

Cognizance Of School Teachers Toward Communication Disorder In School Going Children Of Twin City, Odisha

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ABSTRACT:

Background: Regular school teachers have awareness regarding different types of communication disorder in school going children.

Methodology: Total 312 regular school teachers (156 primary and 156 secondary) had participated in the study, and they were given a questionnaire based on features of different types of selected communication disorder seen in school going children.

Aim and Objectives: The study was aimed to investigate Cognizance as well as the awareness of primary and secondary school teachers regarding the occurrence of various communication disorders in school going children.

Result: Mean \pm SD and percentile score for common features of selected communication disorder was calculated. A two-way ANOVA along with post hoc analysis using unpaired t test was used from statistical point of view. The result indicated that $p < .0001$, a statistically significant difference between primary and secondary school teacher.

Discussion: All the teachers participated, had cognizance, and had observed the features belonging to selected communication disorders but no cent percent result could obtain, which state that they were not aware of all of them as well as of various other communication disorders prevailing in school going children, hence it was concluded that, there is limited awareness and cognizance related to communication disorders in children among regular school teachers i.e. both primary and secondary.

Conclusion: So, it could be suggested that more survey like the present study can be considered to carry out among more numbers of regular school teachers belonging to different geographical part of our country where programs can be organized in order to sensitize them regarding communication disorders in school going children.

INTRODUCTION:

Communication disorder is a broad umbrella term which covers different types of disorders under it, (Ruscello, Louis & Mason, 1991) which can be

noticed at the level of comprehension or production of speech sounds (i.e. consonants and vowels), words, phrases, or sentences (ASHA, 2006). The spectrum of communication disorders

include problems in speaking, hearing and thinking such as voice disorders, phonological and articulation disorders, fluency disorders (Stuttering & Cluttering), language disorders, delayed and/or arrested speech and language development due to hearing impairment, behavioral disorders like attention deficit disorders (ADD), Autistic spectrum disorders (ASD); mental retardation and other problems (Paul, 2009), which are reported to be found majorly in school going children.

Parents, primary caregivers, and teachers are critical for rich stimulation of children's communication as well as play an important role in the early identification of communication disorders by observing the primary school going children, which if not identified and treated early, it may also pursue in secondary school age children. Hence, it is important to acknowledge how much regular school teachers (both primary and secondary) are aware about the same, as a lack of awareness regarding communication disorders in children may lead to delay in their management. However, the statistical information which can estimates the magnitude of awareness of communication disorders in children among primary and secondary school teachers in twin city of Odisha i.e. Bhubaneswar and Cuttack are scarce.

AIMS AND OBJECTIVES:

To investigate and compare the primary and secondary school teachers' cognizance as well as the awareness regarding the occurrence of various communication disorders in school going children.

MATERIALS AND METHODS

A cross sectional study was conducted among 312 regular school teachers were divided into two groups i.e. group-I consist of 156 primary school teachers (PST) and group II with 156 secondary school teachers (SST) from both English and

Odia medium schools of Bhubaneswar and Cuttack, Odisha. Hence forth all the primary school teachers or group-I will be viz PST and secondary school teachers or group-II as SST for rest of the article. All the school teachers having teaching experience of minimum 10years and teaching different subjects were included. Less than 10years experienced teachers for both the groups were excluded.

An ethical approval consent was taken from the higher authority of selected schools for primary and secondary education with prior permission. A survey was done by visiting the selected primary and secondary schools (government and private), in order to make an approach for the participants to participate in the survey. All the teachers who were interested in the survey, were introduced with the aims and the objectives of this study and a written consent and permission were sought from them for their approval.

Based on primary features of the selected communication disorders like hearing impairment, articulation disorder or speech sound error, fluency disorder/stuttering, Learning Disorder including reading, writing and mathematics difficulty, Attention and Behavioral problems related to autism and ADHD, occurring very commonly among school going children, a close ended structured questionnaire was constructed initially in English by investigators and validated by 5 experienced ASLPs. The questionnaire was further translated into Odia language by native speakers and then back translated along with proofread to ensure that the meaning of the content remains the same.

