

APHASIA REHABILITATION IN INDIA: A PRELIMINARY SURVEY OF SPEECH-LANGUAGE PATHOLOGISTS

¹Shivani Tiwari, & ²Gopee Krishnan

Abstract

This study aimed to investigate the issues speech-language pathologists (SLPs) face in the rehabilitation of people with aphasia (PwA) in India. A survey questionnaire was distributed to 540 SLPs through e-mail. Among 437 survey recipients, 61 SLPs participated in the study. The questionnaire explored various 'client-related' and 'clinician-related' issues in the rehabilitation of PwA in addition to the sections that gleaned into the clinician and therapy characteristics, and finally the SLPs' concerns toward aphasia rehabilitation. The major 'client-related' issues highlighted were: poor economic status, distant therapy centres, poor family support and subjects' motivation, associated problems (e.g. hemiplegia), acute stage, lack of awareness about aphasia and its management in the common public. The main 'clinician-related' issues were the lack of adequate time for rehabilitation and the general inefficiency of the therapy techniques. More importantly, the survey stressed on the lack of basic epidemiological research on aphasia in India. Being a preliminary survey of first in its kind, the study revealed several basic issues in the rehabilitation of PwA confronted by SLPs in India.

Keywords: *Aphasia; India; Rehabilitation; Survey; Speech Language Pathology*

Introduction

Aphasia, an acquired language disorder, has been one of the most common symptoms in the acute and chronic stroke patients (Pederson, Jørgensen, Nakayama, Raaschou, & Skyhoj Olsen, 1995) and one in three stroke survivors experience aphasia (Townend, Brady, & McLaughlin, 2007). With the advances in health care, more people survive strokes but many have to cope with the physical, psychological, social, and functional sequelae, resulting in increased personal and public costs (Kaste, Palomäki, & Sarna, 1995; O'Connell, Hanna, Penney, Pearce, Owen, & Warelow, 2001). Subsequent to the initial medical risk factor work-up, most of them return to their home quickly, despite suffering from various impairments and disabilities, and often without having received any rehabilitation services to compensate them (Mayo et al., 1999; Chuang, Wu, Ma, Chen, & Wu, 2005). Considering the fact that approximately every one in three stroke survivors experience aphasia (Townend et al., 2007), it may be inferred that a considerable proportion of people with aphasia (PwA) do not receive adequate rehabilitative services.

The management of aphasia is often a challenging task to the Speech-Language Pathologists (SLPs). In India, the scenario is expectedly challenging considering the Nation's gigantic and multilingual status. Further, a review of published literature reveals an apparent dearth of information on rehabilitation of PwA in India. In this context, as a preliminary step, the present study attempted to study the issues in aphasia rehabilitation by surveying a group of SLPs in the country.

In the past, rehabilitation of PwA in the country was carried out by clinicians in nursing homes and clinics. However, this was restricted to the larger specialized national medical centres in the cosmopolitan cities (Karanth, 2002). Although the scenario has been changing with the entry of a handful of training institutions in the private sector, a good majority of PwA is still far from the reach of these centres. In the following section, we present the relevant and recent census data of the country as well as some contemporary investigations on the prevalence of stroke (in the absence of such data on aphasia) in India.

1.1. Population characteristics

Being the second most populous country in the world, India homes approximately 1028.7 million people of which 532.2 million are males. Majority of the population (72.2%) lives in rural areas. The overall literacy rate in India is 64.8%. In the urban population, the literacy rate is about 80%, whereas in the rural, it is only about 59% (Census of India, 2001). Further, the global rise in life expectancy is observed in India too, and the current elderly population (~ 76.6 million) is projected to reach about 137 million by 2021 (Johnson, 2008).

1.2. Disability in India

The National Sample Survey Organization's (2002) 58th round report on disability status of India revealed that nearly 18.49 million people are affected with some form of disability. In addition, 77% of them were residing in rural areas. Such a massive number with majority residing in rural areas pose intense challenges to the nation with respect to the financial as well as

^{1&2}Associate Professors, Dept. of Speech & Hearing, Manipal College of Allied Health Science (MCOAHS), Manipal University, Manipal, E-mail: brain.language.krishnan@gmail.com

professional resources. In this context, it is worth mentioning that the annual per capita public health expenditure in the country is not more than Rs. 200 (~ 4 USD). With this meagre amount, the reach and quality of the public health services has been below the desirable standards (National Health Policy, 2002).

