

Impact of IEP given to CWID at the Time of Joining and Interim Stage of Special Training

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Abstract: The present study aimed to find out the difference between two stages i.e., joining and interim stages of special training through **IEP (Individualized Educational Programme)** given to **Children With Intellectual Disabilities (CWID)**. The sample consisted of 353 children with intellectual disability undergoing special training at Bavitha Readiness Centers in Chittoor district, Andhra Pradesh, India. The results of IEP training given to CWID is measured through Madras Development programme system (MDPS, Prof.P. Jayechandran, et. al,1968). The concerned mean scores were computed and compared at two stages of special training given to children i.e., at the time of joining and after two years of training with paired t-test of significance. The findings revealed that the overall score as well as its 14–scales score of special training (IEP) improved after providing 2 years of special training to the children as compared to the time of joining the school.

Keywords: Children with Intellectual Disability (CWID), Special training, IEP (Individualized Educational Programme), joining & interim stage.

1. INTRODUCTION

A major goal of special education is to enable special children to live in the most independent way possible. Its scope is very wide it provides several types of services and training programmes from early intervention to vocational placement. In this purview, Individual Education programme is the most suitable one to make the CWID towards independent from dependency. The major aim of implementing IEP is to provide need based and age appropriate training to every child with mental retardation. As IEP is prepared by a team of professional experts and parents to meet unique needs of children with mental retardation, the intervention programming is implementing effectively after systematic planning. To provide IEP, the background information of the child and assessment and comprehensive evaluation are to be done effectively Sinshu, (2007) & Krishnakumar et al. (2006). Training of children with mental retardation as well as parents plays an important role in shaping their behaviour for the better development of children. Around the world in different settings, such training was used an intervention strategy in different dimensions. There are studies related to social skills of children with intellectual disability (Behroz-Sarcheshmeh et al. (2017); John, (2017); Barati et al., (2012); Umadevi & Sukumaran, (2013) computer assisted learning enhances reading skills

(Mosito et al. (2017); Rahimi & Donyaie, 2016; Alnahdi (2015) parental training helped their children to learn functional skills and work readiness skills (Moshin et al (2015); Vanitha & Ramaa (2013). Ruteere et al. (2015) tried to establish the challenges encountered when teaching Daily living skills (DLS) to learners with Mental Retardation (ID). Hosseinkhazadeh, (2014); Ahmad et al., (2013) & Ho (2013) considered identification of social skills deficits as important component and the training of social skills shows positive effects which helps to decrease in aggression of mentally retarded children and also group learning experience were especially effective in social skills learning. Idrees & Faize (2014) reported that through Individualized Educational Plan (IEP) incorporating different techniques of Behaviour Therapy.

2. Methodology

2.1: Objectives of the Study:

- To study the socio-demographic profile of the Children with Intellectual disability (CWID) and their parents selected for this study.
- To compare the mean scores of IEP and its sub-scales at the time of joining and interim stage of special training given to CWID.
- To examine the association of IEP of CWID at the time of joining the school and interim stage of special training given to CWID with the selected socio-economic characteristics of CWID.

2.2 HYPOTHESES

- There will be a significant association between the socio-economic characteristics of CWID, and IEP at the time of joining school and interim stage of special training given to CWID.
- There will be a significant change in mean scores IEP of CWID during the period of joining the school and interim stage of special training given to CWID across the categories of socio-economic characteristics of CWID.
- There will be a significant association between Socio- economic characteristics of CWID, and change observed in IEP during the period of joining the school and interim stage of special training given to CWID.

2.3. Procedure

The present article (which is an extract from the author's doctoral thesis) was principally bent upon the Descriptive research design as most of the information is related to the socio demographic characteristics of CWID and IEP (Special training), however, this is also supported by Analytical design (Statistical analysis).

2.4. Participants

Parents of the CWID studying in Integrated Education Resource (Readiness) centre (IERCs) were the study population for this study. The resource centres were called as "Bavitha

Readiness Centres” in Chittoor district, Andhra Pradesh, India. For each and every Mandal head quarter equipped with one resource centres, which located in the premises of Government High schools, totally there were 66 Readiness Centres in the Chittoor district. These centres are potentially ready with suitable resource material to give special training to the children with intellectual disabilities and on the other hand specially trained teachers in specific disability (Diploma/Bachelor’s degree in Special Education in Intellectual disability) appointed to train the CWID.

The sample was selected based on stratified disproportionate technique at each Mandal level. In this process, the total sample selected for this study came to 353 CWID – 133 from Madanapalle Division, 94 from Chittoor Division, and 126 from Tirupati Division. Further, the point to be noted here that the total sample size appears to be little bit higher over the required size (as per Krejcie & Morgan’s (1970) sample determination), such higher sample size may result into statistically fairly accurate results.

2.5. Data collection instruments.

1. Socio – demographic Schedule: This socio – demographic schedule was developed for getting background information of children with intellectual disabilities and parents. This information schedule was used for getting background information of CWID and parents. The information mainly includes CWID’s age, gender, education, living residence, educational level, level of intellectual disability and associated conditions. In the same way parent’s age, education, occupation, and family income along with type of family, the status of family and consanguinity, and history of ID in the family was included in the schedule.

