

Effectiveness of Behavioral Skills Training (BST) on Knowledge of Sexual Abuse and Resistance Ability among Children with Intellectual Disability : a pilot study

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Abstract

Sexual abuse among children with Intellectual Disability is 2-4 times the rate of the general population. 39% - 83% of girls and 16% - 32% of boys with Intellectual Disability typically experience sexual abuse by the time they reach the age of 18. In order to protect themselves, children with Intellectual Disability must have the skills to independently recognize potentially abusive situations and respond appropriately. The current study focused on assessing the effectiveness of Behavioural Skills Training on knowledge of sexual abuse and resistance ability among children with Intellectual Disability. A true experimental, pre-test post-test control group design was adopted. Study was conducted among 14 children with mild or moderate disability (7 in the experimental and control groups respectively), randomly selected from a selected special school. Pre-assessment of subjects was done using the Personal Safety Questionnaire (PSQ), and video based modified What If Situation test (WIST). BST was administered for one month (12 sessions). Post-assessment was done one week after the intervention. The Experimental Group demonstrated greater knowledge regarding sexual abuse ($t=3.27$, $p=0.008$) and resistance ability (WIST female $t=5.85$, $p< 0.001$, WIST male $t=4.47$, $p=0.001$) when compared to the control group. Current study findings

suggest that BST is effective for children with mild or moderate Intellectual Disability in the experimental group. Further research with the same protocol to gain more subjects, is suggested in order to confirm the result before being applied as a primary prevention intervention for child sexual abuse in children with Intellectual Disability.

Keywords : Child Sexual Abuse, Behavioural Skill Training Programme, Intellectual Disability.

Introduction

Sexual abuse of children with Intellectual Disability is increasing in alarming proportions globally. In the general population, between 5 to 10% of boys and at least 20% of girls have been sexually abused (Sobsey & Doe, 1991). As high as these numbers are, children with Intellectual Disabilities are at a greater risk of being sexually victimized. (Sobsey & Doe, 1991; Strickler, 2001; Baladerian, 1991; Khemka, Hickson, & Raynolds, 2005; Sullivan & Knutson, 2000) The rate of sexual abuse among children with Intellectual Disability is 2-4 times the rate of the general population (Strickler, 2001; Sullivan & Knutson, 2000). 39% - 83% of girls and 16% - 32% of boys with Intellectual Disability typically experience sexual abuse by the time they reach the age of 18. Sexual abuse is recurrent and lasts for longer periods of time when the victim is a person with disability. Children with

Intellectual Disability are more vulnerable to sexual abuse due to limited communication ability, dependence on others for care, social isolation, poor social judgment and an emphasis on compliance. (Nettelbeck & Wilson, 2002). Ninety two to ninety nine percent of the abusers were known to, and trusted by, the victim. Long term chronic abuse by known and trusted persons causes more sustained psychological, physical, and behavioural damage. Abusers are usually a family member, a paid care giver, a transportation provider, or an acquaintance. (Strickler, 2001). As professional awareness of the problem of Child Abuse expands, there appears to be a need for personal safety programs as one of multiple approaches to reduce the risk of child abuse. (Kim, 2010) In order to protect themselves against abuse, children with Intellectual Disability must have the skills to independently recognize potentially abusive situations and respond appropriately. (Furey, 1994) Even though some of the abuse prevention programmes are widely used, the effectiveness of most of the programmes are not established. Although sexual abuse is a significant problem among children with Intellectual Disabilities, there is little research evaluating prevention programmes for this population (Khemka et al., 2005; Furey, 1994; Lumley, Miltenberger, Long, Rapp & Roberts, 1998). Children with Intellectual Disability are less likely to be educated about sexuality issues, or given self-assertiveness training, which is necessary in learning the difference between "safe" versus "unsafe" people and situations, and in knowing how to say "no" to unwanted sexual propositions. They often think they do not have a right to refuse sexually abusive treatment, especially if the abuser is an authority figure, such as a parent, step-parent, relative, teacher, caseworker, pastor or some other individual who is well-respected by other family members,

neighbours and co-workers. (Lumley et al., 1998) Reviewed literature shows negligible research on the effectiveness of BST on the prevention of sexual abuse among children with Intellectual Disability, and the studies conducted are limited to adult women with Intellectual Disability. An unpublished thesis submitted to NIMHANS focused on empowering parents in dealing with sexuality issues of children with Intellectual Disability, and provided training to parents on sexual abuse and sexual abuse prevention. The results of the study revealed that 100% of parents feared sexual abuse of their daughters and expressed a need for training on sexual abuse prevention (Nair, 2011).

