

# A Study to Identify the Cognitive Delay and Learning Difficulties by Using Wechsler Preschool and Primary Scale of Intelligence Among Children In Smvmch At Puducherry.

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## Abstract

Learning difficulty is a condition in the brain that causes difficulties comprehending or processing information and can be caused by several different factors. Given the "difficulty learning in a typical manner", this does not exclude the ability to learn in a different manner. The aim of present study is to identify the cognitive delay and learning disabilities. A quantitative research approach and descriptive research design was used for this study the 30 sample and selected with the use of purposive sampling technique. Sample consists of children are at the age of 5 to 7 years who fulfil the inclusion criteria, data collection was done with Wechsler preschool and primary scale of intelligence to identify the cognitive delay and learning difficulties. The result was concluded using descriptive and inferential statistics. In test 3(10%) children had extremely low level of intelligence, 3(10%) children had borderline level of intelligence, 2(6.7%) children had low average level of intelligence, 8(26.7%) children had average level of intelligence, 5(16.7%) children had high average level of intelligence, 5(16.7%) children had superior level of intelligence, 4(13.2%) children had very superior level of intelligence. The chi square revealed that has statistically significant association with religion have significant with chi-square value of ( $X^2 = 25.68$   $df = 12$ ) at  $p < 0.05$  level.

**Key words:** Learning Difficulty, Cognitive Delay, Intelligence & Quantitative.

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## I. INTRODUCTION

Learning disability, learning disorder, or learning difficulty LD (British English) is a condition in the brain that causes difficulties comprehending or processing information and can be caused by several different factors. Given the "difficulty learning in a typical manner", this does not exclude the ability to learn in a different manner.

According to WHO between 93 million and 150 million children live with a disability worldwide. The World Health Organization and the World Bank estimate that in some countries "being disabled more than doubles the chance of never enrolling in school". An estimated one in three out-of-school children have a disability. According to Indian journal of psychiatry the incidence of dyslexia in Indian primary schoolchildren has been reported to be 2%–18%, dysgraphia 14%, and dyscalculia 5.5%. India is thought to have approximately 90 million people with varying degrees of learning disabilities and an average class in school has about five students with learning disabilities.

### NEED FOR THE STUDY

#### AT INTERNATIONAL LEVEL

Children with learning disabilities account for **47%** of the total amount of them receiving special education. Boys account for about **66% of children** with a learning disability diagnosis. Over 18% of learning-disabled kids **drop out of school**. The three most common learning disabilities found in American children are **ADHD, dyslexia, and dysgraphia**.

#### **AT NATIONAL LEVEL**

According to Indian journal of psychiatry the incidence of dyslexia in Indian primary schoolchildren has been reported to be 2%–18%, dysgraphia 14%, and dyscalculia 5.5%. India is thought to have approximately 90 million people with varying degrees of learning disabilities and an average class in school has about five students with learning disabilities.

#### **AT STATE LEVEL**

According to “The Times of India” states that Tamil Nadu: New education scheme to bridge learning gap from 2022-2023 .To bridge the learning gap due to Covid-19 pandemic among primary students, the state government will implement "Ennum Ezhuthum Mission" from 2022-23 academic year to ensure all students up to eight years are able to read and possess basic arithmetic skills by 2025.

### **II. OBJECTIVES OF THE STUDY**

- To identify the cognitive delay and learning difficulties by using wechsler preschool and primary scale of intelligence among children 5 to 7 years.
- To associate the cognitive delay and learning difficulties by using wechsler preschool and primary scale of intelligence among children with their selected demographic variables.

### **III. REVIEW OF LITERATURE**

The literature directs the researcher in designing the study and interpreting the outcomes. The primary purpose is to gain broad background or understanding of the information that is available related to the problem. This helps the investigator to gain in-depth knowledge that is needed to make changes in practice and problem. The review of literature is organized and presented under the following headings.

Section A: Review related to cognitive delay and learning difficulties

Section B: Review related to Wechsler preschool and primary scale of intelligence

#### **SECTION A: REVIEW RELATED TO COGNITIVE DELAY AND LEARNING DIFFICULTIES**

Karande S et al., (2022) Cross-sectional single-arm questionnaire-based study was conducted a study on school students with specific learning disabilities have lower emotional intelligence abilities. The aim of the study was School students with specific learning disabilities endure academic difficulties, anxiety, and social maladaptation. Specific Learning Disabilities students studying in class standards VII–IX were recruited by non-probability sampling. To evaluate the unadjusted impact that each of the “variables” had on the FESEI-A scores, linear regression or the Mann-Whitney U test, or the Kruskal-Wallis test, was utilized as applicable. They concluded that urgent need to evaluate the EI abilities of Specific Learning Disabilities students to identify deficits so that optimum rehabilitation can be facilitated.

