ANGOLA

Multiple Indicator Cluster Survey

1996

PREFACE

We present the Final Report of the Multiple Indicators Survey, more commonly known as MICS "Multiple Indicator Cluster Survey". The survey MICS, carried out by the National Statistics Office (INE), with technical and financial support from the United Nations Children's Fund (UNICEF) provides new data which will serve to establish a representative information base on health, nutrition, water, hygiene and sanitation, education, and demography, amongst others. The report presented here contains the main results of the survey with detailed analysis of the themes discussed.

In the first place we intend these statistics to enable us to up-date the statistical base line on the conditions of the Angolan population. In the future it will be used by the many sectors already mentioned in the regular tasks of planning, programming, monitoring and evaluation. This survey is the first operation and most extensive of its kind to collect and up-date data to be carried out in the country as a whole since Independence, and as such we believe that it will fulfil this objective. Secondly, the results presented here can be used as a point of departure for more detailed studies, which could contribute to a better understanding of the causes which determine the living conditions of the population, and for the better definition of programmes and policies which favour the child, other vulnerable groups and the most disadvantaged. To further these objectives, INE will be able to make the database available to interested parties in order to facilitate more specific research.

The survey was the result of the collaboration of many national and international organisations. In particular, in its preparation and implementation of the fieldwork it involved the two most influential parties in the Angolan peace process, the Government and Unita.

The experience of MICS presented an excellent opportunity to improve and strengthen the institutional capacities of INE and of its individual cadres, as well as of the other organisations, in the areas of questionnaire design, supervision and management of fieldwork, training, sampling, analysis, and report design. These areas constitute priorities for INE.

All the lessons learnt during the implementation of MICS will be taken into consideration by the Office for Monitoring the Population's Living Conditions (GMCVP). This office was in charge of MICS as a whole and it has gained in expertise. In future initiatives we expect to see progressively more improvement.

INE and UNICEF would like to thank all the organisations and their professional staff, at national and provincial level, (see participation list) for the time and resources spent. Without them, we can say that the Survey would not have been a success; and to all of them including the donors (list of participants), especially the United Kingdom Government, a very heartfelt thank-you.

Dr. Mário Adauta de Sousa
Director
National Statistics Office

Dr. Christian Voumard
Representative in Angola
United Nations Children's Fund

Luanda, April, 1998

LIST OF PARTICIPANTS IN THE FORMULATION AND REALIZATION OF THE SURVEY

INSTITUTION RESPONSIBLE FOR THE SURVEY AND ANALYSIS

National Statistics Office (INE) - Living Conditions Monitoring Office (GMCVP)

TECHNICAL AND LOGISTIC SUPPORT

United Nations Children's Fund - UNICEF

FINANCIAL SUPPORT

Department for International Development - British Government
Finnish Government
Swedish Government
National Committee of UNICEF of Portugal
National Committee of UNICEF of Spain

TECHNICAL AND NATIONAL COORDINATION TEAM

Angelina Ribas (INE - GMCVP): National Co-ordinator
Patrick Ward (UNICEF)
Júlia Grave (INE - GMCVP)
Mário Adauta de Sousa (Director of INE)
Jonathan Lewis (UNICEF)
Roland Svensson (UNICEF)

SAMPLING TEAM

Ana Paula Jordão (INE)
Gilberto Ribeiro (INE - GMCVP)
Patrick Ward (UNICEF)

TECHNICAL SUPPORT COMMITTEE (TSC)

Sophie Perriquet (FNUAP)
Paulo Campanário (FNUAP)
Maria Gabriela Guerra (WHO)
Clarice Caputo (C.C. - UNITA)
M´Bala Zananga (Ministry of Education)
Fátima Rita (CAOL)

ANALYSIS AND REPORT DESIGN

Camilo Ceita (Coordenador)
Júlia Grave
Gilberto Ribeiro
N´Dola Prata

EDITOR

Gabriela Antunes

COMPUTER TEAM

Zatando M´Bike (Coordinator)

- Supervisors -

Gaspar Neto
N' kosi Kikavuanga

- Computer Operators-

Inês Miranda Boniface
Elizabete Fortunato
Adriana Rosa
Isabel Rosa Andrade
Maria de Lurdes Gaspar Lucas
Euridce Fernandes
Eva Lemos
Tomás António Neto
Joana António Neto
Joana Faria
Esperança Costa
Joana Pereira
Catarina Miranda Boniface
Maria Otília do Nascimento

PROVINCIAL COORDINATORS

António Silvestre Chidioco
António Susana Agostinho
Pio José Altino Lucas
Alberto Brito
Joaquim Miguel Ambrósio
Marques José Gomes
Alberta Gomes
Anatilde Mariana

SUPERVISORS

João Diakondua
Araújo Cristóvão Domingos
Maria da Conceição Pimentel
Justino Dumbi
Joaquim Q. Manuel
Fernando E. Sozinho
Ilda Cassema Menezes
José Lino
Isabel Ngola Lopes
Lote Zeca Moutinho

REVISORS
Agostinho Susana Seke
José Augusto Amaro
António Magalhães
Santinho Filipe Figueira
Ana Maria A. da Silva

Lote Moutinho
Madalena Monteiro
Dolores Fonseca
João Rodrigues
Sobral Catrapilar
Paulo Lucas
Fernando Cefa Dias

INTERVIEWERS
Sidória Panzo
Ana Regina

Suzana Moura
Sidória António
Madalena Nhongo
Nazaré Pedro
Ana do Carmo
Paulina Eduardo
Agostinho Seke
Emília
Justino Francisco
Aleluia Kialanda
Miguel Nenganga

António Agostinho
João Diakondua
Agostinho Seke
Paulo Samuel
Rosa António
Júlia Mandes de Carvalho
Inês Konduka
Carlota Mateus
Araújo Domingos
Luisa Tomás
Júlio A Tuyango

Manuel Morais
Délia Manuel
Samuel Pedro
Morena Pedro
Anatilade Mariana
António Agostinho
Ana Lima
Alexandre Sebastião
Dolores Fonseca
Alcina Caputo
Santa Mendes
Benedita Quitumbo
Inácio Zacarias
Silvestre Zangui
Bosco Afonso
Abílio Hando
Suzana Gonçalves
Maria Mateus
Adraão Raimundo
João Ribeiro
Maria José
Luisa Gonçalves
Maria Neto
Marcelina Fuche
Helena Camilo
Esperança Jamba
Elisa Quiduna
Luzia Marcolino
Ana Gomes
Augusto Lourenço
Francisco de Jesua
Antónia Kinglês
Domingos Caianda
Mário Nhanga
Carlos Luís
Domingas Francisco
Ilunga André
Mário Nelson
Fátima Cadiata
Zeferino Miudo
Gabriel Curita
Nelson Henriques
Evaristo Luquino
António Manengo
Guilherme Chicolassonhge
Ernesto Dias
Paulino Cachimina
Horácio Jéu
Altino António
Fernanda Chinene
Maria Martins
Bela Martins
Rosa Caquarta
Rosália Capamba
Emília Ferreira
Maria Braga
Judith Numa
Beatriz Wandaqueia
Elvira Celestino
Beatriz Chimbenje
Augusta Maurício
Josefa Migi
Teresinha Chihela
Alice Jóia
Maria da Conceição

Margarida Martins
Feliciana Calista
Carla Cji Dena
Paula Marinda
Victor Pedro
Augusto Dala
Margarida Bumba
Amélia Gambo
Eva Nhama
Teresa Mateus
Custódio Vieira
Amélia Filipe
Maria Domingos
Adão Fuato Jorge Lupoco
Joaquim Tchipalanga
Odeth Luís
Helena Valentina
João Malheiro
Vitorina Pina
João Malheiro
Maria Domingos
Joaquim Tcipalanga
Bernardo Bunga
Conceição Pandema
Odeth Luís
Adão Fuato
Aida de Deus
Muteça Mbutu
Inês dos Santos
Marcelino Hipuculo
Hilário Ndeudalela
Tadeu Hilukila
Balbina Alberto
Altino António
Madalena Cita Monteiro
Ana Maria da Silva

NUTRITIONISTS

Luís Santos
Maria Nunes
Maria Kutxi
Rodrigues Joana
Marta Alberto
Sara José
Conceição Custódio
Amélia Panzo
Rita Domingos
Adriano Domingos
António Mucage
Suzana João
Maria Decambeko
Feliciana de Almeida
Francisca Tchulo
Julião Muquenza
Maria Tussamba
Maria Miguel
José Canganjo
Adélia Cainda
Miséria Carlos
Bernarda Mafuca
Filomena Cândida
João Oliveira
Delfina Catuva
Ismael Catumbela
Helena Adelaide

Vitoriana Pina
Helena Valentina
Victor Adolfo
Maria Salomé
Mateus Muhongo

UNITED NATIONS ORGANISATIONS

World Food Programme
United Nations Verification Mission in Angola, Third Contingent
United Nations Population Fund
United Nations High Commission for Refugees

NON-GOVERNMENTAL ORGANISATIONS

Lutheran World Federation
German Agriculture Action
Catholic Relief Service
CARE International
Oxfam
International Committee of the Red Cross
Angolan Red Cross
Norwegian Council for Refugees
Save the Children-USA
Doctors Without Borders-Belgium
Doctors Without Borders -Holland
Angolan Action for Development
Goal
Save the Children-Great Britain
Association for International and Cultural Co-operation
Christian Children's Fund
Molisv
Africare
Fund for Co-operation and Development (FOS-Belgium)
World Vision
Danish Refugee Council
Food for the Hungry
Joint Commission

_____//_____

The photographs in this report were kindly presented by Roland Svensson and by UNICEF ANGOLA.
PAM produced the maps used in the report

Table of Main Indicators of Mics by Area of Residence 1998*

Indicators	Urban	Rural	Total
Infant/Juvenile Mortality (per thousand)	271	276	274
Infant Mortality Rate (per thousand)	---	---	166
Life Expectancy at Birth (in years)	---	---	42.4
Total Fertility Rate (Children by Mother)	6.8	7.0	6.9
Rate of Dependency	0.68	0.78	0.74
% of the Population with Access to Safe Drinking Water	46.4	22.2	31.2
% of Population with Access to Adequate Sanitation	61.5	26.6	39.6
% of Population (5-18) With No Schooling	25.3	40.6	34.0
Rate of Entry to 1st Level at 6 years of Age	40.0	25.1	30.5
Net Rate of Schooling (1st and 2nd Level)	63.7	39.6	49.7
Gross Rate of Schooling (1st and 2nd Level)	109.5	75.0	89.4
Retention Rate Until 5th Grade	39.7	18.2	30.2
Retention Rate Until 7th Grade	21.4	4.9	15.2
Global Rate of School Drop-out	15.1	28.2	21.1
% of Population with No Schooling (Age ≥ 19)	18.4	41.2	32.1
% of Disabled	2.4	3.2	2.9
Children Under 5 Years Height/Age (Stunted Growth) - Global Chronic Malnutrition	46.8	57.5	53.1
Children Under the Age of 5 Height/Age - Severe Chronic Malnutrition	19.6	32.5	27.2
Children under 5 Weight/Height (Marasmus) - Acute Global Malnutrition	5.2	7.1	6.4
Children Under 5 Weight/Height - Acute Severe Malnutrition	1.3	1.8	1.6
Children Under 5 Weight/Age - Global Malnutrition	31.6	48.5	41.6
Children Under 5 - Severe Malnutrition	10.0	16.8	14.0
% of Children from 12 to 23 Months of Age Fully vaccinated	25.6	9.5	16.7
% of Children from 12 to 23 Months of Age Vaccinated against: BCG	74.2	47.0	59.5
DTP3	35.3	14.2	23.9
Polio 3	36.6	19.8	27.5
Measles	49.2	42.4	45.5
% Vaccination Coverage of Women with Toxoid Tetanus	69.3	35.6	49.2
% of Ante-natal Coverage	80.4	51.4	63.5
% Home Births	71.9	90.5	82.9
% Of Births assisted by Skilled Attendant	35.3	13.4	22.5
% of Women Practising Contraception	13.1	4.3	8.1
% of Women Using Modern Methods of Contraception	7.0	0.8	3.5
% of Women who do not wish to have Children	25.5	20.5	22.7
Total Number of Wanted Children	5.6	6.8	6.3
% Children ≤ 5 who have had Diarrhoea in the Last 2 weeks	29.4	27.8	28.4
% Of Women who know how to use ORS	93.5	81.3	86.2

*A Table of intervals of confidence can be consulted in the annexes.

Table of the Main Indicators of Mics by Region* - 1998

Indicators	Region						Total Population
	Capital C	North	East	West	South	C. South	
% of Population with Access to Safe Drinking Water	49.6	7.6	10.5	37.3	28.6	37.7	31.2
% of Population with Access to Adequate Sanitation	65.5	30.3	40.9	26.0	13.5	49.5	39.6
% of Children from 24 to 59 months of Age Fully Vaccinated	35.2	10.0	9.1	7.8	20.3	11.2	16.7
% of Children from 24 to 59 Months of Age Vaccinated against: BCG	74.4	28.1	59.6	43.6	61.2	62.9	57.3
DTP3	38.6	12.7	13.8	13.1	22.5	16.2	21.3
Polio 3	46.8	16.9	18.7	15.7	28.5	22.2	26.8
Measles	64.4	42.6	48.8	57.5	46.5	62.7	56.6
Yellow Fever	52.9	23.6	26.7	26.5	31.5	16.8	21.2
Children under 5 years of Age Height/Age (Stunted Growth) - Global and Chronic Malnutrition	40.5	50.5	39.3	54.8	43.9	62.3	53.1
Children Under 5 years of Age Weight/Height (Marasmus) - Global and Acute Malnutrition	4.2	5.6	6.6	3.3	9.0	8.7	6.4
Children under 5 years of Age Weight/Age - Global Malnutrition	26.9	44.9	27.4	37.4	39.8	50.3	41.6
% of Ante-Natal Coverage	76.0	30.0	62.3	52.1	60.1	62.3	63.5
% Of Home Births	64.0	87.2	76.3	86.3	80.1	89.1	82.9
% of Births Assisted by Skilled Attendants	37.2	7.6	6.7	13.7	17.6	17.2	22.5
% of Women not wishing to have more Children	28.5	20.1	22.7	17.9	28.3	23.2	23.7
Total Number of Wanted Children	5.6	7.2	6.8	6.7	7.4	6.3	6.5
% Children under 5 who have had diarrhoea in the last two weeks	22.9	27.5	19.5	37.4	24.7	33.2	28.4
% of Women who Know how to Use ORS	93.0	88.4	80.1	91.0	86.4	78.3	86.2
% of Population (5-18) with no Schooling	25.5	40.0	49.6	30.2	32.4	38.9	34.0
Rate of Entry to 1st level at 6 Years of Age	33.8	23.0	19.0	37.0	43.6	27.9	30.5
Net Rate of Schooling (1st and 2nd Level)	62.1	38.4	31.9	58.8	49.3	43.4	49.7
Gross Rate of Schooling (1st and 2nd Level)	105.4	73.8	58.5	106.0	89.9	80.1	89.4

*Regions: **Capital C**: Luanda, Cabinda, Kuanza Norte, Bengo; **North**: Uíge, Zaire, Malange; **East**: Lunda Norte, Lunda Sul, Moxico;
West: Benguela, Kuanza Sul; **South**: Huíla, Namibe, Cunene; **Centre South**: Huambo, Bíe, Cuando Cubango;

INDEX OF TABLES

ACRONYMS

MICS: Multiple Indicators Survey

INE: National Statistics Office

GMCVP: Living Conditions Monitoring Office

UNICEF: United Nations Children's Fund

TSC: Technical Support Committee

CC: Joint Commission

PAM: World Food Programme

DNA: National Water Board

MR: Male Ratio

MINSA: Ministry of Health

UN: United Nations

ORS: Oral Rehydration Salts

UNAVEM III: United Nations Verification Mission in Angola, Third Contingent

UNITA: National Union for the Total Independence of Angola

GENERAL INDEX

Map 1. Angola - Provinces

1. GENERAL INTRODUCTION

1.1. Objective and Context of the Multiple Indicator Cluster Survey (MICS) in the Republic of Angola

This survey is entitled *Multiple Indicator Cluster Survey (MICS)* and its main objective was to produce estimates of basic indicators of welfare for children, women and the population as a whole, at the national level, in areas of residence (urban and rural) and at regional level, dividing the country into six regions, See Map 1.1: Region of the Capital and Cabinda, Northern, Eastern, Western, Southern and Central Southern Regions. These estimates were aimed at the definition and monitoring of policies and programmes to improve the country's general situation. The following were considered priority areas: Demography, Education, Health (Maternal/Infant), Nutrition, Safe Water and Basic Sanitation.

