

AGGRESSION AND ACHIEVEMENT

IN NURSERY SCHOOLS //

BY

AVNI P. VYAS

UNIVERSITY OF NAIROBI
LIBRARY

A THESIS

SUBMITTED IN PARTIAL FULFILMENT OF
THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF ARTS IN THE UNIVERSITY OF
NAIROBI

JULY 1982

UNIVERSITY OF NAIROBI LIBRARY



0146291 0

THIS THESIS IS MY ORIGINAL WORK
AND HAS NOT BEEN PRESENTED FOR
A DEGREE IN ANY OTHER UNIVERSITY.

Avni P. Vyas

AVNI P. VYAS

THE THESIS HAS BEEN SUBMITTED
FOR EXAMINATION WITH MY APPROVAL
AS UNIVERSITY SUPERVISOR.

Dr. Ezra Arap Maritim

DR. EZRA ARAP MARITIM

CONTENTS

	Page
CHAPTER I: THE RESEARCH PROBLEM	
A. <u>Introduction</u>	1
B. <u>Problem and Rationale</u>	1
C. <u>The Purpose of the Study</u>	5
D. <u>The Organisation of the Thesis</u>	6
CHAPTER II: REVIEW OF LITERATURE	
A. <u>Introduction</u>	8
B. <u>The Social Aspect of Education in Kenya</u>	8
1. The History of Education	8
2. Preschools	14
C. <u>The Theoretical Background</u>	20
1. The Ethological Theory	22
2. The Psychoanalytic Theory	25
3. The Frustration - Aggression Hypothesis	28
4. The Social Learning Theory	32
D. <u>The Empirical Findings</u>	34
1. Literature on Sex and Aggression	35
2. Literature on Performance, Social Class and Aggression	40
E. <u>The Research Hypotheses</u>	42
CHAPTER III: METHODOLOGY	
A. <u>Introduction</u>	45
B. <u>The Research Variables</u>	45
1. Aggression	45
2. Academic Performance	46
3. Sex	47
4. Social Class	48
C. <u>The Collection of Data</u>	49
1. The Schools	49
2. The Subjects	52
3. Instrumentation	53
4. The Observation Schedule	54

	Page
CHAPTER IV: ANALYSIS AND RESULTS OF THE DATA	
A. <u>Introduction</u>	57
B. <u>Date Analysis</u>	58
C. <u>Descriptive Statistics</u>	60
D. <u>The Hypotheses Tested</u>	63
1. Aggression and Academic Performance	63
2. Sex and Aggression	66
3. Age and Aggression	69
4. Socio-Economic Class and Aggression	71
5. Sex and Academic Performance	74
6. Age and Academic Performance	77
7. Socio-Economic Class and Academic Performance ...	79
 CHAPTER V: DISCUSSION, SUMMARY AND CONCLUSIONS	
A. <u>Introduction</u>	82
B. <u>The Study Questions</u>	82
C. <u>The Theory and the Hypotheses</u>	83
D. <u>The Sample</u>	84
E. <u>Results of the Tests of the Hypotheses</u>	85
1. Aggression and Academic Performance	85
2. Sex and Aggression	85
3. Age and Aggression	86
4. Socio-Economic Class and Aggression	86
5. Sex and Academic Performance	87
6. Age and Academic Performance	87
7. Socio-Economic Class and Academic Performance ...	88
F. <u>Limitations of the Study</u>	88
G. <u>Implications of the Research</u>	89
 <hr style="width: 20%; margin: 10px auto;"/>	
REFERENCES	92
APPENDICES	102

LIST OF TABLES

Table	Page
3.1 The Composition of the Sample	52
4.1 The Cross Tabulation Partitions	59
4.2 Description of Partial Tables	60
4.3 Aggression and Academic Performance	63
4.4 Aggression and Academic Performance by Sex	64
4.5 Aggression and Academic Performance by Age	64
4.6 Aggression and Academic Performance by Social Class	65
4.7 Sex and Aggression Summary Table of One-Way ANOVA.	66
4.8 Sex and Aggression by Age	67
4.9 Sex and Aggression by Class	68
4.10 Age and Aggression Summary Table of One-Way ANOVA.	69
4.11 Age and Aggression by Sex	70
4.12 Age and Aggression by Class	70
4.13 Socio-Economic Class and Aggression Summary Summary Table of One-Way ANOVA	71
4.14 Class and Aggression by Sex	72
4.15 Class and Aggression by Age	73
4.16 Sex and Academic Performance	74
4.17 Sex and Academic Performance by Age	75
4.18 Sex and Academic Performance by Class	76
4.19 Age and Academic Performance	77
4.20 Age and Academic Performance by Sex	78
4.21 Age and Academic Performance by Class	78
4.22 Socio-Economic Class and Academic Performance ...	79
4.23 Socio-Economic Class and Academic Performance by Sex	80
4.24 Socio-Economic Class and Academic Performance by Age	81

Abstract of the Thesis

Aggression and Academic Achievement

In Nursery Schools

The main purpose of the research was to study the aggression and the academic achievement of the nursery school children in different nursery schools in Nairobi. The study also examined the effects of sex, age and socio-economic class differences on aggression and academic achievement.

Since aggression and academic achievement were the two major dependent variables, different theories of aggression were reviewed with the social learning theory of aggression being the most appropriate approach to this study. The social aspect of education in Kenya has also been reviewed.

Aggression was measured by summing the frequency counts or tallies of the child's behaviours observed as aggressive, which were obtained through an observation procedure developed by Vaughn and Waters (1981). A measure of pupils achievement was obtained by asking the teachers to grade their performance on a four point scale, A, B, C, and D. Grades A and B were awarded for good performance and C and D for poor performance.

The school sample was obtained through a stratified random sampling of the school fees of the proprietarily owned nursery schools in Nairobi. At the four schools sampled, ten boys and ten girls were randomly chosed. Five girls and five

boys belonged to the age group of three years and five boys and five girls belonged to the age group of five years at each of the four schools. This gave a total population of eighty children.

In the analysis of the observed data, the analysis of variance (ANOVA) and chi square were used. The major results showed that:

- a. Boys are more aggressive than girls at $p < .01$ Level of significance.
- b. Within the lower socio-economic class boys are more aggressive than girls at $p < .05$ Level of significance. Yet there was no significant sex difference on aggression with children of a high socio-economic class.

These results are useful to policy makers, preschool education units in Nairobi, the head-teachers and teachers at different nursery schools and parents. For instance, guided modelling with reinforcement would facilitate the acquisition of new patterns of behaviour, where a particular desired behaviour is required in a child. Accepted aggressive behaviours for the non-aggressive five year olds can be promoted. Further research can be carried out by using variables such as the rural-urban environment, the family size of the child, the teacher's qualification and motivation levels of the child, and developing assessment tests for preschool children.

ACKNOWLEDGEMENTS

I would like to thank the following people without whom this thesis would not have been completed.

Dr. Ezra Arap Maritim supervised very patiently not only the guiding, conducting and writing of the thesis but also with the statistical analysis, interpretation and presentation.

Ms. Shashi Bali gave a lot of her time and very helpful comments.

Ms. Marielena Humphrey who observed the pilot-project children with me in order to establish the inter-observer reliability.

Mr. Ajay Kothari for having drafted and designed the day to day observation sheets and the frequency tables and charts.

All the headmistresses and the teachers whose schools and classrooms I visited, and above all, all the children I observed.

Ms. Fawzia Adamali for typing the thesis.

CHAPTER 1

THE PROBLEM

A. Introduction

The problem is to find the steady state and the
 behavior of a system for a given set of initial
 conditions. The system is described by the
 equations of motion. The initial conditions are
 given by the state of the system at time zero.
 The steady state is reached when the time
 derivatives of the state variables are zero.
 The behavior of the system is determined by
 the eigenvalues of the system matrix. The
 system is stable if all the eigenvalues have
 negative real parts. The system is unstable if
 any eigenvalue has a positive real part.

FOR AMIT

The system is described by the equations of motion
 in the form of a set of ordinary differential
 equations. The system is linear if the
 equations are linear in the state variables.
 The system is nonlinear if the equations are
 nonlinear in the state variables. The system
 is time-invariant if the equations do not
 depend explicitly on time. The system is
 time-varying if the equations depend
 explicitly on time. The system is autonomous
 if the equations do not depend on time.
 The system is non-autonomous if the
 equations depend on time. The system is
 continuous-time if the state variables are
 functions of continuous time. The system
 is discrete-time if the state variables are
 functions of discrete time.

B. System and Model

The system is a physical system. The model
 is a mathematical representation of the
 system. The model is used to study the
 behavior of the system. The model is
 derived from the physical system by
 applying the laws of physics. The model
 is used to predict the behavior of the
 system for a given set of initial
 conditions.

CHAPTER I

THE RESEARCH PROBLEM

A. Introduction

This study is about the social class, age and sex differences in aggression and performance of the nursery school children. Specifically, it is an investigation into the association of these variables among the nursery school children in Nairobi area. Although the study was not primarily designed so that its results could be generalized to other nursery schools in urban settings, its implications are important for future researchers and those who are concerned with the business of nursery schools.

The central question of this research project is to find what magnitude or extent are these variables associated with children living in an urban setting today. The study also attempts to assess the background variables that influence any possible association among these variables. This chapter attempts to show why it is important to examine these variables and the purpose of the study. At the conclusion of the chapter a brief overview of the remainder of the study is presented.

B. Problem and Rationale

Kenya being a developing country in its initial stages already faces a problem of a rapid rate of urbanization. With the rural urban migration and a drastic change in the

traditional values, the modern Kenyan is pressured. "Social pathologies are increasing such as prostitution, delinquency, suicide, venereal diseases, alcoholism, abortion, aggressiveness ..." (Otaala, 1979, p.3).

When aggressiveness too is considered to be socially dangerous just during the early development stages, it poses to be a serious problem. For instance, when observing only within the Kenyan educational system, aggressiveness is well demonstrated by the numerous riots that happened not so long ago at the University of Nairobi. Some riots even occurred at many of the secondary schools.

Otaala (1979), explains this aggressive behaviour by saying the "... attitudes which prevail in the school will to a large extent reflect those prevailing in the local community" (p.19). "A great deal of indiscipline in schools is basically a reflection of the social problems of an open and increasingly affluent society" (Gachathi Reports, 1976, p.2). Hunt and Sullivan (1974) on the other hand explain behaviour in terms of the product of the environment and the person. Mwaniki (1973), too remarks that, "teachers in the city in Nairobi are continuously facing discipline problems from the pupils. Some parents (perhaps those who themselves are faced with problems) are unable to discipline their children ..." (p.19).

Thus, it would be interesting to find out the relationship of aggressiveness to the academic achievement

of the child. It is the effect of the family and the school that brings about the child's behavioural and educational outcomes. Defleur (1977) commented that "families vary greatly in the degree to which they encourage children to perform well in school, yet such encouragement can contribute to success in the classroom" (p.572). "Children are very strongly influenced by the attitudes, habits and other activities of their parents" (Gachati Reports, 1976, p.2).

Also, the family's economical status would determine the type of school the child would go to, as "social stratification has always been the basis of formal educational" (Entwistle, 1978, p.30). Defleur (1977) also remarked that "where one lives - what state, community, neighbourhood - determines the quality of educational facilities one will be exposed to" (p.572). Clignet (1974) too says that "modes of interaction among the various members of large sized families exert a negative influence on the academic behaviour and aspirations of children" (p.50). Gakuru (1979) found that "the differences among nursery schools reflect the existing social class structure of the society" (p.14) because "the social class background is more important in determining the type of school a child is likely to attend than the ethnic factor" (p.99). Hence the importance of using the socio economic variable in this study.

It would be more interesting to approach the

problem of aggressiveness right at the roots of the educational system, the nursery school. Also, little has been done in the way of research in the preschools to investigate and improve the standards of the school, and teaching of the child. Also, "education is a partnership between the school and the home, the child being the most important person in the partnership" (The Standard, November 6, 1978, p.7).

It is important to study the child at school because this is where he spends much of his waking time.

Academic performance is a major variable because "nursery schools spend on average more time on academic work than on creative activities and play irrespective of cost category" (Gakuru, 1979, p.20).

The ages of three and five year olds are significant in the study as "generally the third year is the age for entry into nursery schools" (Otaala, 1979, p.21). The fifth year is important since that is the last year for the child at preschool before entering into the primary school. Also, "many child psychologists have said that the preschool years from about school ages two to five are among the most important if not the most important of all the stages of development. This is because the foundations of complex behaviours are laid" (Bijou, 1975, p.829).

Since "we possess almost no information about important characteristics of the pupils (that is, their

ages, geographic distribution, relative social status)" Herzog, 1970, b, p.2), we need to conduct a research on children as subjects themselves instead of the schools.

C. The Purpose of the Study

The primary objectives of this research are to study the aggression and the academic performance of the nursery school children in different nursery schools and if differences among the children are found to exist, to attempt to identify whether age, sex of the socio-economic class contribute to the observed differences.

These issues can be expressed in seven questions:-

1. Is there any relationship between aggressiveness and the academic achievement of the child?
2. Are boys more aggressive than girls?
3. Are five year olds more aggressive than three year olds?
4. Are children of the lower income bracket more aggressive than children of the higher income bracket?
5. Do the five year olds academically perform better than the three year olds?
6. Do boys perform better than girls?
7. Do the children of the lower income bracket academically perform better than those of the higher income bracket?

It is basically an observational study of the nursery schools. It attempts to contribute some information and insights to the area of child behaviour where little is

presently known.

A study of this nature is therefore essential for those who are concerned with the nursery school education. The results of the study will have wide implications for nursery school teachers, administrators and parents.

If a relationship is observed, new means of attaining a better method of education would be attempted. Attempts would also be made to improve the school situation. Suggestions and modifications of some of the standards we already have, could be found. This is important because "educational achievement is also seen as the key to a better living standard", (Kapila, 1976, p.1).