2. Individualized Education Programme Inventory: In the present research work, for measuring the IEP of children, the *Individualized Education Programme Inventory* is adopted, which has been developed as by Prof. P. Jeyachandran and Dr. V. Vimala, attached to Vijay Human Services, Madras (1968), popularly known as *Madras Developmental Programming System (MDPS)*. This tool is noted to be used widely used in the field of special education to assess the behaviour of the children with mental retardation while they were undergoing the special training. However, the researcher has made use of the fifth revised version developed in 1992 with modification. Originally, the MDPS contains 360 activities used to be performed by special education children (CWID) under 18 domains. But, in the present research work, the researcher has modified it into 101 activities (statements) under 8 domains and 14 sub-scales. The information is elicited from the parents of the children on 5-point Likert type scale with scoring pattern of ‘1’ for responses such as ‘Fully Independent’ and ‘5’ for ‘Total Dependent’ (positive scoring) in performing various day-to-day activities by the CWID. The total or cumulative score derived for each respondent forms children’s extent of IEP and as the scoring pattern of items is positive type, based on the cumulative score of the respondent, one can locate them on IEP to children continuum. Further, based on this pooled score, one can interpret that the higher the score, the higher would be the IEP to children and vice versa. The computed Chronbach’s Alpha (α) – values for the total sample of CWID at the time of joining and interim stages of special training are 0.954 and 0.949. These figures indicate that the

statements (activities) considered for the measurement of IEP to sample children are noted to be having higher reliability.

2.6. Data Analysis.

Data analysis was done by the researcher on the following lines. At first, frequency tabulations were done to understand the nature of all data under study viz., socio demographic characteristics of the CWID, parents, besides the data collected through Individualized Education Programme Inventory of CWID. Information related to IEP was analysed to measure the special training given to the CWID during joining and interim stage. In addition to these, the change (the difference between the cumulative scores arrived at the joining and interim stage of training). From all the nine cumulative scores (two cumulative scores and one change in a cumulative score for the particular domains; $1 \times 2 = 2$) were taken into consideration as another dependent variable in this study. Associations between the dependent variable with socio demographic characteristics of CWID. Parent were carried out (cross – tabulations) in terms of mean scores, standard deviations, and one – way ANOVA test of significance.

2.7. Ethical Issues.

While conducting the study, efforts were taken into consideration to maintain ethical norms of social research were not violated even inadvertently. In view of this the researcher obtained permission from the project officer, SSA, Chittoor district to visit Bavitha Readiness Centres to obtain information about IEP's of CWID. Opinions from parents about joining and interim stage of training of their children were collected.

3. Findings and Discussion.

Table – 1.

Socio-Demographic Details of Individual with Mental Retardation

Socio-Demographic Details of Sample CWID	Percentage	Frequency
1. Locality		
Rural	63.2	223
Urban	36.8	130
2. Religion		
Hindu	84.4	298
Muslim	10.8	38
Christian	4.8	17
3. Caste		
Scheduled Castes / Tribes	20.7	73
Backward Castes	63.7	225
Forward Castes	15.6	55
4. Gender		
Male	65.7	232
Female	34.3	121

5. Age (in Years)	7.4	26
3 – 6	53.8	190
7 – 10	23.5	83
11 – 14	9.7	34
15 – 17	5.6	20
18 +		
6. Level of Special Education	7.4	
Pre-primary	53.8	26
Primary	23.5	190
Secondary	9.7	83
Pre-Vocational	5.6	34
Vocational		20
7. Level of Mental Retardation		
Mild	72.5	256
Moderate	27.5	76
8. Associated Conditions		
Cerebral Palsy	19.8	70
Autism	12.2	43
Vision / Hearing Impairment including Deaf / Blind	5.1	18
No Associated Conditions	62.9	222
Total	100.0	353

Locality: Locality in which the persons live in general and persons with mental retardation (CWID) live in particular is important for the growth and development of children. From panel 1 of Table 1, it is evident that a large majority of the CWID belong to rural areas (63%), whereas the remaining 37 per cent are from urban areas. This pattern appears to be mostly representative of the existing situation in the sample district (Chittoor) of Andhra Pradesh. **Few studies from India** also showed that majority of the sample children with mental retardation / intellectually disabled belonged to rural areas (Siddique, 2008; Upadhyay & Havalappanavar, 2008), whereas in the study by Radha Rani (2016) urban CWID represented a little more (53%).

Religion: Religious affiliation of the persons is another major socio-cultural characteristic in India. Data provided in panel 2 of Table 1 highlights that a greater percentage of the CWID have affiliation to Hindu religion (84.4%), whereas a little over one-tenth of them (10.8%) are adhering to Islam (Muslim) and the rest of them attached to Christianity (4.8%). This pattern is mostly common in Indian context, wherein Hindus are in large majority. More or less, similar finding is also reported from some studies conducted in India (Nagarkar et al., 2014; Gupta et al., 2012).

