

# Statistics Of Transition from Multidisciplinary Therapy Session to Normal School in Children with Disabilities-A Descriptive Study

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## Abstract

Children with disabilities “include those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis”. Children with disabilities are a highly diverse population group. Analysis of data in the [2021 UNICEF report on children with disabilities](#) and [MICS-EAGLE factsheets](#) reveals that in many countries, across all education levels, children with disabilities are more likely to be out of school than children without disabilities. This statistical study includes 3801 children with disabilities in Cross Disability Early Intervention Centre,NILD,who underwent multidisciplinary therapy approach from Occupational Therapist, Physiotherapist, Speech language Therapist,Special Educators and Clinical Psychologist.From 3801 children 101 children was found to be eligible for the transition to Transdisciplinary Therapy Approach and again 30 children from Transdisciplinary group session was eligible for the transition to School Readiness Program and few from there opted to normal school.Treatment Protocols used by Occupational Therapist,Physiotherapist and Special Educators for the transition from Multidisciplinary to Normal School are specified in the study.

This study shows the descriptive statistics concerning the percentage of transition of children with disabilities to normal school after Intervention by Rehabilitation Professionals in Cross Disability Early Intervention Centre.

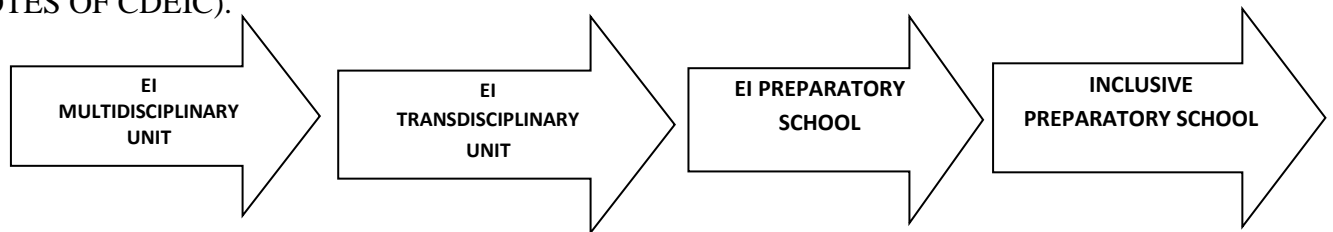
**Keywords:** Crossdisability, EarlyIntervention, Multidisciplinary, Transdisciplinary

## Background

World Health Organization (WHO) defines disability as impairment, limitation, or restriction in activity caused mainly by health issues and environmental factors(1,2,3).Census 2011 and recently held 76th round of the National Sample Survey (NSS) estimates the prevalence of disability was 2.2% in India.(4,5). According to a recent UN report, 75 per cent of children with disabilities in India do not

attend any educational institute in their lifetime. This is despite the existence of a seemingly comprehensive policy on education with provisions to make the Indian education system inclusive.

Birth to 5years is said to be truly magical and golden period as child's most of the physical growth and cognitive development takes place during this time. The recently formulated National Education Policy(2020) by Govt of India has also emphasised that the early childhood education and the foundational literacy skills will pave the way for achieving the sustainable development goal quality education for all for an inclusive development. The Cross Disability Early Identification and intervention are aimed to provide a one stop facility for children with various disabilities in different phases(SOP NOTES OF CDEIC).



#### **Aim & Objectives of the study are as follows:-**

- To evaluate the descriptive statistics of transition from multidisciplinary to normal school
- To find out the protocol of intervention used for the transition

#### **Method**

This research used a sample of 3801 children males and females aged 0-6years from Cross Disability Early Intervention Centre, National Institute For Locomotor Disabilities, Kolkata. The data were taken from the documentation taken since 2021 to 2023. Protocols used for the transitions were collected from Occupational Therapist, Physiotherapist and Special Educator.

##### Method of Documentation

The children coming to Cross Disability Early Intervention Centre were first provided the EI Number through registration and information sheet. They start undergoing multidisciplinary therapy approach consisting of Physiotherapy, Occupational Therapy, Special Education, Speech and Language Therapy and Behavioural Modification as an individual session. Once the eligibility criteria is achieved, the child is shifted to Transdisciplinary Therapy Group where all the professionals together participate in the all round development of the child. Again after achieving the eligibility to transit to School readiness programme few children are shifted and thereafter become fully independent in participating in normal school.

