

## **A Preliminary Survey Report on Awareness of Communication Disorders among Nursing Trainees and Primary School Teachers**

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### **Abstract**

**Background:** As the old adage goes “Prevention is better than cure”, one of the primary objectives of rehabilitation would be the prevention and early identification of communication disorders. Over the years, various specialists in the field of communication disorders have attempted to promote awareness to various professionals regarding the importance of prevention and early detection of communication disorders. The present study aimed to quantify and compare the awareness level about communication disorders among the medical versus the non-medical professional, i.e. nursing trainees versus teachers.

**Method:** A total of 200 participants, comprising of 100 nursing trainees and 100 primary school teachers were considered for the study. The participants were given a questionnaire comprising of 19 questions categorized in five sections on various communication disorders. The nursing trainees were recruited as volunteers and were selected randomly from 5 purposively selected private hospitals in Selangor state, Malaysia. The primary school teachers were also recruited as volunteers and were selected randomly from 10 purposively selected public and private schools in Selangor.

**Results:** Results of the study revealed that the nursing trainees and primary school teachers are better aware of most of the communication disorders (14 out of 19 questions). However, significant difference ( $p < 0.05$ ) was noticed across two groups for some communication disorders (5 statements), wherein the nursing trainees showed better performance than the teachers.

**Conclusion:** The present study found a higher level of awareness of communication disorders amongst the medical professional and non- medical group. Hence, it can be concluded that there is a need to spread constant awareness and awareness programs about the

communication disorders among the medical and non- medical professionals as a team approach to enhance the quality of life of children who are at risk.

**Keywords:** Primary prevention; communication disorders; awareness; questionnaire; nurses; teachers.

## **Introduction**

The word “communication disorders” is an umbrella term which encompasses a wide range of speech, language and hearing disorders that may cause an interruption or interference in the information processing and exchange. Over the years, there has been an increasing need to promote awareness on the early identification of communication disorder(s) in order to undertake suitable rehabilitative methods and improve the overall quality of life of the individuals with disability(s). Apart from Speech - Language Pathologists, the assessment and management of communication disorders can be executed by other medical and non- medical professionals such as doctors, nurses, psychologists, teachers as well as social workers.

The prevention of the onset of communication disorders often begins with the need to create awareness through public education regarding the various speech and language disorders and the risk factors involved during the various stages of gestation. According to American Speech and Hearing Association (1991), primary prevention refers to the “elimination or inhibition of the onset and development of communication disorder by altering susceptibility or reducing exposure for susceptible persons.” Some of the means to instill awareness amongst the caretakers and concerned professionals include orientation programs to various professional and non- professional target groups, performing street plays/ tableau and distributing Public Education Materials (PEM). Several researchers have attempted to identify the level of awareness, attitudes and perception among various target groups such as general public, teachers, doctors, nurses and so forth.

Hana, Aya, and Rana (2014) conducted an awareness study among the general public regarding Speech- Language Pathology in Amman, Jordan. A total of 1,203 participants across the age range of 18- 50 years were surveyed regarding various speech and language disorders through questionnaires. Results revealed limited knowledge regarding the communication disorders, with the exception of females (mothers) who were well aware of the various disorders, especially stuttering since they had bachelor’s degree in health and/or education related fields. Markham, and Dean, (2006) studied the parents and professionals’ perceptions on the quality of life of children with speech and language disorders through focus group interviews of parents and professional caregivers. Results of the study support the notion that the speech- language therapy provided to children with SLD’s must include an assessment of their impairment as well

as the factors related to the child's wellbeing. Gandhimadhi and Gananjane Eljo (2010) conducted a study to determine the level of awareness about learning disability in primary school teachers. A total of 71 teachers from 16 schools were surveyed using a checklist regarding the causes, characteristics and so forth. It was found that there was a low level of awareness about the disorder amongst the primary school teachers.

There is an increasing need to impart awareness amongst other professionals such as primary health care providers such as doctors and nurses, teachers, social workers and parents so as to promote a multidisciplinary approach for the assessment and early intervention of individuals with communication disorders. Teachers carry a large share of the responsibility for the educational development of children. This responsibility is perhaps even greater when children with a disability are concerned. Despite efforts to study the awareness, attitudes and perceptions of other medical and non- medical professionals regarding the various communication disorders, there is a scarcity of information to quantify or define the awareness level amongst the various professionals regarding the communication disorders as a whole. Hence, the current study is an attempt to understand the level of awareness amongst the medical and non- medical professionals using a questionnaire based survey.

The aim of the present study is to quantify and compare the awareness of communication disorders among the medical versus the non-medical professional, i.e. nursing trainees versus primary school teachers.

## **Method**

### **Participants**

A descriptive survey research design was used to identify the level of awareness among medical and non-medical professionals. A total of 200 individuals participated in the study, of which 100 were nursing trainees and 100 were primary school teacher. The nursing trainees were recruited as volunteers and were selected randomly from 5 purposively selected private hospitals in Selangor state, Malaysia. The primary school teachers were also recruited as volunteers and were selected randomly from 10 purposively selected public and private schools in Selangor. Participants were native speakers of Malay language. All the participants were fluent in English and had the knowledge of reading and writing in English language.

