

Managing Attention Deficit-Hyperactivity Disorder of Pupils Intellectual with Disability: Implications for Video Modelling and Self-Monitoring Techniques

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Abstract

Conduct disorder, anxiety/ withdrawal problem and attention deficit disorder were more common among children with intellectual disability as such it had attracted numerous behavioural and pharmacological treatments. However, a considerable assessment research on Attention Deficit Hyperactivity Disorder is highly essential, thus, the thrust of this paper focused on the management strategies for Attention Deficit-Hyperactivity Disorder (AD-HD) of pupils with intellectual disability using video modelling and self-monitoring techniques. A pre-test, post-test, control group, true-experimental research design was adopted in the study that lasted for six weeks. Validated Connor's Teachers Rating Scale (CTRS) and Observational Coding System (OCS) were the instruments used to collect data among 100 pupils randomly selected and grouped into two on 50-50 basis in the Video Modelling and Self Monitoring groups respectively. One hypothesis was tested at 0.05 level of significance and the result obtained indicated no significant difference in the two treatment strategies in the management of Attention Deficit-Hyperactivity Disorder.

1. Introduction

A good number of pupils with attention deficit hyperactivity disorder (AD-H.D) usually have difficulty meeting the expectations of the general education curriculum; this is as a result of their being negatively influenced by their attentive, hyperactivity and impulsive tendencies. To a pupil whose ADHD is left unidentified or untreated, such a pupil is at great risk for impaired learning ability, decreased self-esteem, social problems, family difficulties, potential long term effects and withdrawal from school. That is the reason why this study remains invaluable for teachers, parents and other care givers.

Fee, Matson and Benavidez reported the importance of the empirical study of the concept of developmental or 'mental' age that is, in diagnosing AD-HD [10]. Barkley stated that AD-HD is diagnosed only when deficits are

significantly inappropriate for the child's mental age and DSM -III -R also includes this criterion [5] [7].

Fee, et al further illustrated this developmental rule of thumb, stating that an 8-year old child functioning intellectually at the 5-year level with corresponding attention skills of a 5-year old would not receive the AD-HD diagnosis [10]. The same child would, however, receive the diagnosis if the attention of skills were inadequate for a 5 year - old. All the same, experience has suggested that children with intellectual disability often show levels of over activity and inattention that would clearly lead to a diagnosis of AD-HD were the children not intellectual impaired

Attention deficit hyperactivity disorder is a condition characterized by inappropriate degree of inattention, impulsivity or and hyperactivity [11]. Attention deficit hyperactivity disorder (ADHD) is a condition in which a person has trouble paying attention and focusing on tasks. It may begin in early childhood and continues into adulthood [9]. It is a neurobiological disorder that affects five to ten percent of school age children [3].

ADHD may have serious consequences including short attention span, preservation, impulsivity, low frustration tolerance, irritability, academic difficulties, in coordination, visual motor difficulties (figure-ground reversal, rotation of symbols and others) [3] [7] [13]. To date, there are discrepancies among researchers on the actual causes of ADHD and how it should be treated; hence, some claimed that heredity makes the largest contribution to the expression of the disorder in the population. In instances where heredity does not seem to be a factor, difficulties during pregnancy, prenatal exposure to alcohol and tobacco, premature delivery, injury to the frontal region of the brain have all been found to contribute to the risk for attention disorder to varying degrees [13].

ADHD is commonly recognized as the most frequently occurring childhood behaviour disorder which has received relatively little attention as it occurs among children with intellectual disability [5] [6]. This assertion is surprising given that

ADHD and other behavioural disorders occur at least as frequently among children with intellectual disability as compared to children without intellectual ability. For instance, Quay and Peterson using behaviour problem checklist, found that conduct disorder, anxiety/withdrawal problems and attention deficit disorder were more common among elementary school children with intellectual disability than those without intellectual deficit [17].

