

**IMMUNIZATION COVERAGE PATTERN
IN NAIROBI**

BY

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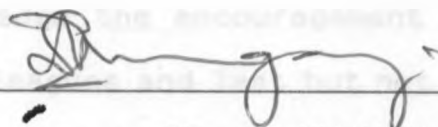
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DECLARATION

This project is my original work and has not been presented for a degree at any other University.

A. A. WAWERU

This project has been submitted for examination with my approval as a Supervisor.

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DEDICATION

To my family.

ABSTRACT

This paper attempted to find out the immunization coverage of various vaccinations, namely: DPT for whooping cough, diphtheria and tetanus, BCG for tuberculosis, measles and polio, in Nairobi. The variables that were considered were mothers' level of education and age.

Maternal education was found to have a strong impact on immunization. The higher the mothers' education, the more the child was likely to be vaccinated.

Mothers' age is related to vaccination coverage. Younger mothers (20-29) appeared to have their children presented for vaccinations while older mothers (35-44) years had fewer children presented for vaccinations.

There were varied results for types of immunizations. BCG was better covered (24.5%), compared to measles (7%). The time factor attributed to the difference. BCG is given at first contact with the child, while measles vaccination is given after 9 months. Many children drop out of the immunization programme before receiving measles vaccination.

DPT and polio presented interesting results. The first doses of the vaccines were moderately covered while there was

a drop in the number of children who received the last vaccines. The first dosage of DPT and polio is given at 6 weeks, the second is given at 10 weeks, while the third is given at 14 weeks. Some mothers forget or just drop out of the immunization programme.

There is need for an immunization campaign in Nairobi, since the coverage is still low, inspite of the availability of vaccination facilities.

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C H A P T E R O N E

1.1 GENERAL INTRODUCTION

Studies on the immunization of children have been carried out before in Kenya. In 1987, the Ministry of Health, under the Kenya Expanded Programme on Immunization, (KEPI), carried out a survey on the coverage of immunization in 10 districts that were randomly selected; these were Nairobi, Kiambu, Machakos, Nakuru, Kisii, Siaya, Busia, Kericho, Kilifi and Narok. The results showed a fully immunized rate of 51% and a drop out rate of 17%. Nairobi and Central province had the highest coverage of 60%; while, Western, Nyanza and coastal region had the lowest coverage of 30%.

The Kenya Expanded Programme on Immunization; (KEPI) was launched in June, 1980; (KEPI, 1988-90 report). It is now entering its consolidated phase, with a total of 950 out of 1,779 government and non-governmental health facilities, offering immunization, as part of their Maternal and Child Health Services, (MCHS). KEPI is not a programme for raising immunization coverage, but it is primarily for reducing the occurrence of the vaccine preventable diseases of childhood.

In 1989, another study on immunization was carried out by the National Council for Population and Development

(NCPD), through the Kenya Demographic Health Survey, (KDHS). The six immunizable diseases which were covered are, measles, tuberculosis, whooping cough (pertussis), tetanus, diphtheria and poliomyelitis.

Immunization is one of the elements of Primary Health Care, (PHC), which would contribute to attainment of health for all by the year 2000 (KEPI, 1988-90 report). Each year in Kenya, 80,000 children under age one, die due to preventable diseases and 60,000 between age one and 5 years. Out of the total, 140,000 deaths of children under 5 years, 100,000 are preventable, through interventions, such as, immunization, (KEPI, 1988-90).

Immunization refers to the artificial way of raising the human body's resistance to certain infections by giving vaccines.

Vaccines are preparations of microorganisms used against the same disease, i.e. measles viruses are used to vaccinate against measles.

This study will attempt to highlight some of the factors like, education and mother' age that contribute to disparities in immunization coverage of children in Nairobi.

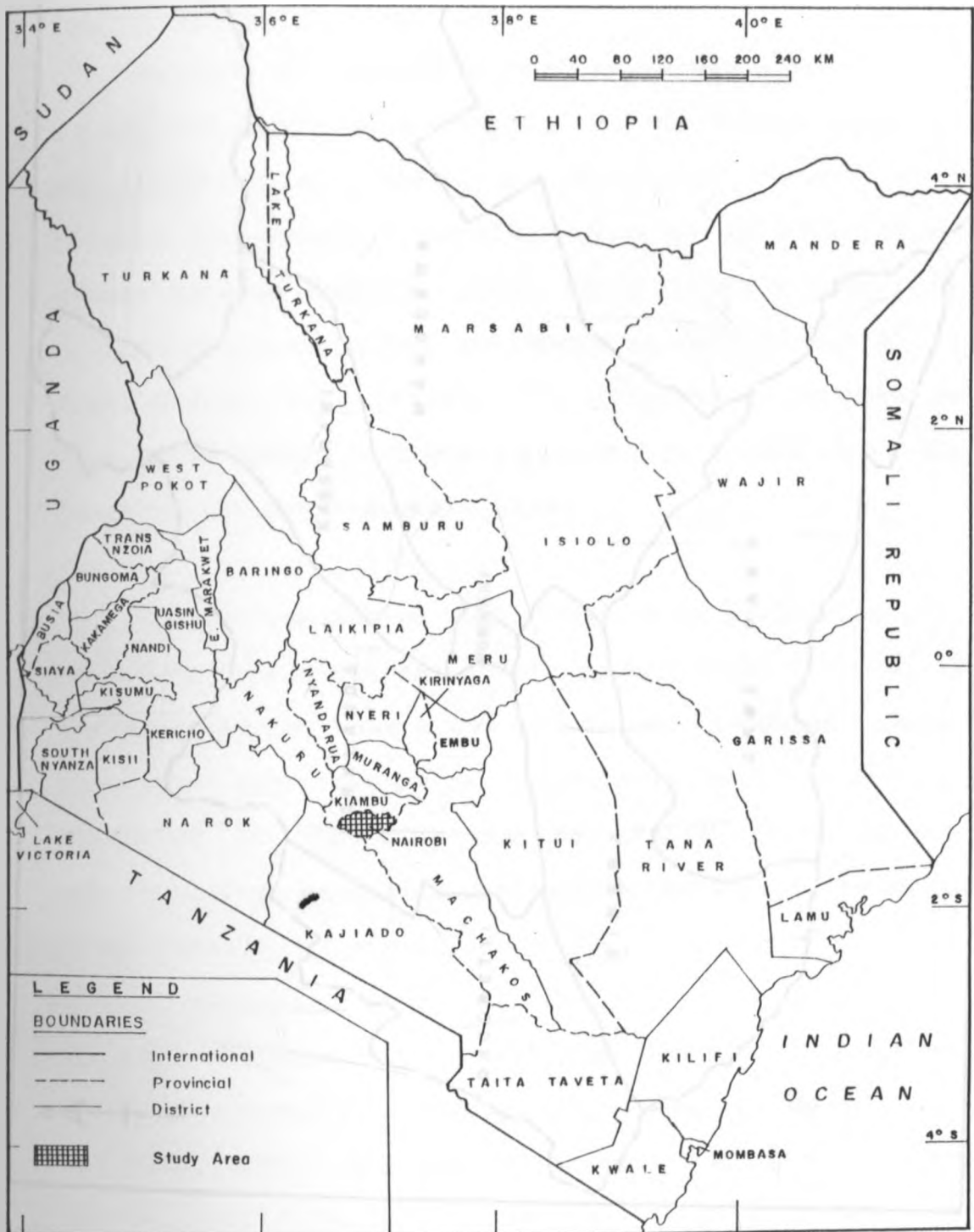


Fig 1 LOCATION OF STUDY AREA IN KENYA

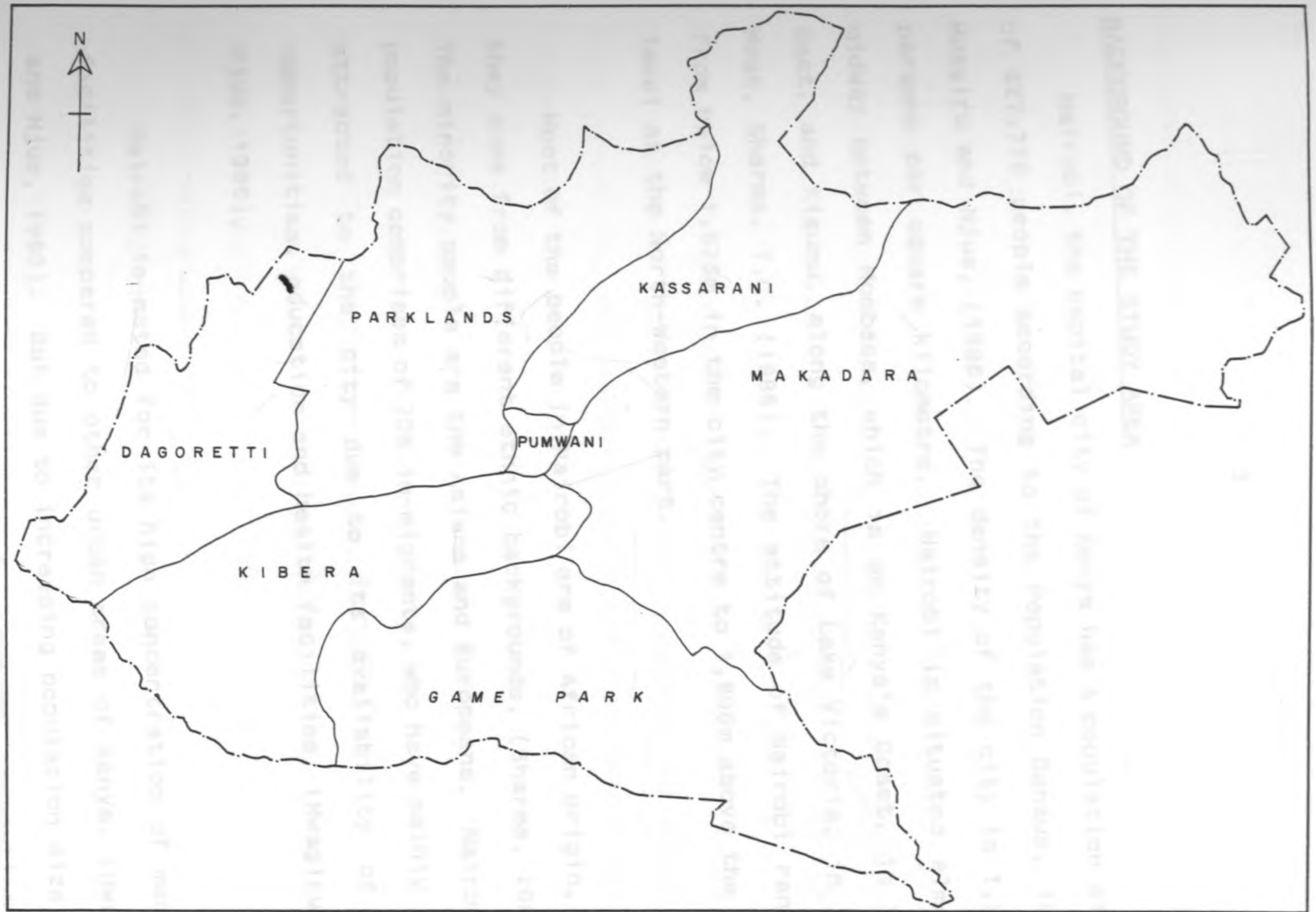


Fig. 2 : NAIROBI — ADMINISTRATIVE UNITS

1.2 BACKGROUND OF THE STUDY AREA

Nairobi, the capital city of Kenya has a population size of 827,775 people according to the Population Census, 1979 Mwagiru and Njue, (1986). The density of the city is 1,210 persons per square kilometre. Nairobi is situated almost midway between Mombasa, which is on Kenya's Coast, in the East, and Kisumu, along the shore of Lake Victoria, in the West, Sharma, T.C. (1985). The attitude of Nairobi ranges from below 1,675m in the city centre to 1,905m above the sea level at the North-Western part.

Most of the people in Nairobi are of African origin, but they come from different ethnic backgrounds, (Sharma, 1985). The minority people are the Asians and Europeans. Nairobi's population comprises of 70% in-migrants, who have mainly been attracted to the city due to its availability of job opportunities, education and health facilities, (Mwagiru and Njue, 1986).

Nairobi is noted for its high concentration of medical facilities compared to other urban areas of Kenya, (Mwagiru and Njue, 1986). But due to increasing population size, the health facilities are strained, causing congestion and shortage of essential drugs. Findings of this study, will show that, Nairobi has not been adequately covered. The

immunization coverage is still relatively low, despite the availability of maternal and child health centres.

Immunization in Nairobi is covered by various health personnel. The Nairobi City Commission runs maternal and child health centres in every administrative division, namely: Parklands, Kasarani, Makadara, Pumwani, Dagoretti, Kibera (except the Game Park). The private hospitals also undertake immunization of children, who are born under their care. The Ministry of Health coordinates and runs maternal and child health services; these include all hospitals (government) which are (213), all health centres (293) and about 1/3 of dispensaries, (Ominde, 1988).

1.3 PROBLEM STATEMENT

During the 1960's and the 1970's, the health care systems could do little to attack the major childhood killers, (Chen, 1980), of which the six immunizable diseases, namely; measles, tetanus, whooping cough, diphtheria, tuberculosis and poliomyelitis are included. Appropriate technology, vaccines, cold chains, oral rehydration and growth monitoring, had not been developed. Today, the immunizable diseases can be prevented through low-cost drug therapy.

Immunization coverage in Nairobi is relatively low compared to the health facilities it has, since it has more

health facilities than any other region in Kenya, (KEPI, 1988-90 report). The KEPI report of 1988-90 revealed that, Nairobi's coverage of immunization of children was 60%, rated the highest in Kenya.

This study will attempt to highlight some of the demographic and social factors, contributing to the disparities in immunization of children in Nairobi.

4 JUSTIFICATION OF THE STUDY

According to the available research evidence, immunization, as a research area, has not been widely studied. It is said to be a new medical intervention measure, whose impact on the health status and child mortality has not been adequately evaluated.

However, research findings point to the fact that, where immunization has been implemented, there has been substantial reduction in childhood diseases. The extent to which this has been done in Kenya in general and Nairobi in particular is least known. Thus, this study hopes to provide evidence on the immunization coverage pattern in Nairobi.

1.5 OBJECTIVES OF THE STUDY

GENERAL OBJECTIVES

This study will attempt to find out the impact of immunization coverage pattern in Nairobi.

SPECIFIC OBJECTIVES

- (1) To identify the problems related to inadequate immunization coverage of infants and children in Nairobi.
- (2) To provide information on the prevention and reduction of childhood diseases, which in the long run will be an indicator of social change and development in Nairobi.
- (3) To provide planners with information that will be useful for the promotion of a wider coverage of immunization of infants and children in Nairobi.

1.6 SCOPE AND LIMITATIONS OF THE STUDY

Due to limitation of resources and time, the study will only concentrate on the coverage of immunization of infants and children in Nairobi.

1.7 LITERATURE REVIEW

Immunization of infants and children is a relatively new medical intervention in Africa, (IUSSP, 1988). There has been a slight infant and child mortality reduction in Africa, due to improved health measures, changing demographic factors and

improved food distribution. In Kenya, infant and child mortality is still high, (Otieno, 1988/89), his findings state that, Nyanza and Coast provinces have IMR of 165 and 101 deaths per 1000 births respectively, while Central Province has a low IMR of 61 deaths per 1000 live births. KEPI's national coverage survey of 1987, found out that, for all antigens of immunization given, a high coverage was found in Nairobi, Central Province and other central districts, while the rest of the country and especially Nyanza Province, had the lowest coverage. To some extent, the findings can explain the high infant and child mortality found in Nyanza, Chen (1980).

The following childhood diseases can be prevented through immunization; neonatal tetanus, pertussis, measles, poliomyelitis, tuberculosis, diphtheria and whooping cough, Chen (1980). Chen carried out a study in Matlab Thana, Bangladesh and his findings were, 2,257 of 7,858, deaths of children under age 5 years (35%) were, attributed to neonatal tetanus, pertussis, measles and acute lower respiratory tract infection. While, Handayana, (1983) identified pneumonia, tetanus and measles as responsible for 35% of deaths in children under age two years in a Javanese village.

