"PARENTAL INFLUENCES UPON STUDENTS'

EDUCATIONAL AND OCCUPATIONAL

ASPIRATIONS"

BY

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of Master of Arts in the University of Nairobi"

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"This thesis is my original work and has not been presented for a degree in any other University"

Signed ....P. Karinki..........

Date ....20-9-76..........

"This thesis has been submitted for examination with my approval as University Supervisor"

Signed ....Neill..........

Date ....20-9-76..........

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The responsibility for the study as here presented however, lies entirely with the author.

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ABSTRACT

"Parental Influences upon Students'

Educational and Occupational

Aspirations".

This study examines the relationships between Parents'
Educational Attainment, their Occupational Status, and students'
Educational and Occupational Aspirations.

The data was obtained by administering a questionnaire
to two hundred secondary school students. Ninety-six of the
students were in Form Four (eleven years of formal education)
while one hundred and four of the students were in Form One
(eight years of formal education). Among the subjects, there
were seventy girls and one hundred and thirty boys.

The subjects came from three Secondary Schools. Two of
these schools were in the rural areas, and one was in the out-
skirts of the city of Nairobi.

The Educational Aspirations of the students was measured
by asking the students, the level of education they would like
to attain after their school certificate examination. The
subjects were asked to look realistically at their future and
the chances that may be available for furthering their educational
plans.

The Occupational Aspirations of the students was measured
by asking the students the kind of occupation they would like to
obtain, if all the necessary training was made available.

The results showed that the sex of the subjects was
significantly related to their educational and occupational

aspirations. Similarly, the level of education attained by the respondents was significantly related to both their educational and occupational aspirations. The results also indicated that both the educational and occupational aspirations of the respondents are related to their parents' level of education and the status of their parents' occupations. The fathers' education clearly emerged as a very important factor in the overall relationship to both educational and occupational aspirations of the respondents. Those respondents who came from well placed families, had generally very high aspirations.

These findings shed some light upon the kind of parental factors, namely, the fathers' and mothers' education and occupations, which are related to the formation of the students' educational and occupational aspirations.

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CHAPTER ONE

INTRODUCTION

Many psychologists and educationalists in recent years,
have shown keen interest in educational and occupational aspira-
tions of students. (Foster 1968; Clignet 1966; Sewell 1968;
King 1971; Somerset 1970). These studies have mainly focused
on the "ideal" and the "real" aspects of aspirations. An
"ideal" aspiration satisfies a person's idea of what is good
or perfect. It exists only in the imagination, or as an idea,
and as such is unlikely to be achieved. A "real" aspiration
on the other hand, exists in fact, and as such is likely to be
achieved.

Research results indicate that educational and occupation-
al aspirations are influenced by such factors as school type;
school quality; examination marks and a student's socioeconomic
background. The parent's education and occupation also
influence the student's aspirations now, and in future.

It has been indicated by some studies, (Somerset 1970;
McQueen 1965; Rehberg 1967) that students, especially in deve-
loping countries, have or seem to have unrealistic educational
as well as occupational aspirations. Since the ways in which
students form correct aspirations are not directly connected
with the school's formal curriculum — are not directly taught
in the classroom — students find themselves faced with great
difficulty in their choice of jobs and other educational goals,
towards the end of their school career.

This has often meant that wrong and unrealistic choices, full of fantasy, have been made by students. This is mainly as a result of lack of correct information about what to expect and what is available. It would seem that the school must play an important role, if students are to choose realistic educational and occupational goals.

For the rural high school student, the problem appears even greater because, unlike his urban counterpart, he has limited opportunities of meeting people of various professions, and hence, of learning about the available job opportunities. His environment is not as rich. He is therefore less equipped to deal with the various occupational choices and to achieve the appropriate educational goals in the future. Faced with such a situation, he often makes incorrect choices.

Observation has shown that the way in which parents act as a primary reference group for students is related to their educational and occupational aspirations. (Silvey 1969; Simpson 1962; Weeks 1967). The parents furnish some kind of work role models with which the student can identify. They also transmit a set of values about work in general, and certain types of work in particular. This means that the parents function, to a large extent, as social reinforcers of the student's educational as well as occupational aspirations. (Mussen 1969; Boyle 1966).

The most crucial problem that faces a study of educational and occupational aspirations, is the measurement of aspirational

levels. Studies of this kind have often asked students what they would like to do and what they think they have reasonable chances of doing (Somerset, 1970; Foster 1968). A lot of fantasy and unrealism is reflected in the way these questions are answered. For instance, a student may say that he would like to be an engineer and then indicate a certain level of educational attainment which makes his choice unrealistic. Thus it becomes very difficult to evaluate the answers given in terms of realism.

Another problem is that research directed to finding the relationship between educational, or occupational, aspirations and parental influences is scanty.

Although all channels of education are used to further vocational goals, we still find that studies have not focused on the kind of jobs that students eventually obtain. This necessitates a follow-up of students after they leave school. In addition to this, there are substantial differences between the inclinations of the students, and the occupational opportunities likely to be open to them.

The way in which students evaluate the meaning of their education is an important guide to the expectations and aspirations which they hold about future careers. For this reason, questions on what education means to the students go a long way to indicating the kind of jobs they hope to obtain after school.

The examination taken at the end of fourth form is an

important threshold in the Kenyan educational system. It is
at this level that many students today leave school. Those
who continue for higher education have good chances of going
on to University, and hence of obtaining good jobs. If the
aspirations of those students who cannot continue their
education are not properly adjusted to the realities,
innumerable problems and frustration follow.

The rural fourth-form leaver offers a unique opportunity
for study, since his non-formal education on available job
opportunities is almost non-existent. From such a study, we
may be able to determine how he conceives his educational
and occupational aspirations. An understanding of the
student's problems, in terms of his needs, may assist
teachers and school counsellors to help the student to adjust
to the outside world.

Since the rural adolescent sees education as the only
possible way for a job, it is hoped that the study will
reveal the problems he encounters, and hence the way in which
he can be assisted.

The expansion of formal education in Kenya, has led
to a decline in the occupational returns to a given level
of education. Thus, an understanding of how students form
their educational and occupational aspirations before they
leave school is useful. It might mean that the students
need more information on the nature of jobs which are
highly preferred, but which are scarce.

This indicates that an intensive effort to inform students of the occupational realities which confront them after school is indispensable. Implicit in this, is the fact that teachers should play a greater role in advising students. This will help the students make proper adjustments to the realities of a rapidly closing opportunity system.

In addition to this, the kind of influence that parental education or occupation has on student's aspirations might also be useful. It may reveal something about the school system and the society which has shaped it. Such information is useful to planners and administrators. They may use it to identify some of the ways in which the contemporary secondary school system is being used to integrate student's motivations with the social and economic requirements of the country.

The manpower planner, as well, needs to know how a student's educational plans are related to the most productive periods of his life. Such information will provide the basis of a comprehensive vocational information and guidance system in the present day secondary schools.

CHAPTER TWO

REVIEW OF LITERATURE

Somerset (1970) made a detailed study of aspirations among secondary school students in Kenya. His sample consisted of twenty-one randomly selected schools from all over Kenya. Seventeen of the schools were boys' schools, two were co-educational and two were girls' schools. Data were also obtained from three schools which were not in the sample. "This was done in order to cover as fully as we could the complete range of types of secondary schools found in Kenya".

His study had two main questions concerning student's aspirations and expectations for further education and training. Firstly, the students were asked how far they wanted to continue their education. Secondly, they were asked how far they thought they would be able to continue. Somerset anticipated that the questions would produce very different answers. However, eighty-eight per cent of the sample answered the two questions in exactly the same way. Only about five per cent of the sample said they would like to continue their education to a higher level than they thought would be possible.

Somerset points out that the students experience seems to have affected both their expectations and their aspirations. He also shows that the type of school that the student attends is strongly associated with how far he wants to continue his education. He uses three types of

schools to illustrate this point: — National Catchment, Local Catchment and Harambee Schools. National Catchment Schools are defined as those schools that recruit their students from all over the country. They make selections of intake before other secondary schools, and attract teachers of high calibre. Their physical equipment is of a high standard. The Local Catchment Schools draw most of their intake from a smaller area by contrast. They charge relatively low fees and are aided by the Government. Harambee Schools are those built by local self-help initiative, in response to the shortage of places in government maintained schools. Their intake is largely non-selective and staff is rather poor compared with other types of schools.

Somerset shows that students at National Schools have high aspirations. More than two-thirds want to continue their education through to higher school certificate, and about three-fifths hope to go to University. By contrast, more than three-quarters of the students in Harambee schools are not aiming at anything more than a pass in the school certificate examination at the end of their fourth year. The aspirations of students in local catchment schools are intermediate in character, but are much closer to those of Harambee school students, than they are to those of students in National Schools.

Apart from the type of school that the student has attended, Somerset shows that educational aspirations are

strongly correlated with school certificate performance.
Students who want to continue their education to higher
school certificate or University tend to have much better
marks than those who want to leave school after the school
certificate examination.

Somerset concludes that; "reality factors are of
major importance in determining the aspirations which
fourth-form pupils have for further education. Pupils
understand clearly that selection for form five is severe
— that their chances of further education hinge upon
their academic achievement —". Somerset shows that not
merely ability, but also school quality and the students'
background factors, affect educational aspirations.

Silvey (1969) surveyed over five hundred fourth-form
students in ten secondary schools in Uganda. He asked
them what they hoped to do after completing senior four.
Only one per cent in his sample said that they hoped to
leave school and find a job. The rest wanted to go on to "higher
school certificate" class, and they felt that their chances of
doing so were good though not certain.

Silvey also asked his respondents, "What do you think are
the two most important aspects of a job to consider?"
when thinking about your first job. His results show that
sixty-two per cent of his sample specified, "interest in the
job"; forty-nine per cent chose, "abilities and personality
well suited"; while twenty per cent mentioned the pay.
"Highly respected job" was given by about five per cent of

subjects.

Silvey says that the Ugandan students' responses suggest that salary is a secondary aspect of prestige in a job. Both salary and prestige are well behind more "psychological" factors of interest and suitability when students think about their first jobs. Silvey considers interests, abilities and personality – suitedness as being important in the attractiveness of an occupation. From his Ugandan evidence, he concludes that, "We cannot therefore equate prestige with an incentive to recruitment". His Ugandan respondents attached very little importance to prestige in thinking about their first job. He says, however, that aspirations do often respond to the reality of the market.

Durojaiye (1970) questioned one-hundred and ninety six students in all forms of the International School in Ibadan. Over sixty per cent of the subjects wished to go to the University.

McQueen (1965) interviewed one-hundred and sixty-two primary pupils in Port Harcourt. Eighty-four per cent of those questioned wished to pursue further education. Some of the reasons given for wanting further education were, helping the family and self-improvement. A smaller number mentioned the money or prestige that might be gained.

Koff (1967) examined what primary pupils in Kenya think are the purposes of their education, and how these relate to their aspirations. His sample consisted of

thirty-three primary schools. The majority of the pupils
saw the pursuit of their education as providing a chance
for personal as well as social mobility. Those who were
interested in knowledge for its own sake were in the
minority. Some of the reasons given for studying hard
were: a) helping one's parents; b) paying school fees
for brothers and sisters; c) getting good jobs,
d) living a comfortable life. Koff concludes that
education is principally seen as a means towards social
mobility. This means, that occupations which are linked
with educational activities are preferred by pupils,
because they offer chances for further education. For
instance a boy in Koff's sample preferred to be a clerk
because of the following reason:

> "I would like to have this job (clerk) because I
> shall be reading some books and I can continue
> like that till I have a good education" (Koff,
> 1967, p 402).

In investigating occupational aspirations, Koff
asked his respondents, "What is the best job to have in
Kenya?" In the order of popularity, the choices given were
as follows: "Cash crop farmer"; clerical, and skilled
labour type of jobs. When asked what jobs they personally
would prefer, both rural and urban pupils named clerical
work. Koff indicates in his results that those who say
farming is the best job give, as reasons, a high income;
status; and "service to the nation".

In his sample, the open sentence: "Farming is good for —" yielded thirty per cent of rural pupils replies based on personal reasons, such as its income, and free food. About twenty-five per cent of the subjects mentioned the benefits that farming has to the nation. In comparison, only thirty-nine per cent of rural pupils thought that farming would be their career as against fifty-one per cent of urban pupils who thought likewise.

Hicks (1966) study in the copper-mining town of Broken Hill in Zambia, was mainly concerned with the aspects which make a job prestigious. His respondents had twelve occupations to consider. These included Cabinet Minister; Minister of Religion; police constable; secondary school teacher; and domestic servant. The respondents were trainees at the Railway training school and had had at least nine years of education. They came from families in which the fathers had had primary education and were employed as teachers, gardeners, traders and clerks. Hicks found that prestige is a compound of several attributes of a job. These include the money earned; responsibility exercised; education and intelligence needed; service rendered to others; and the power and influence gained. Hicks concludes that these factors are more often found as a group and seldom individually. These factors give some measure of the relative attractiveness of a job.

Clignet (1966) has summarised results from various studies, on levels of aspirations: Ivory Coast (1959); Mali (1961);

Gabon (1962); Senegal (1962). He found that the Ivory Coast results showed a rise in aspirations with increase in school level. As the students got nearer in Secondary school, they tended to aspire to high level jobs. Clignet also found out that the fields of technical work and teaching were most popular in all the countries examined. In comparison, politics and agriculture seemed to be in little demand in all these groups. Clignet discusses the differences in aspirations between pupils of rural and urban origins. In Senegal, the results showed that rural and urban pupils' aspirations did not differ in level, though they did differ with regard to types.

For instance, more rural pupils had desires to enter teaching. In Gabon, urban pupils had higher level preferences than their rural counterparts. In Mali, there were large rural-urban differences in terms of level and type of aspirations. The rural pupils again had a smaller proportion with high ambitions.

Clignet concludes that the reasons for differences in occupational aspirations are due to the traditional social organisations found in each of these countries. These have an influence upon the aspirations and professional motivations of the school population. In Senegal, for instance, Wolof pupils look towards a political career more than pupils from other tribes. Clignet says that they are less attracted towards the medical profession unlike other tribes.

Foster (1965) interviewed two hundred and ten boys in nine randomly selected middle schools in Accra. The respondents were asked, "What kind of job would you really like to get if you could freely choose what you wanted to do?" and, "What kind of job do you expect to obtain, in fact, when you leave school?". Results show that fifty-one per cent chose to be artisans and skilled workers while twenty-one per cent were interested in professional jobs. Less than one per cent were interested in teaching. Foster found very high aspirations for continuing education. About ninety-seven per cent of his sample hoped to carry on full time schooling after fourth form. Regarding post-secondary aspirations, he found that nearly three-quarters of his group hoped for University education of some kind. Some hoped to go to the University of Ghana while others were interested in Overseas Universities.

Foster points out that there was a tendency for students with higher parental education to have higher occupational aspirations. The majority in this group expected to enter clerical type jobs while those from less educated backgrounds expected more often to find themselves teaching. Foster says that this reflects, "the general contention that teaching in Ghana, as in most countries, constitutes the principal mode of occupational mobility for lower status groups".

Heijnen (1967) presented a list of twenty-four jobs to one hundred and fifty-four rural pupils. An almost

identical list was given to over one hundred urban pupils in
Mwanza, Tanzania. The jobs were open to primary school
leavers which meant they occupied a very narrow part of
the total occupational spectrum. The pupils had to respond
on a five-point scale. They were required to indicate whether
they liked the job very much or did not like it at all.

The item "farmer" was placed seventh among both groups,
while "house servant" was bottom of the lists. Heijnen
collected the reasons given for choosing the good jobs and
avoiding the bad ones. Fourty-nine per cent of the sample
gave "nation-building" type of reasons, while less than
thirty per cent gave financial reasons. Nearly three-
quarters of his respondents said that "house servant"
reminded them of "slave labour", while others considered it
"woman's work".

Heijnen sees a sense of reality in the pupil's rating
of the item "farmer". He says that once students have failed,
they think it better to turn to farming than to swell the
ranks of the unemployed in town. From the farm, they can at
least be assured of enough food and a reasonable money income.

American researchers have made a substantial contribution
to the study of aspirations. Sewell, et al (1957) undertook a
study to test the general hypothesis that levels of educational
and occupational aspirations of youth are associated with the
social status of their families. His questions were aimed at
the education the student planned to obtain after graduating
from high school. All those students who planned to enter the

university were classified as having high educational aspirations, while all others were classified as having low educational aspirations.

The students were asked what kind of vocation they planned to enter after high school. Those who chose occupations equal to or higher than university lecturer were considered to have high occupational aspirations, while all others were said to have low occupational aspirations. The occupational level was measured by the level of education needed for the particular occupation.

Sewell's results indicate that females from high status families are more likely to have higher level educational aspirations, than are those from lower status families. For males, the study also shows that high level educational aspirations are more characteristic of those from high status families. Sewell shows that ninety per cent of the respondents from high status families plan to attend college while only thirty-two per cent of those from low status families plan to do likewise.

Sewell (1968) indicates that father's education has a slightly stronger effect than mother's education on student's educational plans. This is particularly so for males. For females, both father's and mother's education have an almost equal effect on the student's aspirations.

Alan B. Wilson (1959) made a survey of students' interests as related to their decisions about educational and

occupational aspirations. He investigated the effect that
the education of the parents has on these aspirations. His
results show that if the father has not completed high school,
it makes little difference whether the mother has gone to
college or not. It makes considerable difference however, if
the father has gone to college, even though the mother has
not completed high school.

Krauss, Irvin (1964) made a similar investigation on
sources of educational aspirations among working-class youth
in America. He found that among the possible sources of
educational aspirations, are experiences that lead to dissatis-
faction with a present status and interest in a new one.
Krauss shows that when the working-class father has not
completed high school, the mother's educational achievement
does not influence the student's post high school plans.
When the father has completed high school, the mother's
education strongly affects the student's interest in college.
Where the mother and the father have both completed high
school, the majority of the respondents indicated that they
had plans for higher education. Thus the high school
experience of the parents influences students' aspirations
for higher education.

Glick (1956) investigated the relationship between
educational level and potential income. He states that
educational attainment helps to determine the occupational
and income levels to which a person can aspire. He concludes
that an investment in education increases the probability of

financial sucass but does not guarantee its attainment.

Powers, (1974) administered questionnaires to students to find out the ideal and real occupational aspirations. He was mainly interested in the relationship of these aspirations to selected personal and family factors. The major findings indicated that the educational attainment of the parents is strongly related to the students' occupational aspirations. Similarly, the occupational status of the father and the occupational aspirations of the students are strongly related.

Overview

It appears clear that there is a widespread desire for the kind of education that leads to a good job. The foregoing studies show that educational and occupational aspirations are related to various factors. Among these factors, the quality of the schools attended; the student's personal factors and experience, and the parents' education and occupation appear to be important.

In the American studies for instance, the status of the family is shown to be significantly related to the student's aspirations. Some of these studies show that the mother's education is of little significance if the father has had no education. Sewell (1968) points out that the father's education has a slightly stronger effect on males than mother's education. This is also true for occupational status of the father is significantly related to the occupational aspirations of the students. (Davis 1973; Haller 1957; Maxwell 1969).

In the African Studies, the available research results leave several questions unanswered. For example:

(a)   Will the abilities developed in formal education assist the students in selecting the kind of jobs to which they are best suited?

(b)   Will students to a great extent think of the rewards brought by certain jobs than of the obligations that ensue in aspiring to such jobs?

(c)   Will jobs be found attractive principally by those qualified to fill them?

These are questions of interest which have not so far been adequately answered by researchers.

More research is also needed to show how prestige affects desirability of jobs. The work of McQueen (1968) and Koff (1967) for example suggests that perception of prestige in a job does not involve a desire for that job.

Observation shows that job opportunities are becoming fewer and fewer relative to those seeking employment. Consequently, the number of the jobless is rising, the period required to obtain employment is lengthening, and the formal qualifications for jobs are rising steadily. This is partly, why the Kenyan education system is being questioned, because of its highly selective character of producing only a few individuals equipped for placement in the modern sector of the economy. These facts show the gross inadequacies of our present educational system. It is in view of this that a study of educational and occupational aspirations can be useful, in revealing areas that need attention, and in which students can be guided.

CHAPTER THREE

METHODOLOGY

This study hypothesises that several factors are related to secondary school students' educational and occupational aspirations. The following hypotheses were considered in the study:

Hypothesis I

The age of a student is related to his educational and occupational aspirations.

Silvey (1969) found in his study that the older the student is the higher are his aspirations. Silvey states that the older the student is, the more likely is he to have had certain life experiences which assist him in forming aspirations.

Hypothesis II

There is a relationship between the religious affiliation of a student and his educational and occupational aspirations.

In the rural areas of Kenya, the religious affiliation of a person is given a lot of emphasis. It is therefore felt that the religion in which a student has been brought up, is related to his educational and occupational aspirations.

Hypothesis III

The birth order of a student is related to his educational and occupational aspirations.

Davis (1973) indicated that some first borns in his sample were forced to terminate further education in order to get jobs and assist their younger brothers and sisters.

Hypothesis IV

There is a relationship between family size and
a student's educational and occupational
aspirations.

Sewell (1968) indicated in his study that students who came
from small families have higher aspirations than those who
came from larger families.

Hypothesis V

There is a relationship between parental encourage-
ment and a student's educational and occupational
aspirations.

Sewell (1957) indicated in his study that students who received
regular parental encouragement on their work, had higher aspira-
tions than those who did not receive such help.

Hypothesis VI

There is a relationship between the educational
level attained by a student, and his educational
and occupational aspirations.

King (1971) found in his study that form one students who
aspired to go to university were sixty-nine per cent, and that
this dropped to forty-six per cent in form four. King also
found that the occupational aspirations of form four students
were higher than those of form one students.

Hypothesis VII

The educational and occupational aspirations of
males are higher than those of females.

Clignet (1966) points out that though sex differences are not always predictable, there are noticeable differences in the way boys and girls aspire to high level jobs and to high education as well. In Gabon, there was a greater proportion of rural girls with high aspirations than there was urban girls. There was a smaller proportion of rural boys with high aspirations than there was urban boys. In Senegal, however, there was a smaller proportion of girls with high aspirations than there was boys.

Hypothesis VIII

Students with highly educated parents have higher educational and occupational aspirations than students with less educated parents.

Foster (1965) showed that in his study, there was a tendency for students whose parents had attained high education, and obtained good jobs to expect to enter clerical type of jobs. Those from less educated backgrounds expected more often to find themselves teaching.

Hypothesis IX

Students whose parents have executive jobs have higher educational and occupational aspirations, than students whose parents have less executive jobs.

Foster (1965) found in his study that there was a tendency for students whose parents had executive jobs, to have higher aspirations than students whose parents had less executive jobs.

