Oral and Written Confrontation Naming In Bilinguals

DISSERTATION

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CHAPTER 1

INTRODUCTION

Communication – the human connection – is the key to personal and career success. Language is a material medium in which people interact in the society. It is the learned code or system of the rules (Owens, 2008).

Native language is a formal language which follows the phoneme-to-grapheme correspondence rules having a finite sequence of symbols from a finite alphabet; whereas a non-native language is an opaque but also a formal language which does not always follow the phoneme-to-grapheme correspondence.

Learning another language is not only learning the words for the same things but learning another way to think about things and to have another language is to possess a second soul. Mono-lingualism is the ability of using only one language while speaking or writing and bilingualism is the ability of using two languages.

One of the most common features seen in normal population's and disordered population's utterance is word finding difficulty. To assess these difficulties researchers developed many tasks and methods as remediation. Out of which confrontation naming gave spark to the management options for the individuals with naming difficulties.

Confrontation naming is a type of task used in assessment when problems with anomia or word retrieval are of concern. This task is carried out because the examiner knows the target word without any ambiguity. It is often studied using oral and written modalities of responses. Orthographic variables like regularity of language can also influence naming tasks. However, the confronted target pictures could elicit more than one response and hence reliability of the particular lexical entry the person is searching for is questioned.

According to Deloche, Hannequine, Dordain, Perrier, Pichard, Quint (1996) the models of information processing generally distinguish three major levels in confrontation picture naming are:

1) Perceptual analysis of picture presented.
2) Access to store semantic information.
3) The target word to be produced is selected of the output verbal representation (Morton , Patterson, 1980; Morton, 1985; Howard & Orchard-Listle, 1984).

Thomas, Sam & Goswamy (2000), did a research on Effect of aging in written and oral confrontation naming in Kannada and English Speaking Individuals. The study deals with subjects aged 25- 85 years and the results revealed an overall decline in the accuracy of naming responses with age. Semantic errors were more evident in the older age groups for oral and written naming in both the languages. Kannada written naming was found to be better than English written naming across all age groups, emphasizing the role of orthographic regularity in naming. The study also provides a basis that naming responses differ with the modality used for an irregular language.

Effect of aging on confrontation naming is also an interest of researchers. It is well known fact that there is a declination of various linguistic skills as the age progresses. Thus, the effects of aging on naming tasks have been poked out widely in recent studies.

Confrontation naming refers to a type of task which involves the selection of a specific label corresponding to a viewed picture of an object or an action. It is studied using oral and written modalities of responses. Orthographic variables like regularity of a language can also influence naming task. Dearth of literature in bilinguals across languages has not been addressed till date in Indian context. Thus, the need for this study arises.

CHAPTER 2

REVIEW OF LITERATURE

Picture confrontation naming and oral naming have been studied widely in normal and persons with brain damage. In this study focus is mainly given on oral confrontation naming and written confrontation naming.

Confrontation naming refers to a type of task used in assessment when problems with anomia or word retrieval are of concern. Confrontation naming involves the selection of a specific label corresponding to a viewed picture of an object or an action.

Naming tasks are usually of two types, visual confrontation naming and responsive naming. In visual confrontation naming individual is shown a picture of an object and is expected to name the object. If the visual stimulus does not elicit a response, an auditory or gestural stimulus can be provided to help with recall.

By concealing the picture, you are no longer practicing confrontation naming (naming a picture you see). Instead you are trying to produce the word in response to an idea, a skill you need in a conversation. Cover the picture and listen to the description for responsive naming task.

There are also other types of naming such as generative naming (or divergent naming) and convergent naming. Generative naming is the ability to fluently list members of a category and is widely considered as a common diagnostic tool of brain health. Clinicians ask patients to name all the animals they can in one minute, and to compare the results to general and impaired population. Convergent naming is providing descriptive cues to the individuals and eliciting the response for the same. The results are being compared among normal and disordered population.