Dr. Zia Islam presented a paper to the First Health Officers Conference in Kenya, (1976) hosted by USAID Mission in Kenya, on immunization programme. His comments were that, "it is tragic that vaccination, one of our most effective tools against certain communicable diseases, is not yet available to all children." Less than 10 per cent are vaccinated against diphtheria, pertussis, tetanus or poliomyelitis and fewer than 5 per cent receive potent measles vaccine. High coverage has been recorded for B.C.G. It is estimated that, out of 80 million children born in the developing world each year, approximately 5 million die of these six diseases namely; tuberculosis, tetanus, measles, whooping cough, diphtheria and poliomyelitis and at least twice as many are disabled through paralysis, brain damage, stunted growth, deafness and blindness. The seminar concluded its discussions by urging that, more research be done on developing vaccines, which do not require refrigeration because of the difficulty in establishing cold chains.

Scotney, (1976) carried out a research for African Medical Research Foundation and came up with findings which militate against immunization coverage in Kenya;

- (i) People generally, have come to accept the giving of injections to sick people, but there is less understanding of the value of injections for prevention.

People do not quickly perceive the importance of having a reaction to an injection for immunization.

- (ii) The idea that, a small attack of the disease can have a long term prophylactic influence is not widely understood or accepted, although it is not a difficult one.
- (iii) The importance of attending three times at the right intervals for polio or tripple (DPT) vaccine is not understood. People must understand the natural build up of resistance (antibodies), which is the objective of the DPT strategy, and also the different strains of polio virus to be protected against. Generally, health education on these points has not been sufficiently thorough.
- (iv) Some immunizations have nearly meaningless names, which are a barrier to communication and thus, health education for example, BCG should fairly be called TB vaccine and DPT or tripple antigen could be called "whooping cough vaccine" or possibly DIP/HCO/Tet vaccine.
- (v) Finally, patients must be encouraged to tell their friends about the importance of protection through immunization. The success of the battle against smallpox can be used to reinforce this message.

Another study on immunization was carried out in Burundi as a Demographic Health Survey in 1987 by Dunn/Yumkella, (1990). Separate sampling schemes were employed for urban and

the rural areas. The urban area, there were 347 clusters comprising approximately 500 residents each, were constructed to form a sampling frame. One in 8 clusters were chosen systematically from a list and one household in 6 within each selected cluster was chosen in a similar manner. All women aged 15-49 years in selected households were interviewed. The sampling fraction was 1/48, a factor of 5 greater than that was used for the rural area. Data on vaccination were gathered on all live children born since 1982 to mothers included in the survey, and analysis was confined to only children under 5 years at the date of the interview. The mother was asked to produce a vaccination card for each child. If produced, dates of vaccinations were transcribed onto the questionnaire. The vaccines in question are BCG, measles and shots of three each polio and DPT. The fourth shot goes beyond WHO's recommendations and has not been analysed. If the card was not produced, the mother was asked for each child, if it had a card, and if the child had ever been vaccinated. Information on specific vaccines was not sought. Only documentary proof of vaccination was accepted, children with cards and those without cards. This approach may grossly underestimate the true coverage, but provides a lower bound for the estimate coverage.

The findings of the Burundi Demographic Health Survey, 1987 by Dunn/Yumkella, (1990) were as follows: coverage by

area; the urban area (Bujumbura) has distinctly higher coverage rates and does not show decline with age as is evidenced in the rural areas. The influence of socio-economic characteristics in the urban sample were a child of a mother with secondary or further education was more likely (by about 10%) to have been vaccinated than the child of a mother with no or primary education. The influence of demographic factors e.g. age of mother, mothers under 25 years were more likely to have their children vaccinated.

The findings in this study; immunization coverage in Nairobi will more or less present similar results as those of Dunn/Yumkella, (1990) in Burundi.

1.8 THEORETICAL FRAMEWORK

From the literature review we see that, several factors hinder immunization coverage; ignorance of the mothers and lack of cold storage for the antigens, among others. The Mosley and Chen Socio Economic Framework of determinants of Health Dynamics can be used to study immunization. The proximate determinants are grouped into five categories:

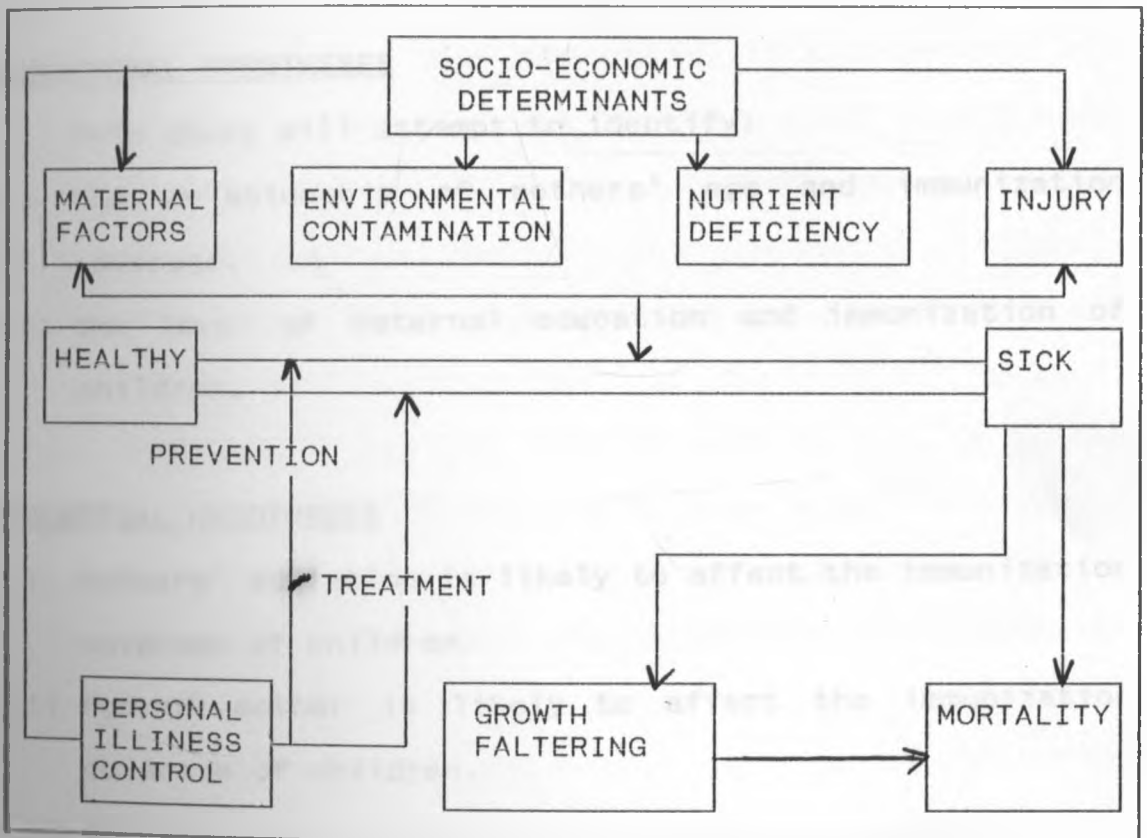
- (i) Maternal factors: age, parity, birth interval.
- (ii) Environmental contamination: air, food, water, fingers, skin, soil, inanimate objects, insect vectors.
- (iii) Nutrient deficiency: calories, proteins, micronutrients (vitamins and minerals).

(iv) Injury: accidental, intentional.

(v) Personal illness control: personal preventive measures, medical treatment.

The fifth determinant, personal illness control attempts to show in this study that, immunization is associated with child survival.

MOSLEY AND CHEN'S MODEL



Source: Population and Development Review, Supplement to Vol. 10, pp. 25-48.

Using the above framework, the personal illness control for infants and children carried out through immunization will be studied. The variables that will be measured are:

- (i) Maternal education and immunization coverage.
- (ii) Mothers' age and immunization coverage.
- (iii) Types of immunization given, by mothers education and age.

1.9 OPERATIONAL HYPOTHESES

This study will attempt to identify:

- (i) The relationship of mothers' age and immunization coverage.
- (ii) The level of maternal education and immunization of children.

1.10 CONCEPTUAL HYPOTHESES

- (i) Mothers' education is likely to affect the immunization coverage of children
- (ii) Age of mother is likely to affect the immunization coverage of children.

C H A P T E R T W O

2.1 METHODOLOGY OF STUDY AND DATA SOURCES

The secondary data to be used in this study, will be derived from the Kenya Demographic Health Survey, (KDHS, 1989). The survey was carried out by National Council for Population and Development, (NCPD), in 1989 in conjunction with CBS. The KDHS considered women, who had children under the age of five years, and were asked, if the children had health cards. If the card was available, the interviewers copied from the card, the dates on which the child had received immunization against the following diseases, tuberculosis (BCG), diphtheria, whooping cough (pertussis) and tetanus (DPT), polio and measles. If the child had no card, or the interviewer was not able to examine the card, the mother was asked, if the child had ever received a vaccination. However, no information was obtained for no card child because of doubts about the reliability of the mothers' recall.

The following schedule for immunization was recommended by KEPI in 1986, January.

AGE	IMMUNIZATION
At Birth	BCG,
6 weeks	DPT, Polio
10 weeks	DPT, Polio
14 weeks	DPT, Polio
9 months	Measles

The KEPI report of 1988-90, recommends only three doses of polio for a child to be fully covered against polio.

In this study, the data that has been derived from the KDHS survey include the following:

- (i) Female population of reproductive age by five year age-groups in Nairobi.
- (ii) Children ever born and reported immunized and also not immunized by women in reproductive ages by five year age groups.
- (iii) Children ever born who were immunized and also not immunized by mothers education level, i.e:-
 - (a) No Education
 - (b) Primary School Education
 - (c) Secondary Education and plus

- (iv) Immunization given by type and number of doses to children ever born according to education and age of mother.
- (v) Children dead by mothers age and education.

2.2 QUALITY OF DATA

These data does not represent all children in Nairobi, but only children of women, who were interviewed in KDHS. Since no information was obtained on specific vaccinations for these children because of doubts about the reliability of the mothers' recall if the card was not presented, the findings of the survey can be relied upon as representing Nairobi coverage on immunization.

SHORTCOMINGS OF THE DATA

It is inevitable in any research not to have any shortcomings. They may come up as a result of sampling or non sampling errors. For the KDHS, some of the non sampling errors were due to:

- (i) Failure to locate and interview the correct household.
- (ii) Misunderstanding of questions by the mothers, in case of no card child.
- (iii) Data entry errors.

2.3 METHOD OF DATA ANALYSIS

The first method of analysis will utilize simple cross tabulated tables. Mothers reporting of vaccination of their children by producing the child's immunization card and those not vaccinated by mother's age and level of education, against types of immunization received. Descriptive analysis, will then be used to explain the information that will be derived from the tables.

Bargraphs will also be used for comparative analysis between BCG and measles coverage, Polio 1, 2 and 3 coverage and finally, DPT 1, 2 and 3 against mothers age and level of education.

C H A P T E R T H R E E

3.1 ANALYSIS

Introduction

The following discussion is an attempt to analyse the immunization coverage pattern in Nairobi by the following variables:

- (i) Differential by mothers' age.
- (ii) Differential by level of education of mothers.
- (iii) Differential by type of immunization.

TABLE 1

CHILDREN VACCINATED AND THOSE WHO ARE NOT VACCINATED BY MOTHERS' AGE

Mothers' Age Group	Female Population	Children Ever Born	Children Dead	Children not Vaccinated	Children Vaccinated
15-19	113	35	18 (51.4%)	3 (8.6%)	14 (40%)
20-24	139	175	99 (56.6%)	13 (7.4%)	63 (36%)
25-29	104	244	152 (62.3%)	6 (2.46%)	86 (35%)
30-34	75	280	185 (66.1%)	13 (4.6%)	82 (29%)
35-39	47	185	145 (78.4%)	7 (3.8%)	33 (17.8%)
40-44	32	157	124 (79%)	0	33 (21%)
45-49	14	61	44 (72%)	0	17 (27%)
TOTALS	524	1137	767 (67.5%)	42 (3.7%)	328 (28.9)

It appears that, out of 1137 children born, only 3.7% children have not received any vaccination, while 28.9% children have received vaccination. 67.5% children are dead,

though it is not known whether they were vaccinated or not. The children who have survived are fewer when compared to those children ever born.

The number of children who have not received vaccination by mothers age group 15-19 years, are 8.6%, while those who have received vaccination are 40% children. Those children who are dead, and it is not known whether they had received vaccination or not, are 56.6%. The implications of these findings for children whose mothers' age is between 15-19 years is, nearly half the number of children born who are alive have received vaccination, while the other half is dead and this is out of the scope of this study to determine whether they had received vaccination or not. The number of children who have not received vaccination by mothers age group 20-24 years are 7.4%, while those who are vaccinated are 36% children, and the percentage that is dead is 56.6%. Mothers' age group

25-29 years has 2.46% children who are not vaccinated, while 35% children are vaccinated and those who are dead and it is not known whether they had received vaccination are 62.3% children. The percentage of children who have not received vaccination in mothers' age group 30-34 years are 4.6, while those who have received vaccination are 29 children and the children dead are 66.1%. For the group 35-39 years of mothers' 3.8% children have not received vaccination, while

17.8% children have received vaccination and those who are dead are 78.4% children. Children whose mothers age is between 40-44 years and are vaccinated are 21%, while those who are dead are 79% children. For the group 45-49 years of mothers, 27% of the children are vaccinated, while the dead children are 72%. The implications of these findings are, mothers under age 35 years are more likely to have their children vaccinated. It is also noted that more children born to mothers of ages ranging between 35 to 49 years tend to die, hence the few number of children who have survived and are vaccinated.

Age Group	Vaccinated (%)	Dead (%)
40-44	21%	79%
45-49	27%	72%

TABLE 2

CHILDREN VACCINATED AND THOSE WHO ARE NOT VACCINATED BY LEVEL OF MOTHERS EDUCATION

Mothers Level of Education	Female population	Children Ever Born	Children Dead	Children not Vaccinated	Children Vaccinated
No Education	46	177	115 (65%)	12 (6.8%)	50 (28%)
Primary Education	248	630	351 (55.7%)	31 (4.9%)	48 (39%)
Secondary Education and plus	228	394	142 (36%)	7 (1.8%)	45 (62%)
TOTALS	522	1201	608 (50.6%)	50 (4.1%)	543 (45.2)

It appears that, from this table, 4.1% children are not vaccinated, while 45% children are vaccinated and 50.6% children out of 1201 children ever born are dead. It is not known whether the dead children had received vaccination.

The percentage of children who have not received vaccination by mothers level of education is as follows; for No education are 6.8; Primary education 4.9; Secondary education and plus 1.8% children. While percentage of those children who have received vaccination for No education

mothers are 28, Primary education, 39, Secondary education and plus, 62 children, while the percentage of children who are dead by mothers' No education are 65, Primary education, 55.7, and Secondary education plus are 36 children. The implications of these findings are, children of mothers with Secondary and further education are more likely to have been vaccinated than children of mothers with no or Primary education, Dunn/Yumkella, (1990). The table also reflects that the number of children dying reduces as mothers education level increases. The implications of these findings are, there are more children presented for vaccination by mothers whose level of education.

TABLE 3

SUMMARY TABLE OF THOSE CHILDREN VACCINATED AND THOSE NOT VACCINATED BY MOTHERS AGE AND LEVEL OF EDUCATION

Female Population	Children Ever Born Alive	Children Dead	Children Alive not Vaccinated	Children Alive Vaccinated
1046	2338	1375 (58.8%)	92 (3.9%)	871 (37%)

It appears from this table that, out of 2,338 children ever born, 58.8% are dead, while 3.9% children who are live, have not received vaccination and 39% of the children alive,

have received vaccination. The implications of these findings are, about half of the children ever born die, though in this study it is out of its scope to determine whether these dead children had received vaccination or not. Secondly, the immunization coverage is still relatively low in Nairobi, since, less than half of the children ever born and are alive, are vaccinated.

