Academic performance of school children with behavioural disorders in Uyo, Nigeria

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Abstract

Introduction: Behavioural disorders can have a negative influence on the academic performance of school children. There are no similiar published is no known studies in Nigeria.

Objective: To compare the academic performance of primary school children with behavioural disorders with that of their controls.

Methods: A total of 132 primary school pupils aged 6-12 years with behavioural disorders using Rutter scale for teachers (Scale B_2) and their matched-controls were selected. Their academic performance was assessed and compared using the overall scores achieved in the first and second term examinations in the 2005/2006 academic sessions, as well as the scores in individual subjects. Number of days absentt from school was documented.

Results: While 26.5% and 12.9% pupils with behavioural disorders had high and poor academic performance respectively, 38.6% and 9.1% pupils without such disorders had high and poor performances respectively. The difference in the ooverall academic performance was statistically significant ($p=0.04$). The mean scores of the pupils with behavioural disorders on four core subjects compared well with those of the controls. Pupils with antisocial behaviour underachieved more than others. School absence rate had no significant influence on their performance.

Conclusion: Behavioural disorders are associated with poor academic performance in school children in Uyo.

Key words: behavioural disorders, academic performance, school children
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Introduction

Poor academic performance among children have been noted to be on the increase in our environment despite efforts at improving the school curriculum and quality of teaching.[1] This has been a source of concern to some authors in the West African sub region.[2-4] Studies done on academic performance of school children in our environment were on children with chronic diseases (epilepsy[2] and sickle cell anaemia[3]). Though behavioural disorder was reported not to have any influence on the overall academic performance of these pupils, significantly larger proportion of poor achievers than age- and sex-matched healthy classmates were documented in both groups.

Studies from the western ccountries have reported poor academic performance in the developed countries.[5,6] They noted that these children had serious problems of social adjustment, were disruptive at home as well as in school and failed to make friends.[7] They also had difficulties keeping notes to learn.[7] However, these results may not be validly extrapolated for the West African sub-region because of socio-cultural differences. The current study was therefore carried out to determine the effect of behavioural disorders on academic performance of urban school children in Uyo a town in West Africa. The findings could help in formulating policies that will be used in educational programme for children with behavioural disorders in the sub-region.

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Methods

The study was carried out in Uyo Urban, the capital of Akwa – Ibom State of Nigeria in the West African sub-region over a four months period (April 2006 to July 2006). Ethical clearance was obtained from the Ethics committee of the University of Uyo Teaching Hospital before embarking on the study. Written consent was obtained from the educational board of the state while verbal consent was obtained

from all the headteachers of the selected schools. Informed verbal/written consent was also obtained from the parents of the pupils involved in the study.

The primary schools were grouped into two: private and government-owned schools. Three schools were selected from each group by random sampling method. For each class stream, a class was randomly selected such that six classes were selected from each school. Pupils in each class were given the Draw – A- person – Test. They were given forty-five minutes to carry out the task. Those with Draw – A – person Quotient of greater than 75% were examined for visual and hearing impairment. The Snellen equivalent (E-Chart) was used to test for visual impairment. The pupils were requested to read letter E in different directions at a distance of six metres. Those who could not read beyond the 18 metre line on the chart were considered to have poor vision and were excluded from the study. Hearing was tested by speech receptions, recognition and discrimination. Those with hearing impairment were also excluded from the study. Oral interview was also conducted on the pupils and those with diseases such as epilepsy, sickle cell anaemia and bronchial asthma were excluded from the study.

Rutter's behavioural questionnaire for teachers (B_2) was completed by the teachers of 572 pupils who met the inclusion criteria. Pupils with Rutter score of ten (10) and above were adjudged to have behavioural disorders.[8] These pupils constituted the subjects for the study. Parental socio-economic classification into the upper (I, II), middle III and lower (IV and V) groups was done using the method recommended by Oyedeji.[9] In this method of classification, specific scores were allotted to specific parental occupations and educational qualifications and the means of these scores were used to classify the children to socioeconomic groups I, II, III, IV and V and grouped as above.

Equal number of pupils were selected as control group from the various classes of the subjects. The method proposed by Richard and Burlew[10] was used. This involved the selection of classmates without behavioural disorder who were next to the subjects in the class register and were of the same sex and age (within 6 months) as the subjects, and were also from similar socioeconomic background.