Caste: In Indian context, caste background of the population is another pivotal socio-cultural characteristic. Information given in panel 3 of Table 1 reveals that while a large majority of the CWID belonged to (Other) Backward Castes (63.7%), slightly more than one-fifth of them,

20.7 per cent, belonged to Scheduled Castes / Tribes (bottom / lower level in social hierarchy) and the remaining 15.6 per cent of them are from Forward Castes (fairly upper / higher position in social hierarchy). Earlier studies related to persons with mental retardation have no such studies about the role of caste in influencing parental stress or IEP of the target group.

Gender: Gender is the chief socio-demographic factor among human beings. In India, there is large preference towards son(s) and thereby, sex ratio is always unfavourable (females are lesser in number than males) uniformly among all the major states, except in Kerala. Further, due to gender specific nurturing of children by parents, girls are mostly neglected schooling, especially among lower socio-economic strata. Obviously, in the case of sample CWID, a little less than two-thirds (65.7%) are boys and the rest 34.3 per cent are girls. These figures naturally support the contentions stated in the earlier lines. Some of the studies in India that dealt with CWID have examined the gender background of the target group (John, 2017; Malhotra & Sharma, 2015; Nagarkar et al., 2014; Siddique, 2014; Vanita and Ramaa, 2013; Bhat & Najar, 2010; Singh et al., 2008; Upadhyay & Havalappanavar, 2008) and invariably in almost all these studies males (boys) outnumbered females (girls), mostly in the range of 58 – 67 per cent.

Current Age: Age is one of the good demographic indicators. It is natural that with an increase in age the physical features of the body, besides the development of the mind and maturity takes place. Among the sample CWID (panel 5 of Table 1), one can note that slightly more than half of them are in the ages of 7 to 10 years (53.8%) and about a little less than one-fourth of them are in the ages of 11 to 14 years (23.5%). On the other hand, while about 9.7 per cent of the CWID belonged to 15 to 17 years, a few of them are at the lower ages of 3 to 6 years and 18 years & above (7.4% and 5.6%, respectively). More or less, similar finding has been reported in some of the studies carried out in India (Chourasiya et al., 2018; John, 2017; Malhotra & Sharma, 2015; Nagarkar et al., 2014; Bhat & Najar, 2010), whereas a few studies focused on those who belonged to a little higher ages of such CWID ranging up to 28 or 30 years (Vanita and Ramaa, 2013; Singh et al., 2008; Upadhyay & Havalappanavar, 2008).

Level of Special Education: As the sample comprises of children with mental retardation and the sample has been drawn from *Bhavitha* Readiness Resource Centres, all of them are studying at different levels under special education scheme. From panel 6 of Table 1, it is evident that more than half of them are studying primary school classes (53.8%), whereas a slightly less than one-fourth of them are attending classes from 6th to 9th (Secondary school). Furthermore, while 9.7 per cent of the CWID are in the pre-vocational stream (classes), a few of them are in the pre-primary classes and vocational stream (7.4% and 5.6%, respectively). This finding is also concordance with the following earlier studies conducted in India: Nagarkar et al. (2014) and Singh et al. (2008).

Level of Intellectually disabled: Though all the CWID covered in the study are part of *Bhavitha* Readiness Resource Centres, they are at different levels of intellectual disability (mental retardation). Among the sample CWID, panel 7 of Table 1, a large majority of them (72.5%) are said to be under mild conditions of mental retardation and a little over one-fourth of them, 27.5 percent, are noted as moderately mental retarded. This finding is in tune with some of the earlier studies in which, more or less, similar observation has been made

(Chourasiya et al., 2018; John, 2017; Malhotra & Sharma, 2015; Siddique, 2014; Nagarkar et al., 2014; Bhat & Najjar, 2010; Vanita and Ramaa, 2013; Singh et al., 2008).

Associated Conditions with Intellectually disabled: In the present study, the researcher has tried to identify the associated conditions with (at the time of survey) the mental retardation. Information demonstrated, in panel 8 of Table 1, suggests that about one-fifth of them are found to be associated with cerebral palsy (19.8%) followed by autism 12.2 per cent and a few of them observed to be suffering from the associated conditions like vision / hearing impairment including (fully) deaf / blind. Conversely, a large percent of CWID (62.9%) have no associated conditions of mental retardation. Presence of co-morbidity conditions among those individuals with mental retardation has also been reported in a few studies (Nagarkar et al., 2014; Singh et al., 2008) conducted in India.

Table 2

Mean Scores of IEP to Children (CWID) at the Time of Joining and Interim

Stages of Training Related to Different Sub-scales and Domains (N = 353)

Areas IEP of Children	No. of Items	Mean Score	S.D.	Paired t-test	
				t-value	Sig. Level
Domain : Personal Skills					
1. Meal Time	<i>Joining</i> <i>Interim</i>	4	9.22 14.81	4.42 4.26	36.224 p<0.001
2. Dressing	<i>Joining</i> <i>Interim</i>	4	9.10 14.09	4.89 5.40	33.340 p<0.001
3. Grooming	<i>Joining</i> <i>Interim</i>	4	8.54 13.33	4.70 5.38	31.517 p<0.001
4. Toileting	<i>Joining</i> <i>Interim</i>	3	7.45 11.06	3.56 3.66	27.282 p<0.001
Domain : Language Skills					
5. Receptive Language	<i>Joining</i> <i>Interim</i>	2	6.25 8.83	2.53 2.15	24.760 p<0.001
6. Expressive Language	<i>Joining</i> <i>Interim</i>	10	17.71 29.43	12.15 14.52	39.195 p<0.001
Domain : Social Interaction					
7. Social Interaction	<i>Joining</i> <i>Interim</i>	11	17.29 30.45	12.27 14.41	40.977 p<0.001
Domain : Functional Academics					
8. Reading	<i>Joining</i> <i>Interim</i>	10	15.31 27.04	11.12 12.55	47.420 p<0.001
9. Writing	<i>Joining</i> <i>Interim</i>	10	16.04 27.43	11.45 13.08	44.223 p<0.001