Interviews were carried out in 4,337 households during the fieldwork stage, which lasted from August-December 1996. The survey was national, including all the country's provinces, urban and rural areas, areas administered, and at that time, controlled by the Government or by UNITA.

The problem of extreme lack of information concerning the basic welfare indicators of the Angolan population, due to the administrative division of the country between the Government and Unita made it impossible for administrative information systems to cover the areas controlled by UNITA. Even in the Government-controlled areas coverage was weak. There was poor access to areas in which the surveys were carried out due to problems of access by road (road infrastructures destroyed and/or damaged).

With the Peace Process defined by the Lusaka Protocol, the possibility of access to almost the whole country became possible, offering the opportunity of implementing a national survey for the first time since Independence. Hence, both the National Statistics Office (INE) and UNICEF Angola became involved in MICS, an idea which had been promoted by UNICEF New York, with the intention of measuring progress made in relation to targets defined for a 5 year period, when the Child World Summit Meeting was held in 1991. From then on INE incorporated this survey into the work of its Office for Monitoring the Population's Living Conditions (GMCVP), attached to INE in 1996.

For countries like Angola where the emergency context conditions the adoption of programmes to achieve mid-decade targets, MICS was promoted as a means of managing more up-to-date basic indicators and of measuring the reality of the situation in the country.

Meetings were held with potential users amongst which were Government Bodies, United Nations Agencies, NGOs and other organisations. Grasping the opportunity offered by the survey, they recommended that a range of additional information should be collected.
The survey was administered by the Office for Monitoring the Population's Living Conditions (GMCVP) at the National Statistics Office with technical, logistic and financial assistance from UNICEF. The support of several organisations was instrumental in ensuring a positive outcome to the survey.

For the first time in 22 years the estimates produced using MICS represent national and regional data on basic welfare indicators. In spite of the team's efforts it was impossible to survey (for various reasons) between 10 and 20 perhaps 15% of the original sample, this part of the sample was replaced by another which was not part of the initial sample, see subsection 1.2.1 the third paragraph. This

part of the population is probably relevant, which leads us to believe that the data obtained can slightly underestimate the problems that the Angolan population faces.

We can state that the general situation as depicted by MICS is alarming. For example, 34% of those interviewed between the ages of 5-18 had never been to school, the repetition rate in the 7th grade (penultimate class at the primary school level) is 15%, life expectancy is 42.4, infant mortality is estimated at 274 per thousand, and there is serious chronic malnutrition (stunted growth) affecting about 27% of children between the ages of 6-59 months.

The estimates presented in this report reveal an important source of information and an opportunity for the formulation of programmes and policies aimed at improving the present situation in the country. It allows us to establish a baseline from which we can measure developmental progress.

This document is the culmination of extensive stages of work and has needed various contributions. From the preparatory phase to the writing-up of the final report, the collection of data, the treatment and analysis of data- the work was carried out by a multidisciplinary team. The members of the team come from some of the following organisations, the National Statistics Office, Office for the Monitoring the Population's Living Conditions, the United Nations Children's Fund (UNICEF), Representatives from the Government and UNITA on the Joint Commission, Provincial Governments, Provincial Statistics Offices in the provinces, NGOs, the World Food Programme (PAM), Provincial Offices of UNICEF, and UNAVEM III.

Those doing the survey, the supervisors, the revisers and the co-ordinators made it possible for the sample to be carried out throughout the country against all odds, overcoming all difficulties encountered in the field. In addition, we must not forget the work of the computer operators.

1.2. Methodology and Sampling.

The sampling plan for MICS was intended to obtain a multiple purpose sample to be applied in 6 extended regions, defined as the research areas, on the basis of, on the one hand a UNICEF interventionist plan in Angola, and on the other hand, taking into consideration their geographical features. The regions are made up as follows. See 1.2.2 and Map 1.1.

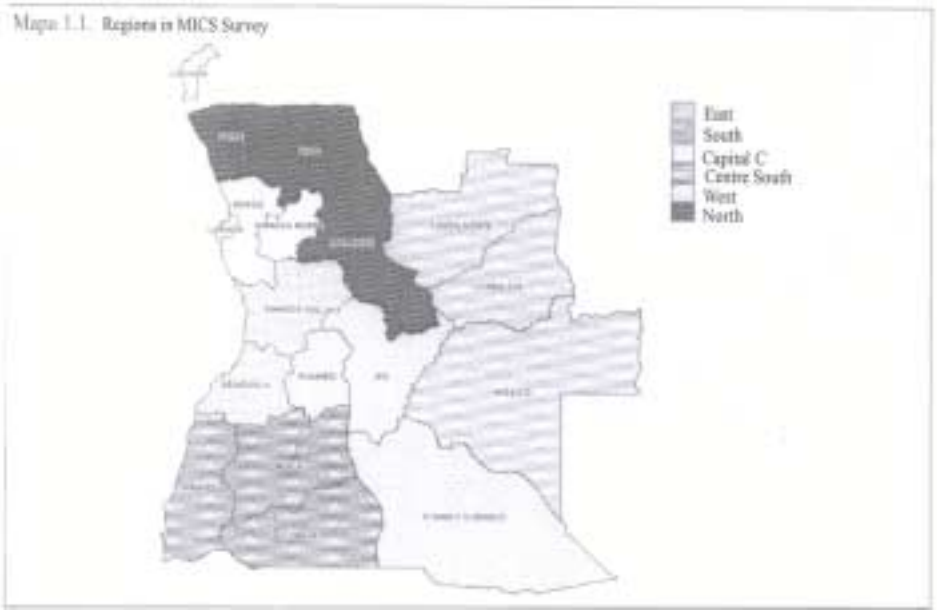


Table 1.2.1. Provinces by Research Regions

Regions	Provinces
Capital C	Luanda, Kwanza Norte, Bengo, Cabinda
North	Zaire, Uíge, Malanje
East	Lunda Norte, Lunda Sul, Moxico
West	Benguela, Kwanza Sul
South	Huíla, Cunene, Namibe
Centre South	Huambo, Bié, Kuando Kubango

From this sample it was possible to obtain estimates at the national level and at the level of the six geographically defined regions. Estimates at a more disaggregated level were not advisable, otherwise running the risk of losing the representative nature of the results.

More details on the sampling plan and the calculation of the weighting, as well as the difficulties encountered in the implementation of the sampling plan, can be seen in the sampling report plan and in the fieldwork report respectively.

Due to the war situation the country was facing factors, such as a displaced population and difficult access to certain localities. The last population census dates from 1983-84. Apart from the fact that these data are out of date, they only refer to a part of the country. For this reason, all the information available was used, and from various sources, to construct the Sampling Frame in order to select Primary Sampling Units (P.S.U.). Sources such as the Electoral Register/Census of 1992, information from the Ministry of Territorial Administration (MAT) the Provincial Governments and the social and economic provincial profiles prepared for the donors' round table in Brussels in 1995 for UNDP were used.

With the exception of the first stratum of the region "Capital C" (constituted by the Province of Luanda) the sampling of selected families for the research was probabilistic with 3 selection stages. In each region a potentially self-weighted sample of households was selected, though this

characteristic self-weighting could be lost due to various factors, especially variations in population estimates.

The unit used in the first stage (PSU) was the "comuna"[1] whose selection within each region was made independently, systematically and with probability proportional to the estimated size of the population.

The village in the rural areas or the neighbourhood in the urban areas constitutes the unit used in the second stage (SSU) and its selection was made without replacement and from a list of villages, which were accessible and based on information collected by regional co-ordinators. Thus, the selection was generally proportional to the number of inhabitants in the villages (proportional method in table 1.2.1.1.). In some cases (absence of population information) the treatment was:

1. When no information was available concerning the people of the village, the selection was made on a simple random basis (enumeration method);
2. When a list of villages did not exist or any information concerning its or their population (inhabitants) selection was made randomly from a point on the map, after it had been divided into 20 parts. (Map method)

Finally, the family constituted the Third Stage Unit (TSU) and its selection was without replacement and with equal probability within each selected village. The method used by PAV (Extended Vaccination Programme) was applied to barrios or neighbourhoods outside Luanda. This method consists in spinning a bottle to select a random direction. Following this the first family surveyed is randomly selected in this direction. The other families are those closest to the first.

In the case of Luanda, the sample was probabilistic with two selection stages. The unit used in the first stage was the census section in the Demographic Census of 1983/84, updated when the Priority Survey on Household Living Conditions was carried out in 1995 (IPCVD) by INE. The selection of primary sampling units was made independently and systematically with probability proportional to the number of dwellings. The secondary sampling unit was the family, whose selection was without replacement and with equal probability within each selection made. The selection of families in Luanda was made using a complete list of families taken from the selected census section.

The final probability of selection for each household is obtained from the product of the probabilities at each selection stage. The analysis of the weighted results was used to facilitate national and regional estimates and in order to correct the information used in the selection of PSUs and SSUs in the next selection stage.

The sample size was defined with a level of confidence of 95% to estimate the proportion of variable keys for the research based on information available to UNICEF. The level of precision was 5%, with the exception of some variables linked to breast-feeding in which more limited age-groups were used. In these cases the level of precision used was 8%.
The estimation of the necessary sample size was made separately for each of these key variables. Quite different sizes were obtained for the sample from each of the variables, having in the end to opt for the largest size. This confers a higher level of accuracy on the other variables than that originally expected. Or, that is to say, estimates can be obtained from the survey data with a maximum error of plus or minus 5%, with the exception of those variables related to breast-feeding where the maximum error was plus or minus 8%.

The "Design Effect" (Deff) is a factor used to adjust the variance obtained from a complex sampling design using clusters with the variance of a simple random sample.

[1] The "comuna" is the smallest administrative division in Angola

In the definition of the sample, size 2 was assumed as the lowest value and 10 as the highest, using the highest value only in the case of Water and Sanitation.

In the analysis of data the confidence intervals of 95% were calculated for the main indicators using Program Epi Info 6, which calculates the value of DEFF directly from the data, see annexes.

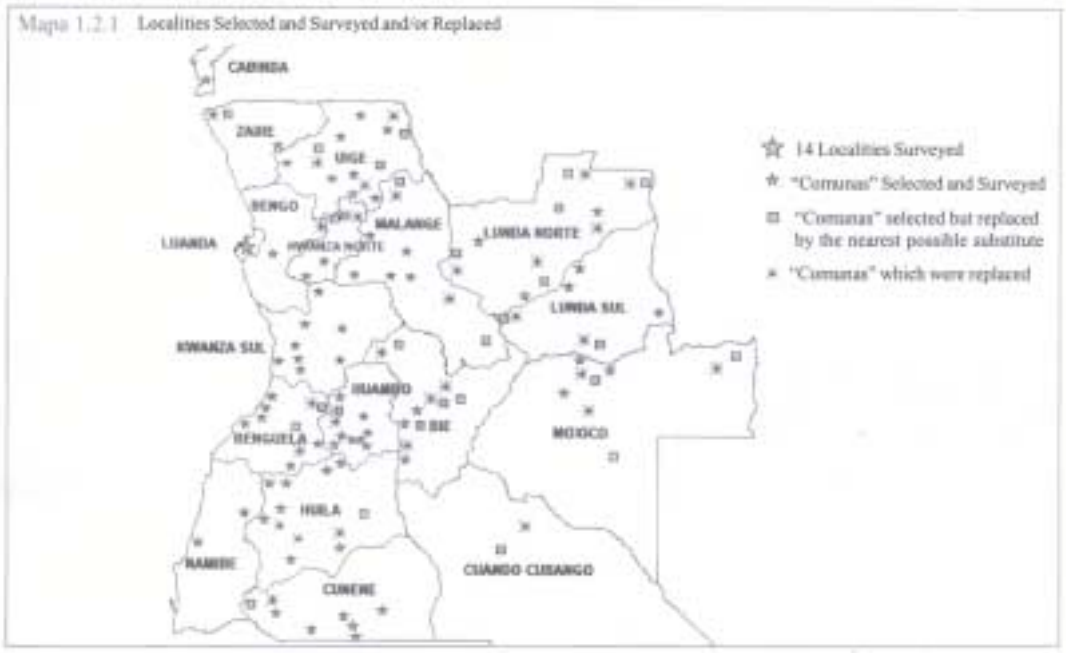
The sample size was fixed at 4,410 families distributed equally among the six regions, resulting in a sample of 735 families, 21 primary units (PSUs) and 21 secondary units (SSUs) for each of the six regions. In this way in each secondary unit selected, 35 families were chosen.

In summary, the size of the national sample was defined in:
(21 clusters per region) X (35 families per cluster) X (6 regions) = 4,410 families.

1.2.1. Difficulties Encountered during Implementation.

MICS is the first survey since the country's independence to be carried out on a national scale. During its implementation it was necessary to call on the co-operation and help of a large number of organisations in order to overcome a whole series of political and logistic difficulties.

In spite of this help it was not always possible to reach the selected "comunas" and in some cases it was not possible to have access to all the villages which constitute the "comuna". This lack of access was generally due to mines, collapsed bridges or lack of security.



Initially a total of 28 “comunas” were selected, however, these were in fact inaccessible (table 1.2.1.1.). They were replaced (see Map 1.2.1.) respectively by those that were nearest and accessible, the term “nearest” having been defined as the distance between the main towns and villages of the “comuna”. The replacement of inaccessible “comunas” served to maintain the size of the sample for each region, where the nearest “comuna” was used to try and represent what had been rejected or replaced.

Obviously the situation of these replaced “comunas” will be different or probably worse than the situation of those used to replace them.

This leads us to say that the estimates arrived at as a result of the survey cannot represent the whole Angolan population and the regions, but only the population that was accessible. In the results analysis it was possible to use "weightings" in order to try and make adjustments to represent approximate numbers, as part of the population was inaccessible, but it was never possible to get exact information about this same population. All the data should be seen in this light.

However, if it is considered that the population of these “comunas” might have been overestimated on the basis of the survey, and that some of them were practically under-populated, then we can estimate the proportion of the initial sample that was lost as between 10-20%. We found that the regions with greatest access problems were those to the East and Central South. Data may well be affected in these regions.

Table 1.2.1.1. - General Information on the Implementation of the Sampling Plan

Region	Total N° of Clusters Selected	Number of Communities Selected[1]		Number of Villages/Neighbour-hoods with		Selection of SSs (Number of communities by method of selection)		
		Surveyed	Replaced	Full Access	Partial Access	Pop.	Counting or map	Other[2]
Capital C	21	19	2 (10%)	19	2	19	2	0
North	21	15	6 (29%)	18	3	14	5	2
East	21	11	10 (48%)	12	9	15	3	3
West	21	19	2 (10%)	19	2	18	3	0
South	21	19	2 (10%)	20	1	15	6	0
Centre South	21	15	6 (29%)	12	9	21	0	0
Total	126	98	28 (22%)	100	26	102	19	5

1.3 Structure and Execution of Fieldwork

We intend to summarise how we undertook the survey fieldwork. The development of these stages was evident in the planning and implementation of MICS.

