



## Impact of Training on Perceived Stress of Parents with Intellectually Disabled Children

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### ABSTRACT

The present study focuses on the perceived stress in 353 parents, whose Children with Intellectual disability underwent training in special education schools of (Bavitha Readiness Centres), Chittoor dist., Andhra Pradesh. The overall perceived stress (scale) score was measured through family assessment scheduled (FAS) developed by NIMHANS. 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 a paired t-test of significance. The overall findings reveal that the overall score, as well as its four sub-scales score of parent's perceived stress, have been reduced after providing 2 years of special training to their Children with Intellectual disability as compared to joining the school (training).



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## 1. Introduction

Parents suffer a lot with a disabled child and the disability makes things more difficult for them. Parents find their role of parenthood very difficult and stressful when dealing with children having impairment in physio-psycho-social development issues that result in social, economic/financial problems; physical and psychological problems (Hartley, Barker, Seltzer, Floyd, Greenberg, Orsmond & Bolt, 2010), and poor quality of life (Ravindranadan & Raju, 2008; Eklund, Backstrom & Tuveesson, 2014). The developmental needs of children and the problems associated with it create ambiguity which parents find unacceptable. Sharief (2014) opines that parents find it quite stressful to accept the disability of their child and if a child had severe impairment leading to greater dependency on the caregiver, greater was the discomfort felt by the caregiver. The family is liable to look after the child with special needs as less valuable as compared to the other non-affected children.

Stress is experienced by everyone in day-to-day life at different degrees, depending on a person's patience.

According to Holroyd & Lazarus (1982), stress exists when environmental and/or internal demands exceed the individual's resources for managing them. Some of the biological manifestations of stress include loss of energy, easily getting exhausted, cardiovascular problems, negative impact on the immune system, gastrointestinal problems, etc. The effect on the psychological state of mind includes impaired cognitive functions, experiencing negative emotional effects such as shock, terror, irritability, anger, guilt, grief, helplessness, impaired concentration, confusion, decreased self-esteem, and decreased self-efficacy) and socially (the disruption of a social unit such as a family).

In the context of mentally retarded children, there is a constant doubt for parents, on whether one is doing the right thing for the child or not. The heavy burden of taking care of children who need regular care is unending stress that can be an overwhelming and exhausting parenting experience. Psychologically, parental stress can be manifested in the form of self-doubt, low self-esteem, helplessness, negative affect; socially, it can be in the form of decreased social

interaction, poor family interaction, and interpersonal difficulties and; biologically, it can take the form of poor physical health and reduced immune system.

Perceived stress may thus be defined as “*an emotionally unbalanced state as a consequence of the perceived difference between situational demands of parenting a child with disabilities and the individual’s resources to meet those parenting demands.*”

Chourasiya et al. (2018) reported that 62% of parents were classified under moderate stress, followed by mild stress 31%, and the remaining 6 percent were with severe stress. Benjamin (2016) found that mothers were stressed more compared to the fathers in daily care, emotional and social stress, and regarding financial stress, there was no difference between fathers and mothers. Verma et al. (2016) reported high stress in mothers compared to fathers. Radha Rani (2016) reported that the type of stress reported by the parents may range from family problems, psychological, physical, social, professional advice, child-rearing and management, psychosomatic, financial, and school and vocational problems.

Kumar & Mohanty (2011) reported that both the parents were adversely affected by the disability of their children but mothers were affected more than the fathers (mean scores were 46.90 and 41.35;  $p < 0.05$ ). Bhat & Najjar (2010) reported that mothers who were less educated and belonged to the lower family income category experienced higher stress. Gupta & Kaur (2010) opined that parents have higher mental stress when compared to physical stress.

Reyahi et al. (2017) mentioned that fathers, were imposing more responsibilities on mothers, and it is indicated in the negative effect of children’s disabilities on the balance of parental role and increased pressure bearing by mothers. Hsiao (2018) reported that family quality of life is an important aspect associated with parental stress. Gupta & Kaur (2010) find that most parents of children with an intellectual disability experienced more mental stress than physical stress. Against this backdrop, this study is envisaged to find out whether there is any improvement in the parent’s perception of stress after enrolling their children for training in a special school.

## 2. Objectives of the Study

- To study the sociodemographic profile of the Children with Intellectual disability (CWID) and their parents selected for this study.

- To compare mean scores of parents’ perceived Stress and its sub-scales at the time of joining and interim stages of special training given to CWID
- To examine the association of perceived stress experienced by parents 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.

