

# EFFECT OF COGNITIVE RESTRUCTURING TECHNIQUE AND MULTI-COMPONENT THERAPIES IN THE MANAGEMENT OF NOCTURNAL ENURESIS AMONG JUNIOR SECONDARY SCHOOLS

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## ABSTRACT

*The experimental study examined the effects of Cognitive Restructuring and Multi-Component Therapies (CR) & (MCT) in the management of Nocturnal Enuresis among junior secondary school adolescents. The study adopted 3x2 factorial design. Two research questions and three null hypotheses were formulated and tested at 0.05 level of significance. A sample of twenty seven (27) junior secondary school adolescents was used for the study. Two instruments, Enuresis identification questionnaire and Internal and External locus of control scale were used for assessment during pre-test, post test and follow-up sessions. Analysis of Covariance (ANCOVA) and t-test statistics were used to analyze the data obtained. The findings indicated that the treatment techniques were effective in managing enuretic behaviour. Implication of the findings include that the subjects who had gained control over their enuresis behaviour due to treatment received will develop self-confidence in the ability to control and direct their behaviours and consequently achieve their goals especially in academic performance. It was recommended for use in handling not only other enuretic students but students with other behavioural problem.*

**Keywords:** Cognitive Restructuring, Multi-Component Therapies

## INTRODUCTION

There is an increasing incidence of maladaptive behaviours among secondary school adolescents in Nigeria as it is in other countries. These maladaptive behaviours prevent these adolescents from fulfilling their developmental tasks thereby making them not to achieve the stated academic objectives. According to Gelford, Jenson and Drew (1988), untreated problems sometimes gradually grow into more serious and chronic disorders as the child passes with the problem into adulthood through adolescence or they manifest themselves later as different disorders. A child, who therefore engages in any type of behaviour which the society disapproves, manifests anti-social behaviour. (Anagbogu, Nwachukwu and Nwandu in Odemelam, 2004)

Problem behaviours have been classified based on manifestation. Akinade and Adedipe, (2004) classified behaviour problems into excess, (that is behaviour is present in an individual but it is exhibited in an embarrassing way which may be frequent or over expressed, example alcoholism and smoking) weakly manifested behaviour refers to behaviour that is inadequate in an individual example poor academic performance, while deficit behaviour occurs as a result of deficiencies example a pupil who does not know how to write letters of alphabets. Considering the above classification of behaviour problems, nocturnal enuresis which is the main behaviour problem for this study falls within excess behaviour.

Enuresis commonly called bed-wetting is a habitual involuntary discharge of urine while a person is sleeping. It is also regarded as a disorder of elimination that involves the voluntary or involuntary release of urine into bedding, clothing or other inappropriate places. (Diagnostic and Statistical Manual of Mental Disorder, DSM-IV: 1994)

Enuresis as was identified by Shindi (1986) Von-Gontard, Gulus and Lehnkuhl (1999), Hunshalle (1999) is of two major types – namely organic and functional. Organic enuresis is largely due to medical conditions while functional enuresis includes primary and secondary nocturnal enuresis. Primary enuresis refers to bedwetting that has been ongoing since early childhood without break while secondary enuresis occurs when a child has stayed dry at night for at least six months, then returns to wetting. It usually occurs at night hence it is known as nocturnal enuresis.

Nocturnal enuresis is the inability of some children, to achieve urinary continence after the anticipated period of five years. National Kidney Foundation (2000), notes that more than five million children in United State (US) continue to wet the bed past the age of six. This behaviour problem can be a very embarrassing and discomforting experience in the enuretic's social, academic and psychological life. The Enuresis Treatment Centre in the US (2000) asserts that children who are enuretic have problems in school caused by the unhealthy sleep patterns. According to Olatewura (1983) many schools especially those with boarding facilities also feel helpless about what to do to their enuretic students. Essa (1999) identifies adult's reactions to children's misbehaviour in general and to bedwetting in particular as being negative and added that children who receive such negative attention do not develop good feelings of self worth.