D. The Organisation of the Thesis

The thesis has been divided into five chapters to make it easier for the reader and it may also enable him to go to the chapter that he is most interested in.

The first chapter acquaints the reader with the problem and justification for inclusion of all the variables used in the study.

With the review of literature in chapter two, different theories and hypotheses of aggression have been scrutinized to give a broader basis of the understanding of aggression. The history of education in Kenya has also been looked into, to emphasise further, the importance of a

study of this nature.

Chapter three deals with the methodology, the variables are operationally defined, the sampling procedures and the instruments used in the study are described.

The analysis of the data collected is presented in chapter four, together with descriptive statistics. The analysis is addressed to several specific issues. First, aggression and performance are compared. Second, subject variables (age, sex and socio-economic classes) are analysed in relation to aggression. Third, the analysis of these variables in relation to performance are carried out.

Finally, chapter five is devoted to the discussion of the overall results of the study, a summary of the main findings and suggestions and recommendations for further research for people interested in the field of teaching, parenting and administrating preschool children.

CHAPTER II

REVIEW OF LITERATURE

A. Introduction

This chapter is a review of the literature related to aggression, sex differences and performance among young children. Of the many studies available an effort was made to select the most relevant even though all of them are not of the most rigorous research design.

The chapter is divided into four major sections: the theoretical background; the social aspect of education in Kenya; the primary findings and the hypotheses of the present study.

B. The Social Aspect of Education in Kenya

1. The History of Education

When the missionaries first came to Kenya, "they viewed the African as a fallen man, heathenish, cruel, savage, greedy immoral and prone to drunkenness" (Cameron, 1970, p.19). At this time the only type of education was the traditional education. This was for the children to adjust to their society.

With the turn of the twentieth century, the African saw the Western education as a gateway to get away from poverty and get into social advancement as this was "the secret of the Whiteman's success" (Raju, 1973, p.2).

However, Christianity was the package sold along with the education so much so "that to the African, in these early years, an 'educated man' and a 'Christian' were interchangeable terms" (Raju, 1973, p.2). Kipkorir (1978), said that "If Africa gets education without Christianity the clash between black and white will be awful" (p.19). Another difficulty that the Kenyans faced with the oncoming western influence was a need to find a system suited to his own society. This is because, "a process of alienation became successful through the exaltation of the supremacy of western religion, technology and social values and down grading completely the usefulness of the African traditions and practices" (Gachathi Reports, 1976, p.9).

With some struggle, the independent school was born, but with that, the African was restricted from academic education to technical and vocational types of education. "Just as handwork has been found useful in the training of mentally defective children, so the most useful training which the African can receive in his present condition is continued contact with material processes" (Raju, 1973, p.5).

Expressing their concern over the orientation of African education, Court and Ghai (1974) noted that "during the colonial period, one role of the schools was to turn out a body of person with training in the basic skills of literacy and arithmetic with an aim to man the middle and lower-level openings ... the high level jobs were held by foreigners, mostly Europeans" (p.327).

The African rebelled as he saw the colony laying different foundations of education in the order of superiority of the Europeans, Asians and Africans. Hence, began the African's craving for independence. A movement for independent school and service courses were organised for teacher training. Gradually, primary schools were set up with the purpose of "education for citizenship in Africa" (Raju, 1973, p.8), since the colony was to gain independence shortly. The first batch of the educated Africans then fulfilled the requirement of leadership in Kenya, for example, Kenyatta, Koinange, Mathu, Gichuru and others.

Straight after independence, the Ominde's Commission (1964), was established by the Uhuru Government to look into the educational system of Kenya" ... Kenya has the potential and scope to make the most appropriate changes in her system of education and training to meet the challenges of a rapidly changing world" (Gachathi Reports, 2976, p. xix).

The first thing that Ominde's Commission intended to do was to terminate the racial structure already existing in the educational system. "The British Administrators of Nairobi, the capital of Kenya, practised the philosophy of racial separation during the colonial period (1899 - 1963) and as a consequence, three distinct "social Nairobis" came into being - a European Nairobi, an Asian Nairobi and an African Nairobi" (Tiwari, 1972, p.36). The termination would ensure national unity which would in turn lead to social

equality and the individual's adaptability to change.

Court and Ghai (1974) suggested a further research to be carried out to erase the colonial tendency of the superior or elitist social group getting the best of the education since "those benefitting most from education will be those with previously advantaged parents who are able to provide first the kind of home background and then "the kind of school which enables the child to take most advantage of the present selection procedures" (p.18). "A frequent allegation in Kenya is that 'poor' parents use nursery centres as 'cheap' primary schools ..." (Herzog, 1970,(b), p.3-4).

Although Ominde (1966) stressed the importance of an education system as an investment in social and economic development and Krystall and Maleche (1976) saying "... nationwide concern with education, which generally has been expected to ensure national development and African advancement" (p.1), Court and Ghai (1974) found that:-

"Inequalities between regions and groups in access to education constitute an inefficient use of national resources. For many, social background and regional origin are disproportionately important in determining access to educational opportunity while others of higher ability are being

lost to national life for lack of these advantages. The group which is able to sponsor the mobility is increasing in size and so correspondingly is the extent to which inequalities are being perpetuated. This is not to say that elite recruitment is already a closed process. It does suggest a cause for some alarm and the need for a remedial policy of education in Kenya is to serve the broader purposes of development" (p.18).

Thus, the need and importance of education emerged. Ominde (1966) saw the educational system as "a reflection of a complex set of factors including not merely the obvious question of material and human resources but in a historical context, the changing social philosophy of a nation" (p.1).

Not only is education viewed in terms of good leadership, it is vital for national development. "The President Mzee Jomo Kenyatta has called on parents to give children maximum education to prepare them for effective future leadership" (The Standard, February 6, 1978, p.1). Mr. Peter Gachati stressed further importance of education as vital for national development. (Daily Nation, June 21, 1977, p.4).

Krystall and Maleche (1975) see education in the

light of, "after westernization new and different opportunities necessitated the introduction of a new type of learning situation" (p.1). "Kenya's educational system would be changed to suit current technological advancement and to curb the importation of foreign consultants and advisors" (The Standard, March 12, 1979, p.2).

Education is also seen in terms of a 'must', a necessity. "Education will soon be compulsory in Kenya ... The government had realised education was the sole basis for the development and no development could be achieved unless the whole population was adequately educated" (The Standard, May 22, 1979, p.3).

However, different educational levels are employed by different economic classes and demographic levels of the country. "The educational demand has always been unequal between different parts of the country due to differences in economic and social needs and the degree of awareness of the role of education" (Ominde, 1966, p.8). "As a result of this tremendous social and economic orientation towards the modern urbanized sector of the economy, economic values have tended to dominate other socially and culturally vital values of the society" (Gachati Reports, 1976, p.xxi).

Hence we see that, "the educational development in Africa tends to give the impression that the geographical factor and ethnicity are the most important determinants" (Gakuru, 1979, p.27). This is because, "the residential

pattern in Nairobi is based on social classes but was initially organized on a racial basis" (Gakuru, 1979, p.105).

Although Ominde's Commission (1964) pointed out the economic and social differences in different parts of the country almost eighteen years ago, we still see these differences existing in the current times even in Nairobi, leave alone the country as a whole. Herzog (1969) too pointed out these economic differences when he said that there were some schools where children paid a fee of seven shillings a month whilst others paid upto about five shillings a day. "The relationship between geographical location of nursery schools and the fees that these schools charge is strong and significant" (Gakuru, 1979, p.105).

"Thus we are witnessing a shift from a racially determined educational structure to one run on social class basis" (Gakuru, 1979, p.117). Hence, "access to educational opportunities is not equitably disturbed in Kenyan society" (Court and Ghai, 1974, p.207).

2. Preschools

The earliest nursery school recorded in Nairobi was in 1942, primarily for the Europeans and children of urban centres (Kenya Institute of Education, 1974). Today there are over two thousand nursery schools in Nairobi (Kipkorir Leah - personal communication). "Having inherited a delicate situation whereby nursery, primary and intermediate schools were racially segregated, the Kenyan government had a manifold

task to perform" (The Standard, May 18, 1978, p.4).

Herzog (1969) seems to have been the first researcher to put together the data and compiled a comprehensive report on the preschools in Kenya. His focus was on the quality, the teacher qualification and the lack of organization of the preschools. Even Gakuru (1979) said that "the case for Nairobi was much more difficult and it seemed right from the start that preschool education is an administratively disorganized structure lacking in co-ordination and control" (p.45). The reason for this was that "until 1969, no government department had a mandate to supervise their development and even now, confusion continues as to the allocation of responsibility for registration and supervision" (Herzog, 1970, p.1). The preschools at that time were called nursery centres and were under the supervision of Nairobi City Council (Herzog, 1970).

More chaos and confusion was caused because four ministries, the Ministry of Co-operatives and Social Services, the Ministry of Home Affairs, the Ministry of Local Government and the Ministry of Education, played a visible role in the affairs of a nursery school (Herzog, 1970, p.3). Hence, there was no formal or nationally standardized schedule, curriculum, registration or requirement for the nursery school.

Although Herzog's research seems to be outdated today because the economic standards have risen and the economic areas in Nairobi that Herzog termed middle class

at that time no longer holds to be true, his study is significant in that he opened up the field of research for children and preschools. In a paper presented at the annual general meeting of the Family Service Council of Kenya in March 1969, Herzog pointed out that "the nursery school group is more important as a setting within which events promoting insights can occur, not as a small society in which Johnny may 'learn how to play' ". (p.3). Thus, the importance of the nursery school education came to light after Herzog's report. Herzog (1969) however, was advising the Kenyans to rely on their own traditions and imagination in designing their programme instead of having to look for examples for training of the preschool affairs onto the United Kingdom and the United States of America (p.6).

With the importance of the establishment of nursery schools and the years that have passed the children themselves instead of the schools, have to be looked up on as the subjects for the betterment of the preschools in Kenya. The preschools are important today because of the rural-urban migration and a drastic change in the value system. Within the urban centres, the children are no longer free to experiment on their own. A child in the rural area knew the importance of taking care of the young, herding animals, carrying water which resulted in his attaining a good sense of responsibility and a high self esteem.

The "preschool becomes important when a child's

home experiences no longer give him sufficient opportunity to develop attitudes about himself and others that will be needed for later social and intellectual growth" (Krystall and Maleche, 1975, p.2). Thus, the preschool would allow the child to discover his own space and time, explore and share and have the opportunity to be with his own age group.

However, Logan, (1976) comments that the rural child may not find the preschool as competent and challenging, as far as performing tasks are concerned, as the rural environment encourages children's tasks like carrying water, looking after the young, shepherding and so on.

Another vital reason for the need of a nursery school is to enhance motor, intellectual, emotional and social development of the child. "It is generally accepted that the overall objective of pre-primary education should be to promote the child's total growth and development, while assisting his transition between home and school. This view gives attention to the holistic nature of development of children aged 3 - 6 for whom the physical, mental and socio-economic spheres are much more inter-related and interdependent than at a later stage" (Krystall, 1976, p.5).

Gakuru (1979) on the other hand emphasizes the importance of nursery school by saying that it "... plays an important role in reinforcing the values, attitudes, and other personality traits characteristic of the different social classes" (p.120) and thereby to learn in preparation

for duties and responsibility.

When Kenya Institute of Education founded a preschool programme, the whole objective of this new project was "towards developing the wholeness of each child in promoting a healthy development both physically and mentally" (Kenya Institute of Education, 1975, p.1).

"Many primary headmasters require standard one applicants to have attended nursery schools and/or bring with them a good "report" from the nursery school head teacher" (Herzog, 1970, p.5). Besides this being a purpose of having preschools in Kenya, it also poses as a problem in Nairobi. Although there are thousands of pupils attending nursery schools, many of them have been denied places in the primary schools because only a few seats per classroom are available. The competition for placement in a good nursery becomes so great that "a mother says she had to book a place in a nursery school before her child was born" (Daily Nation, November 22, 1978, p.19).

Another disadvantage of the nursery school that Logan (1972) pointed out was that "the preschool can become to them a sort of a fairy tale, fantasy land, having no relationship to their everyday lives. The consequence of this can be that the child will come to dislike a home and community that to him seems to be dull and uninteresting in comparison with the nursery school" (p.10).

The difficulty currently faced is financial by both

the parents and the ministries. "When rising costs mean that already allocated sums of money accomplish far less than planned" (Krystall and Maleche, 1975, p.5). As it is, the government of Kenya is sacrificing its economic development for the growth of education in the country. The Vice-President, Kibaki (1979), said that "... the government spent a third of its total annual budget on education" (Daily Nation, May 22, 1979, p.4). Krystall and Maleche (1975) reckon that "even before inflation the education budget was growing at a rate of 15 to 20 percent per year, whereas the money available to the government was growing at a rate of about 10 percent per year" (p.5).

Thus, "major effects to improve the quality of pre-primary education have depended largely on outside funding (Krystall, 1976, p.4), since 'the ministry's efforts are limited by financial constraint and by lack of an official government policy concerning preschool education" (Krystall and Maleche, 1976, p.1).

For this reason, different types of nursery schools emerged, as they were sponsored by parents, church, employee groups or different individuals. Herzog, (1970) saw that different attitudes were being formed towards preschooling as "nursery centres in Kenya are sponsored by a wide variety of agencies; religious groups, social welfare organizations, private enterprises, local government and self-help (Harambee) associations of parents" (p.1).

With this division of nursery schools the fees per child varied, contingent on the social background and what part of Nairobi the child came from. "The educational system however, does not only reflect the social class structure in the society but also reproduces it" (Gakuru, 1979, p.1), as "the lack of government intervention and the acute competition for standard one vacancies in primary schools had led to a fees structure in nursery schools that reflects the income inequality that characterises the different social classes" (Gakuru, 1979, p.14).