A co-ordinator managed the survey nationally, under the supervision of the head of GMCVP, trained with technical assistance from UNICEF, with 8 provincial co-ordinators whose main responsibility was to implement the survey in the selected provinces.

The selection and training of the provincial teams was carried out after the training of 8 provincial co-ordinators in Luanda. In Luanda, apart from the co-ordinators all the questionnaire revisers, nutritionists and some supervisors were also trained. The training was enriched with feedback obtained during the pilot survey carried out in Bengo Province.

The provincial co-ordinator made a preliminary visit to the province he/she was given in order to plan the survey and collect information concerning accessibility of “comunas”. He or she also collected information on the villages /neighbourhoods selected, and the availability of personnel to form a team.

After drawing up work plans with the national co-ordinator in Luanda, the provincial co-ordinators returned to the provinces to select and train the team to carry out the survey.

The fieldwork was done between August and December of 1996, the length of time depending on the number of clusters to be surveyed, the logistics, climatic conditions and other complexities. The average time per cluster was a day. The teams faced great logistic problems, as well as sometimes, facing difficulty in gaining access to Unita areas, at the beginning of the work. However, due to the intervention of the Joint Commission it was possible to establish collaboration after some unpleasantness between the teams and the local administrations.

[1] For region Capital C and for the total, the number of "comunas" selected includes the 14 census sections of Luanda.
[2] Of a total of 5 “comunas”, access was limited to the main town or only one other locality, due to insecurity or due to the rest of the “comuna” being uninhabited. In these cases the method of selection of SSU’’s is indicated as “other”.

In some provinces the survey used mixed teams made up of survey personnel from the Government and from Unita, which became a high impact strategy.

Apart from these activities, members of the National Co-ordination Unit from GMCVP and UNICEF made fieldwork control and supervision visits.

For the implementation of fieldwork the following stages were laid down
- Preliminary visits
- Planning of the survey work teams and human resources
- Training of fieldwork personnel
- Selection of fieldwork personnel for the training
- Data collection

The analysis of indicators created to evaluate the level of implementation of the activities laid down leave it clear that there was a satisfactory effort on the part of the field teams. The evaluation indicators were four, i.e.

- Average data collection time
- Rate of implementation of the survey planned per province
- Proportion of surveys carried out on the first and second visit
- Non-response to questions used to assess the quality of the responses
- Quality control of the fieldwork.

This was essentially undertaken by the questionnaire reviser and by the provincial co-ordinator, the latter having, in the final stage, the responsibility for everything and control of the fieldwork. This control culminated in the analysis of the GMCVP data, which led to guidelines being issued, based on field errors.
During the fieldwork, whilst the supervisor observed the interviewers doing the interviews, the reviser had the job of sorting through completed questionnaires. The questionnaires were analysed in order to check that they had been correctly filled in, or that the responses given were coherent. If there were any incoherence, the reviser would send the form back for the interviewer to correct the facts with the interviewee. Subsequently, the provincial co-ordinator checked all the questionnaires at the end of day, returning to where the survey was being carried out to check or correct any ambiguity.

The analysis of data from Luanda/Bengo was also carried out before dealing with the provinces. In this analysis certain mistakes were found, result of poor supervision in the field, and co-ordinators and editors were notified in order to avoid any eventual problems in other provinces. As the survey developed this attention to detail was encouraged when the national team made control visits to other provinces.

DATA PROCESSING AND ANALYSIS

1.4.1. Data Processing

Seventeen people in the computing department entered the MICS data from September till the end of December 1996. The co-ordinator of the IT area and the IT supervisors oversaw this work. The IMPS and SPSS PC software packages were used in order to process the data.

Subsequently the data was edited, which lasted almost 2 and half months. This work was carried out in an integrated form by the analysis team, in collaboration with those in the computer processing team. The editing served to:

- Calculate the identification numbers of the individuals and their families;
- Calculate ages using the dates of birth of those interviewed;
- Make links between the modules, especially between the list of family members (Module B) and the modules for individuals, in order to evaluate losses at the individual level;
- Carry out coherence tests on the questions and check any incoherent data in the questionnaires;
- Examine the distribution of variables for extreme or improbable frequency values and check questionnaires;

1.4.2. Analysis

Analysis is the final part of the survey and one of the most important aspects. With this analysis it is aimed to demonstrate what the data represent and eventually indicate the problems which the field information reflects.

The analysis was carried out over a period of six months, under the supervision of a co-ordinator who was also a member of the analysis team. The team was made up of 4 individuals co-opted onto GMCVP and to INE, with technical assistance from UNICEF. At the beginning of the analysis it was thought a good idea to create a Technical Support Committee (TSC) which had the job of reading and commenting on the work being done by the team. The TSC was made up of representatives, cadres and specialists in the most diverse areas analysed, and from the most varied institutions within civil society, as well as interested individuals invited by the analysis team, and by the National Co-ordination Team.

The analysis was done in two stages:

- Entering and editing data onto the databases;

And

- Cross-referencing between indicators and creation of new variables and or indicators.

In order to carry out the analysis the following computer programmes were used: SPSS for Windows, version 6.1.3 for the statistical processing of data, Epi Info 6 for the treatment of anthropometrical data, Microsoft Word 7 for word processing, Microsoft Excel 7 and Harvard Graphics for the tables and figures, and Atlas GIS 3 for the geographic maps.

The analysis is based on the production of national, urban, rural and regional estimates. The differentials of sex, education and other indicators were also examined. However, it must be stressed that the analysis carried out is above all descriptive and the causes which determine the situation depicted are thoroughly analysed.
To finalise this succinct overview of analysis, it is relevant to point out that the results presented in this report can be considered the essential indicators of the situation they describe. In this way, this report opens various interesting avenues for policy makers, researchers, NGOs, the United Nations System and similar bodies, which could be interested in enriching and/ or going into further depth on the analyses given here. MICS data will be made available to individuals or collective groups.

1.5 Data Quality

The quality of the data was evaluated by the National Co-ordinating Committee during the fieldwork stage and by the IT team during data entry, and also by the analysis team during editing and analysis.

The following problems were identified:

- Analysis of problems related to the fieldwork reports;
- Difficulties in the field;
- Some of the interviewers had difficulty in understanding technical words, e.g. the meaning of "drains";
- Difficulty in drawing up calendars of local events due to lack of information; in Unita areas, national events cannot be used as they relate to political events and dates decided on by the party in power;
- The interviewers tended not to use the ages calendar;
- The more elderly people interviewed did not know their dates of birth;
- The module on women, module D, where women had to record past births;
- Non-accounting of nearly 300 cases in the last version of Module A due to IT problems.

During the analysis it was necessary to look at questions where the proportion of responses "Don't know", "No reply" or without any type of reply (missing) was high. Amongst them there were notably questions relating to nutrition (anthropometry) with 5% of "don't knows" or with no response. To a great extent evaluation of quality was carried out using reports from control visits undertaken by the technical team (INE and UNICEF); some problems were detected during data editing carried out by the same technical team. Evaluation was made of the co-ordinators and of the information provided on ages.

1.6 Report Structure

We begin the report by presenting the people that participated in carrying out this work from the beginning to the end. Next, there is a presentation of the main indicators of the survey, and then the main survey maps. The General Introduction will form the first of 10 chapters that make up the report. It is also made up of other subsections with summaries of the sampling and the implementation of the MICS survey.

The second chapter is on the Demographic Characteristics of the Households Surveyed, particularly demography, migration and the displaced population. Emphasis will be on the assessment of data quality and the evaluation of the dates of birth in the second subsection.
The third chapter will make reference to the Social and Housing Characteristics of the Households Surveyed. We will speak about dependency rates within households, of average educational level, of the type of dwelling, mother tongue, and finally there will be a section with information on mines and Physical Motor disabilities (prevalence and reasons).

Water and Basic Sanitation are discussed in the fourth chapter. The sources of a safe water supply and water which could be made into drinking water, elements relative to collecting water and treatment problems. In the other subsection, in the discussion on basic sanitation we will talk about the existence or not of sanitary facilities, as well as access to available basic sanitation.

The fifth chapter deals with the Respondents' Level of Education. This chapter is analysed on two levels: firstly adult education, i.e. those 19 and over; at the second level of analysis the education of children from 5-18 years of age will be discussed, referred to as Basic Education.

In the sixth chapter we analyse mortality, with information concerning infant, juvenile and adult mortality. The life table will be discussed as well as life expectancy at birth.

The seventh chapter will talk about fertility. Estimates will be given of global fertility rates and fertility differentials, by area of residence and education.

In the following chapter, we deal with contraceptive practices and reproductive intentions. The present situation will be analysed, as well as the wish to have more children and the number of additional children wanted.

In the ninth chapter, the report will deal with maternal and child health care. Amongst other things reference will be made to maternal care provision, ante-natal care, vaccination, diarrhoea, knowledge of oral rehydration salts and finally, a discussion of acute respiratory infections.

In the last chapter information will show the extent of breast-feeding and the nutritional state of children. Women interviewed gave information on the frequency and the duration of this practice, and food and liquid supplements used with breast-feeding. Nutrition will be analysed using the sample population and anthropometrical indices will be derived. To follow, there will be a more detailed analysis of the different types of nutrition within the sample, ending with a subsection on malnutrition and poverty.

2. DEMOGRAPHIC CHARACTERISTICS OF THOSE SURVEYED.

2.1. Introduction

In the demographic part of this survey analysis will be divided into 4 subsections, the first of which is the introduction. The second will aim at evaluating the data, particularly in relation to information provided on dates of birth and ages calculated using these dates.

The third sub-section will concentrate on the analysis of the main demographic factors, relative population distribution by age and by sex, by residential area and, where possible, by region. The population's situation will be presented in detail, especially over the last 5 years. INE 's predictions, which emerged on population data, will constitute the comparative base for the MICS data.

In the fourth sub-section migrant groups will be analysed, i.e. those constituted by post-independence and post-electoral displacements. The sub-group of migrants of particular concern will be those displaced mainly by war and drought. A forward-looking analysis will also be made, or rather, an indication will be given of the main municipalities and provinces to which the migrants or the internally displaced wish to move, if favourable conditions are established and such a move is possible.

2.2 Data Evaluation

The MICS sample totals 19,844 individuals. There will be issues, which are limited by age, for example those linked to migration.

2.2.1. Evaluation of the dates of birth declared and Ages Calculated

In the MICS survey, age is one of the most important factors to emerge from the information collected. On the one hand, the evaluation of ages declared in the sample will enable us to confirm to what extent the information collected is consistent, and on the other hand, it will serve to compare the data obtained with other existing data, so that any deviation existing can be studied. To do this demographic evaluation the Whipple Indexes and the Myers 4 methods will be used. These refer to attraction or repulsion to certain figures related to age, which means an analysis of the internal consistency of the data. An additional element will be the analysis of the proportion of males (percentage of men in the total population) i.e. the male ratio (on the basis of sex), and reasons for excess or deficit of men in the population as a whole.
The clear declaration of age is important as it has direct influence on the use of the data to analyse other indicators, the most important of which are: adult level of education or children of school age; study of infant and adult mortality; fertility; anthropometry; and breast-feeding.

We include a section on the evaluation of ages because in general, most surveys and/or censuses carried out in Africa have enormous problems in providing correct information regarding age. This stems from the social and cultural characteristics of African society. Being a society where most people share an oral tradition, when asked to give their age we can predict a tendency to exaggerate certain figures, depending on regions, but especially in rural areas. The fact that people do not know their ages, or are not sure of them, means that they round up their ages.

Age was not directly asked about. People were not asked, "How old are you?" Or "What is your age?" they were asked for their date of birth (day/month/year) so that the interviewer in the field could calculate their exact age. In the case of people who did not know their date of birth, the interviewers tried to establish their date of birth using certain local events. In the case of children, when the parents or guardians did not remember their actual date of birth the priority was to obtain the month and the year.

Subsequently the analysis team had to reassess the age calculated by the interviewer in the field, in order to correct errors which might have arisen due to the population's low level of education or problems of memory, particularly in rural areas. These factors could, in one way or another, affect the quality of the data, in terms of coverage. Mistakes made by the interviewer in the field were thus eliminated with the correction of the calculated age.

Table 2.2.1.1 illustrates the values and the levels of evaluation relative to the Myers and Whipple classifications suggested by the United Nations (UN). On the one hand these two indices distort the ages i.e. before and after the corrections made by the analysis team, and on the other hand, after the corrections carried out by the same team.

Table 2.2.1.1. Summary of Reference Values

Level of Preference	Values Index Whipple-Summary
No Preference	0
Maximum Preference	180
Level of Preference	**Values Index Myers-Summary**
Total Repulsion	0
No Attraction	100
Total Attraction	500
Precision Level	**Values Index Whipple**
High Level	Lower than 105
Good Level	105 to 110
Approximate Level	110 to 125
Bad Data	125 to 175
Very Bad Data	Higher than 175
Level of Attraction	**Values Index Myers**
Low	0.0 to 5.0
Intermediate	5.1 to 15.0
High	15.1 to 30.0
Very High	30.1 and over

The Myers index is a synthetic index, which evaluates the degree of attraction or repulsion from any number. There will be digits, which will have negative values, which mean that in providing information on ages there is a repulsion of these same numbers. The WHIPPLE index will enable us to quantify the quality of the information on ages calculated, related to attraction of digits 0 and 5.

After calculating age typing errors were corrected. It was confirmed that the analysis of the calculated age did not present very relevant factors in the attraction/repulsion of the figures. The table below reflects this situation.

Table 2.2.1.2. Preference of Digits for Calculated Age

Myers: Digit	Both Sexes	Male Sex	Female Sex
0	11.88	8.88	14.04
1	10.31	10.66	10.05
2	10.57	10.85	10.36
3	10.19	10.56	9.91
4	9.66	10.56	9.01
5	9.62	9.51	9.71
6	10.10	10.37	9.91
7	8.74	8.83	8.67
8	10.49	11.62	9.67
9	8.45	8.16	8.67
MYERS (Summary)	7.05	9.24	8.91
WHIPPLE	114.06	93.28	129.03

We can conclude that globally the quality of age is at an intermediate level in the United Nations classification. These two indices of information on the date of birth and subsequently age show that although the data are acceptable, the quality of the information on the ages of women is not as good as that of men. The indices for women are higher than for men, indicating that, particularly in their case, there is a greater attraction for ages ending in the digit 0.

2.2.2. Analysis of Data Quality in Relation to Population Structure by Sex

The composition measurements by sex are few and simple to do. There are three:

1. *the percentage of men in the population or the proportion of males Pm/Pt;*
2. *the comparison between the sexes or the ratio of males "((Pm-Pf)/Pt)*1000"*
3. *the reason for the excess or deficit of men in the total population "((Pm-Pf)/Pt)*100".*

Where:
Pm: Male Population
Pf: Female Population
Pt: Total Population

These measurements are useful when comparing population on an inter-regional or inter-area basis of residence. Unfortunately, it is not possible to compare the MICS composition by sex with the INE prediction, as this differential is not included in the latter case.

The first measurement - the proportion of males - is 46.3%; at first sight this figure reveals a substantially reduced number of men in the total population.

The value of MR is 86.4. In the sample there are 86 men for every 100 women, an extremely low figure. In most countries, and in particular in Africa, the gap is between 95 and 102 men for every 100 women. In countries where events have taken place, which have resulted in human loss of life and big migratory movements, this gap fluctuates between 90 and 105 men for every 100 women.

The analysis of the third measurement indicates a percentage value of the excess or deficit of the male sex in the total population. In relation to the population surveyed the value is 7.39%; the male sex has a deficit of 7.39%.

There are various contributory factors; to a large extent it can be explained by the war. Several factors must have contributed to this situation; on the one hand there was a high level of male and juvenile mortality, in addition to the existence, at the moment, of different demobilisation areas, and male emigration in order to avoid conscription. This situation continues due to the exceptional factor of the armed conflict.