1.2.1. Speech disability

The NSSO's 58th round report (2002) on speech disability in India reveals that about 2.15 million persons (11.65% of the total disabled population) in the country were having some form of speech impairment. The prevalence rate of speech disability (per million) in rural areas was about 220 and 193 in urban areas. In the elderly population (i.e. above 60 years), the prevalence rates showed an increase both in the rural and urban populations. The incidence rate of speech impairment increases progressively from 55 years onwards and it hovers around 5-15 in rural areas and 15-20 in urban areas in 55-60 years age group. Age group above 60 years showed incidence rate of around 20 in both rural and urban areas. Specifically, 58th round NSSO survey (2002) revealed that 35-45 percent of speech impaired population acquired it after 60 years of age. Alarming, the most common cause of speech impairment was paralysis both in the rural and urban elderly populations. From these, it is apparent that in the elderly population, brain damage (e.g. cerebrovascular accident - CVA) may be one of the major causes of impaired communication.

The prevalence of CVA in various geographical areas of India have shown rates ranging from 143 (Razdan, Kaul, Motta, & Kaul, 1989) to 220 per million (Dalal, 1997). In a random sample survey of major neurological disorders in East India, 486.85 per million people were found to have stroke, second only to epilepsy (557.5 per million) (Das et al., 2007). Although, there have been methodological differences in estimating the prevalence of stroke (Dalal & Bhattacharjee, 2007) (for e.g. extrapolating the prevalence rate from the hemiplegia data), these estimates provide an outlook of the prevalence of stroke in India. Similarly, the incidence rate of stroke has also been studied by various authors. For example, recently, Dalal et al. (2008) reported 456 people with first-ever stroke during their two-year period study. Their findings showed an annual stroke incidence of 145/100,000 (above 25 years of age).

CVA has been the most common cause of aphasia (Pederson et al., 1995; Townend et al., 2007). The incidence of aphasia in the acute phase of stroke in unselected community and hospital samples has been in the range of 34-38%

(Kauhanen et al., 2000). Duffy (1995) reported that approximately 27% of the population with neurogenic communication disorders possess aphasia. In India, a prospective study (Panicker, Thomas, Pavithran, Nair, & Sarma, 2003) found that 25% of people with ischemic stroke exhibited aphasia. Further, the presence of aphasia is one of the strongest predictors of poor functional recovery after stroke (Fang, Chen, Li, Huang, & Zeng, 2003) and it is often associated with patients' increased functional dependency and a high frequency of admission to the institutional care (Tennant, Geddes, Fear, Hillman, & Chamberlain, 1997). Although this is the case, there has not been any community-based, large-scale published prevalence data on aphasia in India. Yet, from the disability statistics as well as the available prevalence data on stroke, especially in the elderly population, it may be inferred that the prevalence of aphasia in India could remarkably be high.

1.3. *Speech-Language Pathology services in India*

Despite more than 40 years since its inception, the profession of Speech-Language Pathology in India still experiences lack of sufficient personnel to meet the needs of the communicatively handicapped population, at large. The number of speech-language pathologists (SLPs) in India is just above one thousand (www.isha.org.in). In this context, it is worth quoting "*It is regrettable that a discipline which is as heavily manpower-dependent as SLP has not expanded vigorously in a country whose major resource is its human resource*" (Karanth, 2002). The author also expressed that the clinical service delivery in the field of Speech-Language Pathology is still centred on a few educational institutions owing to their public awareness and the rich professional resources in terms of trainee student population. In the recent past, there has been a spurt of private institutions in the field of professional education, which in turn, has elevated the cost of clinical services. Yet, such institutions serve as the backbones of clinical service delivery in the field of communication disorders. But, a good majority of the population is far from such centres, hampering its access to the needy. Several training institutions have been seen clustered in specific geographical areas, further limiting their service delivery to a small portion of the disabled population. In addition, owing to the poor financial reimbursement schemes in the country (unlike in United States, Britain, etc.), the clients often pay for their medical services. In spite of the attempts of the Government of India to establish such health reimbursement schemes, currently, millions of people with disability are unable to afford the

expenses incurred from medical as well as the rehabilitative services in India. PwA are no exception to this in the country.

