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# Relationship between Chronic Illness on School Going Children and Academic Achievement in Ainabkoi County, Kenya

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## Abstract

Children with chronic illness are at the intersection of the health and education systems. Unfortunately, typical educational programs and policies are not designed to support students battling chronic illness. Therefore understanding their educational needs of pupils affected with chronic illness is important if we are to provide equitable educational opportunities. Chronic illness has an impact on children development, affecting their academic performance, self esteem, social relationship and ability to access the same educational outcomes as healthy peers. This paper

seeks to highlight some of the experiences that chronic ill pupils go through that affect their academic performance. The study was descriptive targeted pupils from class 7 and 8 and class teachers from Public primary schools in Ainabkoi constituency. Questionnaires and interview guide formed tools for data collection. Results from the study revealed that children academic performance is affected by other factors caused by chronic illness. The finding also revealed that chronic illness affects intelligence, memory, concentration and self esteem of pupils. Pupils with chronic illness are likely to perform poorly in Languages, and mathematic. The study therefore, recommends modification of curriculum to be able to accommodate this group of pupil. The study also recommends an in-service training that will enable teachers learn how to deal with chronically ill children in schools.

## 1.1 Introduction

Chronic illness is a condition which last for a considerable period of time or has sequel which persists for a substantial period and /or persists for more than three months in a year or necessitates a period of continuous hospitalization in more than a month (Thompson and Gustafon, 1996). This condition cripples major efforts made to increase literacy levels for example free compulsory education in Kenya schools (Ojiambo, 2009; Bogonko, 2006). Crump, Rivera, London, Landau, Erlendson, and Rodriguez (2013) suggested that chronic health conditions in early life adversely affect school

performance. This study measured the number of full day school absences per year, based on school attendance records and California Standards Tests (CST) for English Language Arts (ELA) and math from the 2008-2009 and 2009-2010 school years. Academic performance was measured in three ways: CST performance levels divided into "basic or below" versus "proficient or advanced", CST scores categorized into five ordered performance levels (advanced, proficient, basic, below basic, and far below basic), and numerical CST scores converted into z-scores, indicating the number of standard

deviations above or below the mean CST score for a particular grade and school year. The results from the study indicated that chronic neurodevelopment and seizure disorders were associated with low school performance among children and youth, regardless of ethnicity, socio economic status, or grade level (Crump et al., 2013). The authors recommended educational, medical, and social support interventions at early ages to reduce gaps from these conditions.

Pinquart (2012) studied 58,281 children and adolescents with chronic illness. Results from this study revealed that the largest subgroups had obesity (n=10,220), arthritis/rheumatism (n=7620), diabetes (n=4443), cancer (n=3887), and asthma (n=2890). The mean age was 12.30 years with 52% being girls and 37% were members of ethnic minorities. The mean duration of the chronic illness was 7.01 years. A comparison of 21 diseases showed significantly reduced levels of self-esteem in children based on more than 600 studies. Children with a chronic physical illness were found to have lower levels of self-esteem than healthy peers, and most differences were small (Pinquart, 2012).

A study by Latshwayo and Bongiwe (2011) noted that iron deficiency anemia as a chronic illness among children in rural South Africa. This study revealed that a large number of children under the age of 5 years do not reach their developmental potential due to this illness. This study discussed IDA as an important cause for decreased attention span, reduced alertness and learning difficulties in both young children and adolescents in poor communities. This situation had caused a growing disease burden in South Africa. This study noted that there was limited data on the effect of chronic iron deficiency on school going children and the associated effects in their academic performance. In efforts to illustrate how chronic illness affects children Chandramani and Shah (2012) reported that AR affects the quality of sleep in children by frequently leading to day-time fatigue as well as sleepiness which reduces children class concentration and memory.

Kelly (2009) defines academic achievement as a child's performance when assessed by standardized tests within a school, or educational setting. Often this is quantified as achievement in specific subjects such as mathematics or reading skill, grade point average (in the US) or through standard national assessment tests (SATs) in other countries. A child's

performance is dependent on the ability of the child, their home background and environment, as well as the quality and quantity of academic instruction that child receives. Cognitive performance refers to the child's performance when assessed using a recognized and validated test of cognitive function. Tests assess components of cognition such as reaction time, attention, working memory and stimulus response (collectively referred to as executive control). Cognitive and academic performance is thought to interrelate as aspects of cognition such as attention and working memory are vital for academic success.

According to children suffering from epilepsy encounter problems such as impaired intellectual functioning, learning disabilities, difficulties sustaining attention, organizational and planning problems and poor working memory which adversely affects their academic performance. On the other hand note that diabetes affects pupils memory, blurred vision and poor academic achievement especially boys who are at higher risk. Asthma has been discussed as one which affect pupils' verbal memory, limited sporting activity and loss of sleep. Increased absenteeism due to hospitalization, overprotection by parents poverty and low levels of parental education are other effect of chronic illness that affect academic achievement.

## **2.0 Methodology**

This study utilized a descriptive research design which enabled the researcher to collect information on the subject of the study. School going children from class 7 and 8 were targeted as they were able to give comprehensive information on the performance. Class teachers of these classes from sampled public primary schools were also involved in the study. Questionnaire for pupils and interview schedule for teachers were tools employed to collect data. Simple random sampling and purposive sampling was used to collect information from the respondents. Data was analyzed descriptively using SPSS version 20.0. Analyzed data was presented in table using frequencies and percentages.

## **3.0 Results and Discussion**

This section presents results and discusses findings as per the data obtained from the field.

