

Effectiveness of Video Assisted Teaching on Knowledge of Parents on Management of Their Children with Intellectual Disability, in Selected Special Schools of Berhampur, India

Tanushree Debnath^{1,2}

¹Tabora Polytechnic College, Tuli Campus, Tabora, United Republic of Tanzania

²College of Nursing, MKCG Medical College Campus, Berhampur, India

Email address:

tanu.debnath87@gmail.com

To cite this article:

Tanushree Debnath. (2024). Effectiveness of Video Assisted Teaching on Knowledge of Parents on Management of Their Children with Intellectual Disability, in Selected Special Schools of Berhampur, India. *American Journal of Psychiatry and Neuroscience*, 12(1), 9-18. <https://doi.org/10.11648/j.ajpn.20241201.13>

Received: December 11, 2023; **Accepted:** December 28, 2023; **Published:** January 11, 2024

Abstract: Intellectual disabilities involve problems in general mental abilities that affect Intellectual functioning such as learning, problem solving, judgement and Adaptive behavior like activities of daily living such as communication and independent living. Moreover, a child with an intellectual disability (formerly called mental retardation) is not only a burden to the family but also to the society as whole. In addition, poor knowledge regarding care of such type of children adds additional stress on the parents and family. Studies in the specific subject area are scanty. This gap in knowledge prompted the design of the current study. One group pre-test and post-test Pre-experimental research design and evaluative approach was undertaken among 45 parents of children with ID studying then at Manovikas GEMM (Guidance and education centre for multiple and mental retardation) Berhampur, India, with the objective to assess the effectiveness of Video assisted teaching module on their knowledge in taking care of their children at home. Prior to implementation of VATM the Parents had average knowledge (37.84%) regarding home management of their children with ID whereas after administration of VATM the number increases to 53.87%; revealing good knowledge along with the difference in mean percentage of 16.03% which shows the effectiveness of the module undertaken in the study (VATM).

Keywords: Intellectual Disability, VATM (Video Assisted Teaching Module), Manovikas GMM, ID, Odisha, India

1. Introduction

Intellectual disability affects the acquisition of knowledge and skills, in particular any of various neurodevelopmental conditions affecting intellectual processes, educational attainment, and the acquisition of skills needed for independent living and social functioning.

According to the American Association on Intellectual disability (AAIDD) 2010, an intellectual disability is characterized by significant limitations both in intellectual functioning and in adaptive behavior, which covers many everyday social and practical skills. This disability originates before the age of 18" [4].

The family plays a significant role in the child's cognitive, academic, emotional, social, and physical development. All parents want what is best for their child; when they realize

their child has a disability, they may face a variety of emotions. Van Riper and Selder (1989) found that the parents' first reaction to the birth of their child with an intellectual disability is often a combination of hopelessness, loss, and resentment. "For many parents, the realization that their child has a disability is a blow to their sense of self-worth. They are in difficult parenting situations with many unknowns and may feel less than capable" [5].

Raj Kumari & Harpreet Kaur (2010) found that most parents of children with intellectual disability experience stress. Physical and mental stress are significantly correlated, gender differences in stress experienced occur only in the mental area, and parents have higher mental stress score as compared to physical stress [6].

Research has shown that the best place for children with mentally challenged to grow in is their own families, where

they can be nurtured with appropriate stimulation. Therefore, services should be organized so that the families are supported, strengthened & empowered to look after their affected members. It should also be recognized that families are not just recipients of services but care-providers as well. In other words, they are partners in care [7].

A quasi-experimental study was conducted on ($n = 99$, comprising 56 males and 43 females) students with moderate intellectual disability (MID) from selected three rehabilitation centres of Guwahati, Assam, India. The objective was to test the effectiveness of Interactive video-based instruction (IVBI) session on training new social skills to the MID population. The session was employed on the experimental group and the findings were compared with the comparison group. The mean and standard deviation of individual interactive video-based instruction (IIVBI) and collaborative interactive video-based instruction (CIVBI) was better than the conventional group. The ANCOVA result shows a significant effect of IIVBI and CIVBI in the improvement of social skills over conventional approach on students after controlling the effect of the pre-test. The interactive session in both the experimental group allowed the students to create their own space for learning social skills via different activities using IVBI [1].

Another Quasi-experimental research design with one group pre-test post-test was adopted by Hena Chandran et. al. to assess the effectiveness of video assisted teaching on knowledge, attitude and practice among primary caregivers of children with Autism Spectrum Disorder in which a total of 60 primary caregivers were selected through stratified random sampling technique. Video-assisted teaching was given to 60 primary caregivers. Data collection was done before and after the video-assisted teaching programme using structured questionnaire consisting of 57 questions. The results of the study showed that the post-test level of knowledge, attitude and practice among primary caregivers of children with ASD was significantly high ($p < 0.0001$) when compared to pre-test level by using Wilcoxon Signed Rank Test. The study findings revealed that video-assisted teaching was effective in enhancing the knowledge, developing a positive attitude and good practice among primary caregivers regarding care of children with ASD [2].

Carla L Sanders et. al. conducted a project on Virtual Patient Instruction sessions in order to improve students'(nurses) knowledge and comfort level for caring children with developmental disabilities.