Considering this, it appears therefore that a programme of attitude change would be a more durable solution than individual or collective punishment as suggested by Ugwuegbu (1975). The researchers therefore studied the effects of Cognitive Restructuring technique and Multi-Component Therapies in the management programme of nocturnal enuresis. Cognitive Restructuring Technique (CRT) is cognitive behavioural technique that focuses on changing a person's perceptions and irrational assumptions of self and world. Cognitive restructuring gives people new ways of thinking and talking to themselves about their problems. This technique believes that man's maladaptive behaviour is hinged on irrational thoughts, beliefs, self-talks or verbalizations. According to Nwamuo (2005), cognitive learning theory assumes that individuals are not passive observers in their environment, rather they are active, goal oriented and capable of taking responsibility for their decisions, actions and consequently exercise control over their behaviours. Multi-Component Therapies can be defined as various techniques used in the management of anomaly to help in ameliorating a person's difficulty. Ekennia (1991) defined Multi-Component Therapies as broad spectrum of therapies that involve the combination of selected complementary behavioural techniques in treatment of specified problems. Considering the behavioural problems for treatment MCT appears to be most ideal in this regard.

## STATEMENT OF THE PROBLEM

Enuresis as a behaviour problem can restrict activity and cause humiliation. This in turn can lead to more maladaptive behaviours (like negative self concept) in a growing person. This calls for what should be done to modify the enuretic behaviour. This study therefore intends to find out how cognitive restructuring technique and multi-component therapies with locus of control (internal and external) as moderating variable will be effective in the management of enuresis among secondary school adolescents. The subjects are grouped into internal and external locus of control. According to Rathus and Neval (1994) locus of control is the

perception that reinforcement is within one's control (internals) or outside ones control (externals).

### **SCOPE OF THE STUDY**

The study is limited to the use of CR and MCT in treating nocturnal enuresis among adolescents aged 11-14 years whose problems are not associated with any medical condition.

### **PURPOSE OF THE STUDY**

The main purpose of the study is to determine the relative effectiveness of CR and MCT techniques on the management of urinary continence among enuretic secondary school adolescents.

Specifically, this study sought to,

- I. Ascertain the effectiveness of CR on the management of urinary continence by nocturnal enuretic adolescents;
- II. Find out the effect of MCT on the management of urinary continence by nocturnal enuretic adolescents and
- III. Find out whether Internal and External locus of control has any role to play in enuresis.

### **SIGNIFICANCE OF THE STUDY**

The study is significant to the enuretics, their parents/families, schools, counselors, teachers and society at large. The enuretics so helped will improve their self-concept which will in turn change their behaviour and dispositions positively. This will help to increase their level of interaction with non-enuretic persons – both inside and outside their families.

Counsellors will utilize the techniques proved to be effective in their intervention programmes for enuretics. Teachers will be poised to identify and refer children with such maladaptive behaviour for treatment in order to reduce their effects on their academic endeavour.

### **RESEARCH QUESTIONS**

To guide the study, the following research questions were posed.

1. What is the effect of CR on the management of urinary continence among enuretic adolescents at post test assessment?
2. What is the effect of MCT on the management of urinary continence among enuretic adolescents at post test assessment?

### **HYPOTHESES**

To guide the study, the following null hypotheses were formulated and tested at 0.05 level of significance.

1. There is no significant difference between the group treated with cognitive restructuring techniques and the control group at post test assessment.
2. There is no significant difference between group treated with MCT and the control group at post test assessment.
3. There is no significant difference on the improvement of students with internal and external locus of control at post test.

## REVIEW OF RELATED LITERATURE

Enuresis commonly called bedwetting is the habitual involuntary discharge of urine while a person is sleeping. Its concept cannot be fully understood without the exposition of the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders fourth edition, (DSM-IV-TR). Enuresis is defined in DSM-IV-TR as the repeated voiding of urine into the bed or clothes at least twice a week for at three consecutive months in a child who is at least five (5) years of age and above. Ekeruo (1990) sees it as an elimination disorder of children and adolescents (inappropriate behaviour). According to Ekerue, inappropriate behaviour is described as normal behaviour that occurs at the wrong place or time or under inappropriate circumstances. Passing urine is a normal body function of elimination but considered as maladaptive when passed at inappropriate places after the anticipated weaning period.