Oral confrontation naming is a simple task wherein the subject has to name the objects name verbally while written confrontation naming is done by writing down the objects name whenever a target is elicited.

Ronald, Stephen, Nichole and Dobb (2005) conducted a longitudinal study on confrontation naming in 541 normal elderly (ages 50-99) using the 60 item Boston Naming Test (BNT). A rise in the mean rate of change on BNT was noticed till the 50s age group with no change in the 60s age group, and a decline in the 70s and 80s age groups. These findings demonstrated that during aging, there is a well preserved lexical retrieval as measured by a visual object confrontation naming task, with only minimal variations in the 7th and 8th decades of age.

Again in 2007 Ronald, Nicole, Stephen, Dobb conducted a cross-sectional study on the effects of age, education and gender on the 60-item Boston Naming Test (BNT) in 1111 normal elderly (ages 50-101), and 61 younger adults (ages 20-49). The results revealed significant inferior mean BNT scores with successively older age groups and lower educational grades. However, the males showed a non-significant trend to score slightly higher than females.

American journal of neuroradiology 26, by Sarah Thomas Zewki, Gregory Harriongton, Catherine Broommand, M. Seyal did research on 'Differences in functional MRI activation patterns associated with confrontation naming and responsive naming'. 20 participants underwent f-MRI while performing either a confrontation of responsive naming task. Region of interest were identified within the anterior and posterior temporal lobe. The findings are consistent with cortical stimulation studies and suggest that responsive naming produce more widespread activation within the temporal lobe compared with confrontation naming. The activation more often included anterior temporal regions during responsive naming as compared with confrontation naming. In clinical case where the functional assessment of the temporal lobe – particularly the anterior regions- is important, the current result suggest the responsive naming should be a useful f-MRI paradigm and may ultimately help predict the risk of post-surgical language changes.

Chiara Luoni, Umberto Balottin, Laura Rosana, Enrico Savelli, Silvia Salini and Chriastiano Termine studied on Confrontation naming and Reading abilities at primary school: A longitudinal study. Results revealed that performance on the BNT emerged as a function of IQ and SES. Significant correlations between confrontation naming and reading abilities, specially comprehensions were found; BNT score correlated better with reading, fluency than reading

accuracy. Hence, they concluded that the longitudinal data obtained in this study are discussed with regard to reading ability, intelligence, age, gender and socio-economic status.

Confrontation naming task often are incorporated as part of clinical language testing for aphasia to detect impairments of word finding abilities, or anomia, in individuals with neurological conditions typically affecting the left hemisphere of the brain. Although the word finding difficulties seen in the course of sentence generation in conversational speech, it is most often tested clinically in picture confrontation naming task where the vocabulary tested is constrained to known, identified target words. Therefore, word finding functions are at times referred to as naming abilities.

INDIAN STUDIES

In recent years the impact of social media on Indian society shows that, it has played a pivotal role in the population. In fact, one would agree that social media has transformed the Indian society to a more matured society. There is an opposite polarity for social media too in our coming generation. Social interaction in the real environment has been reduced. You can always notice short cuts in written paragraphs which are commonly used to chat through social media.

Thomas, Sam and Goswamy (2007) studied on "Effect of aging on oral and written confrontation naming in Kannada and English" and the results revealed an overall decline in accuracy of naming response with age.

Mody (2015) studied mountains of evidence showing that the children learn more if they are thought in their mother tongue. Besides, many teachers barely know the language of instruction. The push for English primary schools over the past decade is part of this problem. Nowadays most of the schools in India use English as medium of instruction in all schools, public and private. The massive push for English started with India's claim that it had an English language advantage that would make it a leading knowledge economy. Primacy of the mother tongue has been reduced since the introduction the non-native language across state.

The above studies highlight the differences in naming across modalities and across age-groups. Only few studies were done on effect of aging on oral and written confronation-naming in bilinguals.

