

Academic Performance of Hyperactive Children in Early Grade Schools in Ghana: A Case of Enchi Kramokrom R/C in the Western North Region

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Abstract

Hyperactivity is said to be a situation characterized by inattentiveness, impulsivity and destructivity. A serious disorder if not treated well can affect the academic performance of pupils. The research used purposive sampling technique to select the pupil for the study. The instrument used to collect data was observation; the data was presented in tables and percentages. This research work was conducted at Enchi Kramokrom R/C primary school to help a hyperactive child in KG 1B to improve on her performance in class. The research questions used for the study were: What are the causes of hyperactivity? In what ways do hyperactivity affects pupils' academic performance? What techniques could be used to reduce hyperactivity? The study revealed that, the severity of problems associated with Attention Deficit Hyperactive Disorder (ADHD) and the pervasiveness of its symptoms suggests that, efforts to find better ways to teach the relatively small number of children diagnosed with ADHD could have a large pay off in terms of improving the academic outcomes of many children with milder symptoms. It is recommended that, Classroom teachers should try as much as possible to use motivational strategies such as giving tokens, signing behaviour contracts and assigning of responsibilities when teaching pupils with hyperactive disorders.

Keywords

Hyperactive, Early Grade, Enchi, Ghana, Western North Region

Received: September 10, 2020 / Accepted: September 23, 2020 / Published online: October 28, 2020

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1. Introduction and Background

Attention deficit hyperactivity disorder (ADHD) is a heterogeneous group of disorders characterized by a high level of inattentive, hyperactive and impulsive behaviour that begins in childhood. It is developmentally inappropriate and impairs the functional life of the affected child at home and at school. Although ADHD is a very common childhood developmental disorder, it is not given the attention it

deserves in childhood disorders in Ghana. Children affected by ADHD present with numerous psychosocial problems in the communities they live, wherever they find themselves, and in later life. These psychosocial problems include substance, child and sexual abuses. They also present a range of psychiatric and behavioural disorders e.g. suicides and homicides. They are prone to becoming school dropouts, armed robbers and prostitutes [1]. Attention-Deficit/Hyperactivity Disorder (ADHD) has a significant impact on child and adolescent development, especially in

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relation to school functioning and academic outcomes [2].

It has been a common trend when results of public examinations are released for teachers to be blamed for poor performance of pupil. This is because the populace blames teachers for not teaching well. Though this assertion may be partially true, the success of pupils in examination is not solely the responsibility of teachers. Parents, pupils and other stakeholders in education contribute in one way or the other to ensure the success of pupils in public examinations. ADHD appears to be prevalent in the Ayawaso sub-metro primary schools. Most parents, guardians and teachers who are not aware of the disorder may physically and psychologically punish ADHD pupils because of their behaviour. They may also be punished because of their poor intellectual performance especially in the classroom. This may lead to absenteeism from school and subsequent aimless roaming and formation of gangs. The latter may lead to antisocial behaviours like substance abuse disorder, teenage pregnancy, armed robbery and other criminal activities. This state of affairs may not augur well for the child's development, the family and the nation at large. All these behavioural disorders may be prevented by early identification and intervention by psycho education and drug therapy [1].

In view of this, it is necessary for teachers to identify issues that are likely to affect the performance of pupils during examinations. During the in-in out component of the researcher's training at Enchi College of education, she was posted to Kramokrom R/C Primary 1. It was realized at the school that, participation in class by pupils was not encouraging during lessons which was not pleased to the researchers liking. The researcher therefore took it upon herself to embark on this project to help develop and establish effective ways of helping them to improve their performance in class activities.

Hyperactivity is one of the examples of behavioural disorders and emotional instability affecting most children nowadays. It is a serious disorder which normally affects pupils learning and social expectations. Victims of hyperactivity do not perform well in school. In some schools, hyperactive children are labelled as bad and subjected to several punishments of which pupils of Kramokrom R/C Primary 1 are of no exception. These children restlessly touches anything they see and have difficulty concentrating on a particular task within a period. They always appear aggressive, move aimlessly and fight unnecessarily.