10. Arithmetic	<i>Joining</i> <i>Interim</i>	14	25.01 42.50	15.82 17.02	44.445	p<0.001
Domain : Domestic Activities						
11. Domestic Activities	<i>Joining</i> <i>Interim</i>	9	14.40 24.92	10.40 11.61	32.565	p<0.001
Domain : Community Orientation						
12. Community Orientation	<i>Joining</i> <i>Interim</i>	10	17.37 29.90	11.53 12.74	33.103	p<0.001
Domain : Recreation and Leisure						
13. Recreation and Leisure	<i>Joining</i> <i>Interim</i>	10	16.95 27.61	10.69 11.95	29.441	p<0.001
Domain : Vocational Skills						
14. Vocational Skills	<i>Joining</i> <i>Interim</i>	10	15.23 25.82	11.10 13.51	31.230	p<0.001
Total IEP to Children						
Total IEP to Children	<i>Joining</i> <i>Interim</i>	101	195.86 327.86	120.11 107.63	52.887	p<0.001

Data provided in the last row of Table 2 shows that, on the whole, the *mean score of IEP to total sample children (CWID)* at the time of joining to the special training is 195.86, whereas the matching score has strikingly increased to a higher level of 327.86 during the interim stage of training given to CWID and the paired t-test results in this regard emerged statistically highly significant ($t=52.887$; $p<0.001$). This finding indicates that the mean score of IEP to children (CWID) at the interim stage of special training is much higher as compared to similar score at the time of joining the training and thereby, there appears to be a remarkable impact of special training given to CWID in increasing their magnitude of IEP (better improvement) during the two stages under study. (Also see below figure)

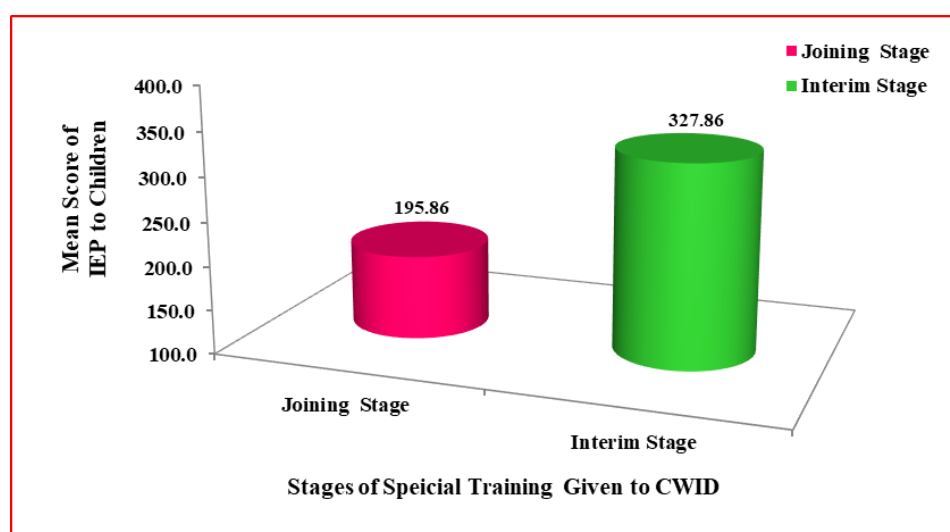


Figure: Mean Scores of IEP to CWID at the time of Joining and Interim Stages of Special Training Given to CWID

Patterns of IEP to Children (CWID) across Sub-scales

Data related to the mean scores of various sub-scales of IEP to children i.e. CWID at the time of joining and interim states of training as well as impact of training by each sub-scale-wise (with paired t-test results) are provided in Table 2. On the whole, the mean scores of all 14 sub-scales of IEP considered in this research work are noted to be reasonably higher at the time of interim stage of special training of CWID as compared to the corresponding scores observed at the joining time to similar training. Moreover, looking at all the mean scores of all sub-scales of IEP these individuals at the time of interim stage as against joining stage of training given to them; one can conclude that there is clear support for the impact of training, to a large extent, given to CWID.

While examining the details, from panel 1 of Table 2, it is evident that the mean score of '**Meal Time**' sub-scale (consists of 4 statements viz., *Mixes food and eats independently, Eats in public places without calling attention to eating behavior, After eating empties plate into a trash can and washes it and Makes necessary arrangements for food in family style setting*), is comparatively higher at the time of interim stage as against joining stage of special training (14.81 vs.9.22). Further, the difference between these two mean scores (increasing trend) is also turned out as highly significant ($t=36.224$; $p<0.001$).