### **Materials and Procedure**

A self-report questionnaire was developed in English by an experienced Speech Language Pathologists and Audiologists. The questionnaire consisted of four sections such as 'terminologies', 'characteristics', 'assessment' and 'rehabilitation' of communication disorders. Each domain consisted of 4 to 7 statements. A total of 19 close ended questions which required a

‘yes/no/maybe/I-don’t-know’ response from participants. Prior to administration, the nursing trainees and the primary school teachers were brief about the contents of the questionnaire and response pattern.

### Statistical Analysis

SPSS Version 17 (Statistical Package for the Social Sciences, Norusis, 1996,) was used to enter the responses of 19 questions from all the participants. Frequency descriptive analysis was done to derive the percentile scores of the responses obtained from both the groups. Further, Smith’s Statistical Package (SPS, Gary Smith, 2005) was used to determine the level of significance of responses between the two groups.

### Results

First section aimed to analyse the level of awareness about different terminologies of communication disorders. The responses for the domain “terminologies of communication disorders” are showed in Table 1.

Table 1: Percentage of responses for the domain “terminologies of communication disorders”

Terminologies of communication disorders	S.No	Questions		Yes (%)	No (%)	May be (%)	I don’t know (%)
	1	Are you aware of the term Autism?	NT*	97	3	0	0
			PST*	77	23	0	0
	2	Are you aware of the term Hearing loss?	NT	99	1	0	0
			PST	99	1	0	0
	3	Are you aware of the term Learning disability?	NT	97	3	0	0
			PST	96	4	0	0
	4	Are you aware of the term mental retardation?	NT	94	6	0	0
			PST	93	7	0	0
	5	Are you aware of the term articulation disorders?	NT	59	41	0	0
			PST	61	39	0	0
	6	Are you aware of the term delayed speech and language?	NT	88	12	0	0
			PST	79	21	0	0

\*NT- Nursing trainees; \*PST- Primary school teachers

From table 1, questions like ‘are you aware of autism’ NT were more aware (97%) compared to PST (77 %) with a significant difference of  $p < 0.01$ . For the questions ‘are you

aware of hearing loss', 'learning disability' and 'mental retardation', both the groups (NT & PST) were aware of it (>90%) and no significant difference was seen ( $p>0.05$ ). For the question like 'are you aware of term articulation disorder', 59% NT and 61% PST said 'yes' with no significant difference ( $p>0.05$ ). For the question, 'are you aware of the term delayed speech and language', 88% of NT said yes and 79% PST said yes with no significant difference ( $p>0.05$ ).

The second section on "characteristics of communication disorders" also shows interesting results. The responses are showed in Table 2.

Table 2: *Percentage of responses for the domain "characteristics of communication disorders".*

Characteristics of communication disorders	S.No	Questions		Yes (%)	No (%)	May be (%)	I don't know (%)
	7	Do you think screaming/shouting affects your voice?	NT*	68	12	10	0
			PST*	78	8	14	0
	8	Do you think the communication disorders can be identified at birth?	NT	50	40	5	5
			PST	41	34	20	5
	9	Do you think listening to loud music/exposure to loud noise affects your hearing?	NT	91	3	6	0
			PST	84	4	12	0
	10	Does a child with Autism fail to socialize and communicate with people?	NT	71	17	12	0
			PST	55	27	18	0
	11	Do you know that "a condition where it is difficult to pronounce sounds/speak sounds correctly is called misarticulation" ?	NT	57	18	9	16
			PST	52.5	14	11	22.5

\*NT- Nursing trainees; \*PST- Primary school teachers

From Table 2, question like 'Do you think screaming/shouting affects your voice?', 68% NT said yes, and 78% PST reported yes with no significant difference ( $p>0.05$ ). For the question 'Do you think the communication disorders can be identified at birth?', NT were aware about 50% and PST about 41% with no significant difference ( $p>0.05$ ). For the question 'Do you know that a condition where it is difficult to pronounce sounds/speak sounds correctly is called

misarticulation’, only 57% NT responded as yes, and 52.5% PST responded as yes with no significant difference ( $p>0.05$ ). For the question ‘Does a child with Autism fail to socialize and communicate with people?’, NT were aware about 71% and PST about 55% with significant difference ( $p<0.05$ ). Similarly, for the question, ‘Do you think listening to loud music/exposure to loud noise affects your hearing?’ 91% NT said yes, and 84% PST said yes with a significant difference of  $p<0.05$ ).

The responses for the third section “assessment of communication disorders” are showed in Table 3.