A core development team consisting of nurse practitioners and nursing faculty from three universities, one physician assistant faculty, parents of children with DD, and educational specialists developed two multimedia (virtual patient) pediatric instructional modules in CD-ROM format—one involving a child with Down syndrome, and the other involving an infant born at 26 weeks' gestation. Participants were required to make clinical decisions throughout the cases. The modules on CD were piloted with nursing students from three universities. Results of the effectiveness study demonstrated significant gains in

knowledge and comfort level regarding the care of children with DD. Ninety-four of 100 students (94%) from the three participating universities completed the DSI-SC pre-knowledge and post-knowledge tests. For these 94 students, the mean pretest score was 33.05 (SD = 6.565) and the mean posttest score was 29.51 (SD = 7.642), with lower scores indicating greater comfort level. Paired samples t tests demonstrated that changes in perceived comfort were significant, $t(94) = 4.440$, $p < .0001$, Cohen's $d = .497$, representing a medium effect size [3].

2. Material and Methods

2.1. Study Design, Study Area and Settings

This study was carried out at Manovikas GEMM (Guidance and education centre for multiple and mental retardation) which is a special school located in the city Berhampur, Odisha, India. Manovikas GEMM is a non-profit organization imparting education and skills training to the specially-abled children of different types from various age groups. It also provides regular health check-ups, mental health care along with physiotherapy to their students. This study deployed a quasi-experimental study design to see the effectiveness of VATM on the knowledge of parents of intellectually disabled children.

2.2. Study Population, Inclusion, and Exclusion Criteria

All the parents of 89 children studying in Manovikas GEMM then, were regarded as the study population of which only 45 parents were included in the study those who were present at the day of data collection.

2.3. Sampling Strategy and Sample Size

Purposive sampling technique was used to collect the sample size of 45 parents of intellectual disability children studying at Manovikas GEMM then.

2.4. Data Collection Procedures

Data collection was conducted by the researcher using a structured knowledge questionnaire (written in Odiya, the native language of the state) on home care management of children with ID which was employed two times: first as a pre-test and the second time after implementation of VATM as post-test. The parents were first explained about the purpose of the study and the consented participants were invited for data collection. The questionnaire was having two sections namely Section A: demographic characteristics of the participants and Section B: knowledge of parents regarding home management of their children with intellectual and Developmental disabilities. Data were collected and the filled questionnaires were coded numerically from 1 to 45.

2.5. Data Management and Statistical Analysis

Microsoft excel was used to analyze the quantitative data. The collected data was organized, tabulated and analyzed by

using descriptive statistics such as mean, median, SD and inferential statistics including paired 't' test and chi square test. The data were first organized in a master sheet; the demographic data was analyzed in terms of frequencies and percentages. The knowledge of parents was analyzed in terms of Mean, Median, Standard deviation, and was presented in the form of table and bar diagram. The significance difference between pre-test and post-test knowledge score was determined by paired 't' test. And the association between post-test knowledge score of parents

with their selected demographic variables was determined by using chi-square.

2.6. Ethical Consideration

Prior ethical clearance had been taken as necessary for the study. The study was conducted after obtaining permission from the school administration. Informed consent were signed by the participants before data collection and implementation of the tool.

3. Results

3.1. Social-Demographic Characteristics of the Participants

Table 1. Demographic characteristics of the participants.

| Character | Category | Percentage (%) |
|------------------------------------------------------------------------------|---------------------------------|----------------|
| Age | 20-30 years | 17.78 |
| | 31-40 years | 42.22 |
| | 41-50 years | 31.11 |
| | >51 years | 8.89 |
| Gender | Male | 31.11 |
| | Female | 68.89 |
| Education | Primary | 7.0 |
| | High school | 16.0 |
| | Higher secondary | 31.0 |
| | Graduation and above | 47.0 |
| Occupation | Unemployed | 18.0 |
| | Government employee | 16.0 |
| | Private employee | 49.0 |
| | Health worker | 7.0 |
| | Own business/Self employed | 11.0 |
| Religion | Hindu | 95.56 |
| | Muslim | 0 |
| | Christian | 4.44 |
| | Others | 0 |
| Residence | Urban | 88.89 |
| | Rural | 11.11 |
| Per capita income of the family | 3000-5000 INR | 29.0 |
| | 5001-7000 INR | 31.0 |
| | 7001-10000 INR | 2.0 |
| | >10000 INR | 38.0 |
| Number of children | 1 | 29.0 |
| | 2 | 60.0 |
| | 3 | 9.0 |
| | >3 | 2.0 |
| Number of children with Intellectual Disability | 1 | 96.0 |
| | 2 | 4.0 |
| | 3 | 0 |
| | >3 | 0 |
| Age of the child/children with Intellectual Disability | 0-5 years | 7.0 |
| | 6-10 years | 32.0 |
| | 11-14 years | 48.0 |
| | >15 years | 13.0 |
| Previous source of information regarding home management of children with ID | From books and newspaper | 18.0 |
| | From friends and family members | 56.0 |
| | From mass media | 11.0 |
| | From health care professionals | 16.0 |

The above table shows that the highest number (42.22%) of sample participants were belong to the age group of 31-40 years, 68.89% of them were females, 47% of them had an education level of graduation and above, the highest percentage (49%) were working in private organizations,

95.56% of them were Hindu by religion, 88.89% of them lived in urban region, the highest percentage (38.0%) had an earning of >10000 INR. In the category of number of children the highest percentage (60.0%) of parents had two (2) children, among which 96.0% had only one (1) child with