Objectives

1. Assess the subjects in experimental and control groups, on their knowledge of sexual abuse and resistance ability.
2. Evaluate the effectiveness of Behavioural Skills Training in terms of change in the knowledge of sexual abuse and resistance ability in the experimental group, compared with the control group.

Methods

Study Design

A true experimental, pre-test post-test control group design was adopted to evaluate the effectiveness of BST, on knowledge of sexual abuse and resistance ability.

Participants

The subjects were 14 children with Intellectual Disability, attending a selected special school in Bangalore, while parents of the children were considered as co-therapists. The study was conducted in June and July 2016 in a special school in Bangalore, among 14 children, 7 in an experimental group and 7 in a control group, who were selected randomly using random numbers generated by statistical software, recruited from all of the children in the

school who met the inclusion and exclusion criteria of the study.

Setting: It was a selected special school in Bangalore which provides services and training to children with special needs. It caters different academic programmes as per an Individualized education plan and is focused more on training children in meeting Activities of Daily Living, money management, communication, and social skills.

A) Children

Inclusion criteria for children were

- Children with mild and moderate Intellectual Disability as per DSM V, and as determined by the assessment of qualified educational psychologists prior to admission to the special schools.
- Age 10-19 years
- Those children whose parents were available during the period of study
- Children with verbal ability which would allow them to participate in the study.

Exclusion Criteria

- Children who cannot speak Malayalam/English
- Presence of active symptoms of co morbid psychiatric illness

B) Parent Inclusion Criteria

- Parents (either mother or father) who were willing to participate as co-therapists.
- Parents staying with the child for at least one year prior, and were the primary care givers of the child.

Exclusion Criteria

- Parents who cannot speak Malayalam/English

Instruments

1. Personal Safety Questionnaire (Wurtele 1990) This was designed to assess knowledge about sexual abuse. Participants respond “yes”, “no”, or “I don’t know” to the 11 items covering personal safety. The range of score was 0-11. This tool required about 5 minutes to administer.

2. The ‘What If Situation’ test (Wurtele 1990) It measures participants’ ability to differentiate between appropriate and inappropriate sexual advances, and their knowledge about hypothetical abusive situations. The instrument consisted

of 2 practice trials and 6 brief vignettes, with 3 describing appropriate requests to touch, and the remaining 3 describing inappropriate requests. The “What If Situation” test yields 3 scale scores: appropriate request recognition (range 0-3), inappropriate request recognition (range 0-3), and the total score which measures knowledge of self-protection skill (range 0-24). The total score is a combination of four total specific skill scores which represent the patient’s verbal report of whether he/she is able to 1) refuse the advance by making appropriate, assertive and persistent verbal responses (say), 2) remove himself/herself from the situation (Do), 3) list a person to tell about the incident (tell) 4) report the incident and the identity of the offender.

Two practice situations and six vignettes were depicted in a video developed by the researcher for better understanding of children with Intellectual Disability, and were shown to the children for assessing their ability to differentiate between appropriate and inappropriate sexual advances, and their resistance ability towards them. There were two sets of videos to assess the resistance ability (WIST-Female and WIST-Male), and assessed the difference in the response of the child with Intellectual Disability, depending on the gender of the perpetrator/parent/ teacher/ doctor/ nurse. Hence every child was assessed by two sets of videos (WIST-Female and WIST-Male), irrespective of their gender. All of the data collection tools have been used worldwide and the psychometrics are established. Tools were discussed with experts in NIMHANS, who opined that they are appropriate for use in the Indian context.

