The International Journal of Indian Psychology
ISSN 2348-5396 (Online) | ISSN: 2349-3429 (Print)
Volume 13, Issue 3, July- September, 2025
DIP: 18.01.254.20251303, DOI: 10.25215/1303.254
https://www.ijip.in

Research Paper

Efficacy of Thoppukaranam and Yoga for the enhancement of Verbal Analogy among Learning Disabled and Normal Girl Children

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ABSTRACT

In the present study an attempt has been made to understand the relationship between the Efficacy of Yoga in enhancing the Verbal Analogy among Learning Disabled and Normal Girl Children. The study was conducted at Vidya Vikasini Matric Higher Secondary School, Coimbatore involving 300 Girls. Cognitive Ability Test (2012) was used to assess the Verbal Analogy among Normal Girl Children and Learning Disabled. As a part of Intervention Practicing Pranayama, Vajrasana and Savasana and Thoppukaranam in a regular basis showed a greater improvement in the performance. Group 1 practiced Yoga (N= 50), Group 2 practiced Yoga and Thoppukaranam (N= 50), and Group 3 practiced Thoppukaranam (N= 50). Results revealed that there was statistically significant relationship between the participants those who practiced Yoga, Yoga and Thoppukaranam and only Thoppukaranam.

Keywords: *Yoga, Thoppukaranam, Verbal Analogy, Normal Girl Children and Learning Disabled Children*

Children with learning disabilities typically demonstrate inefficient information processing skills, which have been pinpointed as a possible underlying cause of their cognitive academic and social emotional difficulties (Kavale & Forness, 1996; Kolligian & Sternberg, 1987). Researchers have suggested two major subgroups of children with Learning Disabled, those with Verbal Learning Disabilities (VLD) and those with non-verbal learning disabilities (NLD; Johnson & Myklebust, 1967; Rourke,1988; Rourke & Tsatsanis, 1996). Children with VLD are characterized by poor reading and spelling skills, auditory processing difficulties, and other disorders that 4 Journal of Learning Disabilities affect the reception, expression, and processing of verbal and written language (Johnson, 1995; Kamhi & Catts,2002; Palombo, 1996). These problems, specifically problems in phonological word processing, create a bottleneck that limits the flow of information to higher levels of processing (e.g., Hulme & Snowling, 1992; Ransby & Swanson, 2003; Shankweiler et al., 1995).

Receptive language processing refers to an individual's understanding of oral and written language. A student with difficulties in this area may have trouble understanding meaning conveyed by vocabulary (including multiple meanings and figurative language), word

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Received: August 08, 2025; Revision Received: August 27, 2025; Accepted: August 31, 2025

structure (such as suffixes and prefixes), sentence structure (syntax/grammar) and meaning conveyed across sentences (such as in stories or a conversation). Expressive language processing refers to a student's ability to express ideas in oral and written language. This may include difficulties with recalling and using vocabulary, word structure, sentence structure and the conveyance of ideas across sentences. Receptive and expressive language processing primarily relate to the semantics of the language. People with learning disabilities may also have difficulties with the pragmatics of language, which involves communicating in practical ways, using both verbal and non-verbal channels. A student who has problems with pragmatics may have trouble understanding social contexts (such as an informal meeting with friends versus a formal meeting) and social cues (such as body language) influence meaning or in modifying language to suit the specific social context and/or using non verbal communication cues, such as body language and how they influence the meaning of any communication.

Learning disability is common, affecting 1-2.5% of the general population in the western world and encompasses many different conditions. It usually leads to major functional impairment and life long need for support and interventions, not the least important of which are medical and health care services. Rapid progress is being made in the understanding of the cause and pathogenesis of many learning disability syndromes, and these advances are likely to improve targeted interventions in the next decade. Many countries have abolished a learning disability specialty for medical professionals, but there is a great need to revive this niche of medical knowledge. We know little about quality of life and effects on families of people with learning disability and research is needed to address these issues.