ID. Among 48.0% of the participants the age of their child/children with ID was 11-14 years by then. And in case of previous source of information regarding home management of children with ID the highest number (56.0%) agreed to have the knowledge from friends and family members. (Table 1)

3.2. Knowledge of Parents on Home Management of Their Children with ID

Table 2. Area wise comparison of Pre and Post-test knowledge score of Parents.

| Sl. No. | Area of knowledge | Pre-test | | | | Post-test | | | |
|---------|-------------------------------------------------------------------------------------------|------------|-------|------------------|-------|-----------|------------------|--------|-----------------|
| | | Max. score | Mean | Stand. deviation | Mean% | Mean | Stand. Deviation | Mean % | Diff. in mean % |
| 1 | Concept on intellectual disability | 11 | 4.066 | 2.22 | 36.96 | 5.11 | 1.90 | 46.45 | 9.49 |
| 2 | Knowledge on home management of children with intellectual and developmental disabilities | 02 | 0.88 | 0.61 | 44 | 1.15 | 0.64 | 57.5 | 13.5 |
| 3 | Knowledge on carrying out sensory motor stimulation (SMS) | 04 | 1.2 | 1.05 | 30 | 1.86 | 0.92 | 46.5 | 16.5 |
| 4 | Knowledge on carrying out language development | 03 | 1.15 | 0.79 | 38.33 | 1.66 | 0.74 | 55.33 | 17.0 |
| 5 | Knowledge on training for activities of daily living (ADL) | 07 | 2.71 | 1.63 | 38.71 | 4.15 | 0.3 | 59.28 | 20.57 |
| 6 | Knowledge on care for behavioural problems | 05 | 2.08 | 1.57 | 41.6 | 3.44 | 1.54 | 68.8 | 27.2 |
| | Over all total | 32 | 12.11 | 5.92 | 37.84 | 17.24 | 4.69 | 53.87 | 16.03 |

Area wise comparison of mean, SD, mean percentage of pre-test and post-test knowledge score shows that, during post-test the highest mean score was (3.44±1.54) which was 68.8% of the maximum scores obtained from the area ‘knowledge on care for behavioural problems’ whereas the lowest mean score was (5.11±1.90) which was 46.45% of the maximum scores obtained from the area ‘concept on intellectual disability’. During pre-test highest mean scores (0.88±0.61) which was 44% of the maximum scores were obtained for the area ‘Knowledge on home management of children with intellectual and developmental disabilities’

whereas the lowest mean score was (1.2± 1.05) which was 30% of the total score obtained for the area ‘Knowledge on carrying out sensory motor stimulation (SMS)’.

Further overall pre-test mean score was 12.11±5.92 which was 37.84% of maximum scores whereas it was 17.24±4.69 which was 53.87% of maximum scores during posttest; showing a difference of 16.03% of effectiveness. It was also observed that, difference between the pre and post-test area wise mean score values vary from 9.49% to 27.2%. Hence, it can be interpreted that, VATM was effective both area wise and overall (Table 2).

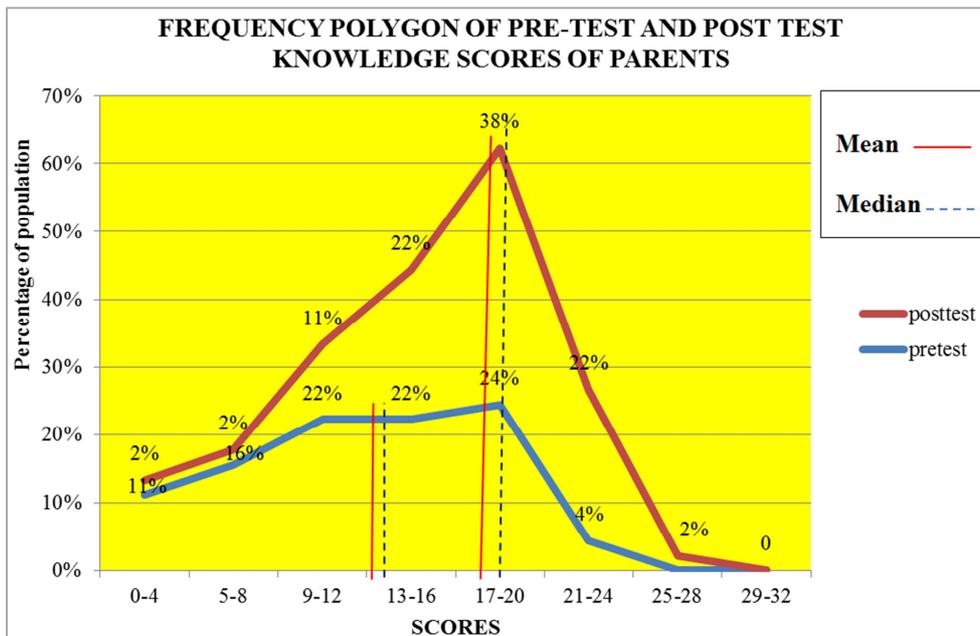


Figure 1. Line graph showing comparison between pre-test and post-test knowledge scores of parents.

The lowest score of pre-test was 0-4 which was obtained by (11.11%) of parents and in post-test also it is ranged from

0-4 which was obtained by (2.22%) of parents. Similarly, highest score of pre-test was ranged from 21-24 which was

obtained by (4.44%) of parents where as in post-test it is ranged from 25-28 and was obtained by (2.22%) of parents.