## 3. Hypotheses

- There will be a significant association between the socio-economic characteristics of CWID, parents & family, and *perceived stress of parents* at the time of joining the school, and the interim stage of special training given to CWID.
- There will be a significant *change in mean scores of perceived stress of parents* 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, parents, and family with the *change observed in perceived stress of parents* during the period of joining the school and interim stage of special training given to CWID.

## 4. Methods and Procedure

The present research work was principally bent upon the *Descriptive research design* as most of the information is related to the sociodemographic characteristics of CWID, parents, and family as well as perceived stress, However, this is also supported by *Analytical design* (Statistical analysis).

Parents of the CWID studying in Inclusive Education Resource (Readiness) Centres (IERCs) were the study population for this research work. In the recent past, these centres were named as ‘Bavitha Readiness Centres’. The State Government had sanctioned one Bavitha Readiness Centre for each Mandal of Chittoor district. Thus, in all, there were 66 such centres which were situated in the premises of Government high schools, mostly at Mandal headquarters. In these centres, appropriate training used to be given to children with Intellectual disability. Trained special teachers (also known as Inclusive Education Resource Teachers; IERTs) were appointed into these Centres who were expected to give special training to the needy. Thus, the sample

was selected based on stratified disproportionate technique at each Mandal level. In this process, the total sample selected for this research 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 was that the total sample size of this study though appears to be little higher over the required sample size (as per Krejcie & Morgan's sample determination), such higher sample size may result into statistically fairly accurate results.

The self-developed sociodemographic information schedule was used for getting background information of CWID and parents. The main information includes CWID's age, gender, education, area of residence, educational level, intellectual level of the CWID, and associated conditions. Likewise, parents' (both mother and father) age, education, occupation, and family income as well as the type of family, the status of family, consanguinity, and history of ID in the family was also elicited from this schedule. *Family Assessment Schedule (FAS)* was used to measure the stress level of parents which was developed by Dr. Sathish Girimaji, Department of Psychiatry, NIMHANS, Bangalore (1996), which was empirically tested by Girimaji (1996). This tool consists mainly of two sections, viz., Perceived Stress and Coping Resources (Mediators) with 9 areas and 19 sub-scales. Through this tool, information about the perceived stress of the parents was collected when their CWID joined the Bavitha Readiness Centre and during the interim stage (after 2 years of special training). More details on the scoring pattern of the individual statements, areas, and sub-scales, and subsequently, the measurement of perceived stress of the parents measured (based on the information collected from parents) is presented and discussed.

After the collection of data, the researcher edited all the responses provided in the interview schedules for uniformity and thus, rectified the inconsistencies, if any found. A code design was developed so as to transform and minimize the qualitative and quantitative data into numbers and then, entered the data into SPSS spreadsheets on a computer. Next, the raw data was verified and/or cross-checked for transcription errors and discrepancies. Then the data analysis was carried out by the researcher on the following lines. Firstly, frequency tabulations were done to understand the nature of all the data under

study viz., sociodemographic characteristics of the CWID, parents, besides the data collected through the Family Assessment Schedule of CWID. Information related to Family Assessment Schedule was analysed to measure the perceived stress of parents. In addition to these, the change (the *difference between the cumulative scores arrived at the beginning and interim stages of training*) in the cumulative scores of stress (Change in perceived stress CWID) was also computed. Thus, in all nine cumulative scores (two cumulative scores and one change in a cumulative score for the particular domains;  $1 \times 3 = 3$ ) were taken into consideration as another dependent variable in this research work. Associations between the dependent variables with sociodemographic characteristics of CWID, parents were carried out (cross-tabulations) in terms of mean scores, standard deviations, and one-way ANOVA test of significance.

## 5. Results and Discussion

### 5.1. Sociodemographic Details of Children with Intellectual Disability

Socio-demographic characteristics of the sample Children with Intellectual disability, play a vital role in determining the living contexts of the children. Hence, some of the basic background characteristics that are most relevant to this study have been collected, which are analysed, presented and interpreted here in this section.

