

**EFFECT OF MODELLING TECHNIQUE ON IMPULSIVITY AMONG JUNIOR
SECONDARY SCHOOL STUDENTS IN ANAMBRA STATE, NIGERIA**

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Abstract

This study examined the effect modelling technique on impulsivity among junior secondary school students in Anambra state. Four research questions and four null hypotheses tested at 0.05 level of significant guided the study. The pretest-posttest, control group quasi-experimental design was adopted for this study. The population of the study was a total of 1,185 students who exhibited impulsivity in all the public secondary schools in Onitsha North Local Government Area. The sample for the study was 20 impulsive students who were selected from two purposely chosen public secondary schools. Two instruments were used for data collection, namely: Students Impulsivity Identification Scale (SIIS) and Impulsivity Detecting Scale (IDS). The instruments were validated by experts in Measurement and Evaluation as well as Guidance and Counselling, and the reliability indices established at 0.81 and 0.86 for SIIS and IDS respectively using Cronbach alpha statistic. Data collected from the study were analyzed using Mean to answer the research questions and Analysis of Covariance (ANCOVA) to test the null hypotheses. The results obtained from the study showed that modelling technique was significantly effective in reducing impulsivity among the junior secondary school students who participated in the experiment. The results equally indicated that modelling technique was slightly more effective in reducing impulsivity among the female junior secondary school students than the male students, but the difference in the effectiveness was not significant based on gender. The results also showed that the effect of modelling technique was significantly retained four weeks after the treatment. Moreover, the results of the study showed that the effect of modelling technique on impulsivity was more significantly retained among the male students than their female counterparts. It was recommended, among others, that modelling technique should be adopted by counsellors and other therapists as an effective counselling technique in controlling impulsivity among junior secondary school students so as to enhance their social and academic performances.

Keywords: Modelling Technique, Impulsivity, Gender, Students

Introduction

Every human being exhibits one form of behaviour or the other at a given point in time, issue, event or situation. Behaviours that are accepted within a defined social context are referred to as adaptive, rational or normal, while those behaviours that are not accepted within a defined social context are regarded as irrational, deviant, unacceptable, maladjusted or abnormal. Hence, the behaviour of an individual at a particular point in time could either be adaptive or maladaptive. Maladaptive behaviour is defined by Owuasoanya (2016) as a deviation from acceptably described and appropriate behaviour which interferes with the individuals' growth and development and that of others around them. This implies that maladaptive behaviours are those which are unacceptable by the society in which one belongs. Oftentimes, students exhibit various types of maladaptive behaviours which may hinder their proper adjustment and development both in the school and at home. One of such maladaptive behaviours that have greatly plagued some junior secondary school students in the present time is impulsivity.

Impulsivity may be described as the act of acting without prior thought or anticipation of possible consequences. According to Whelan, Conrod, Poline, Lourdusamy and Banaschewski (2012), impulsivity is a tendency to act on a whim, displaying behaviours characterized by little or no forethought, reflection, or consideration of the consequences. Farmer and Golden (2014) defined impulsivity as a type of choice behaviour whereby smaller immediate gains are selected over larger delayed gains, or larger delayed penalties are preferred over smaller immediate penalties. Pedneault (2019) viewed impulsivity as actions without foresight that are poorly conceived, prematurely expressed, unnecessarily risky, and inappropriate to the situation. However, in the context of this study, impulsivity is regarded as a maladaptive behaviour in which individuals act suddenly without any prior planning and without considering the effects or consequences of such actions.

Consequently, students with impulsivity are characterized with unarticulated and unplanned actions that often generate negative feedbacks. Williams (2018) observed that students who are impulsive are unable to curb their immediate reactions or think before they act. Also, students with impulsivity may blurt out inappropriate comments or run into the street without carefully looking around to see if there is danger. Similarly, Andrade, Alessi and Petry (2013) noted that impulsive students often have a short fuse and they often do not stop to think before they act. The authors further added that such students will say or do something and be sorry for saying or doing it before

they finish. In the classroom situation, such students may answer teachers' questions before they could finish asking the questions. Impulsivity is associated with undesirable, rather than desirable outcomes. People who are impulsive are commonly described as being hash, hot-headed, unpredictable, or unstable. Impulsivity is often characterized by action without foresight.