NEED FOR THE STUDY

Confrontation naming refers to a type task which involves the selection of a specific label corresponding to a viewed picture of an object or action. It is studied using oral and written modalities of responses. Orthographic variables like regularity of a language can also influence naming task.

Dearth of literature in bilinguals across language have not been addressed till date Indian context. Thus the need for this study arises.

AIM OF THE STUDY

Aim of the present study was to analyze oral and written confrontation naming in bilinguals with following objectives:

1) To analyze the effect of aging on the accuracy and type of orthographic responses in oral and written naming task in native (Malayalam) and non-native (English) languages in bilingual individuals across age groups.

2) To study the influence of social media social media on oral and written confrontation naming in bilinguals.

3) To study the influence of increasing number of English medium schools.

CHAPTER 3

METHODOLOGY

Aim of the present study was to analyze oral and written confrontation naming in bilinguals with following objectives:

1) To analyze the effect of aging on the accuracy and type of orthographic responses in oral and written naming task in native (Malayalam) and non-native (English) languages in bilingual individuals across age groups.
2) To study the influence of social media social media on oral and written confrontation naming in bilinguals.
3) To study the influence of increasing number of English medium schools.

SUBJECT

40 typical bilingual individuals in the age range 25-65 years with Malayalam as their native language and English as non-native language were taken as subjects who were further divided into 4 groups with 10 individuals in each (25-35, 36-45, 46-55, 56-65 years). All individuals were proficient in using both the languages for 10 years minimum. Individuals with any history of speech, hearing, neurological, psychological or any other known organic deficits were excluded in the study.

STIMULUS PREPERATION

Twelve picture cards depicting nouns (black and white) with size 5” × 7" selected from “Manual on Developing Communication Skills in Mentally Retarded Individuals” by Subbarao (1998) were used to elicit responses from individuals.

List of the picture cards used is shown in appendix 1.

PROCEDURE

The procedure in collecting data was done in two ways:

1) One picture at a time was presented to one individual in a well illuminated soundproof room with less disturbances. The individual was supposed to identify picture and name it orally in native language (Malayalam) and simultaneously write in non-native language (English).
2) Same procedure as in task 1 was used. Simultaneous oral confrontation naming in non-native language (English) and written confrontation naming in native language (Malayalam).

All the oral responses were audio recorded using a microphone and laptop placed infront of the individual. PRAAT software was used during oral confrontation naming and transcribed for further analysis. Written responses were recorded in a response sheet.

ANALYSIS

The recorded sample was transcribed and later analyzed.

Score of 1 was given for each acceptable correct response in oral and written confrontation naming and score of zero was given for each incorrect response. Incorrect responses included semantic errors, spelling errors and no responses. The obtained scores were analyzed using t-Test to compare responses across each of the different parameters within each age groups and one way ANOVA was carried out to make comparisons within the different parameters across age groups. The significant measures were further analyzed using Duncan's Post-Hoc analysis.

CHAPTER 4

RESULTS

The aim of the study was to analyze the effect of aging in oral and written confrontation naming in bilinguals. The study compared responses between oral and written confrontation naming tasks across two languages in 4 age groups and results are as follows:

a) Qualitative Analysis

The individual responses across age groups yielded various type of errors. The errors were classified as semantic errors, spelling errors [Grapheme-Phoneme correspondence (GPC) errors] and no responses.

