



A Study to Assess the Effectiveness of Token Economy for Behavior Problems among Mild and Moderate Mentally Challenged Children in Selected Special Homes

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Author's contribution

The sole author designed, analysed, interpreted and prepared the manuscript.

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ABSTRACT

This study was conducted to evaluate the Effectiveness of Token Economy on Behavioural Problem among Mentally Challenged Children in a Selected Special homes, Chennai. In this study Pre Experimental (one group pre test- post test) design was adopted. Setting of the study was Matheraiee, special school, valluvargurukullam campus, Chennai. The sample size was 37 and they were selected through Non Probability Purposive Sampling Technique. Behaviour problem was assessed through Conner's Abbreviated Rating Scale (CARS). After Token Economy Intervention the collected data were analysed by using both descriptive and inferential statistical methods. Of the study participants, 48.65% showed severe behavioral problem, 32.43% had moderate and 18.92% had mild behavioral problem. There was no significant similarity between the pre test score and behavior problems but, the study showed significant relationship between the token economy and behavior of the participants. This study concluded that the Token Economy was effective, attractive, easy to carry, dispense and cost effective therapeutic intervention in reducing the Behavioral Problems among Mentally Challenged Children.

Keywords: Effectiveness; token economy; behavior problem; mentally challenged.

1. INTRODUCTION

Few of the people population show significant retardation or slowness on their mental ability due to much complex reasons spanning from the family to social conditions. They are termed to "Mentally Retarded" or "Mentally Challenged" [1]. Their IQ ratio is quite low (lesser than 99) and those mentally challenged children show behaviors that are considered as problematic because of the harm or inconvenience they cause others, or to the child himself, unknowingly [2]. These problem behaviors could be due to a number of reasons (i.e.) lack of communication skills, may also be due to a wrong handling by people in the environment of the child. The behavior could be Violent and destructive, mischievous with others, self-injurious, repetitive, odd, hyperactivity, rebellious and antisocial in nature. Mentally challenged is not a disease to be cured. It is a condition or handicap that has to be helped by training or rehabilitation. There can be no operations or surgeries to increase memory or intelligence. Mentally challenged children require teaching and training using scientific methods to become self-dependent and useful citizens. Behavior modifications for children's are a method of therapy geared towards turning undesirable behavior into desirable behavior [3-4]. There are different methods that can be used for behavior modifications such as positive reinforcements, direct instructions, punishments, verbal reprimand and token economy for adaptive behavior and time-outs for maladaptive behavior. Based on this concept researcher have adopted the token economy program [5-8]. The token economy is a behavioral therapy technique in which the desired change is achieved by means of tokens administered for the performance of predefined behaviors according to the programme. The token economy is a treatment intervention based on principles of operant conditioning and social learning [9-12].

1.1 Operational Definition

Effectiveness: It calculated based on the token economy that is achieved by the mentally retarded children using inferential statistical method.

Token Economy: It describes the ratio of star sticker that is given to the mentally retarded children as the rewards of fruits and fruits for

their timely actions directed by the tutors. This method comprehensively slow down the risks associated with their thinking ability.

Behavior problem: This refers to the complete set of problems that reasoning behind inability of the mentally retarded children to sit, to listen, to follow the instructions and to get irritate, anger and hurt others easily. It is based on the Conner's Abbreviated Rating Scale. The present study aimed to analyze the impacts of token economy on the behavior of the mentally retarded children. This study was framed based on the conceptual work suggested by modified Roy's adaptation model. It consists of five elements *namely*, person, Goal of Nursing, Nursing Activities, Health and Environment. One's behavior is the result of cognator and Regulator Coping Mechanisms. It is the outcome of complex and oriented processes like information processing, learning, timely action of the brain activity. The present study analyzed the brain status of the participants in view of token economy.

2. RESEARCH METHODOLOGY

2.1 Research Approach

The research approach adopted for this study was Quantitative Evaluative Research Approach.

2.2 Research Design

Pre Experimental Research Design, in which one group pre test-post test design was used in this study to evaluate the Effectiveness of Token Economy on Behavioral Problem among Mentally Challenged Children in a Matheraiee, special school, valluvargurukullam campus, Chennai.

O1 = Pre test X = Intervention (Token Economy)
O2 = Post test.

2.3 Sample Size

The sample size of this study was 37 (determined based on the pilot study and h Non Probability Purposive Sampling Technique).

2.4 Sampling Technique

The sampling technique adopted for this study was Non Probability Purposive Sampling.

2.5 Criteria for Sample Selection

2.5.1 Inclusion criteria

1. Mentally challenged children with behavioural problem.
2. The age group between 6-15 years.
3. Includes both males and females.