Mizen and Cooper (2012) reviewed about Learning Disabilities. There are thousands of causes of learning disabilities, and often the cause is unknown despite comprehensive assessment. People with learning disabilities have very high rates of physical and mental ill health, and comorbidity is typical. Some associated conditions are related to the causes of a person's learning disability (e.g. 'behavioural phenotypes'), and benefit from treatment interventions. Autism, Attention Deficit Hyperactivity Disorder (ADHD), Schizophrenia, Mania, Pica and problem behaviours are all more common than in the general population, as are gastro esophageal reflux disorder, epilepsy, constipation, sensory impairments, and injuries and falls. Choking and aspiration are frequent and can cause death. Problem behaviours are multi factorial, and can also be a symptom of other mental or physical disorders or distress. Assessments take longer, and must involve paid careers and relatives as well as the person with learning disabilities. There are other considerations in addition to the standard assessment and standard treatment plans. A biopsychosocial developmental approach to both is a useful framework to adopt. Care needs to be taken to avoid 'diagnostic overshadowing', where symptoms of medical conditions are attributed inadvertently to the person's learning disabilities and left untreated. People with learning disabilities face many barriers in accessing the health care they need, and more proactive approaches by health professionals are required.

Mogasale and Patil (2012) reviewed about the prevalence of specific learning disabilities among primary school children in a South Indian city. Specific Learning Disability can be characterized such as dyslexia, dysgraphia and dyscalculia. Children aged 8-11 years from third and fourth standard were selected. A six-level screening approach that commenced with identification of scholastic backwardness followed by stepwise exclusion of impaired vision and hearing, chronic medical conditions and subnormal intelligence was carried out

among these children. In the final step, the remaining children were subjected to specific tests for reading, comprehension, writing and mathematical calculation. This study suggests that the prevalence of Specific Learning Disabilities is at the higher side of previous estimations in India. Based on the authors' experience, they express the need for more prevalence studies, remedial education and policy interventions to manage specific learning disabilities at main stream educational system to improve the school performance in Indian children.

Russell and Bryant (2017) studied about people with Learning Disabilities (LD) have poor physical and mental health when compared with the general population. They are also likely to find it more difficult than others to describe their symptoms adequately. It is therefore harder for healthcare workers to identify the health needs of those with learning disabilities, with the danger of some problems being left unrecognized. The research was conducted to support people to identify people with mild to moderate learning disability who are currently not registered as learning disability. Read code searches were created to identify individuals with a learning disability. The read code search supported practices to populate their registers and was quick to run and review, making it a viable choice to support register and revalidation.

METHODOLOGY

Objective

The objective of the study is

- To enhance the Verbal Analogy of the Normal Adolescent Girls and those with Learning Disabilities through Yoga and Thoppukaranam.

Research Hypotheses

The following research hypotheses would be tested during the research.

- Hypothesis 1: There will be a significant difference in the level of Intelligence among Learning Disabled and Normal Girl Students between Before, After and Follow-up of Intervention.
- Hypothesis 2: There will be significant difference between Before, After and Follow-up Phases through Intervention among Normal Girl Students
- Hypothesis 3: There will be significant difference between Before, After and Follow-up Phases through Intervention among Learning Disabled Students
- Hypothesis 4: There will be significant difference between Before, After and Follow-up Phases through Intervention among Normal Girl Students and Learning Disabled Students

Area

The area selected to conduct the study was Vidya Vikasini Matric Higher Secondary School, Coimbatore and Raashmika Centre for Learning, Coimbatore.

Sample

From in and around schools of Coimbatore, Tamil Nadu, 300 adolescent girls (13-15 years) that include both normal adolescent girls and adolescent girls with learning disabilities will be randomly selected. The Phases I, II and III of the study would involve 300 adolescents' girls. The learning disabilities addressed will be dyslexia, dysgraphia and dyscalculia.

Homogeneity will be ensured in socioeconomic status and gender. Formal written *Informed consent* will be taken from all the participants.

RESULTS AND DISCUSSIONS

This Section presents the results of the Descriptive Statistics, Repeated Measures of ANOVA, Pairwise and Post-hoc comparison during Before, After and Follow-up phases to find out the Efficacy of Thoppukaranam and Yoga for the Enhancement of Verbal Analogy among Normal Girl Students and Learning Disabled Girl Students in Verbal Analogy from Cognitive Ability Test.