Realizing the negative effect such situation can have on the pupil, the researchers deemed it necessary to employ behaviour contract to help remedy the problem for such children and the nation at large. The researchers used

observation in identifying such children. During the researchers visit to the aforementioned school, it was observed that children demonstrated hyperactive characteristics such as inability to sit still, fidgeting and squirming in seat, very impulsive and lacks attention in class. The researchers knowing the devastating effects of hyperactive behaviours of a child in his academic performance and social life, thought it wise to use behavioural contract to help the child at Kramokrom R/C Primary 1 to improve her performance in class. The study was guided by this research questions- 1. What are the causes of hyperactivity? 2. In what ways do hyperactivity affects pupil's academic performance? 3. What techniques can be used to reduce hyperactive behaviour

2. Review of the Literature

Hyperactivity among pupils is gradually increasing which needs much attention and immediate solution, if not it can be transmitted through the genes or inherited [3]. The Cambridge international dictionary of English also defines hyperactivity as situations characterized by inattentiveness, impulsiveness and destructiveness. The Advance learners English dictionary also explains that someone with hyperactive is unable to relax and is always about or doing things. Hyperactivity as a problem with inattentiveness over an activity [4]. Hyperactivity as purposeless movement, that children normally have attention deficit and are easily destructed. They fidget, squirm, talk excessively, cannot sit still and always seem to be in motion [5]. From the definitions given, one can say that, hyperactivity is a situation whereby a child has enough energy in him and cannot rest and concentrate on a given task.

This section has the following sub-divisions:

- 1) What are the causes of hyperactivity?
- 2) In what ways do hyperactivity affects pupil's performance?
- 3) How hyperactive pupils can be helped to overcome the problem.

2.1. Causes of Hyperactivity

Children and NBW classmates across their first three years in school revealed that a caregiver-based diagnosis of ADHD and related symptoms in kindergarten were associated with slower growth in academic skills or lower levels of achievement across the early grades. Both inattentive and hyperactive-impulsive symptoms were related to these outcomes, suggesting associations with higher symptom levels as well as a diagnosis of ADHD [6]

Indeed, it is likely that many children with ADHD are psychologically and physically punished by ignorant parents

and guardians or teachers at homes and schools respectively for their behaviour. This will often lead to school phobia, absenteeism and school dropouts. They are also likely to be punished because of their poor intellectual and academic performance, since there is an association between ADHD and poor scholastic performances [28, 29]. Even though ADHD is prevalent in Ghana, there has not been any effort to assess its prevalence. Physicians, teachers, parents and guardians should be aware of the behaviours which may require full assessment for ADHD diagnosis. This will only be achieved through frequent workshops on ADHD with parents, guardians and teachers who form the Parents Teachers Association (PTA) of respective schools. Because of the multifactorial causes of ADHD, research in this area will be difficult but not impossible. Such study should include a follow-up of pregnant mothers throughout their antenatal, perinatal and postnatal periods, the lifestyles and habits of these women particularly with regard to alcohol intake and other substances. The mental state and the family dynamic of the parents or the guardians should be assessed. Their socio-educational status should also be assessed since this is also a risk factor for ADHD. The babies should be monitored from birth and followed up through their preschool years and to school until the age of 10 or 15 years. It will also be borne in mind that ADHD may persist to adulthood with less hyperactivity [2]. Parents and guardians whose children are diagnosed of ADHD are assured of drug treatment and psycho-educational interventions [1]. This implies that, teachers should be trained in the training institutions on the nature, causes, outcomes, early detection and management of ADHD to break major barriers of successful management of ADHD within the classroom, hence information on ADHD should be included in curriculum of training institutions [7].

However, some major causes of hyperactivity such as biochemical factor which included food additives like synthetic flavours and yes, artificial colouring, caffeine and excessive sugar intake serve as driving force for hyperactivity [8]. ADHD is one of the most researched areas in child and adolescent mental health. However, the precise cause of the disorder is still unknown. Available evidence suggests that ADHD is genetic. It is a brain-based biological disorder. Low levels of dopamine (a brain chemical), which is a neurotransmitter (a type of brain chemical), are found in children with ADHD. Brain imaging studies using PET scanners (Positron Emission Tomography; a form of brain imaging that makes it possible to observe the human brain at work) show that brain metabolism in children with ADHD is lower in the areas of the brain that control attention, social judgment, and movement [9]. Estimates suggest that about 4% to 12% of children have ADHD. Boys are 2 to 3 times

more likely to have ADHD of the hyperactive or combined type than girls. Many parents of children with ADHD experienced symptoms of ADHD when they were younger. ADHD is commonly found in brothers and sisters within the same family. Most families seek help when their child's symptoms begin to interfere with learning and adjustment to the expectations of school and age-appropriate activities [9].