The median plotted on the line graph shows that the pre-test mean and median scores were 12.47 and 13 respectively.

Whereas during post-test mean and median scores were 17.24 and 18 respectively. It shows the effectiveness of VATM (Figure 1).

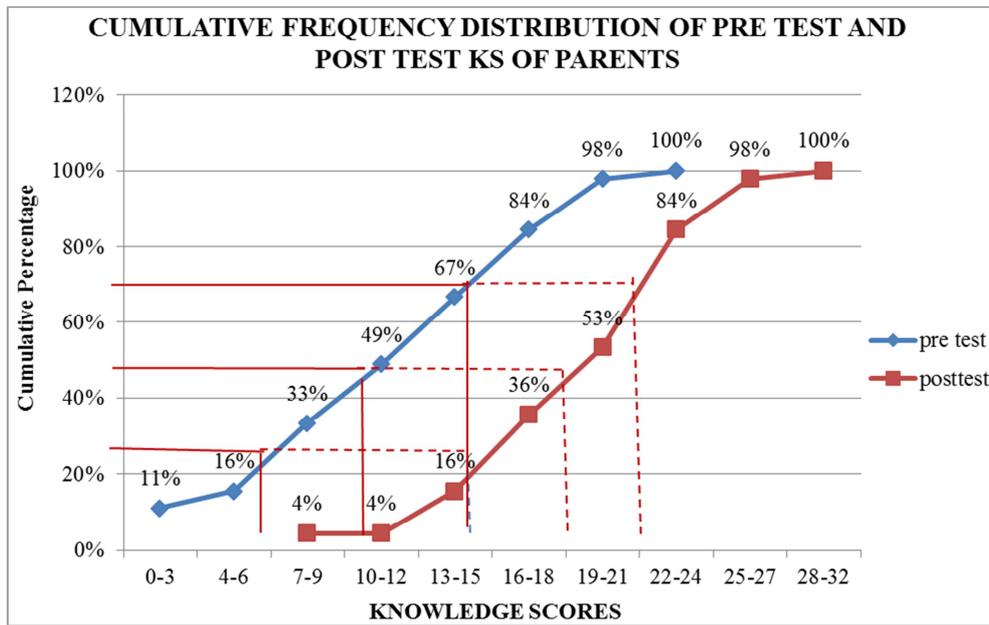


Figure 2. O-Give Curve showing comparison of pre-test and post-test cumulative percentage of KS of Parents.

The above graph shows that the post test score lies to the right of the pre-test scores; over the entire range showing that post test scores were higher than the pre-test scores. In the

pre-test 25th, 50th, 75th percentile scores were 7.2, 11 and 15.9 whereas it was 16, 19.8 and 22.8 respectively in the post-test. It shows that the VATM was effective overall. (Figure 2)

Table 3. Item wise analysis of correct responses of various items of pre and post-test knowledge scores of Parents.

CONCEPT ON INTELLECTUAL DISABILITY

| Q. No. | Item | Correct responses | | Effectiveness of VATM Y-X=E (%) |
|--------|------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------|---------------------------------|
| | | Pre-test X (%) | Post-test Y (%) | |
| 1 | Intelligence is the capacity for learning, reasoning and understanding. | 26.67 | 42.22 | 15.55 |
| 2 | Adaptive functioning is the ability to meet developmental & socio-cultural standards | 4.44 | 15.56 | 11.12 |
| 3 | Intellectual disability is the deficits in intellectual & adaptive functioning | 37.78 | 43.11 | 5.33 |
| 4 | Intellectual disability is a permanent and non-curable condition | 24.44 | 55.56 | 31.12 |
| 5 | A Psychiatrist only is authorized to diagnose a case of Intellectual disability. | 66.67 | 84.44 | 17.77 |
| 6 | The diagnosis of Intellectual disability should be based on individualized clinical assessment and standardized intelligence testing. | 13.33 | 11.11 | 2.78 |
| 7 | A child with mild Intellectual disability can attempt formal schooling up to standard 6 th . | 17.78 | 77.78 | 60 |
| 8 | A child with moderate Intellectual disability can attempt formal schooling up to standard 2 nd . | 42.22 | 68.89 | 26.67 |
| 9 | A child with severe or profound Intellectual disability can attempt no formal schooling at all. | 62.22 | 66.22 | 4.0 |
| 10 | The children with Intellectual disability need special schooling. | 75.56 | 71.11 | 5.55 |
| 11 | Heredity factors, early alterations in embryonic development, Pregnancy with perinatal factors are the causes of intellectual disability | 28.89 | 17.78 | 8.89 |

The above table shows that during pre-test the highest percentage (75.56%) of parents correctly responded to the item “The children with Intellectual disability need special schooling” and only 4.44% of parents correctly responded to the item “Adaptive functioning is the ability to meet developmental & socio-cultural standards”. However, during post-test (77.78%) parents correctly responded to the item “A

child with mild Intellectual disability can attempt formal schooling up to standard 6th” and lowest percentage (11.11%) of parents correctly responded to the item “The diagnosis of Intellectual disability should be based on individualized clinical assessment and standardized intelligence testing”.