Data related to the '**Dressing**' sub-scale – Panel 2 of Table 2 – (which consists of 4 statements: *Removes / unbutton shirt & pant, Unbuttons of Shirt & pant, Buttons of clothing and Dress self completely*) shows that the mean score is higher at the time of interim stage as compared to joining stage of special training given to CWID (14.09 vs.9.10) and the paired t-test results also in this regard have emerged as highly significant ($t=33.340$; $p<0.001$).

Information pertaining to the sub-scale – '**Grooming**' (panel 3 of Table2) that consists of 4 statements viz., *Brushes independently, Bathes independently, Combs hair and Shaves independently / maintains menstrual hygiene properly*, reveals that the concerned mean score is higher at the time of interim stage as against to joining stage of special training given to CWID (13.33 vs.8.54). Further, the paired t-test results in this regard have turned out as highly significant ($t=31.517$; $p<0.001$).

Data provided in panel 4 of Table 2 shows that the mean score of '**Toileting**' sub-scale (that composed of 3 statements: *Uses gestures/words when needed to go toilet, Self clean after elimination and Flushes the toilet*) is reasonably higher at the time of interim stage as against to joining stage of special training given to CWID (13.33 vs.8.54). However, the paired t-test results in this regard have come out as highly significant ($t=27.282$; $p<0.001$).

With regard to sub-scale '**Receptive Language**' (panel 5 of Table 2), it is evident that the concerned mean score (based on two statements: *Points to any common objects, such as ball, spoon etc., upon request. & Points to 10 body parts such as nose, eyes, mouth etc., and Follows prepositions such as 'put the ball into the box' or 'put the broom behind the door'*) is somewhat higher at the interim stage as compared to the joining stage of special training given to CWID (8.83 vs.6.25). Nevertheless, the paired t-test results in this regard have turned out as highly significant ($t=24.760$; $p<0.001$).

From panel 6 of Table 2, it is clear that the mean score of '**Expressive Language**' sub-scale (consists of 10 statements viz., *Able to tell 20 words, Says name when asked, Names of common objects when asked, 'What is this?', Names 10 body parts when asked, 'What is this?', Able to tell / gestures their parents' names and occupations in which they engaged, Communicates address of residence and contact phone number, Expresses (feelings, desires or problems in complete sentences such as I am hungry, verbally/gesture, etc.), Asks simple questions such as 'What is this?' or 'Why can't I? Verbally/ gesture, Uses pronouns such as I, 'You', 'He', 'Her', 'Me' or 'Mine' in a complete sentence and Names / indicates country, the President, Prime Minister, Chief Minister of the country*), is much higher at the time of interim stage as against joining stage of special training (29.43vs.17.71). Further, the difference between these two mean scores is also turned out as highly significant ($t=39.195$; $p<0.001$).

Data related to the '**Social Interaction**' sub-scale – Panel 7 of Table 2 – (which consists of 11 statements: *Greets others upon meeting, either verbally or with non-verbal friendly gestures, Waits for own turn in a group, Says 'Please' and 'Thank you' and 'Sorry', Receives guests appropriate to acquaintance (differences in the receiving of relatives, stranger, gas/electricity men and so on), Uses items that belong to others, only with their permission, Objects/asks for help if someone uses own belongings without permission, Interacts with members of the opposite sex and members of different age, Responds using proper social courtesies on occasions such as festivals, apologize, offer greeting or compliments as need, Participates actively in social events by engaging in the same activity as the other members of the group, Manages/asks for help if/when teased or bullied and Receives phone calls/passes on information to the right person when given*) highlights that the mean score is strikingly higher at the interim stage as compared to the joining stage of special training given to CWID (30.45vs.17.29). Obviously, the paired t-test results also in this regard have emerged as highly significant ($t=40.977$; $p<0.001$).

Information pertaining to the sub-scale – '**Reading**' (panel 8 of Table 2) that consists of 10 statements viz., *Matches 10 pictures with objects, Sorts objects of 3 different shapes, Sort pictures of similar and/or familiar objects into the same category, Reads out functional 3 letter words, Shown 5 pictures sequentially arranged and told a story with them, pictures then jumbled up, arranges them again in sequence, Reads out functional 3 letter words & acts accordingly – Stop, Men, Women, Danger, Poison, Exit, Pull, Push, In, Put, Enter, etc., Reads out functional two-word phrases like Drink water, Eat food, etc., Using price tags/price markings identifies cost of purchases, Read aloud, sentences with five common words and Reads a simple sentence and answers questions about it*, is pertinently higher at the time of interim stage as against to joining stage of special training given to CWID (27.04vs.15.31). Evidently, the paired t-test results in this regard have turned out as highly significant ($t=47.420$; $p<0.001$).

Data provided in panel 9 of Table 2 reveals that the mean score sub-scale related to '**Writing**' (that composed of 10 statements: *Traces with pencil or crayon along a three-inch straight line, Colours within lines, Traces circles and semi circles geometric shapes (square, rectangle, and triangle.), Traces three letter functional words, Copies his name, Writes his name readably with initials or father's, Copies a printed sentence readably, Writes address and phone number*

readably, Copies a paragraph readably with punctuation's on/to a sheet of lined paper writing on the lines and Writes 5 sentences on its own so as to read by others) is conspicuously higher at the interim stage as against to joining stage of special training given to CWID (27.43 vs.16.04). Obviously, the paired t-test results in this regard have come out as highly significant ($t=44.223$; $p<0.001$).