Table 1: Mean and Standard Deviation of Verbal Analogy in Before, After and Follow-up phases of Interventions among Normal Girl Students

Normal Girl Students Interventions		Before		After		Follow-up	
	N	Mean	S. D.	Mean	S. D.	Mean	S. D.
Yoga with Thoppukaranam	50	43.60	9.93	45.08	8.63	46.42	8.46
Yoga	50	31.82	8.13	34.38	7.60	36.20	7.74
Thoppukaranam	50	34.02	9.65	36.42	9.06	38.36	8.51

Table 1 shows the Mean and Standard Deviation for Verbal Analogy among Normal Girl Students. The mean value for Yoga with Thoppukaranam practicing group during Before, After and Follow-up Phases were 43.60, 45.08 and 46.42; Yoga practicing group means were 31.82, 34.38 and 36.20; and Thoppukaranam group means were 34.02, 36.42 and 38.36 respectively. Brain activity is involved with different cognitive processes and plays a critical role in different yoga practices; yoga aims to attain the unity of mind, body and spirit through Asana and Pranayama. Hence the intervention certainly helped the Normal Girl Students who actively participated and showed a great impact on their cognitive abilities.

Table 2: Repeated Measures of ANOVA for Verbal Analogy during Before, After and Follow-up of Interventions among Normal Girl Students

Tests of Within Subjects Effects					
Source		**Type III Sum of Squares**	**df**	**Mean Square**	**F**
Phases	**Sphericity Assumed**	1114.751	2	557.376	185.890**
	Greenhouse-Geisser	1114.751	1.426	781.997	185.890**
	Huynh-Feldt	1114.751	1.455	766.091	185.890**
	Lower-bound	1114.751	1.000	1114.751	185.890**
Phases X Interventions	**Sphericity Assumed**	41.049	4	10.262	3.423**
	Greenhouse-Geisser	41.049	2.851	14.398	3.423**
	Huynh-Feldt	41.049	2.910	14.105	3.423**
	Lower-bound	41.049	2.000	20.524	3.423**

** = *Significant at 0.01 Level*

Table 2 shows the Repeated Measures ANOVA for Before, After and Follow-up Phases in Verbal Analogy among Normal Girl Students. There was a significant difference among the

participants and it clearly indicates that there was a significant difference between Before, After and Follow-up Phases as well as there was significant difference between Yoga with Thoppukaranam, Yoga and Thoppukaranam intervention during before, after and follow-up phases of intervention.

Table 3: Pairwise comparison for Before, After and Follow-up Phases in Verbal Analogy among Normal Girl Students

Phases	Phases	Mean Difference	Standard Error
Before	**After**	-2.14*	0.20
	Follow-up	-3.84*	0.25
After	**Before**	2.14*	0. 20
	Follow-up	-1.70*	0.14
Follow-up	**Before**	3.84*	0.25
	After	1.70*	0.14

** = Significant at 0.05 level*

Table 3 indicates that there was significant difference between Before, After and Follow-up Phases in Verbal Analogy among Normal Girl Students. Verbal analogy assesses a student's vocabulary, efficiency and verbal memory, ability to determine word relationships, and the ability to comprehend ideas which could be improved due to the effect of Thoppukaranam, Yoga and Yoga with Thoppukaranam had greater impact on the improvement of analogy especially while using a language without getting disturbed.

Table 4: Post- hoc Comparisons for the Interventions in Verbal Analogy among Normal Girl Students

Interventions	Interventions	Mean Difference	Standard Error
Yoga with Thoppukaranam	**Yoga**	10.90*	1.71
	Thoppukaranam	8.77*	1.71
Yoga	**Yoga with Thoppukaranam**	-10.90*	1.71
	Thoppukaranam	-2.13 N. S.	1.71
Thoppukaranam	**Yoga with Thoppukaranam**	- 8.77*	1.71
	Yoga	2.13N. S.	1.71

** = Significant at 0.05 level* *N. S. = Not Significant*

Table 4 shows the results of the post-hoc comparison of three types of interventions administered to the normal girl students; it was found that Yoga with Thoppukaranam was significantly different with that of Yoga as well as Thoppukaranam, whereas Yoga was not found to be significantly different with that of Thoppukaranam. Thus, Yoga with Thoppukaranam was more effective in increasing the verbal analogy of the normal girl students.