In another investigation, Jacobson found aggression, self-injury and hyperactivity to be common psychological disturbances co-existing with intellectual disability [14]. Adewuya and Famuyiwa had found a prevalence of 8.7% for the Nigeria's primary school children with age range of 7 to 12 [3]. In a similar study conducted by Egbochuku and Abikwi among primary school children aged 5-12 in Benin metropolis Nigeria [9]. The prevalence of ADHD was put at 23.15% of which 47.87% had the hyperactive type, 21.28% had the inattention type and 30.85% had ADHD combined type. To this effect, two instructional strategies-video modelling and self monitoring techniques had been adopted in the management of ADHD of pupils with intellectual disability in this study.

Videos modelling are broadly used by typically developing children for leisure and educational purposes, the extensive use of videos in training may stem from the obvious shift in emphasis from language based instruction to more visual instructional supports for teaching pupils with multiple disability and autism including children with Attention Deficit Hyperactivity Disorder (ADHD).

Harris and Delmolino explained that video modelling can be a powerful tool, both for teaching new behaviours and for improving already acquired ones, thus allowing a learner to demonstrate new responses without errors [12]. It is a treatment technique that does not require extensive training prior to implementation. Sturmey reported that video modelling is a form of observational learning in which desired behaviours are learned by watching a video demonstration and then imitating of the behaviour of the model [18].

Video modelling serves as an efficient and cost-effective tool, it provides a permanent product. Video recording of a model's actions could reduce the cost of live models employed in training programs [16].

Self monitoring on the other hand is the ability to control and regulate one's behaviour. A considerable assessment research on ADHD in children with intellectual disability becomes imperative as the researcher has adopted self-monitoring strategy to produce differential results for critical academic and behavioural outcomes. In a study, Aman found that self-monitoring paired with reinforcers improved both on-task behaviours

and it enhances reading comprehension among three elementary students with attention deficit hyperactivity disorder [4].

Payton, Burkhart, Hersen & Helsel examined the effect of self-monitoring on academic productivity and self-monitoring of accuracy on the academic performance and on-task behaviour of three pupils with both learning disability (L.D) and ADHD during independent class work in a small group setting [15]. All three pupils increased their academic productivity and accuracy and their on-task behaviours improved across all academic areas.

2. Statement of the Problem

The effects of anti-social behaviour manifest among children with intellectual disability are debilitating and challenging. A good number of these children are being negatively influenced by their inattentive, hyperactivity and impulsivity tendencies. Studies had shown that these children with ADHD often experience social difficulties, social rejection, and interpersonal relationships problem which attract concerns of care-givers, special educators, parents and curriculum planners who proffer so many therapeutic interventions with a view to reduce or eliminate its resultant effects.

Although, there are numerous behavioural and pharmacological treatments currently available for Ad-HD, a better understanding of the components of AD-HD in children with intellectual disability may be helpful in deciding whether these treatments would be effective with this population. The researcher thus decided to use video modelling and self-monitoring strategies as means of managing AD-HD of pupils with intellectual disability.

3. Hypotheses

Pupils exposed to video modelling and self-monitoring will not differ significantly in their mean scores performance.

4. Methodology

4.1. Research Design

A pre-test, post-test, control group quasi-experimental design was adopted in this study. 10 pupils each were purposively selected from 10 special schools in Ibadan, Nigeria to participate in the study.

4.2. Instrumentation

An adapted Conners' Teachers Rating Scale

(CTRS) was considered a screening instrument. This scale has 39-items which provide relative information regarding the components of the disorder in the child. The scale's reliability was established using Kuder Richardson (21) formula at 0.79.

Also, adapted was Observational Coding System (OCS) to assess AD-HD, this coding system was based on work by Stony Porook Group [19]. With this code, 14 behavioural categories were sampled. Reliability of the code was reported and the system was used to better understand the components of ADHD in children with intellectual disability [2].