score

Group		Task	N	Mean	Std. Deviation	95% Confidence Interval for Mean		t test p value	
						Lower Bound	Upper Bound		
Group 1	MALAYALAM	Written confrontation naming	10	7.20	1.033	6.46	7.94	.000	HS
		oral confrontation naming	10	11.10	.738	10.57	11.63		
	ENGLISH	Written confrontation naming	10	19.10	1.524	18.01	20.19	.000	HS
		oral confrontation naming	10	8.80	1.135	7.99	9.61		
Group 2	MALAYALAM	Written confrontation naming	10	8.10	.738	7.57	8.63	.000	HS
		oral confrontation naming	10	10.50	1.179	9.66	11.34		
	ENGLISH	Written confrontation naming	10	9.90	2.234	8.30	11.50	.124	NS
		oral confrontation naming	10	11.20	1.229	10.32	12.08		
Group 3	MALAYALAM	Written confrontation naming	10	10.00	1.563	8.88	11.12	.632	NS
		oral confrontation naming	10	9.70	1.160	8.87	10.53		
	ENGLISH	Written confrontation naming	10	8.70	1.418	7.69	9.71	.004	HS
		oral confrontation naming	10	10.60	1.174	9.76	11.44		
Group 4	MALAYALAM	Written confrontation naming	10	11.30	.823	10.71	11.89	.009	HS
		oral confrontation naming	10	10.10	.994	9.39	10.81		
	ENGLISH	Written confrontation naming	10	10.00	1.633	8.83	11.17	.632	NS
		oral confrontation naming	10	10.30	1.059	9.54	11.06		

Table 4.1: t-Test p value depicting the significance of oral and written confrontation naming in Malayalam and English languages.

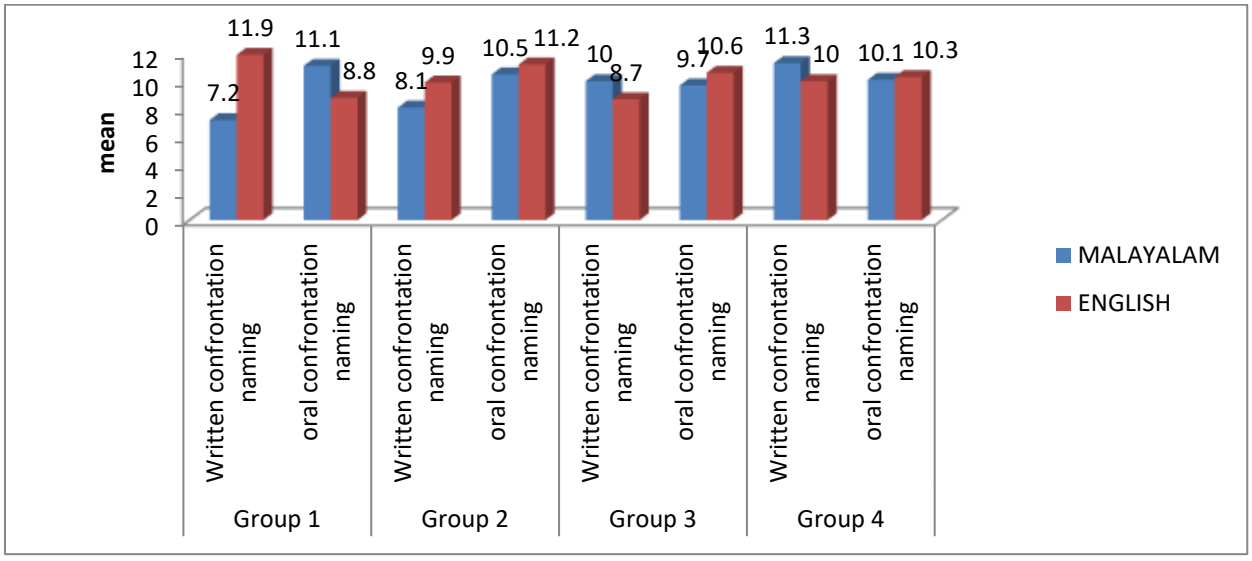

Figure 4.1: Effect of aging in oral and written confrontation naming within each age group.

In accordance with the study done by Thomas et Al. in 2008, the youngest age group 25-35 years, the written tasks revealed semantic errors, incorrect responses and self-corrections, whereas GPC errors (omissions and substitution) were found only in Malayalam written naming task. In Malayalam oral task, semantic errors were prominent. This result can be the result of increasing number of English medium schools and high literacy rate in Kerala.