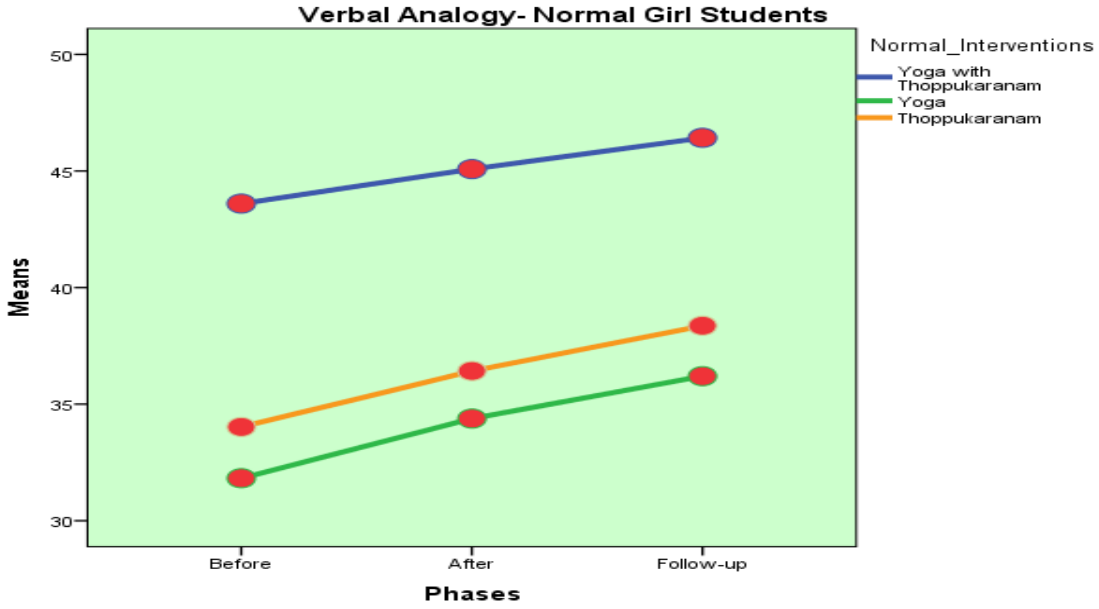

Figure 1: Verbal Analogy during Before, After and Follow-up Phases of Interventions among Normal Girl Students

Figure 1 shows the results for three groups practicing Yoga with Thoppukaranam; Yoga and Thoppukaranam during before, after and follow-up phases. The participants were given idea about Yoga and Thoppukaranam and they were divided into three groups. The participants who practiced Yoga with Thoppukaranam had an impact in improving their interest towards Verbal Analogy which improves the student's vocabulary, efficiency and verbal memory, ability to determine word relationships, and the ability to comprehend ideas. Gallassi et al. (2014) conducted a study on Simple Verbal Analogies Test (SVAT): A normative data on a short task exploring abstract thinking. The simple verbal analogies test was a short neuropsychological task requiring few minutes of administration that explored inductive verbal abstract thinking. It already showed a good specificity and sensitivity in discriminating normal controls from probable Alzheimer's Patients. Verbal working memory, semantic knowledge and memory and word finding ability were also involved in performing analogies Simple Verbal Analogies Test was a useful test to assess executive functions, working memory and to discriminate between cognitive deterioration and normal aging. Hence the Alternative Hypothesis 4 "**There will be significant difference between Before, After and Follow-up Phases in Verbal Analogy through Intervention among Normal Girl Students**" is accepted.