##### Criteria for transition

Transferring the child from one to other services as per the child's requirements or any associated factors. It is important for transition to build relations to other professionals and discuss the child's report and explain the type of services required by the child.

#### **I Accomplishment of Early Intervention course:-**

- When child requires to be admitted in preschools
- When child accomplishes the set goals
- When child requires to be indulged in other social activities/groups/vocational center/ICD's/Aanganwadi for his/her improvement
- When child can be given home based intervention

**II By choice of professionals:-**

- When child requires to be indulged in other medical services/social activities/groups/vocational center/ICD’s/aanganwadi for his/her better improvement
- If child have a good graph of progress
- Functional level and requirements of the child should be explained to other service providers

**III By default,or due to some challenges**

- Transfer from present state/city to another state/city
- Transportation facilities not available from their area to our centre
- Outstation beneficiaries
- Due to parental busy lifestyle

**Following steps are considered and taken care before transition:-**

- Planning for transition to mainstream school
- Readiness of schools for inclusion
- Facilitating admission to mainstream inclusive school
- Linkages with mainstream inclusive school
- Readiness skill development for hool inclusion
- Follow up services

**PROTOCOLS USED FOR TRANSITION FROM TRANSDISCIPLINARY THERAPY SESSION TO NORMAL SCHOOL**

Protocol for transition depends on the condition of the patient.

For transition from Transdisciplinary Group session to School Readiness and then to normal school

**Physiotherapy Protocol:-**

A stable trunk allows for the development of the child’s social, cognitive, and communicative skills by increasing orientation of the child to environment and proceeding towards inclusive training.

**Physiotherapy protocol included are following:**

- Vestibular and proprioceptive training on balance board and different sized exercise balls
- Dynamic balance training in sitting, kneeling and standing position through functional reaching activities and ball throwing
- Balance exercises in front of the mirror on the trampoline and balance board
- Weight bearing exercises in sitting, crawling, kneeling and standing position
- Gross motor activities of upper limb
- Lower extremity motor activities(11,12)

**Occupational Therapy Protocol:-**

Sensory diet is provided for ASD/ADHD cases-

SLNO.	INTERVENTION	QUANTITY	TIMES
1.	SWING	Forward and sideways 20times each	3times a day
2.	SENSORY MAT	Hand wiping and walking	3times a

		20times each	day
3.	PROPRIOCEPTIVE TRAINING	Gymball Activities Rope Ladder Activity 10times each	3times a day
4.	COGNITIVE & PERCEPTUAL ACTIVITIES	<ul style="list-style-type: none"> <li>• Maze activities</li> <li>• SimpleMathematical calculations</li> <li>• Simple logical reasoning through activities</li> <li>• Colour and Shape perception board activities</li> <li>• Peg board Activities</li> <li>• Proper Reinforcements during the activities</li> </ul>	2 times a day
5.	VISUAL PROCESSING ACTIVITIES	Different coloured projections	1time a day
6.	AUDITORY PROCESSING ACTIVITIES	Calm slow music to be involved in the diet after waking up	2times a day

Ref:-15

**ADL training** is advised for all other cases and home advice for the same is given.

**Special Education Protocol**

Criteria for School readiness program

- Child age must be above 3years
- Child must sit in class without parent
- Child must sit without support or with help of CP Chair
- Child IQ not below moderate level
- Child must have grasping power
- Child can actively participate in group activity

