

EFFECT OF VIDEO BASED INSTRUCTION IN TEACHING FIRE SAFETY SKILLS AMONG INDIVIDUALS WITH INTELLECTUAL DISABILITY

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ABSTRACT

The present study was designed to identify the “Effect of Video based instruction in teaching fire safety skills among Individuals with Intellectual Disability”. Pre and post-test, Control Group design was used in the study. The sample for the present study was taken from Special Education Centre (NIMH), Secunderabad. A group of 8 Individual with Intellectual Disability between the age ranges of 12-18 years. Fire safety skills (FSS) checklist was prepared by researcher for the assessment. A Video was developed by the researcher for the intervention. A total of 20 sessions were carried out for the Experimental Group and Control Group. Simultaneously prompting was given with the Video based instruction. Data analysis was done by using Paired t-test to find out the significant difference in Pre and post test of Individual group. Independent t-test was done to find out significant difference among post scores of Experimental and Control Group. Results indicated that the Video based instruction was effective in teaching fire safety skills among the Individuals with Intellectual Disabilities.

KEYWORDS: Fire Safety Skills, Video Based Instruction, Intellectual Disability

INTRODUCTION

Being safe and secure is a right of every person. There are many types of safety measures that a person acquires to stay a secure life whether it may be social, economic, medical self-care etc. kinds of safety. Disaster is one of the reasons to spoil or damage the life and property of a person. Fire accidents can take place anywhere whether it is school, home, theatre, laboratory, factories,, offices, workplace etc. Safety is the best measure to overcome fire accident for this concerned safety. It is obvious to plan safety measures or teach fire safety skills for the people. It is easy to teach fire safety skills to the general people but when to it comes to Intellectual Disabled child the area or the difficulty arises. Because, due to lack of Intellectual ability, and deficits in adaptive behavior(AAIDD 2002) it is difficult to give or teach safety skill to them verbally.

To overcome this Video based instruction is used to teach fire safety skills because video consists of animation, sound and pictures which grab the attention of the students. It gives continuous feedback to acquire the reinforcement of a physical task. Video is far superior to task or graphic. Video based instruction could be used as a means to provide additional support for learners. Malone, Wheaton and Park, (2012).

The investigator of the present study reviewed the number of studies which provides the clear idea about the need and effect of video based instruction in teaching fire safety skills among Individuals with Intellectual disability. Mechling, Gast and Gustafson, (2009).

In this article, the authors examined the importance of Safety skills are essential for an individual, Parents and teachers has serious doubt about the safety and protection of their children and were extremely concerned about their future safety, parents stated that fire safety skill instruction was very important for their children fire safety skill has never been included in their children's Individual education programme. David Garcia, (2013). So as to initiate and to maintain the accepted or positive behaviors those are needed for acceptance and to have an active part in every place without calling attention to one.

The study was done to find out the effectiveness of video based instruction in teaching fire safety skills among Individuals with intellectual disability. The data was collected by a group of 8 Individuals with intellectual Disability between the age ranges of 12-18 years. Four in Experimental Group and four in Control Group. Data analysis was done by using Paired t-test to find out the significant difference in Pre and post test of Individual group. Independent test was done to find out significant difference among post scores of Experimental and Control Group.

Objective of the Study

- To assess the awareness level of the Individuals with intellectual disability on fire safety skill.
- To find out the effectiveness of video based instruction in teaching fire safety skill among the Individuals with Intellectual disability.
- To find out the effectiveness of Classroom teaching in fire safety skill among the Individuals with Intellectual disability.
- To compare effectiveness of teaching fire safety skill between and experimental group and controlled group.

METHOD

Design

The present study Pre and Post-test, Control Group Design was used to find out the Effectiveness of Video based Instruction in teaching fire safety skills among Individuals with intellectual disability.

Sample

Probability sampling techniques of simple random sampling method was used. The sample in the study was Individuals with intellectual disability, who are attending the special school at Special Education Centre in NIMH Secunderabad. The sample has met the pre-requisite criteria for the intervention. The sample size was eight Individuals with Intellectual Disability of age range from 12-18 years.