TABLE 4

CHILDREN WHO HAVE RECEIVED BCG BY LEVEL OF MOTHERS EDUCATION AND THOSE WHO HAVE NOT RECEIVED

Mothers Level of Education	Female Education	Children Ever born	Children Dead	Children Not Received	Children Received BCG
No Education	46	177	144 (81.3%)	7 (3.9%)	26 (14.7%)
Primary Education	248	630	478 (75.9%)	1 (0.15%)	151 (24%)
Secondary Education and Plus	228	394	280 (71.1%)	8 (2.0%)	106 (26.9%)
TOTAL	522	1201	902 (75.1%)	16 (1.3%)	283 (23.6%)

This table shows that, the percentage of children who have not received BCG by mothers level of education were, 1.3 and those children who had received BCG were 23.6. The children whose mothers' have no education and had not received BCG were 3.9% out of 177 children ever born. The percentage of the children who had received BCG were 14.7. The children whose mothers had Primary education and had not received BCG were, 0.15%, while those children who had received BCG were 24%. The children whose mothers have Secondary education and plus and had not received BCG were, 2.0%, and the percentage of the children who had received BCG were, 26.9%. The percentage of dead children was 73.1, though it is not known, whether they had received any vaccination.

One of the possible reasons for the relatively high BCG coverage in Nairobi is because, BCG is given on first contact with the child. In this case, if most children in Nairobi are born in hospital, BCG coverage ought to be high, (KEPI report, 1987).

TABLE 5

BCG COVERAGE BY MOTHER'S AGE GROUP

Mothers Age Group	Female Population	Children Ever Born	Children Dead	Children Not Received BCG	Children Received BCG
15-19	113	35	17 (48.6%)	1 (2.9%)	17 (48.6%)
20-24	139	175	80 (45.7%)	7 (4%)	18 (50.3%)
25-29	104	244	150 (61.4%)	9 (3.7%)	85 (34.8%)
30-34	75	280	232 (82.9%)	0	48 (17.1%)
35-39	47	185	146 (78.9%)	0	39 (21.1%)
40-44	32	157	148 (94.3%)	0	9 (5.7%)
45-49	14	61	0	0	0
TOTALS	524	1137	831 (73.1%)	17 (1.5%)	289 (25.6%)

The findings that are presented from this table are, the percentage of children that is not vaccinated by mothers age group is 1.5% and the children that were vaccinated are 25.6% out of 1,137 children ever born. The percentage of children whose mothers group was 15-19 years and were not vaccinated were 2.9%, while 48.6% were vaccinated against tuberculosis. It appears that, the younger cohort of women have an advantage over the older cohort of women by having most of their children vaccinated. The percentage of children who have received BCG by mothers' age group 20-29 years, 30-34 years, 35-39 years, 40-44 years and 45-49 years is as follows: 50.3, 34.8, 17.1, 21.1 and 5.7 respectively. There was a decline of BCG vaccination among children whose mothers are older. The possible implication from these findings could be that, mothers tend to be relaxed as they advance in age and therefore very few present their children for vaccinations.

TABLE 6

SUMMARY COVERAGE OF BCG FOR CHILDREN ALIVE

Female Population	Children Ever Born	Children Dead	Children Not Received BCG	Children Alive Received BCG
1046	2338	1733 (74.1%)	33 (1.4%)	572 (24.5%)

The percentage of children that has received BCG vaccination is has relatively higher than that, which has not received BCG vaccination. Those children that are dead are 74.1% though it is no know whether they had been vaccinated or not, while those children who were alive and had not received BCG were 1.4%. The children that were alive and had received BCG were 25.5%. This data also shows that, though there were many health facilities in Nairobi, compared to other districts, mothers do not fully utilise them maximumly.

TABLE 7

THE COVERAGE OF DPT 1, 2 AND 3 BY MOTHERS' LEVEL OF EDUCATION

Level of Mothers ed.	Female Population	Children Ever Born	Children Dead	Children Not Rec. DPT1	Children Rec. DPT1	Children Not Rec. DPT2	Children Rec. DPT2	Children Not Rec. DPT3	Children Rec. DPT3
No Ed.	46	177	78 44.1%	13 7.3%	17 9.6%	10 5.6%	20 11.3%	19 10.7%	20 11.3%
Pri. Ed	248	630	198 31.4%	17 2.7%	116 18.4%	29 4.6%	125 19.8%	29 4.6%	116 18.4%
Sec. Ed. & Plus	228	394	56 14.2%	5 27.7%	109 4.3%	17 24.6%	97 6.3%	25 21.6%	85
TOTALS	522	120	332 27.6%	35 2.9%	242 20.1%	56 4.7%	242 20.1%	73 6.1%	221 18.4%

The percentage of children who have not received DPT 1, 2 and 3 by mothers level of education is as follows: for No education, the figures are; 7.3%, 5.6%, 10.7%; while for those

who have received, the figures are; 9.6%, 11.3% and 11.3%, respectively. It appears that, there was a poor response by mothers in presenting their children from DPT vaccination.

The percentage of children who have not received DPT 1, 2 and 3 by mothers level of education is as follows; for Primary education, the figures are; 2.7%, 4.6% and 4.6%; while for those who have received the figures are; 18.4%, 19.8% and 18.4% respectively. There are more children as it appears from this table, who have been presented for DPT vaccination, compared to children whose mothers belong to the cohort of No education. For Secondary school and plus, the figures of children who have not received DPT 1, 2 and 3 are as follows; 1.3%, 4.3% and 6.3%; while those who have received are; 27.7%, 24.6% and 21.6%; respectively. There are more children as it appears who have been presented for DPT vaccination compared to the two previous groups of mothers' level of education. There is a slight drop in number of children who were presented for DPT 3 (85); while the total number of children ever born were (394); it is therefore most likely that, due to the interval of time between DPT 1, 2 and finally 3, could have affected the coverage. DPT 1 is given at 6 weeks (one and a half months), DPT 2 is given at 10 weeks (two and a half months); while DPT 3 is given at 14 weeks (three and a half months); according to KEPI National Immunization Schedule (1989). DPT coverage is an indication of accessibility to

health; KEPI (1988-90); but with these findings, it reflects that Nairobi has not been adequately covered and therefore there is need for further immunization campaign.

TABLE 8

THE COVERAGE OF DPT 1, 2 AND 3 BY MOTHERS' AGE

Moth-ers' age group	Female Popu-lation	Child-ren Ever Born	Child-ron Dead	Child-ron Not Rec. DPT1	Child-ron Rec. DPT1	Child-ron Not Rec. DPT2	Child-ron Rec. DPT2	Child-ron Not Rec. DPT3	Child-ron Rec. DPT3
15-19	113	105	52 50%	1 0.95%	17 16%	1 0.95%	17 16%	5 4.8%	12 11.4%
20-24	139	525	51 7.8%	10 1.9%	86 16.4%	14 2.7%	82 15.6%	21 4%	61 11.6%
25-29	104	732	456 62.3%	4 0.5%	87 11.9%	10 1.4%	81 11.1%	21 2.7%	73 10%
30-34	75	840	678 80.7%	11 1.5%	37 4.4%	19 2.3%	37 4.4%	21 2.5%	37 4.4%
35-39	47	555	408 72.8%	9 1.6%	40 7.2%	9 1.6%	39 7.0%	22 4%	33 5.9%
40-44	32	471	429 91.1%	0	9 1.9%	0	9 1.9%	15 3.2%	9 1.9%
45-49	14	183	0	0	0	0	0	0	0
TOTALS	524	411	289 66.5%	35 1.0%	276 8.1%	53 1.6%	285 7.8%	05 3.1%	225 6.6%

These data shows that, the number of children, who were presented for DPT vaccination reduced by the last vaccine (DPT 1, 8.1%, DPT 2, 7.8%, and DPT 3, 6.6%). The possible reason for the drop out could be due to the time interval between the three vaccines. DPT 1 is given at 6 weeks; DPT 2 at 10 weeks and DPT 3 is at 14 weeks, according to KEPI National Immunization Schedule (1989).

It appears that, the younger mothers have some initiative in taking their children for vaccination, than older mothers. Mothers' age group 15-19 years, had the following percentage of children, vaccinated for DPT 1, 2 and 3; 16, 16 and 11.4; respectively. While mothers' age group 35-39 years had the following; 7.2, 7.0 and 5.9; respectively.

TABLE 9

THE DPT COVERAGE SUMMARY

Female population aged.	Children Ever Born	Children Dead	Children Alive Not Rec. DPT1	Children Alive Rec. DPT2	Children Alive Not Rec. DPT2	Children Alive Rec. DPT2	Children Alive Not Rec. DPT3	Children Alive Rec. DPT3
1046	4612	484 10.5%	70 1.5%	518 11.2%	109 2.4%	507 10.9%	178 3.9%	446 9.7%

This summary table for DPT coverage, appears to reflect that, DPT coverage is still poor; only 11.2% of the children born had received DPT 1, while 10.9% had received DPT 2 and 9.7% had been presented for DPT 3. The drop out cases increased by the number of doses; i.e. DPT 3 (9.7%) while DPT 1 was (11.2%). The time interval between the doses of DPT could be a contributory factor towards the drop out rate.

TABLE 10

THE COVERAGE OF POLIO 1, 2 AND 3 BY MOTHERS' LEVEL OF EDUCATION

Level of Mothers ed.	Female Population Born	Children Ever Born	Children Dead	Children Not Rec. Polio1	Children Rec. Polio1	Children Not Rec. Polio2	Children Rec. Polio2	Children Not Rec. Polio3	Children Rec. Polio3
No Ed.	46	177	100 56.3%	7 3.9%	1 0.5%	14 7.9%	16 9.0%	19 10.7%	20 11.2%
Pri. Ed.	248	630	298 47.3%	9 1.4%	17 2.6%	29 4.6%	24 19.7%	31 4.9%	122 19.4%
Sec. Ed. & Plus	228	394	17 4.3%	3 0.7%	146 37.1%	11 2.8%	103 26.1%	17 4.3%	97 24.6%
TOTALS	522 34.6%	1201 1.6%	415 13.7%	19 4.5%	164 20.2%	54 5.6%	243 19.9%	67 5.6%	239 19.9%

This table shows that, out of 1201 children ever born, classified by level of mothers' education; those who have not received Polio 1, 2 and 3 by percentage are; 1.6, 4.5 and 5.6; respectively; while those who have received are; 13.7, 20.2

and 19.9, respectively. There are more children generally, who have received Polio vaccination by mothers level of education, than those who have not received. For No Education mothers the percentage of children who have not received Polio 1, 2 and 3 are; 3.9, 7.9 and 10.7 respectively, while those who have received are; 1, 9.0 and 11.2 respectively. The implications of these figures reflect a poor response by No Education mothers, towards Polio vaccination for their children. For Primary Education mothers, children who have not received Polio 1, 2 and 3 are 1.4, 4.6, and 4.9 respectively. These figures are higher than for the children whose mothers have No Education. The implication of this outcome is, mothers with Primary Education are better off in terms of understanding vaccination concepts and the need for vaccination than uneducated mothers, Dunn/Yumkella (1990). The percentage of children who have not received Polio 1, 2 and 3 by mothers level of education is as follows, for Secondary Education level and Plus are; 1.6, 4.5 and 5.6; while those who have received are 13.7, 20.2 and 19.9; respectively. It appears that, the higher the mothers level of education, the better, the response towards children's vaccination. Another implication that can be made from the findings of these data is, Polio vaccination is poorly covered in Nairobi.

TABLE 11

THE COVERAGE OF POLIO 1, 2 AND 3 BY MOTHERS' AGE

Moth- Age Mothers ed.	Female Popu- lation Born	Child- ren Ever Born	Child- ren Dead	Child- ren Not Rec. Polio1	Child- ren Rec. Polio1	Child- ren Not Rec. Polio2	Child- ren Rec. Polio2	Child- ren Not Rec. Polio3	Child- ren Rec. Polio3
15-19	113	105	54 51.9%	1 0.95%	17 16.2%	1 0.95%	16 15.2%	3 2.9%	14 13.3%
20-24	139	525	47 47%	4 0.8%	92 17.5%	9 1.7%	80 15.2%	9 1.7%	84 16%
25-29	104	732	61 82.9%	9 1.2%	85 16.2%	12 1.6%	75 10.2%	15 2.0%	75 10.2%
30-34	75	840	74 80.2%	5 0.6%	43 5.1%	19 2.3%	43 5.1%	19 2.3%	37 4.4%
35-39	47	555	420 75.7%	0	39 7.0%	9 1.6%	39 7.0%	15 2.7%	33 5.9%
40-44	32	471	444 94.3%	0	9 1.9%	0	9 1.9%	0	9 1.9%
45-49	14	183		0	0	0	0	0	0
TOTALS	524	411	2300 87.4%	19 0.6%	285 8.4%	50 1.5%	262 7.7%	61 1.8%	252 7.7%

It has been shown above that, out of 3411 children ever born, the following have not received Polio 1, 2 and 3 vaccinations as follows; 0.6%, 1.5% and 1.8% respectively; while those who have received are; 8.4%, 7.7% and 7.4% respectively. The percentage of children who are dead, though

it is not known whether they had received vaccination is 67.4%. The implications of these data are; Polio 1 has been fairly well covered compared to Polio 2 and 3 vaccinations. The KEPI schedule of 1989, recommended the following interval for this vaccine; Polio 1 be given at 6 weeks (one and a half months), Polio 2, at 10 weeks (two and a half months) and Polio 3 at 14 weeks, (three and a half months). The children who drop out of the immunization programme increase with duration taken before the next appointment. This factor may have affected Polio vaccination coverage in Nairobi.

The percentage of children who have not received Polio 1, 2 and 3 by mothers' age is as follows; for age group 15-19 is; 1, 1 and 3 respectively. While those those children who have received are as follows; 17, 16 and 14 respectively. The children born by mothers in age group 15-19 years are (105), while those who are dead are 54 (51.9%). The pattern that is displayed is, Polio coverage is low for children by mothers' in age group 15-19 years. Consequently, data derived for children who are not vaccinated by their mothers' age group 20-24 years is as follows; for Polio 1, 2 and 3; 0.8%, 1.7% and 1.7%; respectively. While those who have received are; 17.5%, 15.2% and 16%; respectively. There is little difference in percentages of children vaccinated by mothers' age group, 15-19 and 20-24 years. There is a decline in percentage of the children who had received vaccination by

mothers age group 30-34 years. For Polio 1, 2 and 3, it is as follows; 5.1%, 5.1% and 4.4%; respectively. The KEPI report of 1988-90, had an explanation for the decline in vaccinations for children whose mothers are 35 years and above they tend to ignore the fact that vaccination is important for their children. The same findings from this data were depicted by Dunn/Yumkella, (1990) in Burundi.

TABLE 12

POLIO COVERAGE: SUMMARY

Female population aged.	Children Ever Born	Children Dead	Children Alive Not Rec. Polio1	Children Alive Rec. Polio1	Children Alive Not Rec. Polio2	Children Alive Rec. Polio2	Children Alive Not Rec. Polio3	Children Alive Rec. Polio3
1046	4612	2715	38 (0.8%)	449 (9.7%)	104 (2.2%)	505 (10.9%)	128 (2.8%)	491 (10.6%)

On the face of this table, there is a high drop out number of children who received Polio 2. Children who are live and have received Polio 3 vaccination were 14 (2.8%) out of 505 (10.9% who were presented for Polio 2. There are more children who are alive and have not received Polio vaccination.