**Table 1:** Socio-demographic details of Children with Intellectual disability.

Socio-Demographic Details of Sample CWMR	Percentage	Frequency
<b>1. Locality</b>		
Rural	63.2	223
Urban	36.8	130
<b>2. Religion</b>		
Hindu	82	298
Muslim	10.8	38
Christian	4.8	17
<b>3. Caste</b>		
Scheduled Castes / Tribes	20.7	73

Backward Castes	63.7	225
Forward Castes	15.6	55
<b>4. Gender</b>		
Male	65.7	232
Female	34.3	121
<b>5. Age (in Years)</b>		
3 – 6	7.4	26
7 – 10	53.8	190
11 – 14	23.5	83
15 – 17	9.7	34
18 +	5.6	20
<b>6. Level of Special Education</b>		
Pre-primary	7.4	26
Primary	53.8	190
Secondary	23.5	83
Pre-Vocational	9.7	34
Vocational	5/6	20
<b>7. Level of Mental Retardation</b>		
Mild	72.5	256
Moderate	27.5	76
<b>8. Associated Conditions</b>		
Cerebral Palsy	19.8	70
Autism	12.2	43
Vision / Hearing Impairment including Deaf / Blind No Associated	5.1	18
Conditions	62.9	222
<b>Total</b>	<b>100.0</b>	<b>353</b>

**Locality:** Locality in which the persons live in general and persons with Intellectual disability (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 IWID 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 Intellectual disability belonged rural areas (Siddique, 2014; 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 few 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, Sharma, Tandon & Goutam, 2014; Gupta, Mehrotra & Mehrotra, 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 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 Intellectual disability 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 lesser in number than males) uniformly among all major states, except in Kerala. Further, due to gender specific nurturing of children by parents, girls are mostly neglected to send to schools, especially among lower socio-economic strata. Obviously, in the case of sample CWID (panel 4 of Table 1), a little less than two-thirds (65.7%) are boys (males) 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, 2013; Nagarkar, Sharma, Tandon & Goutam, 2014;



Siddique, 2014; Vanita & Ramaa, 2013; Bhat & Najar, 2010; Singh, Indla, & Indla, 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 7–10 years (53.8%) and about little less than one-fourth of them are in the ages of 11–14 years (23.5%). On the other hand, while about 9.7 per cent of the CWID belonged to 15–17 years, few of them are at the lower ages of 3–6 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 few studies focused on those who belonged to little higher ages of such CWID ranging up to 28 or 30 years (Vanita & Ramaa, 2013; Singh, Indla & Indla, 2008; Upadhyay & Havalappanavar, 2008).

**Level of Special Education:** As the sample comprises of Children with Intellectual disability and the sample has been drawn from *Bhavita* 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 slightly less than one-fourth of them are attending classes 6<sup>th</sup>–9<sup>th</sup> (Secondary school). Furthermore, while 9.7 per cent of the CWID are in the pre-vocational stream (classes), 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 Intellectual disability:** Though all the CWID covered in the study are part of *Bhavitha* Readiness Resource Centres, they are at different levels of intellectual disability. Among the sample CWID (panel 7 of Table 1) a large majority of them (72.5%) are said to be under mild conditions of Intellectual disability and a little over one-fourth of them (27.5) are noted as moderately intellectually disabled. This

finding is in tune with some of the earlier studies in which, more or less, similar observation has been made (Chourasiya, Baghel, Kale & Verma, 2018; John, 2017; Malhotra & Sharma, 2013; Siddique, 2014; Nagarkar, Sharma, Tandon & Goutam, 2014; Bhat & Najar, 2010; Vanita & Ramaa, 2013; Singh, Indla & Indla, 2008).

**Associated Conditions of Intellectual disability:** In the present study, the researcher has tried to identify the associated conditions with (at the time of survey) the Intellectual disability. 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%) and 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%) are having no associated conditions of Intellectual disability. Presence of co-morbidity conditions among those individuals with Intellectual disability has also been reported in a few studies (Nagarkar et al., 2014; Singh, Indla & Indla, 2008) conducted in India.

## 6. Patterns of Perceived Stress of Parents: Measurement

As stated in results and discussion, in the present study the perceived stress of parents was measured based on the information collected under Section-I of Family Interview for Stress and Coping in Mental Retardation (FISC–MR) developed by Girimaji et al. (1996; 1999) with the funding from ICMR. In Section-I, in total there were 55 statements (classified under 4 Areas / 10 sub-scales; in the present study the sub-scale – Marital Problems not included) for which responses were elicited from the parents on 5-point Likert type scale with scoring pattern of ‘0’ for responses such as ‘Nil / Not at All’ ‘4’ for ‘High / Very High’ responses. The total or cumulative score derived for each respondent forms their ‘Perceived Stress’ and thereby, such score was used to locate the respondents on the perceived stress continuum. Hence, based on this pooled score, one can interpret that the higher the score, the higher would be the Perceived Stress of parent(s) and vice versa. The computed Chronbach’s Alpha ( $\alpha$ ) – values for the total sample (CWID and their parents) at the time of joining and interim stages of special training