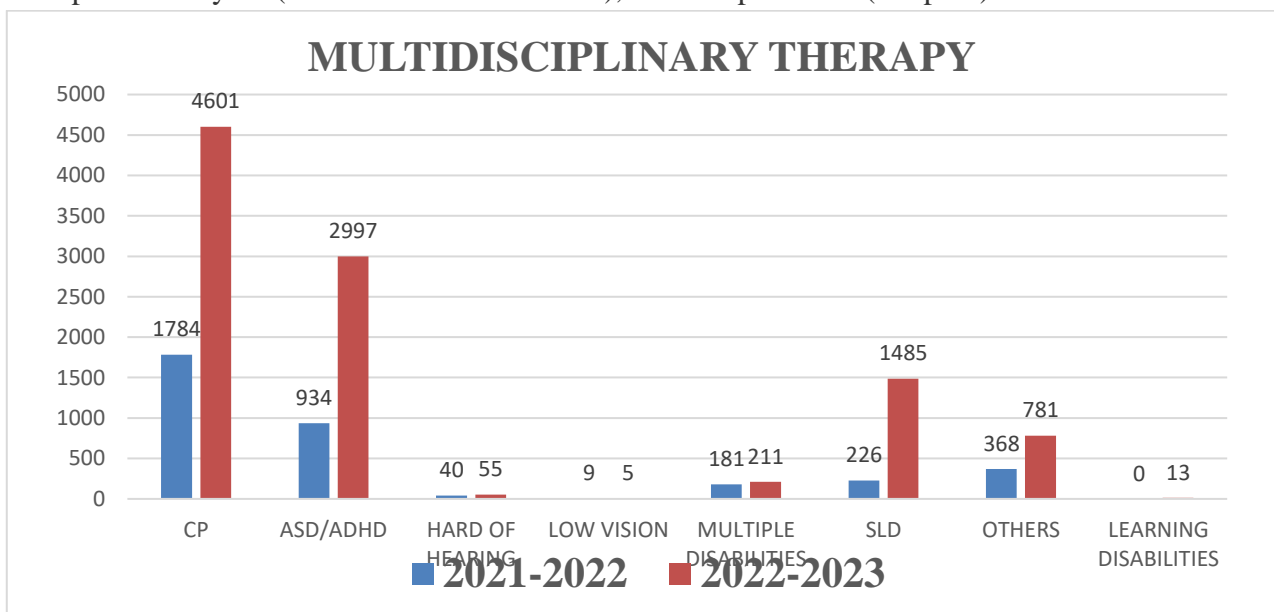
Domains	Activities	Times
Physical Domain	Shape Board Activity Beads Activity Ball passing Activity Staking	10mins/2times a day

Cognitive Domain	<p>Exercise book</p> <p>Pre writing Activity</p> <ul style="list-style-type: none"> <li>• Colouring</li> <li>• Tracing</li> <li>• Dot joining</li> <li>• Copying</li> <li>• Without coping</li> <li>• Matching</li> </ul> <p>Pre reading Activity</p> <ul style="list-style-type: none"> <li>• Pointing</li> <li>• Matching</li> <li>• Identification</li> <li>• Sorting</li> </ul> <p>Followed by reading and writing activities</p> <p>Pre Arithmetic</p> <ul style="list-style-type: none"> <li>• Sorting, matching and identifying numbers, coins, notes etc</li> <li>• Counting</li> </ul>	30mins/2times a day
Social Domain	<p>Wait for turn</p> <p>Sharing</p> <p>Interaction</p> <p>Instruction Follow</p>	20mins/1 time a day
Emotional Domain	Hidden curriculum	30mins a day

