Of all the cars/buses/two wheelers, do you have a favourite?

How do you like the weather right now? What is your favourite kind of weather? What do you like to do most in that weather?

So, how old are you? And where do you stay?

1. Family and Home

- Tell me about your family a little
- Prompts:
 - All of your family lives together?
 - How many people help in household chores?
 - Who drives/rides you around?
 - Who cooks at home?
 - Do you still enjoy doing household chores like before stroke?

2. Food and Nutrition

- What is the most meal cooked at home? What is your favourite thing to eat?
- Prompts:
 - Has your diet changed since some days?
 - Any change in your feeding schedule?
 - Who helps you in cooking?
 - Does your spouse enjoy cooking?
 - What is your spouse's favourite meal?

3. Physical Health

- Tell me about your general health
- Prompts:
 - Do you like taking walks?

- Do you go shopping for clothes/vegetables, etc.?
- Do you go alone or does someone accompany you?
- Can you explain the usual routine when you're out shopping for anything?

4. Social Life

- Tell me about any friends you have or had. Do you meet them now?
- Prompts:
 - How often do you go out and meet other people than family?
 - What do you do in your free time? Do you have any hobbies?
 - Can you tell me any favourite memories with any close friends?

5. Medical Issues

- How often do you go to the doctor for check-ups?
- Prompts:
 - Which hospital do you go to?
 - Do you go alone?
 - When was your previous check-up?

6. Personality

- Tell me what you like most about yourself
- Prompts:
 - Are people impressed with this quality of yours?
 - Is there any quality in any family member that you specifically like?

Stroke Story and Coping:

1. **“I’m going to be asking you to do some talking. How do you think you speak in English/Hindi/Kannada (Choose the dominant language spoken by the PWA pre-morbidly)?”**

If no response in approximately 10 seconds, prompt:

“How's your talking/ability to tell a story?”

Listen, encourage full response.

If no response, ask, **“Are you having trouble with your talking?”**

2. **“Do you speak any languages besides your mother tongue (specify)?”**

3. **“Have you ever had a stroke or serious illness?”**

If yes, **“Please tell me about it.”**

If no response in approximately 10 seconds prompt: **“Try to tell me about the day you/they had your/their stroke/illness.”**

At a natural juncture add:

4. **“Tell me about your recovery. What kinds of things have you done to try to get better since your stroke/illness?”**

If no response in approximately 10 seconds, prompt:

“Tell me about any changes you needed to make in your daily life.”

APPENDIX III

Transcription System in Kannada

The word structure in Kannada language is of CV/VCV structure. In today's time, persons speaking Kannada use many borrowed words from English. Simple words like car, bus, biscuit, chair, etc. are borrowed into Kannada but are uttered with a vowel in the end, for example, 'car-u', 'bus-u', 'biscuit-u', 'chair-u', etc. However, there are word contractions present while speaking Kannada like 'haudu' will become 'haud'.

Kannada has the following speech sounds which were transcribed in the following way:

- a) Short and long vowels:
 - Short Vowels: a, e, i, o, u
 - Long Vowels: a:, e:, i:, o:, u:
- b) Diphthongs: ai, au
- c) Consonants:
 - Bilabials: p, b, m, ph, bh
 - Labiodentals: v
 - Dentals: t, d, th, dh, n
 - Alveolars: c, j, ch, jh, l, r, s
 - Palatals: T, D, Th, Dh, L, N, y, sh
 - Velars: k, g, kh, gh
 - Glottal: h

The 'h' with few consonants represents an aspirated sound.

Clusters are represented with the combination of two sounds like 'tr', 'bl', 'yk', etc.