Final causes are functional descriptions, and focus our attentions on the consequences of ADHD. Many of those consequences are in fact good. Finding ways to channel affected youths into careers that put their abilities to best use, and training them how to work around their deficits, will be to everyone's immediate advantage. Finding a place in our schools and work places and societies for individuals with these dispositions is our challenge. Routine medicalization of the condition is our failure [10]. Most importantly, some reasons for pupil's active behaviour which includes the following:

Television has contributed to the short attention span of children in today's societies. Children usually follow entertainment on it and this lets them to lose their focus easily. Also those who like watching aggressive films to be aggressive themselves. Some conditions at home make people to be hyperactive, impulsive and disruptive. Either it is learned behaviour from home or it is emotional compensation for problems at home. Boys in general seem to be more physically active than girls. Many of them would rather be outside playing than sitting quietly at school. Caffeine and sugar would cause a student to become wild and overactive. Some students drink laced cola and caffeine drink before coming to school. They take too much Lipton tea to make them overactive. This gradually acts as a stimulant and makes them to be active always [11].

2.2. Effect of Hyperactivity

Hyperactive children usually do not achieve academically and eventually become drop-out. Besides, they are always seen being punished by the school authorities and as well as elders in the society. Some are the truant people found on streets engaging in daylight robbery and finding themselves in troubles. Those who are employed also cannot control their temper and always have problems with their superiors at the work places. In recent years, Attention Deficit Hyperactive Disorder (ADHD) has been a subject of increasing public attention and concern. Affecting an estimated 4 to 5 percent of children Attention Deficit Hyperactive Disorder is the most common chronic mental health problem among young children in the USA [12].

Researchers explored this subject in child mental health and human capital accumulation. The case of Attention Deficit Hyperactive Disorder. The authors used data on children

aged 4 to 14 in the 1990's from the US National Longitudinal survey of youth and the Canadian national longitudinal survey of children and youth. They focus on a continuous measure of symptoms from an Attention Deficit Hyperactive Disorder Screening test administered to all children rather than reported cases of ADHD to avoid the problem of imperfect diagnoses and to examine the effect and lower levels of symptoms. They also diagnose from two sources, the child's parents and teachers to better measure the child's true level of Attention Deficit Hyperactive Disorder (ADHD). The authors pay particular attention to the possibility that some children for example, those in the low income households may be more likely to have ADHD and worse outcomes which could confound estimates of the effect of Attention Deficit Hyperactive Disorder (ADHD) on outcomes [13]. To address this, they control for factors such as family income and mother's education in their analyses. The authors find that, children with more symptoms of ADHD such as being impulsive or restless have significantly lower mathematics and reading scores on standardized tests several years later. These children also have an increased probability or grade repetition, enrolment in special education and delinquency which includes behaviour such as stealing, hitting people or using drugs [13].

2.3. How Hyperactivity Can Be Helped

Children with hyperactive sometimes becomes very difficult to be taught. It is also seen that children with Undifferentiated Attention Deficit Disorder (UADD) may be at high risk for academic failure, those with Attention Deficit Disorder (ADD) and Attention Deficit Hyperactive Disorder (ADHD) so as to help the child to upgrade his or her academic competencies. The following are some of the strategies to be used in helping the hyperactive child to learn well;

2.3.1. Establishing the Proper Learning Environment

This involves the sitting of pupils of hyperactive disorder near the teacher's desk. Teachers must try hard to avoid sitting the child nearer to anything that can distract his or her attention from learning. This means that, the teachers must try very well not to play with the pupils of Attention Deficit Disorder (ADD) and Attention Deficit Hyperactive Disorder (ADHD) near air conditions, high traffic areas and windows since they are they are easily distracted by these external bodies.

