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FOREIGN LANGUAGE ANXIETY AND ACADEMIC STRESS OF DYSLEXIC AND NON-DYSLEXIC CHILDREN: A COMPARISON

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ABSTRACT

The study aims to find out how dyslexic children and non-dyslexic children differ in their foreign language anxiety, academic stress, and the association between the two. The study utilized a convenience samples of dyslexic (N = 84) and non-dyslexic (N = 132) children studying in different secondary schools of Ernakulam district. The data, collected by administering the English Language Anxiety Scale and English Language Related Academic Stress Scale, were analysed by using appropriate statistical techniques by keeping the hypotheses in mind. The analysis revealed that dyslexic and non-dyslexic children differ significantly in their foreign language anxiety and English language related academic stress, wherein the dyslexic children were found to have greater anxiety and stress in learning English as second language. Whereas the dyslexic boys and dyslexic girls were alike in their foreign language anxiety and academic stress, significant difference was found to exist between non-dyslexic boys and non-dyslexic girls with respect to the variables. A significant and positive correlation was found to exist between foreign language anxiety and academic stress of both dyslexic and non-dyslexic children. Neither the dyslexic condition nor the gender, however, was found to be significant in discriminating secondary school students on the basis of the association between their foreign language anxiety and English language related academic stress.

Key words: Learning disability, Dyslexic children, Non-dyslexic children, Foreign language anxiety, Academic stress.

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1. INTRODUCTION

Learning difficulties have gained a great popularity in the last few decades not only because of the innovative pedagogical methods but also of the raised awareness among the societies. Dyslexia, in particular, is one of the most serious learning difficulty that affects the life of

millions of children and adults around the world. As students diagnosed with dyslexia face difficulties in learning their mother tongue, having to learn how to express themselves in a foreign language is a demanding and challenging procedure which demands more effort than the other students (Jin et al., 2011; Reid & Strnadova, 2008). Learning a foreign language is more demanding for students who suffer from dyslexia (Lodej, 2016). Generally, students who suffer from dyslexia experience greater anxiety when learning a foreign language than their non-dyslexic peers due to their specific learning characteristics (Ganschow & Sparks, 2001; Brunswick, 2009).

Foreign language anxiety is a situation-specific anxiety that relates to the experience of learning a new language. Its arousal can be determined by the combination of several factors. Some of them are associated with the learner, such as inherent difficulty to process language as in the case of dyslexia, or his or her degree of self-esteem and competitiveness. Several researches have revealed that anxiety can hinder success in second or foreign language learning (Williams & Andrade, 2008; Ohata, 2005; Pappamihiel, 2002). It was also found that language learning difficulties could predict anxiety best in foreign language settings (Chen & Chang, 2004). Language learning anxiety, specifically foreign language learning anxiety has attracted several researchers to examine this phenomenon as it affects language learners (e.g., Sabbah, 2018; Sadiq, 2017). Anxiety has been considered as one of the most important affective factors that influence second language learning (Na, 2007). Piechurska-Kuciel (2008) reported developmental dyslexia as a factor contributing to language anxiety in English classrooms.

Two psycho-pedagogic factors that play decisive role in learning outcome in classrooms are stress associated with the teaching learning activities, called as academic stress, and the anxiety associated with learning of specific subjects (Huang, 2012; Putwain, 2007). In the prevailing school system in India, students are expected to acquire English as a foreign language apart from the vernacular and the national language, Hindi. Learning a foreign language involves cognitive reorganization in the linguistic structure of the learner causing additional stress and anxiety, which is entirely different from those at the time of acquiring a new knowledge in one's mother tongue. The academic stress and foreign language anxiety that the dyslexic children experience may be different from those experienced by normal children. The challenges that the dyslexic children experience in English classroom could be better understand by comparing factors like academic stress and foreign language anxiety with non-dyslexic children.

2. OBJECTIVES OF THE STUDY

The study has the following specific objectives in view:

1. To find out the foreign language anxiety and academic stress of dyslexic and non-dyslexic children in secondary schools.
2. To compare foreign language anxiety and academic stress of dyslexic and non-dyslexic children.
3. To compare boys and girls in dyslexic as well as non-dyslexic groups with respect to their foreign language anxiety and academic stress.
4. To find out the relationship of foreign language anxiety and academic stress of dyslexic and non-dyslexic children in the secondary schools.
5. To compare dyslexic and non-dyslexic children with regard to the degree of relationship between foreign language anxiety and academic stress.

