

Effect of Behaviour Contract Counselling Technique on Impulsivity among Primary School Pupils in Zaria Metropolis, Kaduna State, Nigeria

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Abstract

The study determined the “Effect of Behaviour Contract Counselling Technique on Impulsivity among Primary School Pupils in Zaria Metropolis, Kaduna State, Nigeria”. Four objectives were formulated to guide the study. The study employed quasi experimental design involving pre-test post-test group design in which the participants were assigned to two treatment groups. The population of the study consisted of 35 pupils identified with impulsivity. Purposive sampling technique was used to select 10 pupils used for the study. The instrument used for data collection was Impulsive Behaviour Scale adapted from Whiteside and Lynam. The four Null hypotheses were tested using the paired sample t test at 0.05 level of significance. Findings revealed that Pupils exposed to behaviour contract had a reduced premeditation impulsivity among primary schools in Zaria Metropolis ($p = 0.001$); Pupils exposed to behaviour contract had a reduced urgency impulsivity among primary schools in Zaria Metropolis ($p = 0.021$); Pupils exposed to behaviour contract had a reduced sensation seeking impulsivity among primary schools in Zaria Metropolis ($p = 0.000$) and; Pupils exposed to behaviour contract had a reduced perseverance Impulsivity among primary schools in Zaria Metropolis ($p = 0.004$). Based on the findings of the study, it was deduced that Behaviour contract was effective in reducing impulsivity such as premeditation, urgency, sensation seeking and perseverance among primary schools in Zaria Metropolis. It was recommended among others that since behaviour contract technique was effective in reducing impulsivity such as premeditation, urgency, sensation seeking and perseverance among primary school pupils, Counsellors, Psychologists and Social Workers should be encouraged to use the technique in handling pupils with impulsivity behaviour.

Keywords: Impulsivity, Behaviour Contract, Counselling, Technique, Pupils.

Introduction

Impulsivity is a behaviour disorder characterized by not being able to wait before answering a question, or answering even before it is completed; often interrupting or intruding on others; running out into the street without stopping and looking, and being unable to wait for things that they may desire. Impulsivity may make meeting the daily rigors of school challenging, difficulty in sustaining attention to a task may contribute to missing important details in assignments, daydreaming during lessons and other activities and difficulty organizing assignments. It may also lead to careless errors, responding to questions without fully formulating the best answers and only attending to activities that are entertaining or novel. Generally, pupils with impulsive behaviour may experience more problems with school performance than their reflective peers. Valiente, Spinrad, Eisenberg and Kupfer (2013) reported that impulsivity is prospectively and uniquely related to achievements and there is also a positive relationship between impulsivity and academic failure. Two main types of Impulsivity have been identified. First, there is a tendency to go for the immediate reward without thoughtful consideration of long-term effects, and second, there is a strong motivation or urge to act. However, Whiteside and Lynam (2001) (as cited in Lopez, Dauvilliers, Jaussent, Billieux & Bayard, 2015) reported four facets: the first facet is urgency, which refers to the tendency to experience strong impulses, frequently under conditions of negative affect. The second facet, premeditation, refers to the tendency to think and reflect on the consequences of an act before engaging in that act. Perseverance is the third facet; it refers to an individual's ability to remain focused on a task that may be boring or difficult. Individuals who are low in or lack perseverance are unable to complete projects and to work under conditions that require resistance to distracting stimuli. Sensation seeking is the fourth and final personality facet a tendency to enjoy and pursue activities that are exciting and openness to trying new experiences that may be dangerous. High scorers enjoy taking risks and engaging in dangerous activities.

Three causes of Impulsivity were reported by True (2014) which are Biological, Developmental and Sociological factors. Impulsive behaviours that result from biological causes can be traced to specific areas of the brain. In this regard, differences in the prefrontal cortex are associated with differences in

the inability to control certain actions that may conflict with long term goals. This is because prefrontal cortex is considered the most effective region of the brain that engages in executive control, other functions that can be linked to the prefrontal cortex include; the functions of cognitive control, decision making and planning. Therefore, damage to the prefrontal cortex suggests an increase in impulsive action or behaviour (Greene, Heilbrun, Fortune & Nietzel, 2014). In view of the developmental factor, theory and developmental research have suggested a strong link between poor parenting and problems of impulsivity among children (True, 2014). The sociological factor essentially hinges on socioeconomic status or poverty which has been reported as another cause of impulsivity (Lynam, Caspi, Moffitt, Wikstrom, Loeber & Novak, 2013). They found that teenagers with higher levels of impulsivity lived in poorer neighborhoods, and boys who lived in poorer neighborhoods took part more in different types of violent crimes.