The main prevalence of enuresis is unknown in the general population. Turner and Taylor (1984) have estimated that four to five million children and adolescents in the U.S suffer from the inconveniences and embarrassment of the disorder. The enuresis treatment centre in the U.S (2000) put the figure at nearly twenty million children in the U.S and millions more throughout the world. Studies carried out by Cendran (1999) estimated that 21.9% of boys and 15.5% of girls are enuretic at age seven compared with about 3% of boys and 1.7% of girls at age 14. Findings of Gumus, Vurgun, Lekili, Iscan, Muzzinoglu and Buyuskin (1999) put the overall prevalence of nocturnal enuresis in Turkey and Korea at 13.7% and 9.2% respectively. The prevalence of nocturnal enuresis in our environment as investigated by Obi (2004), was found to be significant in Abia State of Nigeria. She carried a research to investigate the effect of self control and contingency management on the enuretic pupils aged 8 – 12 years. The result showed an overall percentage of nocturnal enuretics in the three schools as 20.65%. Generally, enuresis should be treated in childhood since there is no way of finding out which children and adolescents will remain enuretics into adulthood (Essa, 1999). The Enuresis Treatment Centre shows that the longer the bedwetting goes untreated, the greater the potential for problems. Similarly, Harori and Moulden (2000) assert that if left untreated, enuresis will considerably have psychological concomitants on children and adolescents as they grow old.

The development of urinary control in children is basic to understanding the symptom of enuresis. After the birth of a baby, its bladder fills to a point then automatically contracts and empties. As the child gets older, the nervous system develops. The child's brain begins to send messages to the bladder to keep it from automatically emptying until the child decides it is the time and place to void. Failures in this control mechanism results in urinary incontinences (Obi, 2004). Several factors have been implicated to this which includes genetic, family issues, sleep patterns, physical disorder, and psychological and emotional disturbances. Apart from these cause, enuresis have tremendous effects not only on the enuretics but to the family, the school and the society at large. Most enuretics face shame and guilt before siblings, friends, mates and close relatives. It places them at risk of being a target for name calling and teasing from peers. The behaviour can damage child's self esteem and place him or her rejected by caregivers (National Kidney Foundation 2000).

There are a lot of benefits which enuretics achieve in urinary continence. This includes reduction of stress and anxiety which in turn will enhance their self concept and make them to perform well academically. They can stay in camps, sleep over, invite friends and live in boarding houses without fear of being discovered. Different methods were adopted previously in treating children with enuresis. These methods include traditional methods, psychological interventions, dietary therapy, and chemotherapy. Some of these treatments

have been found to be dehumanizing, debilitating and damaging. As a result, this calls for continued search for more effective and efficient method.

The researchers' choice of CR is based on its efficacy in managing behaviour problems as noted by Okwun (1995), Otta (2000) and Oko (2007). According to Nwamuo (2005) CR learning theory assumes that individuals are not passive observers in their environment, rather they are active, goal oriented and capable of taking responsibility for their decisions, actions and consequently exercise control over their behaviours. CR technique involves teaching persons or individuals to reduce their negative emotional reactions by getting them to interpret situations with greater accuracy and avoid distorted thinking and think rightly. In the same vein, Ekennia (1991) confirmed the efficacy of MCT in cessation of cigarette. MCT refers to as a broad spectrum of therapies that involve the combination of selected complementary behavioral techniques in treatment of specified problems. Research supports the use of CR and MCT with couple, children and adolescents. They are very effective in the treatment of many behavioural problems (Corrales, 1993). It is against this background that the researchers investigate the effect of CR and MCT in the management of enuresis behaviour among in-school adolescents.

## METHODOLOGY

It is an experimental research employing the pretest-post test-control group design. Subjects selected from the screened list were assigned into CR and MCT with locus of control and the control group (C) through randomization.

The study was conducted in Federal Government College, Okigwe, in Okigwe Local Government Area of Imo State Nigeria.

The population of the study consisted of all the students from JS 1 to JS3 that manifest enuresis disorder and who responded to the counsellor's advertisement and willingness to participate.