Further effectiveness of video assisted teaching module shows highest percentage (60%) of correct response gained

for the item “A child with mild Intellectual disability can attempt formal schooling up to standard 6th” and lowest percentage (2.72%) of correct responses shows for the item “The diagnosis of Intellectual disability should be based on

individualized clinical assessment and standardized intelligence testing.” In the rest of the items the effectiveness varies from 4 % to 31.12% respectively showing that video assisted teaching modules was effective in all areas. (Table 3)

Table 4. Knowledge on home management of children with intellectual and developmental disabilities.

| Q. No. | Item | Correct responses | | Effectiveness Of VATM Y-X=E(%) |
|--------|---------------------------------------------------------------------------------|-------------------|-----------------|--------------------------------|
| | | Pre-test X (%) | Post-test Y (%) | |
| 12 | Aim of home management is to empower the child and decrease the parents’ burden | 20 | 26.67 | 6.67 |
| 13 | Looking at the abilities is the principal care for these types of children. | 68.89 | 82.22 | 13.33 |

The pre-test highest percentage (86%) of parents correctly responded to the item “Looking at the abilities is the principal care for these type of children” and lowest percentage (20%) of students correctly responded to the item “Aim of home management is to empower the child and decrease the parents’ burden”. During post-test 82.22% of parents correctly responded to the item “Looking at the abilities is the principal care for these types of children” and again the lowest percentage i.e 26.67% of parents correctly responded to the item “Aim of home management is to

empower the child and decrease the parents’ burden”. It might be due to their existing pre-test knowledge level regarding the items.

Further effectiveness of video assisted teaching module shows highest percentage (13.33%) of correct response gained for the item “Looking at the abilities is the principal care for these types of children” and lowest percentage (6.67%) of effectiveness shows for the item “Aim of home management is to empower the child and decrease the parents’ burden. (Table 4)

Table 5. Knowledge on carrying out sensory-motor stimulation.

| Q. No. | Item | Correct response | | Effectiveness of VATM Y-X=E(%) |
|--------|----------------------------------------------------------------------------------------------------------------------------------|------------------|-----------------|--------------------------------|
| | | Pre-test X (%) | Post-test Y (%) | |
| 14 | SMS refers to the activities that facilitates development of the sensory motor skills | 31.11 | 73.33 | 42.22 |
| 15 | SMS should be carried in infants | 8.89 | 24.44 | 15.55 |
| 16 | SMS should be performed when the baby is awake and in a mood to play | 62.22 | 75.56 | 13.34 |
| 17 | Vision, hearing, touch and other tactile sensation, kinesthetic sensation & smell and taste are the aspects to be covered in SMS | 20.0 | 25.56 | 5.56 |

The pre-test highest percentage (62.22%) of parents correctly responded to the item “SMS should be performed when the baby is awake and in a mood to play” and lowest percentage (8.89%) of parents correctly responded to the item “SMS should be carried in infants”. During post-test again the highest percentage (75.56%) of parents correctly responded to the item “SMS should be performed when the baby is awake and in a mood to play” and lowest percentage (24.44%) of parents correctly responded to the item “SMS should be carried in infants” which might be due to their existing pre-test knowledge.

Further effectiveness of video assisted teaching module shows highest percentage (42.22%) of correct response gained for the item “SMS refers to the activities that facilitates development of the sensory motor skills” and lowest percentage (5.56%) of effectiveness shows for the item “Vision, hearing, touch and other tactile sensation, kinesthetic sensation & smell and taste are the aspects to be covered in SMS”

In the rest of the items the effectiveness of VATM varies from 13.34% to 15.55% respectively which reveals that video assisted teaching module was effective in all area. (Table 5)

Table 6. Knowledge on carrying out language development.

| Q. No. | Item | Correct response | | Effectiveness of VATM Y-X=E(%) |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-----------------|--------------------------------|
| | | Pre-test X (%) | Post-test Y (%) | |
| 18 | In a normal child, the language development usually takes place in 9-11 months of age. | 17.78 | 31.11 | 13.33 |
| 19 | Early identification of the delay in language development & need for early speech-language stimulation is a key aspect in facilitating language development in children | 24.44 | 42.22 | 17.78 |
| 20 | Parents should talk and play with the child while feeding, bathing and dressing him up to facilitate language development | 73.33 | 88.89 | 15.56 |

The pre-test highest percentage (73.33%) of parents correctly responded to the items “Parents should talk and play with the child while feeding, bathing and dressing him up to facilitate language development”

Which is also highest in post-test (88.89%) & lowest

percentage (17.78%) of parents correctly responded to the item “In a normal child, the language development usually takes place in 9-11 months of age” which is also lowest in post-test (31.11%).

Further effectiveness of video assisted teaching module

shows highest percentage (17.78%) of correct responses gained for the item “Early identification of the delay in language development & need for early speech-language stimulation is a key aspect in facilitating language development in children” and lowest percentage (13.33%) of effectiveness shows for the item

“In a normal child, the language development usually takes place in 9-11 months of age”.