Prevalence of impulsivity has been reported all over the world, studies worldwide on Attention Deficit Hyperactivity Disorder (ADHD) prevalence in children aged 18 and under found an overall pooled estimate of 7.2% (Thomas, Sanders, Doust, Beller & Glasziou, 2015). Based on DSM-IV screening of 11,422 adults for ADHD in 10 countries in the Americas, Europe and the Middle East, the estimates of worldwide adults with ADHD averaged 3.4% (Fayyad, De Graaf, Kessler, Alonso, Angermeyer, Demyttenaere, De Girolamo, Haro, Karam, Lara, Lepine, Ormel, Posada-Villa, Zaslavsky & Jin, 2013). In different parts of Nigeria, Adewuya and Famuyiwa, (2013); Egbochuku and Abikwi (2014) found a prevalence of 3.2% among Nigerian primary school children, 7.6% among pupils in Egor Local Government Area of Edo State (Ambuabunos, Ofovwé & Ibadin, 2014) and among primary school pupils in Kano, Darma (2015) reported 8% while Dungurawa and Sani (2015) reported 8.7%. The hyperactive-impulsive subtype is reported to be the most prevalent (Rowland, Umbach, Catoe, Stallone, Long, Rabiner & Sandler, 2011, Montiel-Nava, Pena & Montiel-Barbero, 2013). Also, the researcher observed that while monitoring primary schools in Zaria Zone as a member of the UKaid sponsored Education Sector Support Programme in Nigeria (ESSPIN), all the primary four teachers complained of pupils that exhibit characteristics of impulsive behaviour. In the same programme also, the researcher had the opportunity of visiting the other Zones for the monitoring exercise in the State and the same complains were observed.

Different approaches such as class rules and regulations (Oweus, 2015); Positive Behavioural Interventions and Supports (PBIS), (Sugai & Horner, 2016); suspension (Thepa, Cohen, Guffey, & Higgins-D'Alesandro, 2013); office disciplinary referrals (Rigby, 2012) and; social and emotional learning (CASEL, 2013) were used to handle impulsivity but the problem still persists. The need to seek the use of psychological approaches such as behaviour contract to reduce the behaviour becomes imperative. Behaviour contract is a simple reinforcement intervention that is widely used to change maladaptive behaviour such as emotional and behavioural disorders, autism, attention deficit hyperactivity disorder (ADHD), intellectual disabilities and traumatic brain injury (Hufford, Williams, Malec & Cravotta, 2012). In addition, they reported the efficacy of behaviour contract on academic gains, improved social behaviours, weight control, adherence to an exercise programme and a reduction in aggressive and violent behaviours. Behaviour contracting is a behavioural intervention within the applied behaviour analysis literature that has been used to influence behaviour change over a decade (Bailey, Wolf & Phillips (1991) as cited in Bowman-Perrott, Burke, DeMarin, Zhang & Davis, 2016). Within the field of behaviour analysis, Colon (2016) reported that behaviour contracts have been used to address behaviours such as student studying behaviour, weight control, child aggressive behaviours, sports performance, intellectual disabilities, typically functioning children and adults and individuals with autism.