The sample size was twenty-seven (27) nocturnal enuretics randomly selected through simple random sampling from forty five (45) nocturnal enuretics from Federal Government College Okigwe. Subjects were grouped into three groups of nine (9) each.

The following instruments were used for the study namely;

- i. Enuresis Identification Questionnaire for School Adolescents (EIQSA), which was used to screen further nocturnal enuresis.
- ii. Internal and External (I-E) locus of control scale, which was used for measuring locus of control in individuals.

Three experts from Guidance and Counseling and two from Measurement and Evaluation in the department of Psychological Foundations of Abia State University, Uturu were requested to access the relevance of question to the object of the study, the level of the language used, appropriateness of the instructions and the adequacy of content. The instruments as modified were subjected to field trial of using groups similar to the sample. The EIQSA has a test retest reliability of 0.83 at two weeks interval and split-half reliability of 0.79. The I.E locus of control has a test-retest reliability of 0.82 and a split half Kuder Richardson of 0.88 respectively.

The data collected were statistically analyzed using Analysis of Covariance (ANCOVA) and t-test statistic and tested at 0.05 level of significance.

**RESULTS****Research Question 1**

*What Is The Effect Of CR On The Management Of Urinary Continence Among Enuretic Adolescents At Post Test Assessment?*

**Table 1. t-test Analysis of CR on the Management of Urinary Continence Among Enuretics at Post-test**

	<i>N</i>	<i>X</i>	<i>SD</i>	<i>Df</i>	<i>Standard Estimation</i>	<i>Error</i>	<i>t-cal</i>	<i>t-critical</i>
Pre-test	9	54.44	5.95	16	2.65		3.73	2.120
Post test	9	64.33	5.27					

Table 1 shows that calculated t-value of 3.73 is greater than t-critical value of 2.120 with degree of freedom of 16 at 0.05 level of significance. We therefore reject null hypothesis and accept the alternative that CR was effective in reducing enuresis both at treatment and post-test assessment. The treatment groups had better enuresis reduction than control group, and this may be as a result of the treatment administered to the subjects.

**Research Question 2**

*What Is The Effect Of MCT On The Management Of Urinary Continence Among Enuretic Adolescents At Post-Test Assessment?*

**Table 2. t-test Analysis of MCT on the Management of Urinary Continence among Enuretics at Post-test**

	<i>N</i>	<i>X</i>	<i>SD</i>	<i>Df</i>	<i>Standard Estimation</i>	<i>Error</i>	<i>t-cal</i>	<i>t-critical</i>
Pre-test	9	57.56	5.29	16	2.55		3.396	2.120
Post test	9	66.22	5.51					

Table 2 shows that calculated t-value of 3.396 is greater than t-critical value of 2.120 with degree of freedom of 16 at 0.05 level of significance. We therefore reject the null hypothesis and accept the alternative that MCT was effective in reducing enuresis both at treatment and post-test assessment. The treatment groups had better enuresis reduction than control group, and this may be as a result of treatment administered to the subjects.

**Ho1: There Is No Significant Difference Between The Group Treated With CR And The Control Group Of The Nocturnal Enuretics In Their Urinary Continence At Post-Test Assessment**

**Table 3. t-test Analysis of CR and Control Group at Post-test Assessment**

<i>Treatment</i>	<i>N</i>	<i>X</i>	<i>S<sup>2</sup></i>	<i>df</i>	<i>t-cal Value</i>	<i>t-critical Value</i>	<i>Decision</i>
CRT	9	54.7	41	16	4.45	2.12	0.05
C	9	23.7	39.54				

Table 3 shows that the calculated t-value of 4.45 is greater than the t-critical value of 2.12, with degree of freedom of 16 at 0.05 level of significance. We therefore reject the null



hypothesis and accept the alternative that students treated with the cognitive restructuring technique improve in their urinary continence than those without treatment.