The features of each selected disorder in the close ended questionnaire were explained to the teachers participated in the study and they were asked if they had experienced or observed any of these features present in any children in their teaching career. They were instructed to put a tick "✓" mark to the correct response given as the

either 'yes' or 'no'. The duly filled questionnaires were collected and the responses were noted down which were further compiled for statistical analysis.

The recorded data were documented in Microsoft excel 2018 and analyzed using Statistical Package for Social Sciences (SPSS) version 18.0.0. In order to summarize the overall score of both the groups, Mean \pm SD and percentile score for each factor under every selected parameters were calculated.

To determine the effects of the communication disorders as well as combined effect of primary

and secondary school teachers, two-way ANOVA was applied along with post hoc analysis using unpaired t test in order to check the difference between subgroups.

RESULTS:

The information was collected from 156 primary school teachers (PST) in group I and 156 secondary school teachers (SST) in group II. The details of participants were given in Table.1

Table-1: Depicts details of teachers (Number and Mean Age Range)

Group	Male	Female	Total	Mean Age Range (Years)
PST (Group- I)	72	84	156	39.6
SST (Group- II)	76	80	156	46.3

The descriptive statistics associated with awareness of communication disorders prevailing

in children across the two groups of teachers i.e. primary and secondary, were reported in Table.2.

Table-2: Depicts descriptive statistics of selected communication disorder awareness between two groups of teachers.

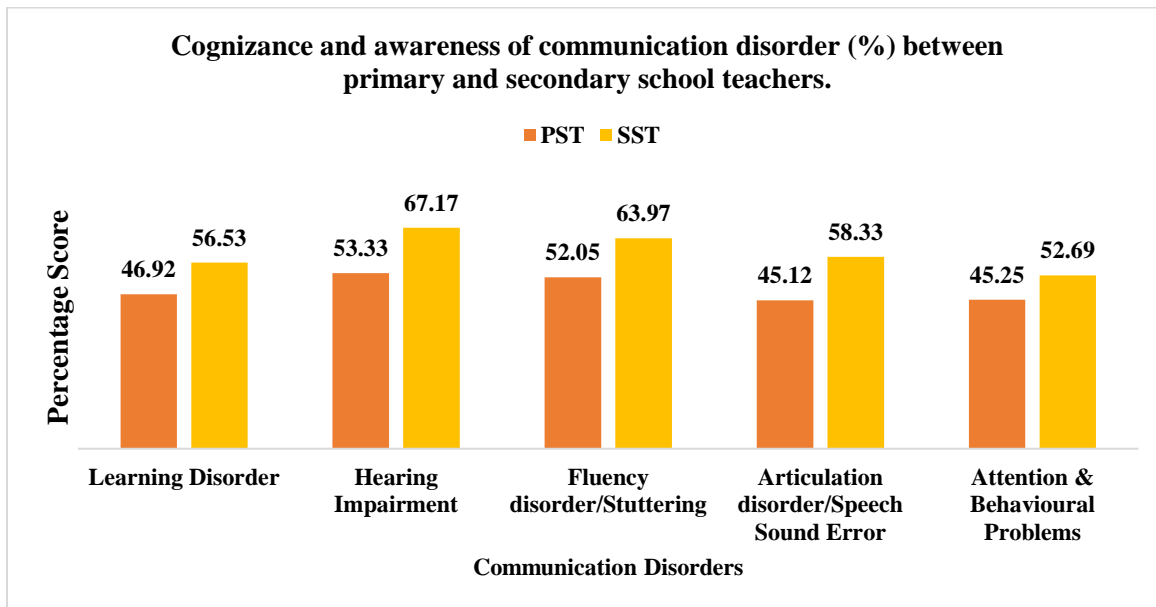
Communication Disorders in children	Schoolteachers	Mean	Standard Deviation	Standard Error
Learning Disorder (Reading, writing & mathematics difficulty)	PST	2.3462	0.5407	0.0433
	SST	2.8269	0.8437	0.0675
Hearing Impairment	PST	2.6667	0.6256	0.0501
	SST	3.359	0.5322	0.0426