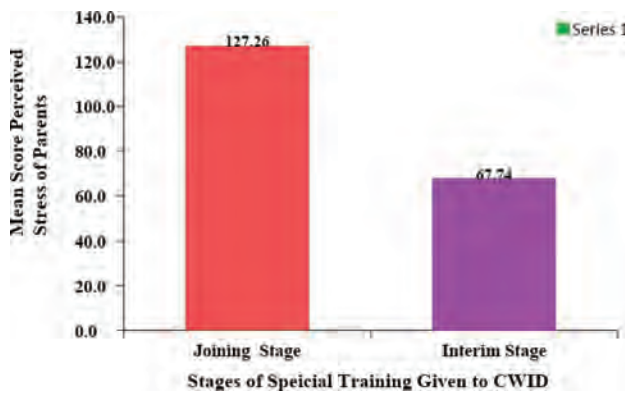
were 0.899 and 0.939. These figures indicate that the statements (items) considered for the measurement of

Perceived Stress of the sample parents were noted to be having high reliability.

**Table 2:** Mean Scores of Parents' Perceived Stress and its Sub-scales at the time of Joining and Interim Stages of Special Training Given to CWID.

Areas / Sub-scales of Perceived Stress Experienced by Parents	No. of Items	Mean Score	S.D.	(N = 353) Paired t-test	
				t-value	Sig. Level
<b>Area: Daily Care Stress</b>					
1. Extra Inputs for Care <i>Joining</i> <i>Interim</i>	5	12.14 6.11	4.32 4.97	-29.693	p<0.001
2. Decreased Leisure Time <i>Joining</i> <i>Interim</i>	3	7.01 3.49	3.02 3.32	-25.705	p<0.001
3. Neglect of Others <i>Joining</i> <i>Interim</i>	3	7.07 3.58	2.92 3.33	-24.783	p<0.001
4. Disturbed Behaviour <i>Joining</i> <i>Interim</i>	3	8.00 4.68	3.38 3.78	-23.915	p<0.001
<b>Area: Family Emotional Stress</b>					
5. Personal Distress <i>Joining</i> <i>Interim</i>	11	22.92 10.31	9.25 7.00	-33.397	p<0.001
6. Other Interpersonal Problems <i>Joining</i> <i>Interim</i>	3	7.04 4.47	3.13 4.05	-16.008	p<0.001
7. Neglect of Other Siblings <i>Joining</i> <i>Interim</i>	6	14.31 7.86	5.55 6.83	-25.628	p<0.001
<b>Area: Social Life Stress</b>					
8. Altered Social Life <i>Joining</i> <i>Interim</i>	8	18.04 9.10	6.34 7.49	-31.755	p<0.001
9. Social Embarrassment <i>Joining</i> <i>Interim</i>	5	12.99 7.97	5.48 6.47	-23.087	p<0.001
<b>Area: Financial Stress</b>					
10. Financial Implications <i>Joining</i> <i>Interim</i>	7	17.54 10.16	5.53 6.49	-29.424	p<0.001
<b>Total Perceived Stress of Parents</b>					
<b>Total Perceived Stress</b>	<b>54</b>	<b>127.26</b> <b>67.74</b>	<b>37.93</b> <b>44.75</b>	<b>-37.026</b>	<b>p&lt;0.001</b>

From the data provided at the last row of Table 2 above, it is evident that, on the whole, the mean score of perceived stress of total sample parents at the time of their children i.e., CWID joining to the special training is 127.26, whereas the corresponding score has decreased to 67.74 during the interim stage of training given to CWID. The paired t-test results in this regard demonstrated that the difference of mean scores of perceived stress of parents between the joining and interim stages of special training given to CWID is statistically highly significant ( $t=-37.026$ ;  $p<0.001$ ). This finding highlights the fact that there appears to be a pertinent impact of special training given to CWID on their parents' perceived stress during the two stages under study (Also see the below Figure).



**Figure 1:** Mean Scores of Parents' Perceived Stress at the time of Joining and Interim Stages of Special Training Given to CWID.

### 6.1. Patterns Perceived Stress of Parents across Sub-scales

Information about the mean scores of perceived stress of parents by sub-scales 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 perceived stress of sample parents for 10 sub-scales under study are reported to be higher at the time of their children i.e. CWID joining to the special training as compared to the corresponding scores derived at the interim stage. Further, there seem to be substantial impact of training given to CWID on all the mean scores of sub-scales at the time joining and interim stages of training.