3. HYPOTHESES OF THE STUDY

The following null hypotheses were tested for the study:

1. There is no significant difference between dyslexic and non-dyslexic children with regard to their foreign language anxiety.
2. Gender is not decisive in the foreign language anxiety of dyslexic and non-dyslexic children.
3. There is no significant difference between dyslexic and non-dyslexic children with regard to their academic stress.
4. Gender is not decisive in the English language related academic stress of dyslexic and non-dyslexic children.
5. There is no significant relationship between foreign language anxiety and academic stress in dyslexic and non-dyslexic children.
6. There is no significant difference between dyslexic and non-dyslexic children with regard to the degree of relationship between foreign language anxiety and academic stress.

4. METHODOLOGY

4.1. Method

Descriptive research design that follow normative survey method was adopted for the study.

4.2. Population

The study involved two different populations, *viz.,* the dyslexic children and non-dyslexic children. Both the populations comprise of adolescents in the age range 13 to 15, studying in Standards 8 to 10 in the high schools affiliated to the Board of Secondary Education, Govt. of Kerala.

4.3. Sample

The study made use of a sample of 216 secondary school students (Dyslexic = 84; Non-dyslexic = 132), selected from the secondary schools of Ernakulam district, Kerala. Convenient sampling method was adopted for selecting the samples of both dyslexic as well as non-dyslexic students. The list of dyslexic children to be sampled for the study was prepared from the list of dyslexic children studying in different secondary schools of Ernakulam district, available with the Block Resource Centre (BRC), Sarva Shiksha Abhiyan (Govt. of Kerala), Angamali. The sample of non-dyslexic children was selected from three secondary schools of Ernakulam district.

4.4. Instrumentation

i. *English Language Anxiety Scale (ELAS):* ELAS is a standardized psycho-pedagogic instrument to evaluate the levels of anxiety experienced by secondary school students in connection with the learning of English as second language in the schools, developed by Arjunan and Archana (2014). It covers three dimensions of language anxiety viz., Communication apprehension, Performance anxiety, and Fear of negative evaluation. The ELAS is a 30-item, 5-point Likert-type scale where the responses range from '*Strongly Agree'* to *'Strongly Disagree'.* The scale is found to have an external validity of 0.72, and a test-retest (four weeks interval) reliability of 0.81.

ii. *English Language Related Academic Stress Scale (ELRAS):* ELRAS is a standardized instrument to assess the academic stress experienced by the adolescents in learning English, developed by Beena and Ratina (2015). It is a 50 item five-point Likert scale (No stress, Slight stress, Moderate stress, High stress, and Extreme stress) that covers

six dimensions of academic stress, viz., Cognitive, Affective, Behavioural, Physical, Interpersonal, and Motivational. The scale has an external validity (teacher rating as external criterion) of 0.61 and test-retest reliability *(four weeks interval)* of 0.76.

4.5. Procedure

The tools were administered on the sample of non-dyslexic children in group situation under standardized conditions by the second investigator. Since non-dyslexic children were distributed over a good number of schools spread over a wide geographic area, data were collected with the cooperation of the IED Teachers working in school under the SSA Project. Prior to data collection, a one day orientation and hands-on experience was given to the IED Teachers with the support of BRC, Anagamli for the administration and scoring of the tools. The data thus obtained were subjected to appropriate statistical techniques and interpreted accordingly. The descriptive statistical indices for the total sample and relevant sub-samples were computed and the group comparisons were done by applying t-test or ANOVA with the help of SPSS (Windows 16.0).

5. RESULTS AND DISCUSSION

The data and result of the independent sample t-test performed to compare the foreign language anxiety of dyslexic and non-dyslexic children are given in Table 1.

Table 1 Comparison of the foreign language anxiety of dyslexic and non-dyslexic children

Groups	Statistical Indices				t-value	Sig.
	N	M	SD	SE_M		
Dyslexic	84	97.07	7.593	.828	6.07*	0.01
Non-dyslexic	132	89.48	9.736	.847		

The t-value obtained on comparing the foreign language anxiety of dyslexic and non-dyslexic children is significant at 0.01 level (6.07; $p<0.01$). It indicates that dyslexic and non-dyslexic children differ significantly in the anxiety they experience in learning English as foreign language. A closer observation of the mean values obtained reveals that the dyslexic children experience greater anxiety in English classroom than do their non-dyslexic counterparts. The Hypothesis-1 (there is no significant difference between dyslexic and non-dyslexic children with regard to their foreign language anxiety) is, hence rejected.