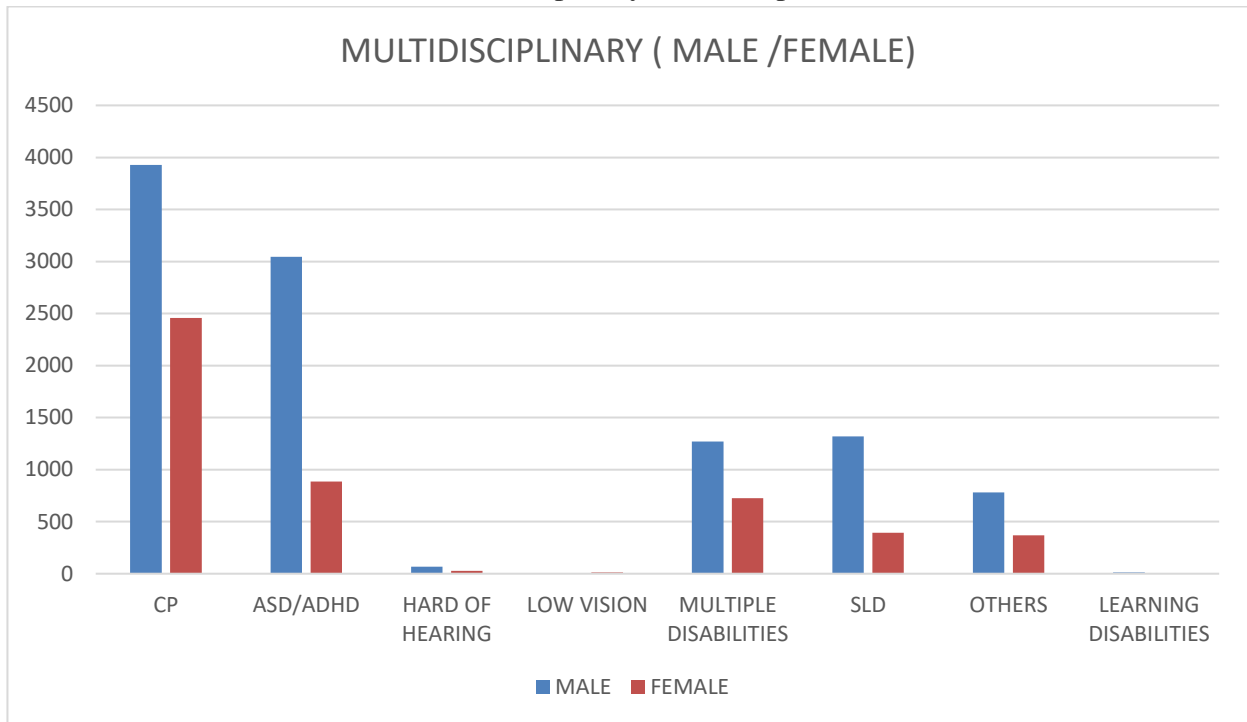
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**Statistical Analysis**

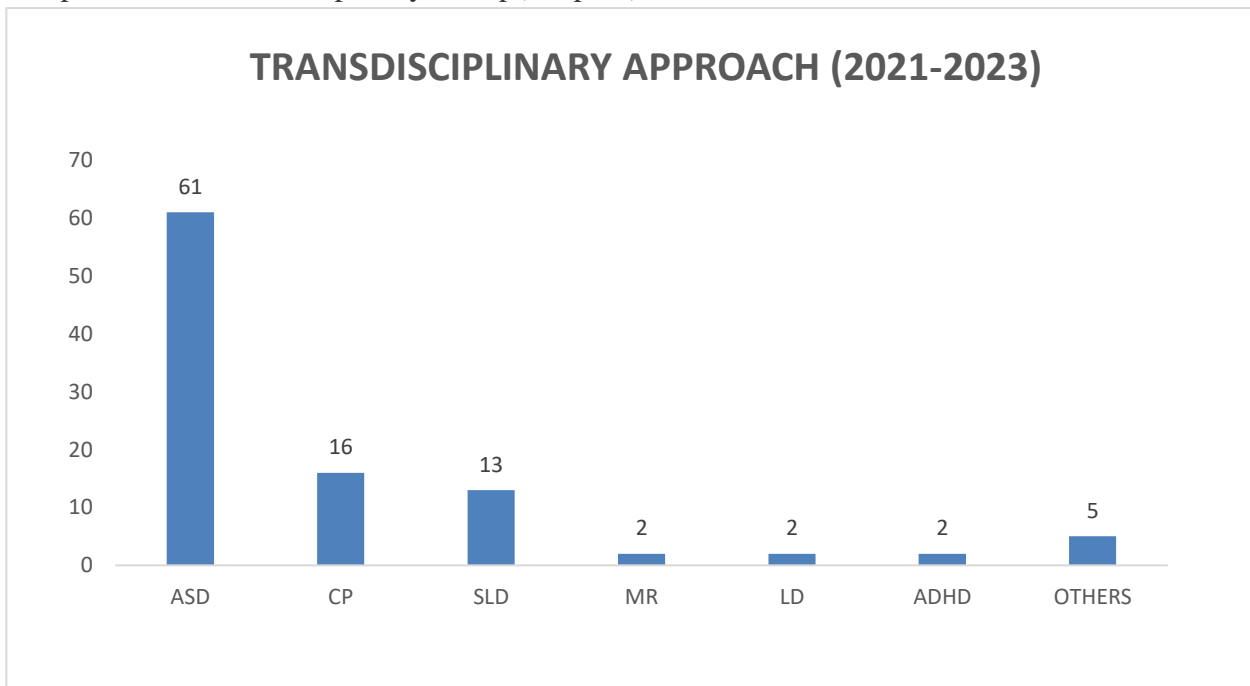
Data of patients in year (2021-2022 & 2022-2023),Follow up services(Graph 1)