TABLE 13

MEASLES COVERAGE BY MOTHERS LEVEL OF EDUCATION

Mothers Level of Education	Female Education	Children Ever born	Children Dead	Children Not Received Measles	Children Received Measles
No Education	46	177	146 (82.5%)	12 (6.7%)	19 (10.7%)
Primary Education	248	630	485 (77%)	72 (11.4%)	73 (11.5%)
Secondary Education and Plus	228	394	280 (71.1%)	44 (11.1%)	70 (17.8%)
TOTAL	522	1201	977 (81.3%)	128 (10.7%)	96 (7.9%)

It is clear that measles coverage revealed by this table is low; only 7.9% children out of 1201 children ever born, have received measles vaccination. According to Hayden, (1974), many mothers in Kenya do not consider measles to be of great importance. KEPI, (1989), recommends a vaccination schedule which shows that, measles should be given at 9 months. Many mothers do wait for the children to suffer from measles before seeking medical help.

Another possible reason for the poor presentation of children for measles vaccination could be as a result of the interval between birth and when the measles vaccination is given. Measles is given at 9 months, while the last doses of DPT, and Polio are given at three and a half months. The time difference between three and a half months and 9 months, could also be a contributing factor towards poor measles coverage. It requires that, mothers have initiative to present their children for vaccination.

The children who have not received measles by mothers' level of education are, for No Education mothers is as follows; 6.7% for Primary Education mothers; 11.4% and for Secondary Education and plus is, 11.1%. Measles coverage is higher for children whose mothers have Primary and Secondary Education, while those children whose mothers have no education are not adequately covered for measles. The figures are as follows; the children whose mothers have No Education are; 10.7%, Primary Education, 11.5%, and Secondary Education and Plus is 17.8%. KEPI, 1988-90 found a strong relationship between level of mothers' education and immunization coverage, especially for measles vaccination.

TABLE 14

MEASLES COVERAGE BY MOTHERS' AGE

Mothers Age Group	Female Population	Children Ever Born	Children Dead	Children not Vaccinated	Children Vaccinated
15-19	113	35	18 (51.4%)	7 (20%)	10 (28.6%)
20-24	139	175	76 (43.4%)	40 (22.8%)	59 (33.7%)
25-29	104	244	153 (62.7%)	46 (18.8%)	45 (18.4%)
30-34	75	280	229 (81.8%)	22 (7.9%)	29 (10.4%)
35-39	47	185	146 (79%)	20 (10.8%)	19 (10.3%)
40-44	32	157	48 (94.3%)	0	0
45-49	14	61	0	0	0
TOTALS	524	1157	851 (73.6%)	135 (11.6%)	171 (14.8%)

It appears that from the findings of these data above, few children are presented for measles vaccination; 14.8%

children out of 1157 children ever born had been presented for measles. Hayden, (1974), in his findings, measles ranked 10th as a cause of death in children who are 5 years and under, in Kenya Government hospitals. He also noted that, the majority of hospitalized children with measles were just under one year old.

The children whose mothers' age group is 20-24 years, appear to have the highest measles coverage, (33.7%); while the children with the lowest coverage are of mothers age group, 34-39 years. Dunn/Yumkella, (1990), had an explanation for this finding in their Burundi Demographic Health Survey, that, mothers who are younger tend to take their children for vaccination, unlike older mothers, who seem relaxed about the dangers of having their children not vaccinated.

TABLE 15

MEASLES COVERAGE: SUMMARY

Female Population	Children Ever Born Alive	Children Dead	Children Alive not Vaccinated	Children Alive Vaccinated
1046	2338	1808 (77.3%)	263 (11.24%)	267 (7.1%)

It appears from this table that, the percentage of children who are alive and have not been vaccinated for

measles is just as high; (11.24%) as that of the children who are vaccinated; (7.1%). This shows that measles is poorly covered in Nairobi.

CHAPTER FOUR

4.1 SUMMARY AND POLICY IMPLICATIONS

4.2 SUMMARY:

This study has attempted to find out the immunization coverage pattern in Nairobi. The specific objectives were to, identify the problems related to inadequate immunization coverage and at the same time, to provide the planners with information that would be useful for the promotion of a wider coverage of immunization.

The variables which were considered are;

- (i) Maternal education and immunization coverage.
- (ii) Mothers' age and immunization coverage.
- (iii) Types of immunization coverage by mothers level of education and age.

EDUCATION

Maternal Education has a strong impact on immunization coverage. Children whose mothers had secondary and higher education were more likely to be vaccinated, Dunn/Yumkella, (1990), than children whose mothers had primary and No Education. Education, therefore as a social factor plays a great role in increasing awareness on the seriousness of vaccination for children who are between age 0 to 5 years.

MOTHERS' AGE

Mothers' age, is a demographic factor that was found in this paper, contributing highly to the immunization coverage. Younger mothers, (20-29 years) appeared more keen in having their children vaccinated than older mothers (35-44 years). The drop out rate of children increased with mothers age, especially for the vaccinations which require several doses to have the child fully immunized, (i.e. DPT and Polio).

TYPES OF IMMUNIZATION COVERAGE BY MOTHERS EDUCATION AND AGE

The types of immunization that were considered in this paper were; Measles, BCG (Tuberculosis), Poliomyelitis and DPT (Whooping Cough, Diphtheria and Tetanus).

(i) Measles

Children whose mothers had Primary Education and above, had higher chances of being vaccinated than, if their mothers had No Education. Generally, measles was poorly covered. One major factor that was attributed to the poor coverage was, due to the time factor, when measles is given; (9 months). According to KEPI report; (1988-90), mothers tend to forget, to present their children for this vaccine. Measles has been found a major childhood killer disease.

(ii) BCG (Tuberculosis)

There was a relatively higher coverage of BCG, compared to measles. BCG is given as soon as the child is born, or at first contact with the medical personnel. Since Nairobi is an urban area, the findings from the data revealed a high coverage of BCG, due to availability of Maternal Health Care Centres. It was also noted that, though Nairobi had the highest BCG coverage in the country (60%); KEPI report; BCG coverage is not as well covered as it is expected of an urban region.

(iii) Poliomyelitis/DPT

Polio vaccination coverage was very similar to DPT. The coverage and the recommended schedule, (KEPI, 1989) did not differ much. The level of mothers education and age affected Polio and DPT coverage. The higher the level of education of mothers, the more the children reflected having been vaccinated. The last doses of the vaccine was poorly covered, DPT 3 and Polio 3. This was attributed to the time interval between the first vaccine, and the third vaccine. Mothers tended not take their children for the last vaccination. This contributed to the high drop out rate.

4.3 POLICY IMPLICATIONS

Some of the objectives that were intended to be achieved were:

- (i) To provide information on the prevention and reduction of childhood diseases, which in the long run, would be an indicator of social change and development in Nairobi.
- (ii) To provide the planners with information that would be useful for the promotion of a wider coverage of immunization of children in Nairobi.

There has not been adequate information regarding prevention and reduction of childhood diseases. The available health facilities in Nairobi are strained due to population increase and also, at the same time, there are poor storage facilities for the vaccines, which require cold chains.

The health facilities in Nairobi are not fully utilized, especially those run by private organizations. They are also not known to the majority in the city. There is lack of publicity in the media that can reach most people.

4.4 RECOMMENDATIONS FOR POLICY PLANNERS AND FURTHER RESEARCH

- (i) It is mandatory for children joining City Commission Schools, to produce their immunization cards. The same policy should apply to other schools that are privately

run. This is one measure that can ensure that most children under 5 years are presented for the various vaccinations.

- (ii) Education campaign on the role of vaccinations should be boosted by the government and the other organizations undertaking immunization as a Primary Health Care Service.
- (iii) More research should be carried out to establish vaccines, which can be stored under room temperatures and not cold chains. These types of vaccines would then be easily available in most dispensaries around the country.

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Fig. 3 : CHILDREN EVER BORN BY LEVEL OF THE MOTHERS' EDUCATION AND HAVE RECEIVED BCG FOR TUBERCULOSIS AND THOSE WHO HAVE NOT RECEIVED THE VACCINATION

