The Relative Affects Of Contingency Management And Token Reinforcement Strategies On Self - Control Levels Of Remand Home Inmates In Nigeria.

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Abstract: *The study examined the relative effects of Contingency Management and Token reinforcement strategies on self control levels of remand homes inmate in south-west of Nigeria. The study adopted the quasi-experimental non-organized pre-test, post-test and control group involving 3x2 factorial designs. Seventy two (72) clients formed the sample for the study. Three remand homes- Akure (Ondo state), Osgbo (Osun state) and Ibadan (Oyo state) were purposively sampled for the study. The clients were randomly assigned to two treatment groups and a control group. Self Control Scale (SCS) was employed in gathering data and descriptive statistics, ANCOVA, and scheffe post hoc analysis were used to analyzed the data. The result revealed that both Contingency Management and token reinforcement strategies were adequately effective therapies in enhancing self control levels of the clients. On the basis of these findings, it was highly recommended that government at various levels should employ well trained counselling psychologies who are competent in the use of various behavior modification techniques in solving different maladjustment problems among our youths and clients should avail the opportunity of the training exposed to at various homes and realize that adults have once passed through experience similar to what they are passing through and they still make best use of opportunity available through endurance and self control. Having that in mind, they would behave 'normal' and could contribute positively to the development of the nation.*
Key words: *clients, self control, contingency management, token reinforcement.*

I.   Introduction

Children are born without a specific mode of character. Their characters could be mended, molded and remolded through training, orientation, re – orientation, interaction and association they have with the parents, siblings, relatives, peers and communities they might have the opportunity in one way or the other to interact with. The upbringing of any child therefore, involves the type of moral, financial and emotional supports received from these people. This could greatly influence the emotional behaviour and self-control level of such a child in later life. In turn, it could be a determining factor in the development of delinquent or non-delinquent behaviour in future. Suleiman, (2014) remarked that lacking in good moral upbringing could equally lead to delinquent behaviour such as, stealing, assaults, robbery, affray, murder, idleness, falsification of evidence and so on.

This study focuses on one area of particular concern: deviant behaviour often referred to as juvenile delinquency or criminal behaviour committed by minors which is aggravated by their low self-control. The study of delinquent behaviour is important both because of the damages suffered by its victims and the problems faced by its perpetrators. Suleiman, (2014) opined that Juveniles who engage in criminal acts are placed under the control of law enforcement, court, and correctional agencies that comprises the juvenile justice system. They may be taken into custody by the police, have their cases heard in a juvenile or family court, and be placed in a residential facility that treats troubled children. As the case may be in Nigeria such children are being placed in special centres known as approved Schools, rehabilitation Centres, Juvenile Remand Homes, or children correctional centers'.

Apart from the officially registered delinquents, Daramola (2008) remarked that there are many unregistered delinquents scattered here and there in different parts of the country. The unreliable statistics in most countries is due to the thin line of demarcation between psychiatric problems and real delinquencies because the two lie on a continuum. In Nigerian context, (Onyehalu 1986) asserted that criminal acts among the youths is on the increase due to the fact that most average Nigerian parents do not expose delinquent acts of their children or wards because they want to preserve the integrity and prestige of the families. Despite the fact

that there are no reliable and comprehensive statistics on juvenile delinquency in Nigeria and many other countries of the world, the fact that it is an enigma on us, and that delinquency is on the increase. Bello, (1986) reported that the incidence of Juvenile delinquency in Lagos state alone rose from 316 in 1979 to 459 in 1984; within that period of five years, 2,256 juvenile delinquents were caught in Lagos. Between 2007 and 2011 in Ondo State, over 2,000 cases of delinquency were reported. Vanguard (2013) remarked that the alarm ingrates of Juvenile delinquent cases among the youths in Nigeria are giving people and the government in particular a great concern which demands for an urgent attention. The reported cases of deviant behavior are estimated to be over 2 million in the last three years and the population is fast accelerating. World Health Organization estimates that the number of people who die by suicide is expected to reach 1.5million per year by year 2020. This is attributed to poor parenting, improper child upbringing, moral de cadence, little or no attention devoted to the child's needs, crazy hustling for worldly life by parents, Government failure to fulfill her civic responsibilities, inadequate future planning for the youths and the host of others.