Foster stresses that the social status of the parents'
occupation, also appeared to influence the students' aspirations.

Description of the Questionnaire

A questionnaire, (appendix V) consisting of eighteen
questions was constructed, in order to measure the variables in
the hypotheses.

Question one which was in four sections, required the
respondents to indicate their age, religion, birth order, and
the size of the family. It was felt that religion may
influence students' aspirations, because in the rural areas of
Kenya, children are brought up with some kind of religious
affiliation. Religious knowledge is also a major subject
among those studied in school. The section on the birth order
of the subjects was to find out whether they were first borns
or later borns. Studies have indicated that first borns tend
to have higher aspirations than later borns. (Davis 1973).
The section on family size required the respondents to indicate
the number of brothers and sisters living in the same house.
Studies have indicated that family size influences students'
aspirations (Sewell 1968).

As a measure of the students' educational aspirations,
questions two, three and four were used. In question two,
the respondents were asked to state how they rated their
chances of continuing education beyond fourth form. The options
given were:

I am certain to continue my education

I have a reasonable chance of continuing

I will certainly not be able to continue.

Question three was to assess the way students make choices

of the institutions they would like to join after form

four. They were given six choices and were asked to

indicate their first and second. The choices given were:

A Teacher Training College

A Technical Institute

An Agricultural Institute

A Higher School Certificate Class

A Commercial College

A Nursing School.

Question four required the respondents to indicate the kind of

encouragement they received from their parents about further

education.

In questions five and seven, the respondents were asked

to report the educational levels of their parents. They were

given five categories to choose from. The highest of these

categories was, "had university education", while the lowest

was, "did not go to school". The respondents were also

asked in question six and eight to indicate whether their

parents had had any education or training of other kinds,

such as in a Trade School, a Secretarial College or a Teacher

Training College. Questions ten and eleven sought knowledge

concerning the parents' occupations.

As a measure of the respondents' occupational

aspirations, questions twelve, thirteen, fourteen, sixteen

and seventeen were used. The respondents were asked in

question twelve to state the job they would train for,

given the necessary training opportunities. Question fifteen
was given in order to check the consistency with which the
respondents answered the questions regarding the occupations
they would like to do after school. Question thirteen
sought knowledge of the level of education the respondents
thought was sufficient for the job of their choice.

Question fourteen required the respondents to indicate
the kind of jobs, that their parents would like to see them
do after school. In questions sixteen and seventeen, the
respondents were given two statements regarding the way one
gets a job in Kenya today. The respondents were required to
indicate whether they agreed, disagreed, or were not sure
about these statements.

To show the respondents' conception of the jobs that
would interest them in the future, they were given a set of
sixteen occupations in question eighteen and asked to rank
them in terms of prestige. The occupations given, required
different levels of education. The highest of these
educational levels was University education, while the
lowest was no education at all.

Choice of the Sample

The sample for this pilot study was selected from children
in form one in two urban secondary schools. The schools used
were Parklands Boys and Ngara Girls Secondary Schools. These
two schools were chosen because they were within convenient
walking distances.

Before the questionnaire was administered, permission was obtained from the headmaster and headmistress respectively. The heads of the two schools introduced the interviewer to the teachers whose classes were to be used in the study. The teachers then introduced the interviewer to the students. With the aid of the class registers, twenty boys and twenty girls were randomly selected. These students who were selected then moved into a different room so as to respond to the questionnaire without interference.

Administration of the Questionnaire

The interviewer distributed the questionnaires to the respondents. It was explained to the respondents that the purpose of the questions was to find out the educational and occupational aspirations of students, and how these are related to the education they get in school. The respondents were required to answer all the eighteen questions. Help, if needed was given to the respondents by the interviewer. The respondents spent between twenty and thirty minutes to complete the questionnaire.

Some problems were encountered during the administration of the questionnaire. In question two some of the respondents tended to tick more than one option. It was explained to them that one cannot say, "I am certain to continue my education", and then at the same time also say, "I will certainly not be able to continue". In question three, some respondents indicated more than the required first and second choices.

This too was clarified to the respondents. Some of the
respondents appeared confused by the negatives in the
fourth question. It was explained that the respondents
were required to tick either a "Yes" or a "No", but not both
as some did. In questions sixteen and seventeen, some
respondents ticked the "agree" and the "not sure" categories
at the same time. It was also explained to them that one
cannot say he agreed with the statement, and then also
say that he was not sure about it. The word "prestige" in
question eighteen appeared difficult and unclear to some
respondents. The meaning of the word was explained to them.

Measurement of Variables

Level of Educational Aspirations

The responses given in question three were dichotomised
into "high" and "low" educational aspirants. Those respondents
who gave a "Higher School Certificate Class", or a "Technical
Institute" as their first choice, were placed in the "high"
category. It was felt that these categories require a similar
level of education. Those respondents who gave anything acade-
mically lower than a higher school certificate class, were
placed in the "low" category.

Level of Occupational Aspirations

The responses given for questions twelve and thirteen,
were diohotomised into "high" and "low" occupational aspirants.
Those respondents who chose jobs that require university
education, were placed in the "high" category. Those

respondents who chose jobs that require anything academically lower than university education, were placed in the "low" category.

Parents' Education

The responses given to question five were split to indicate "high" or "low" education of the parents. "High" education was taken to mean that the parents had had secondary or more education. "Low" education on the other hand, was taken to mean that the parents had had less than secondary education or none. The number of years that a parent had spent in school was used to indicate his educational level. Question seven was treated similarly and the aggregate of responses to question five and question seven used as parental educational level.

Parents' Occupation

The parents' occupations were categorised according to the level of education necessary for the job. Secondary education was taken to be the highest level of education necessary for a good job. The level of education that a parent had attained, was therefore used to indicate the status of the occupation that a parent had.

Occupational Ranking

It is important to note here that a valid method of ranking occupations in Kenya does not exist. This is mainly

due to the scarcity of information about jobs in the modern sector. Also, different people employ differing values as yardsticks for ranking occupations. The method employed in this pilot study depends on the level of education considered sufficient for the job. The assumption is that a strong correlation between educational achievement and occupational status exists. A student who chooses a job that requires university education, is said to have higher occupational aspirations, than his counterpart who chooses a job that requires less than university education. (Sewell 1957).

Appendices III and IV, show the way in which the respondents ranked the sixteen occupations given to them. The ranking was done in terms of the prestige of the given occupations. For the purpose of analysis, a method was devised for ranking these occupations and awarding different scores to each of them. The ranking depended on the frequency with which a particular occupation was chosen by respondents, and also on the position it was given by the respondents.

The following example is used to illustrate. For the first eight occupations which were ranked high, the scores ranged from one to eight in the order of choice. If a respondent placed a University professor as his first choice, this position being the highest in his order of prestige, received a score of plus eight. If a respondent placed a policeman in the sixteenth position, this being the lowest choice in his order of prestige,

received a score of minus eight. To avoid very high figures, negative scores were awarded to the eight occupation choices which were placed lowest. Thus, the highest choice received a score of plus eight, while the lowest choice received a score of minus eight. A total score for all the respondents was then calculated, by adding up all the scores for all the occupation choices given by the respondents.

Example: Ranking of a Member of Parliament by Boys.

Number of boys ranking M.P. as first choice	=	4
Total number of boys	=	20
Score for a first choice	=	8

$$\frac{4 \times 8}{20} = 1.6$$

Score for a second choice	=	7
Number of boys making this choice	=	1

$$\frac{1 \times 7}{20} = 0.35$$

Score for a third choice	=	6
Number of boys making this choice	=	5

$$\frac{5 \times 6}{20} = 1.5$$

Score for a fourth choice	=	5
Number of boys making this choice	=	4

$$\therefore \quad \frac{4 \times 5}{20} \quad = \quad 1.0$$

Score for a sixth choice = 3

Number of boys making this

choice = 2

$$\therefore \quad \frac{2 \times 3}{20} \quad = \quad 0.3$$

Score for a ninth choice = -1

Number of boys making this

choice = 2

$$\therefore \quad \frac{2 \times -1}{20} \quad = \quad -0.1$$

Score for a tenth choice = -2

Number of boys making this

choice = 1

$$\therefore \quad \frac{1 \times -2}{20} \quad = \quad -0.1$$

Score for a fourteenth

choice = -6

Number of boys making

this choice = 1

$$\therefore \quad \frac{1 \times -6}{20} \quad = \quad -0.3$$

Total Score = $(1.6 + 0.35 + 1.5 + 1.0 + 0.3) + ((-0.1) +$

$(-0.1) + (-0.3))$

= 4.25

Thus a Member of Parliament received a total score of plus

4.25. The total scores for all the occupations were then ranked from the lowest to the highest. All the other occupations were similarly treated.

CHAPTER FOUR

PILOT STUDY RESULTS

The chi square test at the 0.05 level and the point biserial correlation were used to analyse the results. The pilot study yielded the following results:

Ranking of Occupations by respondents.

A close look at the way the respondents ranked the occupations given to them, shows that the occupational choices fell into three groups. A Member of Parliament was in a class of his own. A second group included occupations that require a University level of education — professor, doctor, lecturer, and lawyer. A third group included occupations that require a secondary school level of education — high school teacher; hotel manager; nurse; secretary; clergyman and businessman. The occupations were therefore ranked according to the level of education necessary for the particular occupation.

The ranking of these occupations indicate some awareness on the part of the respondents, of the fact that a high level of education enhances the range of options open to individuals in particular jobs. The respondents realise the importance of education in relation to good jobs.

Relationship between respondents' Educational and Occupational Aspirations, and Mothers' Occupation.

Mothers' occupation as a variable was not examined with either the educational or the occupational aspirations of the respondents. The reason for this omission is that the majority of the respondents in the pilot study reported that their mothers were just housewives, and that they had no other jobs outside the home. This meant that there was a lack of adequate variation

in mothers' occupations.

Relationship between respondents' Age and Educational Aspirations.

The point biserial coefficients between the respondents' age and their educational aspirations for boys and girls were —0.12 and —0.17 respectively. When boys and girls were combined, the coefficient was —0.16. A t – test was used to determine whether these coefficients were significantly different from zero (McNemar, Q. 1969, p. 219). It was found out that these three coefficients were not significantly different from zero. There was no significant relationship between the age of the respondents and their educational aspirations.

Relationship between respondents' Age and Occupational Aspirations.

The point biserial coefficients between the respondents' age and their occupational aspirations for boys and girls were —0.42 and —0.17 respectively. When boys and girls were combined, the coefficient was —0.24. The t – test indicated that the coefficients for the girls and combined samples were not significantly different from zero. The coefficient for the boys' sample, however, was found to be significantly different from zero. The observed (t = 1.87) and the critical ($t_{.05}$ = ± 1.73) df = 18. This result indicates a negative relationship between the boys' age and their occupational aspirations.

TABLE I

Relationship between respondents' Sex

and Educational Aspirations.

	High	Low	
Boys	9	11	20
Girls	11	9	20
	20	20	40

$$x^2 = 0.40 \quad \text{Critical } x^2 = 3.84$$

The chi square test indicated that the sex of the respondents was not significantly related to their educational aspirations. That is, the proportion of boys who were high educational aspirants was not significantly different from the proportion of girls who were high educational aspirants.

TABLE II

Relationship between respondents' Sex

and Occupational Aspirations.

	High	Low	
Boys	12	8	20
Girls	5	15	20
	17	23	40

x^2 = 5.00 Critical x^2 = 3.84

The chi square test indicated that the sex of the respondents was significantly related to their occupational aspirations. That is the proportion of boys who were high occupational aspirants was significantly different from the proportion of girls who were high occupational aspirants.

TABLE III

Relationship between respondents' Religion

and Educational Aspirations

	High	Low	
Christians	13	15	28
Non-Christians	7	5	12
	20	20	40

$$X^2 = 0.46 \quad \text{Critical } X^2 = 3.84$$

The chi square test indicated that the religious affiliation of the respondents was not significantly related to their educational aspirations. That is, the proportion of Christians who were high educational aspirants was not significantly different from the proportion of non-Christians who were high educational aspirants.

TABLE IV

Relationship between respondents' Religion

and Occupational Aspirations.

	High	Low	
Christians	17	11	28
Non-Christians	5	7	12
	22	18	40

$x^2 = 1.93$ Critical $x^2 = 3.84$

The chi square test indicated that there was no significant relationship between the respondents' religious affiliation and their occupational aspirations. That is, the proportion of christians who were high occupational aspirants was not significantly different from the proportion of non-christians who were high occupational aspirants.

TABLE V

Relationship between respondents'

Birth Order and Educational Aspirations.

	High	Low	
First Borns	6	8	14
Later Borns	14	12	26
	20	20	40

$x^2 = 0.42$ Critical $x^2 = 3.84$

The chi square test indicated that there was no significant relationship between the respondents' birth order and their educational aspirations. That is, the proportion of first borns with high educational aspirations was not significantly different from the proportion of later borns with high educational aspirations.

TABLE VI

Relationship between respondents' Birth

Order and Occupational Aspirations.

	High	Low	
First Borns	8	6	14
Later Borns	14	12	26
	22	18	40

$$x^2 = 0.17 \quad \text{Critical } x^2 = 3.84$$

As in the case of educational aspirations, the chi square test indicated that there was no significant relationship between the respondents' birth order and their occupational aspirations. That is, the proportion of first borns who were high occupational aspirants, was not significantly different from the proportion of later borns who were high occupational aspirants.

Relationship between respondents' Family Size and Educational Aspirations.

The point biserial coefficients between the respondents' family size and their educational aspirations for boys and girls were -0.13 and 0.12 respectively. When boys and girls were combined, the coefficient was -0.01. The t - test indicated that these three coefficients were not significantly different

from zero. This indicates that there is no significant relationship between the respondents' family size and their educational aspirations.

Relationship between respondents' Family Size and
Occupational Aspirations.

The point biserial coefficients between the respondents' family size and their occupational aspirations for boys and girls were -0.46 and -0.05 respectively. When boys and girls were combined, the coefficient was -0.22. The t - test indicated that the coefficients for the girls and combined samples were not significantly different from zero. The coefficient for the boys' sample, however, was found to be significantly different from zero. The observed ($t = -2.13$) and the critical ($t_{.05} = \pm 1.73$) df = 18. This result indicates that for boys, a negative relationship exists between the respondents' family size and their occupational aspirations.

Relationship between respondents' Educational Aspirations
and Fathers' Education.

The point biserial coefficients between the respondents' educational aspirations and their fathers' education for boys and girls were 0.48 and -0.28 respectively. When boys and girls were combined, the coefficient was 0.01. The t - test indicated that the coefficients for the girls and combined samples were not significantly different from zero. The coefficient for the boys' sample, however, was found to be significantly different from zero. The observed ($t = 2.29$), and the critical ($t_{.05} = \pm 1.73$)

df = 18. This result indicates that for boys, a positive relationship exists between the respondents' educational aspirations and their fathers' education.

Relationship between respondents' Educational Aspirations and Mothers' Education.

The point biserial coefficients between the respondents' educational aspirations and their mothers' education for boys and girls were -0.12 and 0.18 respectively. When boys and girls were combined, the coefficient was 0.03. The t - test indicated that the three coefficients were not significantly different from zero. This result indicates that there is no significant relationship between the respondents' educational aspirations and their mothers' education.

Relationship between respondents' Educational Aspirations and Fathers' Occupation.

The point biserial coefficients between the respondents' educational aspirations and their fathers' occupation for boys and girls were -0.18 and 0.07 respectively. When boys and girls were combined, the coefficient was -0.04. The t - test indicated that the three coefficients were not significantly different from zero. This result indicates that there is no significant relationship between the respondents' educational aspirations and their fathers' occupation.

Relationship between respondents' Occupational Aspirations and Fathers' Education.

The point biserial coefficients between the respondents' occupational aspirations and their fathers' education for boys

and girls were 0.12 and -0.09 respectively. When boys and
girls were combined, the coefficient was -0.01. The t - test
indicated that the three coefficients were not significantly
different from zero. This observation indicates that there
is no significant relationship between the respondents'
occupational aspirations and their fathers' education.

Relationship between respondents' Occupational Aspirations
and Mothers' Education.

The point biserial coefficients between the respondents'
occupational aspirations and their mothers' education for boys
and girls were 0.21 and 0.03 respectively. When boys and girls
were combined, the coefficient was 0.13. The t - test indicated
that the three coefficients were not significantly different
from zero. This observation indicates that there is no signi-
ficant relationship between respondents' occupational aspirations
and their mothers' education.

Relationship between respondents' Occupational Aspirations
and Fathers' Occupation.

The point biserial coefficients between the respondents'
occupational aspirations and their fathers' occupation for boys
and girls were 0.09 and 0.33 respectively. When boys and girls
were combined, the coefficient was 0.23. The t - test indicated
that the three coefficients were not significantly different
from zero. This observation indicates that there is no significant
relationship between the respondents' occupational aspirations
and their fathers' occupation.

Summary of the Pilot Study Results.

Table seven below shows the summary of the relationships between the respondents' age; sex; religion; birth order; family size; fathers' education; mothers' education; fathers' occupation; and their educational and occupational aspirations.

TABLE VII

Relationships between variables in the pilot study and

Educational and Occupational Aspirations.

Variables	Educational Aspirations			Occupational Aspirations		
	Boys	Girls	Combined	Boys	Girls	Combined
Age	$r = -0.12$	$r = -0.17$	$r = -0.16$	* $r = -0.42$	$r = -0.17$	$r = -0.24$
Sex	$x^2 = 0.40$			$x^2 = 5.00$ *		
Religion	$x^2 = 0.46$			$x^2 = 1.93$		
Birth Order	$x^2 = 0.42$			$x^2 = 0.17$		
Family Size	$r = -0.13$	$r = 0.12$	$r = -0.01$	* $r = -0.46$	$r = -0.05$	$r = -0.22$
Fathers' Education	* $r = 0.48$	$r = -0.28$	$r = 0.01$	$r = 0.12$	$r = -0.09$	$r = -0.01$
Mothers' Education	$r = -0.12$	$r = 0.18$	$r = 0.03$	$r = 0.21$	$r = 0.03$	$r = 0.13$
Fathers' Occupation	$r = -0.18$	$r = 0.07$	$r = -0.04$	$r = 0.09$	$r = 0.33$	$r = 0.23$

* Significant at .05 level.

Discussion

The results of the pilot study indicated that there was no significant relationship between the respondents' age and their educational aspirations. However, a significant relationship was found to exist between age and the occupational aspirations of boys. The younger the respondents were, the higher their occupational aspirations were found to be. A similar finding was reported by Foster (1965). The only difference is that Foster found a significant relationship between the age of both boys and girls and their educational as well as occupational aspirations. Foster concluded that the aspirations of younger respondents may, however, be more fantasy-laden than reality oriented, and therefore much higher than the aspirations of older respondents. Silvey (1969) found in his study that the older the respondents, the higher were their aspirations. The respondents in Silvey's sample of Form Four students were much older than the respondents in the present sample.

Although there was no significant relationship between the sex of the respondents and their educational aspirations, a significant relationship was found to exist between the respondents' sex and their occupational aspirations. The proportion of boys with high aspirations was greater than the proportion of girls. A similar finding emerges in the studies done by Boyle (1966), Davis (1973) and Elkan (1971). In these studies, the proportion of boys with high educational or occupational aspirations was much greater than the proportion of

girls. Davis (1973) attributes this to the ambitious character
of boys for high positions which was not so evident in the girls
in his sample. Clignet (1966) found that the boys in his sample
aspired as high as the girls, both for high education and for
good jobs.

The results reveal that the religious affiliation of the
respondents was not significantly related to their educational
or occupational aspirations. Christians and non-christians alike,
aspired high, both for high education and for good occupations.
Maxwell (1969) found no significant differences in the way respo-
ndents from different religious groups in his study, aspired to
high education and for good careers in future. The proportion
of Protestants with high aspirations was similar to the proportion
of Catholics with high aspirations.

The results reveal no birth order effects upon the respo-
ndents' educational or occupational aspirations. This supports
Elder's (1965) finding, that the firstborns and the laterborns
in his study, aspired in equal proportions to high education
and for good jobs. Sewell (1968) found that the proportion of
firstborns with high aspirations was greater than the proportion
of laterborns. His sample was from a predominantly urban
environment.

It was also found that the family size of the respondents
was not significantly related to their educational aspirations.
A significant relationship was found to exist between the
respondents' family size and their occupational aspirations in
the boys' sample. The smaller the family was, the higher were

the occupational aspirations. This supports Sewell's (1968) find-
ing. Sewell indicated in his study, that the respondents who came
from small families had higher aspirations than those who came
from larger families. The only difference is that Sewell's result
was significant for both boys and girls.

The results indicate that father's education emerges as an
especially important factor in relation to the educational aspira-
tions of boys. The fathers' education was not significantly
related to the respondents' occupational aspirations. Foster
(1965) indicated that respondents who had highly educated parents
in his study, had higher educational and occupational aspirations,
than respondents whose parents were not highly educated. This
was the case for both boys and girls in his study. The boys in
the present sample may have a stronger desire than the girls, to
be like their fathers.

The mothers' education was not significantly related to the
educational or occupational aspirations of the respondents. The
majority of the mothers in the sample were of low education.
Baker (1973) found that the respondents who had working mothers
had higher aspirations than the respondents whose mothers were
housewives only. This result resembles the findings of Weeks
(1967), Simpson (1962) and Russell (1956).

The fathers' occupation was not significantly related to
the respondents' educational or occupational aspirations. A
slightly stronger relationship existed between the fathers'
occupation and the occupational aspirations of girls than of

boys. Foster (1965) found that the respondents whose parents had executive jobs, also had higher aspirations then the respondents whose parents did not have such jobs.

Inspite of the size of the sample, the results indicate that parents' education and occupation has some relationship to the educational and occupational aspirations of the respondents. These findings shed some light upon the degree to which parental influence affects the way students think about their future education and occupation.

CHAPTER FIVE

CHOOSING THE MAIN STUDY SAMPLE

The subjects used in the main study were <u>two hundred secondary</u> <u>school boys and girls.</u> One hundred and four of them were in Form One, while ninety-six were in Form Four. These subjects came from Kirangari, Kahuho and Uthiru High Schools. The three secondary schools are mixed schools, thus they conveniently provided both boys and girls for the study. The three schools are also day schools, which means the students live with their parents or guardians, therefore maximising the parental influence upon their future educational and occupational plans.

Forms One and Four were chosen for the main study. The interviewer was interested in finding out whether the educational level of a student would make a difference in his educational and occupational aspirations. It was felt that a difference of three years in secondary school would help to indicate whether the aspirations of Form Four students are realistic or fantasy-laden. The Form one students provided a comparative basis.