Fluency disorder/Stuttering	PST	2.6026	0.5976	0.0478
	SST	3.1987	0.5839	0.0467
Articulation disorder/Speech sound error	PST	2.2564	0.6104	0.0489
	SST	2.9167	0.4814	0.0385
Attention & Behavioural problems	PST	2.2628	0.7371	0.059
	SST	2.6346	0.8657	0.0693

The study results regarding the awareness of each communication disorders among teachers were presented in terms of percentile score as given in graph 1 where more than 50% of the SST, participated in the study were aware of communication disorders in school going

children. Both primary (PST) and secondary (SST) school teachers were more aware of features related to hearing impairment and fluency disorder/stuttering, as a reason behind communication problems in children.

Graph-1: Depicts percentage of awareness of communication disorders in primary and secondary school teachers.



It is well surprising fact that PST and SST were aware of learning disability causing communication disorder and helps in identifying

the same. They were somewhere aware of the term dyslexia and dyscalculia. Regarding attention and behavioral problem in children,

features related to autism and attention deficit disorder were recognized by the teachers. They had experienced with children having features like less and/or no eye contact, not answering the question, cannot sit at a place, not paying attention to teachers talk or activities going in the class. However, both PST and SST could not adequately differentiate between ADHD and autism. In case of speech sound disorder, primary school teachers as well as secondary school teachers had addressed their input suggesting that they have seen these features in children studying during third to sixth standard.

During the interaction with teachers of both groups, one interesting information regarding delayed language development in the children, yield an impact result where more than half of the total teachers have a positive firm regarding the same for more children with hearing impairment and attention and behavioral problems. However, it was also documented that the overall, teachers had observed the prevalence of delay language in rest of the communication disorders.

However, no cent percent SST and PST could display cognizance toward the features of selected communication disorders in school going children.

In order to determine the influence of two independent variables (PST & SST) on Cognizance and awareness of communication disorders i.e. Specific Learning Disorder, Hearing Impairment, Fluency Disorder, Articulation Disorder, Attention and Behavioural

problem, a two-way analysis of variance was conducted where all the effects were statistically significant at the .05 significance level. The main effect for PST & SST yielded an F ratio of $F(1, 1559) = 286.42, p=0.000$, indicating a significant difference between Group I- PST with mean and standard deviation (\pm) were for Specific Learning Disorder: $2.34 (\pm 0.54)$; for Hearing Impairment: $2.66 (\pm 0.62)$, for Fluency Disorder: $2.60 (\pm 0.59)$, for Articulation Disorder: $2.25 (\pm 0.61)$, for Attention and Behavioural problem: $2.26 (\pm 0.73)$; and Group II- SST for Specific Learning Disorder: $2.82 (\pm 0.84)$, for Hearing Impairment: $3.35 (\pm 0.53)$, for Fluency Disorder: $3.19 (\pm 0.58)$, for Articulation Disorder: $2.91 (\pm 0.48)$, for Attention and Behavioural problem: $2.63 (\pm 0.86)$ [Table 2]. The main effect for Cognizance and awareness of communication disorders yielded an F ratio of $F(4, 1559) = 41.38, p=0.000$, indicating a significant difference. The interaction effect was significant, $F(4, 1559) = 3.21, p=0.012$ [Table 3].

A post hoc analysis using unpaired t test with $p < 0.0001$, suggested that the selected five parameters were significantly differing from each other along with a significant difference between PST & SST [Table 4]. At Bonferroni Correction $p = 0.01$. $p < 0.01$ suggest that all the selected communication disorders were significantly different from each other in PST as well as in SST.

Table-3: Depicts of two-way ANOVA result regarding awareness of communication disorder between primary and secondary school teachers.