C. The Theoretical Background

It would now be interesting to view aggression from different points of view of various psychologists. The points of view rely on the different theoretical approaches and the operational definitions used by different investigators. Some investigators usually define it as an action which an individual uses to hurt or harm another individual. At this level, aggression can be seen in the forms of:

- a. Aggression for its' own sake or aggression as a means to an end. Is the aim of the behaviour to hurt the victim or is there a motive behind it?
- b. Direct or indirect aggression which means whether the victim is directly attacked with blows or is he indirectly deprived of something significant to him?
- c. The means of aggression. Is it verbal, physical, gestural, or how?

- d. If the aggression is real or fantasized?
- e. If the aggression is self or other directed?
- f. If the aggression is planned or spontaneous?
- g. If the aggression is conducted by one or many?

On very broad basis, aggression can then be defined as "applied whenever an observer perceives non normative, offensive and intentional coercion being applied by an actor" (Gean and O'Neal, 1976, p.249). All the theories of aggression would however, have their own specific definitions being born from their respective theories.

The theories of aggression generally indicated that aggression is composed of two main factors, inhibition and instigation. Instigation is the force that drives a child to act out aggression. Inhibition is the factor that opposes the overt behaviour of aggression in the child. The two major inhibitions are those caused by the environment and other competing responses within the child. Hence, for aggression to occur overtly, the instigation factors have to be stronger than the inhibition factors.

With this basic agreement, the various conceptions of aggression and their specificity as related to the theory can be seen in the theories of aggression as discussed in the order listed below:

1. The Ethological Theory
2. The Psychoanalytic Theory
3. The Frustration - Aggression Hypothesis

4. The Social Learning Theory

1. The Ethological Theory

Human ethology believes that we have an animal heritage. The founder of ethology, Konrad Lorenz has based his knowledge of human aggression out of the observation of lower animals.

The ethologists say that the inhibitions and instigations are innate. Lorenz believes that aggression instigation stems from man's basic physiology and that the inhibitions have evolved with a biological base. "Lorenz's argument is built from the assumption, that patterns such as aggression are seated specifically in the genes" (Montagu, 1973, p.148).

In his book "On Aggression", (1966), Lorenz defines aggression as "the fighting instinct in beast and man which is directed against the members of the same species" (p.ixf). This means that according to Lorenz, aggression only occurs if it is intraspecies. This inherited intraspecies aggression is a constant flow of energy, and does not necessarily emerge as a result of a reaction to an outer stimulus.

When undispensed, this energy accumulates in the neural centres related to that particular behaviour pattern and explosion occurs when fully accumulated even in the absence of a stimulus. But the animal or man usually finds

the stimuli to get rid of all this pent up energy. As the energy keeps on building the man/animal becomes increasingly aggressive, for Lorenz then said the "aggression is primarily not a reaction to outside stimuli, but a 'built-in' inner excitation that seeks for release and will find expression regardless of how adequate the outer stimuli is" (Fromm, 1973, p.17). Then according to Lorenz, it is the spontaneous instinct of aggression that makes aggression dangerous.

The intraspecies aggression also exists for the survival of the species and not only for the survival of the individual. It has four main functions:-

- a. Because of aggression, the members of one species spread out further, maximising the chances of finding food.
- b. The fights amongst the rivals ensure the selection of the strongest for the breed and also defending against external enemies.
- c. "Aggression has a further function of selecting strong 'brood defenders'. Among sticklebacks it is the male ... in many gallinaceous bird, it is only the female which tends the brood and is often far more aggressive than the male. The same thing is said to be true of human beings" (Selg, 1975, p.52).
- d. Aggression helps to find a rank order, as the strongest would often help protect the lower ones.

Lorenz further adds that failure to express

aggression is unhealthy. In fact, "aggression is necessary to the optimal development of man. It is the basis of intellectual achievement, of the attainment of independence and even of the proper pride which enables a man to hold his head high amongst his fellow" (Montagu, 1973, p.46). "Lorenz thought it to be advisable to try and dispense with aggression completely as it has positive social functions" (Lorenz and Leyhaussen, 1973, p.75).

With the process of evolution, aggression has been transformed into a more acceptable behaviour by the society. At the same time aggression in man has become exaggerated and appears to be more of a threat than a help.

For this aggressive energy to be released without causing harm, Lorenz suggests that man has to find means of diverting the instinctive aggression through the use of rituals etc., and participating in sports and other such harmless competitions.

Many psychologists however, differ with what Lorenz has to say. Lorenz has based his knowledge of human aggression out of observations of lower animals in the laboratories. "The legitimacy of transposing these studies to humans has not yet been established" (Messer and Brodzinsky, 1979, p.758 - 766). The human observations that he used were only limited to his friends and himself.

His theory is based on what Darwin said in his theory of the survival of the fittest. In order for one to

understand Lorenz, they first have to read Darwin.

Also, a lot of what Lorenz says is just what he believes in. Many psychologists argue that when one cannot defend himself he starts talking about innate foundations and aggressiveness as seated in the genetic formations. Lorenz also disregarded the quality of humanness in aggression. For instance he has not considered human cognition at all. There is that basic difference in human and animal aggression, i.e. humans utilize their cognitive structures like reasoning.

The role of learning too has been neglected by Lorenz. The rearing conditions for all animals vary. This can lead to significant differences in the aggressiveness of animals.

2. Psychoanalytic Theory of Aggression

Another theory of aggression was born during the first world war, by Freud. He looks at aggression through the eyes of a psychoanalyst. Freud obtained most of his insights from observations of his clients and through the analysis of his own inner dynamics.

Like Lorenz, Freud says that instigation of aggression is innate but the inhibitions arise due to environmental factors, with the process of the child's interaction with his environment. The primary inhibitory agent in the individual is his superego which develops

through the resolution of the child's early relationship with his immediate family. The superego develops as a consequence of the resolution of the oedipal complex.

Freud believed that a man is born with two basic instincts. One, an instinct to live and the other, an instinct to die. The two types of instincts always appear together with varying proportions. "Both kinds of instincts would be active in every particle of living substance, though in unequal proportions so that some one substance might be the principle representative of the Eros" (Freud, 1927, p.31).

All instincts sought the lessening of a stimulation and thereby releasing tension. If both the instincts worked in equal proportions, the conflict could be so violent that the infant would experience an intense anxiety about destruction of those who care for him and his own self destruction. "The collaboration of and the conflict between these two instincts was said to hold the secret to the phenomenon of life" (Selg, 1975, p.45).

According to Freud, aggression was equivalent to destruction and the aggression instinct was the main derivative of the death instinct. Freud in his letter to Einstein, during the war said that "the death instinct turns into the destructive instinct if, with the help of special organs, it is directed outwards on the objects" (Megargee and Hokanson, 1970, p.18), and that the evolution of civilization presented a struggle between Eros and death.

He also said that aggression was self subsisting, original and of an institutional disposition. Also, the primary function of the death instinct was to destroy the individuals so that it could return to the inanimate state, while overt aggression was seen as the outward manifestation of these instincts.

Freud said that aggression was mostly concerned with self destruction rather than directed to the external world and when this happened it tended to destroy others than oneself. This was result of the death instinct being blocked by the erotic and self preservative instincts. In his book "Ego and the Id" (1927) Freud said that "the more a man checks his aggressiveness towards the exterior the more severe, that is aggressive, he becomes in his ego ideal" (p.44). Together with that, greater the inhibition of external aggression, greater is self destruction and self directed aggression. The self destruction is a result of one part of the ego arising to a conflict with the superego. Guilt may also arise. Like Lorenz, Freud too believes that aggression is not necessarily a reaction to stimuli, "but a constantly flowing impulse rooted in the constitution of the human organism" (Fromm, 1973, p.15). Freud also thought that it was impossible to suppress aggression altogether as some aggression was vital for human survival.

The psychoanalysts view aggression as a pathology. The suppressed aggression was often extracted through cathartic release mechanisms. One such method that Freud

introduced was the "Free Association" where the clients were allowed to talk about their problems till they felt less tense. This was because Freud thought it possible to reduce the inner building up of the aggressive energy through the means of aggressive actions.

Since the analysts say the inhibitions came about as a result of the environment factors, it was important that the child was not exposed to a hostile or an unfavourable environment. Freud then suggested that aggression could be minimised through child rearing practices.

The post Freudians however, have differing opinions and views about the death instinct and Freud's theory of aggression.

"There is a lot of confusion about aggressiveness being a drive, and that, it has nothing in common with Freudian death instinct" (Biran, 1980, p.1310). Aggression is looked upon as a behaviour pattern. Biran also says that aggression conflicts with the fear of failure. Recharadt and Ikonen (1980) however, say that "aggression and destructiveness are not two basic drives but merely two of several possible manifestation of "thanatos" (the death instinct)"... (p.254).

3. The Frustration-Aggression Hypothesis

Dollard, Doob, Miller, Mowrer and Sears (Mackal, 1979) came up with Frustration-Aggression Hypothesis, which

is a reconciliation of the Freudian theory with the objective theory of learning, giving it a behaviour point of view. Their basic concept is that aggression is caused due to frustration. They define it as "any series of actions whose goal response is injury to another organism or its substitute" (Selg, 1975, p.10). Frustration is looked at as the blocking of a path to a goal. Another dimension of looking at frustration was as "the negation of a desire or a wish" (Fromm, 1973, p.67).

Because of the broad view of aggression caused due to frustration, Miller in 1941 modified it by saying that "instigation to aggression inevitably follows frustration" (Megargee and Hokanson, 1970, p.23).

Then, according to Dollard aggression occurs on the following assumptions:-

- a. The intensity of aggressive responses depends on the intensity of the frustration caused.
- b. If aggression is punished, it maybe inhibited.
- c. Aggression is directed most strongly at the frustrator. If this aggression against the frustrator is blocked then the aggression has to be displaced, and maybe self dispensed.
- d. The overt expression of aggression may diminish the tendency to aggress.

Buss (Selg, 1975), says that not only is the frustration the cause of aggression but also noxious stimuli,

for example, smell of garlic or physical attacks, etc. He also says that "angry responses are only one of the many observable forms of aggression" (Selg, 1975, p.13). He then re-defines "frustration in the broad sense maybe any unpleasant experience whatsoever, not least a lack of instinctual satisfaction" (Selg, 1975, p.14).

Dollard, (Fromm, 1975), argues that aggression after frustration is an innate response, but the many reactions after frustration cannot be called aggression. The general forms of aggression are intensive behaviours. These vary from situation to situation and person to person because the stronger the instigation to frustration, the greater is the aggression and also, "the most important factor in determining the occurrences and intensity of frustration is the character of a person" (Fromm, 1973, p.68).

However, according to Dollard, aggression can be avoided by inhibition. But it was found that when children were taught to inhibit aggression they inhibited their positive responses also. So, to keep aggressiveness to a minimal, the learning of aggressive responses is taught, by imitating adult behaviour. The Frustration-Aggression Hypothesis however, says that the greater the expectation of punishment, the more likely the inhibition of aggression.

The Frustration-Aggression Hypothesis, also states that aggression is often displaced from the frustrator to a neutral object and it may change form. This is done via sublimation or substituting a socially acceptable type of

behaviour for one that is forbidden.

However, when aggression cannot be directed to the frustrator or be displaced, the individual normally takes it onto himself as his own inadequacies via self directed aggression. This aggression could be interchanged with other directed aggression.

Catharsis too plays an important role in the Frustration-Aggression Hypothesis. The observation and performance of aggressive behaviour may reduce rage and anger. On the other hand, if the aggressive behaviours are seen by those without aggressive tendency may become aggressive.

In the long term range, the consequence of frustration, no longer is aggression but a general quality of aggressiveness. To cope with frustration constructively, Seligman suggests that we should grasp the overall situation. But then, "nothing important is achieved without accepting frustration" (Fromm, 1973, p.67).

Although the Frustration-Aggression Hypothesis is acceptable amongst many psychologists, others feel rather disappointed. The primary argument arises from the definitions used by Dollard for frustration. Some writers refer to frustration as the effect of disturbing stimuli, or intervening variable etc.

Experiments done by Maier (1970) have shown that frustration

is not always followed by aggression, but by regression. For instance, the rats always jumped in one direction where they were rewarded with food. Later the direction of the reward changed. The rats always jumped in their original direction even when they found that the food was given in the other direction.

Aggression is caused due to frustration does not hold for some of the animals experiments. For instance, "we have seen that the best way to train a mouse to be highly aggressive is not to frustrate him, but to give him success in fightings" (Scott, 1970, p.33).

Dollard and all have also missed out on the role of learning non-aggressiveness as a response to frustration as found out by Bandura, Bateson and all.

4. The Social Learning Theory

The fatal defect of Lorenz theory or ethological theory, is its extrapolation of animal behaviours to man. The theory neglects or ignores for example:

- 1) to discuss the possibility that a considerable proportion of aggressive behaviour represents a reaction to frustration
- 2) the view that in many instances of aggressive behaviour is situational, provoked by situations and conditions which have nothing whatever to do with anything genetically programmed in the individual.

Ethological argument is built from the assumption

that behavioural patterns such as aggression are seated specifically in the genes. This key assumption does not consider individual vary in the frequency and the nature of aggression. The fact that ethologists are uninterested in the study of individual differences in behavioural development, leaves a lot to be desired. The thoery fails to question why some individuals are passive, peaceful, whereas others are quarrelsome or active.

The study of individual differences in behavioural development is vital in understanding how aggression arises and varies in both animals and human beings.

Although various theories have been used to explain human behaviours, the proponents of social learning theory, have argued that it is not a man's nature, but his nurture that is the source of aggression. The role of learning and experience in influencing the development of aggression are largely being ignored by the theories thus far discussed. There is substantial evidence, both for animals and man, the learning and experience play substantive roles in the development of an individual's aggression, where behaviour is unrewarded, it is minimal (MacArthur, 1967.)