The Male Ratio (MR) or proportion of sexes is one of the main measurements of composition by sex used in technical demographic studies. Generally defined by the number of men per 100 women, where the balancing point, or rather the point, which denotes a balance between the number of men and women, is 100. An MR over a 100 represents an excess of men and an MR lower than 100 denotes an excess of women.

2.2.3. Evaluation of information on Calculated Ages, by Area and Region of Residence

The areas referred to in the study are urban and rural. This dichotomy defines differences in way of life, as well as the study of social cultural factors, which make people closer or more distant. Table 2.2.3.1 reflects the information on dates of birth (subsequent calculation of ages) without exaggerated attractions to the different figures, and as such it is possible to consider that the data relative to age will be more precise in urban areas than in rural areas, where information on dates of birth was more problematic.

Table 2.2.3.1. Preference of Calculated Age Digits by Areas of Residence.

Myers: Digits	Both Areas	Urban Area	Rural Area
0	11.88	12.28	**13.49**
1	10.31	10.51	10.42
2	10.57	10.67	10.36
3	10.19	10.67	10.39
4	9.66	9.46	9.88
5	9.62	9.41	10.01
6	10.10	9.66	10.65
7	8.74	9.41	8.46
8	10.49	10.67	8.89
9	8.45	8.25	9.36
Myers (Summary)	7.05	6.93	9.81
Whipple	114.06	113.78	126.21

Table 2.2.3.2. Measurements of Population Structure by Sex According to Areas of Residence

Measurements	Areas of Residence		
Composition	8,250	11,594	19,844
By Sex	Urban	Rural	Total
Proportion of Males	46.1	46.5	46.3
Male Ratio	87.3	84.7	86.4
Comparison of Excess or Deficit	-7.8	-7.05	-7.3

The figures for the rural area are very similar to those of the urban area; the male deficit in the rural area seems more normal than in the urban area, because generally speaking it is women who mainly reside there. Men go to the city to look for improved working conditions and a better income, which can perhaps be obtained by the sale or exchange of rural goods.

In the regions the analysis of data was restricted simply to the calculation of these measurements. In general, the analysis of the results, table 2.2.3.3 is worrying, because of the lack of male individuals in all the regions, even though regions Capital C or North are nearer to patterns quoted before in regards to MR. The Centre South Region (Bie, Huambo and Kuando Kubango) seems to be the most problematic with a male deficit of 9.2%. The male ratio is only 83 men for every 100 women. Similarly, the Northern Region has values, which are nearer to those of the Centre South Region.

Table 2.2.3.3 Measurements of Composition by Sex and Region of Residence.

Measurements	Regions of Residence						
Of Composition	4,156	2,735	2,842	3,546	3,595	2,970	19, 844
by Sex	Capital C.	North	East	West	South	Centre South	Total
Proportion of Males	47.3	**45.7**	47.4	**46.2**	**46.3**	**45.4**	46.3
Male Ratio	89.9	**84.1**	89.9	**85.6**	**86.1**	**83.1**	86.4
Comparison of Excess or Deficit	-5.9	**-8.6**	-5.2	**-7.7**	**-7.4**	**-9.2**	-7.3

The statement made in the above paragraph can be justified if we take into account that these two regions were those that apparently suffered most as a consequence of the post-electoral war, in terms of loss of human life and destruction of infrastructures. The latter factor can have been one of the main elements, which has stimulated the displacement of people from these regions to those less directly affected by the war, mortality or demobilisation areas.

2.3. Main Demographic Characteristics

2.3.1. Introduction

In this subsection, apart from presenting the analysis of the tables on population structure by sex and age and the main age pyramids (by simple ages, in 5 year spans, by areas of residence, urban and rural, and finally by regions of residence); a direct comparison will be made between population structure established by MICS in 1996 and the population structure predicted by INE in the same year.

2.3.2. Population Distribution by Sex and Age

Table 2.3.2.1 represents the relative distribution of the population by sex and by age in the MICS sample, reflecting an extremely young population. Almost 50% of the population are under 15 years

of age, or rather; the median age equals 15, and only about 3.2% are more than 60 years of age. The average age of the population is 20 and the differences between the sexes are not significant.

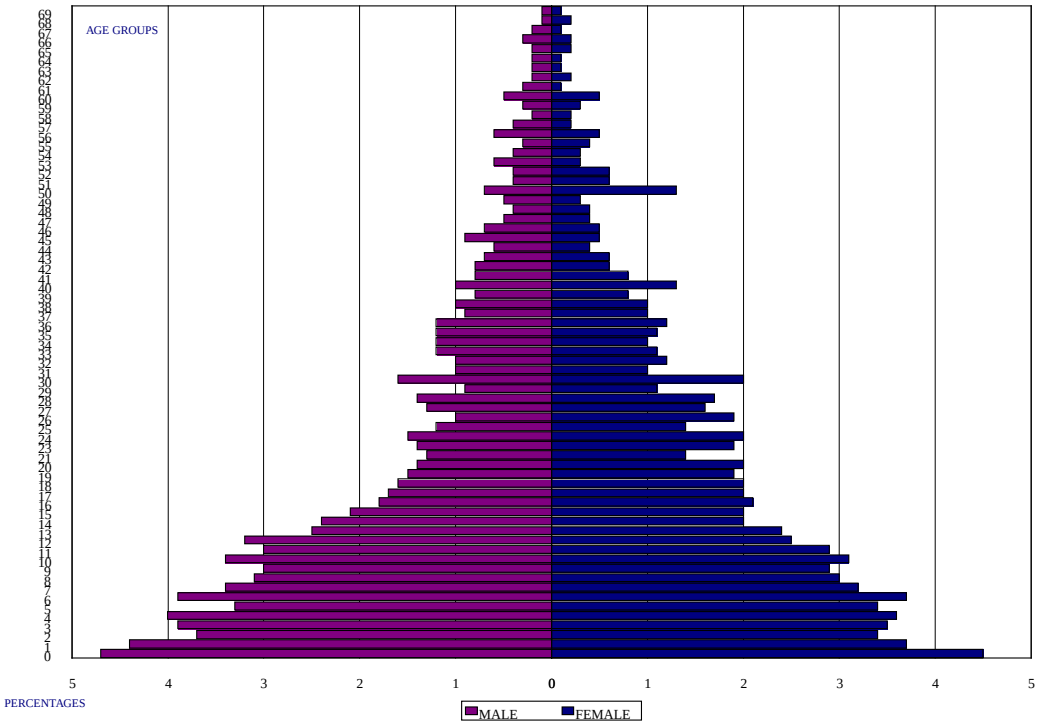
The level or rate of dependency is 0.74, calculated from the following age limits: from 10-59 as the working age limit. This reflects the intensity of economic inactivity implicit in the age structure of the population. This figure is high and shows an unfavourable relationship between the number of individuals who work and the number of dependants they have to sustain.

Table 2.3.2.1. Relative Structure of the Population by Sex and by Age

Age Groups	Both Sexes	Male Sex	Female Sex	MR*
	19,844	9,188	10,656	86.4
0 - 4	19.6	9.7	9.9	97.9
5 - 9	16.8	7.8	9.0	86.6
10 - 14	13.8	6.8	7.0	97.1
15 - 19	9.4	4.3	5.1	84.3
20 - 24	8.9	3.5	5.4	64.8
25 - 29	7.0	2.7	4.3	62.7
30 - 34	6.2	2.7	3.5	77.1
35 - 39	5.2	2.4	2.7	88.8
40 - 44	3.7	1.7	2.0	85
45 - 49	2.5	1.3	1.2	108.3
50 - 54	2.9	1.1	1.7	64.7
55- 59	1.6	0.8	0.8	100
60 - 64	1.3	0.7	0.6	116.6
65 - 69	0.7	0.4	0.3	133.3
70 - 74	0.6	0.4	0.3	133.3
Average Age	20	19	20	
Median Age	15	13	16	

*Male Ratio

Figure 2.3.2.1. Relative Distribution of the Population by Sex and by Age



The age pyramid in figure 2.3.2.1 illustrates the difference between the sexes by age. The graphic representation of simple ages or rather in one-year units gives us the opportunity to observe four different features. The first is the balance between the sexes in young ages; this is from 0 to seven or eight years, followed by those from nine to 15 years of age, where the male sex has a certain advantage in terms of numbers. Later, however, from sixteen to forty, the male sex dramatically appears in great deficit and ends with a relative balance in numbers in the years corresponding to older adults. In a more concise way figure 2.3.2.2 presents the distribution of population by sex and by age in 5-year age groups.

To some extent those from 15-19 and 45-49 were made older, evidence of the poor information on ages, above all, given by the female sex. With exception of the first three age groups and the older adult age group, where the male sex manages to maintain a balance in percentage terms, in all the other groups the male sex is at a disadvantage in relation to the opposite sex, see figures 2.3.2.2 and 2.3.2.3.

Figure 2.3.2.2. Relative Distribution of Population by Sex and by Ages

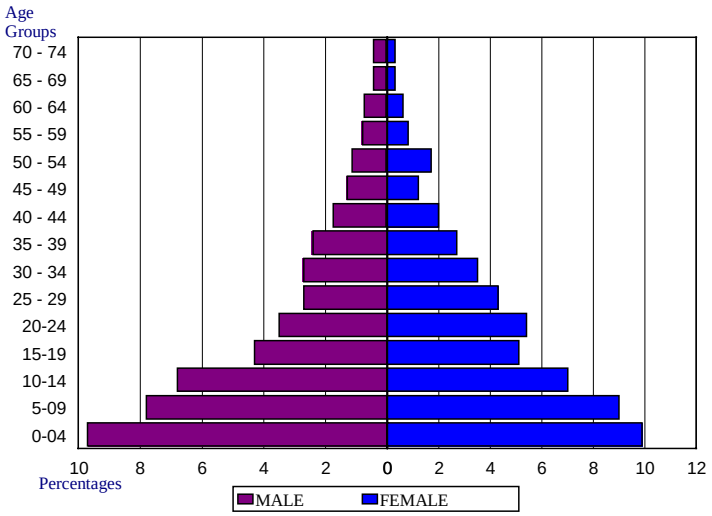
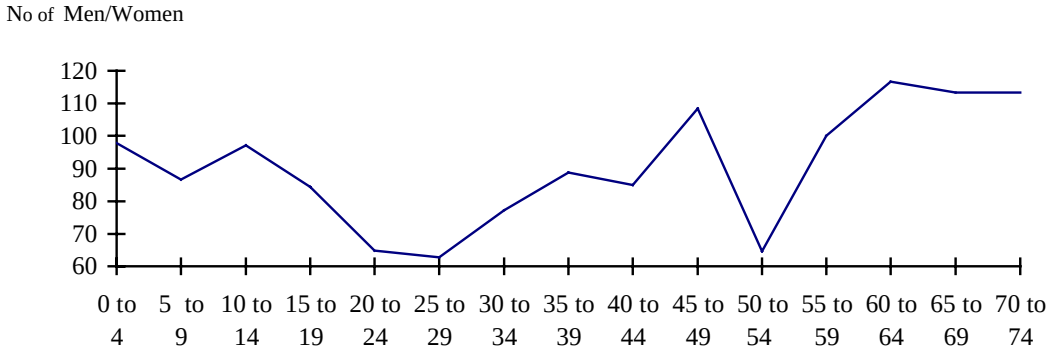


Figure 2.3.2.3. Male Ratio in Total Population



This almost generalised deficit is the result of various factors (see subsection 2.1: evaluation of data) without necessarily being unclear information on dates of birth. The pyramid in Figure 2.3.2.2 is characteristic of countries, which have suffered disturbances such as, war, a high level of migration, etc. If we look at the MR, see Figure 2.3.2.3 for the total sample by age group, the most important information to be retained is:

- The lack of men between 15 and 45 years of age due to reasons already explained;
- A higher number of males in the upper age groups, older adults, perhaps due to age exaggeration by the men, and underestimation by the older women;
- Variability of MR by age due in part to unclear information on dates of birth, above all, as has already been mentioned, by women.

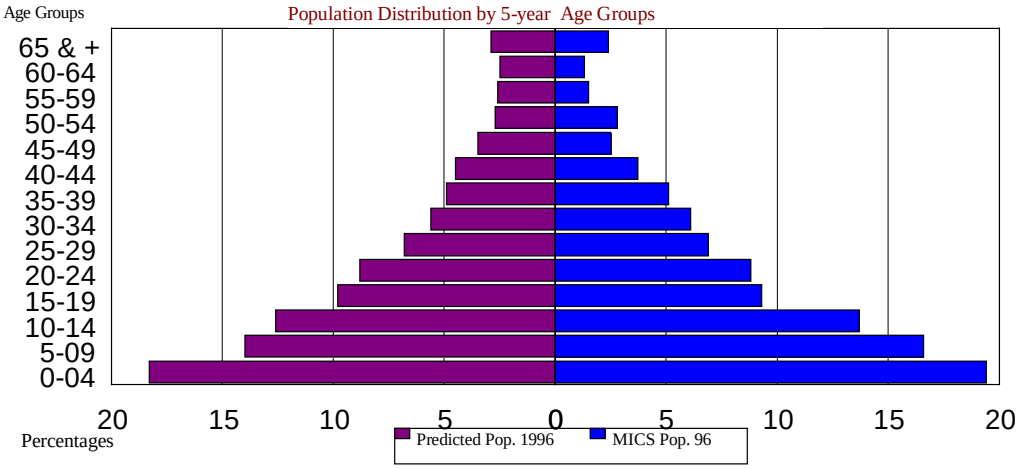
2.3.3. Comparison of Population Structure Using Predicted Data and MICS Data

As one of the official sources existing for some years in Angola the demographic estimates formulated by INE are elements with which to compare and refine the demographic results of MICS. However, only age distributions are compared, particularly for age groups in 5-year blocks, as in the INE predictions sex is not used in the division of data. Comparisons can be made at the level of the country. Confirmation is awaited regarding both the data taken from INE predictions for 1996 and from MICS.

Comparative analysis can begin using the following preliminary hypothesis; the structure of age distribution should be the same for the two sources or rather the base should be very wide and the apex very narrow. It is hoped, however, to find significant differences in certain age groups, above all of young adults. This is because the INE predictions did not predict the influence of events such as the post electoral war and its direct and indirect consequences on the population.

The analysis refers to distribution by age between the two sources, figure 2.3.3.1. In a very eloquent way the preliminary hypothesis is confirmed. MICS data present a wide base characteristic of a country with a very young population, presenting, however, higher values than those predicted for the first age groups. This fact can be as a result of the lack of young age groups in the MICS data.

Figure.2.3.3.1. Predicted Population (INE) and MICS Population for 1996



As was expected the other age groups show a significant deficit for the young adult age groups from 15-19 to 55-59. Apart from the cause already quoted in the preliminary hypothesis, this situation can also be a result of massive displacement (some directly or indirectly linked to the war). This occurred in areas which MICS did not cover, caused by the poor social and economic situation which the country faces, which is symptomatic of the circumstances which devastate all sectors of Angolan life.

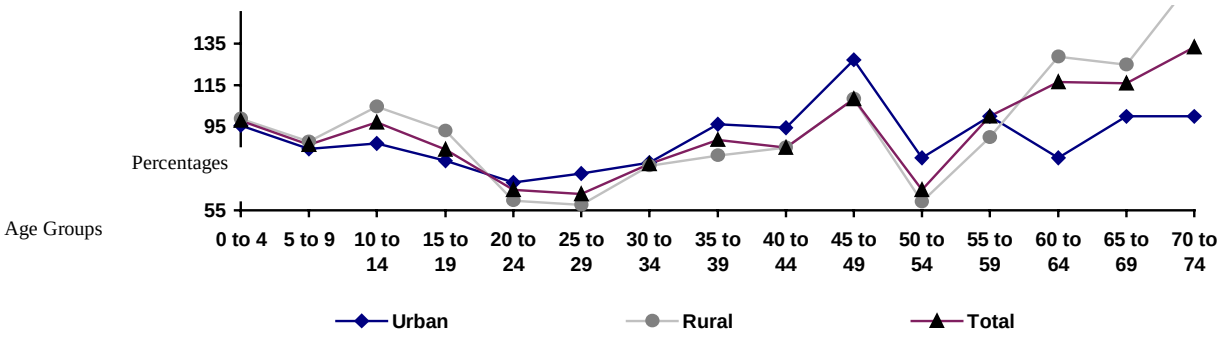
2.3.4. Population Distribution by Sex, by Age and by Area of Residence

2.3.4.1. Distribution by Sex

Taking the population surveyed as a whole, 41.6% are resident in urban areas and 58.4% live in rural areas. This distribution by areas of residence differs slightly according to sex. Forty-one point six percent live in urban areas and 46.1% are men and 53.9% are women. In the rural areas 46.5% are men and 53.5% are women.