2.3.2. Eye Contact

Teachers should maintain eye contact during instructions. Again the teachers should repeat instructions in calm positive manner. The teacher should gradually reduce the amount of assistance but keep in mind that these children will need more help for more period of time than the average child.

2.3.3. Giving Assignments

There should be a development of specific set of psychological and clinical interventions and special management techniques such as shaping, chaining, timeout, token economy systems, response-cost programs, self-monitoring, powerful external reinforcement, scheduling and peer tutoring among others by the ministry of education through the Ghana education service to assist ADHD pupil's in the classroom [7]. It is critical that professionals do not assume that children will display improved academic achievement once medication treatment for ADHD symptoms has been initiated. An increased awareness of the limitations of medication with regard to academic achievement needs to be fostered [14].

Teachers must give out one task at time and monitor frequently. They should also maintain a supportive attitude. The assignment should be modified as needed. Extra time should be given for certain task. Pupils with Attention Deficit Disorder may work slowly but do not punish them for extra time needed and should bear in mind that such children are easily distracted. The teacher again should require a daily assignment book if necessary. This means that they should make sure that each student correctly writes down all assignment each day and if any child is not able to do this, the teacher should help him or her. The teacher should therefore sign the notebook or assignment. Also deep breathing is one of the simplest ways to calm the body. The teacher should therefore teach their children or pupils to take deep breath through the nose and mouth when they begin to feel frustrated or out of control. Finally, the teacher should take her hyperactive child for a walk or send her around the school building on her own if she is old enough, this will help bring the mind back into focus [14, 15].

From the above literature, it was evidently clear that, hyperactivity is a sign of trouble and that food additives, home factors, the nature of some boys and television causes hyperactivity among children. However, study shows that, the severity of problems associated with Attention Deficit Hyperactive Disorder (ADHD) and the pervasiveness of its symptoms suggests that efforts to find better ways to teach the relatively small number of children diagnosed with Attention Deficit Hyperactivity Disorder (ADHD) could have a large pay off in terms of improving the academic outcomes of many children with milder symptoms. Also, study showed that dietary and nutritional control in curing hyperactivity is worth and effective strategy. Strikingly, the effects of ADHD on child outcomes are much larger than the effects of physical health problems such as having asthma or being poor health.

3. Methodology

The research design used the study was action research. The study was carried out in Kramokrom R/C kindergarten 1 class in Aowin municipality in the Western North Region of Ghana. The population was made up of all forty (40) pupils in the kindergarten 1 class made up of nineteen (19) boys and twenty-one (21) girls. Purposive sampling technique was used by the researchers to select the class and all the forty (40) pupils for the study. Data Collection was facilitated through observation. The researchers mostly observed pupils in class and interacted with them to gather more information using pre-intervention and intervention for the study.

3.1. Pre-Intervention Stage

The researchers used the Observation checklist on pupils' hyperactive behaviour in the class. Below was the outcome:

Table 1. Observation checklist on hyperactivity.

Kind of Hyperactivity	Degree of Occurrence		
	Often	Very often	Not at all
Fighting with boys	√		
Fighting with girls		√	
Fighting with teachers			√
Squirring in seat	√		
Fidgeting with fingers	√		
Fidgeting with toes		√	
Running about		√	
Shouting unnecessarily	√		

3.2. Intervention Stage

In an attempt to calm down the hyperactive behaviour pupils in the classroom, the researchers adopted behaviour contract as a strategy to help reduce such problem behaviour. A contract can be explained as an agreement between two parties which requires one to perform a condition for a promise. By this the researchers signed an agreement with the hyperactive children as shown in table 2 below:

Table 2. Contract to reduce fighting.

Day 1

Date	Activity/Contract	Remarks
19/01/19	A gift of pencils and crayons if she is able to sit still and does not fight with three pupils within 30 minutes	Fought with one pupil

Day 2

Date	Activity/Contract	Remarks
26/01/19	A gift of one writing book if she does not fight with others in the class within 45 minutes	Did not fight with others but made unnecessary noise disturbing the class.

Contract to reduce fidgeting

Day 1

Date	Activity/Contract	Remarks
2/02/19	A gift of a doll if she is able to sit down quietly for about 45 minutes without fidgeting her hands.	Was able to grab the offer.