With regard to sub-scale '**Arithmetic**' (panel 10 of Table 2), one can see that the relevant mean score (based on 14 statements: *Responds the number taking in points big/small/more/less/short/long/tall, choose correct number of objects up to 20, does single digit addition and subtraction. In the 'time' taking in the morning as daytime and the time going to sleep as night time, Responds to 'Now', 'Later', 'Hurry' and 'Wait' appropriately, indicates own age, Identifies or names the 7 days of the week in a calendar, Identifies or names the 12 months of the year in a calendar, Tells time by the hour/half an hour on a clock. In money Sorts coins from other small metal objects, Selects 1 Rs., 2 Rs. and 5 Rs. coins from a group of coins, rupee notes from 10, 20, 50, 100, 200, 500 & 2000 rupee notes, Exchanges the correct number of same/ mixed coins for, Rs.10, Rs.20 & Rs.50, out of different value of coins and able to pick up Rs. 50 value coins / notes out of different denominations of coins*) is somewhat strikingly higher at the interim stage as against to the corresponding figure at the joining stage of special training given to CWID (42.50 vs.25.01). Noticeably, the paired t-test results in this regard have turned out as highly significant ($t=44.445$; $p<0.001$).

From panel 11 of Table 2, it is evident that the mean score of '**Domestic Activities**' sub-scale (consists of 9 statements viz., *Puts the waste at home in dustbin upon request, Puts way personal items in the proper location upon request, Dusts furniture leaving no dust on flat surfaces and damp wipes a floor, Folds clothes and put them in a drawer/cupboard, Makes bed, stretching, spreading, rolling and folding, Sort vegetable/grocery items bought from market and store them in respective containers, Sweeps floor with a broom, picks up sweepings in a dustpan and empties the pan, Washes and cleans utensils, and Peels and cuts vegetables and fruits and prepares pre-made drinks (like Rasana) when asked*) is fairly higher at the interim stage as against joining stage of special training (24.92 vs. 14.40). Further, the difference between these two mean scores is also turned out as highly significant ($t=32.565$; $p<0.001$).

Data related to the '**Community Orientation**' sub-scale – Panel 12 of Table 2 – (which consists of 10 statements: *Finds way by self from one place to another within a familiar house / building, Finds way to different houses in the immediate neighbourhood by enquiring, Goes to public places in a supervised group without calling unfavourable attention to self, Identifies policemen, a postman, a fireman, and conductor of a bus, gas deliveryman and telephone serviceman and persons from power supply, etc., Interacts with strangers in public (as the situation warrants), Crosses residential street intersections, looking in both directions and waiting for traffic to clear before crossing, A walk along road that has no sidewalk- maintains left side, Moves about freely in his neighbourhood e.g., School, Post Office, Milk Booth, Market, and Place of Worship, When goes out with a group, maintains the group norms and Obeys signal lights and 'Walk' 'don't walk' signals at light controlled intersections*) demonstrates that the mean score is reasonably higher at the interim stage as compared to the

joining stage of special training given to CWID (29.90 vs. 17.17). Nevertheless, the paired t-test results also in this regard have emerged as highly significant ($t=32.103$; $p<0.001$).

Information pertaining to the sub-scale – ‘**Recreation and Leisure**’ (panel 13 of Table 2) that consists of 10 statements viz., *Play with toys for 5 minutes or more during leisure time, Watches TV without disturbing others, Play indoor games not governed by rules with others, Play indoor games, governed by simple rules, Watches TV or listens to the radio, tape recorder by selecting a station / channel turning on and off, including use of cassettes, Involves in activities such as playing with pets, or hobbies such as collection of pictures and so on, Participates in outdoor activities, swimming / cycling / walking / playing, Initiates self-involvement in a hobby, not including reading or watching TV, Does gardening / makes flower garlands / mango leaf chain for the door and Makes use of entertainments at societal levels such as Theaters, Parks and Places of Entertainment*, shows that the concerned mean score is comparatively higher at the time of interim stage as against to joining stage of special training given to CWID (27.61 vs. 16.95). However, the paired t-test results in this regard have turned out as highly significant ($t=29.441$; $p<0.001$).

Data provided in panel 14 of Table 2 reveals that the mean score sub-scale pertaining to ‘**Vocational Skills**’, that composed of 10 statements: *Participates in a single activity for 10 minutes (if protected from interference), Performs a single activity under supervision, in a room with people, Assembles two-part objects that fit together in a simple but secure way, Performs an assigned task or activity for half an hour (may need motivation with rewards), Stops a task when required, Participates in-group work cooperating with the other members of the group, Changes activity without showing discomfort when assigned from one task to a different task, Accepts supervision and criticism, Goes to an assigned area without reminder in a daily routine program and Under takes and completes a task in order to receive money*, is fairly higher at the interim stage as against to joining stage of special training given to CWID (25.82 vs. 15.23). Evidently, the paired t-test results in this regard have come out as highly significant ($t=31.230$; $p<0.001$).