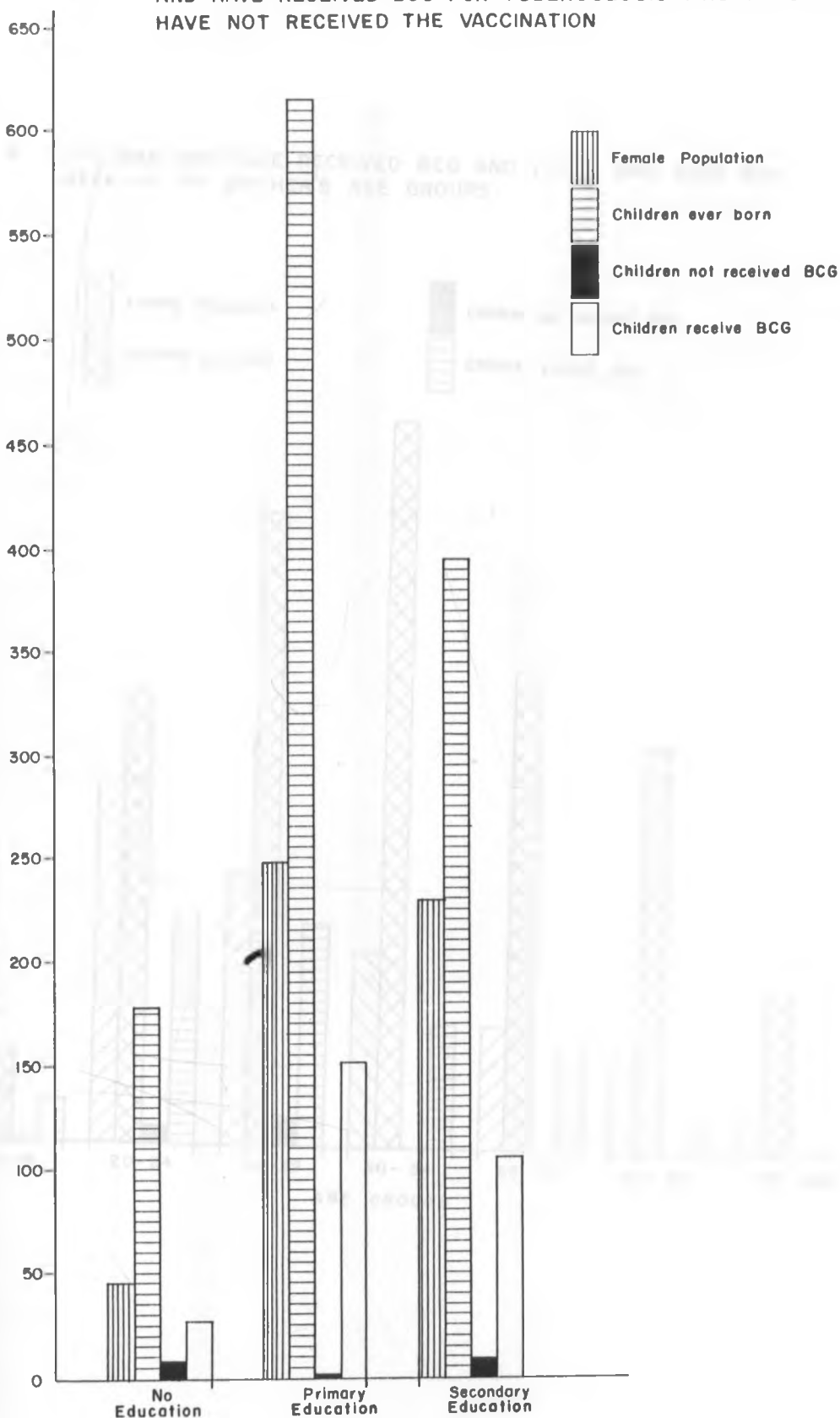


Fig 4 : CHILDREN WHO HAVE RECEIVED BCG AND THOSE WHO HAVE NOT RECEIVED BY MOTHER'S AGE GROUPS

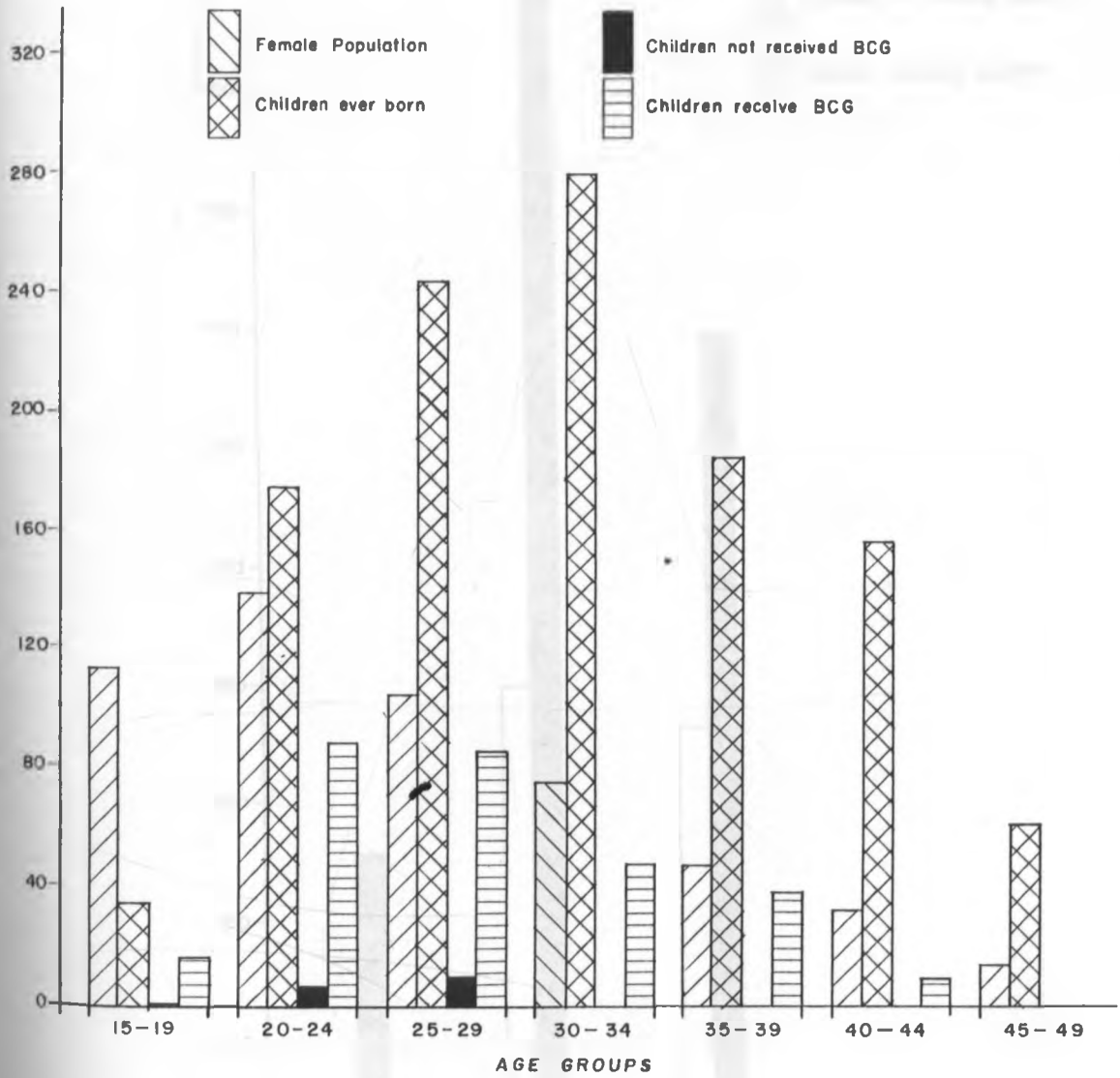


Fig. 5 : CHILDREN EVER BORN WHO HAVE RECEIVED MEASLES VACCINATION AND THOSE WHO HAVE NOT, BY MOTHER'S LEVEL OF EDUCATION

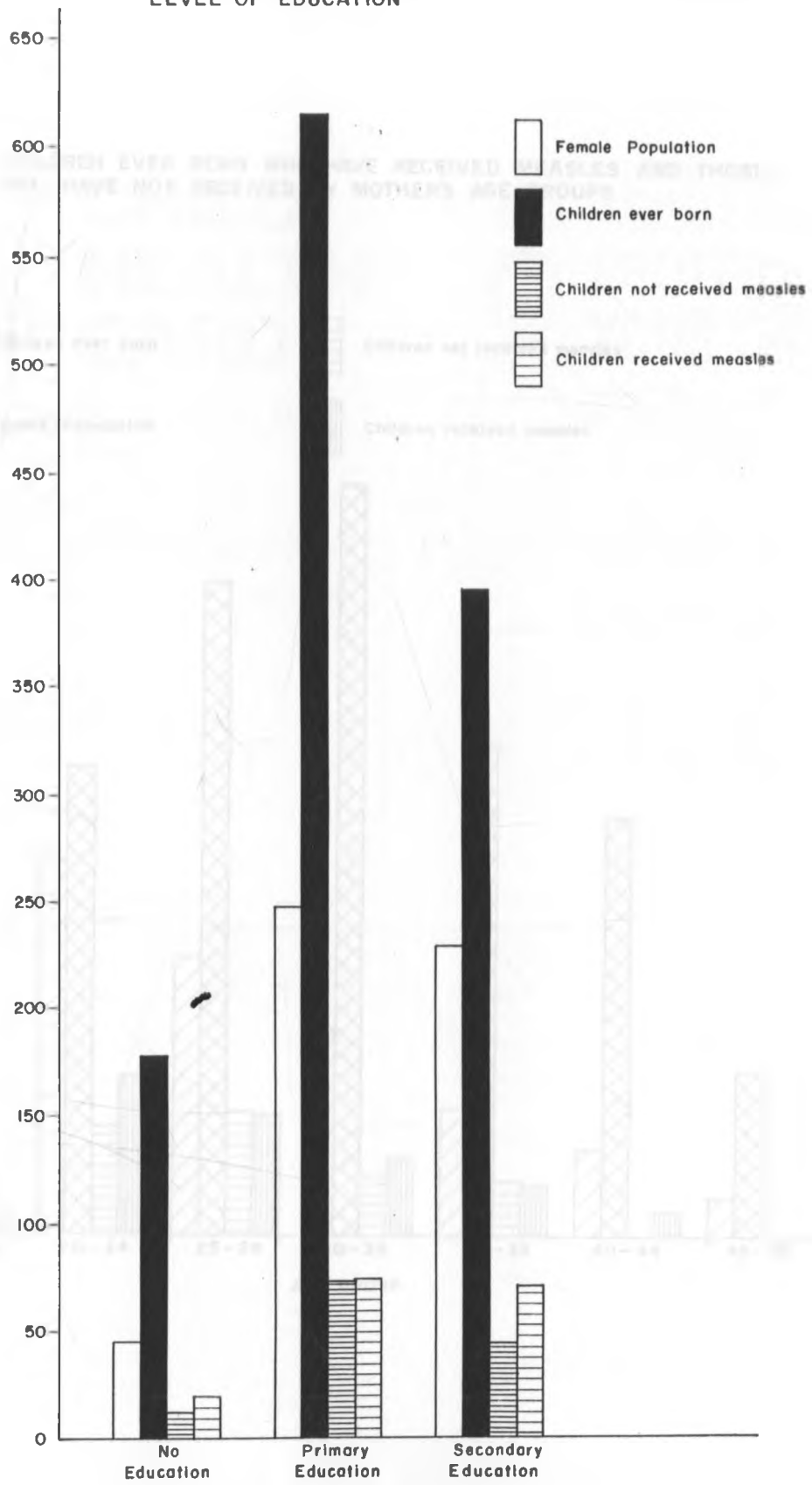
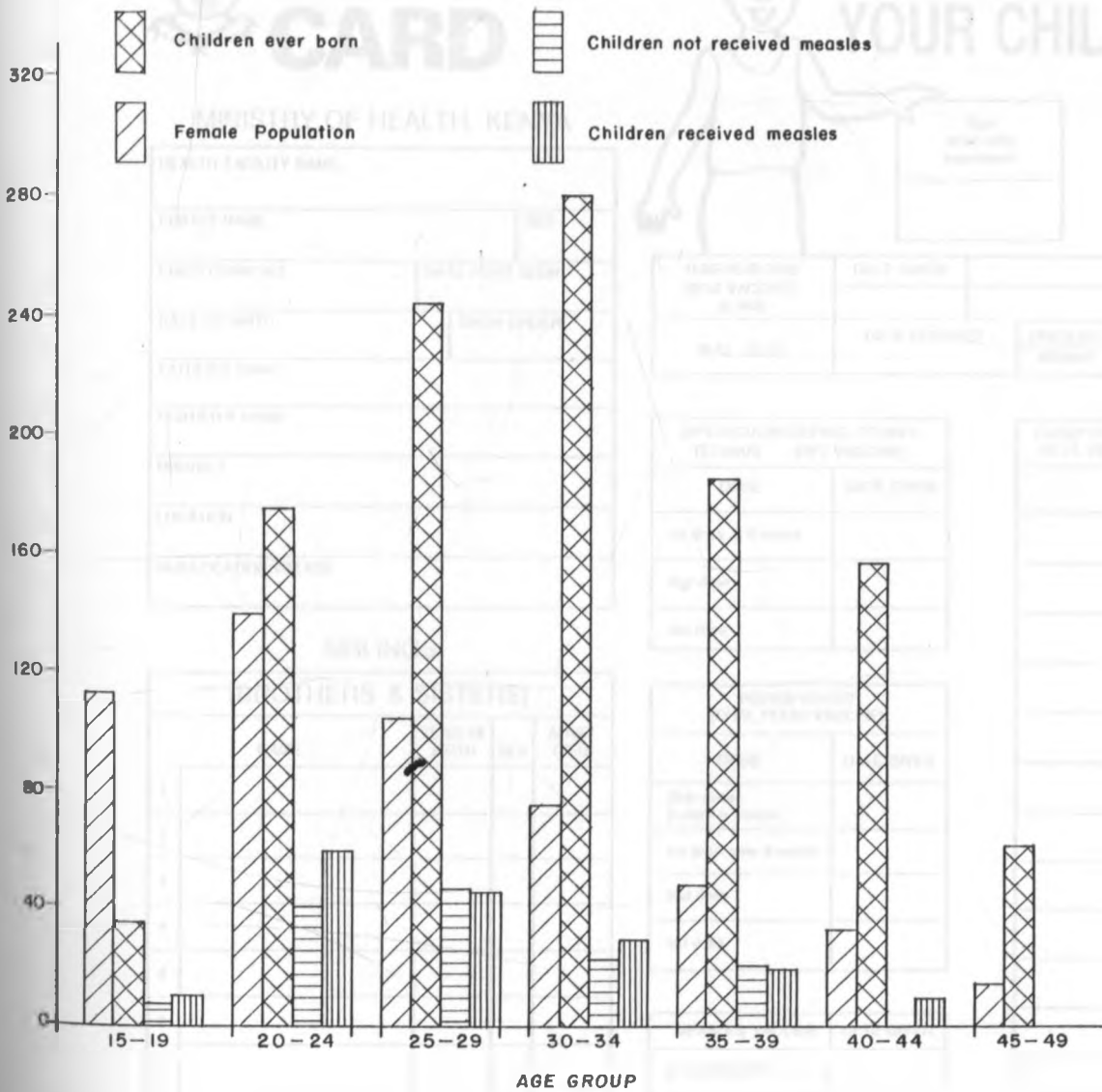


Fig. 6 : CHILDREN EVER BORN WHO HAVE RECEIVED MEASLES AND THOSE WHO HAVE NOT RECEIVED BY MOTHER'S AGE GROUPS



APPENDIX

Crosstabulation: V201 Total children ever born
 By V106 Highest educational level
 Controlling for H10\$01 Ever had vaccination
 Value = 0 No

V106->	V201	Count	Highest educational level			Row Total
		Row Pct	No educa- tion	Primary	Secondar- y	
		Col Pct	0	1	2	
		Tot Pct				
	1			2	1	3
				60.0	40.0	26.3
				25.0	50.0	
				15.8	10.5	
	2		1	3	1	4
			16.7	66.7	16.7	31.6
			33.3	33.3	25.0	
			5.3	21.1	5.3	
	3		1	1		2
			33.3	66.7		15.8
			33.3	16.7		
			5.3	10.5		
	4			1	1	1
				50.0	50.0	10.5
				8.3	25.0	
				5.3	5.3	
	6		1			1
			100.0			5.3
			33.3			
			5.3			
	7			1		1
				100.0		5.3
				8.3		
				5.3		
	9			1		1
				100.0		5.3
				8.3		
				5.3		
Column Total			2	8	3	12
			15.8	63.2	21.1	100.0

Crosstabulation: V201 Total children ever born
 By V013 Age 5-year groups
 Controlling for H10\$01 Ever had vaccination
 Value = 1 Yes

		Count	15-19	20-24	25-29	30-34	35-39	40-44	45-49	
V013->	V201	Row Pct	1	2	3	4	5	6	7	Row Total
		Col Pct								
		Tot Pct								
1	1	6	17	5	1	1				29
		20.0	57.8	17.8	2.2	2.2				22.1
		60.0	47.3	15.1	2.2	4.5				
		4.4	12.7	3.9	.5	.5				
2	2	4	12	12	5					33
		11.8	35.3	37.3	15.7					25.0
		40.0	32.7	35.8	17.4					
		2.9	6.8	9.3	3.9					
3	3		6	6	6			1		19
			33.3	30.0	33.3			3.3		14.7
			18.2	17.0	21.7			11.1		
			4.9	4.4	4.9			.5		
4	4		1	8	7	2	1			19
			3.4	44.8	37.9	10.3	3.4			14.2
			1.8	24.5	23.9	13.6	11.1			
			.5	6.4	5.4	1.5	.5			
5	5			3	4	5	1			12
				21.1	31.6	36.8	10.5			9.3
				7.5	13.0	31.8	22.2			
				2.0	2.9	3.4	1.0			
6	6				3		1			4
					83.3		16.7			2.9
					10.9		11.1			
					2.5		.5			
7	7				2	3	1			6
					30.0	50.0	20.0			4.9
					6.5	22.7	22.2			
					1.5	2.5	1.0			
8	8				1	1	1	1		5
					25.0	25.0	25.0	25.0		3.9
					4.3	9.1	22.2	50.0		
					1.0	1.0	1.0	1.0		
9	9					1		1		3
						50.0		50.0		2.0
						9.1		50.0		
						1.0		1.0		
10	10						1			1
							100.0			1.0
							9.1			
							1.0			
Column Total		10	35	34	30	14	6	3	132	
		7.4	27.0	26.0	22.5	10.8	4.4	2.0	100.0	

Number of Missing Observations = 380

Crosstabulation: V201 Total children ever born
 By V013 Age 5-year groups
 Controlling for H10\$01 Ever had vaccination
 Value = 0 No

		Count					
		15-19	20-24	25-29	30-34	35-39	Row Total
V013->	Row Pct						
	Col Pct						
V201	Tot Pct	1	2	3	4	5	
1	1	1	1	1			3
		40.0	40.0	20.0			26.3
		66.7	28.6	20.0			
		10.5	10.5	5.3			
2	1		2	1			4
		16.7	50.0	33.3			31.6
		33.3	42.9	40.0			
		5.3	15.8	10.5			
3			1	1			2
			33.3	66.7			15.8
			14.3	40.0			
			5.3	10.5			
4					1		1
					100.0		10.5
					66.7		
					10.5		
5			1				1
			100.0				5.3
			14.3				
			5.3				
7						1	1
						100.0	5.3
						100.0	
						5.3	
9					1		1
					100.0		5.3
					33.3		
					5.3		
Column Total		2	5	3	2	1	12
	Total	15.8	36.8	26.3	15.8	5.3	100.0

Crosstabulation: V201 Total children ever born
 By D1 child is alive

Controlling for H10\$01 Ever had vaccination
 Value = 0 No

D1->	Count Row Pct Col Pct Tot Pct	No .00	Row Total
V201	1	3 100.0 26.3 26.3	3 26.3
	2	4 100.0 31.6 31.6	4 31.6
	3	2 100.0 15.8 15.8	2 15.8
	4	1 100.0 10.5 10.5	1 10.5
	6	1 100.0 5.3 5.3	1 5.3
	7	1 100.0 5.3 5.3	1 5.3
	9	1 100.0 5.3 5.3	1 5.3
	Column Total	12 100.0	12 100.0

Crosstabulation: V201 Total children ever born
 By D1 child is alive
 Controlling for H10\$01 Ever had vaccination
 Value = 1 Yes

D1->	V201	Count	Yes	Row
		Row Pct	1.00	Total
Co1 Pct	Tot Pct			
1	1	29	29	22.1
		100.0		22.1
		22.1		
		22.1		
2	2	33	33	25.0
		100.0		25.0
		25.0		
		25.0		
3	3	19	19	14.7
		100.0		14.7
		14.7		
		14.7		
4	4	19	19	14.2
		100.0		14.2
		14.2		
		14.2		
5	5	12	12	9.3
		100.0		9.3
		9.3		
		9.3		
6	6	4	4	2.9
		100.0		2.9
		2.9		
		2.9		
7	7	6	6	4.9
		100.0		4.9
		4.9		
		4.9		
8	8	5	5	3.9
		100.0		3.9
		3.9		
		3.9		
9	9	3	3	2.0
		100.0		2.0
		2.0		
		2.0		
10	10	1	1	1.0
		100.0		1.0
		1.0		
		1.0		
Column		132	132	
Total		100.0	100.0	

Number of Missing Observations = 380

Crosstabulation: V201 Total children ever born
 By V106 Highest educational level
 Controlling for H2\$01 Received BCG
 Value = 1 Yes

V106->	V201	Count Row Pct Col Pct Tot Pct	No educa	Primary	Secondar	Row Total
			tion 0	1	y 2	
1	2	6.2 30.0 1.9	15 29.1 14.8	14 45.8 33.3 14.2	31 31.0	
2	1	2.3 10.0 .6	15 29.1 14.8	13 45.5 30.3 12.9	28 28.4	
3	1	5.9 10.0 .6	5 8.9 4.5	6 52.9 13.8 5.8	11 11.0	
4	1	10.5 20.0 1.3	6 12.7 6.5	5 36.8 10.6 4.5	12 12.3	
5			5 70.0 8.9 4.5	2 30.0 4.5 1.9	6 6.5	
6	1	18.2 20.0 1.3	3 36.4 5.1 2.6	3 45.5 7.6 3.2	7 7.1	
7			1 100.0 1.3 .6		1 .6	
8			1 100.0 2.5 1.3		1 1.3	
9	1	33.3 10.0 .6	1 66.7 2.5 1.3		2 1.9	
Column Total		6 6.5	51 51.0	43 42.6	100 100.0	

Number of Missing Observations = 418

Crosstabulation: V201 Total children ever born
 By V013 Age 5-year groups

Controlling for H2\$01 Received BCG
 Value = 0 No

		Count				
V013->	V201	Row Pct	15-19	20-24	25-29	Row Total
		Col Pct				
		Tot Pct	1	2	3	
	1	1	1	1		3
		50.0	50.0			44.4
		100.0	50.0			
		22.2	22.2			
	2			1	1	1
			50.0	50.0		22.2
			25.0	33.3		
			11.1	11.1		
	3				1	1
					100.0	11.1
					33.3	
					11.1	
	4			1	1	1
			50.0	50.0		22.2
			25.0	33.3		
			11.1	11.1		
Column Total			1	3	2	6
			22.2	44.4	33.3	100.0