Since there was no validated academic assessment tool in Nigeria, academic performance was assessed using the average of the overall score in percentage for the subjects and controls in the first and second terminal examination of the 2005/2006 academic session which was obtained from the class examination result register. Usually the overall score consists of all the continous assignments within the term and the scores on all the subjects during the terminal examinations. Scores of these pupils in four key subjects namely Mathematics, English Language, Integrated Science and Social Studies were also obtained from the class examination register. They were graded as high if they scored >75%, average if between 50 –74%, and low if < 50%. The score of < 50% was regarded as representing a poor academic performance as presented by Ibekwe et al.[3] The days for which the subjects and controls were absent from school during the term was also recorded. Absence rate was said to be high if the pupil was absent from school for more than 4 days in the term and low if days of absence from school was between one and four as as suggested by Weitzman et al.[11]

The student's t-test was used to determine the statistical significance of observed differences between mean values while frequency distributions were compared in the appropriate contingency tables by means of chi-squared test. $P< 0.05$ was taken as indicating statistical significance.

Results

A total of 132 pupils from the selected schools had behavioural disorder. Of these, 20.6% and 27.1% of those aged 6-9years and 10-12years were disturbed respectively. However, the median age of the study population was 9 years. For each group, 79 (59.9) were males while 53 (40.1%) were females. Majority of the pupils (56.8%) were from the lower socio-economic class while 23.5% and 19.7% were from the middle and the upper social class respectively. The age, sex and social class distribution of the sudy population is presented in table 1.

Table 1: Shows the distribution of the study population according to age, gender and socio-economic status

Age(Years)	**N (%)**
6-9	73 (55.3)
10-12	59 (44.7)
Gender	
Male	79 (59.9)
Female	53 (40.1)
Socio-economic Status	
Upper	26 (19.7)
Middle	31(23.5)
Lower	75 (56.8)

The mean Rutter score of the pupils with behavioural disorders was 15.45 ± 5.47 while that of the controls was 3.32 ± 3.22. The Rutter score was significantly higher for pupils with behavioural disorders than the controls (t=22.28, p<0.01). The mean overall percentage score of pupils with behavioural disorder was 65.8 ± 15.02. This value was significantly lower than the mean overall percentage score of the control which was 69.1± 15.22 with p= 0.03.

Table 2 shows that the performance of those without behavioural disorders was found to be significantly higher than that of pupils with behavioural disorders (p=0.04). Out of 132 pupils with behavioural disorders, 35, 80 and 17 had high, average and low overall academic performance respectively while 51, 69 and 12 pupils without behavioural disorders were found to be high, average and low academic achievers respectively.

Table 2: Over all academic performance of pupils with behavioural disorders and their controls

Academic Performance	Subject	Control
High	35(26.5)	51(38.6)
Average	80(60.6)	69 (52.3)
Low	17(12.9)	12 (9.1)
Total	132 (100)	132 (100)

P = 0.04

Percentages in parenthesis

The mean score of pupils with behavioural disorders and the controls in the four key subjects is shown in table 3. There was no significant difference in the mean score for any of the four key subjects.

Table 3: Mean scores of pupils with behavioural disorders and their controls in four key subjects

	Mean Scores			
Subject	Deviants	Controls	t	p
Mathematics	61.52 ± 19.44	64.60 ± 20.73	-1.43	0.16
English language	7.07 ± 17.17	70.15 ± 15.68	- 1.77	0.78
Social Studies	68.89±18.83	71.75 ±17.23	-1.42	0.16
Integrated Sciences	65.98 ±17.06	70.13±18.14	-2.13	0.38

Table 4 shows the overall academic score of pupils and the different types of behavioural disorder. It was noted that 90 (68.2%) pupils had antisocial behaviour and 17.1% of these underachieved as compared to 11.15% and none of the unclassified and neurotic respectively. The different between the overall score and type of behaviour was not statistically significant (X^2 = 8.2, df =4, p=0.085).

Table 4: Overall academic score rating of subjects and types of behavioural disorder

Rating	Antisocial	Neurotic	Unclassified	Total
High	24 (26.67)	10 (30.3)	1 (11.1)	35
Average	50 (55.56)	23 (69.7)	7 (77.8)	80
Low	16 (17.77)	0 (0.00)	1(11.1)	17
Total	90 (100.0)	33(100.0)	9(100.0)	132

X^2 =8.2 df= 4 p =0.085

Table 5 shows the effect of school absence on the academic performance of pupils with behavioural disorders and their controls. School absence rate was higher among pupils with behavioural disorders but did not significantly affect the academic performance of both subjects and controls.