In contradiction to the study done by Goswamy S.P., the group of 36-45 years, oral confrontation naming was better than written confrontation naming. Spelling mistakes were more seen in both 36-45 and 46-55 years of age group. These could be probably the influence of social media on these populations because it was the emergent period of social media.

Malayalam and English oral naming tasks revealed semantic errors and no response errors for individuals within 56-65 years age group. But both the language was having similar results in oral as well as in written confrontation naming as both the languages was given equal importance during their times.

Overall, individuals in younger age groups showed more types of errors in their native language than their non-native language as they give more practice to English language for their future performances.

b) Quantitative analysis

Analysis of this situation was done using one-way ANOVA revealed a significant difference within English written naming task which reported a significant declination in writing in non-native language as age increases than native language. The results of oral confrontation naming gave a surprising difference between the four age groups revealing the fact that there was an inclination seen as age increases. In overall, the performance of oral confrontation naming is better than written confrontation naming. The graphical representation of the above information can be viewed below:

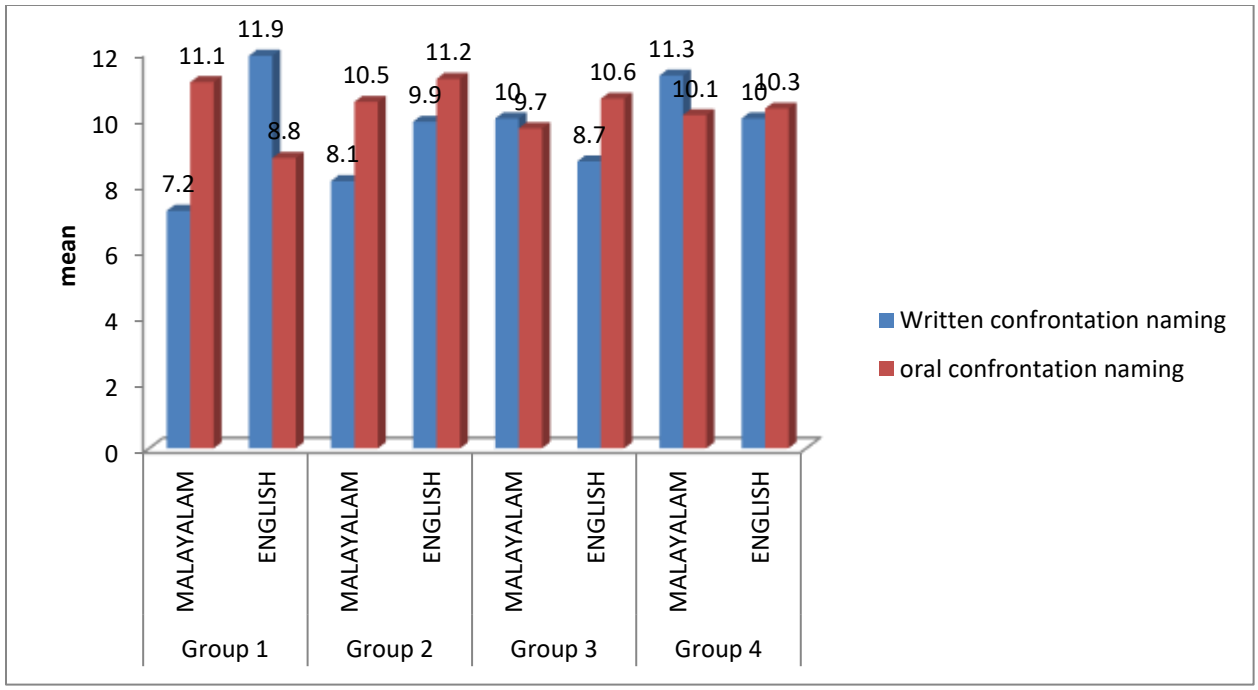

Figure 4.2: Effect of aging in oral and written confrontation naming in bilinguals across the four age groups.