Tool

Assessment of Pre-Requisite Skills for Selecting of Video Based Instruction and Fire Safety Skill (FSS)

It was developed to find out the pre-requisite skills to require for fire safety skills among the Individuals with Intellectual Disability based on performance in the pre-requisite checklist, the fire safety measures and awareness has been selected.

The items in checklist were arranged from simple to complex in a logical sequence. A provision for recording the performance of the Individuals with Intellectual disability was made in the checklist.

The following were used for recording the performance of the students in pre-requisites checklist are given below:-

- Yes (he/she can do the activity himself).
- No (Not do the activity by himself).\

The scoring for checklist “Assessment of pre-requisite skills for selecting fire safety skill was done by marking as codes “Yes” or “No”. Pre-requisite checklist on video based instruction and fire safety skills (FSS) checklist by scoring of 40-60% out of 12 students 8 were selected for study.

Intervention Checklist on Fire Safety Skills

The validated pre-requisites skills checklist was administered on Individuals with Intellectual Disability, based on the performance of Individuals with Intellectual Disability in the pre-requisites skills checklist on fire safety skills sample were selected. To assess the performance of subjects on learning fire safety skills, the researcher developed two task analysis checklists on following fire safety task:

List of fire safety task selected Children with Intellectual Disabilities.

S.No	Level of Retardation	Task
1	Mild	How to operate Fire Extinguisher
2		What to do if the fire catches your cloths

Format is designed in such way; there is a provision for recording the baseline assessment and periodically evaluation, which tell us of the subjects. The codes used for recording the performance of the subjects. The following keys used are Independent (ID), Verbal Prompt (VP), Gestural Prompt (GP), Modeling (MP), and Physical Prompt (PP). The scoring for checklist “assessment of performance and evaluation of fire safety skills was done using numerical codes ranging from (0-5). Independent is given a score of 5, verbal prompt as 4, Gestural prompt 3, Modeling prompt 2, Physical prompt 1.

Video Development

For the intervention video was downloaded by the researcher based on the current level in the fire safety skill, two basic task were selected.

Task 1: How to use fire extinguisher

Task 2: What to do if the fire catches you

- Video was downloaded for task1 by the researcher.
- Video was developed by researcher for task2.
- Researcher downloaded 2 different videos for task1.
 - How to operate fire extinguisher-fire safety training.

- NE video fire safety Awareness 2010.
- The Video was developed by the researcher by using Any Video Convertor, Video Joiner CNET and Picture to Video Converter software.
- For task1 the important clippings from both the video were cut/trimmed by using Any Video Converter software.
- For task 2 the picture slides were made with the titles written in it in a step by step manner and was converted into picture to video through Picture to Video Converter software.
- Task1 and task2 videos were combined through the Video Joiner CNET software.

Procedure

Before conduction of the Experiment, written permission was obtained from the parents of subjects and the principle of Special Education Centre, NIMH to safeguard ethics of conducting research with human subjects. The primary objective of the study was to investigate the “Effect of Video based instruction in Teaching Fire safety skills among Individuals with Intellectual Disability”. Initially 1baseline session was taken for Pre-test and later on 20 intervention sessions were conducted. Each session was taken for half an hour. The scores obtained on the evaluation of performance of the students at the end of the Experiment were subjected to statistical analysis. Collected data was analyzed by using Statistical Package for Social Sciences (SPSS IBM 21) software. Mean (M), Standard Deviation (SD), and “t-test” has been calculated. The “t test” used for the statistical analysis were:-

- Paired “t test” for the comparison of pretest and posttest scores of Experimental and Control Group.
- Independent “t test” for the comparison of group mean scores of Experimental and Control Group.

Data was interpreted both qualitatively and quantitatively.

RESULT AND DISCUSSIONS

Table 1: Comparison of Pre and Posttest Mean Scores of Experimental Group for Task 1 and Task 2

Group	Test			t-value	df	Significant (2-Tailed)
		Pre	Post			
Experimental (task-1)	Mean	15.75	51.25	54.996**	3	.000
	SD	0.958	0.501			
Experimental (task-2)	Mean	19	51.75	38.353**	3	.000
	SD	1.414	0.5			

Table 1 show that the Experimental Group In Mean scores there is a improvement from pre test score 15.75 to post test scores 51.25.paired t-test was carried out to find out the significance difference in mean scores of pre test post test scores of task 1. The calculated t-value is 54.996 which is found to be higher than the table value indicating highly significant at 0.00 level (p<0.01. David Garcia, (2013). In mean scores there is an improvement from pre test score 19 to post test scores 51.75 in task2. The t-value 38.53 which is significant at 0.00 level (p<0.01).