Crosstabulation: V201
 By V013
 Controlling for H2\$01
 Value = 1 Yes

Total children ever born
 Age 5-year groups
 Received BCG

		Count						
		15-19	20-24	25-29	30-34	35-39	40-44	Row Total
V013->	V201	1	2	3	4	5	6	
		Row Pct	Col Pct	Tot Pct	Row Pct	Col Pct	Tot Pct	
1	1	11 35.4	15 50.0	4 12.5	1 2.1			31 31.0
		81.0	34.8	16.2	5.9			
		11.0	15.5	3.9	.6			
2	2	3 9.1	18 63.6	5 18.2	2 6.8	1 2.3		28 28.4
		19.0	40.6	21.6	17.8	10.0		
		2.6	18.1	5.2	1.9	.6		
3	3		7 64.7	3 23.5	1 11.8			11 11.0
			15.9	10.8	11.8			
			7.1	2.6	1.3			
4	4		4 31.6	6 47.4	1 10.5	1 10.5		12 12.3
			8.7	24.3	11.8	20.0		
			3.9	5.8	1.3	1.3		
5	5			4 60.0	2 30.0	1 10.0		6 6.5
				16.2	17.6	10.0		
				3.9	1.9	.6		
6	6			3 36.4	3 36.4	2 27.3		7 7.1
				10.8	23.5	30.0		
				2.6	2.6	1.9		
7	7					1 100.0		1 .6
						10.0		
						.6		
8	8				1 100.0			1 1.3
					11.8			
					1.3			
9	9					1 66.7	1 33.3	2 1.9
						20.0	100.0	
						1.3	.6	
Column Total		14 13.5	44 44.5	24 23.9	11 11.0	6 6.5	1 .6	100 100.0

Number of Missing Observations = 418

Crosstabulation: V201 Total children ever born
 By D1 child is alive

Controlling for H2\$01 Received BCG
 Value = 0 No

D1->	Count		No	Row Total
	Row Pct	Col Pct		
V201	Col Pct	Tot Pct	.00	
1	3	44.4	44.4	3
2	1	22.2	22.2	1
3	1	11.1	11.1	1
4	1	22.2	22.2	1
Column Total	6	100.0	6	100.0

Crosstabulation: V201 Total children ever born
 By D1 child is alive
 Controlling for H2\$01 Received BCG
 Value = 1 Yes

D1=	V201	Count		
		Row Pct	Col Pct	Row Total
		Yes	1.00	
		Tot Pct		
	1	31		31
		100.0		31.0
		31.0		
		31.0		
	2	28		28
		100.0		28.4
		28.4		
		28.4		
	3	11		11
		100.0		11.0
		11.0		
		11.0		
	4	12		12
		100.0		12.3
		12.3		
		12.3		
	5	6		6
		100.0		6.5
		6.5		
		6.5		
	6	7		7
		100.0		7.1
		7.1		
		7.1		
	7	1		1
		100.0		.6
		.6		
		.6		
	8	1		1
		100.0		1.3
		1.3		
		1.3		
	9	2		2
		100.0		1.9
		1.9		
		1.9		
Column		100		100
Total		100.0		100.0

Number of Missing Observations = 418

Crosstabulation: V201 Total children ever born
 By V106 Highest educational level

Controlling for H3\$01 Received DPT 1
 Value = 0 No

V106->	Count	No educa	Primary	Secondar	Row
V201	Row Pct	tion	y	y	Total
	Col Pct	0	1	2	
	Tot Pct				
1	1	66.7	33.3	25.0	2
		25.0	50.0		
		16.7	8.3		
2	1	100.0		8.3	1
		12.5			
		8.3			
3	1	100.0		16.7	1
		25.0			
		16.7			
4	1	50.0	50.0	16.7	1
		50.0	50.0		
		8.3	8.3		
5	1	100.0		16.7	1
		25.0			
		16.7			
6	1	100.0		8.3	1
		12.5			
		8.3			
9	1	100.0		8.3	1
		50.0			
		8.3			
Column Total		16.7	66.7	16.7	8

Crosstabulation: V201 Total children ever born
 By V106 Highest educational level
 Controlling for H3\$01 Received DPT 1
 Value = 1 Yes

V106->	V201	Count	No educa	Primary	Secondar	Row Total
		Row Pct	tion		y	
		Col Pct	0	1	2	
		Tot Pct				
	1	2	14	15	32	
		6.1	44.9	49.0	32.2	
		30.0	30.6	34.3		
		2.0	14.5	15.8		
	2	1	14	14	29	
		2.2	48.9	48.9	29.6	
		10.0	30.6	31.4		
		.7	14.5	14.5		
	3	1	3	6	10	
		12.5	31.3	56.3	10.5	
		20.0	6.9	12.9		
		1.3	3.3	5.9		
	4	1	6	5	12	
		10.5	52.6	36.8	12.5	
		20.0	13.9	10.0		
		1.3	6.6	4.6		
	5		3	2	5	
			62.5	37.5	5.3	
			6.9	4.3		
			3.3	2.0		
	6	1	2	3	6	
		20.0	30.0	50.0	6.6	
		20.0	4.2	7.1		
		1.3	2.0	3.3		
	7		1		1	
			100.0		.7	
			1.4			
			7			
	8		1		1	
			100.0		1.3	
			2.8			
			1.3			
	9		1		1	
			100.0		1.3	
			2.8			
			1.3			
Column Total		6	46	45	98	
		6.6	47.4	46.1	100.0	

Number of Missing Observations = 418

Crosstabulation: V201
 By V013
 Controlling for H3\$01
 Value = 1 Yes

Total children ever born
 Age 5-year groups
 Received DPT 1

		Count							
V013->	V201	Row Pct	15-19	20-24	25-29	30-34	35-39	40-44	Row Total
		Col Pct	1	2	3	4	5	6	
		Tot Pct							
1	1	11	16	4	1				32
		34.7	51.0	12.2	2.0				32.2
		81.0	36.8	15.4	7.1				
		11.2	16.4	3.9	.7				
2	2	3	18	6	2	1			29
		8.9	62.2	20.0	6.7	2.2			29.6
		19.0	41.2	23.1	21.4	11.1			
		2.6	18.4	5.9	2.0	.7			
3	3		6	3	1				10
			56.3	31.3	12.5				10.5
			13.2	12.8	14.3				
			5.9	3.3	1.3				
4	4		4	6	1	1			12
			31.6	47.4	10.5	10.5			12.5
			8.8	23.1	14.3	22.2			
			3.9	5.9	1.3	1.3			
5	5			4	1	1			5
				75.0	12.5	12.5			5.3
				15.4	7.1	11.1			
				3.9	.7	.7			
6	6			3	2	2			6
				40.0	30.0	30.0			6.6
				10.3	21.4	33.3			
				2.6	2.0	2.0			
7	7					1			1
						100.0			.7
						11.1			
						.7			
8	8				1				1
					100.0				1.3
					14.3				
					1.3				
9	9					1	1		1
						50.0	50.0		1.3
						11.1	100.0		
						.7	.7		
Column Total		14	44	25	9	6	1		98
		13.8	44.7	25.7	9.2	5.9	.7		100.0

Number of Missing Observations = 418

Crosstabulation: V201
 By V013
 Controlling for H3\$01
 Value = 0 No

Total children ever born
 Age 5-year groups
 Received DPT 1

		Count					
V013->	V201	15-19	20-24	25-29	30-34	35-39	Row Total
		1	2	3	4	5	
		Row Pct	Row Pct	Row Pct	Row Pct	Row Pct	
		Col Pct	Col Pct	Col Pct	Col Pct	Col Pct	
		Tot Pct	Tot Pct	Tot Pct	Tot Pct	Tot Pct	
1	1	1	1				2
		66.7	33.3				25.0
		100.0	20.0				
		16.7	8.3				
2			1				1
			100.0				8.3
			20.0				
			8.3				
3			1				1
			100.0				16.7
			40.0				
			16.7				
4			1	1			1
			50.0	50.0			16.7
			20.0	100.0			
			8.3	8.3			
5					1		1
					100.0		16.7
					66.7		
					16.7		
6					1		1
					100.0		8.3
					33.3		
					8.3		
7						1	1
						100.0	8.3
						100.0	
						8.3	
Column Total		1	3	1	2	1	8
		16.7	41.7	8.3	25.0	8.3	100.0

Crosstabulation: V201 Total children ever born
 By D1 child is alive

Controlling for H3\$01 Received DPT 1
 Value = .00 No

D1->	Count	No	Row Total
	Row Pct	.00	
	Col Pct		
	Tot Pct		
V201	1	2	2
		100.0	25.0
		25.0	
		25.0	
	2	1	1
		100.0	8.3
		8.3	
		8.3	
	3	1	1
		100.0	16.7
		16.7	
		16.7	
	4	1	1
		100.0	16.7
		16.7	
		16.7	
	5	1	1
		100.0	16.7
		16.7	
		16.7	
	6	1	1
		100.0	8.3
		8.3	
		8.3	
	9	1	1
		100.0	8.3
		8.3	
		8.3	
Column Total		8	8
		100.0	100.0

Crosstabulation: V201 Total children ever born
 By D1 child is alive
 Controlling for H3\$01 Received DPT 1
 Value = 1.00 Yes

D1->	V201	Count	Yes	Row
		Row Pct	1.00	Total
Col Pct	Tot Pct			
1		32	32.2	32
		100.0	32.2	32.2
		32.2		
		32.2		
2		29	29.6	29
		100.0	29.6	29.6
		29.6		
		29.6		
3		10	10.5	10
		100.0	10.5	10.5
		10.5		
		10.5		
4		12	12.5	12
		100.0	12.5	12.5
		12.5		
		12.5		
5		5	5.3	5
		100.0	5.3	5.3
		5.3		
		5.3		
6		6	6.6	6
		100.0	6.6	6.6
		6.6		
		6.6		
7		1	.7	1
		100.0	.7	.7
		.7		
		.7		
8		1	1.3	1
		100.0	1.3	1.3
		1.3		
		1.3		
9		1	1.3	1
		100.0	1.3	1.3
		1.3		
		1.3		
Column		98	98	
Total		100.0	100.0	

Number of Missing Observations = 418

Crosstabulation: V201 Total children ever born
 By D1 child is alive

Controlling for H4\$01 Received POLIO 1
 Value = 0 No

D1->	Count		No	Row Total
	Row	Pct		
V201	Col	Pct	.00	
	Tot	Pct		
	1	1	1	1
		100.0	28.6	28.6
		28.6		
		28.6		
	2	1	1	1
		100.0	14.3	14.3
		14.3		
		14.3		
	3	1	1	1
		100.0	14.3	14.3
		14.3		
		14.3		
	4	1	1	1
		100.0	28.6	28.6
		28.6		
		28.6		
	5	1	1	1
		100.0	14.3	14.3
		14.3		
		14.3		
Column		5	5	
Total		100.0	100.0	

Crosstabulation: V201 Total children ever born
 By V106 Highest educational level
 Controlling for H4\$01 Received POLIO 1
 Value = 1 Yes

V106→ V201	Count	No educa	Primary	Secondar	Row Total
	Row Pct Col Pct Tot Pct	tion 0	1	y 2	
1	2 6.0 30.0 1.9	15 48.0 30.8 15.3	15 46.0 33.3 14.6	32 31.8	
2	1 2.2 10.0 .6	15 51.1 29.5 14.6	14 48.7 30.4 13.4	29 28.7	
3	1 5.9 10.0 .6	5 41.2 9.0 4.5	6 52.9 13.0 5.7	11 10.8	
4	1 10.5 20.0 1.3	6 47.4 11.5 5.7	5 42.1 11.6 5.1	12 12.1	
5		4 66.7 7.7 3.8	2 33.3 4.3 1.9	6 5.7	
6	1 18.2 20.0 1.3	3 36.4 5.1 2.5	3 45.5 7.2 3.2	7 7.0	
7		1 100.0 1.3 .6		1 .6	
8		1 100.0 2.6 1.3		1 1.3	
9	1 33.3 10.0 .6	1 66.7 2.6 1.3		2 1.9	
Column Total	6 6.4	50 49.7	44 43.9	101 100.0	

Number of Missing Observations = 418

Crosstabulation: V201 Total children ever born
 By V013 Age 5-year groups

Controlling for H4\$01 Received POLIO 1-
 Value = 0 No

		Count					
V013->	V201	Row Pct	15-19	20-24	25-29	30-34	Row Total
		Col Pct	1	2	3	4	
		Tot Pct					
	1	1	1				1
		100.0					28.6
		100.0					
		28.6					
	2				1		1
					100.0		14.3
					33.3		
					14.3		
	3				1		1
					100.0		14.3
					33.3		
					14.3		
	4			1	1		1
				50.0	50.0		28.6
				100.0	33.3		
				14.3	14.3		
	5					1	1
						100.0	14.3
						100.0	
						14.3	
Column Total			1	1	2	1	5
			28.6	14.3	42.9	14.3	100.0

Crosstabulation: V201 Total children ever born
 By V013 Age 5-year groups

Controlling for H4\$01 Received POLIO 1
 Value = 1 Yes

		Count							
V013->	V201	Row Pct	15-19	20-24	25-29	30-34	35-39	40-44	Row Total
		Col Pct	1	2	3	4	5	6	
		Tot Pct							
	1		11 34.0 81.0 10.8	17 52.0 36.1 16.6	4 12.0 16.2 3.8	1 2.0 6.3 .6			32 31.8
	2		3 8.9 19.0 2.5	19 64.4 40.3 18.5	5 17.8 21.6 5.1	2 6.7 18.8 1.9	1 2.2 10.0 .6		29 28.7
	3			7 64.7 15.3 7.0	3 23.5 10.8 2.5	1 11.8 12.5 1.3			11 10.8
	4			4 31.6 8.3 3.8	6 47.4 24.3 5.7	1 10.5 12.5 1.3	1 10.5 20.0 1.3		12 12.1
	5				4 66.7 16.2 3.8	1 22.2 12.5 1.3	1 11.1 10.0 .6		6 5.7
	6				3 36.4 10.8 2.5	3 36.4 25.0 2.5	2 27.3 30.0 1.9		7 7.0
	7						1 100.0 10.0 .6		1 .6
	8					1 100.0 12.5 1.5			1 1.3
	9						1 66.7 20.0 1.3	1 33.3 100.0 .6	2 1.9
	Column Total		14 13.4	46 45.9	24 23.6	10 10.2	6 6.4	1 .6	101 100.0

Number of Missing Observations = 418

Crosstabulation: V201 Total children ever born
 By D1 child is alive

Controlling for H4\$01 Received POLIO 1
 Value = 0 No

D1->	Count	Row Pct	Col Pct	Tot Pct	No	Row Total
					.00	
V201	1	1	100.0	28.6	1	28.6
	2	1	100.0	14.3	1	14.3
	3	1	100.0	14.3	1	14.3
	4	1	100.0	28.6	1	28.6
	5	1	100.0	14.3	1	14.3
Column Total	5	100.0			5	100.0

Crosstabulation: V201
 By D1
 Controlling for H4\$01
 Value = 1 Yes

Total children ever born
 child is alive
 Received POLIO 1

D1->	Count	Row Pct		Yes	Row Total
		Col Pct	Tot Pct		
V201	1	32	100.0	.00	32
		31.8	31.8		31.8
	2	29	100.0		29
		28.7	28.7		28.7
	3	11	100.0		11
		10.8	10.8		10.8
	4	12	100.0		12
		12.1	12.1		12.1
	5	6	100.0		6
		5.7	5.7		5.7
	6	7	100.0		7
		7.0	7.0		7.0
	7	1	100.0		1
		.6	.6		.6
	8	1	100.0		1
		1.3	1.3		1.3
	9	2	100.0		2
		1.9	1.9		1.9
Column Total		101	100.0		101
		100.0	100.0		100.0

Number of Missing Observations = 418

Crosstabulation: V201 Total children ever born
 By V106 Highest educational level

Controlling for H5\$01 Received DPT 2
 Value = 0 No

V106→	Count	Highest educational level			Row Total
		No educa- tion	Primary	Secondar- y	
V201	Row Pct Col Pct Tot Pct	0	1	2	
1	1 25.0 50.0 5.3	1 50.0 11.1 5.3	1 25.0 11.1 5.3	1 25.0 12.5 5.3	3 21.1
2			1 25.0 11.1 5.3	2 75.0 37.5 15.8	3 21.1
3			1 50.0 11.1 5.3	1 50.0 12.5 5.3	1 10.5
4			1 50.0 11.1 5.3	1 50.0 12.5 5.3	1 10.5
5			1 50.0 22.2 10.5	1 50.0 25.0 10.5	3 21.1
6			1 100.0 11.1 5.3		1 5.3
8			1 100.0 11.1 5.3		1 5.3
9	1 100.0 50.0 5.3				1 5.3
Column Total		1 10.5	6 47.4	5 42.1	12 100.0