Table 5: Relationship between school absence rate and overall academic performance of pupils with behavioural disorders and controls

	Academic performance							
Absence	Low		Average		High		Total	
rate	Deviants	controls	Deviants	controls	Deviants	controls	Deviants	controls
None	3(6.6)	6(11.1)	30(66.7)	26(48.2)	12(26.7)	22(40.7)	45(100)	54 (100)
Low	3(9.7)	2 (4.8)	19(61.3)	22(53.7)	9(29.0)	17(41.5)	31(100)	41 (100)
High	11(19.6)	4(10.8)	31(55.4)	21(56.8)	14(25.0)	12(32.4)	56(100)	37(100)
Total	17(12.9)	12(9.1)	80(60.6)	69(52.3)	35(26.5)	51(38.6)	132(100)	132(100)

p = 0.37 for deviants, p = 0.73 for controls Percentage is parenthesis

Discussion

This study reports one of the first large-scale work using Rutter Scale to identify children with behavioural problems in a primary school population in our environment. The prevalence of behavioural problems according to the teachers' scale was 23.07%. This is higher than figures obtained from schoolchildren by other authers.[12, 13, 14] A prevalence of 22.6% was documented by Iloeje[15] in his study on children with sickle cell anaemia from Enugu in south-eastern Nigeria. There is considerable evidence that children with chronic illnesses have increased levels of emotional and psychological disturbances, which may amount to a psychiatric disorder.[3,15] Our finding of a high prevalence of behavioural problems despite exclusion of children with chronic illnesses is noteworthy. Environmental and socio-demographic factors may be responsible for this high figure and further study on this may throw more light on this figure.

A higher proportion of pupils were aged 10-12years. This is in agreement with observation made by Rutter among London school children.[17] He observed that children between the ages of 9 years to 12 years were more often disturbed than others.

More males than females had behavioural disorders in this study. This was consistent with earlier reports on gender difference in childhood behavioural disorders.[13,14, 16] More children from the lower socio-economic class were found to have behavioural disorders. Low social class has been reported by earlier authors as a risk factor for psychiatric problems.[17]

The mean overall percentage score of pupils with behavioural disorders was 65.78 + 15.02. Although this was significantly lower than that of the controls, this mean score showed adequate educational attainment. This is in agreement with earlier report in Enugu where the mean score was 61% among children with behavioural disorders.[3] Overall academic performance of pupils with behavioural disorders was significantly lower than that of the controls (p=0.04). The prevalence of academic underachievement among pupils with behavioural disorders was 12.9% and 9.1% among the controls. Academic underachievement is most often reported amongst children with behavioural disorder.[6, 17]

There was no significant difference between the mean scores of pupils with behavioural disorders and the controls in the four key subjects although the overall academic performance of pupils with behavioural disorders was significantly different from that of the controls. This observation differed from earlier reports in which pupils with behavioural disorders were found to perform poorly in key subjects especially Mathematics.[5, 6] The mean score of the pupils (subjects and controls) in Mathematics was also observed to be the lowest among the four key subjects in this study. It has been documented that children in regular as well as in learning disabled schools have impaired skills in Mathematics.[18]This could be due to the fact that Mathematics is a very complex subject that requires multiple cognitive operations.[19]

The significantly low overall academic performance of the pupils with behavioural disorders could be explained by the fact that they lagged behind the controls albeit non-significantly in the four key subjects. Table 4 indicates that underachievement (low overall score) was commoner in children who had antisocial disorder compare to the rest. Adams et al [6] noted that children with conduct disorder formed a significant group in terms of academic underachievement. Henricsson et al[17] in their study reported that children with externalizing problems (antisocial) had more conflicts with teachers, as well as more negative attitudes in teacher relationships and a less positive self perception than did untroubled children. They also found out that the children with internalizing problems had more dependent and conflict with teacher relationships than did the untroubled children

but teachers were able to cope better with the shy children (internalizing problems) than with the aggressive children (externalizing problems). These teachers may likely prefer to relate with the neurotic child than the antisocial and this most likely will affect the achievement of the antisocial child.

Pupils with behavioural disorders were more likely to be absent from schools as reported for other chronic illnesses.[2,3,20-22] This was found not to have a negative influence on their academic performance. Truancy is a major problem in pupils with behavioural disorders and this could account for the high school absence among these pupils.

Conclusion

The overall academic performance of pupils with behavioural disorders was significantly lower than that of those without behavioural disorders. This highlights the importance of periodic assessment of both behaviour and academic records of children in our environment. Teachers are encouraged to pay more attention to those pupils with behavioural disorders by closer supervision of their school works so as to improve their academic performance.

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