Comparing both the languages within the group revealed that Malayalam written confrontation naming improved when age increased and there was only a small significant difference seen in oral confrontation naming. Performance of oral confrontation naming in non-native language (English) increased significantly when compared to written confrontation naming as depicted below: Study was significant as $p < 0.05$ for both ANOVA and t-test as shown in the table below:

ANOVA Table

score

	Task	Group	N	Mean	Std. Deviation	95% Confidence Interval for Mean		ANOVA test p value	
						Lower Bound	Upper Bound		
MALAYALAM	Written confrontation naming	Group 1	10	7.20	1.033	6.46	7.94	.000	HS
		Group 2	10	8.10	.738	7.57	8.63		
		Group 3	10	10.00	1.563	8.88	11.12		
		Group 4	10	11.30	.823	10.71	11.89		
	oral confrontation naming	Group 1	10	11.10	.738	10.57	11.63	.030	sig
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	oral confrontation naming	Group 1	10	8.80	1.135	7.99	9.61	.000	HS
		Group 2	10	11.20	1.229	10.32	12.08		
		Group 3	10	10.60	1.174	9.76	11.44		
		Group 4	10	10.30	1.059	9.54	11.06		

TABLE 4.2: ANOVA Table depicting the significance of the study

Mean scores across age groups for each of the task:

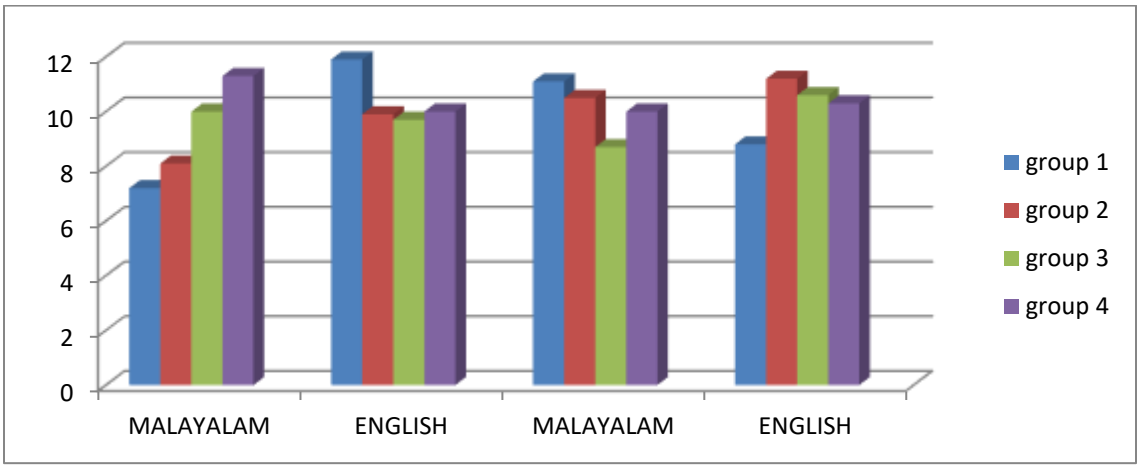


FIGURE 4.3: (a) comparison of written confrontation naming in bilinguals in both the languages across four age groups (b) comparison of oral confrontation naming in bilinguals in both the languages across all the four age groups.

The results revealed an overall decline in accuracy of naming in orthographically non-native language than native language. there was an influence of social media on written task of orthographically non-native language across some group 2 and group 3. Malayalam written naming was found to be better than English written naming task across all age groups, emphasizing the role of orthographic regularity in naming this study also provide a basis that naming responses differ with the modality used for non-native language.

CHAPTER 5

DISCUSSION

Poor performance in terms of the accuracy and type of responses of individuals in English written naming task compared to Malayalam in group 2, 3 & 4 could be attributed to the orthographic irregularity in English. These groups had exhibited varied GPC errors in English written naming task as English does not always adhere to the GPC rules.