Judging from its negative impacts, impulsivity can cause problems both to the impulsive students and people around them. According to Pedneault (2019), impulsivity is capable of undermining students' relationships and overall sense of well-being. For instance, impulsive students may find it very difficult to wait for things they want or take their turn in academic or social activities such as school quiz and games. Such students usually make hasty decisions which may lead them into troubles. Hence, students with impulsivity may easily get angry and yell, throw or hit something on their fellow students. Personal observation shows that impulsive students suffer from feelings of inadequacy that manifest in unstable emotions, actions and behaviours which could mar their relationships with others.

Studies have shown that impulsivity is a disruptive classroom behaviour and influences students' academic achievement and performance (Dickman, 2008). Students who exhibit impulsive behaviour may perform poorly in cognitive tasks and have high rate of failure. A good number of impulsive students may fidget and squirm, frequently blurt out answers to questions without thinking and interrupt others. They may also rush through assignments without going through it. Farmer and Golden (2014) observed that impulsive students make purposeless movements and bully their classmates. They prefer to engage in more physical activities than developing appropriate behaviours. From observations, teachers are very conversant with these children who blurt out without waiting to be called or write the first answers that occurs to them.

Most times teachers ignore them or call them names when they fail to give the right answer. Some teachers may also use corporal punishments such as flogging, clearing of school field, among others. However, these methods of controlling impulsive behaviour among students seem to have not yielded the desired results as the students continue in their pattern of behaviour even after receiving punishments. Consequently, impulsivity creates a lot of problems to students and invariably affects them in such a way that it may stimulate more debilitating and problematic behaviours. On this premise, one can clearly understand that impulsivity among students is a behavioural problem that if

not adequately taken care of, and in a timely fashion too, could lead to severe negative consequences on the overall wellbeing of the affected students.

Against this background, it is very necessary that concerted efforts be made towards assisting impulsive students to overcome their problems. Such efforts may involve the use of behaviour intervention/modification techniques. Nwobi (2008) opined that behaviour modification is the systematic arrangement and scientific process of altering behaviours, the alteration of which could be from undesirable behaviour to desirable behaviour or improving existing behaviour. Behaviour modification as a scientific tool has been found to be efficacious in the management of different behaviour problems (Nnodum, 2001, Chima, 2003; Ekenta, 2009). As a behavioural problem therefore, the researchers believed that students' impulsivity could be better handled using behavioural counseling intervention techniques such as modelling technique. In this light, the researchers employed a behaviour intervention technique which is modelling in reducing impulsivity among school age individuals with special focus on junior secondary school students.

Modelling technique was developed by Albert Bandura in 1977. This technique focuses on helping individuals to learn target behaviours by observing a model and imitating such behaviours. Nwamuo and Ekwe (2005) viewed modelling as a process of observational learning in which the behaviour of one individual or group or the model, act as a stimulus for the thoughts, attitudes or behaviour of another individual who observes the model's performance. Nnodum (2010) opined that modelling involves practicing appropriate behaviour responses within social situations. The author therefore described modelling as the acting out of behaviour, to learn it and refine it as a skill. It involves students imitating their social skills in the therapy session and eventually moving to real life situations. Bandura (1977) noted that learning is easier and better retained through observation and imitation. Similarly, Ekwe, Iwuama and Nwamuo (2012) emphasized that modelling technique involves the client or learner attending to the model, and retaining what is learnt. Modelling technique has been applied successfully by Laley and Currain (2016) in treating ADHD among students. Gilchrist (2013) used modelling technique to improve social skills of students with social anxiety. More so, modelling technique has been found to be significantly effective in reducing maladaptive behaviours such as truancy, anxiety, and shyness (Geral, 2013) and improving adaptive behaviours such as reading fluency and comprehension (Cathy, 2013).