Under Nigerian law, person aged 9 to 18 years are referred to as juveniles and they are presumed capable of committing crimes whose consequences may not be anticipated. A lenient action is therefore taken by the law in dealing with them, like sending them to remand homes and corrective institutions like approved schools or children correctional centre where they are usually socialized and reintegrated instead of sending them to prison. The scheme is aimed at reducing accelerated rate of juvenile delinquents and enabling them to achieve social integration through self-control. However Suleiman (2014) reported that when those young persons were been referred to the children correctional centre by the police, courts, parents, social welfare officers or both governmental and non-governmental agencies for rehabilitation, they discovered that some still engage themselves in one form of delinquent behaviour and the others. The most common among these behaviours are stealing, fighting, bulling, false evidence, indecent assault. This implies that their self-control level is still low rather than been high. Since all these are still featuring among this young person's behaviour while they are still in the remand home, it means that the aged method of punishment as a corrective measure is inadequate for these groups of adolescent. This implies that all attempt made to reduce delinquent behaviour among the youths without considering the key factor (self-control) is inadequate. No matter the treatments and strategies put in place without enhancement of their self-control, it would eventually use it usefulness. Therefore, this study is to investigate the effectiveness of contingency management and token reinforcement strategies in enhancing self-control of the inmates thereby reducing delinquent behaviour among the juvenile in our society.

Many traditional discipline programs rely on practices where one person, usually the teacher or administrator, tries to control the behaviour of another, usually a child. Some other programs use brute force, such as spanking or hitting with an object like a cane. Often with a particular level of physical force does not work, "the hitter" increases the force by hitting harder or more often. Aderanti (2006) remarked that those practices revealed on the part of the hitter that behaviour is caused by prior physical event. This belief is a direct carryover from theories that explain how physical forces cause non-living things to change. Bourbon, (1997) stressed further that this kind of direct relationship between the magnitude or strength of a physical force and the magnitude of its effects on inanimate things is an example of physical law of cause-and-effect. The same model of cause-and-effect that is used in physical science is part of every discipline program that uses reinforcement, or punishment, to control children's behaviour. Example of this is the program that relies on locking students in school (detention), locking them out of school (expulsion or suspension) or putting them in correctional homes.

Many people, who practice discipline by lock and key, seem to assume that the mere act of locking students in or out of school will cause them to change in unspecified ways that result in good behaviour. Pew (2009) remarked that discipline through lock and key, incarceration and admission into correctional home is another example of the belief that behaviour is an effect that is determined by prior causes in the environment. Just like 'the hitter', people who rely on detention, suspension and admission into correctional centers seem to believe that if a little bit of treatment does not change a child's behaviour, all they need to do is to apply more of it. But people are forgetting that it is only inanimate objects that always follow the direction of proportion to physical forces applied to them. Instead people often act to eliminate or cancel the effects of things that are done to them. This explains why cases of delinquent behaviours such as stealing rebelliousness, disorderliness, raping, drug abuse, examination malpractices to mention but a few are still on the increase in our society despite all punitive measures designed by government to ameliorate/eradicate it. All these acts could be eliminated if their self-control level is enhanced through contingency management and token reinforcement strategies.

II. Method

Design

This study adopted the quasi-experimental non-randomized pre-test, post-test and control group design. The participants in this study were randomly assigned to three groups. The first group was treated with Contingency Management (CM). While the second group treated with Token Reinforcement (TR); the third group serves as control. The two experimental and one control were represented schematically below:

$A1 = O_1 X_1 O_2$ $A2 = O_3 X_2 O_4$
$A3 = O_5 - O_6$

Where

O_1 O_3 O_5—represents the pre-test O_2 O_4 O_6—represents the post-test

X_1—treatment with contingency management strategy X_2—treatment with token reinforcement strategy

- - No treatment for control group

The diagrammatical expression of the treatment strategies shown indicates that the experimental groups (A1 and A2) were pre-tested after which they were made to undergo experimental treatment and the post-test was administrated on them. For the control group A3, no treatment was administered but subjects were made to respond to pre-test and post-test instrument.

Population

The target population of the study comprised of all clients in remand home Akure - Ondo state, remand home in Osogbo- Osun state and remand Ibadan Oyo state. As at the time of this study, remand home Akure has 98 inmates while remand home Osogbo 112 inmates and remand home Ibadan has 210 inmates. The age of the inmates is between 9 and 17 years.