According to Bandura's social learning theory, man's behaviour is learnt through modelling or imitating others. Man learns to adapt to the environment through these learned responses by which he develops. The basic theory is that children learn through contacts with other people of the society. The parents are the principle agents of teaching the acceptable behaviours. They accomplish this by rewarding the "right" behaviours and punishing behaviours that violate social rules.

The social learning theory talks about aggression

learned as a means to some other end, like obtaining a parent's approval through imitation of his aggressive behaviour. Also "experimental studies of imitation suggest that the degree to which it occurs depends on the social context, the personal characteristics of the model, and the personal characteristics of the individual, whose imitative behaviour is manipulated" (Sarason, 1976, p.319).

For instance in their study of aggression, Whiting and Whiting (1979) found that in a homogenous community that is, the rural areas, there was generally very low aggression whereas heterogenous communities such as urban area, aggression was much higher, supporting the social learning theory of aggression.

With the social learning theory of aggression, the problems that arise are, the effects of rewards or reinforcements on specified responses, the effect of non-reward and punishment on these responses, the prior learning experiences and the effects of generalization and discriminating learning behaviour.

After having looked at the different theories and the research of preschools in Kenya, the social-learning theory's approach is the most adequate to support the hypotheses in this paper. This is because the social learning theory emphasizes learning through modelling, observation and socialization. Teachers and parents act

as models in the child's environment and make them behave in different ways. This can be in the aggressive behaviours adopted by the children of the lower economic class, who are different from the children of the higher economic class (Defleur, 1977).

Children are easily influenced by the effect of reinforcement. In some cultures boys are 'trained' to be more aggressive than girls. The training may involve exposure to aggressive situations or models.

The ethological theory seems inappropriate for the hypotheses to be tested, because it would be very difficult to prove the aggressive behaviour arises from genetic endowment or an evolutionary process. It may also extend to animal experimentation and brain lesions. Furthermore, details of Darwin's theory of the survival of the fittest cannot be tested rigorously either.

The Frustration - Aggression Hypothesis would also prove to be inappropriate for this study as there are no specific tests or other measures to find out:-

1. How aggression is kept to a minimal.
2. How aggression is displaced or how it changes form
3. What the basic individual frustration is and how it varies culturally and socially.

Dollard et al believe that aggression occurs only due to frustration, but they missed out the role of how aggressiveness as a response to frustration as well. Hence, for the purpose of this study, the Frustration - Aggression Hypothesis seems to be inappropriate.

With the psychoanalytic theory of aggression, Freud says that man is born with an instinct to die, and yet there are no ways to find out if aggression is really innate. The role of environment also plays a part in this theory and there is no clear cut dividing line that indicates where aggression stops being innate. Therefore it would prove to be very difficult to base this study on the psychoanalytic theory of aggression.

D. The Empirical Findings

Even with all the different theories of aggression,

research evidence shows that there is still more to be desired in the area of preschools and aggression, especially in Kenya. This is because very little research has been done here. Whiting and Whiting (1975) conducted a research amongst the Gusii children and found that the girls scored higher on aggression than the boys in the 7 - 11 years age group. Gakuru (1979) conducted his study on the nursery schools in Nairobi and access to educational opportunities. This shows that the need to conduct research in nursery schools is very important in Kenya.

Some researchers have come up with their own findings as contingent upon the culture and the geographical location he came from.

The studies have been divided into three sections. The first is on studies on no sex differences, the second, on boys being more aggressive and the third, on girls being more aggressive.

1. Literature on Sex and Aggression

Drabman, Thomas and Jarvie (1977) on their experimentation of the effects of televised violence on children found no significant sex differences. Frodi (1979) conducted an experiment to illuminate physiological and experimental processes mediating sex differences in aggressive behaviour. She found no sex differences.

Eron (1980) commented that "although in general

girls demonstrate less aggressive behaviour of all types than boys do, there are some girls who have been socialized like boys who behave as aggressively as boys do" (p.244). Eron (1980) conducted a cross lag analysis on correlations between aggressive behaviour and violence viewing at different times over a period of one year, in three and four year old nursery school children. He found no significant differences between boys and girls in their respective aggressive behaviours.

Tiegger (1980) examined critically, Maccoby and Jacklin's (1975) findings of males being biologically predisposed towards aggressive behaviour. Tiegger (1980) quoted from Frodi, Macaulay and Thomm, that "in any case, it is clear that numerous experimental situations can evoke aggressiveness from females as well as males" (p.944). He goes on to say that:-

"Emmerich studied low socio-economic status, black and white, boys and girls, age four - five, from "disadvantaged" backgrounds.

It was found that while boys engaged in more gross motoric activity and seem more assertive, no differences were observed in dominance-submissiveness and defiance-hostility.

Thus, as an instance of an American subculture grouping, these results on low socio-economic status boys and girls

do not indicate a sex difference in these presumed indicators of aggression" (p.944).

Tiegger further emphasised that Maccoby and Jacklin's theory of sex differences in aggression cannot be established.

Sears, Whiting and Nowlis (1953) did an observational study on nursery children of three groups. One group had mothers who seemed quite punitive when their children were aggressive at home. The second, group had mothers who were non-punitive and the mothers of the third group were mildly punitive. They found that during a free play period, aggression in boys was much higher than aggression in girls. This study does not however, agree with the social-learning theory of aggression.

Smith and Green (1975) observed five day nurseries and five play groups to study sex differences in England and to compare the study with the American findings of aggressive instincts. They recorded 144 aggressive incidents between boys only, 93 between a boy and a girl, and 32 between girls only. Their results suggested that the incidence of aggression was higher in the boys than in the girls, just as was true for American nurseries.

Lee and Stewart (1976) say that males are more aggressive than females by saying that "some biological basis of the greater aggressiveness of males would seem to be

indicated by the fact that males tend to be dominant throughout the animal world" (p.396). Lee and Stewart (1976) also quote Terman and Miles who say "the males directly or indirectly manifest the greater self assertion and aggressiveness" (p.402).

Puleo (1978) studied the effects of model reinforcement or imitative aggressive children. Twenty girls and boys of different preschools were randomly assigned to one of the four groups (three experimental and one control). In the experimental groups, the subjects were shown a movie in which a male model received different amounts of social praise for playing in an aggressive manner. In the control group the subjects were not given any exposure to the movie.

Later, in a free play situation data showed that boys exhibited more imitative aggressive behaviour than girls.

Maccoby and Jacklin (1980) defended their hypothesis, against Tiegger (1980) of boys being more aggressive than girls by saying that, "our reading of cross cultural studies then, indicate to us that the results so far are consistent with the studies done in the United States and England in showing higher rates of male aggression" (p.971). They quoted Barrett's study of 1979 saying that "a strong sex difference was found in the rates of both physical and verbal aggression, boys showing more of both" (p.967). At the same time Maccoby and Jacklin (1980) said that "it has become

increasingly evident that children's aggression depends to a considerable extent upon the age and sex of the dyadic partner or the composition of the several child groups in which the child is involved" (p.966). Maccoby and Jacklin (1980) also found that although there are no sex differences of young children in the levels of social behaviour there was a tendency for the boys to be more aggressive than girls. This study supports the social learning theory.

For instance, Matthews and Anguelo (1980) based their studies to find gender differences in competitiveness and aggression, in a sample of 420 children. The teacher ratings on three administrations of MYTH Form 0 indicated that boys were significantly more aggressive than girls.

Frodi, Macaulay and Thomme (1977) on the other hand say that, "men and women may be equally angered, say by insult but women may be more likely to act on that anger if they attend to their angry feeling whereas men may be more likely to act if they attend to objective evaluation of the insulter" (p.654). They are implying here that women may often be more aggressive than men. In 1979 Frodi, Macaulay and Thomme conducted an experiment to find out if men were more aggressive than women. Their research findings showed that when aggression is perceived as justified or prosocial and when other factors are controlled, women may act more aggressively than men.

Archer and Westerman (1981) carried out a research of the sex differences in the aggressive behaviour of school children, of the ages of 6 years and 11 years. They wanted to find out if the sex differences in the aggressive behaviour as much in classroom as in the play ground, in the younger children as much as in the older children, and whether there were sex differences in the physical aggression or verbal aggression in both these. They found no sex differences at 6 years or 11 years. They found no sex differences at 6 years for verbal or physical aggression, but at 11 years, the girls were more verbally aggressive and the boys more physically aggressive.

What then is the situation in Nairobi? Are the boys more aggressive than girls or is it that the girls are more aggressive than boys?

2. Literature on Performance, Social Class and Aggression

Just as different situations brought about differences in the aggressive behaviour of boys and girls, the same holds true for the academic performance of the different socio-economic class children.

Hartup (1974) observed 64 children between the years of 4 - 6 and 38 children between 6 - 7 years of age from lower socio-economic class for ten weeks. Out of these 102 children, there were 56 boys and 46 girls. He found that the older children were less aggressive per unit time than the younger children and that boys were more aggressive totally

than girls. However, he commented that "none of the functional analyses, that is, those relating the nature of the aggressive outbursts to the nature of the antecedent have revealed significant sex differences" (p.340).

Marcus and Corsinin (1978) conducted a study on parent expectations of 40, four year old preschool children distributed equally by child gender and socio-economic status of low and middle classes. No significant differences were found in the performance of academic tasks between boys and girls or between children of lower and middle socio-economic status families.

Pearce (1978) defined aggression as 'physical attack, destructiveness, humiliation, threat and disapproval' (p.379). Two observers, observed 20 lower class and 20 middle class white children in one preschool. Analysis of variance, indicated no significant effects of social class on any measure. Boys were more disapproving than girls. Disapproving was a measure of aggression.

When he studied the social significance of nursery schools in Nairobi, Gakuru (1979) said that "inequality among the social classes are served by these nursery schools". He tested 57 nursery schools by means of interviews, observations and questionnaires.

Seegmiller (1980) did a study to examine the effects of sex, age and social class differences in a large preschool. Her sample consisted of 245 boys and 224 girls of three, four

and five year olds, of middle income and lower income status. The children were observed once in three weeks alternatively by a male and female observer. The results showed that the boys were more aggressive than girls. The lower income girls were significantly less aggressive, the lower income boys were significantly more aggressive while both middle class girls and boys first increased and then decreased their rates of aggression.

Marjoriebanks (1981) studied four Australian lower social stratum groups of 630 families and 150 families of middle social stratum group. Each family had an 11 year old child, making an appropriate equal number of girls and boys. The cognitive performance of the children in their classroom was measured. There were no significant sex differences in any of the scores. Significant differences were found in the environment and cognitive scores for boys and girls from different social groups. The boys and girls of the middle social status group had higher cognitive scores than girls and boys of lower social status group.

E. The Research Hypotheses

With the empirical findings, and the theories of aggression, it would be expected that:-

1. Non-aggressive children perform better than aggressive children.
2. Boys are more aggressive than girls.
3. There is no significant difference in the aggressiveness

- of the three year olds and the five year olds.
4. Children of the lower socio-economic class are more aggressive than children of the higher socio-economic class.
 5. There is no significant difference in the performance of the boys and the girls.
 6. There is no significant difference in the performance of the three year olds and the five year olds.
 7. Children of the higher socio-economic class academically perform better than children of the lower economic class.

The hypotheses, however are stated in the null form (as below), for the purpose of finding a statistical significance, are straight forward and are expected to be true if there are no extraneous influence effecting the relationships.

1. There is no relationship between aggressiveness and the academic performance of the child.
2. There is no significant difference in aggressiveness between boys and girls.
3. There is no significant difference in aggressiveness between three year olds and five year olds.
4. There is no significant difference in aggressiveness between children of the lower income bracket and those of the higher income bracket.
5. There is no significant difference in academic performance between boys and girls.

6. There is no significant difference in academic performance between three year olds and five year olds.
7. There is no significance in academic performance between children of the lower income bracket and those of the higher income bracket.

CHAPTER III

METHODOLOGY

A. Introduction

This chapter presents the definitions of the key research variables, the procedure used in obtaining the sample for the study and some key characteristics of this sample.

In addition, a statistical examination of inter-observer reliability co-efficient is undertaken in an effort to establish the legitimacy of one observer using the observational instrument of this research.

B. The Research Variables

1. Aggression

Aggression as used in everyday language has various meanings. When a bomb dropped on Hiroshima, it was aggression, for that matter, it is considered an act of aggression when a person is ridiculing or abusing another. Psychoanalysis considers gossip as verbal aggression because it is meant to destroy another person. Thus, the area that aggression may cover is very vast.

Even with the various theories of aggression, the psychologists face problems with the operational definition of aggression. Some theorists like Dollard and Miller argue that aggression is a result of frustration whilst Freud and Lorenz point out that aggression is innate. Scott (1970) defines it

by saying that "aggression refers to fighting and the means of inhibiting an attack" (p.1). Mussen (1964) gives a general definition of saying that "the construct of aggression subsumes any action, thought or impulse, the presumed aim of which is physical or psychological, injury either real or symbolic to an individual or a surrogate" (p. 799).

For the purpose of this study the definition of aggression is adapted from Pearce (1980) who operationally defined it as the child's "physical attack, destructiveness, humiliation, threat and disapproval" (p. 1062), of another child. This particular definition was used to suit the instrument used, as in Appendix I.

2. Academic Performance

The term "academic performance" refers to some method of expressing a student's scholastic standing "(Lavin, 1965, p.19). The most common method adapted to evaluate academic performance at most schools is teacher evaluation. Although this method of assessment is widely used, it has a few limitations which have to be examined closely before judging by the teacher evaluation.