#### **SECTION B: REVIEW RELATED TO WECHSLER PRESCHOOL AND PRIMARY SCALE OF INTELLIGENCE**

Florence Renault et al., (2022) was conducted a study on Comparison of the Wechsler Preschool and Primary Scale of Intelligence-Third Edition and the Leiter-R Intellectual Assessments for Clinic-Referred Children. The study aimed to explore the associations and differences between two intellectual instruments, one verbal (WPPSI-III<sup>CDN</sup>) and the other completely nonverbal (Leiter-R), for children with developmental, emotional, or behavioral difficulties consulting in an early childhood psychiatric clinic. Results of the present study revealed significant differences in IQ scores between the two instruments, despite a strong correlation between children’s scores. These results must be replicated with newer versions of the instruments. Further research is needed to understand the nature of the discrepancies between the IQ scores found in this study and validate that these discrepancies could be attributed to the children’s verbal abilities. Time-consuming and more costly.

### **IV. MATERIALS AND METHODS**

A quantitative research approach and descriptive research design was used for this study the 30 sample and selected with the use of purposive sampling technique. Sample consists of children are at the age of 5 to 7 years who fulfil the inclusion criteria, data collection was done with Wechsler preschool and primary scale of intelligence to identify the cognitive delay and learning difficulties. The result was conducted using descriptive and inferential statistics.

**DATA COLLECTION TOOL**

According to the purposive sampling technique 30 samples were selected. After selection researcher will introduce herself to the participants. The next step of the researcher will collect the 11 demographic variables data from the parents.

Section A: This section consists of 11 Demographic variables such as Age, sex, Religion, residential area, type of family, birth order, class of studying, educational status of mother, mother’s occupation, family monthly income, level of ranking in school.

Section B: This section consist of Sub test questionnaire used to identify the cognitive delay and learning disabilities among children are at the age of 5 to 7 years. It contains 15 subtests and each correct answer will award 10 marks. Highest mark is (10) and lowest mark is (0).

After collection of demographic variables details researcher has administered the tool for the samples. After evaluation of the tool, level of learning difficulties identified by the researcher with the questionnaires tool.

**STATISTICAL ANALYSIS**

The data was analyzed by using both descriptive and inferential statistics. Parametric and non-parametric tests were used. The cognitive delay and learning difficulties among children was analyzed by using paired “t” test and chi square test is used to analyzing the association of the selected demographic data. A “p” value of <0.05 was considered to be statistically significant for the interpretation of results. The analysis and graphs are carried out in accordance with the above data for easy comprehension.

**V. RESULTS AND DISCUSSION**

The finding reveals that out of 30 children. In test 3(10%) children had extremely low level of intelligence, 3(10%) children had borderline level of intelligence, 2(6.7%) children had low average level of intelligence, 8(26.7%) children had average level of intelligence, 5(16.7%) children had high average level of intelligence, 5(16.7%) children had superior level of intelligence, 4(13.2%) children had very superior level of intelligence. The findings reveal that out of 30 sample, their mean, standard deviation value are 104.867, 22.624 are in the test, respectively. The chi square revealed that has statistically significant association with religion have significant with chi-square value of ( $X^2 = 25.68$ ,  $df = 12$ ) at  $p < 0.05$  level.

**SECTION A: Frequency and percentage wise distribution of demographic variables among children.**

n=30

DEMOGRAPHIC VARIABLES	FREQUENCY	PERCENTAGE
1. Age of the child (in years)		
a) 5years	12	40%
b) 6 years	5	16.70%
c) 7 years	13	43.30%
2. Sex		
a) Male	16	53.30%
b) Female	14	46.70%
3. Religion		
a) Hindu	25	83.30%
b) Christian	0	0%
c) Muslim	5	16.70%
4. Residential area		
a) Urban	15	50%
b) Rural	15	50%
5. Type of family		
a) Nuclear family	18	60%
b) Joint family	12	40%
6. Birth order		