From the above discussion, it is apparent that aphasia has been an unexplored condition in the country. In this context, as a preliminary attempt, we decided to study the features of aphasia rehabilitation in India by surveying a group of SLPs. The main aims of the study were to fetch: (i) the professional demographics of SLPs involved in the rehabilitation of PwA; ii) the features of aphasia therapy services; iii) the issues in aphasia rehabilitation; and iv) SLPs' concerns toward rehabilitation of PwA. The outcome of this study is expected to attract SLPs' research attention to the issues in aphasia rehabilitation in India.

Methods

2.1 Participants

A group of 540 qualified SLPs' e-mail addresses were collected from Indian Speech and Hearing Association's directory. We chose to contact SLPs through e-mail as this method would reach a larger sample with minimal cost than a surface mail survey (Simmons-Mackie, Threats, & Kagan, 2005). However this method is not without limitations as it potentially surveys only those SLPs who access their electronic mail.

2.2 Survey

An initial draft of the questionnaire was prepared, which covered four domains addressing the aims (see above) of the study. Care was taken to ensure that the questionnaire contained unambiguous questions which were easy to complete in minimal time (Simmons-Mackie et al., 2005). The initial draft was refined by several piloting with the consultation of three selected professionals with more than 10 years experience in the field of aphasia rehabilitation (they were excluded from the final survey). The final version of the questionnaire consisted of 14 questions that included seven multiple choice format and remaining open-ended follow up questions. The questionnaire was preceded by a brief introduction stating its aim and a request to participate in the study (see Appendix for the introduction and the questions of the survey). The anonymity of participation was guaranteed and the survey ended with a note thanking the respondents for their inputs. Finally, with an online survey generating program (www.kwiksurveys.com) a webpage-link was generated and it was enclosed in the e-mail correspondence to the survey population. After seven days, a reminder with the link to the

survey page was sent to the study population to participate in the survey, if they had not. The responses were collected for a period of one month.

2.3 Data analysis

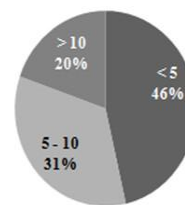
Responses from the survey were analyzed using descriptive statistics to find out the frequency of responses to the multiple-choice questions. The open-ended questions were analyzed descriptively by listing out the answers to each of such questions. All answers were rank-ordered according to their frequency of responses.

Results

3.1 Respondents' Demographics (Questions 1-4)

Among 540 potential participants, 103 were unreachable via e-mail as they returned 'undeliverable'. Therefore, the study involved 437 survey recipients. Of these, 61 (13.96%) participated in the survey and 53 (86.88%) respondents reported that they were actively involved in the rehabilitation of PwA. Majority of them had less than five years of experience. Figure 1a represents the distribution of SLPs based on their experience. Forty five respondents had Masters Degree and nine had PhD degree in the field of communication disorders. Remaining respondents (n = 7; 11%) had Bachelors Degree. Most of them worked in the institutional and hospital set ups (see Figure 1b for the details of work environment). The participants were encouraged to indicate if they worked in more than one setting.

1a Experience (Years)



1b Work Settings

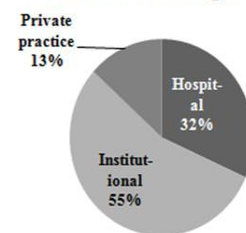


Figure1: Distribution of SLPs based on a) experience (in years) and b) work settings

3.2 Features of aphasia therapy services (Questions 5-6)

The participants were queried about the number of PwA attending therapy as well as the frequency of aphasia therapy sessions on a weekly basis. Fifty nine of 61 respondents (96.72%) answered these questions. Figures 2a and 2b depict the responses to them, respectively.