Sample and Sampling Techniques

The sample consists of 72 clients from the three remand homes purposefully selected for the study. The self-control scale (SCS) was administered on all of the inmates in the three remand homes. The highest score on each item on the instrument is 4 and the lowest score is 1. The maximum points obtainable by a respondent is 4x36 items = 144 while the lowest score obtainable is 1x36 = 36. Thus the mid point of the scale is 54 (i.e. (144-36)/2). The scores obtainable were divided into two. 144-54 or 36+54 which in either case is 90. Therefore the respondents whose scores on the questionnaire ranged from 90-144 were considered as having high and adequate self-control while the respondents who scored less than 90 were considered as having low self-control. The range: 36-89 was set as cut off for the subjects that were selected for the experiment (treatment group) while 90 and above was set for the subjects that did not require the treatment package.

The scores from the first administration of the SCS were taken as the pre-test scores for the clients. There after 72 clients were purposefully sampled in this study which were twenty four (24) clients from Akure were treated with Contingency Management and twenty four (24) clients from Osogbo were treated with Token reinforcement while twenty four (24) (clients) from Ibadan served as the control group.

Instrument for Data Collection

For the purpose of this study, self-control scale (SCS) which was developed by Akinranti (1984) and which had been used by researchers such as Bello (1986), Idowu (1999) and Aderanti (2006) was adapted for the study. Some items that seemed irrelevant to the study were ignored, while items that focused on prison inmates were reframed to reflect Juvenile delinquent behavior. The SCS is a 4-point Likert Scale. The 36 items on SCS are framed to cover every aspect of juvenile delinquency such as behaviour, affective, imaginary, cognition, interpersonal relationship, drugs and diets.

One of the most crucial of all properties of any measurement is its validity, which is concern with whether a test or scale really measures what it claims to measure.

The content and construct validity of the self-control scale (SCS) was established by four experts in guidance and counseling department two each from Adekunle Ajasin University Akungba Akoko, Ondo State and University of Ilorin, Kwara state. They scrutinized the test items on the instrument and made adequate corrections and suggestions. There suggestions were embedded in the instrument to avoid ambiguity in the items. The instrument was critically assessed by the experts in terms of facial value, content and constructs to ensure that the instrument was capable of measuring what it intends to measure. The researcher further carried out a pilot pre-test on fifteen clients in the Remand Home, Ibadan. The purpose was to find out if the scale would be suitable for use among the clients for the study. The 36 items were subjected to an internal consistency analysis. A co-efficient alpha 0.78 was obtained. This showed the content analysis of Self-control Scale was suitable for the study.

To establish the reliability of this instrument, a pre-test study of test-retest procedure was carried out by administering the self-control scale (SCS) on fifteen clients at Ibadan remand home Two weeks later, the same

instrument was given to the same group of clients. The scores from the two separate administrations were subjected to Pearson's product movement correlation analysis to determine the reliability co-efficient of the instrument. The correlation co-efficient of the instrument was found to be 0.89 which represents a relative high degree of stability. This confirms that the scale was actually reliable for among the clients.

Procedure

The researcher personally distributed the questionnaire to the seventy-two clients from Juvenile Remand Home inmates, Akure, remand home Osogbo and remand home Ibadan. All the clients where gathered together in their large hall for a welcoming address in the first week of the program. The role expected of all the participants was clearly spelt out for them. The treatment packages were under two experimental groups and the control group. The procedure for the administration of the instruments and data collected were in three phases

- Pre-treatment phase
- Treatment phase and
- Post-treatment phase.

Pre- treatment session: Before caring out this study, the researcher sort for permission from the chief warden in the Juvenile Remand Home Akure, Osogbo and Ibadan. All the clients participated in the pre-test activities. The Self Control Scale (SCS) were administered on all of the clients at the beginning of the session. The Tokens and the Token Reinforcement cards were handled by the wardens under due instruction.

In setting the experiment, each group was briefed separately regarding the venue of the experiment and the time-table for the treatment session. The group (1) were exposed to Contingency Management (CM); group (2) were exposed to Token Reinforcement strategy (TR) while group (3), the Control Group, (were not exposed to any treatment at all). The treatment took one hour and lasted for nine weeks.