In accordance with the study done by Thomas, Sam and Goswamy (2007), the youngest age group 25-35 years, the written naming tasks revealed semantic errors, incorrect responses and self-corrections, whereas GPC errors (omission and substitution) were found only in Malayalam written naming task. In Malayalam oral task, semantic errors were prominent. This result can be the result of increasing number of English medium schools and high literacy rate in Kerala.

In contradiction to the study done by Goswamy (2008), the group 2 (36-45 years), oral confrontation naming was better than written confrontation naming. Spelling mistakes were more seen in both 36-45 years and 46-55 years of age groups. These could be probably the influence of social media on these populations because it was the emergent period of social media.

Malayalam and English oral naming tasks revealed semantic errors and no response errors for individuals within 56-65 years age group. But both the language was having similar results in oral as well as in written confrontation naming as both the languages was given equal importance during their times.

A great number of theorists have highlighted the fact that writing is channelized entirely by the core sound constituents of words (Geschwind, 1969 & Luria, 1960). Frith (1979) commented on the importance of phonology for writing. A decline in the short term memory with respect to the complexity of information to be recalled has been reported by Craik and Robinowitz (1985). Further the decline in the long term memory with age is primarily attributed to the encoding and organizational difficulties (Rankin and Collins, 1985).

In 25-35 years age group, better performance in the English written compared to the Malayalam oral naming could be attributed to the recent trend of English language usage as a marked feature of cultural technological and societal demands on the performances of younger population compared to the other two groups.

Greater demand and usage of second language has been seen resulting in better activation and hence enhancing the proficiency in the younger age group contrary to the older age group. In the older age groups, the demand and usage of native language is more compared to the second language, bringing about a better proficiency in the native language.

With respect to the type of responses, it was observed that the older age group (56-65 years) showed relatively more semantic errors and self-corrections compared to the younger age groups. In older adults, true semantic and neo-logistic jargons are prominent (Brown, 1978). It is considered that the conceptual system in a bilingual individual is common for all languages (based on revised hierarchical model proposed by Kroll and Stewart (1994). Several lexical nodes of different languages get activated on the presentation of a stimulus, irrespective of the language in which the task is performed. Hence during the lexical selection, these multiple activated notes function as competitors. Regardless of the competition, an inhibitory process mechanism suppresses the activation of the non-target language, words (Green, Hermans & Shreuder, 19988; Lee and Williams, 2001). Thus, it could be stated that an inappropriate inhibition and/ or selection mechanism could result in semantic errors with age highlight a putative indication of a decreased inhibition mechanism in the conceptual system during the naming task.

Overall, the qualitative and quantitative results reveal an obvious difference in a performance of the younger and older age groups, especially in the written naming tasks.

CHAPTER 6

SUMMARY & CONCLUSION

The confrontation naming task has been extensively used to tap naming deficits in the elderly and the population with disorders. Both oral and written modes of responses have been used. However, these studies have been confirmed to the use of only a single language for such naming tasks.

The present study was done across four age groups -younger to adults to old age. Oral and written naming was explored in two languages – Malayalam and English. The results revealed an overall decline in the accuracy of naming responses within the age. Semantic errors were more evident in the older age group for oral and written naming in both the languages. Malayalam written naming was found to be better than English written naming task across all the age groups emphasizing the role of orthographic regularity in naming. There were instances of difference in responses across and within naming tasks in English for the language groups providing an assumption that naming responses differ with the modality used for the irregular language.

The results of the study is suggestive of the importance of an active exposure and active usage of a language rather than an active exposure and passive usage. However, the results of this study need to be generalized with caution and warrants further research in this area.

IMPLICATIONS OF THE STUDY

The present study attempts to compare oral and written confrontation naming in bilingual individuals across age groups. Further the influences of orthographic variables across languages were accounted.

Such information can help the speech language pathologist to compare the nature of responses in the normal and disordered population. Studies on confrontation naming with aging can give an insight into such patterns in normal and pathological aging conditions.