In the rest of the items it is 15.56% which reveals that video assisted teaching module was effective in all areas. (Table 6)

Table 7. Knowledge on training for activities of daily living.

| Q. No. | Item | Correct response | | Effectiveness of VATM Y-X=E(%) |
|--------|------------------------------------------------------------------------------------------------------------------------------|------------------|-----------------|--------------------------------|
| | | Pre-test X (%) | Post-test Y (%) | |
| 21 | The appropriate age for a child to learn toilet training is 4-5 years | 4.44 | 20.0 | 15.56 |
| 22 | parents should go step by step by demonstrating every step while teaching for techniques of activities of daily living. | 42.22 | 60.0 | 17.78 |
| 23 | The correct order of tooth brushing is wash hands-tooth brush-gargle-wash face and hands-wipe with towel. | 37.78 | 51.11 | 13.33 |
| 24 | Parents should guide the child bathe himself by temperature checking to learn for bathing skills. | 11.11 | 20 | 8.89 |
| 25 | Parents should demonstrate buttoning & unbuttoning of shirts without wearing it to make the child learn for dressing skills. | 40.0 | 84.44 | 44.44 |
| 26 | Washing hands before and after taking food is the correct behaviour to be trained to the child. | 66.67 | 82.22 | 15.55 |
| 27 | Parents should allow the child to play with other children to develop group pleasure. | 68.89 | 73.33 | 4.44 |

Item wise comparison of pre and post-test correct responses regarding ‘Knowledge on training for activities of daily living’ shows that during pre-test the highest percentage (68.89%) of parents correctly responded to the items “Parents should allow the child to play with other children to develop group pleasure”. Lowest percentage (4.44%) of parents correctly responded to the item “The appropriate age for a child to learn toilet training is 4-5 years”. However in the post-test highest percentage (84.44%) of correct response was for the item “Parents should demonstrate buttoning & unbuttoning of shirts without wearing it to make the child learn for dressing skills” and the lowest percentage (20%) is for the items “The appropriate age for a child to learn toilet

training is 4-5 years” and “Parents should guide the child bathe himself by temperature checking to learn for bathing skills”.

Further effectiveness of video assisted teaching module shows highest percentage (44.44%) of correct response gained for the item “Parents should demonstrate buttoning & unbuttoning of shirts without wearing it to make the child learn for dressing skills” and lowest percentage (4.44%) of effectiveness shows for the item “Parents should allow the child to play with other children to develop group pleasure”.

In the rest of the items it varies from 8.89% to 17.78% which reveals that video assisted teaching module was effective in all areas. (Table 7)

Table 8. Knowledge on care for behavioural problems.

| Q. No. | Item | Correct response | | Effectiveness of VATM Y-X=E(%) |
|--------|------------------------------------------------------------------------------------------------------------------------|------------------|-----------------|--------------------------------|
| | | Pre-test X (%) | Post-test Y (%) | |
| 28 | Violent, destructive and disruptive behaviours are most commonly seen behavioural problems in these type of children. | 51.11 | 66.67 | 15.56 |
| 29 | Ignore the behavior as far as possible is a technique for modifying problem behaviours | 60.0 | 73.33 | 13.33 |
| 30 | A child who has deliberately messed up the house floor should be asked to clean it. | 66.67 | 82.22 | 15.55 |
| 31 | Parents should give a painful tap on the lips of their child immediately on noticing open mouth to control drooling. | 00 | 66.67 | 66.67 |
| 32 | Parents while correcting for problem behaviors should keep in mind that they are punishing the behavior not the child. | 31.11 | 57.78 | 26.67 |

The pre-test highest percentage (66.67%) of parents correctly responded to the item “A child who has deliberately messed up the house floor should be asked to clean it” which is also highest in post-test (82.22%) & none of the parents could able to correctly respond to the item “Parents should give a painful tap on the lips of their child immediately on noticing open mouth to control drooling” which got drastically increased in post-test (66.67%). In post-test the lowest percentage (57.78%) of parents correctly responded to the item “Parents while correcting for problem behaviors should keep in mind that they are punishing the behavior not

the child”.

Further effectiveness of video assisted teaching module shows highest percentage (66.67%) of correct responses gained for the item “Parents should give a painful tap on the lips of their child immediately on noticing open mouth to control drooling” and lowest percentage (13.33%) of effectiveness shows for the item “Ignore the behavior as far as possible is a technique for modifying problem behaviours”.

In the rest of the items it ranges from 15.55% to 26.67% which reveals that video assisted teaching module was effective in all areas. (Table 8)

HYPOTHESIS TESTING

Paired ‘t’ test was calculated to assess the significant difference in pre and post-test KS and chi square (x²) test was calculated to assess the significant association of select demographic variables of parents regarding home management of children with ID.

Ho1: There is no significant difference between pre and post-test knowledge scores of parents regarding home management of children with ID.

Ho2: There is no significant association between the post-test knowledge scores of parents with their selected demographic variables.

Table 9. Paired ‘t’ value of pre and post-test KS of parents regarding home management of children with intellectual and developmental disabilities.

| Sl. No. | Area | ‘t’ value | Remarks |
|---------|------------------------------------------------------------------------------------------------------------------------|-----------|--------------------|
| 1 | Concept on intellectual disability and on home management of children with intellectual and developmental disabilities | 3.25 | Significant |
| 2 | Knowledge on carrying out sensory motor stimulation (SMS) | 4.40 | Highly significant |
| 3 | Knowledge on carrying out language development | 3.63 | Highly significant |
| 4 | Knowledge on training for activities of daily living (ADL) | 5.55 | Highly significant |
| 5 | Knowledge on care for behavioural problems | 5.33 | Highly significant |

The table value 2.02, d.f-44 at 0.05 level of significance (p value <0.05) is highly significant.