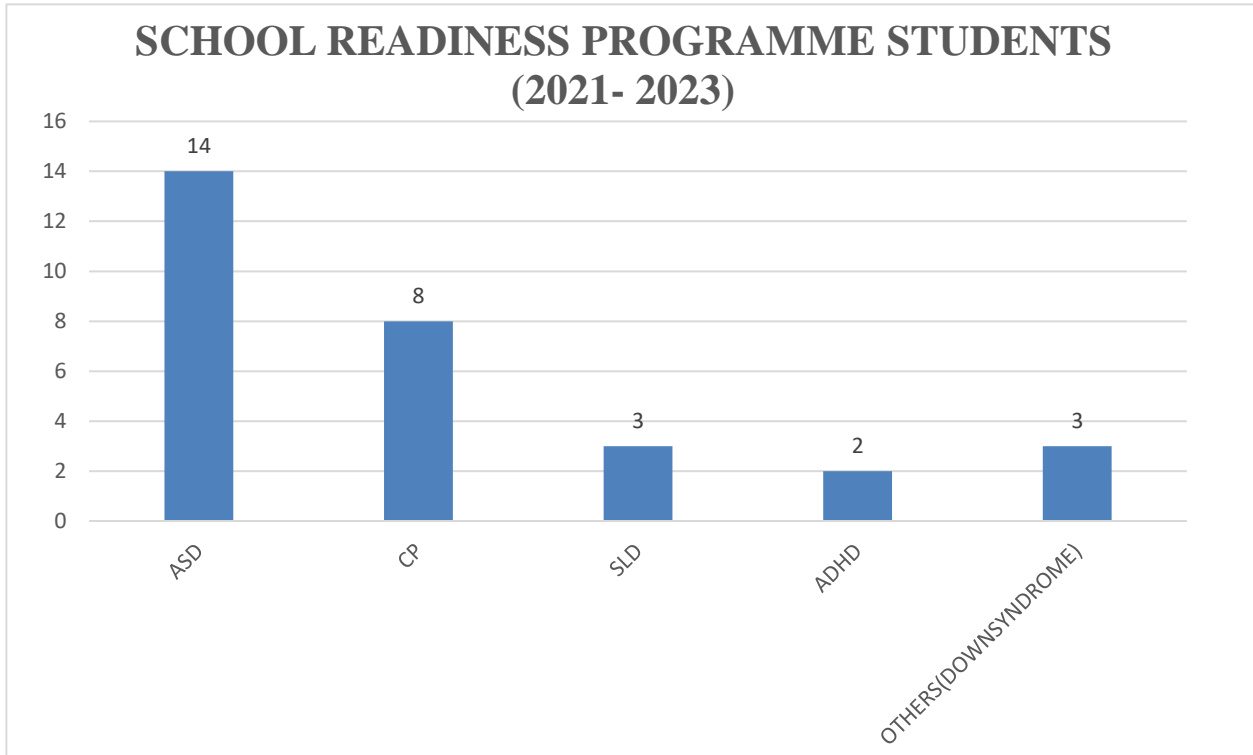
Data of male and female children in Multidisciplinary Unit (Graph 2)