Regarding MR, figure 2.3.4.1 gives the comparative details between the areas and the total sample.

Figure 2.3.4.1. Male Ratio according to Areas of Residence



The study of the MR results presents similar results for the two areas.

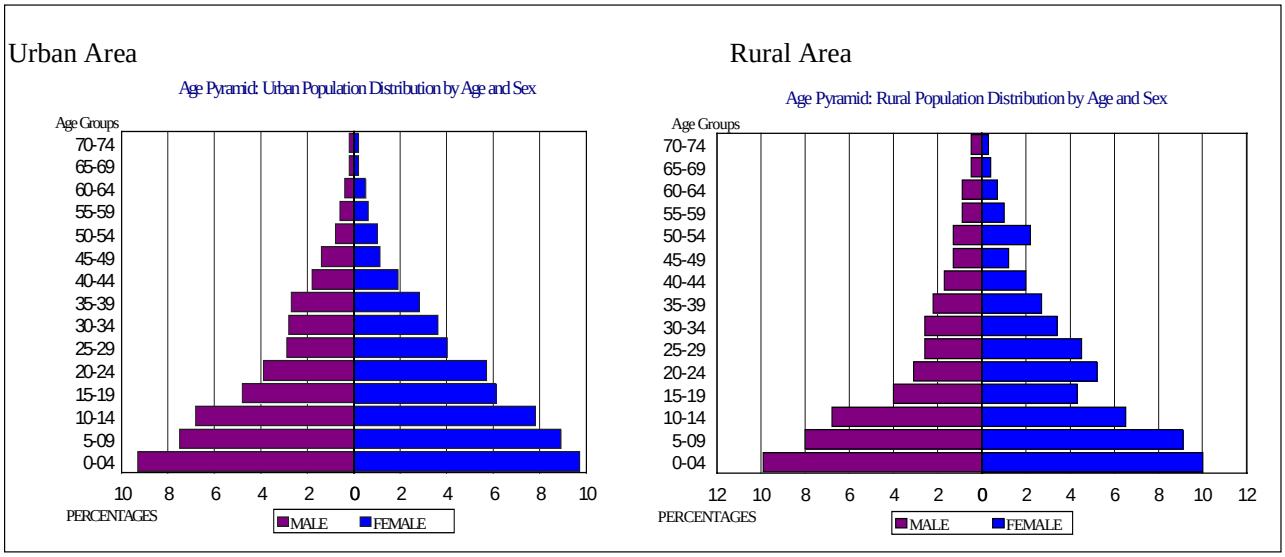
2.3.4.2. Distribution by Sex and by Age

The population of the urban area has an average age of 19.2. The median age is 15.1 for the total of the urban area. In this residential area dependency is valued at 0.68 reflecting a certain burden of the inactive on the active.

In contrast, rural areas show an average age of 20.9. This can have direct influence on the high level of dependency in the rural sector which is 0.78, a high figure and very worrying when we take into account the difficulties faced in the country's rural areas.

The examination of the age pyramids, illustrated in figure 2.3.4.2.1 taken globally reveal regularity in structures by sex and age: wide bases resulting from high fertility and youthfulness of the population, regularly narrow sides and long and thin apexes. These pyramids show that the population in the two areas of residence did not experience great stagnation in their evolution. Within the dynamic of national distribution the male deficit is extremely significant.

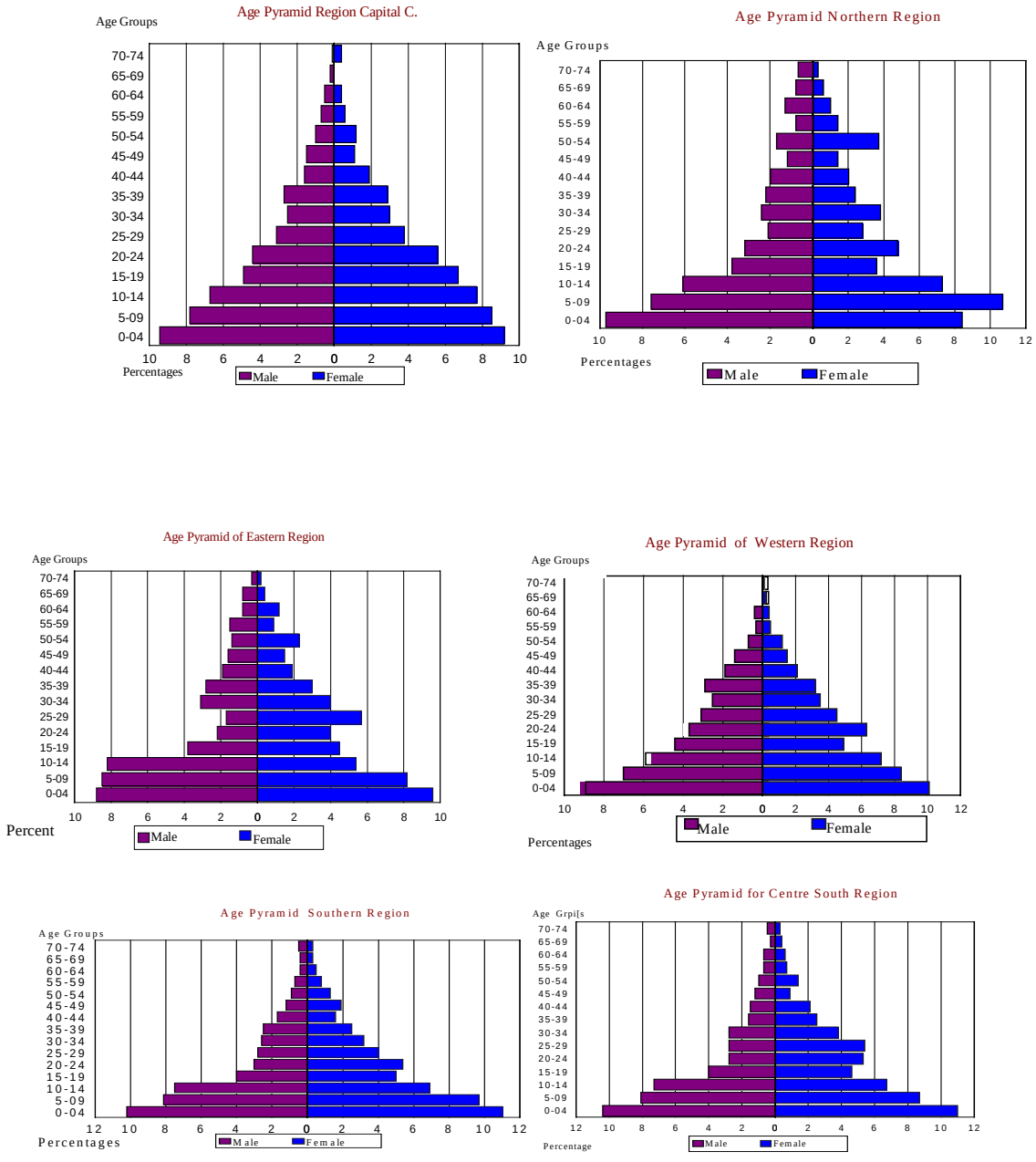
Figure 2.3.4.2.1. Population Distribution by Sex and by Age according to Areas of Residence



Thus, disturbances can be noted in certain generation groups, which upset the general behaviour of the pyramid, namely the female sex in the rural area, and to some extent, the male sex in the urban area. This is the case of the convex form observed in women in the 50-54 age group from the rural areas, and the concave form also for the rural area, in this case for the female sex in the 15-19 age-group. In the urban area the male sex shows rapid stagnation in the age groups from 25-39. These variations can be the result of the influence of various factors linked to the war situation prevalent in the country, as already cited, but in addition to the greater tendency to provide false information regarding dates of birth in the countryside.

2.3.4.3. Population Distribution by Sex, Age and Region

Figure 2.3.4.3.1. Population Distribution by Sex and by Age in Regions of Residence Age Pyramids



The main characteristics of the pyramids illustrated in figure 2.3.4.3.1 in relation to population distribution for the residential regions by sex and by age can be presented as follows:

- They have a similar structure to the national one;
- The number of cases by region is lower in relation to the national structure, for this reason there will be a sample variation. However, the distribution by region shows the problems engendered

by including false information given concerning dates of birth, and the lack of men, which occurs especially in the North and East.

2.4. Migration

When there is no serious or alarming event, which makes populations move, economic factors are the main determiners of migration. In the case of Angola, apart from economic factors, there were above all the direct effects of the civil war.

The objective of MICS is to estimate migration in general and especially, to collect up-to-date information concerning the displaced in the communities, in contrast to the displaced in camps which was the objective of a survey carried out by the National Statistics Office, INE 6.

Two sub-groups can be defined in migration: migration for social and economic reasons and migration due to war or drought, those people in the latter category being called displaced. Through the survey we can try and define the type of migration and the migrant's characteristics.

2.4.1. Definition of Migration and the Migrant

The analysis of migration is less direct than the analysis of other demographic processes. (7) The definition of the migrant is less clear than the definition of birth or of mortality. It depends more on a change in administrative residence. Different organisations use different definitions of residence. As such the data cannot be compared and a distinction must be made between the number of movements (migration) and the number of individuals who migrated (migrants)

For MICS two key dates were defined, Independence and the 1992 Elections. In relation to the first date, the migrant is anybody more than, or, exactly 21 years of age, who at the time of the survey resided in a different municipality from the one he/she resided in at the time of independence. For the second date, it is anybody more than 4 years of age, who resided in a different municipality from the one where he/she resided at the time of the elections. It is to be noted that post-electoral migration can be a subgroup of post-Independence migration, as some migrants from the second period could have been migrants in the first period.

In addition there are those migrants who still intend to migrate i.e. potential migrants. These individuals answered "yes" to the question: “Would you like to move locality?” after having been considered migrants.

Someone will not be considered a migrant if they changed their place of residence between these two dates, but stayed in the same municipality, this is simply considered internal migration within the municipality. In the same way, someone who changed locations between the two dates, but who then returned to the same place will not be called a migrant.

The age limits, used reflect the fact that for the first reference date, i.e. that of National Independence, all those who were under 21 had not yet been born, and as such could not reply. In the same way those under 4 cannot be counted in replies relative to the second key date, i.e. the 1992 elections.

Table 2.4.2.1. Proportion of the Population that Migrated according to Key Dates by Sex and Area of Residence

Key	Sex		Area		Total	Number
Dates	Male (%)	Female (%)	Urban (%)	Rural (%)	Total (%)	
Independence	20.3	18.2	24.6	15.5	19.1	7,741
Elections	5.6	4.9	4.0	6.1	5.2	16,507

2.4.2. Global Data

Almost a fifth of the population migrated between Independence and the time of the survey and 5.2% of the population between the elections and the survey. These percentages do not vary much by sex, but are slightly higher for men. Looking at the figures for the areas of residence the post-independence migrants moved in greater proportions to the urban areas, a significantly higher figure than to the rural area, see table 2.4.2.1. In the post electoral migrations the proportion of migrants is much lower than for the post independence migrations, but the variation between residential areas is not very significant.

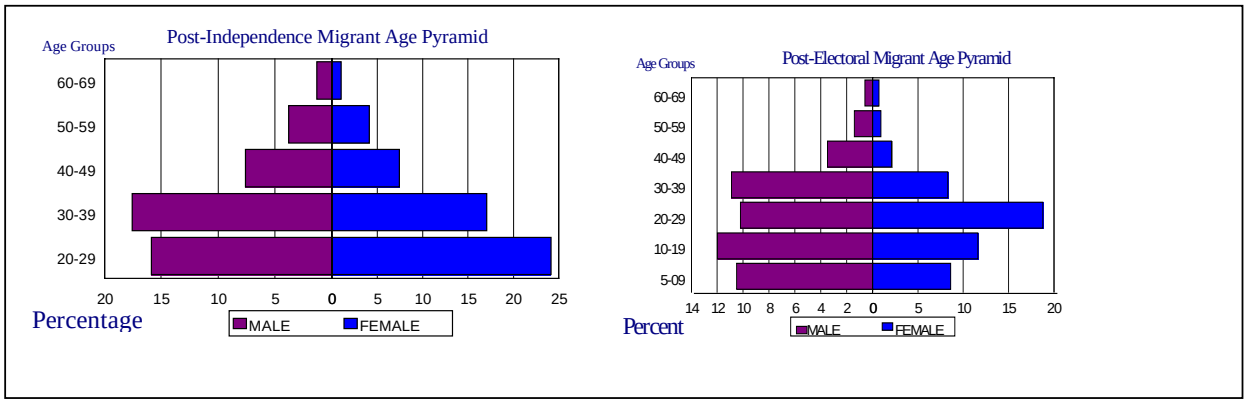
Migrant distribution by extended age groups is presented in Table 2.4.2.2.

Table 2.4.2.2. Distribution of Migrants by Key Dates according to the Extended Age Groups and Sex.

Extended Age Groups	Key Dates			
	7,741		16,507	
	Independence (%)		Elections (%)	
	Male	Fem	Male	Fem
5 to 20	-	-	50.1	44.5
21 to 49	85.6		46.0	51.7
50 and over	88.6		3.9	
	14.4	11.4	3.8	
Total	100	100	100	100

This distribution shows that after independence most of the migrants are young and the majority are of the female sex. The majority of older adult migrants are men although the proportion of women is not much lower. This tendency is almost identical for the post-Election migrants. They are of the male sex in the 5-20 age group, in contrast to the situation in the next age group where women are in the majority. In the last age group a balance is achieved.

Figure 2.4.3.1. Age Pyramids of Migrants for the Whole Country for the Two Key Reference Dates



2.4.3. Distribution of Migrants according to Sex and Age.

The characteristics relative to sex and age of the migrants will be examined using age pyramids. The migrant age pyramids for the reference dates are diametrically opposed. The pyramid relative to the post-Independence migrants is more similar to the structure of the age pyramid for residents, in spite of the fact that only those more than 21 years of age were taken into consideration. However, a relevant fact in the Post Independence pyramid is the increase in the number of females in the young adult age range in relation to males, which seems to indicate that there are more female migrants in the young adult range from 21-29 years of age. This tendency is consistent with the total population sample.

The age pyramid for post-electoral migrants reflects a more diversified and complex situation. This pyramid has two strong elements. There is an increase in population in the 20-29 female age group, in the same way as in the Post-Independence pyramid, as already mentioned. We also see possible false information in relation to these migrants' dates of birth, which possibly provokes the various concave forms of the respective pyramid. For post electoral migrants the most important aspect is the higher number of migrants between 20-39 years of age.

2.4.4. Migration according to Last Residence

On the whole migration in Angola is internal. In effect 95.5% of Post-Independence migrants are internal as against 4.4% of migrants coming from abroad. For the Post-Electoral migrants the values are 97.5% and 2.5% respectively.