Based on the interpretation of all the 14 sub-scales of IEP to children, one can conclude that, there is significant improvement (increase) in all the mean scores at the time of joining interim stages of special training given to CWID. But based on the paired t-test results, the improvement in mean scores is higher in the sub-scales such as ‘Reading’, followed by ‘Arithmetic’ and ‘Writing’ as against to other sub-scales.

Table 3

Association of Mean Scores of IEP of CWID at the Time of Joining and Interim Stages of Special Training Given to them with their Selected Background Characteristics

Selected Characteristics of CWID	Background	Before		After		N
		Mean	S.D.	Mean	S.D.	
1. Locality	Rural	180.01	104.25	310.52	121.41	223
	Urban	223.03	108.13	355.88	112.66	130

<i>ANOVA Test Results</i>		<i>F=13.588; p<0.001</i>		<i>F=12.079; p<0.01</i>		
2. Religion	Hindu	188.00	102.14	320.19	117.08	298
	Muslim	226.84	132.13	345.76	138.87	38
	Christian	262.76	112.54	409.06	97.42	17
<i>ANOVA Test Results</i>		<i>F=5.869; p<0.001</i>		<i>F=5.021; p<0.01</i>		
3. Caste	SC / ST	175.08	108.62	296.34	122.99	73
	BC	193.48	106.59	325.03	119.49	225
	FC	233.16	103.08	377.20	103.91	55
<i>ANOVA Test Results</i>		<i>F=3.891; p<0.05</i>		<i>F=2.026; NS</i>		
4. Gender	Male	180.40	103.06	311.45	118.36	232
	Female	225.50	110.39	357.46	118.10	121
<i>ANOVA Test Results</i>		<i>F=14.498; p<0.001</i>		<i>F=12.035; p<0.001</i>		
5. Current Age (in Yrs.) of Children	3 – 6	103.77	58.86	223.50	61.85	26
	7 – 10	167.63	85.17	301.76	101.70	190
	11 – 14	225.63	108.12	361.14	122.19	83
	15 – 17	282.15	115.41	415.79	117.78	34
	18 +	305.15	120.15	412.65	151.28	20
<i>ANOVA Test Results</i>		<i>F=26.342; p<0.001</i>		<i>F=10.022; p<0.001</i>		
6. Children's Level of Special Education	Pre-primary	144.31	84.39	264.92	99.63	26
	Primary	170.30	93.04	301.69	107.18	190
	Secondary	218.88	102.11	355.10	114.06	83
	Pre-Vocational	271.71	112.49	408.76	108.60	34
	Vocational	281.15	147.35	396.45	176.51	20
<i>ANOVA Test Results</i>		<i>F=14.377; p<0.001</i>		<i>F=11.902; p<0.001</i>		
7. Children's Level of ID	Mild	243.90	100.57	377.37	113.09	97
	Moderate	177.65	101.29	308.22	117.39	256
<i>ANOVA Test Results</i>		<i>F=28.750; p<0.001</i>		<i>F=24.897; p<0.001</i>		
8. Associated Conditions	Cerebral Palsy	190.59	107.75	313.33	120.30	70
	Autism	146.09	85.20	275.30	106.61	43
	Vi. / Hear. Impair. Deaf / Blind	181.78	101.85	304.67	103.61	18
	No associated conditions	208.30	109.48	343.49	120.76	222
<i>ANOVA Test Results</i>		<i>F=4.231; p<0.01</i>		<i>F=4.803; p<0.001</i>		
Total		195.86	107.63	327.22	120.11	353

Locality and IEP to CWID: Generally, one can expect that the IEP to children would be higher among those who are dwelling in urban areas than their rural counterparts. This is mainly due to children's exposure to urban environment including school, home and neighbourhood environment. Data provided in panel 1 of Table 3 highlights that the mean score of IEP to children observed to be much higher in urban areas as compared to their rural

counterparts both at the time of CWID joining for special training (223.03 vs. 180.01) as well at the interim stage of such training (355.88 vs.310.52). Further, the ANOVA results in these regard turned out as significant ($p < 0.001$ and $p < 0.01$, respectively). Thus, *the null hypothesis in both these regard has been rejected to a significant extent* and supported the research hypothesis, viz., *IEP of children is significantly associated with their locality of living at both the stages of training given to CWID.*

Religion and IEP to CWID: The extent of IEP to children (CWID) is likely to be largely associated with their religious background as most of the activities they do at the household and community level are closely associated with the religion to which they adhered to. Information given in panel 2 of Table 3 reveals that mean score of IEP of children both at joining and interim stages of special training given to CWID found to be higher among Christians (262.76 and 409.06, respectively) followed by Muslims (226.84 and 345.76, respectively) and such scores are lower side among the Hindus (188.00 and 320.19, respectively). Evidently, the ANOVA test results in both these regard turned out as highly significant ($p < 0.001$ and $p < 0.01$, respectively). Hence, *the null hypothesis in both these regard have been rejected to conspicuously* and supported the research hypothesis, viz., *IEP of children is significantly associated with their religious background at both the stages of training given to CWID.*