Table 5: Mean and Standard Deviation of Verbal Analogy in Before, After and Follow-up Phases of Interventions among Learning Disabled Girl Students

Interventions	Before			After			Follow-up	
	N	Mean	S. D.	M	Mean	S. D.	Mean	S. D.
Yoga with Thoppukaranam	50	34.00	8.77	38.18		7.90	40.10	7.78
Yoga	50	25.48	9.72	30.06		9.49	31.74	8.79
Thoppukaranam	50	25.94	8.63	30.08		7.81	31.52	8.11

Table 5 shows the Mean and Standard Deviation of Before, After and Follow-up Phases in Verbal Analogy among Learning Disabled Girl Students. The Mean value for Yoga with

Thoppukaranam practicing group Before Intervention was 34.00 and it increased to 38.18 After Intervention and slightly improved to 40.10 in Follow-up phase; for Yoga practicing group the mean scores were 25.48, 30.06 and 31.74; for Thoppukaranam practicing group the mean scores were 25.94, 30.08 and 31.52 respectively. Participants who practiced Yoga or Thoppukaranam showed very much improvement than Yoga with Thoppukaranam practicing group. This implies that Yoga and Thoppukaranam was very effective in bringing change in the verbal analogy among learning disabled girl students. Joice, Manik and Sudhir (2018) studied about the role of yoga in attention, concentration and memory among college students. The results showed that after practicing yoga there was a significant improvement in attention, concentration and memory. These changes may be due to personality development and higher concentration and reduction of distraction.

Table 6: Repeated Measures of ANOVA for Verbal Analogy during Before, After and Follow-up of Interventions among Learning Disabled Girl Students

Tests of Within-Subjects Effects					
Source		**Type III Sum of Squares**	**df**	**Mean Square**	**F**
Phases	**Sphericity Assumed**	2853.640	2	1426.820	391.949**
	Greenhouse-Geisser	2853.640	1.452	1965.900	391.949**
	Huynh-Feldt	2853.640	1.482	1925.242	391.949**
	Lower-bound	2853.640	1.000	2853.640	391.949**
Phases X Interventions	**Sphericity Assumed**	8.107	4	2.027	0.557 N. S.
	Greenhouse-Geisser	8.107	2.903	2.792	0.557 N. S.
	Huynh-Feldt	8.107	2.964	2.735	0.557 N. S.
	Lower-bound	8.107	2.000	4.053	0.557 N. S.

*** = Significant at 0.01 Level*

Table 6 shows the Repeated Measures of ANOVA for Before, After and Follow-up Phases in Verbal Analogy among Learning Disabled Girl Students. It clearly indicates that there was a very drastic change in the verbal analogy among Learning Disabled Girl Students. All the three types of intervention seem to have contributed equally to enhance the interest and knowledge towards verbal analogy. It all depends upon the individual's interest towards the subject. Schiff et al. (2009) investigated the analogical problem solving differences between children with Verbal Learning Disabilities and Non Verbal Learning Disabilities. Results indicated better recall of component stories by children without disabilities but no significant difference between Verbal Learning Disabilities and Non Verbal Learning Disabilities. Mayachandra (2012) selected 200 children from Bangalore by randomized controlled study, after baseline assessment; they were allocated to either yoga or a physical activity. Cognitive functions were assessed using an Indian Adaptation of Wechsler Intelligence Scale for Children at baseline. Results indicated that Yoga and Thoppukaranam was very effective in improving the cognitive performance in 7 to 9 year old school children.

Table 7: Pairwise comparison for Before, After and Follow-up Phases in Verbal Analogy among Learning Disabled Girl Students

Phases	Phases	Mean Difference	Standard Error
Before	**After**	-4.30*	0.22
	Follow-up	-5.98*	0.27
After	**Before**	4.30*	0.22
	Follow-up	-1.68*	0.15
Follow-up	**Before**	5.98*	0.27
	After	1.68*	0.15

**= Significant at 0.05 level*

Table 7 clearly indicates that there was a significant difference between Before, After and Follow-up Phases in Verbal Analogy among Learning Disabled Girl Students. It implies that the intervention has significantly contributed to the enhancement of verbal analogy after the learning-disabled girl students got exposed to Yoga with Thoppukaranam appears to have many benefits. Further the following Table gives additional information on the significant differences between the three phases and interventions.