Statement of the Problem

Over the past few years, concerns have been raised about the poor performance of primary school pupils in public examinations such as the National Common Entrance Examination. Evidence from literature revealed that impulsivity is found to be one of the major factors inhibiting academic achievement among primary school pupils in Nigeria and this accounts for about 3.2% of the population (Adewuyi & Famuyiwa; 2013 and Egbochuku & Abiwi, 2014). The impulsive children perform poorly not because they are not intelligent but because they lack ability in reflective thinking in a given

cognitive tasks in schools, answering questions before the questions are completely asked, they may have a daily rigors of school challenges, difficulty in sustaining attention to a task, missing important details on assignments, daydreaming during lessons and other activities, difficulty in organizing assignments, careless errors, responding to questions without fully formulating the best answers and only attending to activities that are entertaining or novel. They may also experience low self-esteem, difficulties making and maintaining appropriate peer relationship and developing a supportive group. These problems had caused a significant distress or impaired functioning as they frequently experience deficits in social skills, impairing their abilities to function well in school and social settings. However, there is a growing concern on the consequences of impulsivity among children in Zaria Metropolis, Nigeria and indeed the world at large. In spite of the various measures adopted by parent and teachers in managing impulsivity among primary school pupils such as flogging, warning, reproach, advice, denial of rights and privileges, reprimand and suspension from school proved less effective and the problems of impulsivity among primary school pupils still persists in Zaria Metropolis. Studies had proven the effectiveness of Behaviour Contract in handling Impulsivity but were conducted in foreign culture (Rivera Flores and Barreda Parra; 2014, Ghahramani, Sohrabi, Kakhki & Besharat 2016), None of the studies considered the different facets of impulsivity such as such as premeditation, urgency, sensation seeking and perseverance. This gap constitutes a major challenge to the development of primary education. It was against this background that this study investigated the effect of Behaviour Contract Counselling Technique on Impulsivity among Primary School Pupils in Zaria Metropolis, Kaduna State, Nigeria.

Objectives of the Study

The objectives of the study were to determine the:

- i. effect of behaviour contract on premeditation impulsivity among primary school pupils in Zaria Metropolis.
- ii. effect of behaviour contract on urgency impulsivity among primary school pupils in Zaria Metropolis.
- iii. effect of behaviour contract on sensation seeking impulsivity among primary school pupils in Zaria Metropolis.
- iv. effect of behaviour contract on perseverance impulsivity among primary school pupils in Zaria Metropolis.

Hypotheses

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

- H₀₁: There is no significant effect of behaviour contract on premeditation impulsivity among primary school pupils in Zaria Metropolis.
- H₀₂: There is no significant effect of behaviour contract on urgency impulsivity among primary school pupils in Zaria Metropolis.
- H₀₃: There is no significant effect of behaviour contract on sensation seeking impulsivity among primary school pupils in Zaria Metropolis.
- H₀₄: There is no significant effect of behaviour contract on perseverance impulsivity among primary school pupils in Zaria Metropolis.

Methodology

The design adopted in this study was quasi-experimental design involving the pre-test and post-test design. This design involved a pre-test of the subjects before the introduction of treatment followed by a post-test of the subjects after the treatment. The target population consisted of 14 primary 4 school pupils identified with impulsivity in are LEA Adamu B. Dikko Primary School, Tudun Jukun, Zaria. The sample of this study consisted of 10 participants; pupils who were identified with impulsivity and the study adopted the purposive sampling technique. The researcher adapted the 20 items SUPPS- P impulsive Behaviour Scale (Lynam, 2013) for the study. The instrument was designed to measure Impulsivity across four facets. The UPPS includes 4 sub-scales: urgency, premeditation, perseverance, and sensation-seeking. The pupils that obtained a score of 30-50 were selected to serve as subjects in the study.

To localize the instrument especially as a result of amendments made to it, the pilot testing of the instrument was established by administering 10 copies of the validated instrument on 10 pupils of Waziri Lawal LEA Primary School Kofar Kuyanbana, Zaria. The data collected at the pilot study was subjected to the PPMC test re-test technique and a correlation coefficient of 0.88 was obtained. The Behaviour Contract Counselling Technique package intervention programmes was implemented on the subjects and treatment sessions lasted for 6 weeks.

Results

Hypothesis One: There is no significant effect of behaviour contract on premeditation Impulsivity among primary school pupils in Zaria Metropolis.