The students evaluated are often compared when evaluated on different subjects. Teachers vary

in the criteria they use to evaluate. Often subjective criteria is used by the teachers. All these weaknesses therefore cause a difficulty to measure reliability, the academic performance. For instance Lavin (1965) says that " a grade should be viewed as a function of the interaction between the student and the teacher" (p.21). An example of such an interaction is seen by the effect of the set of a student upon the objectivity of a teacher's grading practice.

At the same time, it was found that student evaluation at the pre school level is not viewed very positively because the institute feels that the child of that age is under a lot of pressure and due to the different syllabbi used by the various pre schools, (Mrs. Leah Kipkorir, personal conversation, Aug. 1984). The Kenya Institute of Education is now under the process of developing guidelines for pre schools and as yet have not developed any forms of assessment of the pre school child.

The academic performance is operationally defined as the grades A,B,C,D given by the teacher to each student. A and B meaning a good performance and C and D meaning poor performance. This is a measuring instrument applied to a "variety of practical problems"

(Osgood, 1975, p.25). This scale is "defined by a pair of polar (opposite in meaning), adjectives" (Osgood, 1957, p.25). This is the basis of Osgood's semantic differentials and "used to determine 'profiles' of various social stereotypes" (p. 24).

Each position on this teacher rating scale of A,B,C, D go from the differentials of extremely good to very poor. Osgood (1957) justifies the use of the semantic differential way of evaluating the academic performance of the child by the teacher by saying that "thus far, three such elemental types have been identified with some confidence (evaluation, potency and activity) and have been found to account for a large number and variety of discriminations" (p.116).

The good and the poor performers can also be categorised in the pass/fail grading system. This is a very popular grading system as more than half of the American affiliated and Canadian Medical Colleges and an increasing proportion are adapting to this grading system. (Heywood, 1977, p.64). Teachers in the country also often use the pass/fail method in their classroom tests.

However, such a technique for measurement has its limitations. In Kenya, as far as

the preschool children of the ages three through five years, are concerned, there is no standardized test. These children are only assessed by the use of their teachers' evaluation.

This means of measurement also is appropriate because there is no set curriculum at any of these schools, of either a high socio-economic class or of a low socio-economic class. The curriculum include naming colours and shapes counting, singing rhymes and even general discipline in the classroom. Often schools of the higher socio-economic class can afford to have more advanced equipment to facilitate teaching while the lower class schools have to make do with limited access to teaching apparatus. This too poses a problem of standardizing tests for these preschool children. In fact, the standard is also based on teacher evaluation.

The teachers at these various nursery schools, at the end of the observation schedule were asked to evaluate the children on each of the subjects taught at their respective nursery schools and to assign an average grade for each child. The quantitative scope for A being 4, B three, C two and D one. The score was added and an average grade attained. However, it was difficult to eliminate the effects of teacher

subjectivity on the student performance. This is perhaps the most major limitation of such an evaluation.

The other variables used in the study are sex, age and socio-economic class. These three variables acted as the independent variables. The differences on sex, age and socio-economic class are to be found on the aggression scores and the academic achievement.

3. Sex

The child's sex was determined from the sex of the name and the observer's identification. The sex of the child, that is male or female is important because there seems to be a need to know the extent of sex differences in an urban setting, such as Nairobi. That is, to determine if boys are more aggressive than girls and if boys academically perform better than girls or is it that the girls are more aggressive than boys and if girls academically perform better than boys.

The child's birth date was obtained from the cumulative school records. In all cases, age was figured as of the month of observation, that is November 1981 and January 1982.

4. Social Class

The social class variable in this study is school linked and has been defined as in Gakuru's (1979) study. In the category of Proprietary Day Nurseries, "Nursery schools charging a monthly fee from 101/- to 250/-" is the lower socio-economic class preschool and "nursery schools charging monthly fees of 251/- and over" is the higher socio-economic class preschool.

The child's behavioural differences are contingent on the type of socio-economic background he comes from. In areas like Mathari Valley, Majengo and so on, the families are over crowded, unlike the Muthaiga, Lavington, Kitisuru areas where families have their own tightly fenced compounds and where children are kept within their compounds except when they are accompanied by their parents for outside activities. Children from Mathari Valley tend to be unsupervised in play and are allowed a great deal of unorganised freedom. Entwistle (1978) points out that "success and failure in school has borne some relationship to social-class background" (p.30).

Defleur (1977) claims that since the children in the higher income areas are provided with better school equipment, buildings, libraries and such facilities and in the nursery

schools with books, play materials, toys, play ground and so on. Defleur (1977) therefore, found that "I.Q. scores and results of scholastic achievement tests were notably higher for the children in the schools in the upper income areas" (p.572). One can ask whether this is also true for Nairobi.

What basically happens is that "the pattern of early marriage and lack of family planning makes it difficult if not impossible for many lower class parents to finish their education and thus compete for good jobs. The children of such families are in turn cut off by their parent's poverty from educational and other such opportunities necessary for their own advancement" (Defleur, 1977, p.232). Thus, different social categories are founded. These sociological categories of nationality, religion or social class are important points of reference as these exemplify, concretely, distinctive contributions to human culture" (Entwistle, 1978, p.184).

C. The Collection of Data

Nairobi was selected for this study as it is the largest urban centre in Kenya offering people of all walks of life as far as the race, social class, religion and other such factors are concerned. Once the proposal of the study was written and approved, the Office of the President guaranteed permission for this research to be carried out.

1. The Schools

Stratified random sampling of the schools was done;

The list of the proprietarily owned preschools was obtained from City Education Department, Nairobi. The school fees and the location of the schools in Nairobi was first found and later randomly selected.

Nairobi city is divided into various sections contingent upon the various social classes. For example, The Muthaiga, Lavington areas are occupied by the higher socio-economic class people. The Mathari Valley, Eastleigh sections on the other hand are occupied by the lower socio-economic class people. Tiwari (1972) conducted a research in Nairobi and classified the city as, "On the basis of density the residential areas of the city can be grouped into three distinct classes" (p.43). Tiwari further went on to say that these three classes are:-

- a. Areas of light density (0 - 20 persons per acre).
This zone has gradually lost its white racial exclusiveness but remains an upper class residential area.
- b. Areas of medium density (20 - 40 persons per acre).
Formally dominated by Asians now attracting members of newly emerging African middle class.
- c. Areas of heavy density (over 40 persons per acre).
Remains overwhelmingly African residential areas of lower middle to lower class occupance.

The schools that were stratified and then randomly sampled were Arya Nursery School, Jack and Jill Nursery School, St. Ann's Nursery School and White Cottage Day Nursery.

Arya Nursery School is situated in Ngara, a former lower class Asian and African residential area, charging a monthly fee of 150/-. This school has a mixed population of Asians and Africans. There were approximately 35 pupils of two age groups in a class. (i.e. children of 4 years and 5 years may be found in one classroom). The teacher qualification being 'O' Level.

Jack and Jill Nursery School is situated in Nairobi South-'C', a former Asian/African working class residential area, charging 250/- a month for fees. This school has a dominant Asian population of both the pupils and the teachers. There were approximately twenty pupils of two age groups (of 3 years and 4 years) in one class and the teacher qualification being 'O' Level with no professional training.

St. Ann's Nursery School is situated in upper Ngara, towards Parklands, a former Asian residential area, charging a fee of 340/- a month. This school has a mixed population of African and Asian pupils and teachers. There are twenty eight pupils of one age group in a class. The teacher qualification varied a lot. Some of them had undergone teacher training at P 1 level whereas others had five years experience of teaching with Montessori training while others had 'O' Level.

White Cottage Day Nursery is situated in Westlands, a former European residential area. It charges a fee of 500/- a month and is predominantly an African population. This

school had approximately 24 pupils of one age group in a class with two teachers. The teachers were highly qualified at the level of teacher training at pre-primary level.

2. The Subjects

Once the schools were identified, classes for three and five year olds were allocated to the researchers. The names of the boys and girls in each classroom were separated and five children were randomly selected from each group. Altogether, eighty children were observed in eight classrooms in four different schools. Table 3.1 shows the composition of the final sample.

Table 3.1

The composition of the sample

SCHOOL	CLASS OF SCHOOL	3 YEAR OLDS		5 YEAR OLDS		ROW SUM	
		GIRLS	BOYS	GIRLS	BOYS		
ARYA JACK AND JILL	LOW	5	5	5	5	20	↑ 40 ↓
	LOW	5	5	5	5	20	
ST. ANN'S WHITE COTTAGE	HIGH	5	5	5	5	20	↑ 40 ↓
	HIGH	5	5	5	5	20	
COLUMN SUM		20	20	20	20	80	
		← 40 →		← 40 →			80

3. Instrumentation

The academic performance was scored by teacher evaluation of the child by the grades A, B, C, D. The teachers were asked to grade their pupils on their general academic work. This included reading, writing, spelling, counting, knowledge of colours and so on. The children who attained grades A and B were good academic performers and children with grades C and D were poor performers

Aggression scores were obtained from the observation instrument (Appendix I), used by Vaughn and Waters (1981). The instrument is made up of nine categories of aggression, like hazing, displacement, hostility, and so on. The definitions of each of the aggressive behaviours is given in Appendix I. The reliability of this instrument used by Vaughn and Waters (1981) was 0.93.

Naturalistic observation was used as a method of collecting the data on aggression because children of ages three and five years can hardly be expected to answer questionnaires or interviews. Video taping would have been very expensive. The naturalistic observation has the advantage that the observer does not manipulate the environment of the subjects.

"In its purest form naturalistic observation is the study of behaviour habitat - without the introduction of external or artificial influences" (Marrone and Rasor, 1972, p.5).

A pilot study was conducted to establish the inter-observer reliability of the observation schedule. For the establishment of this inter-observer reliability co-efficient, the investigator and a post graduate student in psychology served as observers. The two observers observed eight children, four girls and four boys, four, three year olds and four, five year olds at Kenwood Kindergarten, a preschool of high socio-economic class situated in the Peponi area in Nairobi. In order for the coding of a given act or behaviour to be counted as an agreement, the two observers had to have coded all categories of aggressive acts identically. The inter-observer reliability obtained was 0.83. Although the figure is lower than what Vaughn and Waters (1981) obtained, this is still acceptable. Rosen and Polansky (1975) have argued that "there are no rules that tell us what level of reliability one should demand of an instrument as long as agreement attained is well beyond chance" (p.174).

4. The Observation Schedule

Once the subjects at each of the schools were selected, they were divided into two groups of five each, in each of the classrooms so that the first group had three boys and two girls and the second group had two boys and three girls. Each subject was given an identification number. All the odd numbers were boys and even numbers girls. Group one was made up of children numbered from 01 - 05 and group two, consisted of children numbered from 06 - 10.

The researcher was an observer as a participant. In order for the subjects and the teachers to get adjusted to her, the observer went to the classrooms twice before recording the observations.

Each child was observed minute by minute for fifteen days. This gave a total observation period of two hundred and twenty five minutes per child. The observations alternated from a classroom environment to a play/break time environment so as to get an unbiased recording of the observations. The classroom activities included reading, counting, painting, reciting numbers and the alphabet and 'basic training'. (This was a subject for the three year olds at White Cottage Day Nursery where the child learnt to sit, stand, walk and generally behave in the classroom). The play/break time activities included singing, playing in the playground (under the supervision of the teacher at the high class schools and unsupervised at the low class schools), and playing with toys and different games in the classroom.

The minute by minute observations were then coded into any of the nine aggressive behaviour categories of the observational guide in Appendix I, and the frequencies summed on each behaviour category to get the aggression score for the day. Once the fifteen observations were completed on each child, the day to day aggression scores were added to obtain a final overall score of aggression for each child. The work sheet used to record the day by day scores of aggression can be seen in Appendix II, and the aggression

scores of each day for every child are included in Appendix III.

Just before the fifteen days total aggression was summed for any group, their respective teachers were interviewed. The teachers were asked to award grades A, B, C, or D to each child based on his perception of the overall academic performance of the child.

CHAPTER IV

ANALYSIS AND RESULTS OF THE DATA

A. Introduction

This chapter presents the empirical findings that test the hypotheses presented in chapter II. It also includes a section on descriptive statistics which describes what happened at each of the nine aggressive behaviours of the test used.

The specific questions that constitute the foci of this chapter are:-

1. Is there a significant relationship between the child's aggression and the teacher's view of his academic performance?
2. Is there a significant relationship between the child's sex and aggression?
3. Is there a significant relationship between the child's age and aggression?
4. Is there a significant relationship between the child's socio-economic class and aggression?
5. Is there a significant relationship between the child's sex and the teacher's view of his academic performance?
6. Is there a significant relationship between the child's age and the teacher's view of his academic performance?
7. Is there a significant relationship between the child's socio-economic class and the teacher's view of his

academic performance?

Also, how do the two dependent variables, aggression and performance compare on various independent variables?

B. Data Analysis

The procedure for analysis is:-

1. The main hypotheses are tested by the use of ANOVA. These are when the child's aggression scores are compared with sex, age and social class.
2. A 2 x 2 Chi Square Analysis is carried out to compare the child's academic performance with his aggression scores, sex, age and socio-economic class.
3. The aggression score is then dichotomized into a high (A) and low (\bar{A}) scale. This was obtained by getting the average of the range of the aggression scores of both the three year olds and five year olds. Those who scored below the average were considered to be low on aggression (\bar{A}) and the children who scored higher than the average were the aggressive scores (A). Cross-tabulation partitions the original sample into four separate categories:-

Table 4.1 The Cross-Tabulation Partitions

		AGGRESSION SCORES	
		A	\bar{A}
ACADEMIC PERFORMANCE	GOOD	I	X
	POOR	Y	II

If the hypothesis is true (for example, aggressive children are better academic performers than non-aggressive children), then most of the cases would fall into cells I and II. Background and age analysis comparing those with higher aggression scores with those of low aggression scores is accomplished by comparing the subjects falling into cell I with the subjects falling in cell II. Cells labelled X and Y represent deviant cases.