Table 8: ***Post-hoc Comparisons for the Interventions in Verbal Analogy among Learning Disabled Girl Students***

Interventions	Interventions	Mean Difference	Standard Error
oga	**Thoppukaranam**	-0.09 N. S.	1.69
	Yoga with Thoppukaranam	-8.33*	1.69
Thoppukaranam	**Yoga**	0.09N. S.	1.69
	Yoga with Thoppukaranam	-8.25*	1.69
Yoga with Thoppukaranam	**Yoga**	8.33*	1.69
	Thoppukaranam	8.25*	1.69

** = Significant at 0.05 level N. S. = Not Significant*

Table 8 shows that Yoga with Thoppukaranam seem to have significantly contributed than the Yoga or Thoppukaranam alone. Therefore, the combined effect of the intervention will pave way to improve the student's vocabulary, verbal memory, and the ability to determine word relationships, as well as to comprehend ideas.

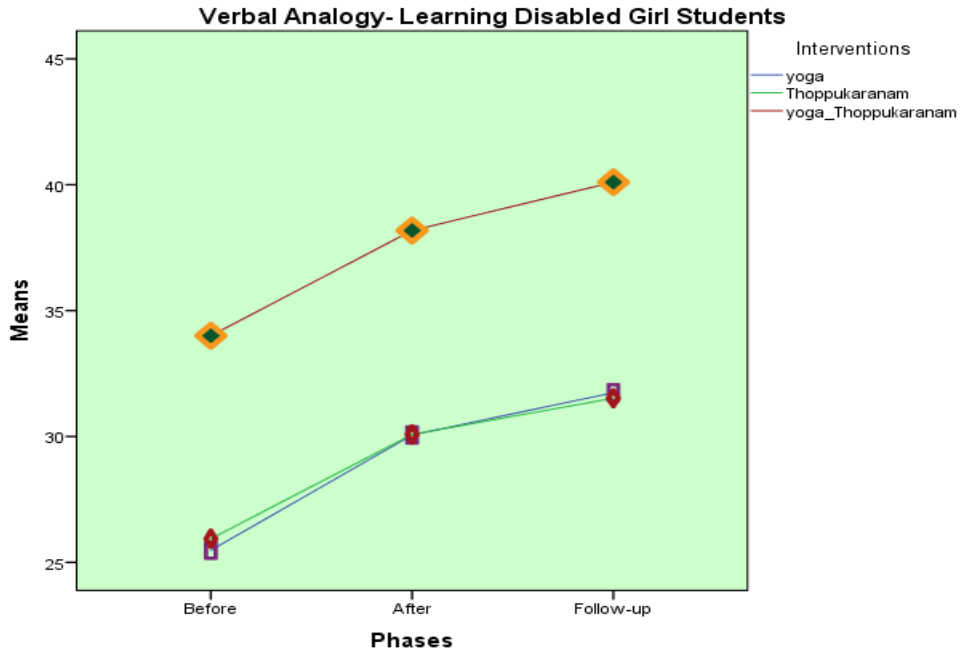

Figure 2. Verbal Analogy during Before, After and Follow-up Phases of Intervention among Learning Disabled Girl Students

Figure 2 shows that there was a significant difference between Before, After and Follow-up Phase in Verbal Analogy among Learning Disabled Girl Students. Yoga with Thoppukaranam played a major role in enhancing Memory, Attention and Confidence than Yoga and Thoppukaranam. Lipowska and Bluma (2018) conducted a study on Physical Activity and Cognitive functioning of children and the results suggested that children who engaged in sports and other physical activity positively influenced their cognitive and emotional functions. Cognitive functions were developed by sports skills and physical exercises. Practicing yoga has the ability to direct one's thinking in whatever direction one would intend. According to Modern Psychology, the mind cannot remain fixated on any solitary object for any considerable period. Rather, it must in some way remain moving, although the boundaries of that movement can be constrained. For instance, one remains "concentrated" on a book to the exclusion of all external attentions, yet that concentration is dynamic in the sense that one's mind is engrossed in the lively fantasy of the story, or intellectual analysis of the subject matter. The results showed that Yoga with Thoppukaranam showed a significant difference among Learning Disabled Girl Students. Hence the Alternative Hypothesis 5 "**There will be significant difference between Before, After and Follow-up Phases in Verbal Analogy through Intervention among Learning Disabled Students"** is accepted**.**