Caste and IEP to CWID: In Indian context, it is generally anticipated that the IEP to children is likely to increase with their caste hierarchy, i.e., from SC / STs (lower in socio-economic status) to BCs and then to FCs (better in their social status). Data given in panel 3 of Table 3 suggests that the mean score of IEP of parents both at the time of their joining and interim stages of training noted as relatively lower among those who belonged to SC/STs (175.08 and 296.34, respectively), which has increased to a moderate level among BCs (193.48 and 325.03, respectively) and comparatively to a higher level among FCs (233.16 and 377.20, respectively). However, the one-way ANOVA test results have come out as highly significant ($p < 0.001$) only in the case of joining the training. Hence, *the null hypothesis in this regard has been rejected conspicuously* and supported the research hypothesis, viz., *the extent of IEP to children is significantly associated with their caste background is supported only for the joining stage of training given to CWID.*

Gender of the CWID and IEP: By and large, one can expect that the extent of IEP to Children would be higher among those who are female CWID as against to their male counterparts. Data provided in panel 4 of Table 3 suggests that the mean score of IEP to children is pertinently higher among female CWID as against male children both at the time of joining (225.50 vs. 180.40) as well as interim stages special training given to them (357.46 vs.311.45). Obviously, the one-way ANOVA test results in both these regard have turned out as highly significant ($p < 0.001$ for both the cases). Thus, *the null hypothesis in both these regard have been rejected to a large extent* and supported the research hypothesis, viz., *IEP to children is significantly associated with their gender at both the stages of training given to them.*

Age of the CWID and IEP : Generally, one can anticipate that the magnitude of IEP to children (CWID) would increase (improve) with an increase in their current age mostly due to the fact

that while children are growing by age their learning practices are likely to increase, besides their psychological development. Information given in panel 5 of Table 3 highlights that the mean score of IEP to children both at the time of joining and interim stages of training given to them observed to be conspicuously increased consistently from lower levels among those children who are in 3-6 years of age (103.77 and 223.50, respectively) to higher levels among those who are in the ages of 18 years and above (305.15 and 412.65, respectively). Apparently, the one-way ANOVA test results in both these regard have emerged as highly significant ($p < 0.001$ in both the cases). Consequently, *the null hypothesis in both these regard has been rejected to large extent* and supported the research hypothesis, viz., *IEP to children is significantly associated with their age at both the stages of training given to them.*

Educational Level of CWID and IEP: In general, one can expect that the extent of IEP to children (CWID) would be increased (improvement) with an increase in children's level of education mainly due to increase in their learning practices surpassing their mental retardation and thereby, performing the day-to-day activities with understanding. When this contention is examined with empirical data of this study (panel 6 of Table 3), it is observed that the mean score of IEP to children both at the time of joining and interim stages of training given to CWID noted to be strikingly increased from lower levels for those children who are at pre-primary school level (144.31 and 264.92, respectively) to higher levels for those children who are studying vocational stream (281.15 and 396.45, respectively). Moreover, the one-way ANOVA test results in both these regard have turned out to highly significant ($p < 0.001$ for both the cases). Hence, *the null hypothesis in both these regard has been rejected largely* and supported the research hypothesis, viz., *IEP to children is significantly associated with their level of education at both the stages of training given to them.*

CWID's Level and IEP: Generally, children with moderate ID are likely to be having lower grasping power and thereby, higher extent of IEP than those who have mil ID. Data presented in panel 7 of Table 3 reveals that the mean score IEP of children is much lower among those children who are having moderate ID as against those who are suffering from mild ID both at the time of joining (177.65 vs. 243.90) and at the time of interim stages of special training given to them (308.22 vs. 377.37). Evidently, the one-way ANOVA test results in both these regard have turned out as highly significant ($p < 0.001$ for both the cases). Thus, *the null hypothesis in both these regard has been rejected strikingly* and supported the research hypothesis, viz., *IEP to children is significantly associated with their level of ID at both the stages of training under study.*

Associated Conditions and IEP: Children's (CWID's) IEP is likely to be associated with different associated conditions of their ID. Data given in panel 8 of Table 3 highlights that the mean scores of IEP to children both at the time of joining as well as interim stages of training are observed to be significantly varied across the different associated conditions of ID. While the mean scores of IEP of children are somewhat higher, both at the time of joining and interim stages, among those who are said to be associated with no associated conditions (208.30 and 343.49, respectively), the corresponding scores found to be lower side among those who have Autism (146.09 and 275.30, respectively), On the other hand, the corresponding figures of those who are suffering from associated conditions like Cerebral Palsy and Vision / Hearing

problems fall in between these extremes. In view of these differences in mean scores, one-way ANOVA test results in both these regard come out as highly significant ($p < 0.01$ and $p < 0.001$, respectively). Hence, *the null hypothesis in both these regard has been rejected largely* and supported the research hypothesis, viz., *IEP to CWID is significantly associated with the linked conditions of ID at both the stages of training given to them.*

4. Conclusion

It may be concluded that the special training given to CWID has certainly benefited them, as well as parents. Thus, the current study proves that education and training of intellectually disabled children will improve their skills and social competence, which makes them self-dependent.

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