Crosstabulation: V201 Total children ever born
 By V106 Highest educational level
 Controlling for H5\$01 Received DPT 2
 Value = 1 Yes

V106->	V201	Count	No educa	Primary	Secondar	Row Total
		Row Pct	tion	y	y	
		Col Pct	0	1	2	
		Tot Pct				
1	1	1	14	15	31	
		4.2	45.8	50.0	33.1	
		20.0	31.0	37.5		
		1.4	15.2	16.6		
2	1	1	14	12	27	
		2.4	52.4	45.2	29.0	
		10.0	31.0	29.7		
		.7	15.2	13.1		
3	1	1	4	5	10	
		12.5	37.5	50.0	11.0	
		20.0	8.5	12.5		
		1.4	4.1	5.5		
4	2	2	6	5	12	
		15.8	47.4	36.8	13.1	
		30.0	12.7	10.9		
		2.1	6.2	4.8		
5			3	1	4	
			83.3	16.7	4.1	
			7.0	1.6		
			3.4	.7		
6	1	1	2	3	6	
		20.0	30.0	50.0	6.9	
		20.0	4.2	7.8		
		1.4	2.1	3.4		
7			1		1	
			100.0		.7	
			1.4			
8			1		1	
			100.0		.7	
			1.4			
			.7			
9			1		1	
			100.0		1.4	
			2.8			
			1.4			
Column Total	6	46	41	93		
	6.9	49.0	44.1	100.0		

Number of Missing Observations = 418

Crosstabulation: V201
 By V013
 Controlling for H5\$01
 Value = 1 Yes

Total children ever born
 Age 5-year groups
 Received DPT 2

Count		15-19	20-24	25-29	30-34	35-39	40-44	Row Total
Row Pct	Col Pct	1	2	3	4	5	6	
Tot Pct								
V013-> V201	1	11 35.4 81.0 11.7	16 52.1 38.5 17.2	3 10.4 13.9 3.4	1 2.1 7.7 .7			31 33.1
	2	3 9.5 19.0 2.8	16 59.5 38.5 17.2	6 21.4 25.0 6.2	2 7.1 23.1 2.1	1 2.4 11.1 .7		27 29.0
	3		6 56.3 13.8 6.2	3 31.3 13.9 3.4	1 12.5 15.4 1.4			10 11.0
	4		4 31.6 9.2 4.1	6 47.4 25.0 6.2	1 10.5 15.4 1.4	1 10.5 22.2 1.4		12 13.1
	5			3 66.7 11.1 2.8	1 16.7 7.7 .7	1 16.7 11.1 .7		4 4.1
	6			3 40.0 11.1 2.8	2 30.0 23.1 2.1	2 30.0 33.3 2.1		6 6.9
	7					1 100.0 11.1 .7		1 .7
	8				1 100.0 7.7 .7			1 .7
	9					1 50.0 11.1 .7	1 50.0 100.0 .7	1 1.4
Column Total		14 14.5	42 44.8	23 24.8	8 9.0	6 6.2	1 .7	93 100.0

Number of Missing Observations = 418

Crosstabulation: V201
 By V013
 Controlling for H5\$01
 Value = 0 No

Total children ever born
 Age 5-year groups
 Received DPT 2

Count		15-19	20-24	25-29	30-34	35-39	Row Total
Row Pct	Col Pct	1	2	3	4	5	
Tot Pct							
V201							
1		1 50.0 100.0 10.5	1 25.0 12.5 5.3	1 25.0 25.0 5.3			3 21.1
2			3 100.0 50.0 21.1				3 21.1
3			1 100.0 25.0 10.5				1 10.5
4			1 50.0 12.5 5.3	1 50.0 25.0 5.3			1 10.5
5				1 50.0 50.0 10.5	1 50.0 50.0 10.5		3 21.1
6					1 100.0 25.0 5.3		1 5.3
8					1 100.0 25.0 5.3		1 5.3
9						1 100.0 100.0 5.3	1 5.3
Column Total		1 10.5	5 42.1	3 21.1	3 21.1	1 5.3	12 100.0

Crosstabulation: V201 Total children ever born
 By D1 child is alive
 Controlling for H5\$01 Received DPT 2
 Value = 1 Yes

D1->	Count	Yes		Row Total
		Row Pct	Col Pct	
V201			1.00	
1	31	100.0	33.1	31
2	27	100.0	29.0	27
3	10	100.0	11.0	10
4	12	100.0	13.1	12
5	4	100.0	4.1	4
6	6	100.0	6.9	6
7	1	100.0	.7	1
8	1	100.0	.7	1
9	1	100.0	1.4	1
Column	93		93	
Total	100.0		100.0	

Number of Missing Observations = 418

Crosstabulation: V201 Total children ever born
 By D1 child is alive
 Controlling for H5\$01 Received DPT 2
 Value = 0 No

D1→	Count Row Pct Col Pct Tot Pct	No .00	Row Total
V201			
1	3 100.0 21.1 21.1	3	3 21.1
2	3 100.0 21.1 21.1	3	3 21.1
3	1 100.0 10.5 10.5	1	1 10.5
4	1 100.0 10.5 10.5	1	1 10.5
5	3 100.0 21.1 21.1	3	3 21.1
6	1 100.0 5.3 5.3	1	1 5.3
8	1 100.0 5.3 5.3	1	1 5.3
9	1 100.0 5.3 5.3	1	1 5.3
Column Total		12 100.0	12 100.0

Crosstabulation: V201 Total children ever born
 By V106 Highest educational level

Controlling for H6\$01 Received POLIO 2
 Value = 0 No

V106->	V201	Count	No educa	Primary	Secondar	Row Total
		Row Pct	tion	1	y	
		Col Pct	0	1	2	
		Tot Pct				
	1	1	1			2
		33.3	66.7			17.6
		33.3	20.0			
		5.9	11.8			
	2		1	1		2
			33.3	66.7		17.6
			10.0	50.0		
			5.9	11.8		
	3		1			1
			100.0			5.9
			10.0			
			5.9			
	4	1	1	1		3
		25.0	50.0	25.0		23.5
		33.3	20.0	25.0		
		5.9	11.8	5.9		
	5		1	1		2
			66.7	33.3		17.6
			20.0	25.0		
			11.8	5.9		
	6		1			1
			100.0			5.9
			10.0			
			5.9			
	8		1			1
			100.0			5.9
			10.0			
			5.9			
	9	1				1
		100.0				5.9
		33.3				
		5.9				
Column Total			2	6	3	11
			17.6	58.8	23.5	100.0

Crosstabulation: V201 Total children ever born
 By V106 Highest educational level
 Controlling for H6\$01 Received POLIO 2
 Value = 1 Yes

V106→	V201	Count	No educa-	Primary	Secondar-	Row Total
		Row Pct	tion	y	y	
		Col Pct	0	1	2	
		Tot Pct				
	1	1	13	16	30	
		4.3	42.6	53.2	32.4	
		22.2	29.4	36.8		
		1.4	13.8	17.2		
	2	1	14	13	28	
		2.3	51.2	46.5	29.7	
		11.1	32.4	29.4		
		.7	15.2	13.8		
	3	1	4	6	11	
		11.8	35.3	52.9	11.7	
		22.2	8.8	13.2		
		1.4	4.1	6.2		
	4	1	5	5	11	
		11.8	47.1	41.2	11.7	
		22.2	11.8	10.3		
		1.4	5.5	4.8		
	5		3	1	5	
			71.4	28.6	4.8	
			7.4	2.9		
			3.4	1.4		
	6	1	2	3	6	
		20.0	30.0	50.0	6.9	
		22.2	4.4	7.4		
		1.4	2.1	3.4		
	7		1		1	
			100.0		.7	
			1.5			
	8		1		1	
			100.0		.7	
			1.5			
			.7			
	9		1		1	
			100.0		1.4	
			2.9			
			1.4			
Column Total		6	44	44	93	
		6.2	46.9	46.9	100.0	

Number of Missing Observations = 420

Crosstabulation: V201
 By V013
 Controlling for H6\$01
 Value = 0 No

Total children ever born
 Age 5-year groups
 Received POLIO 2

Count		15-19	20-24	25-29	30-34	35-39	Row Total
Row Pct	Col Pct						
Tot Pct		1	2	3	4	5	
V013->	V201						
1	1	1		1			2
		66.7		33.3			17.6
		100.0		20.0			
		11.8		5.9			
2			1	1			2
			66.7	33.3			17.6
			40.0	20.0			
			11.8	5.9			
3			1				1
			100.0				5.9
			20.0				
			5.9				
4			1	1			3
			50.0	50.0			23.5
			40.0	40.0			
			11.8	11.8			
5				1	1		2
				33.3	66.7		17.6
				20.0	50.0		
				5.9	11.8		
6					1		1
					100.0		5.9
					25.0		
					5.9		
8					1		1
					100.0		5.9
					25.0		
					5.9		
9						1	1
						100.0	5.9
						100.0	
						5.9	
Column Total		1	3	3	3	1	11
		11.8	29.4	29.4	23.5	5.9	100.0

Crosstabulation: V201 Total children ever born By V013 Age 5-year groups
 Controlling for H6\$01 Received POLIO 2 Value = 1 Yes

V013->	V201	Count						Row Total
		15-19	20-24	25-29	30-34	35-39	40-44	
Row Pct	Co1 Pct							
Tot Pct		1	2	3	4	5	6	
1	1	10	16	3	1			30
		34.0	53.2	10.6	2.1			32.4
		80.0	37.3	14.3	7.7			
		11.0	17.2	3.4	.7			
2	2	3	17	5	2	1		28
		9.3	62.8	18.6	7.0	2.3		29.7
		20.0	40.3	22.9	23.1	11.1		
		2.8	18.6	5.5	2.1	.7		
3	3		6	3	1			11
			58.8	29.4	11.8			11.7
			14.9	14.3	15.4			
			6.9	3.4	1.4			
4	4		3	5	1	1		11
			29.4	47.1	11.8	11.8		11.7
			7.5	22.9	15.4	22.2		
			3.4	5.5	1.4	1.4		
5	5			3	1	1		5
				71.4	14.3	14.3		4.8
				14.3	7.7	11.1		
				3.4	.7	.7		
6	6			3	2	2		6
				40.0	30.0	30.0		6.9
				11.4	23.1	33.3		
				2.8	2.1	2.1		
7	7					1		1
						100.0		.7
						11.1		
						.7		
8	8				1			1
					100.0			.7
					7.7			
					.7			
9	9					1	1	1
						50.0	50.0	1.4
						11.1	100.0	
						.7	.7	
Column Total		13	43	23	8	6	1	93
		13.8	46.2	24.1	9.0	6.2	.7	100.0

Number of Missing Observations = 420

Crosstabulation: V201.
By D1

Total children ever born
child is alive

Controlling for H6\$01
Value = 0 No

Received POLIO 2

D1→	Count	No	Row Total
	Row Pct	.00	
V201	Col Pct		
	Tot Pct		
1	2	2	2
	100.0	17.6	17.6
	17.6		
	17.6		
2	2	2	2
	100.0	17.6	17.6
	17.6		
	17.6		
3	1	1	1
	100.0	5.9	5.9
	5.9		
	5.9		
4	3	3	3
	100.0	23.5	23.5
	23.5		
	23.5		
5	2	2	2
	100.0	17.6	17.6
	17.6		
	17.6		
6	1	1	1
	100.0	5.9	5.9
	5.9		
	5.9		
8	1	1	1
	100.0	5.9	5.9
	5.9		
	5.9		
9	1	1	1
	100.0	5.9	5.9
	5.9		
	5.9		
Column Total	11	11	11
	100.0	100.0	100.0

Crosstabulation: V201 Total children ever born
 By D1 child is alive
 Controlling for H7\$01 Received DPT 3
 Value = 1 Yes

D1->	V201	Count		
		Row Pct	Yes	Row
		Co1 Pct	.00	Total
		Tot Pct		
	1	28		28
		100.0		34.1
		34.1		
		34.1		
	2	23		23
		100.0		27.8
		27.8		
		27.8		
	3	8		8
		100.0		10.3
		10.3		
		10.3		
	4	10		10
		100.0		12.7
		12.7		
		12.7		
	5	4		4
		100.0		4.8
		4.8		
		4.8		
	6	6		6
		100.0		7.1
		7.1		
		7.1		
	7	1		1
		100.0		.8
		.8		
		.8		
	8	1		1
		100.0		.8
		.8		
		.8		
	9	1		1
		100.0		1.6
		1.6		
		1.6		
	Column	81		81
	Total	100.0		100.0

Number of Missing Observations = 418

Crosstabulation: V201 Total children ever born
 By V106 Highest educational level
 Controlling for H7\$01 Received DPT 3
 Value = 1 Yes

V106->	V201	Count	No educa	Primary	Secondar	Row Total
		Row Pct	tion	y	y	
		Col Pct	0	1	2	
		Tot Pct				
1	1	1	12	15	28	
		2.3	44.2	53.5	34.1	
		14.3	30.6	40.4		
		.8	15.1	18.3		
2	1	1	12	10	23	
		2.9	51.4	45.7	27.8	
		14.3	29.0	28.1		
		.8	14.3	12.7		
3	1	1	3	5	8	
		7.7	38.5	53.8	10.3	
		14.3	8.1	12.3		
		.8	4.0	5.6		
4	2	2	5	3	10	
		18.8	50.0	31.2	12.7	
		42.9	12.9	8.8		
		2.4	6.3	4.0		
5			3	1	4	
			83.3	16.7	4.8	
			8.1	1.8		
			4.0	.8		
6	1	1	2	3	6	
		11.1	33.3	55.6	7.1	
		14.3	4.8	8.8		
		.8	2.4	4.0		
7			1		1	
			100.0		.8	
			1.6			
8			1		1	
			100.0		.8	
			1.6			
			.8			
9			1		1	
			100.0		1.6	
			3.2			
			1.6			
Column Total	5	40	37	81		
	5.6	49.2	45.2	100.0		

Number of Missing Observations = 418

Crosstabulation: V201 Total children ever born
 By V013 Age 5-year groups
 Controlling for H7\$01 Received DPT 3
 Value = 0 No

		Count					
V013->	Row Pct	15-19	20-24	25-29	30-34	35-39	Row
	Col Pct	1	2	3	4	5	Total
	Tot Pct						
V201							
1	3	3	1			6	
	44.4	44.4	11.1			23.7	
	66.7	26.7	10.0				
	10.5	10.5	2.6				
2	1	4	2			7	
	18.2	54.5	27.3			28.9	
	33.3	40.0	30.0				
	5.3	15.8	7.9				
3		2	1	1		3	
		60.0	20.0	20.0		13.2	
		20.0	10.0	20.0			
		7.9	2.6	2.6			
4		1	2			3	
		40.0	60.0			13.2	
		13.3	30.0				
		5.3	7.9				
5			1	1		3	
			50.0	50.0		10.5	
			20.0	40.0			
			5.3	5.3			
6				1	1	1	
				50.0	50.0	5.3	
				20.0	50.0		
				2.6	2.6		
8				1		1	
				100.0		2.6	
				20.0			
				2.6			
9					1	1	
					100.0	2.6	
					50.0		
					2.6		
Column Total		4	10	6	3	1	24
		15.8	39.5	26.3	13.2	5.3	100.0