Day 2

Date	Activity/Contract	Remarks
6/02/19	A gift of biscuit if she does not fidgets her hands and concentrates on a given task.	Was able to sit still.

Contract to reduce squirming:

Day 1

Date	Activity/Contract	Remarks
12/02/19	A gift of toffee if she does not squirm in seat within 30 minutes.	Was able to fulfill the agreement.

Day 2

Date	Activity/Contract	Remarks
23/0/19	A gift of rhymes and poems book if she does not squirm in her seat within 45 minutes.	Was able to sit still.

3.3. Post-Intervention Stage

After the intervention, the researchers realized that pupils' condition had improved. They could now follow lessons and cope with academic task. Again they could remain calm in class because pupils could now sit still without fidgeting, fighting and

squirming. They do not walk and shout excessively in class. Hence indicating an improvement in performance.

4. Findings and Discussion

This section deals with the presentation and data analysis for

the study. From pre-intervention stage to post-intervention stage the researchers recorded the degree of occurrence of the child's behaviour. Analysis was based on the degree of

occurrence of the child exhibited certain hyperactive behaviours. The table 3 below shows details of the characteristics displayed and the degree of occurrence.

Table 3. Types of hyperactivity and occurrence before the intervention.

Kind of Hyperactivity	Degree Very often	Of Often	Occurrence Not at all
Squirming in seat	Very often		
Talking excessively	Very often		
Fighting with others	Very often		
Standing on tables		often	
Leaving seat and moving out	Very often		
Loss of attention		often	
Destructiveness		often	

From table 3, pupils squirm very often during the 30 minutes' lesson. They talked excessively during the lesson and fought very often with other pupils. They also frequently

stood on tables during the 30 minutes' lesson. In addition, such pupils often left seat and moved out during lessons. Pupils often lost attention and were often distracted.

Table 4. Kinds of hyperactivity and the degree of occurrence after the intervention.

Kind of Hyperactivity	Degree Very often	Of Often	Occurrence Not at all
Squirming in seat		Often	
Talking excessively		Often	
Fighting with others		Often	
Standing on tables			Not at all
Leaving seat and moving out			Not at all
Fidgeting with hands		Often	

From table 4, pupils' squirms and talked often during the 30 minutes' lesson. They often fought with others and also fidgets with hands often. They did not leave seat and stand on tables but sat quietly during lessons. Comparing the two tables, both before and after the intervention, the researchers realized that during the time pupils were highly affected by the problem, they performed poorly academically due to lack of attention to teaching and learning. After the interventional activities, the researcher realized that, pupils had improved in their academic work because they now sit still and retains information at the appropriate time. The strategy has really helped pupils to overcome their problem of hyperactivity.

5. Conclusions and Recommendations

The study revealed that, the severity of problems associated with Attention Deficit Hyperactive Disorder (ADHD) and the pervasiveness of its symptoms suggests that, efforts to find better ways to teach the relatively small number of children diagnosed with ADHD could have a large pay off in terms of improving the academic outcomes of many children with milder symptoms. The study also concluded that, behaviour contract used as intervention, helped to reduce the hyperactivity disorder and improved the academic performance of the pupils at Kramokrom R/C Primary 1.

It is recommended that, Classroom teachers should try as much as possible to use motivational strategies such as

giving tokens, signing behaviour contracts and assigning of responsibilities when teaching pupils with hyperactive disorders. It is also recommended that, teachers should establish learning environment by not seating the child near anything that would distract his or her attention from the classroom. Teachers should try to give assignments and inspect them regularly. Teachers should also encourage their pupils to take in deep breath in and out whenever they feel frustrated so that they would be relaxed.

The study also recommended that parents should create conducive home conditions such as supplying their children with their basic needs not being highly authoritative and harsh on them since children with hyperactive disorders have difficulty in remaining and coping with such unfriendly environment.

The Ghana Education Service (GES) must employ psychologist in all schools so that they could handle children with such problem or disorders. It is recommended that, pupils should be handled by several experts like counsellors and psychologist who could easily determine the real causes of the problem and also find out if there are other disabilities associated with hyperactivity.

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