In the pilot study, only Form One students had been used as earlier indicated. Thus there was no comparison made in terms of educational levels and aspirations. Some students however, appeared to be brighter and to have had more experience than others. It was therefore decided that Form Four students should be included in the main study to provide for comparison.

The subjects in Form One, and in Form Four were randomly selected. The class registers were used to assist in the process

of selection. Permission was obtained from the three Heads of the three secondary schools, before the questionnaires were administered.

For the Form Fours, the questionnaires were administered only a week prior to the E.A.C.E. Examination. It was felt that this was a convenient time, because the Form Four students would inevitably be thinking about their future educational and occupational plans. Similarly, the Form One students were taking their end of year examinations.

NB

There were more boys than girls in the main study, because in the rural areas, few girls make it to the secondary school level. By the time the girls get to Form four, their number becomes even smaller than that of the boys.

Table VIII reports the following details:-

i) Name of the school from which the respondents come.

ii) Location of the school by district.

iii) Number of subjects who completed the questionnaire in each school.

iv) The Form of the subjects who answered the questions.

TABLE VIII

The Names of the Schools, their location and the number of subjects interviewed in each class.

(i)	(ii)	(iii)			(iv)		
Names of secondary schools	Location by District	Number of subjects who completed the questionnaire in each school			Form of the subjects who answered the questions		
		BOYS	GIRLS	TOTAL	FORM I	FORM IV	TOTAL
KIRANGARI HIGH SCHOOL	KIAMBU	48	30	78	40	38	78
KAHUHO HIGH SCHOOL	KIAMBU	40	22	62	34	28	62
UTHIRU HIGH SCHOOL	NAIROBI	42	18	60	30	30	60
TOTALS		130	70	200	104	96	200

The subjects in the main study consisted of various age groups. These groups ranged from thirteen years to twenty years. It was clear from the various age differences that some of the subjects were too old to be in Form One. The possible explanation for this is that, these subjects might have started school late, or they might have had to repeat a class or two in the lower forms. In the Kenyan educational system, a student should complete Form Four at seventeen years of age, if they move from one class to the other without any difficulties. Some of the respondents in the study were already in their twentieth year, in their final year in school. The Mean Age of the sample was 16.67 years.

Table IX reports the distribution of age and the school from which the respondents came.

TABLE IX

Different Age Groups in the Sample by Schools

Age in Years	Kirangari High School	Kahuho High School	Uthiru High School	Total
13	4	4	2	10
14	8	4	4	16
15	13	3	9	25
16	5	18	17	40
17	18	10	12	40
18	17	14	6	37
19	8	6	7	21
20	5	3	3	11
				200

The procedure for the Main Study.

The pilot study had shown that a few alterations needed to be done in the questionnaire that was to be used for the main study. The following changes were found necessary:

Question four in the questionnaire for the pilot study (appendix V) was substituted and given as question number fifteen in the main study. The pilot study had revealed that the responses given to that question were vague and too narrow in scope to be of any use to the study.

Question fourteen was reworded to read father or mother instead of parents. It was felt that the mother might wish the

respondent to obtain a different kind of job or to attain a different level of education from the father , and vice versa. The question would reveal the influence of each parent upon the educational or occupational aspirations of the respondents.

Questions sixteen and seventeen were found to be poor questions and too vague in content. In these two questions, the respondents had the tendency not to want to commit themselves in their answers. Most of the respondents chose the "Not Sure" alternative in their responses and this was not useful to the purpose of the study. In these two questions, the respondents failed to indicate clearly, whether they agreed or disagreed with the statements given. Thus the answers to questions sixteen and seventeen were found to be unreliable as far as the aspirations of the respondents were concerned. In the Main study, question twenty was given as the substitute for these two questions.

Question twenty was the only free response question in the questionnaire for the main study. The question was intended to reveal the reasons why the respondents were studying hard in school.

Administration of the Questionnaire.

A questionnaire consisting of twenty questions was administered to two hundred respondents in the main study. The majority of the questions required structured responses. The respondents were required to tick the correct answers in the spaces provided, or to fill in the right answers according to their own opinions.

Before the subjects answered the questions of the main study, the interviewer made a brief explanation of the questions, and how they were to be answered. The pilot study had indicated that some of the questions, particularly questions ten and fourteen (appendix VI) were not immediately clear to the respondents. The way in which the occupations in question fourteen were to be ranked was illustrated on the blackboard for all the respondents. This was found particularly necessary to the Form One students, who did not understand what "ranking" meant. Further explanation included the meaning of the words "prestige", and "clergyman". The difference between a university lecturer and a university professor was also explained.

There were relatively few problems in the administration of the questionnaire. The Form Four students in one of the secondary schools were at first hesitant to answer the questions. They said that this would take too much of their revision time, since their final year examinations were near. The interviewer explained that the questionnaire was a short one, and that it would take at most twenty minutes to complete it. The respondents found out that the questions were simple and it took them a much shorter time than they anticipated, to complete the questionnaire. It was explained to the respondents that the questions were not to assess their academic aptitude as they had feared.

On the whole, the respondents in the three secondary schools answered the questions clearly and with enthusiasm.

As in the analysis of the pilot study results, the chi square test at 0.05 level and the point biserial correlation were used to compare the findings of the Main study. Computations are shown in the appendices. The Main study yielded the following relationships:

Relationship between respondents' Age and Educational Aspiration.

The point biserial coefficients between the respondents' age and their educational aspirations for boys and girls were 0.02 and 0.09 respectively. When boys and girls were combined, the coefficient was 0.04. A t - test was used to determine whether these coefficients were significantly different from zero. (McNemar Q, 1969) It was found out that these three coefficients were not signigicantly different from zero. This indicates that there is no significant relationship between the respondents' age and their educational aspirations.

Relationship between respondents' Age and Occupational Aspirations.

The point biserial coefficients between the respondents' age and their occupational aspirations for boys and girls were 0.06 and -0.01 respectively. When boys and girls were combined, the coefficient was 0.05. The t - test indicated that these three coefficients were not significantly different from zero. This indicates that there is no significant relationship between the respondents' age and their occupational aspirations.

TABLE X

Relationship between respondents' Sex and

Educational Aspirations.

	High	Low	
Boys	90	40	130
Girls	28	42	70
	118	82	200

$$x^2 = 15.33 \quad \text{Critical } x^2 = 3.84$$

The chi square test indicated that the sex of the respondents was significantly related to their educational aspirations. The proportion of boys who were high educational aspirants was significantly different from the proportion of girls who were high educational aspirants.

TABLE XI

Relationship between respondents' Sex and

Occupational Aspirations.

	High	Low	
Boys	83	47	130
Girls	25	45	70
	108	92	200

$$x^2 = 14.96 \quad \text{Critical } x^2 = 3.84$$

The chi square test indicated that the Sex of the respondents was significantly related to their occupational aspirations. The proportion of boys who were high occupational aspirants was significantly different from the proportion of girls who were high occupational aspirants.

TABLE XII

Relationship between respondents' Religion and Educational Aspirations.

	High	Low	
Protestants	59	43	102
Catholics	45	53	98
	104	96	200

$$X^2 = 2.89 \quad \text{Critical } X^2 = 3.84$$

The chi square test indicated that the religious affiliation of the respondents was not significantly related to their educational aspirations. The proportion of Protestants who were high educational aspirants was not significantly different from the proportion of Catholics who were high educational aspirants.

TABLE XIII

Relationship between respondents' Religion

and Occupational Aspirations.

	High	Low	
Protestants	57	45	102
Catholics	46	52	98
	103	97	200

$$x^2 = 1.28 \quad \text{Critical } x^2 = 3.84.$$

The chi square test indicated that the religious affiliation of the respondents was not significantly related to their occupational aspirations. The proportion of Protestants who were high occupational aspirants was not significantly different from the proportion of Catholics who were high occupational aspirants.

TABLE XIV

Relationship between respondents' Birth Order

and Educational Aspirations.

	High	Low	
First Borns	46	38	84
Later Borns	59	57	116
	105	95	200

$$x^2 = 0.33 \quad \text{Critical } x^2 = 3.84.$$

The chi square test indicated that the respondents' birth order was not significantly related to their educational aspirations. The proportion of first borns who were high educational aspirants, was not significantly different from the proportion of later borns who were high educational aspirants.

TABLE XV

Relationship between respondents' Birth Order

and Occupational Aspirations.

	High	Low	
First Borns	44	40	84
Later Borns	58	58	116
	102	98	200

$$x^2 = 0.11 \quad \text{Critical } x^2 = 3.84.$$

The chi square test indicated that the respondents' birth order was not significantly related to their occupational aspirations. The proportion of first borns who were high occupational aspirants, was not significantly different from the proportion of later borns who were high occupational aspirants.

TABLE XVI

Relationship between respondents' Educational Level

and Educational Aspirations.

	High	Low	
Form IV	58	38	96
Form I	40	64	104
	98	102	200

$x^2 = 9.69$ Critical $x^2 = 3.84$

The chi square test indicated that the respondents' level of education was significantly related to their educational aspirations. The proportion of form four respondents who were high educational aspirants, was significantly different from the proportion of form one respondents who were high educational aspirants.

TABLE XVII

Relationship between respondents' Educational Level

and Occupational Aspirations.

	High	Low	
Form IV	50	46	96
Form I	75	29	104
	125	75	200

$$x^2 = 8.55 \quad \text{Critical } x^2 = 3.84.$$

The chi square test indicated that the respondents' level of education was significantly related to their occupational aspirations. The proportion of form four respondents who were high occupational aspirants was significantly smaller than the proportion of form one respondents who were high occupational aspirants.

Relationship between respondents' Family Size and Educational Aspirations.

The point biserial coefficients between the respondents' family size and their educational aspirations for boys and girls were 0.09 and 0.18 respectively. When boys and girls were combined, the coefficient was 0.15. The t - test indicated that these three coefficients were not significantly different from zero. This indicates that there is no significant relation-

ship between the respondents' family size and their educational
aspirations.

Relationship between respondents' Family Size and Occupational Aspirations.

The point biserial coefficients between the respondents'
family size and their occupational aspirations for boys and
girls were 0.00 and -0.01 respectively. When boys and girls
were combined, the coefficient was -0.01. The t – test indicated
that these coefficients were not significantly different from
zero. This indicates that there is no significant relation-
ship between the respondents' family size and their occupational
aspirations.

Relationship between respondents' Educational Aspirations and Fathers' Education.

The point biserial coefficients between the respondents'
educational aspirations and their fathers' education for boys
and girls were 0.26 and 0.39 respectively. When boys and girls
were combined, the coefficient was 0.31. The t – test indicated
that the boys', the girls' and the combined coefficients were
significantly different from zero. The observed ($t = 3.08$),
df=128, ($t = 3.47$) df=68, and ($t = 4.63$) df=198 respectively.
The critical ($t_{05} = \pm 1.66$). This indicates that a significant
relationship exists between the respondents' educational
aspirations and their fathers' education, for both boys and
girls and boys and girls combined.

Relationship between respondents' Educational Aspirations
and Mothers' Education.

The point biserial coefficients between the respondents'
educational aspirations and their mothers' education for boys
and girls were 0.28 and 0.36 respectively. When boys and girls
were combined, the coefficient was 0.31. The t – test indicated
that the boys', and girls' and the combined coefficients were
significantly different from zero. The observed (t =3.34)
df=128, (t = 3.09) df=68, and (t = 4.51) df=198 respectively.
The critical (t_{05} =$\pm$1.66). This result indicates that there
is a significant relationship between the respondents' educational
aspirations and their mothers' education. This is the case for
the boys' and the girls' samples and the combined sample.

Relationship between respondents' Educational Aspirations
and Fathers' Occupation.

The point biserial coefficients between the respondents'
educational aspirations and their fathers' occupation for boys
and girls were 0.22 and 0.22 respectively. When boys and girls
were combined, the coefficient was 0.22. The t – test indicated
that the boys', the girls' and the combined coefficients were
significantly different from zero. The observed (t = 2.57)
df=128, (t = 1.82) df=68 and (t = 3.23) df=198 respectively.
The critical (t_{05}= $\pm$1.66). This result indicates that there
is a significant relationship between the respondents' educational
aspirations and their fathers' occupation for the three samples.

....

....

The point biserial coefficients between the respondents'
.... to father's education for boys and girls
were 0... .. 0.... respectively. When boys and girls were
combined, the coefficient was 0.26. The t - test indicated
that the three coefficients for boys', girls and combined,
were significantly different from zero. The observed (t = 3.05)
df=12?, (t = 2.06) df=6? and (t = 3.77) df=19? respectively.
The critical $(t_{05} = \pm 1.66)$. This result indicates that a
significant relationship exists between the respondents'
occupational aspirations and their fathers' education.

Relationship between respondents' Occupational Aspirations and Mothers' Education.

The point biserial coefficients between the respondents'
occupational aspirations and their mothers' education for boys
and girls were -0.03 and -0.15 respectively. When boys and girls
were combined, the coefficient was 0.08. The t - test indicated
that these coefficients were not significantly different from
zero. This result indicates that there is no significant relation-
ship between the respondents' occupational aspirations and their
mothers' education.

Relationship between respondents' Occupational Aspirations and Fathers' Occupations.

The point biserial coefficients between the respondents'
occupational aspirations and their fathers' occupation for boys

and girls were 0.41 and 0.33 respectively. When boys and girls were combined, the coefficient was 0.38. The t - test indicated that these coefficients were significantly different from zero. The observed (t = 1.33) df=128, (t =2.65) df=68 and (t =5.69) df=198 for boys', girls' and the combined coefficients respectively. The critical ($t_{05} = \pm 1.66$). This result indicates that a significant relationship exists between the respondents' occupational aspirations and their fathers' occupation.

Relationship between respondents' Educational Aspirations and Mothers' Occupation.

The point biserial coefficients between the respondents' educational aspirations and their mothers' occupation for boys and girls were 0.36 and 0.37 respectively. When boys and girls were combined, the coefficient was 0.36. The t - test indicated that these coefficients were significantly different from zero. The observed (t = 4.39) df=128 (t = 3;19) df=68 and (t = 5.45) df=198 for boys', girls', and combined coefficients respectively. The critical ($t_{05} = \pm 1.66$). This result indicates that a significant relationship exists between the respondents' educational aspirations and their mothers' occupation.

Relationship between respondents' Occupational Aspirations and Mothers' Occupation.

The point biserial coefficients between the respondents' occupational aspirations and their mothers' occupation for boys and girls were -0.08 and -0.13 respectively. When boys and girls were combined, the coefficient was -0.09. The t - test

indicated that these coefficients were not significantly different from zero. This result indicates that there is no significant relationship between the respondents' occupational aspirations and their mothers' occupation.

Baker (1973) had shown in his study that the levels of Education desired by parents for their children differed significantly from the levels of Education that the students desired for themselves.

Table XVIII shows the different levels of Education desired by Fathers and Mothers for the respondents in the sample.

TABLE XVIII

Levels of Education desired by Fathers and
Mothers for their children (in per cent).

Levels of Education	Father		Mother	
	Boys	Girls	Boys	Girls
University Education	44.6	42.9	47.7	58.6
Higher School Certificate	32.3	31.4	32.3	27.1
School Certificate Education	23.1	25.7	20.0	14.3
Total % = Total N =	100 130	100 70	100 130	100 70

Table XVIII shows that over one half of the fathers and mothers would like their children to have University Education. More than one quarter of the fathers and mothers would like their children to obtain Higher School Certificate level of Education. This means that the majority of the parents would like their children to have at least six years of Secondary Education.

The respondents in the sample were also asked what kinds of occupations their parents desired for them after school. Table XIX shows the kinds of occupations mentioned by respondents, categorised according to the level of education required for the job.

TABLE XIX

Kinds of Occupations desired by Fathers and
Mothers for their children (in per cent).

Kinds of Jobs Desired	Father		Mother	
	Boys	Girls	Boys	Girls
Jobs that Require University Education	53.9	42.8	52.3	48.6
Jobs that Require Higher School Certificate Education	32.2	28.6	26.2	30.0
Jobs that Require School Certificate Education	13.9	28.6	21.5	21.4
Total % =	100	100	100	100
Total N =	130	70	130	70

Table XIX shows that more than fifty per cent of the fathers and mothers would like their children to get jobs that require a high level of Education, namely University Education. The jobs mentioned in this category include: doctors, lawyers, engineers, University lecturers and professors. This shows that the parents of the respondents in the sample, desire white collar jobs for their children. This is not an unexpected observation, in view of the fact that our educational system is mainly geared to this end. The rest of the parents desire that their children have jobs which require at least school certificate level of Education.

The Ranking of Occupations by Respondents.

The ranking of the sixteen occupations, using the method reported in the pilot study, yielded the following for boys:

1. Doctor
2. University Professor
3. University Lecturer
4. Businessman
5. Farmer
6. Lawyer
7. Member of Parliament
8. High School Teacher
9. Hotel Manager
10. Writer
11. Nurse
12. Secretary
13. Clergyman

14. Primary School Teacher

15. Policeman

16. Shopkeeper.

The following was the ranking by girls:

1. Doctor

2. University Professor

3. University Lecturer

4. Member of Parliament

5. Lawyer

6. High School Teacher

7. Farmer

8. Nurse

9. Businessman

10. Hotel Manager

11. Primary School Teacher

12. Secretary

13. Clergyman

14. Writer

15. Policeman

16. Shopkeeper.

The above analysis shows that, for boys and girls, doctors, professors and lecturers in that order, enjoy the most prestigious positions in the country. One possible explanation for this, is perhaps the high level of education required to make a doctor, for instance. The students must have been thinking in terms of occupations which are related to high levels of Education.

As indicated earlier, many of the respondents themselves wish to attain a University level of education, so that they may obtain such enviable jobs.

As shown in appendices VII and VIII, the scores for the various occupations were in the same ranges, for both boys and girls. The occupational rankings also indicate that both boys and girls have a positive orientation towards farming. The occupation "Farmer" was placed fifth and seventh positions by boys and girls respectively. The respondents acknowledge the suitability of farming for "educated" people. The respondents do not appear to think of farming as a supplementary source of income, but as a stable and permanent source, which requires high education.

The job of a businessman appears to have been very popular among the respondents. It was ranked fourth and ninth by boys and girls respectively. Many people today are leaving salaried employment to run their own businesses. One possible explanation for this, is the independence and the amount of initiative the job requires, which the respondents appear to be aware of.

While a Member of Parliament was placed high and in a category of his own, by the respondents in the pilot study, he is ranked seventh and fourth by boys and girls respectively. There is a greater percentage of girls than of boys who indicate that the job of a Member of Parliament is very prestigious.

The ranking of the sixteen given occupations was done on the basis of the level of education considered necessary for the job. Consequently, for both boys and girls, a policeman and a shopkeeper are ranked lowest, in terms of their prestige.

Reasons for Studying Hard.

A certain degree of elaboration on the aspirations of students was provided by responses to a question, asking the respondents to state three reasons why they were studying hard in school.

Many reasons were given by the respondents as to why they were studying hard in school, but eight of them were most popular. The rank order and magnitude of the preferences for the eight reasons given, do not vary a great deal by sex. A possible explanation for this is that, both boys and girls are ultimately interested in getting a good job and helping their families after school. Getting a good job was the most popular reason for studying hard. This is the highest aspiration of the respondents. Table XX shows the respondents' priorities for their hard work in school.

TABLE XX

Reasons for Studying Hard (in per cent)

	REASONS	BOYS	GIRLS
1.	To get a good job	72	76
2.	To help my parents and family	43	47
3.	To become rich, important, famous	42	23
4.	To live a comfortable life	38	39
5.	To go to University	35	31
6.	To pass my examination	33	40
7.	To build Kenya	23	20
8.	To be a good citizen	11	13

The severity of the problem of unemployment is a major concern for everyone in Kenya. The problem is open and visible and students are aware of this as reflected by their answers in Table XX.

For the students, education is seen as playing a crucial role in their long term aspirations. Education seems to link an expectation of employment and prestige, with an ability to fulfil obligations to parents and the entire family.

Other reasons mentioned for studying hard include an opportunity to marry an educated person, to get one's own car, to build a good house, and to "live a better life than my parents".

The parents' influence upon the students' aspirations was also measured by a question on who looks at the student's school report more often.

Table XXI below reports the parent who looks at the students' report by sex of the students and the schools from which they come.

TABLE XXI

The Number of Students whose reports are looked

at by Father or Mother and the Schools from

which they come.

SCHOOLS	FATHER			MOTHER			NONE		
	BOYS	GIRLS	TOTAL	BOYS	GIRLS	TOTAL	BOYS	GIRLS	TOTAL
KIRANGARI	36	24	60	12	6	18	-	-	-
KAHUHO	25	15	40	10	7	17	5	-	5
UTHIRU	25	16	41	15	2	17	2	-	2

Table XXI shows that for both boys and girls, the father looks at the school report more often than the mother. According to the reported parental levels of education, it is the parent with some form of education who generally asks for, and comments on the student's progress as required by the schools. In two schools, seven boys reported that no one looks at their school reports. This might be a sign of negligence on the part of the parents concerned or the students simply refuse to give in the report for fear of being reprimanded for low grades.

Using the above as a measure of parental influence on the students, it is the fathers who exert more influence than the mothers, on the students aspirations both for boys and girls. The fathers were also reported to have had more formal education than the mothers. They would therefore be in a position to check on student's progress than their mothers.

Jobs Most Frequently chosen as "Best".

In terms of specific jobs, Table XXII reports the percentage of choices for the ten most frequently mentioned "best" jobs by boys and girls. For boys, other jobs mentioned include a pilot, a cabinet minister, a permanent secretary, and an ambassador. Some boys indicated that smuggling, inspite of its illegal nature and the risk involved, can be a lucrative kind of occupation. For girls, other jobs mentioned include a nurse, an air hostess, and a captain in the armed forces. The latter has become very popular today, as one of the new roles open to women in the society.

Table XXII, shows that "business" ranks as the "best" job in the minds of both boys and girls, second only to "engineer" for the boys.

TABLE XXII

Ten Jobs Most Frequently Chosen
as "Best" (in per cent)

	JOBS	BOYS	GIRLS
1.	Engineer	22	—
2.	Businessman	17	16
3.	Teacher	15	27
4.	Farmer	10	11
5.	Doctor	9	11
6.	Bank Manager	8	—
7.	Member of Parliament	5	10
8.	Lawyer	4	—
9.	Secretary	—	6
10.	Accountant	4	4
	% of Total Choices =	94	85
	Total N =	130	70

A closer look at Table XXII shows that there is little difference in the agreement on "farmer" and "teacher" as the "best" occupations for both boys and girls.