a) 1	20	66.70%
b) 2	9	30%
c) 3	1	3.30%
d) Above 3	0	0%
7. Class of studying		
a) I standard	16	53.30%
b) II standard	10	33.30%
c) III standard	4	13.40%
8. Educational status of mother		
a) Illiterate	5	16.70%
b) Primary education	9	30%
c) Secondary education	5	16.70%
d) Graduation and above	11	36.60%
9. Mother's occupation		
a) Private sector	6	20%
b) Government sector	1	3.30%
c) Housewife	23	76.70%
10. Family monthly income		
a) Below Rs.5000	1	3.30%
b) Rs.5000 - Rs.10000	17	56.70%
c) Rs.10000 - Rs.20000	10	33.30%
d) Above Rs.20000	2	6.70%
11. Level of ranking in school		
a) 1 – 5 rank	17	56.70%
b) 6 – 10 rank	7	23.30%
c) Above 10 <sup>th</sup> rank	6	20%

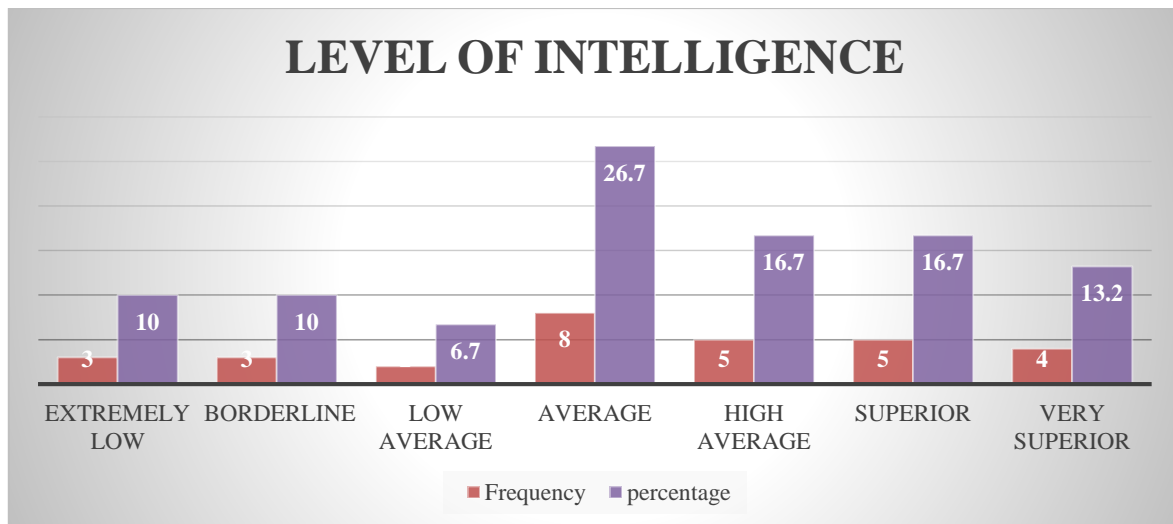
**SECTION B: Frequency and percentage wise distribution of level of intelligence regarding cognitive delay and learning difficulties among children.**

n=30

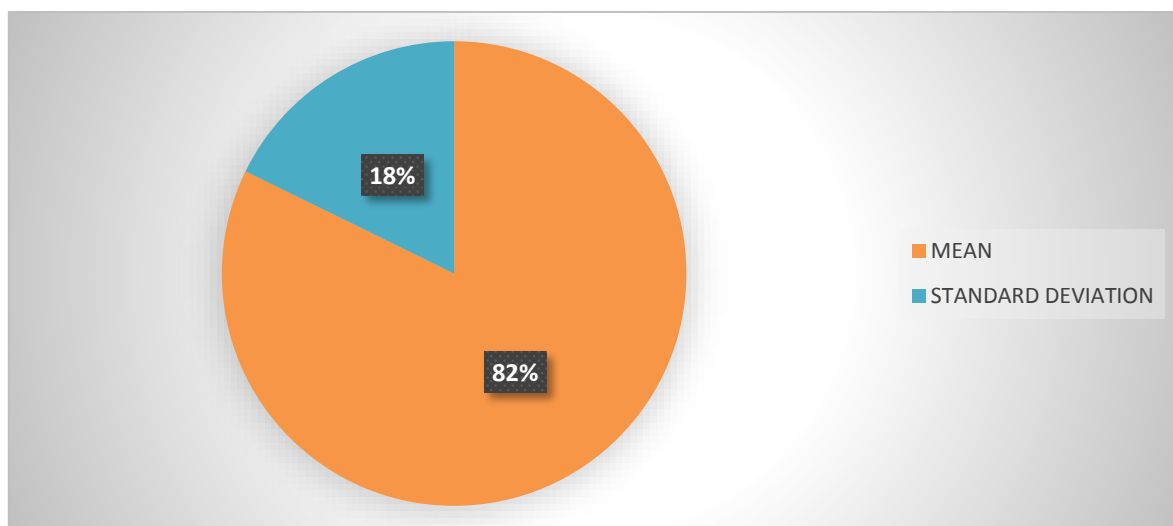
S.NO	LEVEL OF INTELLIGENCE	F	%
1.	Extremely Low	3	10
2.	Borderline	3	10
3.	Low Average	2	6.7
4.	Average	8	26.7
5.	High Average	5	16.7
6.	Superior	5	16.7
7.	Very Superior	4	13.2