We can define two tendencies in internal migration. The first is the inter-municipal migration or rather migrations, which take place from one municipality to another in the same province of residence. The second tendency is inter-provincial, which means that migrations were carried out between the different provinces of the country. The analysis of the results of each of these reflects the following, see table 2.4.4.1. For the migrants of 1975 i.e. Independence the tendency was inter-provincial migration about 62% as against 38% of the population which migrated from one municipality to another in the same province. As far as the post-electoral migrants are concerned the situation has not altered, as 61% of the migrants moved from one province to another and only 39% from one municipality to another.

Table 2.4.4.1. Types of Migration

Key Dates	Geographic extracts		Total	Destination		Total	Number
	inter-municipal (%)	inter-provincial (%)		Urban(%)	Rural(%)		
Independence	38	62	100	51.3	48.7	100	7,741
Elections	39	61	100	31.7	68.3	100	16,507

The situation, which the country has lived through, has led somewhat to these results. To a certain extent armed conflict affects the provinces as a whole, some more than others. In this way it is almost normal that people should move and live outside their province of residence.

2.4.5. Reasons for Migration

Table 2.4.5.1. Migration According to Reasons for Moving to Present Place of Residence by Sex and by Key Dates

Main Reasons	Key Dates					
	Independence			Elections		
	Male (%)	Fem (%)	Total (%)	Male%)	Fem (%)	Total (%)
War	45.6	50.5	48.2	37.8	42.4	40.2
Military Service	13.8	8.7	11.1	10.8	7.6	9.2
Seeking Work	25.1	23.9	24.4	28.2	25.0	26.5
Drought	0.6	1.0	0.8	1.0	0.8	0.9
Others	14.9	15.9	15.4	22.2	24.2	23.2
Total	100	100	100	100	100	100
Total Number	1,576			988		

Forty-eight point two percent of the post-independence migrants moved to their present residences due to the war, followed by economic reasons, seeking work at 24.4% and military service -11%, see table 2.4.5.1. A large percentage is attributed to the item "others", almost 15%; this item presents various features, there is not only one reason for the respective trend.
For the second reference date i.e. the Elections, 40% of migrants moved due to the war and 26% did so in order to seek improved working conditions. For the item "others", the percentage value is much higher than for the previous date. However, almost 1% of these people give "family reasons" as the reason for migration.

It is public knowledge that for both these dates the major cause of migration is war, however, for the post-electoral migrants the war appears in lower proportions than for the post- independence migrants. This is likely to be because of the extent of conflict at the time of the elections.

In general, in table 2.4.5.1 for women the percentage relating to war is significant. Women are a vulnerable group and appear to bear more of the burden of the consequences of the armed conflict in 1975 and 1992. The figures, which relate to women's military service, are included because until some time after Independence military service was also obligatory for them. The election figures can be due to double migration, as they are not very different. However, the category men "seeking work" increased from one date to another.
The present nature of the areas of residence (urban and rural) has a relative influence on the reasons for moving from one area to another. For Independence, the percentage situation between the residential extracts is almost stable. However, for the election date, there are large differences between the residential extracts. Table 2.4.5.2 illustrates these facts in a concise manner.

Table 2.4.5.2. Migrations According to Reasons for Moving to Present Residence by Area of Residence and by Key Dates

Main Reasons	Key Dates					
	Independence (%)			Elections (%)		
	Urb	Rur	Total	Urb	Rur	Total
War	**47.4**	**49.1**	**48.2**	**56.1**	**32.8**	**40.2**
Military Service	10.8	11.4	11.1	13.8	7	9.2
Seeking Work	25.2	22.7	24.4	13.5	**32.6**	**26.5**
Drought	0.6	1.9	0.8	0.0	1.3	0.9
Others	16.1	14.8	15.4	16.6	26.3	23.2
Total	100	100	100	100	100	100
Total Number			1,576			988

For migration due to the war and military service percentage values are lower in the post- electoral period than at the other key date. Percentages have grown in the item "looking for work". However, in the urban areas migration due to the war increases, perhaps because the armed conflict after the elections was more violent in the cities than in the rural areas, and in general more violent than the post-Independence conflict.

A well-known fact is that in rural areas 33% of people seek work in the post-electoral period, as against 14% in urban areas.

2.4.6. Migrant Characteristics

In this sub-section we will examine certain migrant characteristics from the information available on their level of education.

As for the resident population most migrants by key dates have no education or are very poorly educated. This means that they did not go to school or only went through the first years of the formal school system. One of the most relevant findings is that post- independence migrants seem more educated than the post-electoral migrants. However, this statement has to be seen in relative terms, as the lowest age limit is different for the two migrant groups. The post-electoral migrants of 4 or over are included.

Comparing the two reference dates for the total sample does not enable us to fully appreciate the difference in educational level between migrants and the resident population because we are dealing with different numbers for the sexes due to age limits imposed by the questionnaire, as previously mentioned. To overcome this problem we will make a comparative analysis, see table 2.4.6.2 taking the same age limit, or rather a higher age i.e. 21 for the two reference dates, as well as for the total sample which represents the resident population.

Table 2.4.6.2. Last Grade attended by Migrants of 21 or over by Key Dates.

Last Grade	Key Dates		
Attended	Independence (%)	Elections (%)	Population In General (%)
None	23.0	19.6	33.5
Low level*	2.1	1.6	2.5
First level	37.9	40.0	38.1
Second Level	20.0	21.0	14.9
Third Level	11.9	11.8	7.8
Secondary and Higher Education	5.0	6.0	3.2
Total	100	100	100
Total Number	1,628	523	7,740

Table 2.4.6.3. Distribution of Migrants 21 or over according to their educational level and by Area of Residence and by Key Dates

Last Grade Attended	Key Dates					
	Independence			Elections		
	Urban(%)	Rural (%)	Total (%)	Urban (%)	Rural (%)	Total (%)
None	**12.5**	**33.8**	23.0	**10.6**	**23.7**	19.6
Low level*	**2.7**	**1.4**	2.1	**3.3**	**0.8**	1.6
First level	**35.6**	**40.3**	37.9	**22.8**	**47.9**	40.0
Second Level	**23.8**	**16.1**	20.0	**28.4**	**17.6**	21.0
Third Level	**17.2**	**6.6**	11.9	**22.0**	**7.1**	11.8
Secondary and Higher Education	**8.2**	**1.8**	5.0	**13.1**	**2.8**	6.0
Total	100	100	100	100	100	100
Total Number	754	874	1,628	175	348	523

The follow-up on the analysis illustrates the importance of what is said in the above paragraph, i.e. 1) the migrants of both key dates have almost the same levels of education 2) both the areas appear more educated than the total population.

The lack of an item referring to education as a reason for migration is a handicap in the weighting used in the MICS questionnaire. It would perhaps enable us to decipher the reason for migration, even if the item "others", after checking did not reflect a trend in this direction.

The distribution of migrants according to level of education and area of residence, see table 2.4.6.3 illustrates that for both dates urban migrants are more educated than those from rural areas.

In our analysis the urban area registers a relative advantage in level of education for the two key dates. Education levels are higher in urban areas because infrastructures are available, there is school material and there are teachers for all grades and at all levels of education. However, there is uncertainty as to whether migrants obtained their education and respective level before or after migration. Excluding the "war reason" this fact could be seen as one of the most important reasons for groups of individuals to move to large urban centres, leaving the rural areas behind. In the same way the addition of migrants from one rural area to another makes the proportion of migrants increase in these areas.

2.4.7. The Displaced

Defined by the two key dates, they are a sub-group of migrants in general, constituted by individuals who migrated due to the war and drought. They make up almost 9% of the total post-independence population and 2.1% of the post-electoral population.

2.4.7.1. Distribution of Displaced People by Sex and Age

In general, distribution by sex and by age shows a slight male advantage in most of the age groups. Only in some of the age groups are females in the majority, for example in the 21-35 age group. For the post-independence migrants, 64.7% are women and 56.3% are men; for the post-electoral migrants 42.3% are women and 27.7% are men.

Table 2.4.7.1.1. Distribution of the Displaced Population According to Key Dates by Sex.

Age Groups	Key Dates		
	Independence (%)	Elections (%)	Non-migrant Population
4-20	-	**49.1**	53.1
21-35	**61.0**	**35.5**	25.0
36-49	25.4	11.4	11.9
50 and over	13.6	4.0	10.1
Total	100	100	100
Total Number	764	370	15,620

The post-independence 21-35 age-group and the post-electoral 4-20 age-group characterise and make up the majority of the displaced population. To a certain extent the latter accompanied the 21-35 year olds, which represents a significant proportion i.e. 35.5%. We must point out that the large deficit for both old adult groups shows that for the post- Independence group the proportion of old adults of 50 and over is greater than the proportion of the same individuals in the total population. We conclude that migration was carried out on mass, involving entire population nucleuses.

Box 2.4.7.1.

Calculation: END= (NDA/ETA)*PTP
END: Estimated Number of Displaced in the Country

NDS: Number of Displaced in the Sample

ETS: Total number by Age Group in the Total Sample

PTP: Total Population Predicted by INE, adjusted by Age Group

2.4.7.2. Estimates of the Number of Displaced People in the Country according to Key Dates

Using the definition in the analysis of the subsection on migration, we will try to find out what the estimated number of displaced people in Angola is for the two key dates: the Independence of Angola in 1975 and the year in which the first free elections were held in the country i.e. in 1992. In its demographic projection for 1996 the National Statistics Office, using the date of Independence as a reference, places the number of inhabitants in Angola at exactly 11, 904,000 with 5,118,000 inhabitants older or equal to 21 years of age and 9,714,000 inhabitants older or equal to 4 years. Using the calculation indicated below we obtain an estimate of the displaced at the key dates:

- those displaced post Independence are estimated at nearly 446,429.
- those displaced post elections are estimated at about 192,738.

The estimated numbers at key dates show that the civil war post-independence made more people move. However, we must not forget that the displaced of 92 are included in the displaced of 75.

It must be stressed that the displaced referred to in this analysis are only the displaced in the community, i.e. those that "live" in relatives' houses or in their own new homes. We do not take into consideration the displaced in camps who, according to the INE survey, number about 350,000. In

issues related to displaced people MICS could be complementary to the INE survey. However, this is relative as factors of definition from one survey to another differ.

2.4.8. Migratory Intentions

The following question was put to those who were identified as migrants, from any period: “Would you like to move from this locality?” Those that answered "yes" were considered as potential returnees. Thirty percent find themselves in this situation.

Of the 30% who intend to migrate, 50% moved from one municipality to another within the same province. The other 50% migration went mostly to the provinces of Luanda, Huila, Huambo, Kwanza Norte and Bie at 17.7%, 15.8%, 12.6%, 11.9% and 10.7% respectively. Distribution by sex of potential returnees is 54.5% for the male sex and 45.5% for the female sex, see table 2.4.8.1.

Table 2.4.8.1. Potential destination of Prospective Returnees according to the Main Provinces and Municipalities

Potential Destination Provinces	Proportions of Potential Returnees (%)
Zaire	0.1
Uíge	3.8
Luanda	17.7
Kwanza Norte	11.9
Kwanza Sul	0.1
Malanje	4.8
Lunda Norte	1.1
Benguela	6.8
Huambo	12.6
Bíe	10.7
Moxico	6.0
Namibe	3.7
Huíla	15.8
Cunene	3.2
Lunda Sul	1.7
Total	100
Municipalities most quoted	Proportion of Potential Returnees
Uíge - UÍGE	2.1
Damba - UÍGE	1.4
Ingombota - LUANDA	6.4
Rangel - LUANDA	8.0
Cazenga - LUANDA	1.9
N´Dalatando - KUANZA NORTE	10.7
Kalandula - MALANGE	3.7
Chongoroi - BENGUELA	2.3
Huambo - HUAMBO	6.5
Tchiungo - HUAMBO	3.4
Kuito- BIÉ	3.4
Camakupa - BIÉ	6.1
Camanongue - MOXICO	4.8
Lubango - HUÍLA	9.2
Chibia - HUÍLA	3.5
Total	73.4

It should be pointed out that the potential migrants' destinations are localities they wish to settle in and not necessarily their areas of origin.

3. SOCIAL AND LIVING CONDITIONS OF HOUSEHOLDS SURVEYED

3.1. Introduction

In contrast to the other modules the one on water and sanitation deals with issues related to the household. Questions were asked once in each household visited and preferably, to the head of household, or in his/her absence to an adult who could speak on his/her behalf.

The analysis of this module is divided into 4 parts. The first deals with the type of dwelling crossed referenced with some relevant indicators. In the second part we deal with access to safe water, its availability in the home and means used to keep and conserve it. To follow this, in the third part the issue of basic sanitation will be analysed i.e. the ways in which human and household waste are disposed of (domestic used water, rubbish and excreta). Finally, in the fourth part some issues that relate to the households' social characteristics are addressed. Indicators are used, such as ownership of some domestic appliances, like a radio and/or television, the average education level of the adults in the family, the rate of dependency in the household, and the number of people per dwelling. As much as possible comparisons will be made between the sexes, residential areas and regions, if numbers allow.

3.2. Sex of the Head of Household in relation to the Indicators in Analysis.

Table 3.2.1. Head of Household by Areas of Residence

Sex	Areas of Residence		
	Urban (%)	Rural (%)	Total (%)
Male	71.4	67.4	68.9
Female	28.6	32.6	31.1
Total	100	100	100
Total Number	1,496	2,841	4,337

In practically 69% of the households in the two residential areas, as well as in the total sample in general, men are household heads. (See table 3.2.1) Note, however, that the percentage of women who head households is slightly higher in rural areas.
The average indicator figures do not enable us to draw a strong conclusion in gender terms, see table 3.2.1.2. In general, men head slightly bigger families and with more people per room, in contrast women who head households sustain more dependants per adult, probably due to there being no husband at home. However, the average level of education is the most obvious difference in the female-headed households, which is a year lower than that of male-headed households.

Box 3.2.1.1.

Categories of Dependency Rate:

- 1st – Weak Rate: 0 to 0.79;
- 2nd – Moderate Rate: 0.80 to 1.55;
- 3rd – High Rate: 1.56 and more.

Categories of Number of People per Dwelling

- 1st.- Less than 1 to 1 Person;
- 2nd – 1.001 to 2 People;
- 3rd – 2.001 to 3.9 People;
- 4th -4 or more People

Categories of Level of Adult Education in Household*

- No level or Low Level: 0 to 0.99 years;
- Moderate Level: 1 to 3.99 years;
- High Level: 4 or more years of schooling.

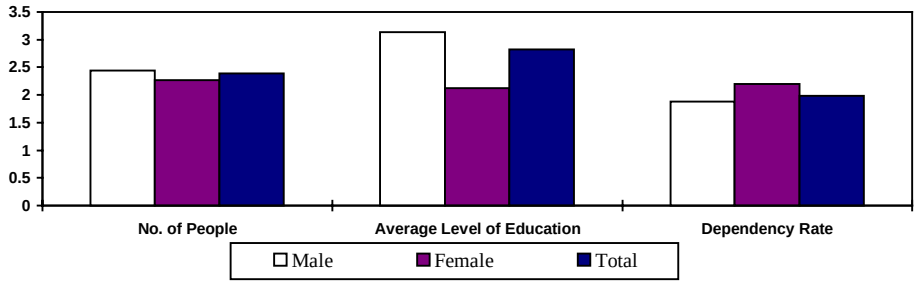
* The term high is used in relation to the other levels, as an individual with 5 years of schooling, normally cannot be considered to have a high level of schooling.

Table 3.2.1.2. Distribution of Average Social Indicators According to Sex of Head of Household

Sex Of Head of Household	Total Number	Social Indicators (Average)			
		Number of People per room	Average Level of Instruction of Adults*	Dependency Rate	Average N° of People per Family
Male	2,988	2.44	3.14	1.88	4.9
Female	1,349	2.27	2.12	2.20	4.0
Total	4,337	2.39	2.82	1.98	4.6

- This figure represents the average number of years of education

Fig. 3.2.1.1. Social Indicators according to Sex of Head of Household



Using the differential of the sex of the head of household, the ownership of a radio means that it is possible for that household to keep track of the news, have access to information of a general nature, as well as that which concerns the family, for example, information about various campaigns, either vaccination, awareness raising or others. Forty-one point two percent of the households headed by men have a radio at home; whereas for households headed by women the proportion is only 20.5%.