4. The influence of age, sex and socio-economic class was tested by partialling of the original chi square relationship. Through this procedure, the influence of a third variable is controlled as schematically shown in 2 x 2 partial tables, in table 4.2.

Table 4.2 Description of Partical Tables

	3 YEAR OLDS		5 YEAR OLDS	
	AGGRESSION SCORES		AGGRESSION SCORES	
	A	\bar{A}	A	\bar{A}
girls	I	X	I	X
SEX				
boys	Y	II	Y	II

C. Descriptive Statistics

Since, the nine aggressive behaviour categories of the observation test were tallied differently, it would be interesting to view what aggressive behaviour was manifested the most and which one was the least displayed.

All the children hazed (a) at least once the highest common for both the girls and the boys, the three year olds and the five year olds as also the lower socio-economic and the higher socio-economic class children. This maybe because the children find it easy to tease and ridicule other children rather than engage into beating up. Also, hazing is the starting point of most of the fights that occurred.

Out of the eighty children only two did not initiate hazing (b). This was a popular activity as well for all the children regardless of their sex, age and socio-economic class differences. The highest score on this category was 20,

scored by two boys.

Specific hostility (c) was manifested by fifty children. The highest score was 9. This activity was more popular with the boys the five year olds and the lower socio-economic class children.

Fifty five children manifested initiating specific hostility (d). The highest score was 9. The boys, five year olds and lower socio-economic class children performed it more than the girls, three year olds and higher socio-economic class children.

Object struggle (e) was also a popular activity next to hazing, performed by 69 children. This action was performed equally by boys and girls, by the five year old and equally by the lower and the higher socio-economic class children.

Mostly the girls, 5 year olds and children of the higher class won object struggle (f). Although 69 children struggled for an object, only 57 won.

Aggression occurred through displacement (g) by 70 children, mostly boys, five year olds and children of the lower class. This was also a popular form in which the children manifested aggression.

Displacement was won (h) equally by boys and girls and the five year old lower class children. Only sixty of the seventy children who indulged into the activity of

displacement won.

Game hostility (i) was the least practised means of aggression. Only 13 children were scored on this activity. The highest score on game hostility is two. It was mainly manifested by the boys, the three year olds and the lower socio-economic class children.

The highest total score on aggression is 78 scored by a five year old boy of a lower socio-economic class. The lowest score on aggression is 3 scored by a three year old girl of a high socio-economic class.

As far as the academic performance is concerned, all in all, boys were higher achievers than girls. Twenty six boys scored a good while 14 scored a poor, whereas 13 girls scored a good, while 27 scored a poor. The three year olds performed almost as well as the five year olds. Twenty, 3 year olds scored a good, while 20 three year olds scored a good while 20 three year olds scored a poor. Amongst the five year olds, 19 scored a good and 21 scored a poor. The lower socio-economic class children performed as well as the high socio-economic class. Amongst the children of the lower class, 19 scored a good and 21 scored a poor, whilst among the children of the higher class, 20 scored a good, and 20 scored a poor.

D. The Hypotheses Tested

1. Aggression and Academic Performance

- a. H_1 : There is no significant relationship between aggressiveness and the academic performance of the child.

Table 4.3 Aggression and Academic Performance

		AGGRESSION SCORES		
		A	\bar{A}	
ACADEMIC PERFORMANCE	Good	27	23	50
	Poor	12	18	30
		39	41	80

The chi square value between the child's academic performance and his aggression scores is 1.47 (1 d.f, n.s) hence the null hypotheses of no relationship is accepted. This is to say that there is no significant relationship between aggressiveness and the academic performance of a child.

b. Background Analysis

Since there is no significant relationship between a child's aggression and his academic performance, sex, age, and social class analysis is done to help account for the

the above result.

Table 4.4: Aggression and Academic Performance by Sex

Table 4.4

		a) GIRLS			b) BOYS		
		AGGRESSION SCORES			AGGRESSION SCORES		
		A	\bar{A}		A	\bar{A}	
ACADEMIC PERFORMANCE	Good	11	17	28	16	4	20
	Poor	2	10	12	11	9	20
		13	27	40	27	13	40

The chi square value for the females is 1.98 (1 d.f, n.s), and the males is 2.84 (1 d.f, n.s). The null hypothesis that there is no significant relationship between the academic performance and aggressive behaviour of either boys or girls included in this study is accepted.

Table 4.5: Aggression and Academic Performance by Age

Table 4.5

		a) 3 YEAR OLDS			b) 5 YEAR OLDS		
		AGGRESSION			AGGRESSION		
		A	\bar{A}		A	\bar{A}	
ACADEMIC PERFORMANCE	Good	11	11	22	16	12	28
	Poor	9	9	18	3	9	12
		20	20	40	19	21	40

The observed chi square value for the 3 year olds is 0(1 d.f, n.s) and for the five year olds is 3.49 (1 d.f, n.s.). There is no significant relationship in the academic performance of the aggressive or non-aggressive 3 year olds, or 5 year olds.

Table 4.6: Aggression and Academic Performance by Social Class

Table 4.6

		a) LOW SOCIAL CLASS AGGRESSION			b) HIGH SOCIAL CLASS AGGRESSION		
		A	\bar{A}		A	\bar{A}	
ACADEMIC PERFORMANCE	Good	13	12	25	14	11	25
	Poor	7	8	15	6	9	15
		20	20	40	20	20	40

The chi square value of the low social class children is 0.10 (1 d.f., n.s) and the chi square value of the high social class children is 0.96 (1 d.f., n.s). This means that there is no significant relationship between aggression and the academic performance of children whether they belong to the high or low socio-economic status.

All in all, although, five year old aggressive children perform better than five year old non-aggressive children on the whole, there is no significant relationship between aggressiveness and the academic performance of the

child. This holds true because there is no significant relationship in the aggressiveness and academic performance in the girls, in the three year olds, in the low social class and in the high social class.

2. Sex and Aggression

- a. H_2 : There is no significant difference in the aggressiveness of boys and girls.

Table 4.7: Summary Table of the One-Way ANOVA

Source of Variation	Sum of Squares	d.f.	Mean Sum of Squares	F	Significance
Between	1835.52	1	1835.52		
Within	14073.63	78	180.43	10.173	$p < .01$
Total	15909.15	79			

The F value of 10.173, (79 d.f., < 0.01) shows a statistical probability of less than one in one hundred of such a relationship occurring by chance. Hence, there is a statistically significant relationship between the sex of the child and their aggressiveness. The boys are more aggressive than the girls.

b. Background Analysis

A background statistical analysis was done to see what factors influenced the boys to be more aggressive than girls.

Table 4.8: Sex and Aggression by Age

Table 4.8

		a) 3 YEAR OLDS				b) 5 YEAR OLDS		
		Sex				Sex		
		Females	Males			Females	Males	
AGGRESSION	A	7	13	20	A	11	13	2
	Ā	13	7	20	Ā	9	7	1
		20	20			20	20	

The computered chi square value for the three year olds as shown in Table 4.8(a) is 3.6. (1 d.f, n.s.). This chi square value shows a statistical probability of less than ten in one hundred of such relationships occurring by chance. It indicates that there is no difference in aggression between three year old boys and the three year old girls.

Similarly, the computed chi square value for the 5 year old as shown in Table 4.8(b) is 0.43 which indicates that there are no sex differences in aggression among the five year old boys and girls. That is, boys and girls at this age do not show significant difference in aggression.

Table 4.9: Sex and Aggression by Class

Table 4.9

		a) LOW SOCIO-ECONOMIC CLASS			b) HIGH SOCIO-ECONOMIC CLASS		
		Sex			Sex		
		Females	Males		Females	Males	
AGGRESSION	A	6	14	20	7	12	19
	\bar{A}	14	6	20	13	8	21
		20	20	40	20	20	40

The chi square value for the low socio-economic class is 4.2 (1 d.f, $p < 0.05$). Since the null hypothesis is rejected, it indicates that within the lower economic class, boys are more aggressive than girls, and this holds true to a statistical probability of less than five in one hundred.

With the high socio-economic class, the chi square value is 2.25 (1 d.f, n.s). The null hypothesis of independence, that is there is no difference in the aggression scores of boys or girls in the higher class, is accepted.

To summarize, generally, boys are more aggressive than girls since within the three year olds and the lower socio-economic class, the same also holds true. However, there is no significant difference in aggression between girls and boys in the five year old category, and with the high socio-economic class level.

3. Age and Aggression

- a. H_3 : There is no significant difference in the aggressiveness of three year olds and five year olds.

Table 4.10

Summary Table of the One ANOVA

Sources of Variation	Sum of Squares	d.f.	Mean Sum of Squares	F	Significance
Between	567.11	1	567.11		
Within	15340.75	78	196.68	2.88	n.s.
Total	15907.86	79			

The F. value of 2.88 (d.f, 78, n.s) shows that the hypothesis is accepted. This implies that there is no significant age difference in the aggression of a child

b. Background Analysis

Since there is no significant relationship between age and aggression, background statistical analysis is done to indicate some of the factors that may have brought about this relationship.

Table 4.11: Age and Aggression by Sex

Tables 4.11a and 4.11b show the chi square values for girls of 1.60 and for boys of 0(1 d.f, n.s) both of which indicate that the null hypotheses can be accepted. This means that there is no significant difference in aggression of the three year olds or five year olds either girls or boys.

Table 4.11

		a) Girls				b) Boys			
		Age				Age			
		3 Yrs.	5 Yrs.			3 Yrs.	5 Yrs.		
AGGRESSION	A	7	11			13	13	26	
	\bar{A}	13	9	18		7	7	14	
		20	20	40		20	20	40	

Table 4.12: Age and Aggression by Class

Table 4.12

		a) LOW SOCIO-ECONOMIC CLASS				b) HIGH SOCIO-ECONOMIC CLASS			
		Age				Age			
		3 Yrs.	5 Yrs.			3 Yrs.	5 Yrs.		
AGGRESSION	A	12	13			8	11	19	
	\bar{A}	8	7	15		12	9	21	
		20	20	40		20	20	40	

For the low socio-economic status and aggression, the calculated chi square values are 0.10 and 0.99 for the children of high socio-economic status. The chi square values show that the null hypotheses in both the cases are accepted. That is to say that there is no difference in the aggression of the three year olds or five year olds of children belonging either to the low socio-economic class or the high socio-economic class.

Hence, to conclude, there is no relationship between age and aggression. This is because there is no difference in the aggression scores of three year olds and the five year olds whether they are boys or girls or whether they belong to the high or the low socio-economic classes.

4. Socio-Economic Class and Aggression

- a. H_4 : There is no significant difference in the aggressiveness of children of the high and the low socio-economic class.

Table 4.13: Summary Table of the One-Way ANOVA

Source of Variation	Sum of Squares	d.f.	Mean Sum of Squares	F	Significance
Between	182.40	1	182.4		
Within	15728.83	78	201.65	0.91	n.s.
Total	15910.23	79			

The F value of 0.91 (79 d.f, n.s) shows that the null hypotheses is accepted.

b. Background Analysis

A Background analysis was done to find out what factors influenced the no relationship.

Table 4.14: Socio-Economic Class and Aggression by Sex

Table 4.14

a) Girls				b) Boys			
Socio-Economic Class				Socio-Economic Class			
Low High				Low High			
A	6	7	13	A	14	12	
AGGRESSION							
A	14	13	27	A	6	8	
20			20	20			20

The chi square value for the girls is 0.12 and for the boys is 0.44 (1 d.f, n.s) both of which indicate that the null hypotheses can be accepted. This implies that there is no difference in the aggression scores of the low socio-economic class or the high socio-economic class of either girls or boys

These values are different from the chi-square values computed for sex and Aggression by class as shown on table 4.9. Table 4.9. indicates that specifically in the low socio-economic class, the boys are more aggressive than girls, and there is no sex difference in aggression amongst children of high socio-economic class.

Table 4.15: Socio-Economic Class and Aggression by Age

		a) 3 YEAR OLDS			b) 5 YEAR OLDS		
		Class			Class		
		Low	High		Low	High	
AGGRESSION	A	12	8	20	13	11	24
	\bar{A}	8	12	20	7	9	16
		20	20	40	20	20	40

The chi square values of the three year olds is 2.4 and the five year olds is 0.42 (1 d.f, n.s) which means that the null hypotheses in both the cases are accepted. That is to say that there is no significant relationship in the aggression of low or high socio-economic class children whether they belong to the age group of three years or five years.

In summary, there is no significant difference in the aggressiveness of children of the high or low socio-economic classes. Similarly there is no relationship between the sexes or the ages of children of low or high socio-economic classes and their aggression scores.

5. Sex and Academic Performance

- a. H_5 : There is no significant difference in the academic performance of girls and boys.

Table 4.16

		Sex		
		Females	Males	
PERFORMANCE	Good	28	22	50
	Poor	12	18	30
		40	40	80

The chi square value between a child's sex and his academic performance is 1.92 (1 d.f, n.s). This value shows that the null hypotheses of independence is accepted. That is to say that there is no sex difference in the academic performance of boys and girls.

b. Background Analysis

To understand why there is no relationship between sex and academic performance background statistical analysis is done on various factors.

Table 4.17: Sex and Academic Performance by Age

Table 4.17

PERFORMANCE	a) 3 YEAR OLDS			b) 5 YEAR OLDS		
	Sex		Total	Sex		Total
	Females	Males		Females	Males	
Good	14	8	22	14	14	28
Poor	6	12	18	6	6	12
	20	20	40	20	20	40

The chi square value of the three year olds is 3.64 (1 d.f, n.s.). This chi square value shows that there is a significant difference in the performance of the girls & boys. It holds to be true for a statistical probability of less than ten in one hundred of such relationships occurring by chance.