Table 3: *The percentage of responses for the domain “assessment of communication disorders.*

Assessment of communication disorders	S.No	Questions		Yes (%)	No (%)	May be (%)	I don't know (%)
	12	If a child does not speak by the age of 1 or 2 years, will u immediately show to Speech Language Pathologist/Audiologist?	NT	78	15	7	0
			PST	57.5	16	22.5	4
	13	If a child has hearing impairment, will you take him to an Audiologist?	NT	91	4.5	4.5	0
			PST	90	0	2	8
	14	If a child having difficulty in academic skill like reading and writing, will you take him/her to SLP and psychologist to confirm learning disability?	NT	71	17	8	4
			PST	65	15	20	0

\*NT- Nursing trainees; \*PST- Primary school teachers

From Table 3, question like ‘If a child has hearing impairment, will you take him to an Audiologist?’, NT were aware about 91% and PST about 90% with no significant difference ( $p>0.05$ ). For the question ‘If a child having difficulty in academic skill like reading and writing, will you take him/her to a SLP and psychologist to confirm learning disability?’, only 71% NT responded as yes, and 65% PST responded as yes with no significant difference ( $p>0.05$ ). For the question ‘If a child does not speak by the age of 1 or 2 years, will u immediately show to Speech Language Pathologist/Audiologist?’, NT were aware about 78% and PST about 57.5% with a significance difference between groups ( $p=0.004$ ).

The responses for the domain “rehabilitation of communication disorders” are showed in Table 4.

Table 4: *The percentage of responses for the domain “rehabilitation of communication disorders.*

Rehabilitation of communication disorders	15	Do you think stammering can be treated?	NT	60	14	16	11
			PST	85	4	14	17
	16	Are you aware of the concessions (Bus/train/pension) are available for individuals with communication disorders	NT	70	26	4	0
			PST	66	27	3	0
	17	Can cleft lip and cleft palate be repaired through surgery?	NT	96	1	4	0
			PST	86	1	4	9
	18	If a person loses speaking ability due to stroke, accident or any other neurological disorder, will he need treatment from a neurologist, Psychologist and speech therapist?	NT	94	3	3	0
			PST	86	0	11	3
	19	Is Cerebral Palsy a Condition that can be partially improved with treatment?	NT	72	11	14	3
			PST	60	5	18	17

From table 4, questions like ‘Do you think stammering can be treated?’, 60% of the NT and 85% of the PST had felt that it can be treated with no significant difference ( $p>0.05$ ). Similarly, for the question, Is Cerebral Palsy a Condition that can be partially improved with treatment?, 72% of the NT and 60% of the PST had felt that it can be treated with no significant difference ( $p>0.05$ ). For the question like ‘Are you aware of the concessions (Bus/train/pension) are available for individuals with communication disorders’, 70% of NT said yes and 66% PST said yes with no significant difference ( $p>0.05$ ). For the questions ‘Can cleft lip and cleft palate be repaired through surgery?’, both NT were better aware of the treatment options than PST. Further, significant difference was noticed among two groups ( $p<0.05$ ).

## Discussion

The present study reported that, both the groups (NT & PST) are aware of most of the questions related to communication disorders (14 out of 19 questions) in all sections. Significant difference was noticed across medical and non-medical professionals for 5 statements which dealt with medical professionals. The statement on ‘awareness of autism’, and the statement ‘Does a child with Autism fail to socialize and communicate with people?’, PST showed low level of awareness as compared to NT with significant difference. These results are supported

with earlier findings (Anil & Sanjeev, 2014) who reported that there is a reduced level of awareness and misperception about autism spectrum disorders among the school teachers.

With respect to characteristics of communication disorders, the statement ‘Do you think listening to loud music/exposure to loud noise affects your hearing?’, NT were more aware than PST. It again makes sense that, NT might have learnt about adverse effects of noise on hearing as part of their education. The statement “If a child does not speak by the age of 1 or 2 years, will u immediately consult Speech Language Pathologist/Audiologist?” revealed better awareness in NT than PST. NT’s probably works closely with medical professionals in hospital setting so they might have known about the source of referrals than PST. Furthermore, the NT showed higher awareness towards questions related to rehabilitation options for neurological disorders or other medical conditions like cleft lip and palate surgery, stroke rehabilitation and prognosis of cerebral palsy. The above findings were in harmony with the findings of a survey conducted by Chazhikat (2014) who reported that the medical professionals were more aware of aphasia and stroke- related problems than the non- medical professionals.

### **Conclusion**

The present study attempted to quantify and compare the level of awareness of communication disorders between the medical professionals (NT) and non- medical professionals (PST). Results of the study revealed that the nursing trainees and primary school teachers are well aware of most of the communication disorders. However, significant difference was noticed for some communication disorders across two groups. Hence, it can be concluded that there is a need to spread more awareness about the communication disorders among the medical and non- medical professionals as a team approach to enhance the quality of life of children who are at risk. This in turn would help in a team- based approach in the prevention, early identification and management of the individuals with communication disorders.

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### **Acknowledgements**

Author would like to thank all the participants in the study for their support.

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