Table 9: Mean and Standard Deviation of Verbal Analogy in Before, After and Follow-up of Interventions among Normal Girl Students and Learning-Disabled Girl Students

Normal and Learning-Disabled Girl Students	Before			After		Follow-up	
	N	Mean	S. D.	Mean	S. D.	Mean	S. D.
Normal Girls	150	36.48	10.54	38.63	9.60	40.33	9.30
Learning Disabled	150	28.47	9.81	32.77	9.21	34.45	9.11

Table 9 shows the Mean and Standard Deviation for Verbal Analogy among Normal Girl Students and Learning Disabled Girl Students. Mean Value for Before, After and Follow-up phases of Normal Girl Students were 36.48, 38.63 and 40.33 and Learning Disabled Girl Students were 28.47, 32.77 and 34.45 respectively. There was an enhancement of verbal analogy in both the groups, whereas Learning Disabled Girl Students had better verbal analogy after the intervention.

Table 10: Repeated Measures of ANOVA for Verbal Analogy during Before, After and Follow-up of Interventions among Normal Girl Students and Learning Disabled Girl Students

Source		Type III Sum of Squares	df	Mean Square	F
Phases	**Sphericity Assumed**	3738.682	2	1869.341	556.801**
	Greenhouse-Geisser	3738.682	1.432	2611.440	556.801**
	Huynh-Feldt	3738.682	1.441	2593.646	556.801**
	Lower-bound	3738.682	1.000	3738.682	556.801**
Phases X Normal and Learning Disabled Girls Students	**Sphericity Assumed**	229.709	2	114.854	34.211**
	Greenhouse-Geisser	229.709	1.432	160.450	34.211**
	Huynh-Feldt	229.709	1.441	159.357	34.211**
	Lower-bound	229.709	1.000	229.709	34.211**

*** = Significant at 0.01 Level*

Table 10 shows the results of the Repeated Measures of ANOVA for Verbal Analogy among Normal Girl Students and Learning Disabled Girl Students. It can be understood that both the participants showed a great improvement with the help of the intervention during before, after and follow-up of intervention. Similarly there was a significant difference between the three Phases and the two groups of girl students.

Table 11: Pairwise Comparisons for Before, After and Follow-up Phases in Verbal Analogy among Normal Girl Students and Learning Disabled Girl Students

Phases	Phases	Mean Difference	Standard Error
Before	**After**	-3.22*	0.15
	Follow-up	-4.91*	0.19
After	**Before**	3.22*	0.15
	Follow-up	-1.69*	0.10
Follow-up	**Before**	4.91*	0.19
	After	1.69*	0.10

**= Significant at 0.05 level*

Table 11 shows the Pairwise Comparisons for Verbal Analogy among Normal Girl Students and Learning Disabled Girl Students. It shows that there was a significant difference between the three phases of intervention namely before and after intervention, after and follow-up and before and follow-up of intervention among the Normal and Learning Disabled Girl Students.