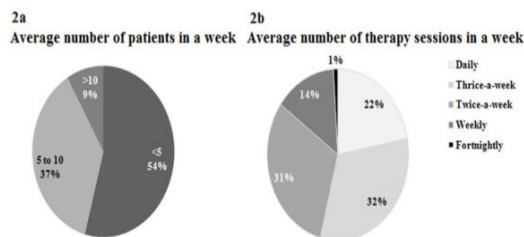


Figure 2: a) Patient-flow and 2b) number of therapy sessions on a weekly basis

3.3 Issues in aphasia rehabilitation (Questions 7-10)

Under this section, the participants were asked if they experienced any problems in the rehabilitation of PwA. All but two responded to this question and Figure 3 shows the distribution of responses.

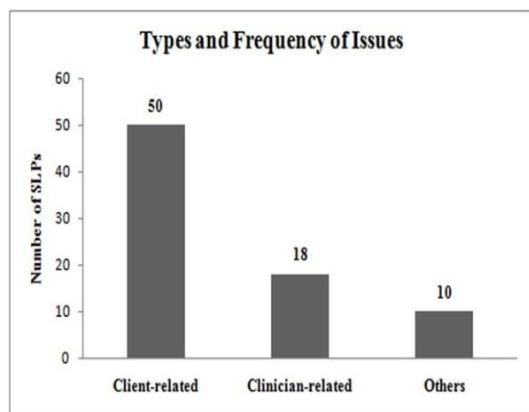


Figure 3: Distribution of the Types and Frequency of issues in aphasia rehabilitation

To explore the ‘client-related’ factors influencing aphasia rehabilitation, the participants were required to select the options provided in a multiple choice with open-ended follow up format. The options and the frequency of responses (in parenthesis) were as follows: a) acute stage (i.e., client unable to comply with speech-language therapy) – 26 (52 %); b) associated conditions (e.g. hemiplegia) – 25 (50 %); c) financial issues (i.e., client unable to attend therapy owing to poor economic status) – 32 (64 %); d) proximity of the clinics (i.e., client lives in a distant place therefore unable to avail clinical services) – 30 (60 %); e) poor family support (i.e., client and his/her problems are ignored by the family members) – 25 (50 %); f) poor motivation of the client – 23 (46 %); g) others – 4 (8 %). All four responses in the ‘others’ emphasized on cortical as well as subcortical lesion sites and the type of aphasia.

The ‘clinician-related’ factors were explored using a multiple choice open-ended follow up question. The options and the frequency of responses (in parenthesis) to this question were

as follows: a) lack of adequate time for rehabilitation – 18 (100 %); b) lack of time-tested treatment methods that guarantee favourable outcome following therapy – 14 (77.78 %); c) professionally do not prefer to manage persons with aphasia – 3 (16.67 %); d) others – 3 (16.67 %). The responses in the ‘other’ category included: i) lack of adequate hands-on practice on PwA while at a supervisory position, and ii) lack of adequate time for training due to the subjects’ discharge from the hospital immediately after the medical status has been stabilized.

In the open-ended follow up section (‘other issues in therapy’), three (of 10) respondents reported lack of materials for the assessment and management of PwA. The remaining responses by the individual participants stressed on following factors such as lack of: a) adequate funding; b) disability-friendly infrastructure; c) adequate home practice; d) adequate facilities in the clinics; e) adequate information provided by the medical professionals on post-stroke rehabilitation; and f) patients’ knowledge on early rehabilitation.

3.4 SLPs’ Concerns toward rehabilitation of PwA (Questions 11-14)

To explore the SLPs’ concerns toward rehabilitation of PwA, four questions were included in the questionnaire (Questions 9 to 13). For example, 47 (77%) respondents felt that PwA were often discharged from the hospital immediately after the acute medical management, without considering their post morbid life as members of the society. Further, to seek the SLPs’ opinion on setting up rehabilitation centres for PwA by the concerned authorities, 51 (83.61%) SLPs responded positively. Majority of them (43 of 51 SLPs, 84%) opined that hospitals whereas 32 (63%) felt that the Government shall set up such centres. Twenty nine (57%) indicated that non-governmental organizations could set up such rehabilitation centres for PwA and three respondents (6%) reported other centres like primary health centres and district rehabilitation centres . One respondent opined that it could be any. The respondents were encouraged to select multiple options, if deemed relevant.