ANOVA						
Source of Variation	SS	df	MS	F	p-value	F crit
PST & SST	122.416	1	122.416	286.4267	0.000000000	3.847465
Communication Disorders	70.74744	4	17.68686	41.38338	0.000000000	2.377669
Interaction	5.503846	4	1.375962	3.219449	0.012122017	2.377669
Within	662.4551	1550	0.42739			

Total	861.1224	1559	
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Table- 4: Depicts post hoc analysis using unpaired t test with applied Bonferroni correction for comparisons of communication disorders with each other in primary and secondary school teachers.

Communication disorders	Mean Difference		p- value	
	PST	SST	PST	SST
Learning Disorder- Hearing Impairment	-0.3205	-0.5321	<.0001	
Learning Disorder - Stuttering	-0.2564	-0.3718		
Hearing Impairment- Articulation Disorder	0.4103	0.4423		
Hearing Impairment- Attention & Behaviour	0.4038	0.7244		
Stuttering- Articulation Disorder	0.3462	0.2821		
Stuttering- Attention & Behaviour	0.3397	0.5641		
Articulation Disorder - Attention & Behaviour	-0.0064	0.2821	0.003	0.0002
Learning Disorder- Articulation Disorder	0.0897	-0.0897	0.001	0.003
Learning Disorder -Attention & Behaviour	0.0833	0.1923	<.0001	0.002
Hearing Impairment- Stuttering	0.0641	0.1603	0.002	0.005

DISCUSSION:

Any kind of limitation or breakdown in the process of learning communication skills can significantly hinder a child's development, specifically speech or language development, effecting the child's social and behavioral skills as well as the academic abilities, caused due to communication disorder [4,5]. Earlier mitigation of problem will further help the children in improving their social as well as academic (reading and writing) skills, in school [6,7,8].

The present study result is all about scoring the cognizance and awareness of various communication disorders among regular school teachers of primary and secondary school. On a closure look to the distribution of different types of communication disorder, we found more than half of the secondary school teachers (SST-

56.53%) and primary school teachers (PST-46.92%) display knowledge toward the primary features of learning disorder. This result however differs from the study result of Lopes and Crenitte (2012) [9], where they had found that 78% teachers do not have knowledge on learning disorders, but with effective orientation and training marked alteration in data with 52% teachers started to classify and understand the manifestations as learning disorder, which is similar to present study result.

Another interesting finding of this study is that more than half of the teachers had reported that they had experience with students having similar features that of learning difficulty as given in the questionnaire, however they could not differentiate between learning disability, its type and slow learners, which was weigh up as one of the reasons to consider learning disorder instead

of accurate learning disability which needs to be diagnosed by professionals.

One of the interesting findings of this study is the highest percentile score for teacher's cognizance regarding the communication disorder was hearing impairment where both SST (67.17%) and PST (53.33%) had identified the features of hearing impairment present in students. However, it has also been observed that many of teachers have no information regarding the same. The result of the present study can be correlated with the study by Chishty et al., (2014) [10], who had observed that the peak prevalence of hearing loss was found at 8 years of age, again declining after that from 20.43 % to 5.38 % by 12 years of age, i.e. main school going age. According to another survey on attitudes of teachers on hearing impairment, 85% & 15% teachers were strongly agree & agree respectively that hearing loss occur with different degree whereas 72.2%, 22.2% & 5.5% of the teachers reported that they agree, somewhat agree & somewhat disagree agree with respective to "children with HI have variation in hearing loss levels [11]. According to 76th round of The National Sample Survey (NSS) in 2018 [12], 28.45% hearing disability in children since birth had been documented in Odisha. Hence, it became crucial for teachers to be conscious regarding the occurrence of hidden disability like hearing impairment in children which can lead to early intervention if identified and reported early.

In the current study, cognizance of teachers toward the stuttering/fluency disorder is the second largest percentile score as one of the recognized communication disorders (SST - 63.97%; PST-52.05%). This could be due to visibility of speaker's fluency disturbance which hamper the communication skills. The present study results can be generalized with the primary school teacher's survey done in Mumbai and South African schools. A study in Mumbai, suggested that 72.4% primary teachers, had taught at least one or more children who stuttered, over their teaching career. 3.5% teachers had

taught four or more children whereas 27.5% teachers had never taught a child with stuttering [13]. In South African Schools, Abrahams et al., set forth that 83.7% teachers reported that they personally knew someone who stutters while 25.6% teachers currently had someone in their class who stutters. It was also concluded that, majority of teachers had experience with stuttering, however, they indicated that they knew the least about stuttering [14].