Behavioural Skills Training Module

The BST module was developed by modifying the Body Safety Training programme developed by Dr. Sandy K.Wurtele. The module consisted of 10 lessons. Each lesson was taught through stories, and each story had a picture that accompanied it. Children were taught firstly

about general safety (poison safety, fire safety, pedestrian safety and vehicle safety) as a way of establishing rapport, and then moved to body safety rules (stranger safety, concept of private parts, appropriate and inappropriate touch, self-protection skills). Appropriate and inappropriate situations were presented using a video, and training was given to children on how to respond appropriately to each situation using role play. Topics covered were a) We are the bosses of our body b) The concept of private parts and their names c) Touching one's own private part is acceptable when done in private d) It is inappropriate for doctors, nurses or parents to touch children's private parts for health or hygiene reasons e) Otherwise, it is not okay to have private parts touched or looked at by a bigger person f) It is wrong to be forced to touch a bigger person's private parts g) Somebody touching a private part is never the child's fault.

The module was delivered over a period of one month, three sessions per week. BST was carried out through the following steps.

- a. Instruction-Involved teaching the location of private parts, difference between appropriate and inappropriate touch, safe and unsafe secrets, sexuality, self-protection skills (saying NO, moving from the situation, telling a trusted person, reporting the person and situation).
- b. Modelling-the researcher modelled correct responses, and instructed on how to act in an unsafe situation using role play. Situations were presented using a video.
- c. Rehearsal - the researcher presented situations using a video and instructed on how to rehearse the skills until able to demonstrate the skills independently

Procedures

Institute Ethical Committee clearance was obtained, while written informed consent was obtained from the child's parents, and an attempt was made to get assent from the child for conducting study. Sixty four percent of the children were able to give signed assent. To avoid intergroup

contamination, data collection was done with the control group first, and then with the experimental group.

Phase I

Pre-assessment of subjects in the Experimental (BST) and Control Groups (TAU), in terms of knowledge of sexual abuse and resistance ability by individual child intervention.

Phase II

Control Group: Treatment as usual These included general safety tips and detailed instructions taught to children by teachers in a special school during the academic programme. As part of the curriculum, teachers taught children about safe and unsafe touch, and instructed children on how to say "No" to unsafe touches. Teachers mainly focused on inappropriate touches and the main mode of instruction was lecturing.

Experimental Group: BST

BST was administered in 3 sessions in a week on alternate days, each session lasting an hour. Training was given in small groups consisting of 3-4 members. The training programme was divided into 10 small lessons and each lesson was taught in a one hour session along with instruction, modeling, rehearsal, praise and corrective feedback. Parents were involved as co-therapists and observed the training given by the researcher, and then practiced it at home with their children.

Post Intervention assessment

A) Post-assessment of the Experimental Group on knowledge of sexual abuse and resistance ability, one week after the Intervention.

B) Post-assessment of the Control Group on knowledge of sexual abuse and resistance ability after one week following Treatment as Usual (TAU).

Results

Analysis of data was done using SPSS. The significance level was taken as <0.05 . Normality of variables; knowledge, resistance ability were checked by the Shapiro Wilk normality test and found that the data followed normal distribution. Hence parametric tests were adopted for the analysis.

Pretreatment analysis

Testing homogeneity of the experimental and control groups

Chi square and t tests were used to test the homogeneity of the two groups and were not found to be statistically significant. There was no significant difference between the groups in the Personal Safety Questionnaire and What If Situation Test. Participant's age and intellectual abilities also failed to show significant differences between the two groups.

Table 1: Frequency Distribution of Sample Based on Baseline Variables (N=14)

Variable	Experimental Group (n=7)		Control Group (n=7)		Fisher's Exact Test	
	Frequency	Percentage	Frequency	Percentage		
Category of IDD	Mild	2	28.6	5	71.4	0.286
	Moderate	5	71.4	2	28.6	
Gender	Male	3	42.9	5	71.4	0.298
	Female	4	57.1	2	28.6	
Age	10-12 yrs	1	14.3	2	28.6	0.370
	13-15	4	57.1	4	57.1	
	16-18	2	28.6	1	14.3	

Mean age of the sample was 14 years ± 2.28 . In the experimental group, the majority were female children (57.1%). On the other hand, in the control group, the majority (71.4%) were male children. In both groups, the majority (57.1%) of the subjects were within the age group of 13-15 years. In the experimental group, the majority (71.4%) were children with moderate ID but in the control group, the majority (71.4%) were children with mild ID. All the participants lived in urban areas. In the experimental group, all subjects were from nuclear families, and in the control group, only one child belonged to a joint family. All the parents attending the

programmes as co-therapists, were mothers. Fisher's exact test was done and results showed that there is no significant difference between the groups ($p>0.05$).