On the whole, professional occupations are chosen as "best", perhaps because of their stability and attractive rewards. The correlation between boys and girls rank order of these occupations is significant at the .05 level.

A fact which deserves to be noted is the high ranking of "farming" and the high preference for "businessman", well before the traditional "white collar jobs". This I believe effectively negates the opinion held by many commentators that students and school leavers as such, are unwilling to work with their hands. While this may be true with some school leavers, the respondents in the study appear to be interested in the kind of job with the most appealing net advantages. The latter include the money income and its regularity.

Summary of the Main Study Results.

Table XXIII below summarises the relationships between the respondents' age; sex; religion; birth order; educational level; family size; fathers' education; mothers' education; fathers' occupation; mothers' occupation; and their educational and occupational aspirations.

TABLE XXIII

Relationships between variables in the Main Study and

Educational and Occupational Aspirations.

Variables	Educational Aspirations			Occupational Aspirations		
	Boys	Girls	Combined	Boys	Girls	Combined
Age	$r = 0.02$	$r = 0.09$	$r = 0.04$	$r = 0.06$	$r = -0.01$	$r = 0.05$
Sex	$x^2 = 15.33$*			$x^2 = 14.96$*		
Religion	$x^2 = 2.89$			$x^2 = 1.28$		
Birth Order	$x^2 = 0.33$			$x^2 = 0.11$		
Educational Level	$x^2 = 9.69$*			$x^2 = 8.55$*		
Family Size	$r = 0.09$	$r = 0.18$	$r = 0.15$	$r = 0.02$	$r = -0.01$	$r = -0.01$
Fathers' Education	$r = 0.26$*	$r = 0.39$*	$r = 0.31$*	$r = 0.26$*	$r = 0.24$*	$r = 0.26$*
Mothers' Education	$r = 0.28$*	$r = 0.36$*	$r = 0.31$*	$r = -0.03$	$r = -0.15$	$r = -0.08$
Fathers' Occupation	$r = 0.22$*	$r = 0.22$*	$r = 0.22$*	$r = 0.41$*	$r = 0.31$*	$r = 0.38$*
Mothers' Occupation	$r = 0.36$*	$r = 0.37$*	$r = 0.36$*	$r = -0.08$	$r = -0.13$	$r = -0.09$

* Significant at 0.05 level.

Discussion

The results of the Main Study indicate no significant relationships between the respondents' age and their educational or occupational aspirations. The young and the slightly older respondents, express a similar desire for high education and for good jobs. This is unlike Silvey's (1969) finding that the older the student, the higher are his aspirations. This finding, however, supports the findings of Eckland (1965). He found no significant relationships between the age of the respondents in his sample and their aspirations.

Significant relationships emerge between the sex of the respondents and their educational and occupational aspirations. The proportion of boys with high educational and occupational aspirations, was greater than the proportion of girls. McQueen (1969) found that the sex of the respondents in his sample was significantly related to their aspirations. The only difference is that his sample was mainly composed of primary school leavers.

The results also reveal that the religious affiliation of the respondents was not significantly related to their educational or occupational aspirations. The Protestants and the Catholics in the sample showed similar aspirations for high education and good jobs. This is an unexpected finding, because, in the rural areas of Kenya, the religious affiliation of a person is given a lot of emphasis. Bordua (1960) similarly found no significant relationships between the respondents' religion and their aspirations.

Similarly, the respondents' birth order was not significantly related to their educational or occupational aspirations. The first borns and the later borns in the sample, showed similar educational as well as occupational aspirations. Brownstein (1972) found that the first borns in his sample tended to have slightly higher educational aspirations than the laterborns. This was not the case with occupational aspirations.

The results also indicate that the educational level of the respondents was significantly related to their educational and occupational aspirations. The proportion of form four respondents who were high educational aspirants, was significantly different from the proportion of form one respondents who were high educational aspirants.

The proportion of form four respondents who were high occupational aspirants was significantly smaller than the proportion of form one respondents who were high occupational aspirants.

This finding supports the findings of McQueen (1969), Hicks (1966) and Boyle (1966), that by the time the respondents get to form four, their aspirations tend to be more realistic than when they were in form one. King (1971) found that the proportion of form one students who wished to go to University, dropped to a small proportion by the time they were in form four.

The respondents' family size was not found to be significantly related to their educational or occupational aspirations. Respondents from small families and large families alike, showed

similar educational as well as occupational aspirations.
Cameron (1970) states that respondents from small families had
higher aspirations than those from large families in his sample.
This is similar to the findings of Sewell (1968). The findings
of Foster (1965) however, indicate no significant relationships
between the respondents' family size and their aspirations.

The results indicate that the fathers' education was
significantly related to the respondents' educational as well as
occupational aspirations. Similarly, the respondents' education-
al as well as occupational aspirations were found to be signi-
ficantly related to their fathers' occupation. The findings of
Elder (1965) and Olson (1972) show that the respondents whose
fathers have high education and highly placed jobs, tend to have
higher aspirations than those respondents whose fathers have
lower education and less highly placed jobs. A similar finding
is reported by Foster (1965). These findings indicate that it
is an asset to have a father with a high level of education and
a good job, in the formation of aspirations.

The findings of the present study, also indicate that the
mothers' education was significantly related to the respondents'
educational aspirations, but not to their occupational aspirations.
Similarly, the mothers' occupation was significantly related to
the respondents' educational aspirations, but not to their
occupational aspirations.

The fathers' and the mothers' education and occupation
generally emerge as particularly important factors in the way

the respondents form their educational as well as occupational aspirations. Education is seen by both parents and students as a means to occupational and social mobility.

NB

Although it was necessary to do a validation of the respondents' statements about their parents' education and occupation, it was not possible to incorporate it in this study, because the parents themselves were not interviewed. It is recommended that future studies should interview parets as well.

SUMMARY AND CONCLUSIONS

The purpose of this study was to find out the relationships that exist, between secondary school students' educational and occupational aspirations, and their parents' educational attainment and occupational status. The assumption was that the aspirations of students, like their attitudes, are formed to a large extent by the attitudes of their parents.

The major findings in the study indicated that significant relationships exist between the following variables:

1. Respondents' sex and their Educational Aspirations.

2. Respondents' sex and their Occupational Aspirations.

3. Respondents' Level of Education and their Educational Aspirations.

4. Respondents' Level of Education and their Occupational Aspirations.

5. Fathers' Education and the Educational Aspirations of the respondents.

6. Fathers' Education and the Occupational Aspirations of the respondents.

7. Mothers' Education and the Educational Aspirations of the respondents.

8. Fathers' Occupation and the Educational Aspirations of the respondents.

9. Fathers' Occupation and the Occupational Aspirations of the respondents.

10.   Mothers' Occupation and the Educational Aspirations of the respondents.

The study showed no significant relationships between the following variables:

1.   Respondents' Age and their Educational Aspirations.

2.   Respondents' Age and their Occupational Aspirations.

3.   Respondents' Religion and their Educational Aspirations.

4.   Respondents' Religion and their Occupational Aspirations.

5.   Respondents' Birth Order and their Educational Aspirations.

6.   Respondents' Birth Order and their Occupational Aspirations.

7.   **Respondents' Family size and their Educational Aspirations.**

8.   **Respondents' Family size and their Occupational Aspirations.**

9.   Mothers' Education and the Occupational Aspirations of the respondents.

10.   Mothers' Occupation and the Occupational Aspirations of the respondents.

The results of this study indicate that the sex of the respondents has some influence upon their educational and occupational aspirations. There was generally a higher proportion of boys with high educational and occupational aspirations than there were girls. A possible explanation for this is that the

education of both boys and girls is equally emphasised in our Kenyan society today, such that a girl will aspire to have as high education as a boy and also work as hard as possible to get a good job. This could be one reason why both boys and girls had such high educational and occupational aspirations. Clignet (1966) remarks in his study that individual biographical differences such as sex and age have some relevance to the aspirations of students. His study indicated that boys had slightly higher aspirations than girls.

The level of education of the respondents, emerges as an important variable in the formation of aspirations. There was a larger proportion of form four students with high educational aspirations than there were form one students. With occupational aspirations, however, there was a smaller proportion of form four students with high occupational aspirations than there were form one students. This means that as the students gain more experience in school and more information on what they expect for the future, their aspirations change from fantasy to reality. Somerset (1968) and King (1971) indicate in their studies that given the contingencies of the job market and the limited information available to students, the aspirations of form one students become higher and more realistic as they get into form four.

The results also indicate that high educational and occupational aspirations are characteristic of respondents whose fathers have had high education and also hold good jobs.

This can be explained by the fact that in homes where fathers have had some education, there are some books, magazines, newspapers and possibly a radio or Television set. Such items are useful to students, and the fathers' initiative and encouragement will also assist the students to form aspirations. Students who are not endowed with such educational tools, may find it difficult to mould their aspirations in the right direction. Somerset (1970) also found that those students who nourished high aspirations had come from families where the parents had had some education. Some caution is needed here, because high aspirations, may also mean unrealistic aspirations. The study shows that there was a large base of mothers with no education. As a result, mothers' education was shown to influence the educational aspirations of the respondents, and not their occupational aspirations. A possible explanation for this, is that mothers who had some education, had occupations outside the home, and the experience which they get from other people through discussions or reading helps them to take greater interest in the education of their children, and thus indirectly encourage and participate in shaping the aspirations of their children. The study generally shows that high aspirations are highly correlated with parental levels of education and the status of their occupations.

Although the results did not show any significant relationships between the age, religion, birth order, family size, and the educational and occupational aspirations of the respondents, these variables have been shown by other studies to influence

aspirations. The findings of Raju (1973), Wandera (1971) indicate that these factors need to be taken along with other variables which are related to the formation of aspirations. For instance the religion of the students and that of the parents should be considered. The present study considered only the religious affiliation of the respondents. The family sizes of the majority of the respondents were generally large, and this variable did not significantly affect the formation of aspirations of the respondents. As far as providing for the education of the children is concerned, the first borns and the later borns are treated equally by their parents. This means that birth order per se cannot be said to influence aspirations agreat deal. Other external factors such as the parents' education and occupation are also at play.

It may be concluded in view of these findings, that the role of interpersonal relationships between parents and students, discussions on educational matters too, play a crucial part in the formation of aspirations. In other words, the kind of motivation that students get from their parents need to be emphasised in school and at home. Sewell (1968) concluded from his findings, that " . . . . parental influence has direct effects on levels of educational and occupational aspirations, as well as educational attainment".

In terms of the knowledge that students have about the occupations in the modern sector today, the results indicate that students' felt needs and aspirations are mainly geared

towards those jobs that require high levels of education, and also those jobs that give a good and regular income. This strongly reflects the attitudes of parents in the rural areas of Kenya, towards an income – earning child. The parents of such children, look up to them to provide most things in the home and generally to uplift their standard of living.

From the reasons that students give about working hard in school, it can be seen that they are concerned about the welfare of their families. "To help my parents and family", ranks second to "getting a good job", among the reasons given why students aim high in school. It is important to note that the felt needs and aspirations for income of many girls has tremendously increased due to the new roles open to women in Kenyan society today. Thus the girls in the study aim as high as the boys in terms of both educational and job opportunities. In general, both boys and girls view the years they have spent in school, as a means of obtaining a steady income to satisfy obligations to their families, and invest for their future.

What appears to be the important question in the formation of students' educational and occupational aspirations, concerns the likelihood of structural change and its impact upon the established pattern of schooling. In trying to answer this question, one is confronted by the very fundamental issue of the social nexus of our educational institutions, and the way in which they respond and mould students' aspirations.

Apart from this, there is the issue of parental influence upon the shaping of students' aspirations.

In view of all this, however, it is worthwhile to note that Education cannot easily be used as a means of altering aspirations, as what an individual aspires to be is only partially related to his schooling. A multiplicity of external factors contribute to the formation of an aspiration.

From the findings of this study, it is felt that more research should be directed to this field, to obtain data on how aspirations are formed and how students can be helped in the formation of their aspirations. Both the parents and the students should be interviewed.

With findings of this nature, it is felt that adult educators, and school teachers can argue their case more convinvingly to their students. This is mainly because the adaptation of any educational system requires that the needs and aspirations of those who will participate, be carefully investigated, and not assumed a priori.

In conclusion an intensive effort is needed to inform students of the occupational realities which will face them when they leave school. What appears to be clearly needed is a guidance service in all schools, to provide the basic and accurate facts about the kinds of jobs that students leaving school can apply for. In addition to this, such information should be relevant to the needs of the students so that they can set their educational and occupational aspirations at the

level appropriate to their talents. This, I believe, will help

to alleviate the frustration which is very much related to

misguided aspirations.

NO.	AGE	RELIGION	FAMILY SIZE	BIRTH ORDER	FATHER'S EDUCATION	FATHER'S OCCUPATION	MOTHER'S EDUCATION	LEVEL OF EDUCATIONAL ASPIRATION	LEVEL OF OCCUPATIONAL ASPIRATION
1	12	Protestant	6	3	12	12	12	LOW	HIGH
2	14	Protestant	6	1	12	12	12	LOW	HIGH
3	13	Hindu	4	4	0	8	0	HIGH	HIGH
4	14	Protestant	8	4	12	8	0	LOW	LOW
5	12	Catholic	6	5	12	8	8	LOW	LOW
6	15	Protestant	5	5	12	12	8	HIGH	HIGH
7	13	Muslim	3	3	17	17	8	HIGH	HIGH
8	14	Protestant	7	3	0	8	0	HIGH	HIGH
9	15	Protestant	7	3	17	17	8	LOW	LOW
10	14	Protestant	8	1	12	12	12	HIGH	HIGH
11	15	Protestant	7	2	8	8	0	LOW	LOW
12	14	Protestant	8	8	8	8	8	HIGH	LOW
13	13	Hindu	3	1	12	12	12	LOW	HIGH
14	15	Protestant	6	4	8	8	0	HIGH	HIGH
15	14	Catholic	7	1	8	8	8	HIGH	HIGH
16	16	Protestant	6	1	8	8	0	LOW	LOW
17	14	Protestant	7	4	12	12	8	HIGH	HIGH
18	15	Protestant	9	4	8	8	8	LOW	LOW
19	15	Catholic	5	3	8	8	8	LOW	LOW
20	16	Catholic	9	7	12	8	8	LOW	LOW

NO.	AGE	RELIGION	FAMILY SIZE	BIRTH ORDER	FATHER'S EDUCATION	FATHER'S OCCUPATION	MOTHER'S EDUCATION	LEVEL OF EDUCATIONAL ASPIRATION	LEVEL OF OCCUPATIONAL ASPIRATION
1	14	Catholic	5	1	12	12	8	HIGH	LOW
2	16	Protestant	8	1	12	8	12	HIGH	LOW
3	13	7th Day	9	8	12	8	8	HIGH	HIGH
4	15	Hindu	3	4	12	12	12	LOW	HIGH
5	14	Protestant	6	7	8	8	8	HIGH	LOW
6	13	Protestant	9	1	12	12	12	LOW	HIGH
7	14	7th Day	4	1	8	8	8	LOW	LOW
8	15	Catholic	6	2	8	8	0	LOW	HIGH
9	14	Catholic	9	1	12	8	8	HIGH	LOW
10	15	Protestant	5	2	8	8	8	LOW	LOW
11	12	Hindu	2	2	12	8	12	HIGH	HIGH
12	13	Hindu	3	2	12	8	12	HIGH	HIGH
13	12	Hindu	2	1	17	8	8	HIGH	LOW
14	13	Protestant	4	1	12	8	8	LOW	HIGH
15	14	Hindu	4	1	8	8	8	LOW	HIGH
16	13	Hindu	5	5	12	8	8	HIGH	HIGH
17	14	Protestant	6	5	8	8	8	HIGH	HIGH
18	15	Protestant	7	3	8	8	8	LOW	LOW
19	13	Hindu	2	1	8	8	12	LOW	LOW
20	16	Protestant	5	2	12	8	12	HIGH	LOW

Scores	8	7	6	5	4	3	2	1	-1	-2	-3	-4	-5	-6	-7	-8		
OCCUPATIONS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total	Rank
1 Primary Teacher	-	-	-	-	.05	.05	.05	.15	.05	.20	.10	.05	.15	-	.05	.10	-2.25	12
2 Shopkeeper	-	-	-	-	-	.05	.05	.05	.05	.05	.10	.10	.10	.15	.20	.10	-4.15	16
3 Doctor	.05	.05	.10	.10	.25	.20	.05	.05	.05	.05	.05	-	-	-	-	-	3.30	3
4 Policeman	-	-	-	-	-	.05	.05	.10	.05	.10	.10	.05	.10	.15	.10	.15	-3.70	15
5 Writer	-	-	.05	-	-	.05	.10	.05	.15	.05	-	.10	.20	.15	.10	-	-2.25	12
6 Clergyman	-	.10	-	.05	.05	-	.05	.05	.10	-	.10	.10	.10	.15	.05	.10	-2.05	11
7 Lawyer	.10	.15	.10	.20	.05	.10	-	.10	.05	-	.05	-	-	.05	.05	-	3.20	5
8 M.P.	.20	.05	.25	.20	-	.10	-	-	.10	.05	-	-	-	.05	-	-	4.25	2
9 Secretary	-	-	-	-	.10	.05	.20	-	.05	.20	.10	.05	.05	.10	.10	-	-1.55	10

Scores	8	7	6	5	4	3	2	1	-1	-2	-3	-4	-5	-6	-7	-8		
OCCUPATIONS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total	Rank
10 Nurse	–	.05	–	.05	–	–	–	.05	–	.10	.15	.15	.15	.10	.15	.05	-3.50	14
11 Businessman	.15	.05	.10	.10	.05	.05	.10	.10	.05	–	.05	.10	–	–	.10	–	2.00	6
12 Lecturer	.15	.15	–	.10	.15	.05	.15	.10	–	.05	.05	.05	–	–	–	–	3.30	3
13 High Sch. Teacher	–	.10	.20	.05	.10	–	–	.05	.10	.05	.20	–	–	.05	.05	.05	0.70	7
14 Farmer	.05	.05	.05	.05	.05	.05	.05	.10	.05	.10	–	.05	.05	.05	–	.20	-0.75	9
15 Professor	.25	.25	.20	–	.05	.10	.05	–	.05	–	–	–	–	–	–	.05	5.10	1
16 Hotel Manager	.05	–	–	.15	.10	.10	.10	.10	–	.05	–	.10	.05	–	.10	.10	-0.20	8

Scores	8	7	6	5	4	3	2	1	-1	-2	-3	-4	-5	-6	-7	-8		
OCCUPATIONS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total	Rank
1 Primary Teacher	-	.05	-	-	-	-	.10	.05	.10	.15	.15	.10	.05	.15	.05	-	-1.40	9
2 Shopkeeper	-	-	-	-	-	.05	-	-	-	.10	.05	.10	.05	.15	.15	.30	-5.20	16
3 Doctor	-	.15	.05	.20	.05	.10	.15	.10	.05	.05	.05	-	-	-	-	-	3.55	4
4 Policeman	.05	-	.05	-	-	.05	.05	.05	-	.10	.15	.10	.10	.10	.10	.10	-2.65	12
5 Writer	-	-	-	-	-	.05	.05	-	.05	.05	.10	.05	.30	.15	.15	.05	-4.25	15
6 Clergyman	-	-	.05	-	.05	.05	.05	.05	.10	.05	.05	.15	.15	.15	.10	-	-1.90	11
7 Lawyer	.05	.20	.15	.15	.15	.05	.05	.05	-	-	.05	.05	-	-	.05	-	3.65	3
8 M.P.	.40	.10	.10	.15	.05	.10	.05	-	.05	-	-	-	-	-	-	-	5.80	1
9 Secretary	-	-	-	.10	.05	.05	.10	.15	.10	.15	.15	.05	.05	.05	-	-	-0.40	8

Scores	8	7	6	5	4	3	2	1	-1	-2	-3	-4	-5	-6	-7	-8		
OCCUPATIONS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total	Rank
10 Nurse	.05	–	–	.10	.25	.05	.20	.05	.15	.05	–	–	–	–	.10	–	1.55	7
11 Businessman	–	–	–	.05	.10	.10	–	.15	.10	–	.10	.15	.05	.10	–	.10	-1.55	10
12 Lecturer	.05	.10	.20	.15	.05	.05	.10	.05	–	.10	–	–	.15	–	–	–	2.70	5
13 High Sch. Teacher	.05	.15	–	–	.20	.25	.05	.05	.05	.10	.05	.05	–	–	–	–	2.55	6
14 Farmer	.15	–	.05	–	–	–	–	.05	.05	.05	–	.15	.05	.10	.20	.15	-2.65	12
15 Professor	.10	.25	.30	.15	.05	–	.05	.05	.05	–	–	–	–	–	–	–	5.40	2
16 Hotel Manager	.05	–	–	–	–	.05	–	.25	.15	.05	.05	–	.05	.05	.10	.20	-2.75	14

QUESTIONNAIRE USED FOR PILOT STUDY

High School Student's Educational and Occupational Aspirations:

1. (a)   How many brothers and sisters do you have?

    _____

    (b)   What is your position in the family?

    1st born / 2nd born etc.   _____

    (c)   What is your age?   _____ years.

    (d)   What is your religion?   _____

2.   Looking realistically at your future, how do you think your chances are of continuing your education beyond 4th form. Tick appropriately:

    _____   I'm certain to continue my education.

    _____   I have a reasonable chance of continuing.

    _____   I will certainly not be able to continue.

3.   If you have the chance to continue your education beyond 4th form, which of these Institutions would you like to join? Write 1 besides your 1st choice, and 2 besides your 2nd choice.

    _____   A Teacher Training College

    _____   A Technical Institute

    _____   An Agricultural Institute

    _____   Complete Higher School Certificate

    _____   Commercial Training

    _____   Nursing School

4.   Is this true about you? Tick appropriately:

    (a)   My parents want me to go on for further Education

                Yes ( )   No ( )

    (b)   My parents do not mind if I go on or not

                Yes ( )   No ( )

    (c)   My parents do not want me to go on any further

                Yes ( )   No ( )

    (d)   My parents have no knowledge of further Education

                Yes ( )   No ( )

5.   Which of these is true of your father's Education

    (a)   Did not go to school   _____

    (b)   Had Primary Education   _____

    (c)   Had Secondary Education   _____

    (d)   Had University Education   _____

    (e)   Don't know   _____

6.   Did your father have any Education or Training of other kinds e.g. in a Trade School, Secretarial School, Teacher Training etc.?

                Yes ( )   No ( )

If Yes, explain briefly

_____

_____

7.   Which of these is true of your mother's Education

    (a)   Did not go to school   _____

    (b)   Had Primary Education   _____

(c)   Had Secondary Education   _____

(d)   Had University Education   _____

(e)   Don't know   _____

8.   Did your mother have any Education or Training of other kinds e.g. in a Nursing School, Teacher Training, Secretarial School?