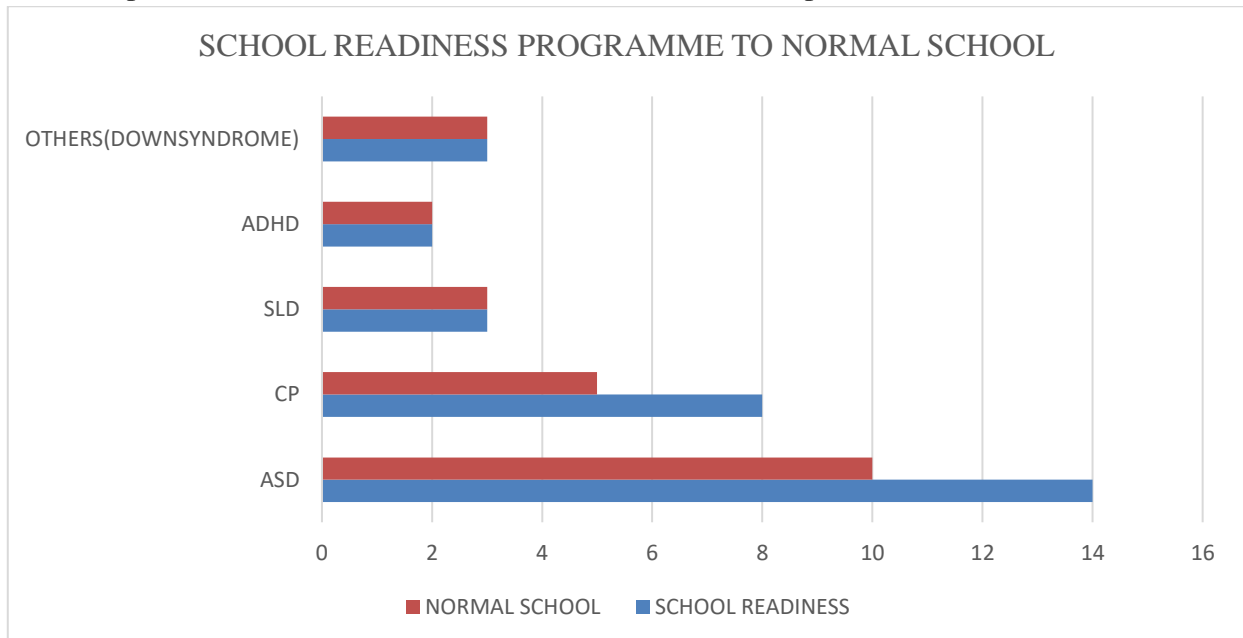
Data of patients in Transdisciplinary Group(Graph 3)



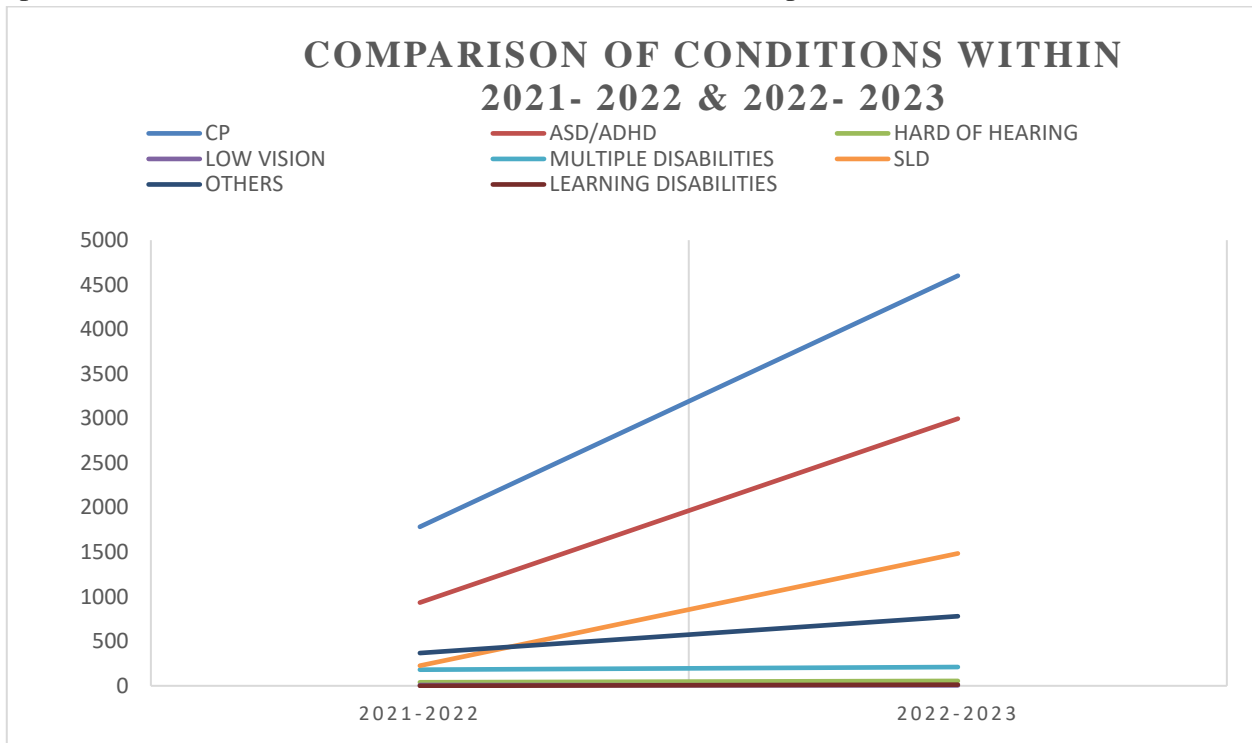
Data of patients in School Readiness Programme(Graph 4)