Outcome Evaluation

Normality of variables ; knowledge, resistance ability were checked by the Shapiro Wilk normality test and found that the data followed normal distribution. Multivariate normality was also checked with the Mardia Test and found that the data followed normal distribution. Hence parametric tests were adopted for the analysis.

Table 2: Effectiveness of Behavioural Skill Training on Knowledge Regarding Sexual Abuse (N=14)

Knowledge	Experimental Group(n=7)	t6	Sig	Control Group (n=7)		t6	Sig	Between Groups			
				Mean± SD				t12	Sig		
				Mean	SD						
Pre PSQ	8±1.41	4.076	0.007	8.29±1.38		0.812	0.448	3.174	<0.01		
Post PSQ	9.71±0.95			7.86±1.35							

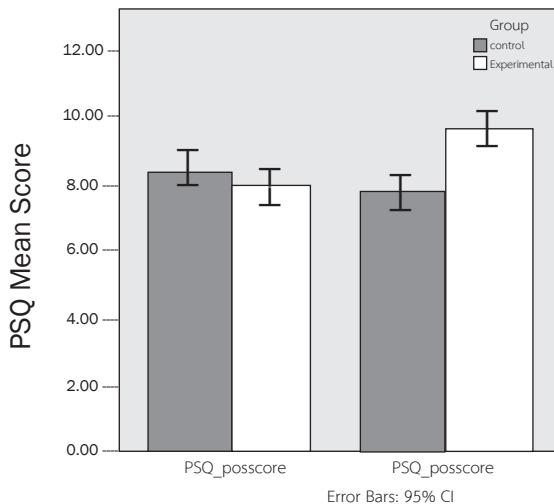
**Figure 1:** Error Bar Chart comparing pre and post test scores of knowledge

Table 2 and Fig 1 show that the mean pre-test knowledge score using PSQ was 8 ± 1.41 in the experimental group, and increased to 9.71 ± 0.95 after attending Behavioural Skill Training. It was found that there is a statistically significant difference in knowledge scores between the experimental and control groups ($t=3.174$, $p=0.008$).

Table 3: Effectiveness of Behavioural Skill Training on Resistance Ability Against Sexual Abuse (N=14)

Resistance Ability	Experimental Group (n=7)	t6	Sig	Control Group(n=7)		t6	Sig	Between Groups			
				Mean±SD				t12	Sig		
				Mean	SD						
Pre WIST-F	14.43±6.63			16.57±3.36		0.225	0.829	4.478	<0.01		
Post WIST-F	27.14±4.67	6.186	0.001	16.71±4.11							
Pre WIST-M	16.29±5.91			16.14±4.02		0.350	0.738	5.845	<0.01		
Post WIST-M	26.86±4.63	6.931	<0.001	16.71±5.02							

Table 3 and Fig 2 show that resistance ability (based on WIST-female scores) increased from 14.43 ± 6.63 to 27.14 ± 4.67 in the experimental group, whereas in the control group it increased from 16.57 ± 3.36 to 16.71 ± 4.11 . Between group comparison shows a significant difference based on WIST –Female scores ($t=4.478$, $p<0.01$). When considering resistance ability based

on WIST-male scores in the experimental group, resistance ability increased to 26.86 ± 4.63 from 16.29 ± 5.91 , but in the control group, the increase was from 16.14 ± 4.02 to 16.71 ± 5.024 . There is a statistically significant difference between resistance ability in the experimental and control groups after intervention ($t=5.845$, $p<0.01$).