<div align="center">Yes ( )   No ( )</div>

If Yes, explain briefly

_____

_____

9.   Which one of your relatives has the highest level of Education?

(a)   Parents – Father or Mother

(b)   Brother

(c)   Sister

(d)   Myself

Indicate the level of Education   _____

_____

10.   What is your father's occupation?   _____

11.   What is your mother's occupation?   _____

12.   If you could have all the training necessary for a job, what job would you train for?

_____

13. What level of Education do you think is sufficient for the job of your choice?

_____

14. Which job do you think your parents would most like to see you do after school?

_____

15. What is the best job to have in Kenya today?

_____

16. Getting a good job in Kenya today depends on luck rather than ability and willingness to work.

Agree _____

Not Sure _____

Disagree _____

Tick appropriately.

17. A good Education does not necessarily mean a good job today.

Agree _____

Not Sure _____

Disagree _____

Tick appropriately.

18. Rank the following occupations in terms of their prestige in Kenya.

1. Primary School Teacher   9. Secretary

2. Shopkeeper   10. Nurse

3. Doctor   11. Businessman

4. Policeman

5. Writer

6. Clergyman

7. Lawyer

8. Member of Parliament

12. University Lecturer

13. High School Teacher

14. Farmer

15. University Professor

16. Hotel Manager.

QUESTIONNAIRE USED FOR THE MAIN STUDY

<u>High School Student's Educational and Occupational Aspirations:</u>

1. What is your age? _____ years

2. How many brothers _____ sisters _____
   do you have?

3. What is your position in the family? _____
   (i.e. 1st, 2nd or 3rd born etc.)

4. What is your Religion?

   1. Catholic

   2. Protestant

   3. Muslim

   4. Hindu

   5. None

5. Which of these is true of your father's Education?

   1. Did not go to school _____

   2. Had primary education _____

   3. Had secondary education _____

   4. Had University education _____

   5. Don't know _____

6. Which of these is true of your mother's Education?

   1. Did not go to school _____

   2. Had primary education _____

   3. Had secondary education _____

   4. Had University education _____

   5. Don't know _____

7. What is your father's occupation? _____

8. What is your mother's occupation? _____

9. Looking realistically at your future, how do you think your chances are of continuing your education beyond 4th form?

Tick appropriately:

_____ I am certain to continue

_____ I have a reasonable chance of continuing

_____ I will certainly not be able to continue.

10. If you have the chance to continue your Education beyond 4th form, which of the following would you like to join?

_____ A Teacher Training College

_____ A Technical Institute

_____ An Agricultural Institute

_____ A Higher School Certificate Class

_____ A Commercial College

_____ A Nursing School.

Indicate your First and Second Choices

11. If it were possible to get the necessary training, what job would you train for? _____

12. What level of Education do you think would be necessary for that job?

1. Primary Education

2. Secondary Education

3. University Education

13.   What is the best job to have in Kenya today?

_____

14.   Rank the following occupations in terms of their prestige in Kenya.

1. Primary School Teacher   9.   Secretary

2. Shopkeeper   10. Nurse

3. Doctor   11. Businessman

4. Policeman   12. University Lecturer

5. Writer   13. High School Teacher

6. Clergyman   14. Farmer

7. Lawyer   15. University Professor

8. Member of Parliament   16. Hotel Manager.

15.   What level of Education do you think your mother would like to see you attain?   _____

16.   What level of education do you think your father would like to see you attain?   _____

17.   What kind of occupation do you think your mother would like to see you do after school?   _____

18.   What kind of occupation do you think your father would like to see you do after school?   _____

19.   Who looks at your school Report more often?

1. Mother   _____

2. Father   _____

20.   State 3 reasons why you are studying hard in school?

1.

2.

3.

RANKING OF SIXTEEN OCCUPATIONS BY BOYS IN MAIN STUDY

Scores	8	7	6	5	4	3	2	1	-1	-2	-3	-4	-5	-6	-7	-8		
Occupations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total	Rank
1 Primary School Teacher	0.16	0.28	0.30	0.25	0.08	0.03	0.40	0.30	0.04	0.18	0.21	0.44	0.60	0.90	0.70	0.72	-2.70	14
2 Shopkeeper	-	-	-	-	0.08	0.09	0.10	0.06	0.02	0.10	0.27	0.36	0.70	1.08	0.91	1.04	-4.25	16
3 Doctor	0.96	1.26	0.72	0.75	0.44	0.18	0.10	0.06	0.04	0.04	0.12	0.16	-	-	-	-	4.21	1
4 Policeman	-	0.14	0.12	0.20	0.16	0.12	0.10	0.05	0.05	0.10	0.18	0.16	0.20	0.48	0.91	2.16	-3.35	15
5 Writer	-	-	0.24	0.25	0.36	0.15	0.12	0.10	0.10	0.20	0.27	0.48	0.25	0.24	0.28	0.40	-1.00	10
6 Clergyman	-	-	-	0.20	0.16	0.24	0.12	0.07	0.12	0.10	0.36	0.36	0.40	0.54	0.77	0.80	-2.66	13
7 Lawyer	0.48	0.42	0.78	0.50	0.48	0.36	0.24	0.09	0.04	0.06	0.15	0.16	0.20	-	-	-	2.74	6
8 Member of Parliament	0.96	0.63	0.72	0.30	0.32	0.27	0.20	0.06	0.08	0.04	0.06	0.20	0.10	0.12	0.28	0.32	2.26	7

Scores	8	7	6	5	4	3	2	1	-1	-2	-3	-4	-5	-6	-7	-8		
Occupations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total	Rank
9 Secretary	-	-	-	0.20	0.20	0.12	0.08	0.08	0.12	0.20	0.36	0.48	0.60	0.78	0.28	0.32	-2.46	12
10 Nurse	-	0.42	0.24	0.25	0.20	0.12	0.12	0.08	0.07	0.20	0.36	0.48	0.30	0.24	0.42	0.48	-1.12	11
11 Businessman	1.20	0.84	0.48	0.60	0.24	0.27	0.12	0.09	0.05	0.08	0.06	0.08	0.20	0.18	0.21	-	2.98	4
12 University Lecturer	0.32	1.33	0.90	0.70	0.32	0.36	0.12	0.04	0.02	0.04	0.12	0.16	0.10	0.12	0.14	0.08	3.29	3
13 High School Teacher	-	0.14	0.24	0.25	0.36	0.36	0.16	0.11	0.13	0.18	0.30	0.16	0.20	0.24	0.14	-	0.27	8
14 Farmer	-	1.84	0.56	0.60	0.30	0.24	0.18	0.12	0.08	0.07	0.10	0.16	0.30	0.12	0.07	0.08	2.96	5
15 Professor	2.08	0.98	0.72	0.50	0.32	0.12	0.08	0.04	0.02	0.08	0.06	0.08	0.10	0.24	0.14	0.08	4.04	2
16 Hotel Manager	0.32	0.35	0.30	0.25	0.32	0.24	0.16	0.05	0.06	0.18	0.27	0.20	0.40	0.30	0.42	0.40	-0.14	9

RANKING OF SIXTEEN OCCUPATIONS BY GIRLS IN MAIN STUDY

Scores	8	7	6	5	4	3	2	1	-1	-2	-3	-4	-5	-6	-7	-8		
OCCUPATIONS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total	Rank
1. Primary School Teacher	0.32	0.28	0.24	0.1	0.28	0.12	0.08	0.01	0.03	0.08	0.21	0.68	0.60	0.54	0.53	0.48	-1.77	11
2. Shopkeeper	-	0.21	0.06	-	-	0.09	0.06	-	0.01	0.14	0.30	-	0.50	0.66	1.39	1.68	-4.76	16
3. Doctor	1.12	0.70	0.66	0.95	0.44	0.57	0.02	0.01	0.07	0.02	0.09	0.04	-	-	-	-	4.25	1
4. Policeman	-	-	-	0.35	0.04	0.18	0.14	0.07	0.01	0.08	0.12	0.06	0.45	0.72	0.42	2.40	-3.58	15
5. Writer	-	-	-	0.05	0.16	0.09	0.20	0.09	0.03	0.28	0.30	0.48	0.60	0.54	0.63	0.08	-2.35	14
6. Clergyman	-	0.21	0.06	0.05	0.12	0.30	0.14	0.09	0.04	0.24	0.30	0.28	0.35	0.36	0.49	0.88	-1.97	13
7. Lawyer	0.24	0.28	0.84	0.85	0.56	0.21	0.14	0.09	0.11	0.06	0.09	0.12	0.05	-	0.07	0.08	2.63	5
8. Member of Parliament	1.12	0.49	1.38	0.55	0.36	0.12	0.08	0.04	0.06	0.06	0.18	0.04	0.20	-	-	0.24	3.36	4

Scores	8	7	6	5	4	3	2	1	-1	-2	-3	-4	-5	-6	-7	-8		
OCCUPATIONS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total	Rank
Secretary	-	0.07	0.06	0.35	0.04	0.09	0.08	0.07	0.20	0.24	0.21	0.28	0.35	0.54	0.63	0.24	-1.93	12
Nurse	0.08	0.28	0.42	0.20	0.44	0.12	0.20	0.07	0.04	0.18	0.21	0.44	0.35	0.24	0.49	-	-0.14	8
Businessman	0.80	0.49	-	0.15	0.12	0.09	0.18	0.10	0.09	0.08	0.18	0.36	0.35	0.66	0.42	0.32	-0.53	9
University Lecturer	0.56	1.68	1.38	0.35	0.36	0.12	0.02	0.06	0.03	0.02	0.12	0.12	0.05	0.06	0.21	0.08	3.84	3
High School Teacher	0.08	0.21	0.24	0.45	0.28	0.63	0.24	0.12	0.07	0.14	0.18	0.04	0.20	0.06	-	-	1.56	6
Farmer	1.28	0.21	0.42	0.05	0.16	0.12	0.18	0.09	0.07	0.14	0.12	0.40	0.15	0.42	0.42	0.24	0.55	7
Professor	1.92	1.47	0.84	0.45	0.28	0.03	0.14	-	0.01	0.06	0.12	0.16	0.15	0.36	0.07	0.08	4.12	2
Hotel Manager	0.08	0.28	-	0.20	0.36	0.12	0.14	0.07	0.10	0.18	0.12	0.16	0.50	0.60	0.49	0.72	-1.62	10

CHARACTERISTICS OF GIRLS IN THE MAIN STUDY

SUBJECT NUMBER	AGE	RELIGION	FORM (CLASS)	FAMILY SIZE	BIRTH ORDER	FATHER'S EDUCATION	FATHER'S OCCUPATION	MOTHER'S EDUCATION	MOTHER'S OCCUPATION	EDUCATIONAL ASPIRATION	OCCUPATIONAL ASPIRATION
1	17	Protestant	4	7	1	12	8	0	0	HIGH	LOW
2	17	Protestant	4	9	6	0	8	0	0	LOW	HIGH
3	18	Protestant	4	9	1	8	8	0	0	HIGH	HIGH
4	14	Protestant	1	11	6	8	0	12	8	HIGH	LOW
5	15	Catholic	1	11	3	12	0	0	0	LOW	LOW
6	15	Catholic	1	6	1	8	12	0	0	LOW	HIGH
7	18	Protestant	4	8	3	0	8	8	12	HIGH	HIGH
8	16	Protestant	1	9	6	0	12	12	8	HIGH	LOW
9	15	Catholic	1	8	1	8	0	0	0	LOW	HIGH
10	16	Protestant	1	7	2	0	0	0	0	LOW	LOW
11	16	Protestant	1	4	1	0	0	0	0	HIGH	LOW
12	19	Protestant	4	7	1	0	0	0	0	LOW	LOW
13	16	Catholic	1	5	1	17	8	8	0	HIGH	HIGH
14	16	Catholic	1	8	4	8	8	12	8	HIGH	HIGH
15	16	Catholic	4	7	1	12	0	0	0	HIGH	HIGH
16	15	Catholic	1	9	1	0	0	8	12	HIGH	LOW
17	17	Protestant	4	7	2	8	12	0	0	HIGH	HIGH
18	16	Protestant	4	7	3	8	12	8	8	HIGH	HIGH
19	18	Protestant	4	7	5	0	12	0	0	LOW	HIGH

SUBJECT NUMBER	AGE	RELIGION	FORM (CLASS)	FAMILY SIZE	BIRTH ORDER	FATHER'S EDUCATION	FATHER'S OCCUPATION	MOTHER'S EDUCATION	MOTHER'S OCCUPATION	EDUCATIONAL ASPIRATION	OCCUPATIONAL ASPIRATION

SUBJECT NUMBER	AGE	RELIGION	FORM (CLASS)	FAMILY SIZE	BIRTH ORDER	FATHER'S EDUCATION	FATHER'S OCCUPATION	MOTHER'S EDUCATION	MOTHER'S OCCUPATION	EDUCATIONAL ASPIRATION	OCCUPATIONAL ASPIRATION
20	16	Catholic	1	7	1	0	0	8	8	LOW	LOW
21	16	Catholic	1	6	1	8	8	0	0	LOW	HIGH
22	14	Protestant	1	2	8	0	8	8	8	HIGH	HIGH
23	16	Catholic	1	4	1	12	12	0	0	HIGH	HIGH
24	16	Catholic	1	6	3	12	8	0	0	HIGH	HIGH
25	18	Protestant	4	4	1	8	0	0	0	LOW	HIGH
26	18	Protestant	4	7	5	0	0	8	12	HIGH	LOW
27	17	Catholic	4	6	4	0	0	0	0	HIGH	HIGH
28	18	Catholic	4	3	2	0	0	8	8	HIGH	LOW
29	20	Catholic	4	6	1	17	8	0	0	HIGH	HIGH
30	18	Protestant	4	6	6	8	8	0	0	LOW	HIGH
31	19	Protestant	4	3	4	0	0	0	0	LOW	LOW
32	13	Protestant	1	5	3	8	12	12	12	HIGH	HIGH
33	13	Catholic	1	9	1	12	8	8	8	HIGH	HIGH
34	17	Protestant	4	5	2	0	8	8	8	HIGH	HIGH
35	14	Catholic	1	2	3	8	0	8	12	HIGH	LOW
36	18	Protestant	4	9	5	8	12	8	12	HIGH	HIGH
37	17	Catholic	4	7	1	0	12	0	0	LOW	LOW
38	18	Protestant	4	9	6	8	0	8	8	HIGH	HIGH
39	19	Protestant	4	4	4	0	8	12	8	HIGH	LOW
40	16	Protestant	1	7	1	8	0	8	8	HIGH	LOW

SUBJECT NUMBER	AGE	RELIGION	FORM (CLASS)	FAMILY SIZE	BIRTH ORDER	FATHER'S EDUCATION	FATHER'S OCCUPATION	MOTHER'S EDUCATION	MOTHER'S OCCUPATION	EDUCATIONAL ASPIRATION	OCCUPATIONAL ASPIRATION
41	18	Catholic	4	6	4	8	0	0	0	LOW	HIGH
42	17	Catholic	4	7	3	8	12	0	0	HIGH	HIGH
43	14	Catholic	1	9	1	0	12	0	0	HIGH	LOW
44	17	Catholic	4	2	3	8	12	12	8	HIGH	LOW
45	14	Protestant	1	5	3	8	0	0	0	LOW	HIGH
46	18	Protestant	4	8	3	0	0	8	8	LOW	HIGH
47	13	Catholic	1	4	2	0	0	8	8	LOW	LOW
48	15	Catholic	1	6	5	0	8	0	0	LOW	LOW
49	16	Catholic	1	6	1	8	0	0	0	HIGH	LOW
50	15	Protestant	1	8	3	8	8	0	0	LOW	HIGH
51	16	Protestant	1	7	6	17	0	0	0	HIGH	HIGH
52	15	Protestant	1	7	3	8	8	0	0	HIGH	LOW
53	15	Protestant	1	7	1	8	8	8	12	HIGH	HIGH
54	17	Catholic	4	3	2	0	0	0	0	LOW	LOW
55	17	Catholic	4	6	1	0	0	12	8	LOW	LOW
56	18	Catholic	4	4	4	0	12	8	8	LOW	HIGH
57	20	Protestant	4	8	1	8	12	0	0	HIGH	LOW
58	15	Catholic	1	7	1	0	8	0	0	HIGH	HIGH
59	19	Protestant	4	10	2	17	8	0	0	HIGH	HIGH
60	14	Protestant	1	6	2	12	0	0	0	LOW	LOW

SUBJECT NUMBER	AGE	RELIGION	FORM (CLASS)	FAMILY SIZE	BIRTH ORDER	FATHER'S EDUCATION	FATHER'S OCCUPATION	MOTHER'S EDUCATION	MOTHER'S OCCUPATION	EDUCATIONAL ASPIRATION	OCCUPATIONAL ASPIRATION
61	19	Catholic	4	5	1	0	8	8	8	HIGH	HIGH
62	16	Protestant	1	8	3	12	8	8	12	HIGH	LOW
63	20	Protestant	4	11	1	12	8	0	0	HIGH	LOW
64	18	Protestant	4	5	1	0	8	8	8	HIGH	HIGH
65	18	Catholic	4	7	2	0	0	0	0	LOW	LOW
66	17	Protestant	4	5	2	0	8	8	12	LOW	LOW
67	17	Protestant	4	4	1	0	12	0	0	LOW	HIGH
68	15	Catholic	1	3	2	0	0	0	0	LOW	HIGH
69	14	Protestant	1	5	1	0	12	0	0	LOW	HIGH
70	13	Protestant	1	7	4	0	12	0	0	LOW	HIGH

CHARACTERISTICS OF BOYS IN THE MAIN STUDY

SUBJECT NUMBER	AGE	RELIGION	FORM (CLASS)	FAMILY SIZE	BIRTH ORDER	FATHER'S EDUCATION	FATHER'S OCCUPATION	MOTHER'S EDUCATION	MOTHER'S OCCUPATION	EDUCATIONAL ASPIRATION	OCCUPATIONAL ASPIRATION
1	20	Protestant	4	3	2	0	0	0	0	LOW	HIGH
2	15	Catholic	1	8	3	8	0	8	8	HIGH	LOW
3	16	Catholic	1	8	1	0	0	8	8	LOW	LOW
4	16	Protestant	1	6	1	0	8	0	0	LOW	HIGH
5	16	Protestant	1	9	5	0	8	12	8	HIGH	HIGH
6	18	Protestant	4	6	1	0	0	12	8	HIGH	LOW
7	16	Protestant	1	7	1	8	0	0	0	LOW	LOW
8	16	Catholic	1	4	1	12	0	0	0	LOW	HIGH
9	16	Protestant	4	4	1	0	8	8	8	HIGH	LOW
10	20	Catholic	4	9	4	8	8	0	0	LOW	LOW
11	17	Catholic	4	10	1	8	12	8	8	HIGH	HIGH
12	17	Catholic	4	7	5	8	12	0	0	LOW	LOW
13	17	Protestant	4	2	2	0	0	12	8	LOW	LOW
14	17	Protestant	4	5	1	0	0	0	0	LOW	LOW
15	18	Catholic	4	6	6	0	8	8	8	LOW	LOW
16	19	Catholic	4	10	1	12	8	0	0	LOW	HIGH
17	16	Protestant	1	4	1	0	0	8	8	LOW	LOW
18	14	Protestant	1	5	3	0	0	0	0	LOW	LOW
19	15	Protestant	1	4	1	8	0	8	8	HIGH	LOW
20	15	Catholic	1	5	2	17	8	0	0	HIGH	HIGH

SUBJECT NUMBER	AGE	RELIGION	FORM (CLASS)	FAMILY SIZE	BIRTH ORDER	FATHER'S EDUCATION	FATHER'S OCCUPATION	MOTHER'S EDUCATION	MOTHER'S OCCUPATION	EDUCATIONAL ASPIRATION	OCCUPATIONAL ASPIRATION
21	15	Catholic	1	1	1	0	0	8	8	HIGH	LOW
22	18	Protestant	1	6	3	0	12	0	0	LOW	LOW
23	13	Protestant	4	10	1	0	0	8	8	LOW	LOW
24	17	Protestant	4	4	4	0	0	0	0	LOW	LOW
25	16	Protestant	1	7	1	0	8	12	12	HIGH	LOW
26	16	Catholic	1	7	2	8	12	0	0	LOW	HIGH
27	16	Catholic	1	3	3	8	12	8	8	LOW	LOW
28	16	Catholic	1	9	1	8	12	0	0	LOW	HIGH
29	18	Protestant	4	10	1	0	0	8	8	LOW	LOW
30	15	Protestant	1	7	2	0	0	0	0	HIGH	LOW
31	15	Protestant	1	7	1	12	8	12	12	HIGH	HIGH
32	13	Catholic	1	6	5	0	0	0	0	LOW	LOW
33	17	Catholic	4	4	4	0	0	0	0	LOW	LOW
34	19	Catholic	4	10	1	8	12	0	0	HIGH	LOW
35	17	Catholic	4	3	1	0	12	0	0	LOW	HIGH
36	19	Protestant	4	6	4	17	12	0	0	HIGH	HIGH
37	17	Protestant	4	9	3	12	0	8	8	HIGH	LOW
38	19	Catholic	4	8	1	12	0	0	0	LOW	LOW
39	19	Catholic	4	3	3	12	8	0	0	LOW	HIGH
40	20	Protestant	4	6	1	0	8	8	12	HIGH	HIGH
41	14	Protestant	1	11	5	0	8	12	8	HIGH	LOW

SUBJECT NUMBER	AGE	RELIGION	FORM (CLASS)	FAMILY SIZE	BIRTH ORDER	FATHER'S EDUCATION	FATHER'S OCCUPATION	MOTHER'S EDUCATION	MOTHER'S OCCUPATION	EDUCATIONAL ASPIRATION	OCCUPATIONAL ASPIRATION
21	15	Catholic	1	1	1	0	0	8	8	HIGH	LOW
22	18	Protestant	1	6	3	0	12	0	0	LOW	LOW
23	13	Protestant	4	10	1	0	0	8	8	LOW	LOW
24	17	Protestant	4	4	4	0	0	0	0	LOW	LOW
25	16	Protestant	1	7	1	0	8	12	12	HIGH	LOW
26	16	Catholic	1	7	2	8	12	0	0	LOW	HIGH
27	16	Catholic	1	3	3	8	12	8	8	LOW	LOW
28	16	Catholic	1	9	1	8	12	0	0	LOW	HIGH
29	18	Protestant	4	10	1	0	0	8	8	LOW	LOW
30	15	Protestant	1	7	2	0	0	0	0	HIGH	LOW
31	15	Protestant	1	7	1	12	8	12	12	HIGH	HIGH
32	13	Catholic	1	6	5	0	0	0	0	LOW	LOW
33	17	Catholic	4	4	4	0	0	0	0	LOW	LOW
34	19	Catholic	4	10	1	8	12	0	0	HIGH	LOW
35	17	Catholic	4	3	1	0	12	0	0	LOW	HIGH
36	19	Protestant	4	6	4	17	12	0	0	HIGH	HIGH
37	17	Protestant	4	9	3	12	0	8	8	HIGH	LOW
38	19	Catholic	4	8	1	12	0	0	0	LOW	LOW
39	19	Catholic	4	3	3	12	8	0	0	LOW	HIGH
40	20	Protestant	4	6	1	0	8	8	12	HIGH	HIGH
41	14	Protestant	1	11	5	0	8	12	8	HIGH	LOW