Treatment session: this is the real psychotherapy session, only the clients in the experimental groups (group 1 and group 2) that is, those whose score in the self-control scale falls between 36 and 89 were subjected to a nine weeks treatment program. The clients in the control group only participated in the pre-test and post-test and were not treated with any of the strategies. Each of the session lasted for one hour. The observation for the token award covered a period between 6.00am and 6.00pm daily.

Contingency Management	(Akure)	Group A1	(treated)
Token Reinforcement	(Osogbo)	Group A2	(treated)
Control Group	(Ibadan)	Group A3	(no treatment)

Post Treatment session: This is the evaluation of the Treatment Programs. This session was devoted to the evaluation of the treatment programs and the entire packages. The researcher carried out a post-test by given out self-control scale (SCS) to all the clients in experimental group (1 and 2) and control group to determine the post-treatment scores which is expected to reveal the present level of the clients' self-control after the treatment. This lasted for forty minutes.

III. Results And Discussion

Descriptive statistics were used to answer the research question while the hypothesis was subjected to Analysis of Covariance (ANCOVA). The hypothesis was tested at 0.05 level of significance. Post hoc analysis involving scheffe test and multiple classification analysis (MCA) were used to fish out the effect of the treatment on adjusted mean sores. The results are presented in two parts based on the question raised and the hypothesis that guided the study. The results are as presented below

Descriptive Analysis Question

What is the self-control level of the clients before the treatment?
In order to answer the question, the pretest mean score of the subjects in both remand homes Akure, Osogbo and Ibadan were computed. The results were presented in the table 1 and figure 1.

Table 1: Descriptive Analysis Showing the Self-Control Levels of the Clients before the Treatment.

Groups	N	Mean	SD
Akure	24	72.56	2.67
Osogbo	24	71.48	2.64
Ibadan	24	73.36	2.70

Table 1 figure 1 revealed that clients from remand home Akure had pretest mean score of 72.56 while the Osogbo remand home clients had 71.48 and Ibadan remand home had 73.36. The clients in both remand

homes however had pretest scores less than the bench mark that is 72.56, 71.48 and 73.36 respectively less than 90. This implies that the clients in the three remand homes had low self-control.
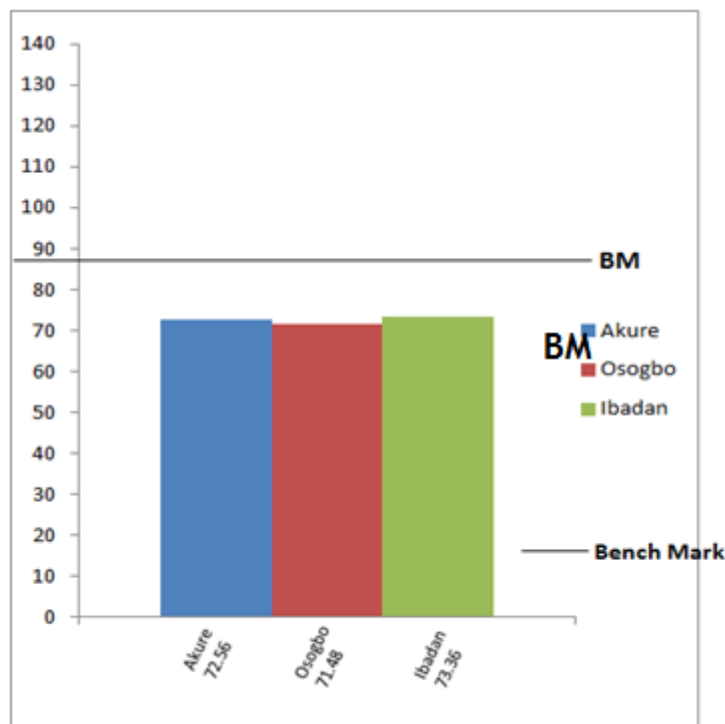

Figure 1: Self control levels of clients in Akure, Osogbo and Ibadan before the treatment.

Table 2: Descriptive Analysis Showing Effectiveness of Contingency Management and Token Reinforcement Strategies on Self Control Levels of the Clients.