The difference in mean score value related to the above mentioned area were true difference. As the calculated value

is higher than the table value hence it states that, null hypothesis was rejected and statistical hypothesis was accepted. (Table 9)

Table 10. Association between pre-test KS of Parents with their selected demographic variables D.F=1.

| Sl. No. | Demographic variables | X ² value | Level of significance |
|---------|--------------------------------------------------------|----------------------|-----------------------|
| 1 | Age | 2.56 | Not significant |
| 2 | Sex | 0.95 | Not significant |
| 3 | Education | 0.87 | Not significant |
| 4 | Occupation | 0.62 | Not Significant |
| 5 | Religion | 0.79 | Not Significant |
| 6 | Residence | 7.66 | Highly Significant |
| 7 | Per capita income per month | 0.32 | Not Significant |
| 8 | Number of children | 0.73 | Not Significant |
| 9 | Number of children with Intellectual disability | 0.22 | Not Significant |
| 10 | Age of the child/children with intellectual disability | 0.78 | Not Significant |
| 11 | Source of information | 0.745 | Not Significant |

The above table shows that no significant association was found between post-test KS when compared with the demographic variables of the sample participants. The calculated value is less than the table value. However, in the ‘residence’ category the association is found highly significant as the calculated value of ‘Chi-Square’ is greater than that of the table value. Hence, it can be interpreted that, the difference in mean score related to their demographic variables were not true difference and only by chance. So, the null hypothesis was accepted. (Table 10)

4. Discussion

4.1. Studies Related to Need for Care givers Evolvment in Care of Mentally Retarded Children

A randomized controlled trial was conducted to evaluate a parent training intervention for caregivers with preschool-age children with developmental disabilities. The 21 families in the experimental group received usual care plus the 12-week Incredible Years Parent Training Program with developmental delay modifications. Families in the control group (n = 23) received usual care, including early childhood education and related services. Results suggested that the parent training intervention was superior to usual care for

young children with developmental delays or disabilities in reducing negative parent–child interactions and child behavior problems. Participants in the experimental group indicated high satisfaction with treatment [10].

A study was conducted to assess the role of parents in the care of mentally challenged children as perceived by parents and caretakers with a view to develop an information booklet regarding care of mentally challenged children in the selected special schools of Tamilnadu, India. This study compared the parent’s perception of their role and care takers perception of parent’s role in care of mentally challenged children. The study was conducted in selected five special schools of Tamilnadu with 50 parents of the mentally challenged children studying in the special schools and 50 care takers who are taking care of those children in the same. The study results showed that there was a significant difference between the perception scores of parents and caretakers. There was a significant association between the perception scores of parents and the parent’s relation with the child. The information booklet had high acceptability and utility among the parents and care takers [12].

Hudson et al (2003) carried out a study on evaluation of an intervention system for parents of children with intellectual disability and challenging behaviors among 115 families in Australia during which educational Programme

were delivered to the parents regarding the same. On post-test 80% of the subjects reported that they felt more efficiency about managing their children's behavior and reported high level of satisfaction with the delivery of the material and educational programme [11].

Frame R. Robbins and Glen (2002) undertook a study on effect of task difficulty on parent skills and behaviour problems in young children with ID in Florida. Young children with ID and their mothers (n=15) were included in the skill training programme and mothers' teaching skills to improve the children's self-care skill were evaluated. Results showed (p<0.001) significant reduction in children's behavioural problems and increased proficiency of parents teaching skills [13].

4.2. Studies Related to Effectiveness of VATM.

A study to assess the effectiveness of VATM on knowledge regarding body fluid spill management among health care professionals in selected hospitals of Kanpur, India showed that the post-test mean score (23.03) was high when compared to the pre-test mean (13.67) score of knowledge after applying VATM to impart knowledge on body fluid spill management among the sample participants hence proving the effectiveness of video assisted teaching module [8].

Sikandar Kumar et. al (2016) in their study on impact of VATM on knowledge regarding multidisciplinary parent education among the caregivers of children with autism found that there was highly significant difference in pre-test and post-test knowledge scores obtained by paired 't-test value 15.67 at 5% level of significance showing the effectiveness of VATM [9].

A similar study was conducted to assess the effectiveness of Video Assisted Teaching Module (VATM) on the knowledge of geriatric people regarding prevention and management of joint pain. Findings revealed that during the pre-test, the geriatric people had an average knowledge (42.25%) whereas during the post-test, the participants had good knowledge (73.5%). The difference of mean percentage was found as 31.25%, which shows the effectiveness of VATM [14].

Felicia Chitra et. al conducted a study on effectiveness of VATM on knowledge, attitude and utilization of voluntary counseling testing center (VCTC) Service among the college students of selected colleges of Pondicherry, results of which showed the mean pretest knowledge score as 19.6 ± 5.17 and 20.75 ± 6.47 whereas the posttest mean knowledge score was 29.44 ± 4.36 and 12.96 ± 8.56 in the experimental and Control group respectively. The pretest attitude score was 36.77 ± 6.01 and 39.78 ± 5.66 whereas the posttest mean attitude score is 45.93 ± 6.32 and 36.6 ± 5.43 in the experimental and control group respectively concluding that the Video teaching on VCTC had an impact on improving the knowledge, attitude and utilization of VCTC services among the sample participants [15].