2.5.2 Exclusion criteria

Mentally Challenged Children with,

1. Severe and Profound Intelligent Quotient level.
2. Other disorders like Autism and Down syndrome etc.
3. Psychosis.
4. Physical illness like fever, vomiting and fits etc

2.6 Data Collection Procedure

After obtaining formal permission from the manager of CSI Balar Gnana Illam, Salem, all mentally challenged children were selected. During first week (29.07.2013 to 03. 08.2013) the investigator used the Conner's Abbreviated Rating Scale for assessed the behavioral problem of the children. After selecting the 37 samples, from second week onwards the investigator started introducing totally 20 tokens. First, the investigator introduced the interventions as follow instructions (like listen to me, showing the star stickers, singing, dancing, etc.), making them to obey commands (Runs and climbs normally, Not disturbing others work, Waiting for their turn to talk, Not crying often, Not burst out the anger, Not get irritated suddenly, Not distract and hurt others) and then started pasting star stickers (as token) on their palm (for each desirable behavior). There by the children were motivated to follow the adaptive behavior. On daily basis the intervention was continued in same way for 2 weeks. In the beginning samples who secure 5 tokens were given biscuits and additionally who secure 15 tokens were given fruits. Likewise the intervention was 34 continued. There by the investigator made the samples come to adaptive behavior from maladaptive behavior. Every 12 children given 2 hours of training per day. Last week the children were reassessed by using the same scale to see the improvement in behavior [2,5,7,11].

3. RESULTS

The Table 1 shows that, the majority of samples i.e. 15(40.54%) belongs to 9 - 12 years of age group, 12(32.43%) samples belongs to 12 - 15 years of age group and 10(27.03%) samples belongs to 6 -9 years of age group. Most of the samples i.e. 22(59.46%) are males and remaining i.e.15 (40.54%) are females.

Majority of the samples i.e. 20(54.05%) have moderate mental retardation and others 17(45.95%) have mild mental retardation.

Most of the samples i.e. 14(37.84%) are performing their activities of daily living by self, 12(32.43%) are performing their activities with the help of care takers and remaining 11(29.73%) samples are performed by care takers only.

Majority of the samples i.e. 37(100%) are spending time in leisure activity. Most of the samples i.e. 23(62.16%) have >1 year period of school exposure and remaining 14(37.84%) have ≤ 1 year period of school exposure.

The Table 2 reveals that, in pre-test, majority of the samples i.e. 18(48.65%) have severe behavioral problem, 12(32.43%) have moderate behavioral problem and remaining 7(18.92%) have mild behavioral problem.

The Table 3 indicates that, in post-test majority of the samples i.e. 15(40.54%) have moderate behavioral problem, 13(35.14%) have severe behavioral problem and remaining samples 9(24.32%) have mild behavioral problem.

3.1 Comparison between the Pre and Post Test Scores of Behavioural Problem among Samples

The above figure shows that, during pretest 18(48.65%) have severe behavioral problem, 12(32.43%) have moderate behavioral problem and remaining 7(18.92%) have mild behavioral problem (Fig. 1).

During posttest the majority of the samples i.e. 15(40.54%) have moderate behavioral problem, 13(35.14%) have severe behavioral problem and remaining 9(24.32%) samples have mild behavioral problem.

Table 1. Frequency and percentage distribution of samples according to their baseline variables (n =37)

S. No	Baseline variables	Frequency (f)	Percentage (%)
1.	Age (in years)		
	a) 6 to 9	10	27.03
	b) 9 to 12	15	40.54
	c) 12 to 15	12	32.43
2.	Types of Mental Retardation		
	a) Mild Mental Retardation	17	45.95
	b) Moderate Mental Retardation	20	54.05
3.	Gender		
	a) Male	22	59.46
	b) Female	15	40.54
4.	Activities of Daily Living Performed		
	a) By self	14	37.84
	b) With the Help of Care takers	12	32.43
	c) By Care takers Only	11	29.73
5.	Spend Time In Leisure Activity		
	a) Yes	37	100
	b) No	-	-
6.	Period of School Exposure		
	a) > 1 year	23	62.16
	b) ≤ 1 year	14	37.84

Table 2. Frequency and percentage distribution of samples according to their pretest scores on behavioral problem (n=37)

S. No	Behavior problem	Pretest	
		Frequency (f)	Percentage (%)
1.	Mild Behavior Problem	7	18.92
2.	Moderate Behavior Problem	12	32.43
3.	Severe Behavior Problem	18	48.65

Table 3. Frequency and percentage distribution of samples according to their post test scores on behavioral problem (n=37)

S. No	Behavioral problem	Posttest	
		Frequency (f)	Percentage (%)
1.	Mild Behavioral Problem	9	24.32
2.	Moderate Behavioral Problem	15	40.54
3.	Severe Behavioral Problem	13	35.14

The mean pre test score is 18.54 ± 5.99 and the mean post test score is 15.49 ± 5.88 with a mean difference is 3.05. This highlights that there is reduction in the behavior problem among samples (Table 4).