3.3. Household Dependency Rates

Using the elementary results by area of residence and by sex of household head table 3.3.1 indicates that in the cities the incidence of households with high dependence levels is much lower at 6.3%, compared to rural areas. In the same way women who are household heads have a much heavier load, with a lot of dependants compared to male-headed households, perhaps in part, as has been said previously, due to the absence of a husband, thus reducing the number of adults in the household, see table 3.3.1.

More used as a macro-economic indicator the level of dependency gives us a notion of the households' explicit reality. We observe a certain logic in the analysis of this indicator, for example, that a family which has a lot of dependants can have a high number of people per room. In addition we observe that where there is a high dependency rate the adult level of education in the household is low.

The dependency rate of households is more an indicator for the relative study of poverty, although a high figure does not necessarily imply that the household is poor. This is because people who work have an income, which is more than enough to sustain the family. But we expect that a family with more dependants by possible worker is more likely to be poorer.

However, apart from the above-mentioned characteristics this indicator shows the risk of the household fluctuating from a stable economic situation to a crisis one. This is because, if the household in question, depends on only one or two people, and if this or these people disappear physically or economically (loss of work), the situation of the household would get worse, as there would only be dependants left.

As table 3.3.2 shows the number of people per room is directly proportional to the dependency rate of the household. The greater the rate of household dependency the larger the number of people per dwelling, this is true for all key areas (urban, rural and the total sample).

Table 3.3.1. Dependency Rate in Household by Area of Residence and Sex of Head

Categories Of Rate of Dependency	Differentials				Total
	Area of Residence		Sex of Head of household		
	Urban (%)	Rural (%)	Male (%)	Female (%)	Total (%)
Weak	33.7	32.3	36.2	25.5	32.8
Moderate	39.4	34.4	39.7	29.1	36.4
High	**27.0**	**33.3**	**24.1**	**45.4**	30.7
Total	100	100	100	100	100
Full Total	1,496	2,841	2,988	1,349	4,337

Table 3.3.2. Average Number of People by Room by Household Dependency Rate and According to Area of Residence

Categories Dependency Rate.	Full Total	Urban	Rural	Total
Weak	1,407	2.2	2.0	2.1
Moderate	1,603	2.5	2.5	2.5
High	1,320	2.6	2.6	2.6
Total	4,330	2.4	2.4	2.4

3.4. Average Level of Education of Adults in Households

The table below (table 3.4.1.) indicates that there are higher numbers of educated adults in households in urban areas than in rural areas. A striking fact is the level of education attained in households headed by men in relation to those headed by women. This situation is in part consequence of the fact that men are generally better educated. Also there are fewer men in families headed by women.

Table 3.4.1. Distribution of Average Level of Education of Adults in the Household by Area of Residence and Sex of Head of Household

Categories of Average Level	Area of Residence		Sex of the Head of Household		Total
Of Education	Urban (%)	Rural (%)	Male (%)	Female (%)	Total (%)
S. Level/Low Level	15.0	35.6	19.8	44.0	27.3
Moderate	31.5	44.6	43.5	29.9	39.3
High	53.5	19.8	36.7	26.1	33.4
Total	100	100	100	100	100
Full Total	1,496	2,841	2,988	1,349	4,337

It is generally recognised that the average educational level of adults is one of the key factors in measuring the possibility of the household getting out of socially deprived situations. Normally the higher the level of education of the individual adult in the family the better its relative individual welfare is, and its capacity to confront the everyday reality of life.

In table 3.4.2 starting from the existing relationship between the level of education and the level of dependency we are trying to find out how a household is able to manage in economic terms. Normally what can be expected is that in a household with a high average level of education there is a lower dependency rate compared to a household with a lower level of education.

The results of the table above enable us to affirm that there is a tendency for the dependency rate of families to go down according to the level of education of the households. In previous studies we have already arrived at the conclusion and in Angola in general it is acknowledged that families have become nuclear when adult levels of education increase.

Table 3.4.2. Average Dependency Rate by Average Adult level of Education Categories in Household by Area of Residence.

Average Level of Education	Total number	Urban (averages)	Rural (averages)	Total (averages)
S. Level/B. Level	1,257	2.37	2.12	2.18
Moderate	1,616	1.30	1.40	1.37
High	1,397	1.25	1.32	1.27
Total	4,270	1.43	1.64	1.56

Table 3.4.3. Average Number of People by Room by Average Level of Education of the Household and by Area of Residence

Average Level of	Average Number of People per Room			
Education	Full Total	Urban	Rural	Total
H. Level/L. Level	1,257	2.2	2.4	2.4
Moderate	1,616	2.4	2.7	2.6
High	1,397	2.3	2.1	2.2
Total	4,270	2.3	2.5	2.4

Table 3.4.3 shows that in the rural area and in the total sample there is no uniformity in the average number of people by room, from the lowest to highest educational level. In urban areas the average is relatively the same for all levels. It is somewhat surprising to find that a moderate education level appears more on average in the rural area rather than the other two levels and in the total sample. It was thought the number would be stable or would fall with an increase in the level of education.

In urban areas, especially, the explanation for this fact perhaps comes from various factors which force families to send relatives to live with those who, as a result of their education, can sustain the expense of the addition of new members to the family, as they have the social conditions to do so.

The ownership of radios in relation to the average adult level of education in a household shows that the higher the average level of adult education in the household, the more possibility people have of keeping themselves informed by radio. However, it indicates great inequality of access to information through the radio; and implies difficulties for any strategy of social mobilisation and using the radio as a means of reaching people with less schooling, see table 3.4.4.

Table 3.4.4. Proportion of Households that own a Radio by Area of Residence.

Average Level of Education	Ownership of Radios			
Education	Total Number	Urban (%)	Rural (%)	Total (%)
H. Level/L. Level	1,257	17.5	12.0	14.1
Moderate	1,616	41.0	24.0	31.8
High	1,397	66.0	35.3	55.8
Total	4,270	50.7	23.9	34.8

3.5. Importance of the Mother Tongue.

According to the Portuguese Language Dictionary the mother tongue is the language from which another derives and the first language which is spoken by the Mother, (hence mother tongue). For MICS it is appropriate to talk in terms of the mother tongue

Table 3.5.1. Distribution of Language by Areas of Residence According to Sex

Mother Tongue	Areas of Residence		Sex		Total
	Urban (%)	Rural (%)	Male.	Fem.	
Portuguese	**46.4**	11.9	**27.8**	**24.8**	**26.2**
Kikongo	3.8	11.8	8.6	8.4	8.5
Umbundu	19.9	**36.8**	**28.7**	**30.7**	**29.8**
Kimbundu	18.2	13.5	15.0	15.8	**15.4**
Fiote	0.1	1.6	0.9	0.9	0.9
Ngangela	3.8	1.9	2.5	2.8	2.6
Cuanhama	0.2	4.9	2.8	3.1	3.0
Chockwé	6.5	5.5	5.9	5.9	5.9
Others	1.2	12.2	7.7	7.6	7.6
Total	100	100	100	100	100
Total Number	7,384	10,396			17,780

In dealing with an analysis of the ethnic-linguistic groups in Angola, it is necessary to select the most representative language (together they cover nearly 92% of the population). Hence, 8 languages have been selected, three of which predominate, namely Umbundu - 29.8% of the people surveyed, followed by Portuguese - 26.3% and finally Kimbundu - 15.4% of the people interviewed. These three languages make up a subtotal of 71.4% of the total sample.

In table 3.5.1 we give the distribution of the mother tongue by areas of residence and by sex for the total sample. There is a linguistic typology by areas of residence. On the one hand Portuguese is mainly spoken in urban areas, and on the other hand, Umbundu predominates in rural areas. This is understandable as Portuguese was the language of colonisation and became the lingua franca as a way of culturally unifying the population. Portuguese became the city language par excellence. Communication in the city is carried out largely in Portuguese; hence its status as the official language, and the ease with which administrative problems can be resolved when it is used.

In rural areas it a little more difficult to justify why Umbundu is used so widely, but it is possible to do so if we consider the widespread use of this language in the past. The fact is that people in urban areas have begun to lose their mother tongue, and their national languages. The increasing use of Portuguese has diminished the use of national languages in urban areas. Another factor, which could explain this, is rural migration. This has led many people, who lived in the rural areas, where Umbundu was dominant, to move to areas where other languages are spoken, causing this language to predominate. To a certain extent the percentage in table 3.5.1 is understandable. The relative justification of the effects of migration can be broadened if we analyse the use of languages by region of residence, see table 3.5.2.

Table 3.5.2. Distribution of People by Mother Tongue According to Regions of Residence

Mother Tongue	Capital C.Region	Northern Region	Eastern Region	Western Region	Southern Region	Centre South Region	Total
Portuguese	**53.7**	12.2	1.8	**29.0**	19.5	**14.9**	**26.2**
Kikongo	6.3	**42.6**	1.7	0.9	0.4	0.1	8.5
Umbundu	3.7	0.9	3.3	**48.8**	**31.4**	**72.6**	**29.8**
Kimbundu	**31.4**	**40.8**	0.8	6.8	0.8	0.4	15.4
Fiote	3.8	0.0	0.0	0.0	0.0	0.0	0.9
Ngangela	0.0	0.0	0.8	0.1	3.4	10.1	2.6
Cunhama	0.0	0.0	0.0	0.0	**21.6**	0.0	3.0
Chockwe	0.5	0.6	**73.0**	0.0	0.8	1.8	5.9
Others	0.5	2.9	**18.5**	**14.4**	**22.2**	0.1	7.6
Total	100	100	100	100	100	100	100
Total Number	3,761	2,440	2,587	3,154	3,204	2,638	17,784

Portuguese is widely spoken in the region of the Capital of the country. In all other regions indigenous languages are more common. However, the regions of the East and the Central South are three quarters monopolised by the languages of these regions. In the Eastern Region the last quarter is divided amongst a group of languages with foreign influence and mixtures of local languages, (others). We also find that Portuguese in this region (East) is only used by about 2% of the population. In the Central Southern Region Portuguese and Ngangela make up the other 25%.

To a certain extent regional languages are maintained in relation to ethnic-linguistic geographical distribution. The position of the Portuguese language on the national stage is a relevant fact. It continues to be one of the more influential languages in the country, but it does not have national hegemony. This fact is alarming, as national languages are not taught in the national educational system. In practice, in the regions where Portuguese is not used much, it is likely that we run the risk of poor assimilation of basic and elementary educational concepts used in Angola.

Table 3.5.3 shows the distribution of the mother tongue by age and reflects that children, adolescents and young adults are those that most use Portuguese, which makes its percentage values higher than for other languages.

Table 3.5.3. Distribution of Use of Mother Tongue According to Age Groups

Age Group	Mother Tongue Used (%)									Total
	Port.	Kiko.	Umb.	Kimb.	Fiote	Ngangela	Cunh.	Chock	Others	Total
2 - 4	**47.7**	6.8	**21.7**	4.6	0.5	2.8	2.9	5.6	7.4	100
5 - 9	**39.2**	6.5	**23.0**	12.0	0.5	3.1	3.2	5.4	7.1	100
10 - 14	**35.6**	6.8	**26.0**	11.5	0.8	2.7	3.0	6.0	7.6	100
15 - 19	**30.8**	8.9	**29.8**	11.9	1.2	2.5	3.6	5.5	6.0	100
20 - 24	**21.4**	7.9	**35.9**	17.8	1.1	2.6	2.0	4.6	6.7	100
25 - 29	**13.8**	8.9	**39.4**	17.1	1.5	3.0	2.2	5.7	8.4	100
30 - 34	12.0	8.4	**37.8**	**21.5**	0.7	2.5	1.8	7.8	7.5	100
35 - 39	9.0	10.8	**33.5**	**23.1**	1.2	2.3	2.3	6.4	11.4	100
40 - 44	10.8	12.5	**35.6**	**20.9**	1.6	2.9	2.0	6.4	7.4	100
45 - 49	6.9	11.4	**30.5**	**23.0**	1.4	3.7	3.6	7.4	12.1	100
50 - 55	3.4	14.5	**32.8**	**29.8**	1.2	1.1	3.1	6.8	7.4	100
56 - 59	4.1	12.7	**32.0**	**26.4**	0.5	2.9	3.6	7.9	9.7	100
60 - 64	3.2	13.3	**34.8**	**28.4**	1.9	2.1	1.6	8.3	6.3	100
65- 69	3.2	16.6	**31.0**	**23.8**	2.6	0.0	7.8	10.1	4.9	100
TOTAL	**26.2**	8.5	**29.8**	**15.2**	0.9	2.7	2.8	5.9	7.6	100

These three languages are distributed in different ways between the age groups. On the one hand, Portuguese is most used by children, adolescents and young adults; on the other hand Umbundu is distributed homogeneously between age groups with a slight increase in older adults. Finally, Kimbundu is exactly the reverse of Portuguese, being mainly spoken by adults and by older adults.

The percentage values which sustain Portuguese in the child and adolescent age-groups can reflect a weak attraction on their part, or what is more logical a lack of interest on the part of the parents and /or guardians in the teaching of different national languages to their children, as Portuguese and other national languages are seen to be in opposition. This fact can mean the loss of national languages.

It would be interesting to analyse the question of bi-lingualism, but unfortunately the MICS questionnaire did not make it possible to do so. However, it is possible to state that the fact someone speaks Portuguese does not mean that they do not speak one or several national languages. The distribution of the use of Portuguese between the different ethnic-linguistic groups would provide a more complete picture.

3.6 Type of Dwelling

Housing characteristics including type are an important aspect of the population's living conditions. Type of house is a very important factor because based on this we can define a pattern of social requisites for the families. In Angola, some housing-related issues are not pertinent when explaining the standard of living of households. The state subsidy to the housing market means that the poor and the non-poor live side by side in the same blocks, and this fact carries some weight in the analysis of the population's living conditions. The MICS questionnaire touched on the type of dwelling, taking into account the general features of its construction (detached house/villa, conventional house, traditional house, apartment, annex), the number of rooms, having a bathroom and a drainage system. Analysis centres round areas of residence and regions. Within these subgroups we make some comments in relation to gender, and differences existing between the dwelling and the mother tongue the household uses.

3.6.1. Type of Dwelling and Residential Patterns

In this sub-section a relative approach is made as to the distribution of households by type of dwelling, regions and areas of residence. In table 3.6.1.1 we see that in all the regions conventional and traditional types of dwellings (see definitions in box 3.6.1.1.) are in the vast majority. This can be explained by the fact that these types of dwelling are not very expensive, neither financially, nor in terms of construction materials. Generally speaking they are badly finished.

In national terms 56.3% of the households reside in dwellings of the traditional type and almost 36% in conventional residences. Both total 92.3% of the total number of households in the country. The households most often found in urban areas only represent 4.7% (3.7% for detached houses and 1% for apartments). As previously stated in urban areas we find conventional dwellings i.e. 51.2%

The same analysis can be made by areas of residence. In urban areas the conventional house is more common whereas in rural areas traditional houses appear in large numbers. However, it should be noted that the percentage of dwellings of the traditional type in the urban area (30.3%) reflects, to a certain extent, the existence of informal dwellings. Their construction materials are not incorporated in the characteristic constructions of the urban areas.

Table 3.6.1.1. Type of Dwelling by Region and Area of Residence.