GROUPS		Pretest		Posttest	
	N	Mean	SD	Mean	SD
Contingency Management	24	61.42	2.77	127.75	1.33
Token Reinforcement	24	58.88	2.07	177.63	1.31
Control	24	62.83	2.70	62.96	2.46

Table 2 and figure 2 showed that the clients exposed to Contingency Management had pretest mean score of 61.42 while those in the Token Reinforcement and Control Group were 58.88 and 62.83 respectively. After exposure to treatment, clients in the contingency management strategy recorded highest mean score on self-control (mean=127.75, SD=1.33). This was followed by those exposed to Token reinforcement strategy (mean=117.63, SD=1.31) while those in the control group had the least mean score (mean=62.96, SD=2.46). It implies that both contingency management and token reinforcement strategies are effective in enhancing self-control levels of the clients.

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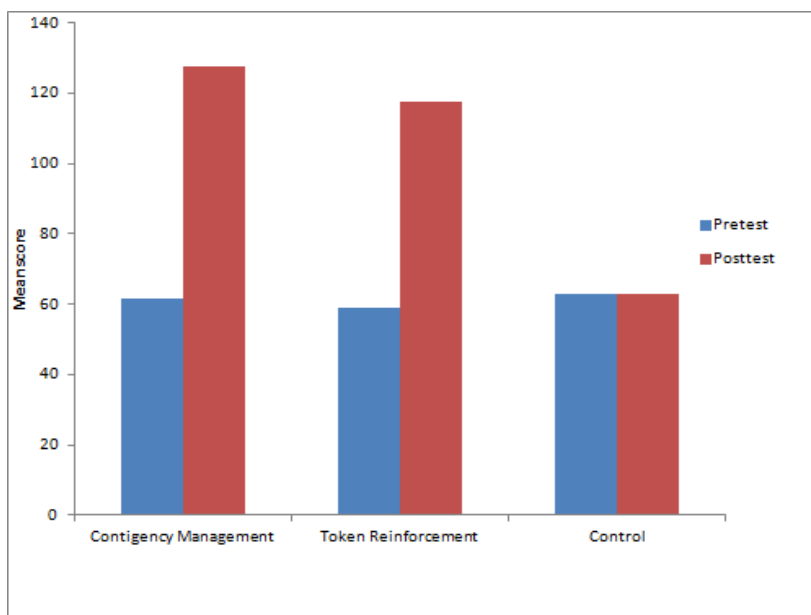
Figure 4: Effect of Treatment on self-control levels of the clients

Hypothesis :

There is no significant difference in the self-control levels of clients in the experimental and control groups before and after treatment.

In order to test the hypothesis, the mean scores of clients on self-control who were exposed to different treatments and their pretest and posttest scores were compared for statistical significance using Analysis of Covariance (ANCOVA). The hypothesis was tested at 0.05 level of significance. The result is presented in Tables 3, 4 and 5

Table 3: ANCOVA Summary of the Treatments and Self-Control Levels of the Clients.

Source	S S	Dt	M S	Fcal	Ftable
Corrected model	58313.857	3	19437.952	6102.766	2.68
Covariate (pretest)	2.496	1	2.496	.784	3.92
Group	5056.714	2	25253.357	7928.579	3.07
Error	216.587	68	3.185		
Corrected Total	58530.444	71			
Total	819086.000	72			

P<0.05

In order to test the hypothesis, the mean scores of clients on self-control who were exposed to different treatment, their pretest and posttest scores for statistical significance using Analysis of Covariance (ANOVA). The hypothesis was tested at 0.05 level of significant. The table shows that Fcal (7928.579) is greater than Ftable (3.07) at 0.05 level of significance. The null hypothesis is rejected. This implies that there is significant difference in the self-control levels of clients in the experimental and control groups before and after treatment. In order to determine the effect of the treatment on adjusted mean scores of the subjects on self-control levels, Multiple Classification Analysis (MCA) was used. The result is presented in Table 4.

Table 4: Multiple Classification Analysis (MCA) Showing Self-Control
Levels of the Clients by Treatment.

Variable +Category	N	Unadjusted Devn'	Eta	Adjusted for Independent + Covariate	Beta
CM TR Control	24 24 24	24.95 14.85 -39.82	.35	26.30 7.27 -33.54	.37

Multiple R^2 Multiple R	.133 .365

The table shows that clients exposed to Contingency Management had the highest adjusted mean score of 129.28 (102.78+26.30). This is closely followed by those in the Token Reinforcement group; 110.05 (102.78+7.22) While the score in the control group had the least adjusted mean score of 69.24 (102.78+(-33.54)). This implies that Contingency Management and Token Reinforcement constitute variable counselling strategies for enhancing self-control levels of the clients.