In order to find out the differential effect of gender on the foreign language anxiety of dyslexic and non-dyslexic children, the mean ELAS scores obtained for boys and girls in the groups of dyslexic and non-dyslexic children were compared. The data and result of the same is presented in Table 2.

Table 2 Comparison of the foreign language anxiety of gender groups of dyslexic and non-dyslexic children

Groups	Sub-groups	Statistical Indices				t-value	Sig.
		N	M	SD	SE_M		
Dyslexic	Boys	58	97.24	7.888	1.036	0.305	NS
	Girls	26	96.69	7.024	1.378		
Non-dyslexic	Boys	50	83.32	8.037	1.137	6.508	0.01
	Girls	82	93.23	8.749	0.966		

The t-values obtained show that though there is no significant difference between boys and girls in dyslexic group ($t = 0.305$; $p>.05$) with respect to their foreign language anxiety,

significant gender difference exists in the foreign language anxiety of non-dyslexic children ($t = 6.508$; $p<.01$). A closer observation of the mean ELAS for the group of non-dyslexic children shows that English language learning in high school classes causes greater anxiety in non-dyslexic girls than that in non-dyslexic boys. The Hypothesis-2 *(gender is not decisive in the foreign language anxiety of dyslexic and non-dyslexic children)* is, therefore, partially substantiated.

The English language related academic stress of dyslexic and non-dyslexic children were compared to find out whether the groups differ significantly. The data and result of the same is given in Table 3.

Table 3 Comparison of the English language related academic stress of dyslexic and non-dyslexic children

Groups	Statistical Indices				t-value	Sig.
	N	M	SD	SE_M		
Dyslexic	84	168.96	20.386	2.224	2.931	.01
Non-dyslexic	132	159.14	26.071	2.269		

The t-value estimated is significant at 99% confidence interval revealing that dyslexic and non-dyslexic children differ significantly with respect to their English language related academic stress. Inspection of mean ELRAS scores make it clear that dyslexic children experience greater academic stress in learning English than that experienced by their non-dyslexic counterparts. The Hypothesis-3 *(there is no significant difference between dyslexic and non-dyslexic children with regard to their academic stress)* is, consequently, rejected.

Dyslexic and non-dyslexic children were then compared with respect to their mean scores of English language related academic stress to find out the significant difference, if any, between the groups. The data and result of the analysis performed in this context is given in Table 4.

Table 4 Comparison of the foreign language anxiety of gender groups of dyslexic and non-dyslexic children

Groups	Sub-groups	Statistical Indices				t-value	Sig.
		N	M	SD	SE_M		
Dyslexic	Boys	58	168.45	19.095	2.507	0.345	NS
	Girls	26	170.12	23.376	4.584		
Non-dyslexic	Boys	50	149.68	29.486	4.170	3.381	.01
	Girls	82	164.90	22.010	2.431		

Comparison of the gender groups of dyslexic children with respect to their English language related academic stress produced t-value which is not large enough to be significant at least at 95% confidence interval ($t = 0.35$; $p>.05$). Significant difference, however, observed between non-dyslexic boys and non-dyslexic girls with respect to their English language related academic stress ($t = 3.381$; $p<.01$). The Hypothesis-4 *(gender is not decisive in the English language related academic stress of dyslexic and non-dyslexic children)* is, hence, partially accepted.

The relationship between English language anxiety and English language related academic stress in dyslexic and non-dyslexic children was find out by estimating the Pearson's product moment coefficients of correlation. The result of the same is given in Table 5.