Finally, the respondents of the survey were encouraged to comment on any other issues that they considered important in the rehabilitation of PwA. Sixteen of the total participants (26%) responded to this open-ended question. Table 1 provides the comments of the participants with their frequency and percentage.

Table 1: *The frequency and percentage of comments on aphasia rehabilitation (n = 16)*

Comments	Frequency	%
1 Lack of epidemiological survey	12	75
2 Poor application of AAC system in the rehabilitation of people with aphasia	8	50
3 Issues regarding multilingualism and illiteracy	7	43.75
4 Clinicians' proficiency in the clients' mother tongue	5	31.25
5 Setting up of rehabilitation centres for persons with aphasia	5	31.25
6 Introduction of support groups for persons with aphasia	4	25
7 Social and vocational impacts of aphasia	2	12.5

Discussion

The present study investigated the issues in the rehabilitation of PwA in India. A group of 61 qualified SLPs from a total of 437 survey recipients responded to an online survey distributed through e-mail. The questions in the survey belonged to four different dimensions such as: a) demographics of the respondents; b) features of the aphasia therapy; c) issues in the rehabilitation of PwA; and finally d) SLPs' concerns toward aphasia rehabilitation. In the following section, we discuss the findings from each of these dimensions and their possible implications to future aphasia research in India.

4.1 Respondents' demographics

The results of the survey may be considered as a factual reflection of the features of aphasia rehabilitation in India as most of the respondents were actively involved in the rehabilitation of PwA. Interestingly, SLPs with less than five years of experience dominated the participant group followed by those with 5-10 years. There were only 10 respondents with more than 10 years of experience. Majority of them had obtained Masters Degree in the field of communication disorders. Although the field of speech-language pathology set out its journey more than four decades ago in the country, the last decade has witnessed an increasing number of youngsters seeking this profession, perhaps explaining the apparent majority of younger clinicians in the survey. Yet, the recent census data on speech-impaired population in the country stress on the need for an exponentially large number of SLPs as currently there is only one SLP for a million people in India. The study revealed that majority of the respondents worked

in institutional set up which was closely followed by the hospital set up. The number of respondents from the private practice as well as other sectors was comparatively meagre indicating that a fewer SLPs involved in this form of service delivery.

4.2 Features of aphasia therapy services

More than half of the respondents provided therapy to less than five PwA on a weekly basis. Yet, a considerable number of SLPs reported that weekly about 5-10 subjects availed speech-language therapy. While analyzing the data, we realized that these inputs might have been more meaningful in the context of the total number of cases attended speech-language services. The current survey did not probe into this, which we consider as a limitation of the study. Future surveys may, therefore, consider the ratio of specific clientele to the total case load. Yet, the fact that more than half of the respondents provided therapy to less than five subjects on a weekly basis indicated that the therapy was availed by only a smaller portion of the clientele. The reason for this finding may be the lack of speech-language therapy services in the vicinity of most of the affected people (see below). The observation that a considerable number of SLPs provided therapy to 5-10 subjects on a weekly basis shows that, when available, more PwA sought SLP services. The number of therapy sessions in a given week also showed a similar trend. Most SLPs provided services on a thrice-a-week followed by twice-a-week basis. The frequency of sessions attended by PwA on average was high, highlighting the increased demand for aphasia therapy in India. Again, we felt that information on location of the work setting and average distance travelled by PwA to receive rehabilitation services could have been more informative.