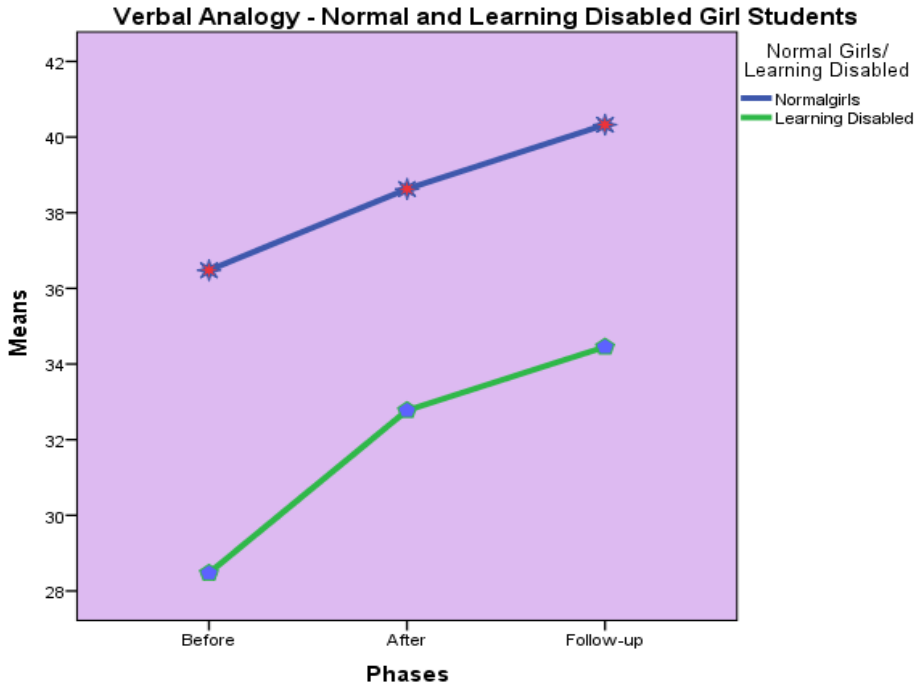

Figure 3: Verbal Analogy during Before, After and Follow-up Phases of Interventions among Normal Girl Students and Learning Disabled Girl Students

Figure 3 reveals that the interventions that were used had shown a highly satisfying result at the same time, compared to Normal Girl Students; Learning Disabled Students had a good improvement in Verbal Analogy. Normal Girl Students and Learning-Disabled students showed an improvement in the after phases as well as follow-up phases. The main cause could be that the Yoga and Thoppukaranam had helped in enhancing the brain process. The yoga which consists of pranayama that enhances the supply of oxygen to the brain helps the individuals to think and act smartly by the help of active brain functions. Brain imaging technologies have confirmed differences in brain function between dyslexics and normal brains. Hence Yoga aims to create awareness on Concentration, Memory Skills, Meta Cognitive Awareness which helps them to create insight into their own learning process. Hence the Alternative Hypothesis 6 "**There will be significant difference in Before, After and Follow-up Phases in Verbal Analogy among Normal Girl Students and Learning Disabled Girl Students through Intervention"** is accepted**.**

SUMMARY AND CONCLUSIONS

This study intended to explore the extent to which an Interventional Programme that can help the participants (Normal Girl Students and Learning Disabled Students) to learn the basic yogic squats and yoga to enhance their cognitive abilities both academically and socially. Researchers at the University of Illinois found that just eight weeks of Hatha Yoga improved cognitive functions within the brains of elderly individuals with sedentary lifestyles. The results of the study showed that the intervention to both Normal Girl Students and Learning Disabled Students were very much effective. Yoga and Thoppukaranam helps to increase the yogic systems. Body and mind are somehow connected to each other. Regularizing physical exercise not only detoxifies the body from used up energies and it also helps to increase the blood and energy circulation.

CONCLUSIONS

The following conclusions are drawn from the present study after analyzing the results through appropriate statistics:

- The Intervention programme was found to be effective in increase of intelligence level among Normal Girl Students and Learning Disabled Students.
- The Intervention programme was found to be effective in increase of Verbal Analogy among Normal Girl Students and Learning Disabled Students.

Implications

- The findings of the present research will enable policymakers in the school education to bring out such intervention programme mandatory to help children perform well in their academics.
- The School Education Department should bring out Yoga as a subject
- The Teacher Education Department should bring out a module in understanding, dealing reporting and counselling the students.

Limitations

- The Intervention programme did not include a control group, which could have helped to find accurate efficacy
- Only one follow-up was conducted after three months of intervention programme, whereas the second and third follow-up could have helped to understand the effect of the intervention over a longer period.
- The experimental design of the present study limited the inclusion of more number of participants.

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Acknowledgment

The author(s) appreciates all those who participated in the study and helped to facilitate the research process.

Conflict of Interest

The author(s) declared no conflict of interest.

How to cite this article: Yogeswarie, S. (2025). Efficacy of Thoppukaranam and Yoga for the enhancement of Verbal Analogy among Learning Disabled and Normal Girl Children. *International Journal of Indian Psychology*, *13*(3), 2778-2790. DIP:18.01.254.20251303, DOI:10.25215/1303.254