Compiling both the studies along with present study reports, it can be concluded that teachers are aware of stuttering as a communication disorder, but they are still clueless about in depth of stuttering. Teachers participated in the present study have also added information like they become helpless when other students try to tease and/or imitate the student stuttering.

The present study result figure for speech sound error or articulation disorder clearly visualizes that SST (58.33%) and PST (45.12%) are aware of the facts related to the same. Speech sound error or articulation disorder is described as production of imprecise articulation affecting speech intelligibility of an individual. A Yazd- Iranian study found that 13.8% speech sound error prevails in primary school children [15]. It was also noticed that primary teachers were more concerned for children with speech sound error as being young children, they themselves were deprived of communicating with their peers due to poor intelligibility of speech. Secondary school teachers have also reported that students having articulation disorder being teased by their classmates. Hence, it became a challenge for teachers to handle such situation.

A study supporting this information has been tracked down which display those schools and teachers face challenges while promoting and supporting the educational development of children with speech sound disorders [16]. Both autism and ADHD are believed to have onset during early childhood, although diagnosis is typically determined in the school age years. The

last but not the least interesting finding of this study was awareness of attention and behavioral problems in school going children which constitute the features related to autism and ADHD. The results suggest that PST and SST were also aware of these features present in the children. Our study result is reconcilable with the international and national studies done separately for autism and ADHD.

Arif (2013)[17] conducted studies on primary school teachers of Karachi, Pakistan and concluded that 55% teachers knew about autism through the media and 9% through formal training. But the present study report results cannot be generalized with study done by Al-Sharbati et al.,[18] where it was observed that autism awareness was low among Osmani teachers and there are several misconceptions about autism among the teachers. As observed by Shetty and Rai (2014) [19], 62% teachers were aware of the term ADHD and their knowledge of ADHD ranged from poor to adequate with 9% of teachers had prior training. Only 29% of the teachers had a good understanding of ADHD.

One of the domains of this study was that there were differences in the rate of awareness of various communication disorders between secondary and primary school teachers. Reddy. Badam (2019) [20] found that primary school teachers were better aware of most of the communication disorders. But there is still scarcity of studies at far indicating the importance of regular secondary school teacher's knowledge and role toward communication disorders as there are children with communication disorder attending secondary and higher secondary education. Hence, it provided another need to study the cognizance of SST on communication disorder awareness.

To the best of authors knowledge, this is the first field survey carried out in Bhubaneswar and Cuttack like cities addressing the awareness of

communication disorder between secondary and primary school teachers. The present study stipulate that SSTs are more aware of communication disorder with respect to PSTs with statistically highly significant difference. Hence, a proposal for special training program should be directed for all regular school teachers including primary and secondary with the aim to acknowledge them regarding various communication disorder in children. This can empower the school authorities and teachers for their role in early identification and guiding parents for further management of the child.

FUTURE OF THE STUDY:

The current study can be taken forward as another survey not only including the awareness part but also as a part of teacher's vision regarding the management of challenges faced by children with communication disorders in their academics. Secondly, more numbers of regular school teachers can be taken into consideration as a part of survey belonging to different geographical part of our country, providing a better outlook towards awareness of communication disorders in school going children. Programs can be organized for teachers to sensitize them regarding communication disorder.

CONCLUSION:

There is clear visibility of limited awareness and cognizance of various communication disorders in children among regular school teachers i.e. both primary and secondary. It is important for primary school teachers to acknowledge the occurrence of various communication disorder as the symptoms started to visible at early childhood when the child starts for primary school. This alertness in primary school teachers can be beneficent toward child's early identification of disorder and its management which can reduce future stumbling blocks, so that the child can achieve secondary educations.

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