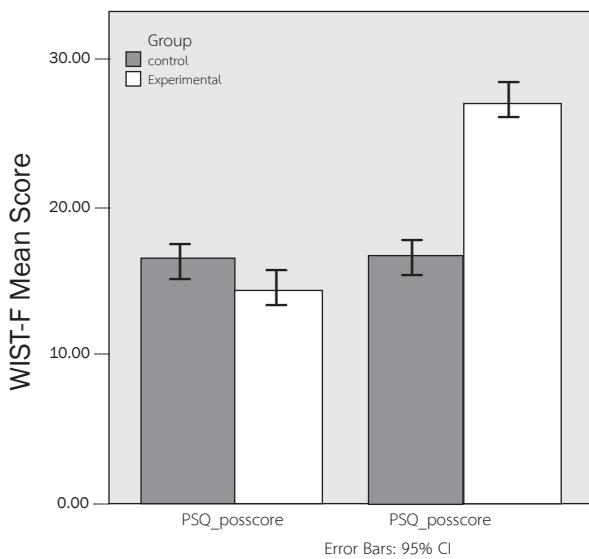


Figure 2: Error Bar Chart comparing pre and post test scores of resistance ability based on WIST Female scores

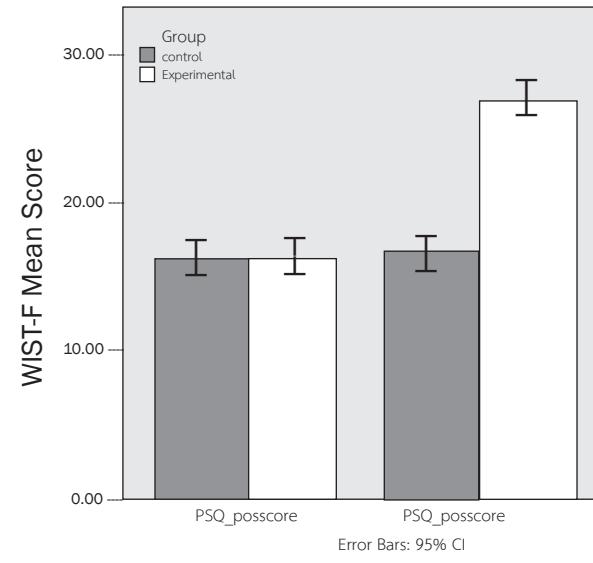


Figure 3: Error Bar Chart comparing pre and post test scores of resistance ability based on WIST Male scores

Table 4: Relationship Between Knowledge and Resistance Ability, Correlation Between Knowledge (PSQ score) and Resistance Ability (WIST-F& WIST-M)

Correlation	r	p
PSQ& WIST-F	.826**	<0.01
PSQ& WIST-F	.828**	<0.01

**. Correlation is significant at the 0.01 level (2-tailed).

Knowledge regarding sexual abuse and resistance ability towards sexual abuse is found to be strongly correlated ($r = 0.826$ with WIST female, and 0.828 with WIST – Male) which is significant at 0.01 level.

Discussion

Present study showed that children with mild to moderate Intellectual Disability between 10-19 years of age demonstrated improvement in their knowledge regarding sexual abuse and resistance ability subsequent to participation in BST. In the pre-assessment of knowledge using the Personal Safety Questionnaire, it was noticed that children in both groups performed well with a mean score of 8 out of 11. Following training, children who had attended training, demonstrated better understanding of sexual abuse issues with a mean score of 9.71 (being boss of the body, knowing that inappropriate touching of a child's private parts is not OK, it is never the child's fault, touching an adult's private parts is wrong, and differentiating between appropriate and inappropriate touch). Even after training, children scored less on concepts, such as: touching own private parts is ok, need for reporting inappropriate touch, and known and trusted people may inappropriately touch a child. In contrast, children in the control group consistently performed lower and remainednaive with regard to sexual abuse. Resistance ability was measured using the video assisted What If Situation Test. Children who received Behavioural Skill Training showed a significant improvement in resistance ability when compared to children in the control group. Pretest of resistance ability in both groups demonstrated that children in both groups exhibited good knowledge in differentiating between appropriate and inappropriate touch requests, but they were very poor in terms of their knowledge regarding the importance of reporting an incident to a responsible person, except for one out of 14, all said they wouldn't report it. But following Behavioural Skills Training, children showed improvement in resistance ability, which was evident in terms of reporting to a responsible person about the incident.