When the details are looked into, from panel 1 of Table 2, one can notice that the mean score of 'Extra Inputs for Care' sub-scale (consists of 5 statements related to: *Child needs extra care compared to other children, Spend lot of time in caring for child, Cannot complete housework because of child's needs, Get tired and Ask others for help to look after the child*) is much higher at the time of children joining as against interim stage of special training (12.14 vs. 6.11). Further, the difference between these two mean scores (declining trend) is also turned out as highly significant ( $t=-29.693$ ;  $p<0.001$ ).

Information pertaining to the 'Decreased Leisure Time' sub-scale – Panel 2 of Table 2 – (which consists of 3 statements: *Put off/ reduced any activity or leisure because of time to be devoted to child, Feel that you do not have enough free time and Any other family member's leisure time being affected because taking care of the child*) highlights the mean score is higher at the time of joining as compared to interim stage of special training given to CWID (7.01 vs. 3.49) and the paired t-test results also in this regard have emerged as highly significant ( $t=-25.705$ ;  $p<0.001$ ).

Data related to the sub-scale – 'Neglect of Others' (panel 3 of Table 2) that consists of 3 statements, viz., *Not able to give proper amount of time to other family members, Feel that other children have to wait for your attention / help because of the time you spend with this child and Other children / spouse say that their needs are not fulfilled* reveals that the concerned mean score is higher at the time of joining as against to interim stage of special training given to CWID (7.07 vs. 3.58). Moreover, the paired t-test results in this regard have turned out as highly significant ( $t=-24.783$ ;  $p<0.001$ ).

From panel 4 of Table 2, one can see that the mean score of 'Disturbed Behaviour' sub-scale (that composed of 3 statements: *Constantly the child has to be kept away from dangers at household, interference with other activities and Not able to control and feeling bothersome when child exhibits disturbed behaviour*) is higher at the time of joining as against to interim stage of special training given to CWID (8.00 vs. 4.68). Further, the paired t-test results in this regard have come out as highly significant ( $t=-23.915$ ;  $p<0.001$ ).

With regard to sub-scale 'Personal Distress' (panel 5 of Table 2), it is evident that the concerned

mean score (that made up of 11 statements: *Feels sad about the child, Feels sad about child's future, Worries a lot about child, Loses sleep over child's future, Feels the need to seek medical help, Compares child's progress with other children and feel disappointed, Feels like giving up looking after child, Feels that one would be better off without a child like this, Feels bad and cursed/blames that it is all due to karmal grabachara, Feels angry/resentful that God/destiny has inflicted this trouble on you and Blame self for having given birth to a child like this*) is pertinently higher at the time of joining as compared to interim stage of special training given to CWID (22.92 vs. 10.31). Obviously, the paired t-test results in this regard have turned out as highly significant ( $t=-33.397$ ;  $p<0.001$ ).

In the case of sub-scale 'Other Interpersonal Problems' (panel 6 of Table 2), it can be seen that relevant mean score (consists of 3 statements: *Anybody blamed for your child's problem, Misunderstandings occurred in the family with regard to the child's care and Visiting doctors one after another which has affected your work and other family members*) is much higher at the time of joining as compared to interim stage of special training given to CWID (7.04 vs. 4.47). Evidently, the paired t-test results in this regard have emerged as highly significant ( $t=-16.008$ ;  $p<0.001$ ).

Information related to the 'Neglect of Other Siblings' sub-scale – Panel 7 of Table 2 – (which consists of 6 statements: *Other children repeatedly nag/make fun of this child, They take care of him/her, or behave rudely with the child, Other children avoid social activities due to this child, The behaviour of the child scares other children at home, Worry about the future of other children and their marriage, career etc., and Repeatedly worry about the future of this child*) suggests that the particular mean score is strikingly higher at the time of joining as compared to interim stage of special training given to CWID (14.31 vs. 7.86) and subsequently, the paired t-test results in this regard have emerged as highly significant ( $t=-25.628$ ;  $p<0.001$ ).

Data related to the sub-scale – 'Altered Social Life' (panel 8 of Table 2) which consists of 8 statements, viz., *Find yourself at home more often, looking after the child than before, Feel bad about not able to go outing, social visits, etc., Find less time to attend family functions like marriage, etc., Neighbours allow their children to play with your*

*child, Neighbours say that it is not good for their children to play with their child, Stopped your leisure time activities now, Relatives stopped inviting you to their house/functions, after the birth of this child and Find less inclination to invite people home* highlights that the respective mean score is much higher at the time of joining as against to interim stage of special training given to CWID (18.04 vs. 9.10). Moreover, the paired t-test results in this regard have turned out as highly significant ( $t=-31.755$ ;  $p<0.001$ ).