The chi square value of the five year olds is 0. This shows that there is no relationship between the sex and the academic performance of a five year old child.

Table 4.18: Sex and Academic Performance by Socio-Economic Class

Table 4.18

		Sex				Sex			
		Females	Males			Females	Males		
PERFORMANCE	Good	15	10	25	Good	13	12	25	
	Poor	5	10	15	Poor	7	8	15	
		20	20	40			20	20	40

The chi square value of the low socio-economic class is 2.66 and of the high socio-economic class is 0.10 (1 d.f, n.s), both of which indicated that the null hypotheses of independence can be accepted. This means that there is no significant sex difference in the academic performance of a child of either high socio-economic class or the low socio-economic class.

Although, three year old girls academically perform better than three year old boys, there is no significant sex difference in the academic performance. This significance of a relationship also holds true because there are no sex differences in the academic performance of low or high socio-economic class children and five year old children.

6. Age and Academic Performance

- a. H_0 : There is no significant difference in the academic performance of three year olds and five year olds.

Table 4.19

		Age		
		3 Yrs.	5 Yrs.	
PERFORMANCE	Good	22	28	50
	Poor	18	12	30
		40	40	80

The chi square value between a child's age and his academic performance is 1.92, a value which indicates that the null hypotheses of independence is accepted. Hence, there is no significant relationship between the age and the academic performance of a child.

b. Background Analysis

Further background analysis was conducted to investigate the lack of significant relationship between age and academic performance. This analysis involves controlling for sex and socio-economic variables.

Table 4.20: Age and Academic Performance by Sex

Table 4.20

a) GIRLS				b) BOYS					
Age				Age					
3 Yrs. 5 Yrs.				3 Yrs. 5 Yrs.					
PERFORMANCE	Good	14	14	28	Good	8	14	22	
	Poor	6	6	12	Poor	12	6	18	
		20	20	40			20	20	40

The chi square value of 0 (1 d.f, n.s) for the girls shows that there is no relationship between the age and the academic performance of the girls.

The chi square value of 3.64 (1 d.f, n.s.) of the boys shows that there is no significant difference in academic performance between boys of ages 5 or 3.

Table 4.21: Age and Academic Performance by Socio-Economic Class

Table 4.21

a) LOW SOCIO-ECONOMIC CLASS				b) HIGH SOCIO-ECONOMIC CLASS					
Age				Age					
3 Yrs 5 Yrs.				3 Yrs. 5 Yrs.					
PERFORMANCE	Good	11	14	25	Good	11	14	25	
	Poor	9	6	15	Poor	9	6	15	
		20	20	40			20	20	40

The chi square values of both, the low and the high socio-economic class is 0.96 (1 d.f, n.s) which means that there is no significant relationship between the age and the academic performance of children or either high or low socio-economic class.

In summary, there is no significant relationship between the age and the academic performance. Although, when controlled for age, five year old boys performed better than three year old boys, (Table 4.20b). No significant age effects were found in academic performance of girls, and children of high and low socio-economic class.

7. Socio-Economic Class and Academic Performance

- a. H_7 : There is no significant difference in the academic performance of children of the high and the low socio-economic classes.

Table 4.22

		SOCIO-ECONOMIC CLASS		
		Low	High	
PERFORMANCE	Good	25	25	50
	Poor	15	15	30
		40	40	80

The chi square value between a child's socio-economic class and his academic performance is 0. This indicates that there is no significant relationship between a child's socio-economic class and his performance.

b. Background Analysis

To investigate some of the factors that may have led to non-significant relationship between a child's socio-economic status and his academic performance statistical analysis is done.

Table 4.23: Socio Economic Status and Academic Performance by Sex

Table 4.23

a) FEMALES

b) MALES

		SOCIO-ECONOMIC CLASS					SOCIO-ECONOMIC CLASS		
		Low	High		Low	High			
PERFORMANCE	Good	15	13	28	Good	10	12	22	
	Poor	5	7	12	Poor	10	8	18	
		20	20	40	20	20	40		

The chi square values for the girls is 0.48 and for the boys is 0.40 (1 d.f, n.s) which implies that there are no significant differences in the academic performance and the socio-economic class of either girls or boys.

Table 4.24: Socio-Economic Status and Academic Performance
by Age

Table 4.24

a) 3 YEAR OLDS

b) 5 YEAR OLDS

		SOCIO-ECONOMIC CLASS				SOCIO-ECONOMIC CLASS			
		Low	High			Low	High		
PERFORMANCE	Good	11	11	22	Good	14	14	28	
	Poor	9	9	18	Poor	6	6	12	
		20	20	40			20	20	40

The chi square values of the socio-economic class and the academic performance of both the three year olds and five year olds is 0. This means that at either age groups of three or five, there is no significant relationship between the socio-economic classes and academic performance.

Therefore, to conclude, there is no significant socio-economic difference in the academic performance of any children. Sex and age do not influence the original relationship between performance and socio-economic status.

CHAPTER V

DISCUSSION, SUMMARY AND CONCLUSIONS

A. Introduction

This chapter pulls together the conclusions of the four chapters. It summarises the questions examined and the results of the hypotheses, the theoretical frame of the study and the characteristics of the sample used in the analysis. Finally an attempt is made for implications of the research for future practical and theoretical work.

B. The Study Questions

The research was specifically about the relationship of aggressiveness to the academic achievement of a child at nursery school and if a relationship did exist, then whether sex, age and the socio-economic class contributed to the observed relationship. The study questions examined were:-

1. Is there any relationship between aggressiveness and academic achievement of the child?
2. Are boys more aggressive than girls?
3. Are five year olds more aggressive than three year olds?
4. Are children of the lower socio-economic class more aggressive than children of the higher socio-economic class?
5. Do boys academically perform better than girls?
6. Do five year olds academically perform better than three year olds?

7. Do children of the lower socio-economic class perform better than children of the higher socio-economic class?

C. The Theory and Hypotheses

The Social Learning of Aggression provided the foundation of this research. This is because the children constantly imitated behaviours manifested by their teachers. For instance, during one of the observations at free play, the researcher found that the children of a particular aggressive environment were beating up children of another non aggressive environment.

Kipkorir of Kenya Institute of Education, in a personal communication remarked that since there were as many as sixty children in one class in some of the lower socio-economic class schools, the teachers had a lot more to cope with and they often resorted to the use of aggression in their classrooms. Obviously these children would learn to imitate their teachers, unlike the higher socio-economic class schools where one teacher would have as few as twelve pupils per class. Sarason, (1977), quoted Bandura by saying that "Bandura found that imitation may play a decisive role in the incidence of aggressive responses" (p.466).

The preschool children are highly vulnerable to imitating models since they have a need to have a self identity. "Identification as a developmental process possesses sufficient practical value to merit continued usage" (Sarason, 1967, p.428 - 429). Thus, when the child learns to imitate at the

young age, he may continue to display that behaviour in the later stages of his life as well. In some cultures, boys are more aggressive than girls simply because they are taught or "trained" to be aggressive by their fathers or elder males who model aggressive behaviours like wife-beating, hunting, wrestling etc. Often, girls in some cultures learn to be more obedient and passive. They therefore, listen and do most of the work given to them by parents, teachers and other elders. At the age of three it was found that the girls are better academic performers than boys. In the nursery school environment the children imitate one another. This is because "much of what young children learn about their world from other children ..." (Schell and Hall, 1979, p.268). So, by the age of five years, there is no significant sex difference in the academic achievement of these children.

D. The Sample

The population was nursery school children enrolled in proprietarily owned schools in Nairobi. The sample size was eighty. There were forty boys and forty girls. Forty belonged to the higher socio-economic class and forty were from the lower socio-economic class. Forty, were three year olds and forty, five year olds. These eighty children belonged to the four schools which were obtained by stratified random sampling. Two schools were high socio-economic class and two belonged to the low socio-economic class.

E. Results of the Tests of the Hypotheses

1. Aggression and Academic Performance

There is significant relationship between aggressiveness and academic performance of a child. The chi square value of 1.47 was not statistically significant. This is to say that there is no difference in the academic performance of aggressive and non-aggressive children.

When the relationship between aggression and academic performance was controlled by the independent variable of age, it was found that among the five year olds, the aggressive children academically performed better than the non-aggressive children ($p < .01$).

A reason for this maybe due to the negative reinforcement on the aggressive five year olds to academically perform better. In turn, the children learn to be aggressive from the teachers who are the models. The three year olds on the other hand have just entered the preschool and the teachers are only just beginning to be models.

2. Sex and Aggression

At a chi square value of 8.46, ($p < .01$), it was found that boys are more aggressive than girls. This means that there is a statistical probability of less than one in one hundred, of boys being more aggressive than girls by chance. According to the social learning theory, this is because boys are taught to be aggressive. "Aggressive behaviour has been stereotyped as appropriate only for boys ..."

(Schell and Hall, 1979, p.260).

3. Age and Aggression

There is no significant difference in the aggressiveness of the three year olds and five year olds. One of the reasons for there being no age difference in aggression maybe because children still at their infant stages (0-2 years) have already learnt different attitudes in behaviour due to reinforcement. For instance, when a baby just learns to speak 'Mama' he is reinforced by the mother's smiles, hugs and kisses. He therefore, says 'Mama' more often. Through repetition this behaviour then becomes a habit carried onto the later stages. Similarly, behaviours in aggression are learnt early and they remain the same in the later stages. Thus, the three year olds are as aggressive as the five year old. This remains true for girls and boys and also for the children of the high and low socio-economic class.

4. Socio-Economic Class and Aggression

There is no significant difference in the aggressiveness of the children of the high and the low socio-economic classes. Nairobi being a metropolitan city where a melting pot for all exists, there appears to be very little difference in the aggressive attitudes of most of the people. Thus, there seems to be no differences in the aggression of the children of high and low socio-economic class, as the socio-economic class variable shows no psychological variance. This is contradictory to the other studies shown in the review of

literature. This maybe because the socio-economic classes were school linked. These schools were proprietarily owned.

5. Sex and Academic Performance

There is no significant difference in the academic performance of girls and boys. Girls and boys are taught the same things at school. The teacher acts as a model for both the girls and boys. Hence, there are no sex differences in the academic achievement of the children. Whilst examining the independent variables, it was found that the three year old girls academically perform better than three year old boys (p.10). This maybe explained by the fact that three year olds have just started their preschool. The girls have learnt to be more passive and obedient. They therefore, work as the teacher teaches them. However, within the next two years they are under the peer inforcement. The boys become as good as the girls in their academic achievement.

6. Age and Academic Performance

There is no significant difference in the academic performance of the three year olds and five year olds. This is because both the three year olds and the five year olds are undergoing the process of learning. Whilst investigating the independent variables, there were marginal age differences in the boys (p.0.10). The five year old boys academically performed better than three year olds. This is because at the age of three, the boys have started preschool. They have had no peer reinforcement. The girls at three years

academically perform better than the boys. At the age of five years, the boys have had a peer reinforcement from the girls, and therefore, boys and girls academically perform equally. Thus, the five year old boys perform better than the three year old boys.

7. Socio-Economic Class and Academic Achievement

There is no significant difference in the academic performance of children of the high and low socio-economic classes. Sex and age do not influence this relationship either. These results are contradicting the other studies that have been reviewed. Maybe because the socio-economic variable in this study does not really discriminate the high socio-economic class. The socio-economic variable in this study was defined as in Gakuru's (1979) study. The rates and the economic standards in Nairobi could have changed a whole lot in the last three years, to yield a non-significant socio-economic class relationship to either academic achievement or aggression.

F. Limitations of the Study

The major constraint was that of time, one year's time limit to formulate a proposal, collect data, analyse it and write the thesis. The financial consideration was also gruesome. Therefore, no other observer could be trained, nor videotaping undertaken and the study had to be limited to Nairobi pre-schools only.

The study would have been more interesting had it

included a rural-urban difference too, but there was a problem of language communication since most of the rural preschools use their local languages as their medium of instruction. Hence, the study had to be carried out in Nairobi, the largest urban centre of Kenya, offering different strata of people, religions and races of different economic levels.

On having to find schools, there were lots of difficulties. At times, the head teachers were very reluctant for any sort of research to be conducted at their schools and were quite suspicious of what might be.

Another difficulty that the observer had was subjects being absent during the fifteen days observation period. Observations had to be done on other days of the absentees.

On interviewing the teachers, some of them found it quite difficult to grade a child of three years old and in some cases, the teacher had known the child for only about two months.

G. Implications of the Research

The research under consideration was limited in the areas that it covered and the variables that were controlled.

The results can be beneficial to the administrators, headteachers, teachers and parents of preschool children. For most part, teachers find aggressive children very disturbing. "Teachers find aggressive symptoms more disturbing than

withdrawal and note it more frequently" (Maclean, 1966, p.70). In order to cope with this aggression, the teachers themselves become aggressive, not realising that they are very often modelled by their own pupils. A vicious circle is formed.

The child would learn most through imitating. It is therefore, important to model behaviour that is best for the child. This learned behaviour would continue when reinforced and gradually become a habit. The desired behaviour has to be modelled very cautiously and carefully so that the learning of new patterns of behaviour is facilitated for the child.

Another method of teaching children desired behaviours is through the use of good films where children can identify themselves and learn to cope with aggression.

The review of literature indicated that girls are also capable of being aggressive. The sex differences in aggression can be accounted for by the effects of socialization. The boys learn to be aggressive from the men around them. In turn, the teachers learn to tolerate aggressive behaviour of the boys and often, not of the girls. The teachers should try and accept or bring out the aggressive behaviour of the girls, since the girls normally

cope with aggression through indirect means like hostility, gossip and avoidance.

Higher scopes of aggression of children of lower class can be accounted for by the lower availability of certain objects within their environment. For instance object struggle would be higher when only a certain number of toys are present in a lower socio-economic class school. Therefore the learned behaviour of aggression would be displayed more often than with children attending a higher socio-economic class school, where more toys are available and therefore a lesser amount of aggressive behaviour displayed. This rationale also follows the social learning theory of aggression.