Crosstabulation: V201
 By V013
 Controlling for H7\$01
 Value = 1 Yes

Total children ever born
 Age 5-year groups
 Received DPT 3

		Count							
V013->	V201	Row Pct	15-19	20-24	25-29	30-34	35-39	40-44	Row
		Col Pct	1	2	3	4	5	6	Total
		Tot Pct	1	2	3	4	5	6	Total
1	1	10	14	3	1				28
		34.9	51.2	11.6	2.3				34.1
		88.2	37.9	16.7	8.3				
		11.9	17.5	4.0	.8				
2	2	1	15	4	2	1			23
		5.7	65.7	17.1	8.6	2.9			27.8
		11.8	39.7	20.0	25.0	12.5			
		1.6	18.3	4.8	2.4	.8			
3	3		5	3	1				8
			61.5	30.8	7.7				10.3
			13.8	13.3	8.3				
			6.3	3.2	.8				
4	4		3	5	1	1			10
			31.3	43.8	12.5	12.5			12.7
			8.6	23.3	16.7	25.0			
			4.0	5.6	1.6	1.6			
5	5			3	1	1			4
				66.7	16.7	16.7			4.8
				13.3	8.3	12.5			
				3.2	.8	.8			
6	6			3	2	1			6
				44.4	33.3	22.2			7.1
				13.3	25.0	25.0			
				3.2	2.4	1.6			
7	7					1			1
						100.0			.8
						12.5			
						.8			
8	8				1				1
					100.0				.8
					8.3				
					.8				
9	9					1	1		1
						50.0	50.0		1.6
						12.5	100.0		
						.8	.8		
Column Total		11	37	19	8	5	1		81
		13.5	46.0	23.8	9.5	6.3	.8		100.0

Number of Missing Observations = 418

Crosstabulation: V201
By D1

Total children ever born
child is alive

Controlling for H7\$01
Value = 0 No

Received DPT 3

D1->	Count	Row Pct	Col Pct	Tot Pct	No	Row Total
V201					.00	
1	6	100.0	23.7	23.7	6	6
2	7	100.0	28.9	28.9	7	7
3	3	100.0	13.2	13.2	3	3
4	3	100.0	13.2	13.2	3	3
5	3	100.0	10.5	10.5	3	3
6	1	100.0	5.3	5.3	1	1
8	1	100.0	2.6	2.6	1	1
9	1	100.0	2.6	2.6	1	1
Column Total	24	100.0			24	24
					100.0	100.0

Crosstabulation: V201 Total children ever born
 By V106 Highest educational level

Controlling for H8\$01 Received POLIO 3
 Value = 0 No

V106->	V201	Count	No educa	Primary	Secondar	Row Total
		Row Pct	tion	y	y	
		Col Pct	0	1	2	
		Tot Pct				
	1	1	1	1	1	3
		25.0	50.0	25.0	16.7	
		25.0	16.7	12.5		
		4.2	8.3	4.2		
	2		2	2		4
			50.0	50.0	25.0	
			25.0	37.5		
			12.5	12.5		
	3	1	1	1		2
		33.3	33.3	33.3	12.5	
		25.0	8.3	12.5		
		4.2	4.2	4.2		
	4		1	1		2
			66.7	33.3	12.5	
			16.7	12.5		
			8.3	4.2		
	5		1	1		3
			50.0	50.0	16.7	
			16.7	25.0		
			8.3	8.3		
	6	1	1			1
		50.0	50.0		8.3	
		25.0	8.3			
		4.2	4.2			
	8		1			1
			100.0		4.2	
			8.3			
			4.2			
	9	1				1
		100.0			4.2	
		25.0				
		4.2				
Column Total			3	8	5	15
			16.7	50.0	33.3	100.0

Crosstabulation: V201 Total children ever born
 By V106 Highest educational level
 Controlling for H8\$01 Received POLIO 3
 Value = 1 Yes

V106->	V201	Count	No educa	Primary	Secondar	Row Total
		Row Pct	tion	y	y	
		Col Pct	0	1	2	
		Tot Pct				
1	1	1	13	15	30	
		4.3	43.5	52.2	33.3	
		25.0	30.3	37.5		
		1.4	14.5	17.4		
2	1	1	13	12	26	
		2.5	50.0	47.5	29.0	
		12.5	30.3	29.7		
		.7	14.5	13.8		
3	1	1	4	5	10	
		6.7	40.0	53.3	10.9	
		12.5	9.1	12.5		
		.7	4.3	5.8		
4	2	2	5	5	12	
		16.7	44.4	38.9	13.0	
		37.5	12.1	10.9		
		2.2	5.8	5.1		
5			3	1	4	
			83.3	16.7	4.3	
			7.6	1.6		
			3.6	.7		
6	1	1	2	3	6	
		11.1	33.3	55.6	6.5	
		12.5	4.5	7.8		
		.7	2.2	3.6		
7			1		1	
			100.0		.7	
			1.5			
			.7			
8			1		1	
			100.0		.7	
			1.5			
			.7			
9			1		1	
			100.0		1.4	
			3.0			
			1.4			
Column Total	5	43	41	89		
	5.8	47.8	46.4	100.0		

Number of Missing Observations = 420

Crosstabulation: V201
 By V013
 Controlling for H8\$01
 Value = 0 No

Total children ever born
 Age 5-year groups
 Received POLIO 3

V013->	V201	Count	15-19	20-24	25-29	30-34	35-39	Row Total
		Row Pct	Col Pct	Tot Pct	1	2	3	
	1	2	75.0		25.0			3
	2	1	16.7	50.0	33.3			4
	3	1		66.7	33.3			2
	4	1		33.3	66.7			2
	5	1			50.0	50.0		3
	6	1				50.0	50.0	1
	7	1				100.0		1
	8	1					100.0	1
Column Total			3	4	5	3	1	15
			16.7	25.0	33.3	16.7	8.3	100.0

Crosstabulation: V201 Total children ever born
 By D1 child is alive
 Controlling for H8\$01 Received POLIO 3
 Value = 0 No

D1->	Count	No	Row
	Row Pct	.00	Total
	Col Pct		
V201	Tot Pct		
1	3	3	16.7
	100.0		
	16.7		
	16.7		
2	4	4	25.0
	100.0		
	25.0		
	25.0		
3	2	2	12.5
	100.0		
	12.5		
	12.5		
4	2	2	12.5
	100.0		
	12.5		
	12.5		
5	3	3	16.7
	100.0		
	16.7		
	16.7		
6	1	1	8.3
	100.0		
	8.3		
	8.3		
8	1	1	4.2
	100.0		
	4.2		
	4.2		
9	1	1	4.2
	100.0		
	4.2		
	4.2		
Column Total	15	15	100.0
	100.0		

Crosstabulation: V201 Total children ever born
 By D1 child is alive
 Controlling for H8\$01 Received POLIO 3
 Value = 1 Yes

D1->	Count	Row Pct	Col Pct	Tot Pct	Row Total
V201			.00		
1	30	100.0		33.3	33.3
		33.3			
		33.3			
2	26	100.0		29.0	29.0
		29.0			
		29.0			
3	10	100.0		10.9	10.9
		10.9			
		10.9			
4	12	100.0		13.0	13.0
		13.0			
		13.0			
5	4	100.0		4.3	4.3
		4.3			
		4.3			
6	6	100.0		6.5	6.5
		6.5			
		6.5			
7	1	100.0		.7	.7
		.7			
		.7			
8	1	100.0		.7	.7
		.7			
		.7			
9	1	100.0		1.4	1.4
		1.4			
		1.4			
Column Total	89	100.0		89	100.0

Number of Missing Observations = 420

Crosstabulation: V201 Total children ever born
 By V106 Highest educational level
 Controlling for H9\$01 Received MEASLES
 Value = 0 No

Count		No educa	Primary	Secondar	Row Total
Row Pct	Co1 Pct	tion	y		
Tot Pct		0	1	2	
V201					
1		2	3	3	8
		23.1	38.5	38.5	20.0
		80.0	14.7	19.2	
		4.6	7.7	7.7	
2			8	6	15
			56.5	43.5	35.4
			38.2	38.5	
			20.0	15.4	
3		1	2	2	5
		14.3	42.9	42.9	10.8
		20.0	8.8	11.5	
		1.5	4.6	4.6	
4			3	3	6
			55.6	44.4	13.8
			14.7	15.4	
			7.7	6.2	
5			1	1	3
			50.0	50.0	6.2
			5.9	7.7	
			3.1	3.1	
6			1	1	3
			50.0	50.0	6.2
			5.9	7.7	
			3.1	3.1	
7			1		1
			100.0		1.5
			2.9		
			1.5		
8			1		1
			100.0		3.1
			5.9		
			3.1		
9		1	1		1
		50.0	50.0		3.1
		20.0	2.9		
		1.5	1.5		
Column Total		3 7.7	22 52.3	17 40.0	42 100.0

Crosstabulation: V201 Total children ever born
 By V106 Highest educational level

Controlling for H9\$01 Received MEASLES
 Value = 1 Yes

V106->	Count	V201			Row Total
		No educa- tion	Primary	Secondar- y	
	Row Pct	0	1	2	
	Col Pct				
	Tot Pct				
1			10	13	23
			44.4	55.6	37.5
			37.2	43.5	
			16.7	20.8	
2		1	6	8	15
		4.3	43.5	52.2	24.0
		14.3	23.3	26.1	
		1.0	10.4	12.5	
3		1	3	4	7
		9.1	36.4	54.5	11.5
		14.3	9.3	13.0	
		1.0	4.2	6.3	
4		2	3	3	8
		25.0	41.7	33.3	12.5
		42.9	11.6	8.7	
		3.1	5.2	4.2	
5			3	1	4
			83.3	16.7	6.3
			11.6	2.2	
			5.2	1.0	
6		1	1	2	5
		28.6	28.6	42.9	7.3
		28.6	4.7	6.5	
		2.1	2.1	3.1	
9			1		1
			100.0		1.0
			2.3		
			1.0		
Column Total		5	28	30	62
		7.3	44.8	47.9	100.0

Number of Missing Observations = 420

Crosstabulation: V201 Total children ever born
 By V013 Age 5-year groups
 Controlling for H9\$01 Received MEASLES
 Value = 1 Yes

		Count								
V013->	V201	Row Pct	15-19	20-24	25-29	30-34	35-39	40-44	Row Total	
		Col Pct	1	2	3	4	5	6		
		Tot Pct							Total	
1	1	8	12	3	1				23	
		33.3	50.0	13.9	2.8				37.5	
		92.3	40.9	23.8	8.3					
		12.5	18.8	5.2	1.0					
2	2	1	10	2	2	1			15	
		4.3	65.2	13.0	13.0	4.3			24.0	
		7.7	34.1	14.3	25.0	20.0				
		1.0	15.6	3.1	3.1	1.0				
3	3		5	2	1				7	
			63.6	27.3	9.1				11.5	
			15.9	14.3	8.3					
			7.3	3.1	1.0					
4	4		3	4	1				8	
			33.3	50.0	16.7				12.5	
			9.1	28.8	16.7					
			4.2	6.3	2.1					
5	5			2	1	1			4	
				50.0	33.3	16.7			6.3	
				14.3	16.7	20.0				
				3.1	2.1	1.0				
6	6			1	2	2			5	
				14.3	42.9	42.9			7.3	
				4.8	25.0	60.0				
				1.0	3.1	3.1				
9	9							1	1	
								100.0	1.0	
								100.0		
								1.0		
Column Total		8	28	14	8	3	1		62	
		13.5	45.8	21.9	12.5	5.2	1.0		100.0	

Number of Missing Observations = 420

Crosstabulation: V201 Total children ever born
 By V013 Age 5-year groups
 Controlling for H9\$01 Received MEASLES
 Value = 0 No

V013->	V201	Count	Age 5-year groups					Row Total	
		Row Pct	15-19	20-24	25-29	30-34	35-39		
		Col Pct	1	2	3	4	5		
		Tot Pct							
1	1	3	38.5	53.8	7.7			8	20.0
		62.5	25.0	5.3					
		7.7	10.8	1.5					
2	2	2	13.0	60.9	26.1			15	35.4
		37.5	50.0	31.6					
		4.6	21.5	9.2					
3	3			3	1	1		5	10.8
				57.1	28.6	14.3			
				14.3	10.5	20.0			
				6.2	3.1	1.5			
4	4			2	3		1	6	13.8
				33.3	44.4		22.2		
				10.7	21.1		40.0		
				4.6	6.2		3.1		
5	5				2	1		3	6.2
					75.0	25.0			
					15.8	20.0			
					4.6	1.5			
6	6				2	1		3	6.2
					75.0	25.0			
					15.8	20.0			
					4.6	1.5			
7	7						1	1	1.5
							100.0		
							20.0		
							1.5		
8	8					1		1	3.1
						100.0			
						40.0			
						3.1			
9	9						1	1	3.1
							100.0		
							40.0		
							3.1		
Column Total		5	18	12	3	3	42	100.0	
		12.3	43.1	29.2	7.7	7.7			

Crosstabulation: V201 Total children ever born
 By D1 child is alive
 Controlling for H9\$01 Received MEASLES
 Value = 0 No

D1->	Count	Row Pct	Col Pct	Tot Pct	Row Total
V201	8	100.0	.00	20.0	8
	15	100.0	35.4	35.4	15
	5	100.0	10.8	10.8	5
	6	100.0	13.8	13.8	6
	3	100.0	6.2	6.2	3
	3	100.0	6.2	6.2	3
	1	100.0	1.5	1.5	1
	1	100.0	3.1	3.1	1
	1	100.0	3.1	3.1	1
Column Total	42	100.0		42	42
				100.0	100.0

Crosstabulation: V201 Total children ever born
 By D1 child is alive

Controlling for H9\$01 Received MEASLES
 Value = 1 Yes

D1->	Count	Row Pct	Col Pct	Tot Pct	Row Total
V201	1	23	100.0	37.5	37.5
	2	15	100.0	24.0	24.0
	3	7	100.0	11.5	11.5
	4	8	100.0	12.5	12.5
	5	4	100.0	6.2	6.2
	6	5	100.0	7.3	7.3
	9	1	100.0	1.0	1.0
Column Total	62	100.0	100.0	100.0	62

Number of Missing Observations = 420

Crosstabulation:
groups

V201

Total children ever born

By V013

Age 5-year

V013->	Count Row Pct Col Pct Tot Pct	15-19	20-24	25-29	30-34	35-39	40-44	45-49	Row Total
		1	2	3	4	5	6	7	
0		85 56.7 75.0 16.2	41 27.0 29.3 7.7	14 9.4 13.6 2.7	5 3.4 6.9 1.0	3 1.7 5.5 .5	1 .9 4.1 .2	1 .9 9.1 .2	150 28.7
1		21 23.4 18.8 4.1	44 48.2 31.6 8.4	19 21.3 18.5 3.7	3 3.5 4.3 .6	1 1.4 2.7 .2	2 2.1 6.1 .4		91 17.3
2		7 8.1 6.3 1.4	33 37.5 23.7 6.3	28 31.6 26.5 5.3	14 16.2 19.0 2.7	4 4.4 8.2 .7	2 2.2 6.1 .4		88 16.7
3			15 25.8 11.2 3.0	15 25.8 14.8 3.0	15 24.7 19.8 2.8	7 11.8 15.1 1.4	4 6.5 12.2 .7	3 5.4 22.7 .6	60 11.4
4			5 9.4 3.7 1.0	19 34.1 17.9 3.6	14 25.9 19.0 2.7	7 12.9 15.1 1.4	6 10.6 18.4 1.1	4 7.1 27.3 .7	55 10.5
5				6 23.3 6.2 1.2	8 27.9 10.3 1.5	8 30.2 17.8 1.6	5 16.3 14.3 .9	1 2.3 4.5 .1	28 5.3
6			1 2.8 .5 .1	3 11.1 2.5 .5	9 38.9 12.1 1.7	6 25.0 12.3 1.1	4 16.7 12.2 .7	1 5.6 9.1 .2	23 4.4
7					3 27.8 4.3 .6	5 38.9 9.6 .9	4 33.3 12.2 .7		12 2.2
8					3 30.8 3.4 .5	2 23.1 4.1 .4	2 23.1 6.1 .4	2 23.1 13.6 .4	8 1.6
9					1 8.3 .9 .1	3 41.7 6.8 .6	3 33.3 8.2 .5	1 16.7 9.1 .2	8 1.5
10						1 66.7 2.7 .2		1 33.3 4.5 .1	2 .4
Column Total		113 21.6	139 26.4	104 19.9	75 14.3	47 9.0	32 6.0	14 2.7	524 100.0

Number of Missing Observations = 0