**Ho2: There is no significant difference between the groups treated with MCT and Control group at post test assessment**

**Table 4. t-test Analysis of MCT and Control Group at Post-test Assessment**

<i>Treatment</i>	<i>N</i>	<i>X</i>	<i>S<sup>2</sup></i>	<i>df</i>	<i>t-cal Value</i>	<i>t-critical Value</i>	<i>Decision</i>
MCT	9	65.1	38.6	16	5.97	2.12	0.05
C	9	23.7	39.54				

In the table above, the calculated t-value of 5.97 is greater than t-critical value at 2.12 at 0.05 level of significance. We therefore reject the null hypothesis and accept the alternative that students treated with the multi-component therapies improved in their urinary continence than those without treatments.

**Ho3: There is no significant difference in the improvement of the urinary continence of nocturnal enuretics by the treatments of the students with internal and external locus of control at post-test assessment.**

**Table 5. Comparison of Treatment Effect Using Difference of Means and Proportion at Post test assessment**

	<i>Proportions</i>	<i>Difference of Means</i>	<i>Confidence Interval for diff.</i>
Internal Locus of control	0.670	0.1920	1.77
External Locus of Control	0.330		

Critical value of 0.05 two tailed test is 1.96

Critical value of 0.01 two tailed test is 2.58

Since the table value is greater than the calculated value, this leads to the acceptance of the null hypothesis, that there is no difference after treating using internal and external locus of control.

## DISCUSSION OF FINDINGS

### Cognitive Restructuring and Nocturnal Enuretics Behaviour

The research question one is in agreement with hypothesis one which indicated that cognitive restructuring techniques is significant in the management of nocturnal enuretics among junior students at the post-test and follow-up activity levels.

This finding which shows that treatment is effective in reducing enuretic behaviour validates the findings of Adesemiwo and Adekoya (1991) Otta (2000) and Oko (2007) who all discovered that cognitive restructuring technique is effective in dealing with behaviour problems. The possible explanation for the superiority of cognitive restructuring to control group may be due to the fact that it is wholly a behavioural or Semitic approach which can be observed and practiced by the subjects, this process will enable the subjects to imbibe the technique.

## **Multi Component Therapies and Nocturnal Enuretics Behaviour**

The findings of this study in relation to hypothesis two reveals that subjects treated with MCT show much improvement in the urinary continent than those without treatment. This study corroborates with the studies of earlier researchers like Elliot and Denney in Ekennia (1991), and Ikediashi, (1995) who observed significant differential effectiveness over the control group than single treatment procedure even after six months follow up.

### **Treatment Packages and Locus of Control at Post-test Level**

These findings revealed that the treatment groups - Cognitive Restructuring Technique and Multi-Component Therapies with locus of control (internal and external) improved the management of enuretics subjects at post-test level. The internal locus of control group in all therapeutic groups showed less enuretics than the externals at post-test. This finding conforms with the opinion of Cooper (1973), Jacob (1976), Ekennia (1991) and Ihekwaba (2009), that those with internal locus of control are better able to cope with stress, but more responsive to treatment, more achievement centred and more goal oriented. Collins in Ihekwaba (2009) also agree in favour of the internals, Cash and Stock (1973) found out that locus of control externals are more prone to mental illness such as neurosis while internals are more likely to show academic leadership. West and Iber (2001) in their study concluded that internals with appropriate support have better treatment adherence than externals.

### **Implications of the Findings**

Findings from the study throw light on the importance of behaviour modification strategies in the reduction and elimination of enuretic behaviour among adolescents. The effect of treatment on the subjects used for this study is another important implication of findings of the study. The subjects who had gained control over their enuretic behaviour due to treatment received will develop self confidence in their ability to control and direct their behaviours and consequently achieve their goals especially in academic performance. The study will help to provide information to parents and teachers on the antecedents of enuresis and possibility of cure which will dispel the fear of being discovered and enable them to send their enuretic students for counseling.

## **RECOMMENDATIONS**

Based on the findings of the study, the following recommendations were made:

With the efficacy of Cognitive Restructuring Technique and Multi-Component therapies, it is recommended to be utilized by counsellors in handling not only other enuretics students but students with other behaviour problems. Again a well functional guidance programme should be established at all levels of education since enuretics have identified at all levels. Establishment of an interactive forum for counsellors, teachers and parents in form of seminars in terms of utilization of treatment technique in the management of enuresis is recommended. This will enable parents gain information on how to create a cordial and rewarding home environment that discourages enuresis.