Although no achievement tests have been developed yet, (Mrs. Leah Kipkorir, personal conversation August 1984), a National guideline has now been developed for the kind of syllabbi that can be utilized for all the preschools of Kenya. This guideline is open-ended to cater for the school of both the higher and the lower socio-economic classes. This therefore provides the much needed basis for developing a standardized test for the three and the five year old.

Thus further research can now be channelled into developing tests for these preschool children.

The Nationally accepted preschool teacher qualification is a standard seven graduate (Mrs. Leah Kipkorir personal conversation 1984). Further studies can be done to prepare training sessions for these teachers so that it would be geared towards the comprehension of this standard seven leaver as well.

REFERENCES

- Archer, J. and K. Westerman. "Sex Differences in the Aggressive Behaviour of School Children". British Journal of Social Psychology, 1981, 20, 31-36
- Berkavitz, L. Aggression: A Social Psychological Analysis. New York: McGraw Hill Book Co., 1962
- Bijou, S. "Development in Preschool Years: A Functional Analysis". American Psychologist, 1978, 38(8), 829
- Biran, S. "Aggression". Psychological Abstracts, 1980, 63, 1310
- Cameron, J. The Development of Education in East Africa. New York: Teacher's College Press, 1970
- Clignet, R. Liberty and Equality in the Educational Process. New York: John Wiley and Sons, 1974
- Cohen, A. Observations in an Ngecha Nursery. A Staff Paper for Bureau of Education Research, 1968
- Court, D. and D. Ghai. Education, Society and Development New Perspectives from Kenya. Nairobi: Oxford University Press, 1974
- Daily Nation. "First Words on Education". Nairobi: Nation Newspapers Ltd., November 22, 1978, p.19
- Daily Nation. "Education 'to be a must soon' ". Nairobi: Nation Newspapers Ltd., May 22, 1979, p.4

Daily Nation. "Education vital - Gachathi". Nairobi: Nation Newspapers Ltd., June 21, 1977, p.4

Defleur, M. et al. Sociology: Human Society. Illinois: Scott, Foreman and Co., Ltd., 1977

Drabman, R., M. Thomas and C. Javie. "The effects of televised violence on children". Clinical Child Psychology, 1977, 6(1), 44-46

Elchardus, M. "Class Structuration and Achievement". The Sociological Review, 1981, 29(3), 419-434

Entwistle, H. Class, Structure and Education. London: Methuen and Co., Ltd., 1978

Eron, L. "Prescription for Reduction of Aggression". American Psychologist, 1980, 35(3) 244-252

Freud, S. The Ego and The Id. London: The Hogarth Press and the Institute of Psychoanalysis, 1927

Frodi, A. "Aggression and Sex Differences". Psychological Abstracts, 1979, 62, 55

Frodi, A., J. Macaulay and P. Thome. "Are Women Less Aggressive Than Men? A Review of Experimental Literature". Psychological Bulletin, 1977, 84(4) 634-660

Frodi, A., J. Macaulay and P. Thome. "Perceived aggression and Prosocial Behaviour in Men and Women". Psychological Abstracts, 1979, 61, 1373

- Fromm, E. The Anatomy of Human Destructiveness. New York: Holt, Rinehart and Winston, 1973
- Gachathi Reports. Report of the National Committee on Educational Objectives and Policies. Nairobi: The Government Printer, 1976
- Gakuru, O. Preschool Education and Access to Educational Opportunities in Nairobi. An M.A. thesis submitted to University of Nairobi, 1979
- Gean, R. and E. O'Neal. Perspectives on Aggression. New York: Academic Press, 1976
- Hartup, W. "Aggression in Childhood. Developmental Perspectives". American Psychologist, 1974, 29, 336-341
- Herzog, J. Services for Preschool Age Children in Kenya. A talk presented at the Annual General Meeting of the Family Service Council of Kenya, Nairobi, 1969
- Herzog, J. Nursery Schools in Kenya. An informal report to the Commission of Inquiry, Public Service Structure and Remuneration Commission, 1970, (a)
- Herzog, J. "Parents Expectations of Kenya's Nursery Centres". East African Journal, 1970, (b) 7, 37-44
- Heywood, J. Assessment in Higher Education. London: John Wiley and Sons, 1977

- Hoppe, C. "Interpersonal Aggression as a function of Subject's Sex, Subject's sex role identification, opponent's sex and degree of provocation". Journal of Personality, 1979, vol. 47(2), 317
- Huck, S. Reading Statistic and Research. New York: Harper and Row, Publishers, 1974
- Hunt, D., and E. Sullivan. Between Psychology and Education. Illinois: The Dryden Press, 1974
- Izrad, C. The Face of Emotion. New York: Appleton-Century Crofts, 1971
- Janis, I. Personality: Dynamics, Development and Assessment. New York: Harcourt, Brace and World Incorporated, 1969
- Kapila, N. Parental Involvement and Academic Achievement in schedule 'C' Schools in Nairobi. An M.A. thesis submitted to University of Nairobi, 1973
- Kenya Institute of Education. Preschool Curriculum Guide. Prepared by preschool education project, K.I.E., Experimental Edition, 1975
- Kenya Institute of Education. Teacher Training Curriculum Development. An unpublished report on Preschool Education Project, 1972-1978
- Kipkorir, B. Whites as Education Experts in Colonial East Africa. A talk given for African studies Association of the U.K. 1978 Conference, Oxford, 19th-22nd September.

Krystall, A. Pre Primary Education: Structure and Policy.

A paper presented to the National Committee on Educational policies and objectives, Kenya, 1976

Krystall, A and A. Maleche. The Day Care Programme: Part of Kenya's National Education Programme. A paper prepared

for the annual meeting of the Social Welfare Division, Ministry of Housing and Social Services, 1975

Krystall, A and A. Maleche. "Self Help and Voluntary Day Care Centres". Kenya Educational Review, 1976, 3(2),

36-53

Lee, P. and R. Stewart. Sex Differences: Cultural and Developmental Dimensions. New York: Urizen Books, 1976

Logan, R. Guidelines for Stimulating Intellectual Growth in Young Children. Staff Paper, University of Nairobi, 1972

Logan, R. "The Psychological Foundations of Early Childhood Education: The Path to Individualism". Kenya Educational Review, 1976, 3(2), 13-18

Lorenz, K. On Aggression. New York: Bantam Books, 1966

Lorenz, K. and P. Leyhausen. Motivation of Human and Animal Behaviour: An Ethological View. New York: Van Nostrand Reinhold Co., 1973

Maccoby, E. and C. Jacklin. The Psychology of Sex Differences. Stanford: Stanford University Press, 1975

- Maccoby, E. and C. Jacklin. "Sex Differences in Aggression: A Rejoinder and Reprise". Child Development, 1980, 51, 964-980
- Mackal, P. Psychological Theories of Aggression. Amsterdam: North Holland Publishing Co., 1979
- MacLean, I. Child Guidance and the School. London: Methuen and Co., Ltd., 1966
- Maier, R. and B. Maier. Comparitive Animal Behaviour. Belmont: Brook/Cole Publishers, 1970
- Marcus, T. and D. Corsini. "Parental Expectation of Preschool Children as related to child gender and socio-economic status". Child Development, 1978, 49, 243-246
- Marjoribanks, K. "Family Environments and Children's Academic Achievements: Sex and Social Group Difference". Journal of Psychology, 1981, 109, 155-164
- Marrone, R. and R. Rasor. Behaviour Observation and Analysis. San Francisco: Rinehart Press, 1972
- Matthews, K. and J. Angulo. "Measurement of the Type A Behaviour Pattern in Children: Assessment of Children's Competitiveness, Impatience-Anger and Aggression". Child Development, 1980, 51, 466-467
- Messer, S. and Brodzinsky. "The Relationship of Conceptual Tempo to Aggression and its Contract". Child Development, 1970, 50 (3), 758-766

Montagu, A. Man and Aggression. London: Oxford University Press, 1973

Mussen, P. Handbook of Research Methods in Child Development
New York: John Wiley and Sons, Incorporated, 1964

Mwaniki, M. The Relationship between Self Concept and Academic Achievement in Kenyan Pupils. A PhD thesis presented to University of Stanford, 1973

Ominde's Report. The Structure of Education in Kenya and some Planning Problems. A conference on Education, Employment and Rural Development for University of East Africa, 1966

Ominde, S. Kenya Education Commission Report. Part 1.
Nairobi: The Government Printer, 1964

Osgood, C., G. Suci and P. Tannerbaum. The Measurement of Meaning. Urbana: University of Illinois Press, 1957

Otaala, B. Mental Health in Schools. Nairobi: Kenyatta University Press, 1979

Pearce, J. "Socio-Economic Status and Aggression in Preschool Children". Psychological Reports, 1978, 43(2), 379-382

Polansky, N. Social Work Research. Chicago: The University of Chicago Press, 1975

Puleo, J. "Acquisition of Imitative Aggression in Children as a Function of Amount of Reinforcement Given the Model".

Social Behaviour and Personality, 1978, Vol. 6(1), 67-71

Raju, B. Education in Kenya. London: Heinemann, 1973

Rechartd, E. and P. Ikonen. "Freud". Psychological Abstracts,

1980, 64, 254

Rimm, C. and J. Masters. Behaviour Therapy: Techniques and

Empirical Findings. New York: Academic Press, 1979

Rothgeb, C. Abstracts of the Standard Edition of the Complete

Psychological Work of Sigmund Freud. New York: International

Universities Press Incorporated, 1973

Sarason, I. Personality: An Objective Approach. New York

John Wiley and Sons, Incorporated, 1967

Schell, R. and E. Hall. Developmental Psychology Today. New

York: Random House Inc., 1979

Scott, J. Aggression. Chicago: The University of Chicago

Press, 1970

Sears R. et. al. "Some Child-Rearing Antecedants of Aggression

and Dependency in Young Children". Genetic Psychology, 1953,

47, 135-234

Seegmiller, B. "Sex Typed Behaviour in Preschools: Sex, Age

and Social Class Effects". The Journal of Psychology, 1980

104, 31-33

- Selg, H. The Making of Human Aggression. London: Quartet Books Ltd., 1975
- Smith, G. A Simplified Guide to Statistics. New York: Holt, Rinehart and Winston, Inc., 1970
- Smith, P. and M. Green. "Aggressive Behaviour in English Nurseries and Play Groups: Sex Differences and Responses of Adults". Child Development, 1975, 46, 211-214
- Storr, A. Human Aggression. Harmondsworth: Penguin Books Ltd., 1968
- The Standard. "Relevant Education Stressed". Nairobi: The Standard Ltd., February 6, 1978, p.1
- The Standard. "Education to be Made Relevant". Nairobi: The Standard Ltd., May 18, 1978, p.4
- The Standard. "Education is a Right for all - Kibaki". Nairobi: The Standard Ltd., November 6, 1978, p.7
- The Standard. "Education System Must be Changed - Gachathi. We can't Rely on Expats Forever". Nairobi: The Standard Ltd., March 12, 1979, p.2
- The Standard. "Kibaki warns 'criminal' parents. Education Soon to be a Must". Nairobi: The Standard Ltd., May 22, 1979, p.3
- Tiegger, T. "On the Biological Basis of Sex Differences in Aggression". Child Development, 1980, 51(4), 943-963

Tiwari, R. Some Aspects of Social Geography of Nairobi - Kenya.

A paper presented to University of Manitoba, Winnipeg, 1972

Vaughn, B. and E. Waters. "Attention Structure, Sociometric Status and Dominance. Interrelations, Behavioural Correlates and Relationships to Social Competence". Developmental

Psychology, 1981, 17(3), 275-288

Whiting, B. and J. Whiting. Children of Six Cultures.

Cambridge: Harvard University Press. 1975

Wollheim, R. Freud. Suffolk: The Chaucer Press Ltd., 1971

Yee, A. Social Interaction in Educational Settings. New

Jersey: Prentice Hall, Inc., 1971

ADDITIONAL REFERENCES

Lavin, D.E., The Prediction of Academic Performance.

New York; John Wiley and Sons, 1965.

Ministry of Education, Science and Technology.,

Guidelines for Preschools Education in Kenya.

Nairobi: Jomo Kenyatta Foundation, 1984

APPENDIX ITHE OBSERVATION TEST

- (a) Hazing: Teasing and physical, vocal or gestural threats, often unprovoked, seem to be used to "get a rise" out of the recipient.
- (b) Initiates Hazing.
- (c) Specific Hostility: Physical attacks or fights leading to submission. May also include high intensity arguments.
- (d) Initiates Specific Hostility.
- (e) Object Struggle: Fights (physical or verbal) over possession of a desired object.
- (f) Wins Object Struggle: Child possessing object at the end of an object struggle.
- (g) Displacement: Removal of one child by another from a position either by threat or physical removal.
- (h) Wins Displacement.
- (i) Game Hostility: Aggression or hostile behaviour in the context of a game.

SEX: M F

AGE: 3 5

PERF: GOOD POOR

	Frequency	Score
()		
()		
()		
()		
()		
()		
()		
()		
()		
()		

I.D.

SEX: M F

AGE: 3 5

PERF: GOOD POOR

Act	Frequency	Score
(a)		
(b)		
(c)		
(d)		
(e)		
(f)		
(g)		
(h)		
(i)		

OBS. NO. _____

SEX: M F

AGE: 3 5

PERF: GOOD POOR

Act	Frequency	Score
(a)		
(b)		
(c)		
(d)		
(e)		
(f)		

I.D.

SEX: M F

AGE: 3 5

PERF: GOOD POOR

Act	Frequency	Score
(a)		
(b)		
(c)		
(d)		
(e)		
(f)		