The result of scheffe posthoc analysis is therefore presented below

Table 5: Scheffe Posthoc Analysis of Self-Control Levels of Clients by Treatments.

Counseling strategies					
	CM	TR	Control	Mean	N
CM		*	*	127.75	24
TR			*	117.63	24
Control				62.96	24

*Mean difference is significant at 0.05 levels

The table reveals that there is significant difference between the self-control levels of clients exposed to Contingency Management and Token Reinforcement counselling strategies at 0.05 level of significance. Similarly, the mean difference between Contingency Management and Control, Token Reinforcement and Control is statistically significant at 0.05 levels in each case.

IV. Discussion

Self-control is an important aspect of human being in order to live a successful life within human community, an individual with high self-control will live a meaningful life and be able to behave and adapt in a confirmatively with the societal needs.

The study indicated that there were significant differences in the self-control levels of clients in the experimental and control groups before and after treatment. It implies that the two treatment strategies had succeeded in enhancing self-control levels of remand home inmates. Therefore, the hypothesis was rejected, as it was found that both contingency management (CM) strategy and token reinforcement (TR) Strategy had significant impact on the self-control levels of the clients.

The reason for this could be as a result of their nine weeks exposure to treatment which their counterparts in the control group did not experience. This resulted into the clients been exposed to Contingency Management having the highest adjusted mean score and closely followed by the clients exposed to token reinforcement while the non-treated group had the least adjusted mean score

However, the post hoc analysis indicated that both Contingency Management and Token reinforcement strategies are statistically different at 0.05 level of significant. This indicated the efficacy of Contingency management and token reinforcement strategies in enhancing self control levels of the clients.

Regarding the superiority of one treatment strategy over the other, the findings indicated that there were significant differences in the self-control levels of clients in the experimental and control groups. However, Contingency Management had a slightly higher adjusted mean score than Token Reinforcement. This implies that Contingency Management is more potent to Token Reinforcement in enhancing self-control levels among the clients. This is in line with that of Akinranti (1984) whose cognitive restructuring therapy clients performed slightly better than token reinforcement group in the treatment of stealing behaviour among prison inmates.

Implication for Counselling

These studies has some vital implications for both remand homes inmate, government and counselling psychologists In enhancing high self control levels among remand home inmates and the youth in general

The implication of the finding is that, Contingency Management and Token Reinforcement strategies greatly enhanced self-control levels of the remand home inmates which invariably assist them to withdraw from any acts of delinquent behaviour. Thereby, they live a 'normal' life after been freed from the remand homes or Children correctional centers'. this revealed advantages of having effective counselling services in all the remand homes and Children correctional centers'. The counsellor should be trained in various therapeutic techniques and equally competent enough to implore different counselling techniques to enhance the self-control levels of the inmates.

The government on the other should be aware that the remand homes and Children correctional centers' should be made a place of self-discovery, a place for learning how to adopt into the accepted norms required by the society, a place of behaviour modification and reconciliation centre and a place of general self-improvement in one's self- control, rather than a place where any convicted adolescent should be subjected to coercive modification of his behaviour and personality.

V. Recommendations

The results of the study have brought into limelight the roles of Contingency Management (CM) and Token Reinforcement (TR) strategies in enhancing the self-control levels of the remand home inmates. The result revealed that Contingency Management and Token Reinforcement strategies were both effective in enhancing self-control of remand home inmates.

The parents should be encouraged to report delinquent children on time without considering the stigma attached or attempt to preserve the family prestige so that they could be immediately referred to rehabilitation center such as remand homes, approved schools or children correctional center where they could be given adequate training, orientation and re – orientation with sole aim of inculcating societal norms in other to assist them adjust to desirable (right type) attitude.

The government should lay more emphasis on the reduction of delinquency in the society through functional education; the social workers should be sponsored for training, workshops and seminars in the use of various techniques in behavioural modification to enhance inmates' self-control. The reduction of delinquency behavior will invariably improves the nation's economy because less money will be spent in the building and maintenance of the remand homes and such would be diverted to other more prudent projects.

The counselor instructors who are concerned with the training of the counselors in personality development, adjustment programs and special attention on the training of the counselor on how to maintain healthy personally, better disposition, show empathically feelings and be able to ensure desirable changes in adolescence behavior through the use of Contingency Management and Token reinforcement strategies.

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