In addition, gender may possibly be a moderating factor to impulsive behaviour among students. Gender may be described as the state of being male or female, typically used with reference to social and cultural differences rather than biological ones. Asherson and Image (2004) defined gender as the range of characteristics pertaining to and differentiating between masculinity and femininity. In his opinion, Bornstein (2008) viewed gender as the social attributes and opportunities associated with being male and female. Anuka, George and Ukpona (2012) observed that Nigeria cultural system assigns traditional sex roles that are mutually exclusive to males and females. They stated that some activities are branded abnormal for females but normal for males and vice versa. Some researchers have argued that there is no gender difference in the effect of modelling technique in reducing maladaptive behaviours among students (Isyaku, 2015). Also, Anyebe (2016) in her study concluded that there is no significant difference in the effectiveness of modelling technique in reducing destructive behaviours among secondary school students in Benue state. During the study, the researchers also investigated how male and female students benefited in the modelling technique experiment.

Most importantly, the modification of human thought process is the goal of modelling technique. Since modelling technique has proven effective in reducing other maladaptive behaviours as reported by previous researchers, the present researchers therefore embarked on this study which investigated the effect of modelling technique on impulsivity among junior secondary school students in Anambra State.

Purpose of the study

The main purpose of this study was to determine the effect of modelling technique (MT) on impulsivity among junior secondary school students in Onitsha North Local Government Area of Anambra State.

Specifically, the study determined:

1. The effect of modelling technique (MT) on impulsivity among junior secondary school students when compared with those in the control group using their pretest and posttest mean scores.
2. The difference in the effects of MT on impulsivity among male and female junior secondary school students using their pretest and posttest mean scores.
3. The retention of the effect of MT on impulsivity among junior secondary school students when compared with those in the control group using their follow-up test scores.
4. The difference in retention of the effect of MT on impulsivity among male and female junior secondary school students using their follow-up test scores.

Research questions

The following research questions guided this study:

- 1) What is the effect of MT on impulsivity among junior secondary school students when compared with those in the control group using their pretest and posttest mean scores?
- 2) What is the difference in the effects of MT on impulsivity among male and female junior secondary school students when compared with those in the control group using their pretest and posttest mean scores?
- 3) What is the retention of the effect of MT on impulsivity among junior secondary school students when compared with those in the control group using their follow-up test mean scores?
- 4) What is the difference in the retention of the effect of MT on impulsivity among male and female junior secondary school students using their follow-up test mean scores?

Hypotheses

The following null hypotheses were formulated and tested at 0.05% level of significance:

- H₀₁:** The effect of MT on impulsivity among junior secondary school students when compared with those in the control group using their pretest and posttest mean scores is not significant.
- H₀₂:** There is no significant difference between the effects of MT on impulsivity among male and female junior secondary school students using their pretest and posttest mean scores.
- H₀₃:** The retention of the effect of MT on impulsivity among junior secondary school students when compared with those in the control group using their follow-up test mean scores is not significant.
- H₀₄:** There is no significant difference between the retention of the effects of MT on impulsivity among male and female junior secondary school students using their follow-up test mean scores.

Method

This study adopted the non-randomized pre-test, post-test quasi-experimental design. Nworgu (2015) described quasi-experiment as an experiment where random assignment of participants to experimental and control groups is not possible. The study was conducted among junior secondary school students in Anambra state. The population of study was 685 junior secondary school students who exhibited impulsivity in the 16 public secondary schools in Onitsha North Local Government Area as identified through their pre-test scores. The sample for the study was 20 impulsive students who were drawn from two purposely selected co-educational public secondary schools that had the largest number of students with impulsivity.

Two instruments were used for this study, they are: Students Impulsivity Identification Scale (SIIS) and Impulsivity Detecting Scale (IDS). The SIIS and IDS used in this study comprised of two sections A and B. Section A was an introductory part that solicited for the bio-data of the respondents particularly, their gender. Each of the instruments contained 20 items prepared along the four point scale; ranging from strongly agree 4, Agree 3, disagree 2 and strongly disagree 1. Students' scores that were below 50 signified junior secondary school students without impulsivity, while those whose scores were from 50 and above were regarded as students with impulsivity. The two instruments used for this study were dully validated by experts in measurement and evaluation as well as guidance and counselling and the reliability indices established at 0.81 and 0.86 for SIIS and IDS respectively, using Cronbach alpha statistics.