SUBJECT NUMBER	AGE	RELIGION	FORM (CLASS)	FAMILY SIZE	BIRTH ORDER	FATHER'S EDUCATION	FATHER'S OCCUPATION	MOTHER'S EDUCATION	MOTHER'S OCCUPATION	EDUCATIONAL ASPIRATION	OCCUPATIONAL ASPIRATION
42	19	Protestant	4	3	1	12	0	0	0	LOW	HIGH
43	14	Protestant	1	6	1	0	0	0	0	LOW	LOW
44	17	Protestant	1	8	1	0	0	0	0	LOW	LOW
45	18	Protestant	1	6	3	0	0	0	0	LOW	LOW
46	17	Protestant	1	8	4	8	12	0	0	HIGH	HIGH
47	19	Catholic	4	8	2	12	12	8	8	HIGH	HIGH
48	20	Catholic	4	7	1	8	0	0	0	HIGH	HIGH
49	18	Catholic	4	5	4	0	0	8	8	HIGH	LOW
50	19	Protestant	1	9	1	8	8	0	0	HIGH	HIGH
51	14	Protestant	1	8	4	8	8	8	8	HIGH	HIGH
52	16	Catholic	1	11	1	0	8	0	0	LOW	HIGH
53	16	Catholic	1	9	1	0	0	12	12	LOW	LOW
54	13	Protestant	1	7	5	12	12	0	0	LOW	HIGH
55	16	Protestant	1	6	1	8	0	8	12	HIGH	HIGH
56	16	Protestant	1	7	1	8	8	0	0	HIGH	HIGH
57	16	Protestant	1	4	1	12	8	0	0	HIGH	HIGH
58	20	Catholic	4	10	1	8	0	0	0	LOW	HIGH
59	17	Catholic	4	8	1	0	0	12	8	HIGH	LOW
60	19	Catholic	1	4	4	0	0	0	0	HIGH	HIGH
61	16	Protestant	1	5	6	0	0	8	12	HIGH	LOW
62	16	Protestant	1	7	1	8	12	0	0	HIGH	HIGH

SUBJECT NUMBER	AGE	RELIGION	FORM (CLASS)	FAMILY SIZE	BIRTH ORDER	FATHER'S EDUCATION	FATHER'S OCCUPATION	MOTHER'S EDUCATION	MOTHER'S OCCUPATION	EDUCATIONAL ASPIRATION	OCCUPATIONAL ASPIRATION
63	16	Catholic	1	8	1	8	12	0	0	LOW	HIGH
64	16	Protestant	1	7	1	0	0	0	0	LOW	LOW
65	15	Catholic	1	7	4	8	8	8	8	HIGH	HIGH
66	17	Catholic	4	11	1	8	8	0	0	LOW	LOW
67	16	Catholic	1	7	1	8	0	12	0	LOW	HIGH
68	16	Protestant	1	10	2	0	8	8	12	HIGH	HIGH
69	13	Protestant	1	8	3	8	0	0	8	HIGH	LOW
70	18	Protestant	4	1	1	12	12	8	12	HIGH	HIGH
71	16	Catholic	1	8	3	0	12	0	0	LOW	LOW
72	18	Protestant	4	7	1	8	0	8	8	HIGH	HIGH
73	17	Catholic	4	9	3	0	8	8	8	HIGH	LOW
74	19	Protestant	4	6	2	8	0	8	8	HIGH	LOW
75	18	Protestant	4	3	3	12	0	0	0	LOW	HIGH
76	18	Catholic	4	9	5	8	8	0	0	HIGH	HIGH
77	18	Catholic	4	7	3	0	12	0	0	HIGH	LOW
78	17	Catholic	4	8	4	8	8	8	8	HIGH	LOW
79	17	Catholic	4	6	1	17	0	0	0	LOW	HIGH
80	16	Protestant	1	5	2	0	0	8	8	LOW	HIGH
81	15	Protestant	1	7	3	0	0	8	8	LOW	LOW
82	16	Protestant	1	7	2	0	8	0	0	LOW	LOW

SUBJECT NUMBER	AGE	RELIGION	FORM (CLASS)	FAMILY SIZE	BIRTH ORDER	FATHER'S EDUCATION	FATHER'S OCCUPATION	MOTHER'S EDUCATION	MOTHER'S OCCUPATION	EDUCATIONAL ASPIRATION	OCCUPATIONAL ASPIRATION
83	17	Protestant	1	6	1	12	0	0	0	HIGH	LOW
84	17	Protestant	1	8	5	8	8	0	0	LOW	HIGH
85	18	Protestant	1	7	1	8	0	0	0	HIGH	HIGH
86	17	Catholic	4	8	2	8	12	0	0	HIGH	LOW
87	19	Catholic	1	9	1	8	12	8	8	HIGH	HIGH
88	17	Protestant	1	6	3	0	0	0	0	LOW	LOW
89	17	Catholic	1	5	4	0	0	8	8	LOW	LOW
90	16	Protestant	1	7	1	0	12	8	8	LOW	HIGH
91	15	Protestant	1	5	1	8	12	0	0	HIGH	LOW
92	15	Protestant	1	7	1	0	12	0	0	HIGH	HIGH
93	13	Catholic	1	5	3	8	12	0	0	HIGH	HIGH
94	15	Catholic	1	10	1	12	0	0	0	LOW	LOW
95	15	Protestant	1	7	4	0	8	8	12	HIGH	HIGH
96	13	Protestant	1	5	1	8	8	8	12	HIGH	LOW
97	14	Catholic	1	8	4	8	8	0	0	HIGH	LOW
98	15	Catholic	1	7	1	0	12	8	8	HIGH	HIGH
99	14	Catholic	1	12	1	0	0	0	0	LOW	LOW
100	14	Catholic	1	5	4	0	8	8	8	LOW	LOW
101	14	Protestant	4	5	1	0	8	0	0	LOW	HIGH
102	18	Catholic	1	7	5	0	0	0	0	LOW	HIGH
103	15	Protestant	1	2	1	0	8	0	0	LOW	HIGH

SUBJECT NUMBER	AGE	RELIGION	FORM (CLASS)	FAMILY SIZE	BIRTH ORDER	FATHER'S EDUCATION	FATHER'S OCCUPATION	MOTHER'S EDUCATION	MOTHER'S OCCUPATION	EDUCATIONAL ASPIRATION	OCCUPATIONAL ASPIRATION
83	17	Protestant	1	6	1	12	0	0	0	HIGH	LOW
84	17	Protestant	1	8	5	8	8	0	0	LOW	HIGH
85	18	Protestant	1	7	1	8	0	0	0	HIGH	HIGH
86	17	Catholic	4	8	2	8	12	0	0	HIGH	LOW
87	19	Catholic	1	9	1	8	12	8	8	HIGH	HIGH
88	17	Protestant	1	6	3	0	0	0	0	LOW	LOW
89	17	Catholic	1	5	4	0	0	8	8	LOW	LOW
90	16	Protestant	1	7	1	0	12	8	8	LOW	HIGH
91	15	Protestant	1	5	1	8	12	0	0	HIGH	LOW
92	15	Protestant	1	7	1	0	12	0	0	HIGH	HIGH
93	13	Catholic	1	5	3	8	12	0	0	HIGH	HIGH
94	15	Catholic	1	10	1	12	0	0	0	LOW	LOW
95	15	Protestant	1	7	4	0	8	8	12	HIGH	HIGH
96	13	Protestant	1	5	1	8	8	8	12	HIGH	LOW
97	14	Catholic	1	8	4	8	8	0	0	HIGH	LOW
98	15	Catholic	1	7	1	0	12	8	8	HIGH	HIGH
99	14	Catholic	1	12	1	0	0	0	0	LOW	LOW
100	14	Catholic	1	5	4	0	8	8	8	LOW	LOW
101	14	Protestant	4	5	1	0	8	0	0	LOW	HIGH
102	18	Catholic	1	7	5	0	0	0	0	LOW	HIGH
103	15	Protestant	1	2	1	0	8	0	0	LOW	HIGH

SUBJECT NUMBER	AGE	RELIGION	FORM (CLASS)	FAMILY SIZE	BIRTH ORDER	FATHER'S EDUCATION	FATHER'S OCCUPATION	MOTHER'S EDUCATION	MOTHER'S OCCUPATION	EDUCATIONAL ASPIRATION	OCCUPATIONAL ASPIRATION
104	15	Protestant	1	6	2	0	12	0	0	LOW	HIGH
105	20	Protestant	1	5	2	0	12	8	8	HIGH	LOW
106	18	Protestant	4	9	2	8	8	0	0	HIGH	LOW
107	18	Catholic	4	7	1	8	8	0	0	HIGH	HIGH
108	18	Catholic	4	9	4	8	0	8	8	HIGH	HIGH
109	19	Protestant	4	5	2	0	12	0	0	LOW	HIGH
110	18	Protestant	4	7	5	0	0	8	8	HIGH	LOW
111	17	Protestant	4	9	4	0	8	0	0	LOW	LOW
112	19	Protestant	4	7	4	0	0	8	8	LOW	HIGH
113	18	Protestant	4	6	1	0	0	0	0	LOW	LOW
114	17	Catholic	4	7	6	8	12	8	12	HIGH	HIGH
115	19	Catholic	1	10	4	8	12	0	0	HIGH	HIGH
116	18	Catholic	4	11	5	8	0	0	0	HIGH	LOW
117	18	Protestant	4	8	5	0	0	8	8	LOW	HIGH
118	19	Catholic	4	5	5	8	0	0	0	LOW	LOW
119	18	Protestant	4	7	1	0	0	8	8	LOW	LOW
120	19	Catholic	4	7	5	0	8	8	8	HIGH	HIGH
121	20	Protestant	4	7	6	8	0	0	0	LOW	LOW
122	17	Protestant	4	5	3	0	0	0	0	LOW	HIGH
123	17	Protestant	4	7	3	0	0	8	8	LOW	HIGH

SUBJECT NUMBER	AGE	RELIGION	FORM (CLASS)	FAMILY SIZE	BIRTH ORDER	FATHER'S EDUCATION	FATHER'S OCCUPATION	MOTHER'S EDUCATION	MOTHER'S OCCUPATION	EDUCATIONAL ASPIRATION	OCCUPATIONAL ASPIRATION
124	17	Protestant	1	8	2	8	0	0	0	LOW	LOW
125	16	Catholic	1	7	3	8	12	8	8	HIGH	HIGH
126	16	Catholic	4	6	2	8	0	0	0	HIGH	HIGH
127	18	Protestant	4	6	1	8	0	8	8	HIGH	LOW
128	18	Catholic	4	4	1	8	8	0	0	HIGH	LOW
129	17	Protestant	4	6	1	8	0	8	8	HIGH	LOW
130	20	Protestant	4	7	1	8	0	8	8	HIGH	LOW

N.B.

The following are the computations for the point biserial correlations and the t – tests given in the text.

Formula

$$rpb = \frac{(M2 - M1)\sqrt{P_1 P_2}}{S_x}$$

$$S_x = \sqrt{\frac{\sum x^2 - \frac{(\sum x)^2}{n}}{n-1}}$$

rpb – is the product correlation between the High and the Low Educational or Occupational Aspirations categories scored as either 0 or 1

M_1 – is the mean of the "low" scores

M_2 – is the mean of the "high" scores

P_1 – is the proportion of cases with "high" aspirations.

P_2 – is the proportion of cases with "low" aspirations.

S_x – is the standard deviation of all the scores

The Boys' Sample

a)   Computation of the point biserial correlation between the boys' age and their educational aspirations. The respondents' ages and the corresponding educational and occupational aspiration scores appear in appendix IX (p 111 - 114)

$$P_1 = \frac{65}{130} = 0.5$$

$$P_2 = \frac{65}{130} = 0.5$$

$$\sqrt{P_1 P_2} = 0.5$$

$$M_2 = \frac{1095}{65} = 16.846$$

$$M_1 = \frac{1088}{65} = 16.738$$

$$M_2 - M_1 = 0.108$$

$$(M_2 - M_1)\sqrt{P_1 P_2} = 0.108 \times 0.5$$

$$= 0.0540$$

$$\sum x = 2183$$

$$\sum x^2 = 37067$$

$$S_x = 2.879$$

$$r_{pb} = \frac{0.0540}{2.879}$$

$$r_{pb} = 0.01876$$

b)   Computation of the point biserial correlation between the boys' age and their occupational aspirations.

$$P_1 = \frac{62}{130} = 0.48$$

$$P_2 = \frac{68}{130} = 0.52$$

$$\sqrt{P_1 P_2} = 0.499$$

$$M_2 = \frac{1052}{62} = 16.968$$

$$M_1 = \frac{1130}{68} = 16.618$$

$$M_2 - M_1 = 0.35$$

$$(M_2 - M_1)\sqrt{P_1 P_2} = 0.35 \times 0.499$$

$$\sum x = 2183$$

$$\sum x^2 = 37067$$

$$S_x = 2.879$$

$$rpb = \frac{0.17465}{2.879}$$

$$rpb = 0.06066$$

c) Computation of the point biserial correlation between the boys' family size and their educational aspirations.

$$P_1 = \frac{65}{130} = 0.5$$

$$P_2 = \frac{65}{130} = 0.5$$

$$\sqrt{P_1 P_2} = 0.5$$

$$M_2 = \frac{450}{65} = 6.923$$

$$M_1 = \frac{425}{65} = 6.538$$

$$M_2 - M_1 = 0.385$$

$$(M_2 - M_1)\sqrt{P_1 P_2} = 0.385 \times 0.5$$

$$= 0.1925$$

$$\Sigma x = 875$$

$$\Sigma x^2 = 6497$$

$$S_x = 2.17023$$

$$rpb = \frac{0.1925}{2.17023}$$

$$rpb = 0.0887$$

d)   Computation of the point biserial correlation between
the boys' family size and their occupational aspirations.

$$P_1 = \frac{62}{130} = 0.48$$

$$P_2 = \frac{68}{130} = 0.52$$

$$\sqrt{P_1 P_2} = 0.499$$

$$M_2 = \frac{415}{62} = 6.694$$

$$M_1 = \frac{460}{68} = 6.765$$

$$M_2 - M_1 = -0.71$$

$$(M_2 - M_1)\sqrt{P_1 P_2} = -0.71 \times 0.499$$

$$= -0.03543$$

$$\Sigma x = 875$$

$$\Sigma x^2 = 6497$$

$$S_x = 2.17023$$

$$rpb = \frac{-0.03543}{2.17023}$$

$$rpb = -0.0163$$

e)   Computation of the point biserial correlation between
the boys' fathers' education and their educational
aspirations.

$$P_1 \quad = \frac{65}{130} \qquad = 0.5$$

$$P_2 \quad = \frac{65}{130} \qquad = 0.5$$

$$\sqrt{P_1 P_2} \quad = 0.5$$

$$M_2 \quad = \frac{394}{65} \qquad = 6.062$$

$$M_1 \quad = \frac{225}{65} \qquad = 3.462$$

$$M - M \quad = 2.6$$

$$(M_2 - M_1)\sqrt{P_1 P_2} \quad = 2.6 \times 0.5$$

$$= 130$$

$$\sum x \quad = 619$$

$$\sum x^2 \quad = 6083$$

$$S_x \quad = 4.9302$$

$$r_{pb} \quad = \frac{1.30}{4.9302}$$

$$r_{pb} \quad = 0.26368$$

f)   Computation of the point biserial correlation between the boys' fathers' education and their occupational aspirations.

$$P_1 \quad = \frac{62}{130} \quad = \quad 0.48$$

$$P_1 \quad = \frac{68}{130} \quad = 0.52$$

$$\sqrt{P_1 P_2} \quad = \quad 0.499$$

$$M_2 \quad = \frac{379}{62} \quad = 6.113$$

$$M_1 \quad = \frac{240}{68} \quad = 3.529$$

$$M_2 - M_1 \quad = \quad 2.584$$

$$(M_2 - M_1)\sqrt{P_1 P_2} = \quad 2.584 \times 0.499$$

$$= \quad 1.289416$$

$$\sum x \quad = \quad 619$$

$$\sum x^2 \quad = \quad 6083$$

$$S_x \quad = \quad 4.9302$$

$$rpb \quad = \frac{1.289416}{4.9302}$$

$$rpb \quad = \quad 0.26153$$

g) Computation of the point biserial correlation between the boys' fathers' occupation and their educational aspirations.

$$P_1 = \frac{65}{130} = 0.5$$

$$P_2 = \frac{65}{130} = 0.5$$

$$\sqrt{P_1 P_2} = 0.5$$

$$M_2 = \frac{408}{65} = 6.277$$

$$M_1 = \frac{257}{65} = 3.954$$

$$M_2 - M_1 = 2.323$$

$$(M_2 - M_1)\sqrt{P_1 P_2} = 2.323 \times 0.5$$

$$= 1.1615$$

$$\sum x = 665$$

$$\sum x^2 = 6913$$

$$S_E = 5.217$$

$$rpb = \frac{1.1615}{5.217}$$

$$rpb = 0.2226$$

h)   Computation of the point biserial correlation between the boys' fathers' occupation and their occupational aspirations.

$$P1 \quad = \frac{62}{130} \qquad = 0.48$$

$$P_1 \quad = \frac{68}{130} \qquad = 0.52$$

$$\sqrt{P_1 P_2} \quad = 0.499$$

$$M_2 \quad = 457 \qquad = 7.371$$

$$M_1 \quad = \frac{208}{68} \qquad = 3.059$$

$$M_2 - M_1 = 4.312$$

$$(M_2 - M_1)\sqrt{P_1 P_2} = 4.312 \times 0.499$$

$$= 2.15174$$

$$\sum x \quad = 665$$

$$\sum x^2 \quad = 6913$$

$$S_x \quad = 5.217$$

$$rpb \quad = \frac{2.15174}{5.217}$$

$$rpb \quad = 0.41244$$

Computation of the point biserial correlation between the boys' mothers' education and boys' educational aspirations.

$$P_1 \quad = \frac{65}{130} \quad = 0.5$$

$$P_1 \quad = \frac{65}{130} \quad = 0.5$$

$$\sqrt{P_1 P_2} \quad = \quad 0.5$$

$$M_2 \quad = \frac{169}{65} \quad = 2.60$$

$$M_2 - M_1 = \quad 2.631$$

$$(M_2 - M_1)\sqrt{P_1 P_2} = \quad 2.631 \times 0.5$$

$$= \quad 1.3155$$

$$\Sigma x \quad = \quad 509$$

$$\Sigma x^2 \quad = \quad 4753$$

$$S_x \quad = \quad 4.626$$

$$r_{pb} \quad = \frac{1.3155}{4.626}$$

$$r_{pb} \quad = \quad 0.28437$$

Computation of the point biserial correlation between the boys' mothers' education and their occupational aspirations.

$$P_1 \quad = \quad 62 \qquad = \quad 0.48$$

$$P_2 \quad = \quad \frac{68}{130} \qquad = \quad 0.52$$

$$\sqrt{P_1 P_2} \quad = \quad 0.499$$

$$M_1 \quad = \quad \frac{233}{68} \qquad = \quad 3.758$$

$$M_2 - M_1 = \quad 0.301$$

$$(M_2 - M_1)\sqrt{P_1 P_2} = \quad 0.301 \times 0.499$$

$$= \quad -0.150199$$

$$\Sigma x \quad = \quad 509$$

$$\Sigma x^2 \quad = \quad 4753$$

$$S_x \quad = \quad 4.626$$

$$r_{pb} \quad = \quad \frac{-0.150199}{4.626}$$

$$r_{pb} \quad = \quad -0.03246$$

k)   Computation of the point biserial correlation between the boys' mothers' occupation and their educational aspirations.

$$P_1 \quad = \frac{65}{130} \quad\quad = 0.5$$

$$P_2 \quad = \frac{65}{130} \quad\quad = 0.5$$

$$\sqrt{P_1 P_2} \quad = 0.5$$

$$M_2 \quad = \frac{352}{65} \quad\quad = 5.415$$

$$M_1 \quad = \frac{140}{65} \quad\quad = 2.154$$

$$M_2 - M_1 = 3.261$$

$$(M_2 - M_1)\sqrt{P_1 P_2} = 3.261 \times 0.5$$

$$= 1.6305$$

$$\Sigma x \quad = 492$$

$$\Sigma x^2 \quad = 4464$$

$$S_x \quad = 4.491$$

$$r_{pb} \quad = \frac{1.6305}{4.491}$$

$$r_{pb} \quad = 0.36305$$

i.) Computation of the point biserial correlation between the boys' mothers' occupation and their occupational aspirations.

$$p_1 = \frac{62}{130} = 0.48$$

$$p_2 = \frac{68}{130} = 0.52$$

$$\sqrt{p_1 p_2} = 0.499$$

$$M_2 = \frac{212}{62} = 3.419$$

$$M_1 = \frac{280}{68} = 4.118$$

$$M_2 - M_1 = 0.699$$

$$(M_2 - M_1)\sqrt{p_1 p_2} = -0.699 \times 0.499$$

$$= -0.348801$$

$$\Sigma x = 492$$

$$\Sigma x^2 = 4464$$

$$S_x = 4.491$$

$$rpb = \frac{-0.348801}{4.491}$$

$$rpb = -0.0776$$

The Girls' Sample

a)   Computation of the point biserial correlation between the girls' age and their educational aspirations. The respondents' age and the corresponding educational and occupational aspiration scores appear in appendix IX (p 11 - 114)

$$P_1 \quad = \quad \frac{40}{70} \quad = 0.57$$

$$P_2 \quad = \quad \frac{30}{70} \quad = 0.43$$

$$\sqrt{P_1 P_2} \quad = \quad 0.495$$

$$M_2 \quad = \quad \frac{663}{40} \quad = 16.575$$

$$M_1 \quad = \quad \frac{488}{30} \quad = 16.267$$

$$M_2 - M_1 \quad = \quad 0.308$$

$$(M_2 - M_1)\sqrt{P_1 P_2} \quad = \quad 0.308 \times 0.495$$

$$= \quad 0.15246$$

$$\sum x \quad = \quad 1151$$

$$\sum x^2 \quad = \quad 19147$$

$$S_x \quad = \quad 1.78$$

$$r_{pb} \quad = \quad \frac{0.15246}{1.78}$$

$$r_{pb} \quad = \quad 0.086$$

b)   Computation of the point biserial correlation between the girls' age and their occupational aspirations.