This also highlights the use of modality specific responses in naming tasks in different languages. The results also imply that during assessment and management the active usage of a language, social media and mode of language in the school are important factor to be considered.

LIMITATIONS

- Latency of a response plays a very important role to distinguish between a normal and disordered population. The present study does not focus on to the latency of the naming task in both oral and written mode. The upcoming studies can use the latency criteria for further evaluation of confrontation naming across age groups.

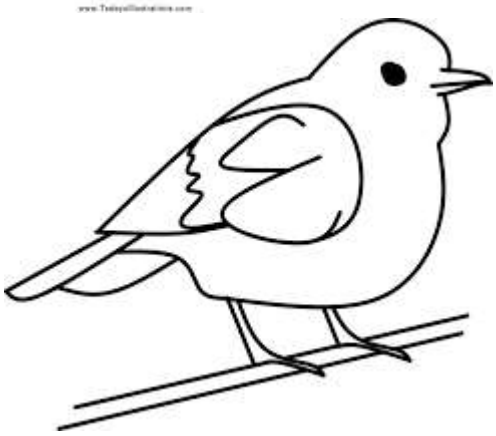
- Most of the Indian population deals with more than two languages in the present scenario. The researchers in Indian context has not put light on confrontation naming in multi-lingual individual, so that the study can provide a baseline for the word finding difficulties across age groups in a disordered multilingual population.

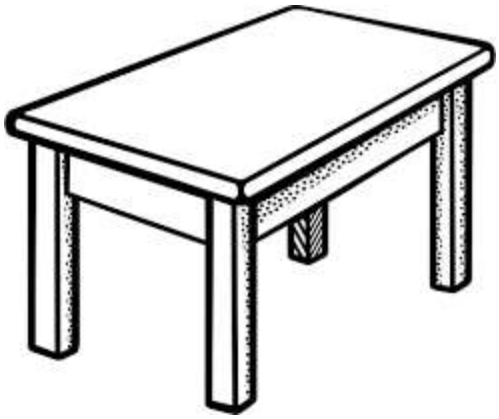
- Age range below 25 years is not focused in the present study.

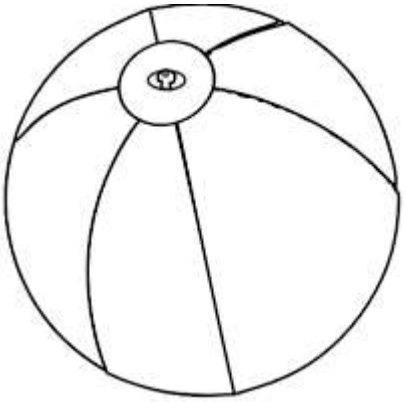
FUTURE SUGGESTIONS

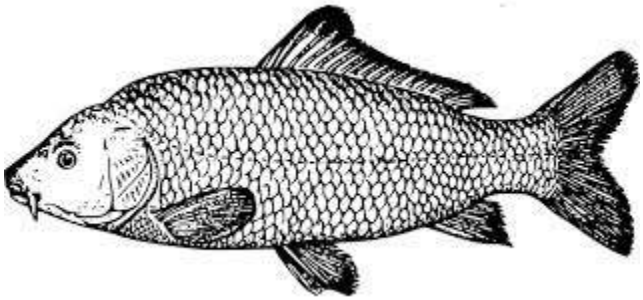
Studies can be conducted across different languages and ages using different types of naming and stimuli used.

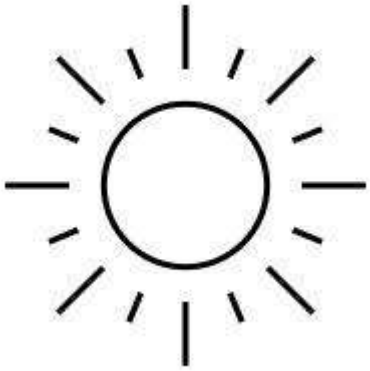
APPENDIX -1











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