The mean pretest score is 18.54 ± 5.99 and the mean post test score is 15.49 ± 5.88 . The paired 't' test value is 2.93 at $p \leq 0.05$ level. This reveals

that the token economy is effective in reducing the behavior problem among samples. Hence the hypothesis H_1 is retained (Table 5).

There is no significant association found between the pretest scores on behavior problem among samples and their selected baseline variables at $p \leq 0.05$ level. Hence hypothesis H_2 is rejected (Table 6).

Comparison between the Pre and Post test Scores of Behavioural Problem among Samples.

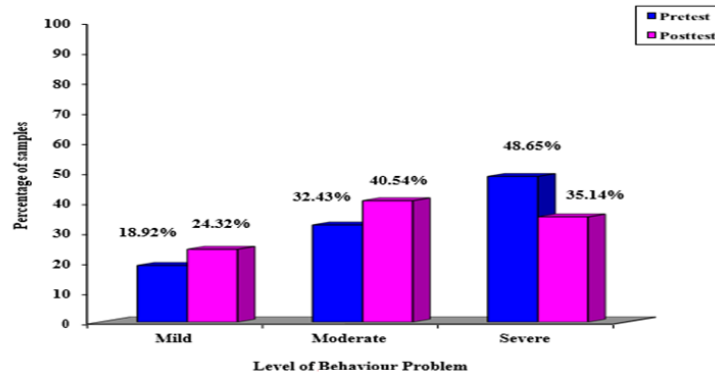


Fig. 1. Percentage distribution of samples according to their behavioral problem

Table 4. Mean, Standard Deviation, and Mean Difference according to their pre and posttest scores of behavioral problem among Samples (n=37)

Behavioral problem	Max score	Mean	Standard deviation	Mean difference
Pretest	30	18.54	5.99	3.05
Posttest		15.49	5.88	

Table 5. Mean, Standard Deviation and ‘t’ value according to their Pre test and Post test Scores on Behavioral Problem (n=37)

Behavioral problem	Max score	Mean	Standard deviation	Paired ‘t’ value	df
Pre test	30	18.54	5.99	2.93*	36
Post test		15.49	5.88		

Table value $t=2.03$, *Significant at $p \leq 0.05$ level

Table 6. Chi-square test on the Pre test Scores of Behavioral Problem among samples and their Selected Baseline Variables (n=37)

S. No	Baseline variables	df	χ^2	‘t’ value
1.	Age (in years)	4	1.93	9.49
2.	Type of mental retardation	2	0.46	5.99
3.	Gender	2	1.08	5.99
4.	Activities of daily living performed	4	7.09	9.49
5.	Period of school exposure	2	1.6	5.99

Significant at $p \leq 0.05$ level

4. DISCUSSION

The present study was conducted to evaluate the Effectiveness of Token Economy on Behavioral Problem among Mentally Challenged Children. In this study Pre- experimental (One Group Pre test & Post test) design was adopted. The mentally challenged children with behavioral problem were selected by using Purposive Sampling Technique. The samples comprised of 37 and the data was collected from them with

the use of Conner’s Abbreviated Rating Scale. During pre test, majority of the samples i.e. 18(48.65%) had severe behavioral problem, 12(32.43%) had moderate behavioral problem and remaining 7(18.92%) had mild behavioral problem. During post test, the majority of the samples i.e. 15(40.54%) had moderate behavioral problem, 13(35.14%) had severe behavioral problem and remaining 9(24.32%) samples had mild behavioral problem. In the pre test, the mean score of behavioral problem

was 18.54 ± 5.99 , were in post test, the mean score was 15.49 ± 5.88 . The paired 't' test value was 2.93 at $p \leq 0.05$ level. This reveals that the Token Economy was effective in reducing the behavioral problem among Mentally Challenged Children. Hence the hypothesis H_1 was retained. There was no significant association found between the pre test scores on behavioral problem among mentally challenged children and their selected baseline variables at $p \leq 0.05$ level. Hence hypothesis H_2 was rejected.

5. CONCLUSION

A study was conducted to evaluate the Effectiveness of Token Economy on Behavior Problem among Mentally Challenged Children in a Selected Special School, Salem. During the pre test, majority of samples had severe behavioral problem. After the implementation of token economy intervention majority of the samples had moderate behavioral problem. This indicates that the token economy intervention was effective in reducing the behavioral problem of mentally challenged children.

CONSENT

As per international standard or university standard, respondents' written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

The study was approved by the Institutional Ethics Committee.

COMPETING INTERESTS

Author has declared that no competing interests exist.

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