4.3 Issues in aphasia rehabilitation

The inputs from this section revealed certain general issues in the field of aphasia rehabilitation. Majority of the respondents reportedly experienced several 'client-related' as well as 'clinician-related' issues in the rehabilitation of PwA. Within this majority, most reported a number of 'client-related' issues (see Results). Among them, certain issues like distant rehabilitation services (Gummow, Gregory, & Macnamara, 1990) and poor transportation (MacFarlane, Collings, Graham, & MacIntosh, 1979; Karanth, 1988) have been identified to influence the cognitive rehabilitation in people with brain damage and aphasia. The inputs from this section of the current survey shed light into certain implementable strategies that could facilitate rehabilitation of PwA in India. For

example, poor family support and motivation of affected persons may be tackled by educating them on the necessity as well as benefits of post-stroke rehabilitation. Further, setting up comprehensive rehabilitation centres by the concerned authorities such as hospitals, government, and/or NGOs, where services from different rehabilitation disciplines are combined, may alleviate the distance as well as transportation issues to a large extent. In addition, this form of a comprehensive service delivery fosters the co-ordinated work of professionals from different disciplines, augmenting the overall rehabilitative outcome in people with aphasia or stroke. The existing regional health care system (including primary health centres and district hospitals) may be equipped with rehabilitation professional to meet this goal. The issues related to financial factors influencing the rehabilitation services may be addressed by introducing new public health care schemes as well as boosting the existing ones.

The major '*clinician-related*' issues were (a) lack of adequate time for rehabilitation and (b) lack of time-tested treatment methods that guarantee favourable outcome following therapy. The first issue on availability of time is not surprising as a good number of the participants worked in the 'institutional' as well as in the 'hospital' set ups. Here, 'institutional' referred to the teaching institutions where the participants were often involved in several domains of work such as teaching, clinical supervision, as well as administration. This undoubtedly limits the effective time spent with the clinical population by these professionals. In this context, it is worth noting one of the respondents' inputs that the SLPs involved in the supervision of PwA do require periodic hands-on practice to keep them abreast with the rehabilitation of aphasia. Contrastively, for those who are practicing in the hospital set ups, the myriad of people with speech-language deficits often limit the amount of time devoted to individual subjects. Recently, Simmons-Mackie et al. (2005) reported that the constraints induced by the student turnover and the academic calendars have adversely affected the outcome assessment in people with aphasia. Though high-intensity speech therapy improves the outcome in PwA (Bhagal, Teasell, & Speechley, 2003), it invariably requires large number of qualified SLPs (Engelter et al., 2006). The second issue – the lack of availability of effective treatment methods – is a global issue in aphasia rehabilitation. The research on this dimension has been progressing with some favourable outcomes (e.g.s. constraint-induced aphasia therapy, (Pulvermüller, 2001); semantic feature-based therapy (Boyle & Coelho, 1995).

4.4 SLPs' Concerns toward rehabilitation of PwA

In our view, the most fundamental issue pointed out by the survey respondents was the sheer lack of any published research on the epidemiology of aphasia in India. Epidemiological research aims to establish the causes, mechanisms, and natural history of illness (Wade, 1997). Any discipline dealing with any disorder has, at its foundation, the epidemiological findings reflecting the incidence and prevalence of the disorder. Abysmally, there have not been such studies in the country so far. This observation, therefore, highlights the immediate need for epidemiological research in aphasiology in the country. Further, the respondents of the survey reported that very often subjects with aphasia are discharged from the hospital without adequate counselling on post-stroke rehabilitation services including speech-language therapy. In this context, it is worth noting the input from one respondent SLP that in a city where the country's one of the oldest institutions in the field of communication disorders is located, a person with aphasia reported for speech-language therapy after three years since the onset, owing to the unawareness of such facility in the city. This essentially indicated a generalized lack of awareness about aphasia and its rehabilitation among the public and medical professionals. Improving public awareness and knowledge about aphasia and its therapy may foster motivation in the clients and their family members. Yet, this is not a nation-specific issue. For example, in a recent study, the public awareness about aphasia was observed to be significantly less compared to Parkinson's disease (PD) in the United Kingdom (Flynn, Cumberland, & Marshall, 2008). These authors suggested several reasons for low public awareness about aphasia. First, aphasia is a hidden and complex condition with varying manifestation that makes it difficult to recognize and understand. Second, the media exposure, a crucial means of public awareness, was rare in the case of aphasia compared to PD. Finally, the personal connection, a major form of awareness in PD, was also ineffective in the case of aphasia (Flynn et al., 2008). Similar finding was also reported by Mavis (2007) in Turkish population. Recently, Pauranik (2008) emphasized on the utilization of print and electronic (television and radio) media as easy ways to reach masses of people to create public awareness on neurological disorders. Awareness among the medical practitioners may be created by organizing seminars and symposia on aphasia.