From panel 9 of Table 2, it is evident that the mean score of 'Social Embarrassment' sub-scale (that composed of 5 statements: *Feel apprehensive about others' comments, stares etc., Such apprehension is occasional or frequent, Feel upset when you face such comments, How much do you get upset and Think lot whenever you want to take your child out or when others are expected to visit home*) is substantially higher at the time of joining as against to interim stage of special training given to CWID (12.99 vs. 7.97). Further, the paired t-test results in this regard have come out as highly significant ( $t=-23.087$ ;  $p<0.001$ ).

From panel 10 of Table 2, one can see that the mean score of 'Financial Implications' sub-scale (that composed of 7 statements: *Expenditure incurred for the child's treatment, Money spent on special foods / special education for the child, Money spent on traditional healing, etc., Taken loans in order to help you out in financial difficulties, how much, Used any of the savings for the child's treatment, Any significant drain on family financial resources due to child's problem and Facing any financial problems*) is substantially higher at the time of joining as against to interim stage of special training given to CWID (17.54 vs. 10.16). Further, the paired t-test results in this regard have emerged as highly significant ( $t=-29.424$ ;  $p<0.001$ ).

Based on the interpretation of all the 10 sub-scales of parents' perceived stress, it may be concluded that, there is significant decrease in all the mean scores at the time of joining and interim stages of special training given to CWID. But based on the paired t-test results, the decrease in mean scores is higher in the sub-scales such as 'Personal Distress' closely followed by 'Altered Social Life', whereas the corresponding figure is at lower side for the sub-scale – 'Other Interpersonal Problems'.



**Table 3:** Associations of Mean Scores of Parents' Perceived Stress at the time of Joining and Interim Stages of Training Given to CWID with Background Characteristics of Children Intellectual disability (CWID).

Selected Background Characteristics of Children		Joining Stage		Interim Stage		N
		Mean	S.D.	Mean	S.D.	
<b>1. Locality</b>	Rural	129.95	37.95	72.40	45.42	223
	Urban	124.38	37.87	59.75	42.57	130
<i>ANOVA Test Results</i>		F=1.195; NS		F=6.663; p<0.01		
<b>2. Religion</b>	Hindu	129.22	36.46	69.29	44.31	298
	Muslim	111.63	44.75	53.66	44.79	38
	Christian	127.94	41.24	72.18	49.27	17
<i>ANOVA Test Results</i>		F=3.682; p<0.05		F=2.157; NS		
<b>3. Caste</b>	SC / ST	121.37	41.49	64.68	45.84	73
	BC	126.19	36.94	66.03	43.43	225
	FC	139.49	34.93	78.80	47.72	55
<i>ANOVA Test Results</i>		F=3.891; p<0.05		F=2.026; NS		
<b>4. Gender</b>	Male	132.26	36.71	72.87	46.77	232
	Female	117.69	38.55	57.91	38.93	121
<i>ANOVA Test Results</i>		F=12.115; p<0.001		F=9.194; p<0.001		
<b>5. Current Age (in Yrs.) of Children (IW ID)</b>	3 – 6	148.11	25.20	81.50	34.43	26
	7 – 10	132.15	36.46	70.50	44.51	190
	11 – 14	123.08	36.19	68.42	44.24	83
	15 – 17	112.85	41.31	57.91	47.27	34
	18 +	95.65	40.59	37.60	45.16	20
<i>ANOVA Test Results</i>		F=8.436; p<0.001		F=3.560; p<0.01		
<b>6. Children's (IW ID) Level of Special Education</b>	Pre-primary	139.77	36.39	72.77	36.42	26
	Primary	129.11	36.77	69.84	44.94	190
	Secondary	125.59	38.10	71.34	45.14	83
	Pre-Vocational	120.29	36.21	52.74	38.36	34
	Vocational	105.70	45.40	51.85	55.74	20
<i>ANOVA Test Results</i>		F=2.925; p<0.05		F=2.027; p<0.10		
<b>7. Children's Level of ID</b>	Mild	110.32	38.23	54.37	41.78	97
	Moderate	133.69	35.85	72.81	44.87	256
<i>ANOVA Test Results</i>		F=28.805; p<0.001		F=12.326; p<0.001		
<b>8. Associated Conditions</b>	Cerebral Palsy	131.16	38.53	72.21	39.40	70
	Autism	135.47	34.73	67.30	52.94	43
	Vi. / Hear. Impair. Deaf / Blind	127.00	30.56	76.50	37.34	18
	No associated conditions	124.47	38.75	65.71	45.26	222
<i>ANOVA Test Results</i>		F=1.320; NS		F=0.615; NS		
<b>Total</b>		<b>127.27</b>	<b>37.93</b>	<b>67.74</b>	<b>44.75</b>	<b>353</b>