Table 5 Relationship between academic stress and foreign language anxiety of dyslexic and non-dyslexic children

Group	Samples	N	r	SE_r	r_{POP}		Sig.
					.05 level	.01 level	
Whole	Total Sample	216	0.446	0.055	0.34 – 0.55	0.30 – 0.59	.001
	Dyslexic	84	0.397	0.092	0.22 – 0.58	0.16 – 0.63	.001
	Non-dyslexic	132	0.414	0.072	0.27 – 0.56	0.23 – 0.60	.001
Dyslexic	Boys	58	0.458	0.104	0.25 – 0.66	0.19 – 0.73	.001
	Girls	26	0.286	0.180	-0.07 – 0.64	-0.18 – 0.75	NS
Non-dyslexic	Boys	50	0.457	0.130	0.20 – 0.71	0.12 – 0.79	.001
	Girls	82	0.243	0.104	0.04 – 0.45	-0.03 – 0.51	.05

The coefficient of correlation between Foreign Language Anxiety and English Language Related Academic Stress estimated for the total sample and sub-samples exposed the presence of significant positive correlation between the variables in all the groups except for dyslexic girls. The coefficient of correlation (r) estimated for the total sample of the secondary school students is 0.446 with a standard error (SE**r**) of 0.055. The confidence interval values ($\mathbf{r}_{POP}$) at .05 level is between 0.34 and 0.55, and at .01 level is between 0.30 and 0.59. The highest value of correlation estimated is for the dyslexic boys ($r = 0.552$; $p<0.01$), and the lowest observed correlation is for the non-dyslexic girls ($r = 0.243$; $p<0.05$). The insignificant relationship estimated for the sub-sample of dyslexic girls may be attributed to the low sample size. The obtained values of correlation throw light to the fact that the higher the level of Foreign Language Anxiety, the greater will be the stress in English classroom. The Hypothesis-5 *(there is no significant relationship between foreign language anxiety and academic stress in dyslexic and non-dyslexic children)* is, therefore, rejected.

The gender based sub-samples of dyslexic and non-dyslexic children were further compared to find out whether the groups differ significantly with respect to the coefficients of correlation between their foreign language anxiety and English language related academic stress. The obtained correlations were first corrected into nearest two decimal figures (***r.cort***) and the analogous Fisher's '***z***' functions were found out followed by the estimation of CR-value. The data and result of the analysis is given in Table 6.

Table 6 Comparison of the correlation between foreign language anxiety and academic stress of dyslexic and non-dyslexic children

Groups	Sub-samples	Statistical Indices				CR	Sig.
		N	r	*r.cort*	*z*		
Whole	Dyslexic	84	0.397	0.40	0.42	0.141	NS
	Non-dyslexic	132	0.414	0.41	0.44		
Dyslexic	Boys	58	0.458	0.46	0.497	0.797	NS
	Girls	26	0.286	0.29	0.299		
Non-dyslexic	Boys	50	0.457	0.46	0.497	1.368	NS
	Girls	82	0.243	0.24	0.245		

The CR-value obtained on comparing dyslexic and non-dyslexic children with respect to the degree of relationship between foreign language anxiety and English language related academic stress is not significant ($CR = 0.141$; $p>.05$). It shows that that dyslexic and non-dyslexic children are almost alike regarding the degree of relationship between their foreign language anxiety and academic stress in English classrooms. Likewise, no gender difference was noticed with respect to the degree of association between the variables either in dyslexic ($CR = 0.797$; $p>.05$) or in non-dyslexic ($CR = 1.368$; $p>.05$) group. The Hypothesis-6 (there is

no significant difference between dyslexic and non-dyslexic children with regard to the degree of relationship between foreign language anxiety and academic stress) is, therefore, accepted.

6. CONCLUSIONS

The results of the analysis showed that dyslexic and non-dyslexic children differ significantly in academic stress and anxiety they experience in learning English as a foreign language. Compared to non-dyslexic counterparts, children with dyslexia experience more anxiety and stress in learning English. Though non-dyslexic girls experience significantly greater stress than non-dyslexic boys, such a gender difference is not observed in the case of children with dyslexia. Likewise, although no gender difference was observed in the academic stress experienced by dyslexic children, non-dyslexic girls were found to experience significantly greater stress than do non-dyslexic boys in learning English. In the light of the findings of the study it can be concluded that the anxiety and stress associated with learning English as a foreign language is independent of gender of the learner in the case of dyslexic children; but they are dependent on the gender of the learner in the case of non-dyslexic children. The stress experienced by both dyslexic and non-dyslexic children in learning English is a positive function of their foreign language anxiety. The dyslexic condition do no exert any influence on the degree of association between anxiety and academic stress which the learners experience while they learn English as a foreign language. Further, gender of the learner has no decisive role in the extent to which the foreign language anxiety influence academic stress of dyslexic and non-dyslexic children.

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