The Students Impulsivity Identification Scale (SIIS) was used for identification of students with impulsivity during the pre-test. The treatment lasted for six weeks using one hour per session. The experimental group was treated with modelling technique, while the control group received no treatment. At the end of the treatment, the SIIS was reshuffled and re-administered to both the experimental and control groups. More so, four weeks after the post-test, a follow-up test was given to the experimental and control groups by administering the Impulsivity Detecting Scale (IDS). This was done in order to ascertain the retention of the effect of modelling technique treatment at an interval of four weeks. During the administration of each of the instruments, the researchers ensured good testing conditions. The instruments were also retrieved on the spot to avoid possible losses. This is to ensure the immediate retrieval of the rating scale from the subjects upon response. The participants' responses were then scored and the overall data generated from the study were subjected to statistical analysis. Mean was used to answer the research questions, and analysis of Covariance (ANCOVA) was used to test the null hypotheses at 0.05 level of significance.

Results

Table 1: Posttest and Posttest impulsivity mean scores of students treated with Modelling technique (MT) and those in the control group (Norm = 50).

Source of Variation	N	Pretest Mean	Posttest Mean	Lost Mean	Remark
Modelling Technique	10	84.60	38.80	45.80	Effective
Control	10	82.56	86.33	-3.77	

Table 1 shows that the students treated with modelling technique had pretest mean score of 84.60 and posttest mean score of 38.80 with lost mean of 45.80 in their level of impulsivity, while the students in the control group had pretest mean score of 82.56 and posttest mean score of 86.33 with lost mean of -3.77. This signifies that modelling technique was effective in reducing impulsivity among junior secondary school students.

Table 2: Pretest and Posttest impulsivity mean scores of male and female secondary school students treated with MT (Norm = 50).

Source of Variation	N	Pretest Mean	Posttest Mean	Lost Mean	Remark
Male	5	81.86	40.45	41.41	
Female	5	84.00	36.21	47.79	More effective

Table 2 indicated that male students treated with modelling technique had a pretest mean score of 81.86 and a posttest mean score of 40.45, with a reduction in mean score of 41.41, while the female students in the group had a pretest mean score of 84.00 and a posttest mean score of 36.21 with a reduction in mean score of 47.79. This therefore implies that modelling technique is more effective in reducing impulsivity among female junior secondary school students than the male students.

Table 3: Posttest and follow-up impulsivity mean scores of students treated with modelling technique (MT) and those in the control group (Norm = 50)

Source of Variation	N	Posttest Mean	Follow-up Mean	Lost Mean	Remark
Modelling Technique	10	38.80	36.60	2.20	Retained better
Control	10	86.33	86.00	0.33	

Table 3 shows that the students treated with modelling technique had posttest mean score of 38.80 and follow-up mean score of 36.60 with a lost mean of 2.20 in their level of impulsivity, while the students in the control group had posttest mean score of 86.33 and follow-up mean score of 86.00 with a lost mean of 0.33. Therefore, the impulsive students who were treated with modelling technique retained, while those in the control group remained impulsive as indicated in their follow-up scores.

Table 4: Posttest and follow-up impulsivity mean scores of male and female students treated with MT and those in the control group (Norm = 50)

Source of Variation	N	Posttest Mean	Follow-up Mean	Lost Mean	Remark
Male	5	40.45	37.60	2.85	Retained better
Female	5	36.21	35.60	0.61	

Table 4 revealed that the male students treated with modelling technique had posttest mean score of 40.45 and follow-up mean score of 37.60 with a lost mean of 2.85 in their impulsivity, while the female students treated with modelling technique had posttest mean score of 36.21 and follow-up mean score of 35.60 with lost mean of 0.61. This signifies that the effect of modelling technique was better retained among the male students than their female counterparts.