Our findings are consistent with findings of previous studies conducted, in which investigators

found an increase in knowledge about sexual abuse and self-protection skills following a sexual abuse prevention programme. However, most of the studies were mainly with female adults. (Khemka et al., 2005; Kim, 2010; Lumley et al., 1998). A Chinese study (Lee & Tang, 1998) demonstrated similar findings but in their study, they included only female adolescents with mild intellectual disability. Even though the children who attended the BST performed well, compared to the control group, its practical significance is doubtful. Children verbally responded appropriately in the post assessment of resistance ability when asked how they would respond to different abusive situations. To what extent they can perform well in real life situations is again questionable. In-situ training programmes, conducted in previous studies for prevention of sexual abuse in children, showed more generalization of skills in real life, but researchers did not include in-situ training as it may create dissonance in children.

The current study was a premiere effort to develop a video supplemented Behavioural Skills Training programme for prevention of sexual abuse, with mild and moderate children with Intellectual Disability in India. The video was adapted from prevention programmes conducted in the West, and modified to suit the local, social and cultural context. There are certain limitations of the study. Firstly, the effectiveness of the study was assessed, based on only 3 appropriate and 3 inappropriate touch request vignettes. Its complexity can be raised using inclusion of more ambiguous situations, specifically more inappropriate situations. Secondly, limited verbal ability of the children was a concern. Since the study included only children with some minimal verbal ability for assessment and training, many of the children with moderate disability were excluded. It is highly recommended to develop an intervention

programme and associated assessment tools, which would be appreciated by children with poor verbal ability, and severe or profound disability, which include more visual cues for better understanding.

Conclusion

Current study findings suggest that Behavioural Skill Training is effective for children with mild or moderate Intellectual Disability in the experimental group. Due to small number of subjects in this study, further research with the same protocol in order to gain more number of subjects is suggested to confirm the reliability of the program before being used as a primary prevention intervention for child sexual abuse in children with Intellectual Disability.

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References

Baladerian, N. J. (1991). Sexual abuse of people with developmental disabilities. *Sexuality and Disability*, 9(4), 323-335.

Furey, E. M. (1994). Sexual abuse of adults with mental retardation: Who and where. *Mental retardation*, 32(3), 173.

Khemka, I., Hickson, L., & Reynolds, G. (2005). Evaluation of a decision - making curriculum designed to empower women with mental retardation to resist abuse. *American Journal on Mental Retardation*, 110(3), 193-204.

Kim, Y. R. (2010). Personal safety programs for children with intellectual disabilities. *Education and Training in Autism and Developmental Disabilities*, 45(2), 312-319.

Lee, Y. K. S., & Tang, C. S. K. (1998). Evaluation of a sexual abuse prevention program for female Chinese adolescents with mild mental retardation. *American journal on mental retardation*, 103(2), 105-116.

Lumley, V. A., Miltenberger, R. G., Long, E. S., Rapp, J. T., & Roberts, J. A. (1998). Evaluation of a sexual abuse prevention program for adults with mental retardation. *Journal of applied behavior analysis*, 31(1), 91-101.

Nair, S. (2011). Empowering Parents to Deal with Sexuality Issues Among Mentally Challenged Adolescents – A Group Intervention Study. Doctoral dissertation, NIMHANS, Bangalore.

Nettelbeck, T., & Wilson, C. (2002). Personal vulnerability to victimization of people with mental retardation. *Trauma, Violence, & Abuse*, 3(4), 289-306.

Sobsey, D., & Doe, T. (1991). Patterns of sexual abuse and assault. *Sexuality and Disability*, 9(3), 243-259.

Strickler, H. L. (2001). Interaction between family violence and mental retardation. *Mental retardation*, 39(6), 461-471.

Sullivan, P. M., & Knutson, J. F. (2000). Maltreatment and disabilities : A population - based epidemiological study. *Child abuse & neglect*, 24(10), 1257-1273.