This table shows that shows that frequency and percentage wise distribution of learning difficulties among children. It reveals that, 3(10%) children had extremely low level of intelligence, 3(10%) children had borderline level of intelligence, 2(6.7%) children had low average level of intelligence, 8(26.7%) children had average level of intelligence, 5(16.7%) children had high average level of intelligence, 5(16.7%) children had superior level of intelligence, 4(13.2%) children had very superior level of intelligence.

**Fig 1: Frequency and percentage wise distribution of level of intelligence regarding cognitive delay and learning difficulties among children.**



**Fig 2: The finding reveals that mean and standard deviation to identify the learning difficulties among children. Whereas the mean value is 104.867 with the standard deviation value is 22**



## VI. CONCLUSION

The finding reveals that out of 30 children. In test, reveals that, 3(10%) children had extremely low level of intelligence, 3(10%) children had borderline level of intelligence, 2(6.7%) children had low average level of intelligence, 8(26.7%) children had average level of intelligence, 5(16.7%) children had high average level of intelligence, 5(16.7%) children had superior level of intelligence, 4(13.2%) children had very superior level of intelligence. The study result shown that the P value for religion at  $p < 0.05$  level is statistically significant respectively. After that the researcher found that learning difficulty she distributed key answer to children to know the answer of the test.

In conclusion, it was evident that Wechsler preschool and primary scale of intelligence is very effective to identify the cognitive delay and learning difficulties.

## NURSING IMPLICATION & EDUCATION

- The study had implications for nursing education, nursing administration, and nursing research.
- One of the leading functions of nursing is imparting education. Nursing students can achieve knowledge regarding the Wechsler preschool and primary scale of intelligence. Thereby it can help the children to identify the learning difficulties.

## **NURSING ADMINISTRATION & PRACTICE**

- The nursing administration should take on active role in organizing and implementing thought formal organizational policies and procedures in the hospitals, will improve nurses in delegating the work in quality, commitment to organization and conducting a mass media communication regarding cognitive delay and learning difficulties.
- The expanded role of the professional nurse emphasizes the activities, which promote health and preventive behavior among people. Since learning difficulties is a very serious problem in children, every nurse should make use of these results to update their knowledge and make use of every opportunity to improve their knowledge.

## **NURSING RESEARCH & RECOMMENDATIONS**

- The effectiveness of the research study was verified by its utility by the nurses in the practical field. The findings of the study also help the professional nurses and students to develop enquiry by proverb and provides a base. This study helps the nurse researchers to develop the positive impact about the Wechsler preschool and primary scale of intelligence. Thereby it can help the children to identify the learning difficulties.

### **On the basis of the findings of the study, the following recommendations have been made:**

- Similar study can be conducted in other parts of the country with large sample.
- The study can be replicated with larger samples for better generalizations.
- The study can be implemented at the various states of India.
- The same study can be conducted in different settings.