Test of Null Hypotheses

Table 5: ANCOVA on the effect of MT on impulsivity among junior secondary school students when compared with those in the control group

Source of Variation	SS	df	MS	Cal. F	Pvalue	$P \leq 0.05$
Corrected Model	6844.377	3	2281.459			
Intercept	360.404	1	360.404			
PRETEST	24.777	1	24.777			
MT	6769.293	2	3384.647	175.357	0.000	S
Error	308.823	17	19.301			
Total	51710.000	20				
Corrected	7153.200	19				

Table 5 reveals that at 0.05 level of significance, 1df numerator and 19df denominator, the calculated F is 175.36 with Pvalue of 0.00 which is less than 0.05. Therefore, the first null hypothesis is rejected. Hence, the effect of modelling technique on impulsivity among junior secondary school students is significant.

Table 6: ANCOVA on the difference in the effects of modelling technique on impulsivity among male and female junior secondary school students

Source of Variation	SS	df	MS	Cal. F	Pvalue	P ≤ 0.05
Corrected Model	10638.248	3	1182.028			
Intercept	322.811	1	322.811			
PRETEST	.248	1	.248			
GENDER	18.054	1	6.018	0.401	0.753	NS
Error	450.152	7	15.005			
Total	68242.000	10				
Corrected Total	11088.400	9				

Table 6 shows that at 0.05 level of significance, 1df numerator and 9df denominator, the calculated F is 0.40 with Pvalue of 0.80 which is greater than 0.05. Therefore, the second null hypothesis is accepted. This indicates that there is no significant difference in the effects of modelling technique on impulsivity among male and female junior secondary school students.

Table 7: ANCOVA on the retention of the effect of MT on impulsivity among junior secondary school students when compared with those in the control group

Source of Variation	SS	df	MS	Cal. F	Pvalue	P ≤ 0.05
Corrected Model	11974.338	3	2394.868			
Intercept	10.139	1	10.139			
POSTTEST	420.838	1	420.838			
TREATMENTS	42.066	2	10.516	4.357	0.006	S
Error	82.062	17	2.414			
Total	64474.000	20				
Corrected Total	12056.400	19				

In table 7, it was observed that at 0.05 level of significance, 1df numerator and 19df denominator, the calculated F is 4.36 with Pvalue of 0.01 which is less than 0.05. Therefore, the third null hypothesis is rejected. This signifies that the retention of the effect of modelling technique on impulsivity among junior secondary school students is significant.

Table 8: ANCOVA on the difference between the retention of the effect of MT on impulsivity among male and female junior secondary school students

Source of Variation	SS	df	MS	Cal. F	Pvalue	P ≤ 0.05
Corrected Model	11997.088	3	2394.868			
Intercept	12.395	1	10.139			
POSTTEST	292.238	1	420.838			
TREATMENT	42.948	1	10.516			
GENDER	22.529	2	7.510	3.798	0.020	S
Error	59.312	7	1.977			
Total	26481.000	10				
Corrected Total	13440.400	9				

Table 8 indicated that at 0.05 level of significance, 1df numerator and 9df denominator, the calculated F is 3.80 with Pvalue of 0.02 which is less than 0.05. Therefore, the fourth null hypothesis is rejected. Hence, there is significant difference in the retention of the effect of modelling technique on impulsivity among junior secondary school students.

Discussion

This study examined the effect of modelling technique on impulsivity among junior secondary school students in Anambra state, Nigeria. The findings of this study revealed that modelling technique was significantly effective in reducing impulsivity among the students who participated in the experiment. From the analyses carried out in this study, it was revealed that students in both modelling technique and control groups exhibited high level of impulsivity before the commencement of the experiment as indicated in their pretest scores. However, the posttest scores indicated a reduction of impulsivity for students treated with modelling technique, with a contrary result for those in the control group. This signifies that junior secondary school students benefited from the modelling technique experiment. The result confirms the previous findings by other researchers who reported the effectiveness of modelling technique in reducing maladaptive behaviours (Geral, 2013; Gilchrist, 2013; Laley & Currain, 2016). The finding also supports the findings of Cathy (2013) who reported that modelling technique is a good fit for improving classroom adaptive behaviours.