Before now, participating teachers had been asked to send a parent consent form home with each participant pupils in the various special schools. The teachers had completed a DSM-III-R check list that included symptoms of AD-HD, and an intelligence screening was performed as a measure to rule out the possibility of mistaken identity, as such intelligence estimates were obtained using the Bloc Design and Vocabulary Subtests of the Wechsler Intelligence Scale for Children [5] [20]. Participant pupils were matched on age and then assigned to groups based on scores from the DSM – III – R Checklist and the I.Q estimate.

4.3. Procedure

Observation took place in the participant pupil's classrooms during treatment intervention in the morning hours. Thus lasts for six weeks pupils were tested outside the classroom for intelligence estimation.

5. Test Administration

5.1. Personal data form.

Parents of the participant's pupils assisted to complete a demographic information form. This contained pupil's date of birth, age, sex, class placement, whether or not the child had ever been diagnosed of having AD-HD or intellectual disability and by whom.

5.2. DSM-III-R checklist.

Teachers completed a likert rating form containing the symptoms for ADHD listed in DSM-III-R [5]. Each symptom was listed followed by ratings, "Not at all" Just A little" "Pretty Much" and very Much. Pupils receiving of "Pretty Much" on 8 or more of the 14 symptoms were assigned to the AD-HD groups.

6. Treatment Packages

6.2. Video-Modelling

This is a form of observational learning in which the desired behaviours are learned by watching a video demonstration and then imitating the behaviour of the model. The researcher used videotape as instruction to emphasize salient, specific behaviour and sequence for task completion, these children with ADHD watched their contemporaries that are without ADHD sitting down quietly, receiving instruction and patiently responding accordingly.

6.3. Self-Monitoring

This is a strategy that allows pupils with intellectual disability and attendant ADHD to rely less on prompts from others. Here, cognitive training technique was used with considerable success for attention problems. This technique involves asking themselves the questions such as "was I paying attention?" and recording a "Yes" or "No" on a score sheet.

Essentially, it includes teaching the child to monitor his/her own behaviour in the absence of an adult.

6.4. Data Analysis

Analysis of variance (ANOVA) was used to provide a basis for ruling out pre-treatment and post treatment difference

6.5. Hypothesis 1

Pupils exposed to video modelling and self-monitoring will not differ significantly in their mean scores performance.

In Table 1, the critical F at df 1 and 97 is 3.92 at .05 level of significance. Since the computed F 40.25 is greater than the critical F value (3.92), the null, hypothesis is rejected. A significant difference was observed in ADHD of pupils with intellectual disability when treated with video modelling and self monitoring methods.

The study revealed a significant difference in the improved performance of pupils with ADHD when exposed to video modelling while difference in the self-monitoring group was not significant. This finding collaborated report of Harris and Dalmolino when the potency of video modelling was acknowledged [12].

Table 1. Analysis of Variance (ANOVA) of Differences between Video-Modelling Group and Self-Monitoring Group

Source of variance	Sum of squares	Df	Mean squares	Fcal	Fcrit	Decision
Between groups	7262	1	6756.86	40.25	3.92	
Within group	12433	97	11278.44			Rejected Ho1
Total	19695					

df – degree of freedom, N = 100, Fcal = calculated f value, F-crit = critical f value, p < .05 alpha level

A significant difference was recorded in the performance of pupils with ADHD treated with both intervention strategies this was agreed with Aman Payton, Burkhart, Herson and Harsel and Sturmy where the two treatments were found to be effective [4] [15] [18].

7. Conclusion

For pupils with attention deficit hyperactivity disorder, the primary care clinicians should prescribe evidence-based parents and/or teacher-administered behaviour therapy as the first time of treatment. Although in most cases, good treatment plans should include close monitoring, follow-ups and any changes needed along the way.

No doubt, this study has brought out the efficacy of the two strategies – video modelling and self-monitoring in the treatment of ADHD of pupils with intellectual disability as such they were strongly recommended to the stakeholders in special education.

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