Table 1: Paired Sample t test on Effect of Behaviour Contract on Premeditation Impulsivity among Primary School Pupils in Zaria Metropolis

Variable	Tests	N	Mean	Std.de	Mean diff.	Df	t cal	P
	Pre-test	10	13.2000	0.918				
Premeditation Impulsivity					5.700	9	17.015	0.001
	Post-test	10	7.5000	0.707				

Results of the paired sample t- test in Table 1 revealed that the calculated p value of 0.001 is below the 0.05 alpha level of significance while the computed t value of 17.015 is higher than the 1.96 at df 9. This implied that, there was significant effect of behaviour contract technique on premeditation impulsivity among primary school pupils in Zaria Metropolis. Therefore, the null hypothesis which stated that there is no significant effect of behaviour contract on premeditation impulsivity among primary school pupils in Zaria Metropolis was rejected.

Hypothesis Two: There is no significant effect of behaviour contract on urgency impulsivity among primary school pupils in Zaria Metropolis.

Table 2: Paired Sample t-test on Behaviour Contract on Urgency Impulsivity among Primary School Pupils in Zaria Metropolis

Variable	Tests	N	Mean	Std.dev.	Mean diff.	Df	t cal	P
	Pre-test	10	12.5000	0.960				
Urgency Impulsivity					5.800	9	9.947	0.021
	Post-test	10	6.700	1.500				

Results of paired sample t-test in Table 2 revealed that the calculated p value of 0.021 is below the 0.05 alpha level of significance while the computed t value of 9.947 is higher than the 1.96 at df 9. This implied that, there was significant effect of behaviour contract on urgency impulsivity among primary school pupils in Zaria Metropolis. Therefore, the null hypothesis which stated that there is no significant effect of behaviour contract on urgency impulsivity among primary school pupils in Zaria Metropolis was rejected.

Hypothesis Three: There is no significant effect of behaviour contract on sensation seeking impulsivity among primary school pupils in Zaria Metropolis

Table 3: Paired Sample t- test on Effect of Behaviour Contract on Sensation Seeking Impulsivity among Primary School Pupils in Zaria Metropolis

Variable	Tests	N	Mean	Std.de	Mean diff	Df	t- cal	P
Sensation Seeking Impulsivity	Pre-test	10	12.700	0.948				
					6.400	9	18.827	0.000
	Post-test	10	6.300	1.059				

Results of the paired sample t- test in Table 3 revealed that the calculated p value of 0.000 is below the 0.05 alpha level of significance while the computed t value of 18.827 is higher than the 1.96 at df 9. This implied that, there was significant effect of behaviour contract on sensation seeking impulsivity

among primary school pupils in Zaria Metropolis. Therefore, the null hypothesis which stated that there is no significant effect of behaviour contract on sensation seeking impulsivity among primary school pupils in Zaria Metropolis was rejected.

Hypothesis Four: There is no significant effect of behaviour contract on perseverance impulsivity among primary school pupils in Zaria Metropolis.

Table 4: Paired Sample t- test on Effect of Behaviour Contract on Perseverance Impulsivity among Primary School Pupils in Zaria Metropolis

Variable	Tests	N	Mean	Std. dev.	Mean diff.	Df	t-cal	P
	Pre-test	10	12.800	1.229				
Perseverance Impulsivity					4.900	9	5.950	0.004
	Post-test	10	7.900	2.079				

Results of the paired sample t- test above revealed that the calculated p value of 0.004 is below the 0.05 alpha level of significance while the computed t value of 5.950 is higher than the 1.96 at df 9. This implied that, there was significant effect of behaviour contract on perseverance impulsivity among primary school pupils in Zaria Metropolis. Therefore, the null hypothesis which stated that there is no significant effect of behaviour contract on perseverance impulsivity among primary school pupils in Zaria Metropolis was rejected.

1. Pupils exposed to behaviour contract technique had a reduced premeditation impulsivity among primary schools in Zaria Metropolis ($p=0.001$).
2. Pupils exposed to behaviour contract had a reduced urgency impulsivity among primary schools in Zaria Metropolis ($p=0.021$).
3. Pupils exposed to behaviour contract had a reduced sensation seeking impulsivity among primary school in Zaria Metropolis ($p=0.000$).
4. Pupils exposed to behaviour contract had a reduced perseverance impulsivity among primary school pupils in Zaria Metropolis ($p=0.004$).