Table 2: Comparison of Pre and Posttest Mean Scores of Control Group for Task 1 and Task 2

Group	Test			t-value	df	Significant (2-tailed)
		Pre	Post			
Control (Task-1)	Mean	16.25	36.75	23.671	3	.000
	SD	2.986	1.893			

Control (Task-2)	Mean	18.75	37.5	25.000	3	.000
	SD	0.958	1.291			

Table 2 In mean scores there is an improvement from pre test score 16.25 to post test scores 36.75 in task1. Paired t-test was carried out to find out the significance of the difference in mean scores of pre test post test scores. The t-value is 23.671 which is highly significant at 0.00 level ($p > 0.05$). In Mean scores there is a improvement from pre test score 18.75 to post test scores 37.5 in task2.. The t-value 25.000 which highly significant at 0.00 level ($p < 0.01$).

Table 3: Post Mean Scores Experimental Group and Control Group Task 1 and Task 2

Group	Test		t-value	df	Significant
	Post Mean	SD			
Control	36.75	1.893	14.812	6	.108
Experimental	51.25	.500			
Control	37.50	1.291	20.586	6	0.94
Experimental	51.75	0.500			

Table 3 shows the Control Group and Experimental Group post scores, post Mean of experimental group is 51.25 and standard deviation is 0.500 and post Mean of control group is 36.75 and Standard deviation is 1.893 and t- value of task 1 is 14.812, which is highly significant at .108 level ($p < 0.01$). Banda, Davender, Dogor, (2011). post Mean of experimental group is 51.75 and standard deviation is 0.500 and post Mean of control group is 37.50 Standard deviation is 1.291 and t- value of task 2 is 20.586, which is highly significant at 0.94 level ($p < 0.01$).

Table 4: Comparison of Post Means Scores of Experimental Group and Control Group in Task 1 and Task 2

Group	Test		t-value	Df	Significant
	Post Mean Scores	SD			
Control	74.25	2.217	25.932	6	0.009
Experimental	103	.0			

Table 4 shows the Control Group and Experimental Group post scores, post Mean of experimental group is 103 and standard deviation is 0 and post Mean of control group is 74.25 Standard deviation is 2.217 and t- value of task 1 is 25.932, which is highly significant at 0.009 level ($p < 0.01$). Banda, Davender, Dogor, (2011).

CONCLUSIONS

The findings of the study revealed that Video based instruction will motivate and enhance the desired learning of the students. Video makes the learning effective and interesting, children likes the Video and can learn the new concept easily and faster when compared to conventional method (Orally) teaching. Videos should be form in such a way they enhance the learning process in children. Teacher can use different audio-video so that it becomes interesting for the children. Props like fire extinguisher, and video based instruction can be used in teaching Fire safety skills. During the intervention investigator show the video to the students with the help of Laptop and asked the students questions regarding the fire safety clips which already came into Video. Students raised their hands and gave the appropriate answers. Meanwhile students were reinforced for every successful behavior during the starting sessions and later it was faded. Hence the performance level of the Experimental Group in learning Fire safety skills was high as compared to Control Group. Subjects in the Control Group were taught through conventional method that is they were taught through orally. Fire safety skills are important for living a safe and life for any person in society. And as we know that persons with

Intellectual Disabilities have significant limitation in Intellectual functioning it is important for the educator to plan activities to provide the stimulation. Results of the study shows that the Video based instruction are very effective on teaching Fire safety skills for Children with Intellectual Disability. This positive outcome gives directions to the future studies and creates awareness among the professionals. The researcher concluded that Video based instruction is effective in teaching Fire safety skills among the Children with Intellectual Disabilities. Further researches are needed to determine the exact nature of their contribution and the components critical for overall development of Children with Intellectual Disabilities.

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