### 3.1.1 Impact of Chronic Illness on Academic Performance

The researcher was interested in understanding whether school going children in public primary

schools academic performance was affected by chronic illness. The response is as presented in table 1.

**Table 1: Impact of Chronic Illness on Academic Performance**

| Impact of Chronic illness | Frequency  | Percentage (%) |
|---------------------------|------------|----------------|
| Yes                       | 200        | 68.9           |
| No                        | 90         | 31.1           |
| <b>Total</b>              | <b>290</b> | <b>100</b>     |

Table 1 shows 68.9% of the respondents agreeing while a minority 31.1% disagreeing on the question of chronic disease having any impact on academic performance of students. These results show that chronic illness affects the performance of the pupils in public schools. An interview with class teachers revealed that children with chronic illness are challenged in their relationship with their peer which affects their academic achievement in terms of social

and communication competence. This they relayed that can be stressful to them and cause poor academic performance.

### 1.3.2 Effects of Chronic illness on Educational experiences of children in Schools

The study was interested in exploring education experiences of children affected by chronic illness. The results are shown in table 2 below.

**Table 2: Chronic Illness and Education Experiences**

| Statement           | Yes        | No         |
|---------------------|------------|------------|
| Absenteeism         | 200        | 90         |
| Skip homework       | 190        | 100        |
| Miss exams          | <b>150</b> | <b>140</b> |
| <b>Less friends</b> | <b>210</b> | <b>80</b>  |

Table 2 above illustrates some of the experiences chronic ill pupil face in education. Absenteeism, failure to do homework, missing exams due to illness and less friends were mentioned. An interview with teachers mentioned more experience such as low self esteem, forgetfulness, self petty, poor concentration and attention which ultimately affected performance according to teachers. This implies that chronic illness causes other challenges that affect academic

performance of school going children. This finding related to Akpan M. (2010) who observed the same in different school which had children with chronic illness.

### 1.3. 2 Frequency of Absenteeism

The study sought to evaluate the frequency of absenteeism of the school going children with chronic illnesses.

**Table 3: Frequency of absenteeism**

| Frequency of absenteeism | Frequency  | Percentage (%) |
|--------------------------|------------|----------------|
| 0-1                      | 70         | 24.12          |
| 2-3                      | 200        | 68.97          |
| 4 and above              | 20         | 6.89           |
| <b>Total</b>             | <b>290</b> | <b>100</b>     |

Table 3 shows that 68.97% have been absent 2-3 times while 24.12% 0-1 times and 6.89% indicated above four times. This implies that the school going children with chronic illness miss on average two school days because of the illness. Prolonged absence has been discussed as a contributor to social

discomfort which affects academic performance (Clay et al. 2004).

**ii. Make up for Classes**

The study sought to find out if the teachers prepare make up classes if the school going children with chronic illness misses class for a long time.

**Table 3 Make up for classes**

| Make up for classes | Frequency  | Percentage (%) |
|---------------------|------------|----------------|
| Yes                 | 90         | 31.1           |
| No                  | 200        | 68.9           |
| <b>Total</b>        | <b>290</b> | <b>100</b>     |

Majority of the respondents 68.9% indicated no while 31.1% indicates yes. This shows that the children with chronic illness misses a lot when they are not in school and the teachers should prepare make up classes in order for the pupils to catch up with the rest of the class.

**iii Catching up for the Missed Class**

The study also sought to evaluate if the school going children with chronic illness manage to catch up and how with other pupils in class. The results are shown in table 4.23 below.

**Table 4 Catching up for the missed class**

| Catching up for the missed class | Frequency  | Percentage (%) |
|----------------------------------|------------|----------------|
| Copying notes                    | 100        | 34.48          |
| Group discussions                | 190        | 65.52          |
| <b>Total</b>                     | <b>290</b> | <b>100</b>     |

According to table 4 above 65.52% indicated that they caught up through group discussions and 34.48% indicated copying notes. This shows that the pupils with chronic illness try their best to make up for the classes they missed without support from the teachers but fellow classmates.

**1.3.2 Class Academic Performance Rating**

The study sought to evaluate how the teachers rate the pupils with chronic illness in class academic performance. The results are shown in table 5 below

**Table 5 Class Academic Performance Rating**

| Class academic performance rating | Frequency  | Percentage (%) |
|-----------------------------------|------------|----------------|
| Excellent                         | 60         | 20.6           |
| Good                              | 40         | 27.59          |
| Fair                              | 100        | 34.48          |
| Poor                              | 90         | 37.21          |
| <b>Total</b>                      | <b>290</b> | <b>100</b>     |

Analysis from table 5 above, a good proportion of the respondents 34.48% indicated fair, 27.59% indicated good, while 20.6% indicated excellent and 17.21% indicated poor. This implies that the teachers rate the children with chronic illness fairly. The researcher wished to understand performance of the pupils per subjects. An interview with teachers revealed that children with chronic illness perform poorly in languages and mathematics than social study and religious study. This response could imply that chronic illness was having more toil on pupils' intelligence and communication aspects which affects academic performance.

According to findings from the study pupils with chronic illness might be at great risk of school failure and developing long term problems. Following the findings the study therefore recommends for schools to implement extra hours and mark up classes for pupils with chronic illness. There also need for modification that will ensure that chronic ill children can access learning when they cannot make it to school. The government should also initiate collaboration between the schools and medical department in schools that will enable training of teachers in matters of chronic illness among the pupils.

**Conclusion Recommendations**

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