**REFERENCES**

- [1] Adesemowo, F. O. & Adekoya, M. (1999). Cognitive styles on Adolescent from intact and broken homes. *The Counsellor. The Counselling Association of Nigeria's (CASSON)*, 17(1), 80-86.
- [2] Akinade, A. E. & Adedipe, V. O. (2004). *Behaviour Modification Principles and Practices*. Edo State: Stirling-Holden pub. (Nig) Ltd.
- [3] Cash, T. & Stack, J. (1973). Locus of Control Among Schizophrenics and other Hospital Psychiatric Patients. *Genetic Psychology Monographs*, 87, 15-122.
- [4] Cooper, J. L. (1973). *Stress and its Management*. New York: McGraw-Hill Book Co.
- [5] Ekennia, C. C. (1991). *Self Control and Multi-Component Therapies in Cigarette Smoking*. Cassation Among Nigerian Soldiers. Unpublished PhD Thesis. University of Ibadan.
- [6] Ekeruo, A. C. (1990). *Behaviour Modification Theory and Application*. Owerri: Totan Pub. Ltd.
- [7] Enuresis Treatment Centre. Retrieval February, 2000 at <http://www.drybed.com>
- [8] Essa, E. L. (1999). *A Practical Guide to Solving Preschool Behaviour Problems*. New York: Delmar Publishers.
- [9] Geldford, D. M., Jenson, W. R. & Drew, C. J. (1998). *Understanding Child Behaviour* (2nd ed). New York: Holt, Reinhert and Winston.
- [10] Gumus, B., Vurgun, N., Lekill, M., Iscan, A., Mussinoglu, T. & Buyuksu, C. (1999). Prevalence of Nocturnal Enuresis and Accompanying Factors in Children Aged 7-11 years in Turkey. *Acta-Pediatrics*, 88(12), 1369-1372.
- [11] Harari, M. D. & Moulden, A. (2000). Nocturnal Enuresis: What is happening? *Journal of Pediatric Child Health*, 36(1), 78-81.
- [12] Ihekweba, I. O. (2009). Relative Efficacy of Systematic Desensitization and Logotherapy in the Reduction of Stress among Aids Patients. *Unpublished PhD Thesis*, Abia State University, Uturu.
- [13] Maunck, K. Hinrichsen, M. & Rose, E. (1975). Life Stress. Locus of Control and Treatment Seeking, *Psychological Reports*, 37, 589-590
- [14] National Kidney Foundation (2000). *Behavioural of Substance Abuse, Treatment*, 18, 51-54.
- [15] Obi, P. O. (2004). Differential Effectiveness of Self-Control and Contingency Management Techniques in the Treatment of Enuretic Pupils. *An Unpublished PhD Thesis*. Abia State University, Uturu.
- [16] Odoemelam, A. M. (2004). *Contemporary Issues in 21<sup>st</sup> Century. Guidance and Counselling: The Nigerian Perspective*. Okigwe: Kalevi-Nedu Concepts, Nigeria.
- [17] Olatawur, M. O. (1983). "Twenty Nigerian Enuretics" A Paper Presented at the *First African Regional Conference of the International Association for the Cross-Cultural Psychology*. Ibadan 2<sup>nd</sup>-6<sup>th</sup> April, 1973.
- [18] Shindi, J. A. (1986). Enuresis. A Review of Therapeutic Efforts. *Nigerian Journal of Psychology*, 5(1), 75-86.

- [19] Thurner, S. M. & Taylor, P. O. (1984). The Token Economy in Day Hospital Settings; Contingency Management or Information Feedback. *Journal of Behaviour Therapy and Experimental Psychiatry*, 15, 891-903
- [20] Ugwuegbu, D. C. E (1975). High School Students Attitude towards Unethical Behaviours in West African School Certificate Exams (WASCE). *Journal of Educational Research* (2)
- [21] West, C. & Iber (2001). In Kozier, Erb, Berman and Snyder (2004). *Fundamentals of Nursing Concepts, Process and Practice*. New Jersey: Pearson Education Inc.