**Locality and Perceived Stress of Parents:** Generally, one can expect that the perceived stress of parents would be lower among those who are living in urban areas than their rural counterparts, as the former ones are exposed to several contacts and mass media channels, besides higher level of education. From panel 1 of Table 3, it can be seen that the mean score of parents' perceived stress observed to be much lower in urban areas as compared to those residing in rural areas both at the time of CWID joining for special training (124.38 *vs.* 129.95) as well during interim stage of such training (59.75 *vs.* 72.40). However, the ANOVA results turned out as highly significant in the case of mean scores at interim stage ( $p < 0.01$ ) only. Thus, *the null hypothesis in this regard has been rejected to a major extent* and supported the research hypothesis, viz., *parents' perceived stress is significantly associated with the locality in which they live only at the interim stage of training to CWID.* A study in Malawi showed that parents' psychological distress was significantly ( $p < 0.01$ ) higher in urban areas than their rural counterparts (Masulani-Mwale, Kauye, Gladstone & Mathanga, 2018), but the study by Upadhyay & Havalappanavar (2008) didn't exhibited significant differences in parental stress across their rural-urban residence.

**Religion and Perceived Stress of Parents:** Parents' perceived stress is likely to be associated with their religious background. In a study conducted at Ujjain city, Madhya Pradesh (Nagarkar, Sharma, Tandon & Goutam, 2014) showed that the level of depression is higher among Hindus as against to those who belonged to other major religious groups. Data provided in panel 2 of Table 3 reveals that mean score of parents' perceived stress is fairly lower among the Muslims as against the Hindus and Christians (interchangeably in latter two religious groups) both at the time of joining (111.63 *vs.* 129.22 and 127.94) and interim stages of special training given to CWID (53.66 *vs.* 29.29 and 72.18). But the ANOVA test results emerged as moderately significant ( $p < 0.05$ ) only in the case of mean scores of stress at joining stage. Thus, *the null hypothesis in this regard has been rejected to some extent* and supported the research hypothesis, viz., *parents' perceived stress is significantly associated with their religious background only at the joining stage of training to CWID.*

**Caste and Perceived Stress of Parents:** By and large, it is expected that the perceived stress of parents would

be higher among the Forward Castes followed those from Backward Castes and the lowest would be among those who are from Scheduled Castes / Tribes. Such pattern is may be due to the fact that parents from the FCs are stated to be socio-economically better off than those from SC/STs and BCs, who are mostly disadvantaged in all respects. Data given in panel 3 of Table 3 highlights that the mean score of parents' perceived stress noted as fairly higher among those who belonged to FCs as against to those who are from BCs and SC / STs both at the time of joining (139.49 *vs.* 126.19 and 121.37) and interim stages of special training given to CWID (78.80 *vs.* 66.03 and 64.68). Yet, one-way ANOVA test results in this regard have come out as moderately significant ( $p < 0.05$ ) for the mean scores at joining stage of training only. Hence, *the null hypothesis in this regard is rejected to a large extent* and supported the research hypothesis, viz., *parents' perceived stress is significantly associated with the caste background only at the joining stage of special training to CWID.*

**Gender of the Children (CWID) and Perceived Stress of Parents:** In general, it is expected that the perceived stress of parents would be lower among those who have female children as against those who have male children. This is mainly due to lack of interest/concern attached to daughters (female) as against the preference towards sons in Indian context. When this contention is examined with empirical data (panel 4 of Table 3), it is seen that the mean score of parents' perceived stress is strikingly lower among those parents who have female children as against male children both at the time of joining (117.69 *vs.* 132.26) as well as interim stages special training given to them (57.91 *vs.* 72.87). It is also conspicuous to note that 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 strikingly* and supported the research hypothesis, viz., *parents' perceived stress is significantly associated with the gender of their CWID at both the stages of training under study.* Few studies didn't show significant association of parental / family stress with the gender (sex) of the CWID (Chourasiya, 2018; Siddiqui, 2014; Gupta et al., 2012), whereas few earlier studies have revealed higher parental stress among those who have female (girl) children than those who have boys (male) (Katkic, Morovic & Kovacic, 2017; Sabih & Sajid, 2008).