One possible reason for the decrease in impulsivity among junior secondary school students in the modelling technique treatment group than those in the control group might be because of the counter-impulsive behaviours exhibited by the models during modelling technique experiment. Perhaps, the students in the experimental group by observing and imitating the

counter-impulsive behaviours of the models were able to discard their impulsive behaviour and build more adaptive and self-enhancing behaviours. It is therefore necessary to recall at this point that modelling technique involves students imitating adaptive social skills in the therapy session and eventually moving them to real life situations. In-line with the above statement, Nnodum (2010) observed that modelling involves practicing appropriate behaviour responses within social situations. The author therefore described modelling as the acting out of behaviour, to learn it and refine it as a skill. Possibly, during the modelling technique, the students through observation embraced and imitated the adaptive social skills of the models, thereby reducing their impulsivity.

The result of this study also revealed that modelling technique was negligibly more effective in reducing impulsivity among female students than the male students. This implies that although the students were given equal opportunities to participate in the modelling technique experimental activities and were also given equal attention under the same experimental condition, the female students seemed to have benefited more from modelling technique than their male counterpart, but the difference was not significant. Although the research question two indicated gender difference in impulsivity mean score reduction, the test of null hypothesis two revealed that the gender difference was not significant. This finding is consistent with the findings of previous researchers who reported that there is no significant gender difference in the effectiveness of modelling technique in reducing maladaptive behaviours (Isyaku, 2015; Anyebe, 2016). In contrary, Anuka, George and Ukpona (2012) observed that Nigeria cultural system assigns traditional sex roles that are mutually exclusive to males and females, and by that, some activities are therefore branded abnormal for females but normal for males and vice versa. Hence, one would have expected that male students will benefit from a group activity such as the modelling technique experiment. However, it is possible that the rapport created by the researchers at the beginning of the experiment and the equal attention given to both the male and female students had helped to reduced the influence of gender difference among students who participated in the experiment. Furthermore, the high clamor for gender equality coupled with the rapid change in gender role in the contemporary society may have degraded the effect of gender differences among the students.

Another finding of this study revealed that the effect of modelling technique on impulsivity among the junior secondary school students who participated in the experiment was significantly retained four weeks after the experiment. This was evidenced by their follow-up test

scores and the test of null hypothesis three. This signifies that modelling technique has a lasting effect on impulsivity among students. This finding is in consonance with the report of Bandura (1977) who earlier found that learning is easier and better retained through observation and imitation. Similarly, Ekwe, Iwuama and Nwamuo (2012) emphasized that modelling technique involves the client or learner attending to the model, and retaining what is learnt. Finally, this study further observed that effect of modelling technique was more significantly retained among the male students than the female students. The gender difference in the retention of the effect of modelling technique was evidenced by the difference in the students' follow-up scores and the test of null hypothesis four. This therefore indicates that male junior secondary school students who participated in the modelling technique experiment retained the skills they have learned from the models better than their female counterparts.

Conclusion

Based on the findings of this study and the discussions that followed, the researchers concluded that modelling technique is effective in reducing impulsivity among junior secondary school students in Anambra state. It was also concluded that although modelling technique was slightly effective in reducing impulsivity among the female students than the male students, the difference in the effectiveness was not significant based on gender. Furthermore, the effect of modelling technique was significantly retained four weeks after the experimental treatment. Finally, it was concluded that the effect of modelling technique was significantly retained more among male students than the female students.

Recommendations

Consequent upon the findings of this study, the following recommendations were made:

1. Modelling technique should be adopted by counsellors and other therapists as an effective counselling technique in controlling impulsivity among junior secondary school students so as to enhance their social and academic performances.
2. School counsellors and teachers should ensure early identification of students with traits of impulsivity for time and proper intervention.

3. School administrators should organize school counsellors so as to better equip them with knowledge of modelling technique so that they will be able to effectively use this technique in helping students who exhibit impulsivity.
4. School counsellors should use modelling technique as an effective and long lasting intervention for impulsivity among junior secondary school students without much consideration for differences in gender.