Transition of patients from school readiness to normal school (Graph 5)



Comparison of conditions within 2021-2022 and 2022-2023(Graph 6)



### Discussion

Transdisciplinary Service is defined as the sharing of roles across disciplinary boundaries so that communication, interaction and cooperation are maximized among team members. Three essential and unique operational features are: -Arena Assessment, Intensive ongoing interaction and role release(6). School readiness is a measure of the preparedness of a child, with age-appropriate physical and emotional wellbeing as well as social, language and cognitive or intellectual competencies to succeed in school. School readiness comprises three interconnected dimensions: the readiness of the individual child for primary school enrolment and participation; the school's readiness to provide optimal learning environment for the child; and family and community supports that contribute to child readiness for school(7).

Graph 1 represents the data of the patients throughout 2021 to 2023 coming to CDEIC, NILD which shows there was significant rise in cases including **Cerebral Palsy(CP)**, **Autism Spectrum Disorder(ASD)**, **Attention deficit hyperactive disorder(ADHD)**, **Hard of Hearing(HH)**, **Low Vision(LV)**, **Multiple Disability(MD)**, **Speech language Deficit(SLD)**, **Learning Disability(LD)**, **Others(O)**. Graph 2 represents the ratio of male and female in Multidisciplinary therapy sessions. All the conditions in the graph depicts male disability predominates female disability which concludes males are more affected than female. Graph 3 manifest the number of children moved to transdisciplinary therapy session and Graph 4 represents the number of children moved from transdisciplinary therapy session to school readiness programme. Out of 3801 children 61 ASD, 16 CP, 13 SLD, 2 MR, 2 LD, 2 ADHD, 5 O was eligible to be shifted to transdisciplinary therapy session, again 14 ASD children from 61, 8 CP from 16, 3 SLD from 13, both the 2 ADHD, 3 others(Downsyndrome) from 5 were eligible to shift from transdisciplinary therapy session to school readiness programme. Graph 5 shows the transition of children with disabilities from school readiness to normal school. 23%(14/61) of



ASD,50%(8/16) of CP,23% of SLD,100% of ADHD,60% of Downsyndrome children was eligible of going to normal school from school readiness programme.This accords with the result given by Katherine C, Cynthis V et al in a pilot study which concludes that School Readiness Programme in Low income children lead to admission in Normal School.(8)Graph 4 states that disabilities in male is more than female which accords with the result given by Rachel Lomes et al in a metaanalysis of children meeting criteria for ASD, the true male-to-female ratio is not 4:1, as is often assumed; rather, it is closer to 3:1.(9)Again another study in India by V.H Ramanandi et al suggests that Cerebral Palsy is more in Male children than in female.(10) Graph 6 represents the comparison between the conditions throughout 2021-2022 and 2022-2023.It shows that there is significant rise in CP and ASD conditions compared to others.

### Future Recommendations

A RCT study can be done to find the effect of protocols used by CDEIC professionals on children to achieve independent life and to reach a normal school.

Other Therapy protocols for the transitions can be added.

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