5. Limitation of the Study

This study was done in 2016. Hence its results may not reflect the current situation. Although through literature little

has been documented on the use and effectiveness of Video assisted teaching module for home management of children with intellectual disability.

6. Conclusion

From the findings of the study it can be concluded that, Prior to implementation of VATM the Parents had average knowledge (37.84%) regarding home management of children with intellectual disabilities whereas after administration of VATM the number increases to 53.87% revealing good knowledge and the difference in mean percentage was 16.03% which shows effectiveness of VATM. Highest post-test mean score was 68.8 % of the maximum score which was obtained by the parents for the area "knowledge on care for behavioural problems". Lowest mean score was (46.45%) of total score which was obtained for the area "concept of Intellectual Disability."

ORCID

<https://orcid.org/0009-0007-5837-2674>

Acknowledgments

The author would like to acknowledge the parents of ID children studying then at Manovikas GEMM who participated in this study for their time and information, school administration of "Diganta Institute for Intellectual Disability, Berhampur, Odisha" for giving permission to conduct the pilot study at their institution and the administration of Manovikas GEMM for permitting to conduct the main study at their organization. She would also like to extend her gratitude to her supervisor Dr. Krutideepa Mohanty, Professor, Psychiatric nursing at College of Nursing Berhampur, Odisha for her continuous support and guidance throughout the casework.

Conflicts of Interest

The author declares no conflicts of interest.

References

- [1] Barman, M., & Jena, A. K. (2023). Effect of interactive video-based instruction on learning performance in relation to social skills of children with intellectual disability. *International Journal of Developmental Disabilities*, 69(5), 683-696.
- [2] Chandran, H., Jayanthi, K., Prabavathy, S., Renuka, K., & Bhargavan, R. (2019). Effectiveness of video assisted teaching on knowledge, attitude and practice among primary caregivers of children with Autism Spectrum Disorder. *Advances in Autism*, 5(4), 231-242.
- [3] Sanders, C. L., Kleinert, H. L., Free, T., King, P., Slusher, I., & Boyd, S. (2008). Developmental disabilities: Improving competence in care using virtual patients. *Journal of Nursing Education*, 47(2), 66-73.

- [4] American Association on Intellectual and developmental disabilities (2010). "Intellectual disability: Definition, Classification, and Systems of Supports", 10th Edition. Washington, DC: American Association on Intellectual and Developmental Disabilities.
- [5] Riper, M. V., & Selder, F. E. (1989). Parental responses to the birth of a child with Down syndrome. *Loss, Grief & Care*, 3(3-4), 59-76.
- [6] Gupta, R. K., & Kaur, H. (2010). Stress among parents of children with intellectual disability. *Asia Pacific Disability Rehabilitation Journal*, 21(2), 118-126.
- [7] Adhikari, Tulshi K. (2009). Study on knowledge and attitudes of family members towards mentally retarded children, 386.
- [8] Gupta, K., Pal, S., Kushwaha, S., & Kumar, M. A. (2023). A STUDY TO ASSESS THE EFFECTIVENESS OF VATM ON KNOWLEDGE REGARDING BODY FLUID SPILL MANAGEMENT AMONG HEALTH CARE PROFESSIONALS IN SELECTED HOSPITALS, KANPUR. *Romanian Journal of Diabetes, Nutrition and Metabolic Diseases*, 30(4), 446-452.
- [9] Kumar, S., Moharana, B., & Devi, S. K. (2016). Impact of Video Assisted Teaching Module on Knowledge Regarding Multi Disciplinary Parent Education among the Caregivers of Children with Autism in Autism Therapy Centre Bhubaneswar, Odisha. *International Journal of Psychiatric Nursing*, 2(2), 295.
- [10] McIntyre, L. L. (2008). Parent training for young children with developmental disabilities: Randomized controlled trial. *American Journal on Mental Retardation*, 113(5), 356-368.
- [11] Hudson, A. M., Matthews, J. M., Gavidia-Payne, S. T., Cameron, C. A., Mildon, R. L., Radler, G. A., & Nankervis, K. L. (2003). Evaluation of an intervention system for parents of children with intellectual disability and challenging behaviour. *Journal of Intellectual Disability Research*, 47(4-5), 238-249.
- [12] Flinsi, M. D. M., Babu, M., & Kathuria, M. O. K. A Study To Assess The Role Of Parents In The Care Of Mentally Challenged Children As Perceived By Parents And Caretakers With A View To Develop An Information Booklet Regarding Care Of Mentally Challenged Children In The Selected Special Schools Of Tamilnadu.
- [13] Robbins, F. R., & Dunlap, G. (1992). Effects of task difficulty on parent teaching skills and behavior problems of young children with autism. *American Journal of Mental Retardation: AJMR*, 96(6), 631-643.
- [14] Sahoo, S., & Dash, B. (2021). EFFECTIVENESS OF VIDEO ASSISTED TEACHING MODULE (VATM) ON THE KNOWLEDGE OF GERIATRIC PEOPLE REGARDING PREVENTION AND MANAGEMENT OF JOINT PAIN. *Journal on Nursing*, 11(1).
- [15] Chitra, F., Kalavathi, K., & Dash, M. B. (2018). Effectiveness of Video Assisted Teaching Module (VATM) on Knowledge, Attitude and Utilization of Voluntary Counseling Testing Center (VCTC) Service among the College Students in the Selected Colleges of Pondicherry. *J Health Educ Res Dev*, 6(277), 2.