## **REFERENCES**

### **BOOKS REFERENCE:**

- [1]. Assumabeevi, T. M. "Textbook of pediatrics nursing", reed Elsevier India private limited.
- [2]. Datta Parul. "pediatric nursing". 2nd edition, published by jaypee.
- [3]. Goel Kishna M. "Hutchinson's pediatrics, (2009) published by jaypee brothers (p) ltd.
- [4]. Gupta Piyush. "Essential pediatric nursing", 2nd edition, published by CBS and distributors.
- [5]. Gupta Suraj, "The short text book of pediatrics", 11th edition, published by jaypee brothers medical pvt.ltd.
- [6]. Hayfield Nancy.T."Broadribb's introductory pediatric nursing. published by lippincott's practical nursing.
- [7]. Kliegman, "Nelson textbook on pediatric", 18th edition, volume-1 (2008), published by saunders Elsevier.
- [8]. kyle Terri, "Essentials of pediatric nursing", 1st edition (2009), published by Walter Kluwer (India) pvt. ltd, New Delhi.
- [9]. Manivannan.c. "Text book of pediatric nursing", published by Emmess.
- [10]. Manojyarav. "A text book of child health nursing with procedures", edited by R.K. Gupta, published by P.V. Books.
- [11]. Marino Bradley S.. "Blueprints of pediatrics", 4th edition. published by Lippincott Williams and wilkins, wottersklumers business.
- [12]. Moralo. "Text book of pediatric nursing". 2nd edition, published by Elsevier pvt.ltd.
- [13]. Parthasarathy A, "TAP text book of pediatrics", 4th edition, published by Jaypee brothers medical publishers (p) ltd, new delhi.
- [14]. Sathyavathy.G et.al, research in biomedical, healthcare and pharmaceutical science, Bhumi Publishing, India, (ISBN: 978-93-88901-88-8), First Edition: September, 2023, Page no:116-121.
- [15]. Sharma Madhu. "Basic pediatric nutrition". publication by jaypee, brothers (p) ItdZ.
- [16]. Williams Lippincott & Wilkins, "Text book of Maternal - Neonatal Nursing", published by Jud.th A. Schilling.
- [17]. Wilson and Ross," anatomy and physiology", published by evalove, new delhi.
- [18]. Wong's, "Essentials of pediatric nursing" 7th edition, published by Mosby an imprint of Elsevier.

### **JOURNAL REFERENCE**

- [19]. Abdo Hasan AL-Qadri et.al. The prevalence of the academic learning difficulties: An observation tool Volume 7, Issue 10, October 2021, e08164.
- [20]. Florence Renaud et.al, Comparison of the Wechsler Preschool and Primary Scale of Intelligence-Third Edition and the Leiter-R Intellectual Assessments for Clinic-Referred Children volume 40, issue7, may 2022.
- [21]. Neena sawney et.al. Study of awareness of learning disabilities among elementary school teachers (2014).
- [22]. G.Muthamilselvi et.al, Sibling Rivalry, TNNMC journal of obstetrics and gynaecological Nursing 4(2), 31-34.
- [23]. G. Muthamilselvi et.al, views and preference about team based learning, Sri Sarada journal of frontiers of knowledge, 6 (3), 1- 32.
- [24]. Sathyavathy.G et.al, IOSR Journal of Nursing and Health Science (IOSR-JNHS) e-ISSN: 2320-1959.p- ISSN: 2320-1940 Volume 12, Issue 3 Ser.3 (May. – June. 2023), PP 24-31
- [25]. Sathyavathy.G et.al, Effectiveness of Jacobson's Progressive Muscle Relaxation Technique (JPMRT), JJTU Journal of Renewable Energy Exchange, Volume 11 Issue 1 (2023), PP 34-42Sheetal Sharma, A study of identification of Learning Disabilities among Elementary School Students inJammu Province of Jammu & Kashmir State- An issue in Early Education, volume 7 issue 11, November- 2017.
- [26]. Wahlstrom, D., Breaux, K. C., Zhu, J., & Weiss, L. G. (2012). The Wechsler Preschool and Primary Scale of Intelligence-Third Edition, the Wechsler Intelligence Scale for Children-Fourth Edition, and the Wechsler Individual Achievement Test-Third Edition. In D. P. Flanagan & P. L. Harrison (Eds.), Contemporary intellectual assessment: Theories, tests, and issues (pp. 224-248).

### **NET REFERENCE**

- [27]. [https://en.wikipedia.org/wiki/Learning\\_disability](https://en.wikipedia.org/wiki/Learning_disability)
- [28]. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8860125/>

- [29]. <https://www.intechopen.com/chapters/70116>
- [30]. <https://www.sciencedirect.com/science/article/pii/S2405844021022672>
- [31]. <https://files.eric.ed.gov/fulltext/ED615538.pdf>
- [32]. <https://journals.sagepub.com/doi/full/10.1177/07342829221105388>
- [33]. <https://www.tandfonline.com/doi/abs/10.1080/21683603.2017.1302851>
- [34]. <https://psycnet.apa.org/record/2012-09043-009>
- [35]. <https://pubmed.ncbi.nlm.nih.gov/34174557/NEED>
- [36]. <https://www.ijpn.in/article.asp?issn=22311505;year=2021;volume=18;issue=1;spage=23;epage=28;aulast=Goel;type=>
- [37]. <https://www.icalcu.com/stat/chisqtest.html>