***Age of the Children (CWID) and Perceived Stress of Parents:***

Usually, it is expected that the perceived stress of parents would decline with an increase in children's age mostly due to the fact that while children are growing they will adjust to their parents and homely as well as societal environment. However, earlier literature highlighted that there are divergent associations between children's age and parental / family stress. For example, while some of the earlier studies showed insignificant association between children's age and parental / family stress (Siddiqui, 2014; Chourasiya, Baghel, Kale & Verma, 2018; Katkic, Morovic & Kovacic, 2017), some other studies have exhibited either a negative association (Woodman et al., 2016; Mbugua, Kuria & Ndeti, 2011; Sahib & Sajid, 2008; Upadhyay & Havalappanavar, 2008; Khamis, 2007) or positive correlation / association (Morya, Agrawal, Upadhyaya, & Sharma, 2015; Bhat & Najar, 2010). Data presented in panel 5 of Table 3 highlights that the mean score of parents' perceived stress both at the time of joining and interim stages of training given to their children (CWID) declined consistently from higher levels for those whose children are in 3-6 years (148.11 and 81.50, respectively) to lower levels for those whose children are 18 years and above (95.65 and 37.60, respectively). Obviously, the one-way ANOVA test results in both these regard have emerged as highly significant ( $p < 0.001$  and  $p < 0.01$ , respectively). Consequently, *the null hypothesis in both these regard have been rejected to striking extent* and supported the research hypothesis, viz., *parents' perceived stress is significantly associated with the age of the their CWID at both the stages of training under study.*

***Educational Level of Children (CWID) and Perceived Stress of Parents:***

Generally, one can presume that the perceived stress of parents would decline with an increase in children's level of education mainly due to increase in learning and adaptive behaviour towards Intellectual disability by the children and thereby, lower extent of stress among those parents who have children with higher education. When this contention is examined with empirical data of this study (panel 6 of Table 3), it is apparent that the mean score of parents' perceived stress both at the time of joining and interim stages of training given to CWID noted to be somewhat declining trend from higher levels for those whose children are having pre-primary school education (139.77 and 72.77, respectively) to lower

levels for those whose children are studying vocational stream (105.70 and 51.85, respectively). However, the one-way ANOVA test results have turned out to a moderate extent ( $p < 0.05$ ) in the case of stress at joining stage, whereas marginally significant ( $p < 0.10$ ) in the case of stress at interim stage. By and large, *the null hypothesis in both these regard has been rejected to some extent* and supported the research hypothesis, viz., *parents' perceived stress is significantly associated with the educational level of their CWID at both the stages of training under study.*

***Children's (CWID) Level and Perceived Stress of Parents:***

Parents of children with moderate ID are stated to be having higher perceived stress than those parents who have children with mild ID. Many studies showed that the parents' perceived stress is positively correlated / associated with the severity of children's Intellectual disability (Katkic, Morovic & Kovacic, 2017; Sharief, 2014; Nagarkar et al., 2014; Islam, Farjana & Shahnaz, 2013; Bhat & Najar, 2010; Khamis, 2007), but few earlier studies didn't support this proposition in significant manner (Siddiqui, 2014; Chourasiya, Baghel, Kale & Verma, 2018). Data of the present study (panel 7 of Table 3) suggests that the mean score of parents' perceived stress is remarkably higher among those parents who have children with moderate ID as against those who have children with mild ID both at the time of joining (133.47 vs. 110.32) and at the time of interim stages of special training given to CWID (72.81 vs. 54.37). Apparently, 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 to strikingly* and supported the research hypothesis, viz., *parents' perceived stress is significantly associated with the children's level of ID at both the stages of training under study.*

***Associated Conditions of ID children and Perceived Stress of Parents:***

Parents' perceived stress is likely to be associated with different association conditions of ID. Data given in panel 8 of Table 3 reveals that the mean scores of parents' perceived stress at the time of joining stage of training are observed to be little higher among those whose have children with Autism and Cerebral Palsy associated with ID (135.47 and 131.16, respectively) as against to those who have children with Visual / Hearing related impairments and 'no conditions' associated with ID (127.00 and 124.47,

respectively). More or less, similar pattern is observed in the corresponding figures at the interim stage of training, except for visual / hearing impairment (72.21 and 67.30 vs. 76.50 and 65.71, respectively). However, the one-way ANOVA test results in both these regard come out as insignificant and thus, there is no clear support to the research hypothesis. The study by Nagarkar et al. (2014) showed that there is a positive relationship between parents' depression and co-morbidities of the children.

## Conclusions

From the above analysis and discussion, it is evident that the parent's perceived stress has decreased considerably after joining the children for training in the special school. Thus, the current study proves that education and training of intellectually disabled children will improve their social competence, reduce their dependency on the parents and thereby ameliorate the stressful conditions for parents.

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## Issues and Ideas in Education

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