The survey also emphasized on the generalized lack of application of alternate and augmentative

communication (AAC) systems in PwA as well as the multilingual nature of the population to be served. Another interesting and clinically noteworthy observation was the SLPs' proficiency in the languages of rehabilitation. This is especially important in training institutions where the trainee students from different linguistic backgrounds across the country are expected to provide therapy in their non-native languages. Considering the multilingual nature and relatively higher proportion of the illiterates in the country, such clinicians often experience intense difficulties in delivering quality services to their clientele.

Summary and future directions

Although the current study was preliminary in nature, it revealed several potential issues in the rehabilitation of people with aphasia in India. Future in-depth studies on these issues incorporating SLPs as well as PwA and their close relatives may provide us more insight into these issues. The outcomes of such studies may serve as the backbones of the policy-making by the concerned authorities towards the rehabilitation of people with aphasia in India.

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Appendix

This survey is designed to explore the issues that the Speech-Language Pathologists in India face in the rehabilitation of subjects with aphasia. We welcome your wholehearted cooperation and we guarantee your anonymity of participation. You are encouraged to key-in all the issues that you come across while managing subjects with aphasia.

a. Respondents' demographics

1. Are you involved in the rehabilitation of subjects with aphasia?
 - Yes
 - No
 2. How many years of experience do you have in working with subjects with aphasia?
 - Less than 5
 - 5 to 10
 - More than 10
 3. In what type of setting(s) do you work? (Check all that apply)
 - Hospital
 - Institutional (and University)
 - Private practice
 - Others, please enter below
 4. Did you obtain
 - Bachelors degree
 - Masters degree
 - Doctorate
 - Others, please enter below
- b. Features of aphasia therapy services**
5. Monthly, how many subjects with aphasia report for speech-language therapy
 - Less than 5
 - 5 to 10
 - More than 10
 6. How frequently subjects with aphasia attend therapy?
 - Daily
 - Thrice-a-week
 - Twice-a-week
 - Weekly
 - Fortnightly
- c. Issues in aphasia rehabilitation**
7. Do you experience any problems in the rehabilitation of subjects with aphasia?
 - Yes
 - No
 8. If you answered "Yes" to the previous question, what are the problems you face in the rehabilitation of subjects with aphasia? (You may select more than one option, if relevant).
 - Client-related
 - Clinician-related
 - Others, please enter below
 9. If you selected "client-related" problems in the previous question, please tell more specifically about it. (You may select more than one option, if relevant).
 - Acute stage (client unable to comply with speech-language therapy)
 - Associated problems (e.g. hemiplegia)
 - Financial problems (client unable to attend therapy owing to poor economic status)
 - Proximity of clinics (client lives in a distant place, therefore unable to avail clinical services)
 - Poor family support (client and his/her problems are ignored by the family members)
 - Poor motivation of the client
 - Others, please enter below
 10. If you selected "clinician-related" problems in Question No. 8, please tell us more specifically about it (You may select more than one option, if relevant).
 - Lack of adequate time for extensive training
 - Professionally do not prefer to see subjects with aphasia
 - Lack of time-tested treatment techniques that guarantee favourable outcomes following therapy
 - Others, please enter below
- d. SLPs' Concerns toward rehabilitation of PwA**
11. Do you think subjects with aphasia are often discharged from the hospital immediately after the acute medical management, without considering their post-morbid life as the individuals of the society?

- Yes
 - No
12. Do you think the concerned authorities shall set up rehabilitation centres for subjects with aphasia?
- Yes
 - No
13. If you answered “Yes” to Question No. 12, who do you think the concerned authorities are? (You may select more than one option, if relevant).
- Government
 - Non-Governmental Organizations (NGOs)
 - Hospitals
 - Others, please enter below

14. Any other comments on the issues in the rehabilitation of subjects with aphasia?
- No
 - Yes, and they are (enter below)
Thank you very much for your participation!

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