Discussion

The study assessed the effects of behaviour contract counselling techniques on impulsivity among primary school pupils in Kaduna State, Nigeria. The first finding indicated that pupils exposed to behaviour contract had a reduced premeditation Impulsivity among primary schools in Zaria Metropolis. The finding is in agreement with findings of Mruzek, Cohen and Smith (2014) which agreed with the ease of using behaviour contracts in their study of two elementary school boys, one with Asperger Syndrome and another with an emotional disability. It was also in agreement with the findings of Cutrell (2015) in a study titled "Effect of Contracts in Decreasing Inappropriate Behaviour of Pupils with Emotional/Behavioural Disabilities". It was found that all pupils exhibited a decrease in inappropriate behaviour with the use of the behaviour contract. This was also in agreement with another study conducted by Jones, Weber and McLaughlin (2015) titled No Teacher Left Behind: Educating Students with ASD and ADHD in the Inclusion Classroom. Pupils exposed to behaviour contract had reduced urgency impulsivity among primary schools in Zaria Metropolis. The finding was in agreement with Selfridge (2015), in a study titled "Contingency Contracting in the Elementary General Education Classroom". The results suggested that contingency contracts can successfully be implemented to increase a desired behaviour (engagement) with students in the general education classroom. It was also in line with the study of Enea and Dafinoiu (2014), study titled "Motivational/Solution Focused Intervention for Reducing School Truancy among Adolescents" in which they implemented a multi-modal intervention for truant behaviours that consisted of "motivational interviewing, solution-focused counselling, successive approximations of behaviour, behaviour contracts and reinforcement techniques". It was also in line with a study by Colon (2016) titled Behaviour Contracting with Dependent Runaway Youth. Results indicated that participants, caregivers and case managers found behaviour contracting to be a useful intervention and something that would benefit other youth in foster care who engage in runaway behaviour.

Pupils exposed to behaviour contract had a reduced sensation seeking impulsivity among primary schools in Zaria Metropolis. This finding was in agreement with that of a study by Gurrad, Weber and McLaughlin, (2013) titled “The effects of Contingency Contracting for a Middle School Students with Attention Deficit Hyperactivity Disorder during corrective reading lessons”. They reported that Dodge, Nizzi, Pitt and Rudolph (2007) used a larger sample of 89 third graders to highlight the effectiveness of behavioural contracts and positive reward systems in improving student responsibility. Also, Hawkins, et al. (2011) echoed these findings when implementing behaviour contracts for assaultive, destructive and out of seat behaviours displayed by four pupils with autism. Their findings suggested that behaviour contracts are a cost effective, proactive intervention that serves as an alternative to exclusionary discipline practices. Pupils exposed to behaviour contract had reduced perseverance impulsivity among primary school pupils in Zaria Metropolis. This was in line with the findings of a study by Thorne and Kamps (2013) titled the “Effects of a Group Contingency Intervention on Academic Engagement and Problem Behaviour of at-risk Students”. Overall, results demonstrated that the intervention improved student behaviours in all four classrooms. Similarly, the finding was in line with a study by Bowman-Perrott, Burke, DeMarin, Zhang and Davis (2016) titled “A Meta-Analysis of Single-Case Research on Behaviour Contracts: Effects on Behavioural and Academic Outcomes among Children and Youth”. Findings suggested that the intervention is more effective in reducing inappropriate behaviours than increasing appropriate behaviours, and that academic outcomes are positively affected by behaviour contracting.

Conclusions

On the basis of the findings of this study it was deduced that Behaviour Contract Counselling Technique was effective in reducing impulsivity such as premeditation, urgency, sensation seeking and perseverance among primary school pupils.

Recommendations

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

1. Since behaviour contract was effective in reducing impulsivity such as premeditation, urgency, sensation seeking and perseverance among primary school pupils, counsellors, psychologists and social workers should be encouraged to use the technique in handling pupils with such behaviour problem.
2. Counsellors should organize conferences, workshops and seminars teachers, parents and pupils on behaviour contract in handling impulsivity in schools.

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