References

- Andrade, L.F, Alessi, S.M. & Petry, N.M. (2013). The effect of alcohol problems and smoking on delay discounting in individuals with gambling problems. *Journal of Psychoactive Drugs*, 45(3), 241-248.
- Anuka, Y., George, M.K. & Ukpona, M. (2012). *Relationships and development*. New York: Psychological Press.
- Anyebe, V. (2016). Effects of modelling and time-out techniques on disruptive classroom behaviours among secondary school students in Otukpo, Benue state, Nigeria. *Retrieved from <http://www.kubanni.abu.ng>jspui>bitstream>*
- Asherson, P. (2004). Attention deficit attention deficit hyperactivity disorder in the post-genomic era. *Retrieved from <http://www.ncbi.nlm.nih.gov>pubmed>*
- Bandura, A. (1977). *Social learning theory*. Englewood cliffs, New Jessy: Prentice Hall Press.
- Bornstein, R. & Kate, P. (2008). *My gender workbook: Outline of a theory of practice*. Cambridge: University Press.
- Cathy, R. (2013). Effects of feed forward video self- modelling on reading fluency and comprehension. *Retrieved from <https://www.ir.canterbury.ac.nz/bitstreat /10092/8672/1/theses-fultext.pdf>*
- Chima, I.M. (2003). Self control and aversive training therapies in the management of bullying among primary school children. *Unpublished Masters Thesis*, Abia Slate Universit, Uturu.

- Dickman, S.J. (2008). Impulsivity, arousal and attention. *Journal of Personality and Individual Differences*, 28, 563-581.
- Ekenta. F.C. (2009). The effect of modeling and cognitive restructuring on the self/concept of adolescent. *Unpublished Masters Thesis*, Imo State University, Owerri.
- Ekwe, A.O., Iwuama, B.C. & Nwamuo, A.P. (2012). *Behaviour change intervention strategies*. Owerri: Reliable Publishers.
- Farmer, R.F. & Golden, J.A. (2014). The forms and functions of impulsive actions: Implication for behavioural assessment and therapy. *International Journal of Behavioural Consultation and Therapy*, 5(1), 12-29.
- Geral, R.S. (2013). The Effects of video modelling on inappropriate behaviour of elementary School Students. Retrieved from http://www.wcupa.edu/undergradateresearch/journal/./geral_53212.pdf
- Gilchrist, L. (2013). Effects of video self-modelling as an intervention for teenagers with social anxiety. Retrieved from <http://www.ir.canterbury.ac.nz/btstream>.
- Isyaku, Y. (2015). Effects of modelling and token reinforcement techniques on shy behaviour among secondary school students in Kano state, Nigeria. Retrieved from <http://www.kubanni.abu.ng>jspui>bitstream>
- Laley, B. & Currain, J.P. (2016). *Effects of deficit disorders*. New York: Lerimer Hauppauge.
- Nnodum, B.I. (2010). Relative effects of assertive training, modelling and their combination in the reduction of shy behaviour among children in Orlu Local Government Area of Imo state. *Edo Journal of Counselling*, 3(1), 233-241.
- Nnodum. B.I. (2001). Differential effectiveness of assertive training and modeling techniques in the social skills of primary school isolates. *Unpublished Doctoral Dissertation*, Abia State University, Uturu.
- Nwamuo, A.P. & Ekwe, A.O. (2005). *Applications of therapeutic principles of behaviour modification*. Owerri: Career Publishers.

Nwobi. U. (2008). *Administration of non-formal education programmes in Nigeria*. Nsukka: Great AP Express Publishers.

Nworgu, B.G. (2015). *Educational research basic issues and methodology*. Nsukka: University Trust Publishers.

Onwuasoanya P.N. (2016). *Behaviour modification techniques in counselling*. Nsukka: Great AP Publishers.

Pedneault, K.S. (2019). Impulsive behaviour and borderline personality disorder. *Retrieved from <http://www.verywellmind.com/impulsive-behaviour-and-bpd-425483>*

Whelan, R., Corod, P.J., Poline, J., Lourdusamy, A. & Banaschewski, T. (2012). Adolescent impulsivity phenotypes characterized by distinct brain networks. *Journal of Nature Neuroscience*, 15(6), 613-622.

Williams, C.S. (2018). Medical definition of impulsivity. *Retrieved from <http://www.medicinenet.com/sript/main/art.asp?articlekey=22330>*