$$P_1 = \frac{40}{70} = 0.57$$

$$P_2 = \frac{30}{70} = 0.43$$

$$\sqrt{P_1 P_2} = 0.495$$

$$M_2 = \frac{657}{40} = 16.425$$

$$M_1 = \frac{494}{30} = 16.467$$

$$M_2 - M_1 = 0.042$$

$$(M_2 - M_1)\sqrt{P_1 P_2} = 0.042 \times 0.495$$

$$= 0.02079$$

$$\sum x = 1151$$

$$\sum x^2 = 19147$$

$$S_x = 1.78$$

$$rpb = \frac{0.02079}{1.78}$$

$$rpb = -0.012$$

c) Computation of the point biserial correlation between the girls' family size and their educational aspirations.

$$p_1 = \frac{40}{70} = 0.57$$

$$p_2 = \frac{30}{70} = 0.43$$

$$\sqrt{p_1 p_2} = 0.495$$

$$M_2 = \frac{270}{40} = 6.75$$

$$M_1 = \frac{179}{30} = 5.97$$

$$M_2 - M_1 = 0.78$$

$$(M_2 - M_1)\sqrt{p_1 p_2} = 0.78 \times 0.495$$

$$= 0.3861$$

$$\sum x = 449$$

$$\sum x^2 = 3197$$

$$S_x = 2.1.279$$

$$rpb = \frac{0.3861}{2.1279}$$

$$rpb = 0.18144$$

d)   Computation of the point biserial correlation between the girls' family size and their occupational aspirations.

$$P_1 = \frac{40}{70} = 0.57$$

$$P_2 = \frac{30}{70} = 0.43$$

$$\sqrt{P_1 P_2} = 0.495$$

$$M_2 = \frac{256}{40} = 6.4$$

$$M_1 = \frac{193}{30} = 6.43$$

$$M_2 - M_1 = -0.03$$

$$(M_2 - M_1)\sqrt{P_1 P_2} = -0.03 \times 0.495$$

$$= -0.01485$$

$$\Sigma x = 449$$

$$\Sigma x^2 = 3197$$

$$S_x = 2.1279$$

$$rpb = \frac{-0.01485}{2.1279}$$

$$rpb = -0.00697$$

e)   Computation of the point biserial correlation between the girls' fathers' education and their educational aspirations.

$$P_1 = \frac{40}{70} = 0.57$$

$$P_2 = \frac{30}{70} = 0.43$$

$$\sqrt{P_1 P_2} = 0.495$$

$$M_2 = \frac{288}{40} = 7.2$$

$$M_1 = \frac{88}{30} = 2.93$$

$$M_2 - M_1 = 4.27$$

$$(M_2 - M_1)\sqrt{P_1 P_2} = 4.27 \times 0.495$$

$$= 2.11365$$

$$\sum x = 376$$

$$\sum x^2 = 4052$$

$$S_x = 5.388$$

$$rpb = \frac{2.11365}{5.388}$$

$$rpb = 0.39228$$

f)   Computation of the point biserial correlation between the girls' fathers' education and their occupational aspirations.

$$P_1 = \frac{40}{70} = 0.57$$

$$P_2 = \frac{30}{70} = 0.43$$

$$\sqrt{P_1 P_2} = 0.495$$

$$M_2 = \frac{260}{40} = 6.5$$

$$M_1 = \frac{116}{30} = 3.87$$

$$M_2 - M_1 = 2.63$$

$$(M_2 - M_1)\sqrt{P_1 P_2} = 2.63 \times 0.495$$

$$= 1.30185$$

$$\sum x = 376$$

$$\sum x^2 = 4052$$

$$S_x = 5.388$$

$$rpb = \frac{1.30185}{5.388}$$

$$rpb = 0.24162$$

g) Computation of the point biserial correlation between the girls' fathers' occupation and their educational aspirations.

$$P_1 = \frac{40}{70} = 0.57$$

$$P_2 = \frac{30}{70} = 0.43$$

$$\sqrt{p_1 p_2} = 0.495$$

$$M_2 = \frac{264}{40} = 6.6$$

$$M_1 = \frac{132}{30} = 4.4$$

$$M_2 - M_1 = 2.2$$

$$(M_2 - M_1)\sqrt{p_1 p_2} = 2.2 \times 0.495$$

$$= 1.089$$

$$\sum x = 396$$

$$\sum x^2 = 3984$$

$$S_x = 4.99$$

$$rpb = \frac{1.089}{4.99}$$

$$rpb = 0.2182$$

h)   Computation of the point biserial correlation between the girls' fathers' occupation and their occupational aspirations.

$$P_1 = \frac{40}{70} = 0.57$$

$$P_2 = \frac{30}{70} = 0.43$$

$$\sqrt{P_1 P_2} = 0.495$$

$$M_2 = \frac{280}{40} = 7.00$$

$$M_1 = \frac{116}{30} = 3.87$$

$$M_2 - M_1 = 3.13$$

$$(M_2 - M_1)\sqrt{P_1 P_2} = 3.13 \times 0.495$$

$$= 1.54935$$

$$\Sigma x = 396$$

$$\Sigma x^2 = 3984$$

$$S_x = 4.99$$

$$rpb = \frac{1.54935}{4.99}$$

$$rpb = 0.31049$$

i)   Computation of the point biserial correlation between the girls mothers' education and their educational aspirations.

$$P_1 = \frac{40}{70} = 0.57$$

$$P_2 = \frac{30}{70} = 0.43$$

$$\sqrt{P_1 P_2} = 0.495$$

$$M_2 = \frac{200}{40} = 5.00$$

$$M_1 = \frac{52}{30} = 1.73$$

$$M_2 - M_1 = 3.27$$

$$(M_2 - M_1)\sqrt{P_1 P_2} = 3.27 \times 0.495$$

$$= 1.61865$$

$$\Sigma x = 252$$

$$\Sigma x^2 = 2352$$

$$S_x = 4.54$$

$$rpb = \frac{1.61865}{4.54}$$

$$rpb = 0.3565$$

j) Computation of the point biserial correlation between the girls' mothers' education and their educational aspirations.

$$P_1 = \frac{40}{70} = 0.57$$

$$P_2 = \frac{30}{70} = 0.43$$

$$\sqrt{P_1 P_2} = 0.495$$

$$M_2 = \frac{120}{40} = 3.00$$

$$M_1 = \frac{132}{30} = 4.4$$

$$M_2 - M_1 = -1.4$$

$$(M_2 - M_1)\sqrt{P_1 P_2} = -1.4 \times 0.495$$

$$= -0.693$$

$$\Sigma x = 252$$

$$\Sigma x^2 = 2352$$

$$S_x = 4.54$$

$$rpb = \frac{-6.693}{4.54}$$

$$rpb = 0.1526$$

k)   Computation of the point biserial correlation between the girls' mothers' occupation and their educational aspirations.

$$P_1 \quad = \quad \frac{40}{70} \qquad = 0.57$$

$$P_2 \quad = \quad 30 \qquad = 0.43$$

$$\sqrt{P_1 P_2} \quad = \quad 0.495$$

$$M_2 \quad = \quad \frac{208}{40} \qquad = 5.2$$

$$M_1 \quad = \quad \frac{52}{30} \qquad = 1.73$$

$$M_2 - M_1 \quad = \quad 3.47$$

$$(M_2 - M_1)\sqrt{P_1 P_2} = \quad 3.47 \times 0.495$$

$$= \quad 1.71765$$

$$\Sigma x \quad = \quad 260$$

$$\Sigma x^2 \quad = \quad 2512$$

$$S_x \quad = \quad 4.699$$

$$r_{pb} \quad = \quad \frac{1.71765}{4.699}$$

$$r_{pb} \quad = \quad 0.3655$$

1) Computation of the point biserial correlation between the girls' mothers' occupation and their occupational aspirations.

$$P_1 = \frac{40}{70} = 0.57$$

$$P_2 = \frac{30}{70} = 0.43$$

$$\sqrt{P_1 P_2} = 0.495$$

$$M_2 = \frac{128}{40} = 3.2$$

$$M_1 = \frac{132}{30} = 4.4$$

$$M_2 - M_1 = -1.2$$

$$(M_2 - M_1)\sqrt{P_1 P_2} = -1.2 \times 0.495$$

$$= -0.594$$

$$\Sigma x = 260$$

$$\Sigma x^2 = 2512$$

$$S_x = 4.699$$

$$rpb = \frac{-0.594}{4.699}$$

$$rpb = -0.1264$$

The Combined Sample

Computation of the point biserial correlation between the boys' and girls' ages, and their educational aspirations.

$$P_1 = \frac{105}{200} = 0.525$$

$$P_2 = \frac{95}{200} = 0.475$$

$$\sqrt{P_1 P_2} = 0.499$$

$$M_2 = \frac{1758}{105} = 16.743$$

$$M_1 = \frac{1576}{95} = 16.589$$

$$M_2 - M_1 = 0.154$$

$$(M_2 - M_1)\sqrt{P_1 P_2} = 0.154 \times 0.499$$

$$= 0.076846$$

$$\sum x = 3334$$

$$\sum x^2 = 56214$$

$$S_x = 1.788$$

$$rpb = \frac{0.076846}{1.788}$$

$$rpb = 0.0429$$

b)   Computation of the point biserial correlation between the boys' and the girls' ages, and their occupational aspirations.

$$P_1 \quad = \frac{102}{200} \qquad = 0.51$$

$$P_2 \quad = \frac{98}{200} \qquad = 0.49$$

$$\sqrt{P_1 P_2} \quad = \quad 0.499$$

$$M_2 \quad = \frac{1709}{102} \qquad = 16.755$$

$$M_1 \quad = \frac{1624}{98} \qquad = 16.571$$

$$M_2 - M_1 = \quad 0.184$$

$$(M_2 - M_1)\sqrt{P_1 P_2} = \quad 0.184 \times 0.499$$

$$= \quad 0.091816$$

$$\sum x \quad = 3334$$

$$\sum x^2 \quad = 56214$$

$$S_x \quad =$$

$$rpb \quad = \frac{0.091816}{1.788}$$

$$rpb \quad = \quad 0.0514$$

c)   Computation of the point biserial correlation between the boys' and the girls' family size, and their educational aspirations.

$$P_1 \quad = \quad \frac{105}{200} \quad\quad = 0.525$$

$$P_2 \quad = \quad \frac{95}{200} \quad\quad = 0.475$$

$$\sqrt{P_1 P_2} \quad = \quad 0.499$$

$$M_2 \quad = \quad \frac{720}{105} \quad\quad = 6.857$$

$$M_1 \quad = \quad \frac{604}{95} \quad\quad = 6.358$$

$$M_2 - M_1 \quad = \quad 0.499$$

$$(M_2 - M_1)\sqrt{P_1 P_2} = \quad 0.499 \times 0.499$$

$$= 0.249001$$

$$\sum x \quad\quad = 1324$$

$$\sum x^2 \quad\quad = 9694$$

$$S_x \quad\quad = 5.221$$

$$rpb \quad\quad = \frac{0.249001}{5.221}$$

$$rpb \quad\quad = 0.04769$$

a)   Computation of the point biserial correlation between the boys' and the girls' family size, and their occupational aspirations.

$$P_1 = \frac{102}{200} = 0.51$$

$$P_2 = \frac{98}{200} = 0.49$$

$$\sqrt{P_1 P_2} = 0.499$$

$$M_2 = \frac{671}{102} = 6.578$$

$$M_1 = \frac{653}{98} = 6.663$$

$$M_2 - M_1 = -0.085$$

$$(M_2 - M_1)\sqrt{P_1 P_2} = -0.085 \times 0.499$$

$$= -0.042415$$

$$\sum x = 1324$$

$$\sum x^2 = 9694$$

$$S_x = 5.221$$

$$rpb = \frac{-0.042415}{5.221}$$

$$rpb = -0.008124$$

e)   Computation of the point biserial correlation between the boys' and the girls' fathers' education and their educational aspirations.

$$P_1 = \frac{105}{200} = 0.525$$

$$P_2 = \frac{95}{200} = 0.475$$

$$\sqrt{P_1 P_2} = 0.475$$

$$M_2 = \frac{682}{105} = 6.495$$

$$M_1 = \frac{313}{95} = 3.295$$

$$M_2 - M_1 = 3.2$$

$$(M_2 - M_1)\sqrt{P_1 P_2} = 3.2 \times 0.499$$

$$= 1.5968$$

$$\sum x = 995$$

$$\sum x^2 = 10135$$

$$S_x = 5.104$$

$$rpb = \frac{1.5968}{5.104}$$

$$rpb = 0.31285$$

f)   Computation of the point biserial correlation between the boys' and the girls' fathers' education and their occupational aspirations.

$$P_1 = \frac{102}{200} = 0.51$$

$$P_2 = \frac{98}{200} = 0.49$$

$$\sqrt{P_1 P_2} = 0.499$$

$$M_2 = \frac{639}{102} = 6.265$$

$$M_1 = \frac{356}{98} = 3.633$$

$$M_2 - M_1 = 2.632$$

$$(M_2 - M_1)\sqrt{P_1 P_2} = 2.632 \times 0.499$$

$$= 1.313368$$

$$\sum x = 995$$

$$\sum x^2 = 10135$$

$$S_x = 5.104$$

$$rpb = \frac{1.313368}{5.104}$$

$$rpb = 0.2573$$

g) Computation of the point biserial correlation between the boys' and girls' fathers' occupation and their educational aspirations.

$$P_1 = \frac{105}{200} = 0.525$$

$$P_2 = \frac{95}{200} = 0.475$$

$$\sqrt{P_1 P_2} = 0.499$$

$$M_1 = \frac{389}{95} = 4.095$$

$$M_2 = \frac{672}{105} = 6.4$$

$$M_2 - M_1 = 2.305$$

$$(M_2 - M_1)\sqrt{P_1 P_2} = 2.305 \times 0.499$$

$$= 1.150195$$

$$\Sigma x = 1061$$

$$\Sigma x^2 = 10897$$

$$S_x = 5.145$$

$$rpb = \frac{1.150195}{5.145}$$

$$rpb = 0.22355$$

h)   Computation of the point biserial correlation between the boys' and the girls' fathers' occupation and their occupational aspirations.

$$p_1 = \frac{102}{200} = 0.51$$

$$p_2 = \frac{98}{200} = 0.49$$

$$\sqrt{p_1 p_2} = 0.499$$

$$M_2 = \frac{737}{102} = 7.225$$

$$M_1 = \frac{324}{98} = 3.306$$

$$M_2 - M_1 = 3.919$$

$$(M_2 - M_1)\sqrt{p_1 p_2} = 3.919 \times 0.499$$

$$= 1.955581$$

$$\sum x = 1061$$

$$\sum x^2 = 10897$$

$$S_x = 5.145$$

$$rpb = \frac{1.955581}{5.145}$$

$$rpb = 0.3800934$$

i)   Computation of the point biserial correlation

between the boys' and the girls' mothers' education

and their educational aspirations.

$$P_1 \quad = \quad \frac{105}{200} \quad = \quad 0.525$$

$$P_2 \quad = \quad \frac{95}{200} \quad = \quad 0.475$$

$$\sqrt{P_1 P_2} \quad = \quad 0.499$$

$$M_2 \quad = \quad \frac{540}{105} \quad = \quad 5.143$$

$$M_1 \quad = \quad \frac{221}{95} \quad = \quad 2.326$$

$$M_2 - M_1 \quad = \quad 2.817$$

$$(M_2 - M_1)\sqrt{P_1 P_2} = \quad 2.817 \text{ x } 0.499$$

$$= \quad 1.405683$$

$$\sum x \quad = \quad 761$$

$$\sum x^2 \quad = \quad 7105$$

$$S_x \quad = \quad 4.599$$

$$r_{pb} \quad = \quad \frac{1.405683}{4.599}$$

$$r_{pb} \quad = \quad 0.305649$$

j)   Computation of the point biserial correlation between the boys' and the girls' mothers' education and their occupational aspirations.

$$P_1 = \frac{102}{200} = 0.51$$

$$P_2 = \frac{98}{200} = 0.49$$

$$\sqrt{P_1 P_2} = 0.499$$

$$M_2 = \frac{353}{102} = 3.461$$

$$M_1 = \frac{408}{98} = 4.163$$

$$M_2 - M_1 = -0.702$$

$$(M_2 - M_1)\sqrt{P_1 P_2} = -0.702 \times 0.499$$

$$= -0.350298$$

$$\Sigma x = 761$$

$$\Sigma x^2 = 7105$$

$$S_x = 4.599$$

$$rpb = \frac{-0.350298}{4.599}$$

$$rpb = -0.0761682$$

k)   Computation of the point biserial correlation between the boys' and the girls' mothers' occupation and their educational aspirations.

$$p_1 \quad = \quad \frac{105}{200} \quad = \quad 0.525$$

$$p_2 \quad = \quad \frac{95}{200} \quad = \quad 0.475$$

$$\sqrt{p_1 p_2} \quad = \quad 0.499$$

$$M_2 \quad = \quad \frac{560}{105} \quad = \quad 5.333$$

$$M_1 \quad = \quad \frac{192}{95} \quad = \quad 2.021$$

$$M_2 - M_1 \quad = \quad 3.312$$

$$(M_2 - M_1)\sqrt{p_1 p_2} \quad = \quad 3.312 \times 0.499$$

$$\quad = \quad 1.652688$$

$$\sum x \quad = \quad 752$$

$$\sum x^2 \quad = \quad 6972$$

$$S_x \quad = \quad 4.566$$

$$rpb \quad = \quad \frac{1.652688}{4.566}$$

$$rpb \quad = \quad 0.3619553$$

1) Computation of the point biserial correlation between the boys' and the girls' mothers' occupation and their occupational aspirations.

$$p_1 = \frac{102}{200} = 0.51$$

$$p_2 = \frac{98}{200} = 0.49$$

$$\sqrt{p_1 p_2} = 0.499$$

$$M_2 = \frac{340}{102} = 3.333$$

$$M_1 = \frac{412}{98} = 4.204$$

$$M_2 - M_1 = -0.871$$

$$(M_2 - M_1)\sqrt{p_1 p_2} = -0.871 \times 0.499$$

$$= -0.434629$$

$$\sum x = 752$$

$$\sum x^2 = 6976$$

$$S_x = 4.566$$

$$rpb = \frac{-0.434629}{4.566}$$

$$rpb = -0.095188$$

N.B.

The t - test was used to find out whether the computed point biserial coefficients were significantly different from zero.

It was assumed that the two samples were independent and that their means were from a randomly selected sample. Hence the means were normally distributed. The t - statistic was found suitable since the estimate of the observations were being used.

Formula:

$$t = \frac{(\bar{x}_1 - \bar{x}_2) - (\mu_1 - \mu_2)}{SE \ \bar{x}_1 - \bar{x}_2}$$

The pooled value of the variance was used in the computation of the t - test.

Hence,

$$s^2 = \frac{\left[\sum x_1^2 - \frac{(\sum x_1)^2}{n_1} \right] + \left[\sum x_2^2 - \frac{(\sum x_2)^2}{n_2} \right]}{n_1 + n_2 - 2}$$

The significance level was at .05 level.

The Boys' Sample

a) Computation of a t - test to find out whether there was a statistically significant relationship between the fathers' education and the educational aspirations of boys'.

$$\sum x_1 = 394 \qquad\qquad \sum x_2 = 225$$

$$\sum x_1^2 = 3746 \qquad\qquad \sum x_2^2 = 2337$$

$$n_1 = 65 \qquad\qquad n_2 = 65$$

$$s_1^2 = \frac{(3746-2388.25)}{64} \qquad s_2^2 = \frac{(2337 - 778.85)}{64}$$

$$s_1^2 = \frac{1357.75}{64} \qquad\qquad s_2^2 = \frac{1558.15}{64}$$

$$s_1^2 = 21.21 \qquad\qquad s_2^2 = 24.35$$

$$s^2 = \frac{(65 \times 21.21) + (65 \times 24.35)}{128}$$

$$s^2 = \frac{1378.65 + 1582.75}{128}$$

$$s^2 = \frac{2961.4}{128}$$

$$s^2 = 23.14$$

$$SE\ \bar{x}_1 - \bar{x}_2 = \sqrt{\frac{23.14}{65} + \frac{23.14}{65}}$$

$$= \sqrt{0.712}$$

$$= 0.8438$$

$$t = \frac{6.062 - 3.462}{0.8438}$$

$$t = \frac{2.6}{0.8438}$$

$$t = 3.0812988$$

Observed t = 3.08

Critical t = 1.66, df = 128, at 0.05 level

This indicated that a significant relationship exists between the boys' educational aspirations and their fathers' education.

)

b) Computation of a t - test to find out whether there was a statistically significant relationship between the fathers' education, and the occupational aspirations of boys.

$$\sum x_1 = 379 \qquad\qquad \sum x_2 = 240$$

$$\sum x_1^2 = 3978 \qquad\qquad \sum x_2^2 = 2112$$

$$n_1 = 62 \qquad\qquad n_2 = 68$$

$$s_1^2 = \frac{(3978 - 2316.79)}{61} \qquad s_2^2 = \frac{(2112 - 847.06)}{67}$$

$$s_1^2 = \frac{1661.21}{61} \qquad\qquad s_2^2 = \frac{1264.94}{67}$$

$$s_1^2 = 27.23 \qquad\qquad s_2^2 = 18.88$$

$$s^2 = \frac{(62 \times 27.23) + (68 \times 18.88)}{128}$$

$$s^2 = \frac{1688.26 + 1283.84}{128}$$

$$s^2 = \frac{2972.1}{128}$$

$$s^2 = 23.22$$

$$SE_{\bar{x}_1 \bar{x}_2} = \sqrt{\frac{23.22}{62} + \frac{23.22}{68}}$$

$$= \sqrt{0.7160}$$

$$= 0.846167$$

$$t = \frac{6.113 - 3.529}{0.846167}$$

$$t = \frac{2.584}{0.846167}$$

$$t = 3.0537707$$

Observed $t = 3.05$

Critical $t = 1.66$, df $= 128$, at .05 level

This shows that a significant relationship exists between

the fathers' education and the occupational aspirations of

the boys.

c)   Computation of a t - test to find out whether there was a statistically significant relationship between the fathers' occupation and the educational aspirations of boys.

$$\sum x_1 = 408 \qquad\qquad \sum x_2 = 257$$

$$\sum x_1^2 = 4128 \qquad\qquad \sum x_2^2 = 2785$$

$$n_1 = 65 \qquad\qquad n_2 = 65$$

$$S_1^2 = \frac{(4128 - 2560.98)}{64} \qquad S_2^2 = \frac{(2785 - 1016.14)}{64}$$

$$S_1^2 = \frac{1567.02}{64} \qquad\qquad S_2^2 = \frac{1760.88}{64}$$

$$S_1^2 = 24.48 \qquad\qquad S_2^2 = 27.64$$

$$S^2 = \frac{(65 \times 24.48) + (65 \times 27.64)}{128}$$

$$S^2 = \frac{3388}{128}$$

$$S^2 = 26.47$$

$$SE_{\bar{x}_1 - \bar{x}_2} = \sqrt{\frac{26.47}{65} + \frac{26.47}{65}}$$

$$= \sqrt{0.8144}$$

$$= 0.902441$$

$$t = \frac{6.277 - 3.954}{0.902441}$$

$$t = \frac{2.323}{0.902441}$$

$$t = 2.574129$$

Observed t = 2.57

Critical t = 1.66, df = 128, at .05 level.

This indicates that a significant relationship exists between the educational aspirations of boys and their fathers' occupation.

d)   Computation of a t – test to find out whether there was a statistically significant relationship between the fathers' occupation and the occupational aspirations of boys'.

$$\sum x_1 = 457 \qquad\qquad \sum x_2 = 208$$

$$\sum x_1^2 = 4865 \qquad\qquad \sum x_2^2 = 2192$$

$$n_1 = 62 \qquad\qquad\qquad n_2 = 68$$

$$s_1^2 = \frac{(4865 - 3368.53)}{61} \qquad s_2^2 = \frac{(2192 - 636.24)}{67}$$

$$s_1^2 = \frac{1496.47}{61} \qquad\qquad s_2^2 = \frac{1555.76}{61}$$

$$s_1^2 = 24.53 \qquad\qquad s_2^2 = 23.22$$

$$s^2 = \frac{(62 \times 24.53) + (68 \times 23.22)}{128}$$

$$s^2 = \frac{1520.86 + 1578.96}{128}$$

$$s^2 = \frac{3099.82}{128}$$

$$s^2 = 24.22$$

$$SE_{\bar{x}_1 - \bar{x}_2} = \sqrt{\frac{24.22}{62} + \frac{24.22}{68}}$$

$$= \sqrt{0.7468}$$

$$= 0.864175$$

$$t = \frac{7.371 - 3.059}{0.864175}$$

$$t = \frac{4.312}{0.864175}$$

t = 4.98973

Observed t = 4.99

Critical t = 1.66, df = 128, at .05 level.

This indicates that a significant relationship between the fathers' occupation and the occupational aspirations of the boys.

e) Computation of a t - test to find out whether there was a statistically significant relationship between the mothers' education and the educational aspirations of boys.

$$\sum x_1 = 340 \qquad\qquad \sum x_2 = 169$$

$$\sum x_1^2 = 3058 \qquad\qquad \sum x_2^2 = 1697$$

$$n_1 = 65 \qquad\qquad n_2 = 65$$

$$s_1^2 = \frac{(3058 - 1778.46)}{} \qquad s_2^2 = \frac{(1697 - 439.4)}{}$$

$$s_1^2 = \frac{1279.54}{64} \qquad\qquad s_2^2 = \frac{1257.6}{64}$$

$$s_1^2 = 19.99 \qquad\qquad s_2^2 = 19.65$$

$$s^2 = \frac{(65 \times 19.99) + (65 \times 19.65)}{128}$$

$$s^2 = \frac{1299.35 + 1277.25}{128}$$

$$s^2 = \frac{2576.6}{128}$$

$$s^2 = 20.13$$

$$SE_{\bar{x}_1 - \bar{x}_2} = \sqrt{\frac{20.13}{65} + \frac{20.13}{65}}$$

$$= \sqrt{0.6194}$$

$$= 0.787019$$

$$t = \frac{5.23 - 2.60}{0.787019}$$

$$t = \frac{2.63}{0.787019}$$

$$t = 3.341723$$

Observed $t = 3.34$

Critical $t = 1.66$, df $= 128$, at .05 level.

This shows that a significant relationship exists between the boys' educational aspirations and their mothers' education.

f) Computation of a t - test to find out whether
there was a statistically significant relationship
between the mothers' occupation and the educational
aspirations of the boys.

$$x_1 = 352 \qquad\qquad x_2 = 140$$

$$x_1^2 = 3296 \qquad\qquad x_2^2 = 1168$$

$$n2 = 65 \qquad\qquad n_2 = 65$$

$$s_1^2 = \frac{(3296 - 1906.22)}{64} \qquad\qquad s_2^2 = \frac{(1168 - 301.54)}{64}$$

$$s_1^2 = \frac{1389.78}{} \qquad\qquad s_2^2 = \frac{866.46}{}$$

$$s_1^2 = 21.72 \qquad\qquad s_2^2 = 13.54$$

$$s^2 = \frac{(65 \times 21.72) + (65 \times 13.54)}{128}$$

$$s^2 = \frac{1411.8 + 880.1}{128}$$

$$s^2 = \frac{2291.9}{128}$$

$$s^2 = 17.91$$

$$SE, \bar{x}_1 - \bar{x}_2 = \sqrt{\frac{17.91}{65} + \frac{17.91}{65}}$$

$$= \sqrt{0.551}$$

$$= 0.742293$$

$$t = \frac{5.415 - 2.154}{0.742293}$$

$$t = \frac{3.261}{0.742293}$$

$$t = 4.3931439$$

Observed $t = 4.39$

Critical $t = 1.66$, df $= 128$, at .05 level.

This indicates that a significant relationship exists between the mothers' occupation and the educational aspirations of the boys.

The Girls' Sample

a)   Computation of a t – test to find out whether there was a statistically significant relationship between the fathers' education and the educational aspirations of girls.

$$\sum x_1 = 288 \qquad\qquad \sum x_2 = 88$$

$$\sum x_1^2 = 3252 \qquad\qquad \sum x_2^2 = 800$$

$$n_1 = 40 \qquad\qquad n_2 = 30$$

$$s_1^2 = \frac{(3252 - 2073.6)}{39} \qquad\qquad s_2^2 = \frac{(800 - 258.13)}{29}$$

$$s_1^2 = \frac{1178.4}{39} \qquad\qquad s_2^2 = \frac{541.87}{29}$$

$$s_1^2 = 30.22 \qquad\qquad s_2^2 = 18.69$$

$$s^2 = \frac{(40 \times 30.22) + (30 \times 18.69)}{68}$$

$$s^2 = \frac{1769.5}{68}$$

$$s^2 = 26.02$$

$$SE\ \bar{x}_1 - \bar{x}_2 = \sqrt{\frac{26.02}{40} + \frac{26.02}{30}}$$

$$= \sqrt{1.5178}$$

$$= 1.23199$$

$$t = \frac{7.2 - 2.93}{1.232}$$

$$t = \frac{4.27}{1.232}$$

t = 3.465909

Observed t = 3.46

Critical t = 1.66, df = 68, at .05 level.

This indicates that a significant relationship exists between the fathers' education and the educational aspirations of the girls.

b)   Computation of a t - test to find out whether there was a statistically significant relationship between the fathers' education and the occupational aspirations of the girls.

$$\sum x_1 = 260 \qquad\qquad \sum x_2 = 116$$

$$\sum x_1^2 = 2820 \qquad\qquad \sum x_2^2 = 1168$$

$$n_1 = 40 \qquad\qquad n_2 = 30$$

$$s_1^2 = \frac{(2820 - 1690)}{39} \qquad s_2^2 = \frac{(1168 - 448.53)}{29}$$

$$s_1^2 = \frac{1130}{39} \qquad\qquad s_2^2 = \frac{719.47}{29}$$

$$s_1^2 = 28.97 \qquad\qquad s_1^2 = 24.81$$

$$s_2^2 = \frac{(40 \times 28.97) + (30 \times 24.81)}{68}$$

$$s^2 = \frac{1903.1}{68}$$

$$s^2 = 27.99$$

$$SE_{\bar{x}_1 - \bar{x}_2} = \sqrt{\frac{27.99}{40} + \frac{27.99}{30}}$$

$$= 1.27781$$

$$t = \frac{6.5 - 3.87}{1.27781}$$

$$t = 2.0582089$$

Observed t = 2.06

Critical t = 1.66, df = 68, at .05 level

This indicates that a significant relationship exists

between the fathers' education and the occupational aspirations

of the girls.

c)   Computation of a t - test to find out whether there was a statistically significant relationship between the fathers' occupation and the educational aspirations of the girls.

$$\sum x_1 = 264 \qquad\qquad \sum x_2 = 132$$

$$\sum x_1^2 = 2592 \qquad\qquad \sum x_2^2 = 1392$$

$$n_2 = 40 \qquad\qquad\qquad n_2 = 30$$

$$s_1^2 = \frac{(2592 - 1742.4)}{39} \qquad s_1^2 = \frac{(1392 - 580.8)}{29}$$

$$s_1^2 = \frac{849.6}{39} \qquad\qquad s_2^2 = \frac{811.2}{29}$$

$$s_1^2 = 21.78 \qquad\qquad s_2^2 = 27.97$$

$$s^2 = \frac{(40 \times 21.78) + (30 \times 27.97)}{68}$$

$$s^2 = \frac{1710.3}{68}$$

$$s^2 = 25.15$$

$$SE \quad \bar{x}_1 - \bar{x}_2 = \sqrt{\frac{25.15}{40} + \frac{25.15}{30}}$$

$$= \sqrt{1.4671}$$

$$= 1.211239$$

$$t = \frac{6.6 - 4.4}{1.211239}$$

$$t = \frac{2.2}{1.211239}$$

$$t = 1.8163219$$

Observed t = 1.816

Critical t = 1.66, df = 68 at .05 level

This indicates that a significant relationship exists
between the fathers' occupation and the educational aspirations
of the girls.

d)   Computation of a t - test to find out whether there was a statistically significant relationship between the fathers' occupation and the occupational aspirations of the girls.

$$\sum x_1 = 280 \qquad\qquad \sum x_2 = 116$$

$$\sum x_1^2 = 2816 \qquad\qquad \sum x_2^2 = 1168$$

$$n_1 = 40 \qquad\qquad n_2 = 30$$

$$S_1^2 = \frac{(2816 - 1960)}{39} \qquad S_2^2 = \frac{(1168 - 448.53)}{29}$$

$$S_1^2 = \frac{856}{39} \qquad\qquad S_2^2 = \frac{719.47}{29}$$

$$S_1^2 = 21.95 \qquad\qquad S_2^2 = 24.81$$

$$S^2 = \frac{(40 \times 21.95) + (30 \times 24.81)}{68}$$

$$S^2 = \frac{1622.3}{68}$$

$$S^2 = 23.86$$

$$SE_{\bar{x}_1 - \bar{x}_2} = \sqrt{\frac{23.86}{40} + \frac{23.86}{30}}$$

$$= \sqrt{1.3918}$$

$$= 1.179745$$

$$t = \frac{7.00 - 7.87}{1.179745}$$

$$t = 2.6531157$$

Observed t = 2.65

Critical t + = 1.66, df = 68, at .05 level.

This indicates that significant relationship exists

between the fathers' occupation and the occupational aspirations

of the girls.

e) Computation of a t — test to find out whether there was a statistically significant relationship between the mothers' education and the educational aspirations of the girls.

$$\sum x_1 = 200 \qquad \sum x_2 = 52$$

$$\sum x_1^2 = 1888 \qquad \sum x_2^2 = 464$$

$$n_1 = 40 \qquad n_2 = 30$$

$$s_1^2 = \frac{(1888 - 1000)}{39} \qquad s_2^2 = \frac{(464 - 90.13)}{29}$$

$$s_1^2 = \frac{888}{39} \qquad s_2^2 = \frac{373.87}{29}$$

$$s^2 = 22.77 \qquad s_2^2 = 12.89$$

$$s^2 = \frac{(40 \times 22.77) + (30 \times 12.89)}{68}$$

$$s^2 = \frac{1297.5}{68}$$

$$s^2 = 19.081$$

$$SE_{\bar{x}_1 - \bar{x}_2} = \sqrt{\frac{19.08}{40} + \frac{19.08}{30}}$$

$$= \sqrt{1.113}$$

$$= 1.054998$$

$$t = \frac{5.00 - 1.73}{1.054998}$$

$$t = \frac{3.27}{1.054998}$$

$$t = 3.0995311$$

Observed t = 3.09

Critical t = 1.66, df = 68, at .05 level.

This indicates that a significant relationship exists between the mothers' education and the educational aspirations of the girls.

f) Computation of a t - test to find out whether there was a statistically significant relationship between the mothers' occupation and the educational aspirations of the girls.

$$\sum x_1 = 208 \qquad \sum x_2 = 52$$

$$\sum x_1^2 = 2048 \qquad \sum x_2^2 = 464$$

$$n_1 = 40 \qquad n_2 = 30$$

$$s_1^2 = \frac{(2048 - 1031.6)}{39} \qquad s_2^2 = \frac{(464 - 90.13)}{29}$$

$$s_1^2 = \frac{966.4}{39} \qquad s_2^2 = \frac{373.87}{29}$$

$$s_1^2 = 24.78 \qquad s_2^2 = 12.89$$

$$s^2 = \frac{(40 \times 24.78) + (30 \times 12.89)}{68}$$

$$s^2 = \frac{1377.9}{68}$$

$$s^2 = 20.26$$

$$SE_{\bar{x}_1 - \bar{x}_2} = \sqrt{\frac{20.26}{40} + \frac{20.26}{30}}$$

$$= 1.1818$$

$$t = \frac{5.2 - 1.73}{1.087106}$$

$$t = \frac{3.47}{1.087106}$$

$$t = 3.191961$$

Observed t = 3.19

Critical t = 1.66, df = 68, at .05 level.

This indicates that a significant relationship exists between mothers' occupation and the educational aspirations of the girls.

The Combined Sample

a) Computation of a t - test to find out whether there was a statistically significant relationship between the fathers' education and the educational aspirations of boys and girls combined.

$$\sum x_1 = 682 \qquad\qquad \sum x_2 = 313$$

$$\sum x_1^2 = 6998 \qquad\qquad \sum x_2^2 = 3137$$

$$n_1 = 105 \qquad\qquad n_2 = 95$$

$$s_1^2 = \frac{(6998 - 4429.75)}{104} \qquad s_2^2 = \frac{(3137 - 1031.25)}{94}$$

$$s_1^2 = \frac{2568.25}{104} \qquad\qquad s_{22}^2 = \frac{2105}{94}$$

$$s_1^2 = 24.69 \qquad\qquad s_2^2 = 22.40$$

$$s^2 = \frac{(105 \times 24.69) + (95 \times 22.40)}{198}$$

$$s^2 = \frac{4720.45}{198}$$

$$s^2 = 23.84$$

$$SE_{\bar{x}_1 - \bar{x}_2} = \sqrt{\frac{23.84}{105} + \frac{23.84}{95}}$$

$$= \sqrt{0.4779}$$

$$= 0.691303$$

$$t = \frac{6.495 - 3.295}{0.691303}$$

$$t = \frac{3.2}{0.691303}$$

$$t = 4.6289398$$

Observed $t = 4.63$

Critical $t = 1.66$, df = 198, at .05 level.

This indicates that a significant relationship

exists between the fathers' education and the

educational aspirations of boys and girls.

b)   Computation of a t - test to find out whether there was a statistically significant relationship between the fathers' education and the occupational aspirations of boys and girls combined.

$$\sum x_1 = 639 \qquad\qquad \sum x_2 = 356$$

$$\sum x_1^2 = 6798 \qquad\qquad \sum x_2^2 = 3280$$

$$n_1 = 102 \qquad\qquad n_2 = 98$$

$$s_1^2 = \frac{(6798 - 4003.15)}{101} \qquad s_2^2 = \frac{(3280 - 1293.22)}{97}$$

$$s_1^2 = \frac{2794.85}{101} \qquad\qquad s_2^2 = \frac{1986.78}{97}$$

$$s_1^2 = 27.67 \qquad\qquad s_2^2 = 20.48$$

$$s^2 = \frac{(102 \times 27.67) + (98 \times 20.48)}{198}$$

$$s^2 = \frac{4829.38}{198}$$

$$s^2 = 24.39$$

$$SE_{\overline{x}_1 - \overline{x}_2} = \sqrt{\frac{24.39}{102} + \frac{24.39}{98}}$$

$$= \sqrt{0.4880}$$

$$= 0.698569$$

$$t = \frac{6.265 - 3.63}{0.698569}$$

$$t = \frac{2.632}{0.698569}$$

$$t = 3.7677022$$

Observed t = 3.77

Critical t = 1.66, df = 198, at .05 level.

This indicates that a significant relationship e exists between the fathers' education and the occupational aspirations of boys and girls combined.

c)   Computation of a t - test to find out whether there was a statistically significant relationship between the fathers' occupation and the educational aspirations of boys and girls combined.

$$\sum x_1 = 672 \qquad\qquad \sum x_2 = 389$$

$$\sum x_1^2 = 6720 \qquad\qquad \sum x_2^2 = 4177$$

$$n_1 = 105 \qquad\qquad n_2 = 95$$

$$s_1^2 = \frac{(6720 - 4300.8)}{104} \qquad s_2^2 = \frac{(4177 - 1592.85)}{94}$$

$$s_1^2 = \frac{2419.2}{104} \qquad\qquad s_2^2 = \frac{2584.15}{94}$$

$$s_1^2 = 23.26 \qquad\qquad s_2^2 = 27.49$$

$$s^2 = \frac{(105 \times 23.26) + (95 \times 27.49)}{198}$$

$$s^2 = \frac{5043.85}{198}$$

$$s^2 = 25.47$$

$$SE_{\bar{x}_1 - \bar{x}_2} = \sqrt{\frac{25.47}{105} + \frac{25.47}{95}}$$

$$= \sqrt{0.5107}$$

$$= 0.714632$$

$$t = \frac{6.4 - 4.096}{0.714632}$$

$$t = \frac{2.305}{0.714632}$$

$$t = 3.225436$$

Observed $t = 3.23$

Critical $t = 1.66$, df $= 198$, at .05 level.

This indicates that a significant relationship exists between the fathers' occupation and the educational aspirations of boys and girls combined.

d) Computation of a t - test to find out whether there was a statistically significant relationship between the fathers' occupation and the occupational aspirations of boys and girls combined.

$$\sum x_1 = 737 \qquad \sum x_2 = 324$$

$$\sum x_1^2 = 7681 \qquad \sum x_2^2 = 3360$$

$$n_1 = 102 \qquad n_2 = 98$$

$$s_1^2 = \frac{(7681 - 5325.19)}{101} \qquad s_2^2 = \frac{(3360 - 1071.18)}{97}$$

$$s_1^2 = \frac{2355.81}{101} \qquad s_2^2 = \frac{2288.82}{97}$$

$$s_1^2 = 23.325 \qquad s_2^2 = 23.596$$

$$s^2 = \frac{(102 \times 23.325) + (98 \times 23.596)}{198}$$

$$s^2 = \frac{4691.56}{198}$$

$$s^2 = 23.69$$

$$SE_{\bar{x}_1 - \bar{x}_2} = \sqrt{\frac{23.69}{102} + \frac{23.69}{98}}$$

$$= \sqrt{0.474}$$

$$= 0.688476$$

$$t = \frac{7.225 - 3.306}{0.688476}$$

$$t = \frac{4.919}{0.688476}$$

$$t = 5.6922826$$

Observed t = 5.69

Critical t = 1.66, df = 198, at .05 level.

This indicates that a significant relationship exists between the fathers' occupation and the occupational aspirations of boys and girls combined.

e) Computation of a t - test to find out whether there was a statistically significant relationship between the mothers' education and the educational aspirations of boys and girls combined.

$$\sum x_1 = 540 \qquad\qquad \sum x_2 = 221$$

$$\sum x_1^2 = 4944 \qquad\qquad \sum x_2^2 = 2161$$

$$n_1 = 105 \qquad\qquad n_2 = 95$$

$$s_1^2 = \frac{(4944 - 2777.14)}{104} \qquad s_2^2 = \frac{(216 - 514.12)}{94}$$

$$s_1^2 = \frac{2166.86}{104} \qquad\qquad s_2^2 = \frac{1646.88}{94}$$

$$s_1^2 = 20.84 \qquad\qquad s_2^2 = 17.52$$

$$s^2 = \frac{(105 \times 20.84) + (95 \times 17.52)}{198}$$

$$s^2 = \frac{3852.6}{198}$$

$$s^2 = 19.46$$

$$SE_{\bar{x}_1 - \bar{x}_2} = \sqrt{\frac{19.46}{105} + \frac{19.46}{95}}$$

$$= \sqrt{0.3901}$$

$$= 0.624579$$

$$t = \frac{5.143 - 2.326}{0.624579}$$

$$t = 4.510238$$

Observed $t = 4.51$

Critical $t = 1.66$, df $= 198$, at .05 level.

This indicates that a significant relationship exists
between the mothers' education and the educational aspirations
of boys and girls combined.

f)   Computation of a t – test to find out whether there was a statistically significant relationship between the mothers' occupation and the educational aspirations of boys and girls combined.

$$\sum x_1 = 560 \qquad\qquad \sum x_2 = 192$$

$$\sum x_1^2 = 5344 \qquad\qquad \sum x_2^2 = 1632$$

$$n_1 = 105 \qquad\qquad n_2 = 95$$

$$s_1^2 = \frac{(5344 - 2986.67)}{104} \qquad s_2^2 = \frac{(1632 - 388.04)}{94}$$

$$s_1^2 = \frac{2357.33}{104} \qquad\qquad s_2^2 = \frac{1243.96}{94}$$

$$s_1^2 = 22.67 \qquad\qquad s_2^2 = 13.23$$

$$s^2 = \frac{(105 \times 22.67) + (95 \times 13.23)}{198}$$

$$s^2 = \frac{3637.2}{198}$$

$$s^2 = 18.37$$

$$SE_{\bar{x}_1 - \bar{x}_2} = \sqrt{\frac{18.37}{105} + \frac{18.37}{95}}$$

$$= \sqrt{0.3683}$$

$$= 0.606877$$

$$t = \frac{5.33 - 2.02}{0.606877}$$

$$t = \frac{3.31}{0.606877}$$

$$t = 5.4541529$$

Observed t = 5.45

Critical t = 1.66, df = 198, at .05 level.

This indicates that a significant relationship exists between the mothers' occupation and the educational aspirations of boys and girls combined.

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