Region	Type of Housing (%)							
	Villa	Conventional	Traditional	Flat	Annex	Other	Total	Real Figure
Capital C.	7.0	**50.5**	**31.1**	4.1	6.2	1.0	100	719
North	0.5	**30.9**	**68.0**	0.0	0.5	0.0	100	696
East	7.1	**30.0**	**57.4**	1.1	4.4	0.0	100	727
West	2.9	**42.3**	**53.7**	0.0	1.0	0.1	100	735
South	3.3	**31.2**	**63.0**	0.0	2.1	0.3	100	723
Centre South	3.2	27.2	66.5	0.5	2.7	0.0	100	735
ANGOLA	**3.7**	**35.9**	**56.3**	**1.0**	**2.8**	**0.3**	**100**	**4,335**
Urban	8.6	51.2	30.3	2.7	6.5	0.6	100	1,496
Rural	0.9	26.8	71.7	0.0	0.5	0.1	100	2,839

Box 3.6.1.1.

DEFINITIONS

DEFINITIONS

Villas: Modern Residence, European Style, well furbished.

Conventional Houses: Dwelling made with brick walls or cement blocks, with a corrugated zinc or cement fibre roof. These dwellings can also be constructed with wooden walls and aluminium plated roof.

Traditional Houses: Dwelling with adobe walls and a roof made of a variety of non-rigid materials for example: straw, wattle and daub.

Apartments: An independent part of a building of collective rooms for one tenant.

Annexes: Compartments integrated into a main house, generally situated in the yard of the main residence.

3.6.2. Type of Housing according to the Sex of the Head of Household.

The distribution of households in different types of housing is basically the same for households headed by women as for those headed by men, see table 3.6.2.1.

Table 3.6.2.1. Distribution of Households According to Type of Dwelling by Sex of Head.

Type of housing	Sex of Head of Household		
	Male (%)	Female (%)	Total
Villa	3.8	3.7	3.7
Conventional House	37.6	32.0	35.9
Traditional Dwelling	54.5	60.5	56.3
Apartment/Flat	1.0	1.0	1.0
Annex	2.9	2.5	2.8
Other	0.2	0.3	0.3
Total	100	100	100
Total Number	2,987	1,348	4,335

The trend for the sexes is similar to the national trend, although female-headed households reside slightly more in houses of a traditional type. There are, however, a larger number of women who head households living in traditional rather than conventional houses (60.5% as against 32%). At the same time there are more women heads of household than men residing in traditional houses, the opposite being the case for conventional houses. The fact that conventional houses could be more expensive to build than traditional houses suggests that female heads of households are in a more precarious economic situation than their male counterparts.

3.6.3. Types of Housing according to Mother Language.

There are significant differences in the type of housing between households using various national languages. Table 3.6.3.1 indicates their distribution.

Table 3.6.3.1. Type of Dwelling according to the Use of Mother Tongue by Household.

Mother Tongue	Type of Housing (%)						
	Villa	Conventional House	Traditional Dwelling	Apartment	Annex	Other	Total Number
Portuguese	7.8	59.0	23.6	3.3	5.2	1.1	381
Kicongo	2.1	30.3	**63.4**	1.6	2.1	0.6	512
Umbundu	3.0	**36.3**	58.1	0.3	2.2	0.1	1,436
Kimbundu	4.7	39.5	51.1	1.1	3.5	0.1	687
Ngangela	1.0	21.9	75.0	1.4	0.7	0.0	119
Cunhama	2.8	6.1	**90.3**	0.0	0.0	0.9	136
Chokwé	6.7	35.1	51.9	1.3	5.0	0.0	573
Others	1.6	15.5	80.5	0.6	1.6	0.2	449
Total	3.8	35.9	54.3	1.0	2.8	0.3	4,045

The table shows that most ethnic groups follow the same distribution as the population at the national level, with the exception of only those that use Portuguese as their mother tongue and live in housing typical of urban and suburban areas. Looking at the table there does not seem to be a direct relationship between the mother tongue and type of housing. However, the Cuanhamas and Ngangelas who subsist more on agriculture and as hunters and shepherds are placed in the traditional house category.

3.7. Number of People by Room

In contrast to the Dependency Rate, the number of people by bedroom, in our case by room is an indicator of present circumstances, and as such it is one more indicator of the household's level of poverty. Table 3.7.1 shows the distribution of households according to areas of residence and sex of the head of household. It enables us to detect that trends are the same in all the differentials where one or two people per room are common.

Table 3.7.1. Number of People per room according to Area of Residence and the Sex of the Head of Household

Categories of Number of People Per Room	Area of Residence		Sex of Head of Household		Total
	Urban (%)	Rural (%)	Male (%)	Female (%)	Total (%)
Fewer than 1	15.5	22.7	16.9	26.2	19.8
From 1.0 to 1.9 People	40.9	37.1	39.5	36.7	38.7
From 2.0 to 3.9 People	30.8	22.2	27.5	21.7	25.7
4 and 4+ People	12.7	18.0	16.1	15.4	15.9
Total	100	100	100	100	100
Total Number	1,492	2,835	2,891	1,346	4,327
Average Number of People by Room	2.3	2.4	2.5	2.3	2.4

If there are four or five people per room in a household it is more probable that the household is poorer than a household which has one or two people per room. This indicator reflects the country's present circumstances.

The results of table 3.7.2.show that households in the first category have, on average, a higher rate of dependency than the households with 4 or more than 4 people per room. This fact can be

caused by households where only elderly people live alone, or with one or two children in a house with several rooms.

Table 3.7.2. Average Dependency Rate and Average Adult level of Education in the Household according to the Category of the Number of people by Room.

Categories of Number of People by Room	Rate of Dependency		Average Level of Education
	Total Number	Averages	Averages
Fewer than 1	897	1.78	2.56
From 1.0 to 1.9 People	1,594	1.40	2.87
From 2.0 to 3.9 People	1,080	1.55	3.22
4 and 4+ People	756	1.70	2.35

The relationship existing between the average level of education of the adults and the categories of number of people per room, illustrated in the same table, also does not reflect what could be expected. The figures from this table do not appear to be linear; it was expected that the average level of education would decrease as the number of people per room increased. This did not happen, the average level of education decreases in the first three categories of this indicator. For both these measurements the results do not reflect what was expected. Categories of people per room at the two extremes seem less significant than the middle figures.

3.8. Access to Information within the Households.

One of the basic elements for the social cultural balance of the household is the ownership of a radio or television. Being informed, broadening your cultural horizons and having a good time are fundamental elements to be taken into account when looking at the different percentages by areas of residence and heads of household. Table 3.8.1 shows these trends in a detailed way.
In the urban area only half the households interviewed have a radio at home and in the rural areas only about 22% have one. The male heads of household have more privileges as far as access to information is concerned, more than double that of the female-headed households. This can also be a consequence of what has already been analysed in section 2.6.2 regarding the higher level of education of men in relation to women. As far as televisions are concerned the situation is appalling.

Table 3.8.1. Proportion of Households that own a Radio or Television according to Area of Residence, Sex of Head of Household and by Region of Residence.

Ownership of a Radio Or Television In the Household	Differentials				Total
	Area of Residence		Sex of Head of Household		
	Urban (%)	Rural (%)	Male (%)	Female (%)	Total (%)
Radio	**50.7**	21.8	**38.6**	19.1	32.6
Television	21.6	0.9	9.7	6.1	8.6
Total Number	1496	2841	2987	1348	4335
	Regions				
	Capital C	North	East	West	South	Centre South
Radio	61.9	18.9	30.5	37.0	30.0	17.3
Television	31.1	0.9	8.9	4.6	3.0	1.8

Fewer than 1 in 10 of the householders interviewed have a television in their houses.

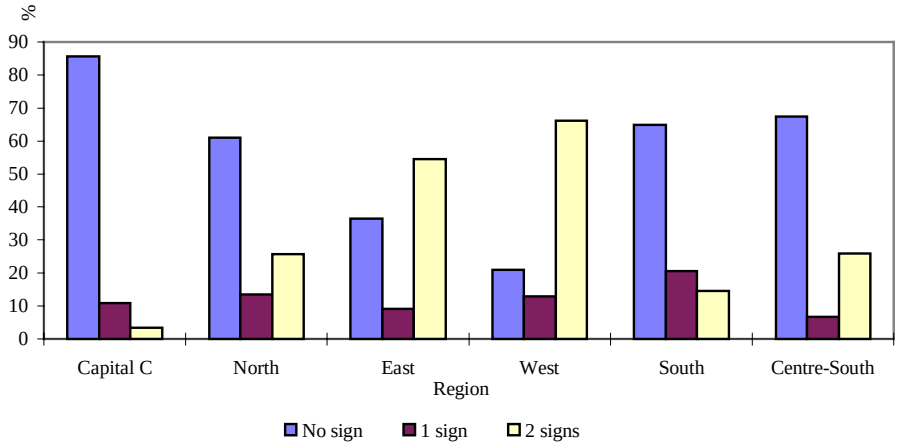
This means that through the mass media the flow of information needed to inform the household does not effectively reach the population.

3.9. Knowledge of Identification Signs for Mines and Attitudes to Strange Objects.

Data presented further on indicates that about 27,000 people have been victims of mines and explosive devices. However, the removal of mines and explosive devices is a long, costly and difficult process, one that will still take decades to complete. The costs are high and the removal of mines requires trained personnel, equipment and the involvement of society. The problem of mines cannot be solved from one day to the next. Parallel to the process of de-mining, awareness raising and education campaigns are being implemented in order to educate the communities to live with mines and to reduce the number of daily victims.

Figure 3.9.1

Knowledge of Identification Signs for Mines by Region of Residence



In order to assess the knowledge and attitudes of the population to mines, questions on knowledge of the different signs used in the country to identify mines were introduced into the MICS questionnaire, as well as questions on people's attitudes when finding a strange object.

The questions referring to mines in MICS were directed only at the heads of households. All the formal or informal signs the respondent identified were recorded without any of them being suggested by the interviewer.

3.9.1. Signs which Identify Mines and Explosives

The table below shows that 41% of household heads know at least one sign which identifies the danger of mines, whilst nearly 30% know two or more signs. However, most of those interviewed (59%) did not manage to identify any signs. Curiously, there are no great differences in knowledge of signs between the urban and rural areas.

Table 3.9.1.1. Knowledge of Identification Signs for Mines by Area of Residence

Indicators	Total	Area of Residence	
		Urban	Rural
. % of Respondents who do not know any signs	58.7	58.9	58.7
. % of Respondents who know at least one sign	11.9	12.6	11.5
. % of Respondents who know 2 or more signs	29.4	28.5	29.9
Total Number	4,337	1,496	2,841

Comparing the pattern of replies by region we observe that in the West and East (Benguela and Kwanza -Sul) and (Lunda-Norte, Lunda-Sul and Moxico) there is greater knowledge of the signs. The case of the Centre South is of special interest given that it is an area, which is quite heavily mined; however, the results do not show great understanding on the part of the households.

3.9.2. Signs most Quoted

One cause for concern is the great variety of signs used to identify mines and explosives, as people use many of these signs for other purposes, thus creating confusion at the heart of the population.

Almost 40% of total replies are "don't knows. Table 3.9.2.1 shows the proportion that each identified sign constitutes of all the replies recorded, the total number of replies being the denominator. The three signs most quoted are (crossed sticks, tied reeds/grass and a string across the track). The traditional sign of mines is crossed sticks, the sign most associated with warning. It is interesting that the symbol of the skull (an international sign) is recognised by only a low percentage of those surveyed, in spite of the awareness-raising campaigns, which currently use this sign.

Table 3.9.2.1. Proportion of Respondents who Identified each Sign by Region of Residence

Most Common Signs	REGION					
	Capital C	North	East	West	South	Centre-South
Painted Stick	8.8	13.4	**35.6**	6.1	6.8	23.7
Skeletons	**44.7**	13.0	2.5	8.7	4.4	6.9
Others	12.3	6.4	1.7	13.7	21.5	7.3
Stick with a Red Tape	12.3	7.7	40.0	10.8	4.4	18.0
Crossed Sticks	14.9	32.4	55.0	**61.1**	**34.3**	**49.0**
Tied Reeds or Grass	4.4	**40.1**	**50.2**	39.8	25.5	29.4
Symbol with a Skull	5.3	2.7	2.7	3.0	2.8	**15.5**
Coloured Object	1.8	3.0	4.2	2.8	8.8	6.1
White Plastic Box	4.4	2.3	1.0	1.3	1.6	4.5
Wire Across a Path	**20.2**	**31.1**	26.1	**36.6**	32.7	26.1
Piles of Stones	7.0	23.7	17.7	**31.3**	14.3	**33.1**
Numbers	148	526	952	1,135	394	596

*In relation to the total number of replies, the interviewer will be able to identify more than one sign.

Table 3.9.2.2. Proportion of Respondents who Identified each Sign by Area of Residence

Signs	Total	Area of Residence	
		Urban	Rural
Crossed Sticks	**47.0**	**42.2**	**49.5**
Tied Reeds or Grass	**36.6**	**34.9**	**37.6**
Wire Across a Path	**30.5**	**35.9**	27.5
Piles of Stones	23.5	18.6	26.2
Painted Stick	16.3	19.7	14.5
Skeleton sign	12.6	18.0	9.7
Stick with a Red Tape	16.5	19.7	3.1
Others	10.0	9.7	10.2
Symbol with a Skull	4.7	8.3	2.7
Coloured Object	4.4	3.8	4.6
White plastic Box	2.1	3.1	1.5
Total Number of Households	3,751	1,392	2,359

*In relation to the total number of replies, the interviewer will be able to identify more than one sign

3.9.3. Behaviour When faced with Strange Object

From the question "what to do if you find a strange object, for example, a pan or a box on a path or another place?", it was possible to illustrate different types of behaviour of those interviewed when encountering a strange and potentially explosive object. The prevalent attitude is not to touch it and to call the local authorities for help. Most people have a passive attitude in terms of prevention of accidents i.e. not touching whereas, only a very small minority assumes an active attitude, e.g. leaving a danger signal. *The objective of the awareness-raising campaigns is that when faced with a strange object people should have the following attitude: not to touch, leave a danger sign and call the authorities. MICS data indicate that only 3% of those interviewed would do all three things when faced with a strange object.*

In regional terms patterns of behaviour are more or less identical, although in the East and Centre South proactive attitudes and telling the authorities are more evident.

Table 3.9.3.1. Proportion of Respondents who adopted a Certain Attitude Faced with a Strange Object by Area of Residence

Attitude of Heads Of Households	Total %	Area of Residence	
		Urban	Rural
Do not Touch	50.1	53.0	49.1
Leave a Danger Sign	7.1	7.3	7.0
Call the Authorities	33.2	30.4	34.4
Don't Know	9.6	9.3	9.5
Total Number	4335	1494	2841

*In relation to the total number of responses

Behaviour patterns by region are more or less identical, although in the East and Centre South positive attitudes for signalling and telling the authorities would in fact be more evident.

Figure 3.9.3.1

Proportion of respondents who adopted a given Attitude when faced with a Strange Object by Area of Residence

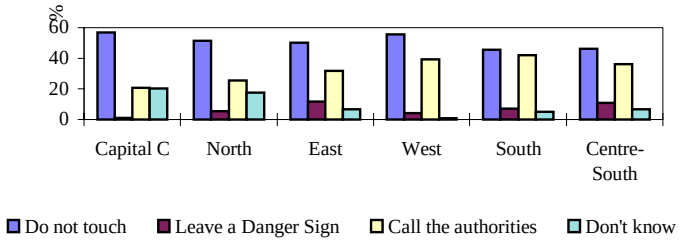


Table 3.10.1.1. Prevalence of Disabilities in The Population by Extended Age Groups and according to Sex and Area of Residence

Age Groups	Areas of Residence								
	Urban (%)			Rural (%)			Total (%)		
	Male	Fem	Total	Male	Fem	Total	Male	Fem	Total
0 - 18	1.2	0.8	1.0	1.7	1.2	1.4	1.5	1.0	**1.3**
19 and 19+	6.4	2.8	4.4	7.5	3.9	5.4	**7.1**	**3.5**	**5.0**
Total	3.3	1.7	2.4	4.0	2.5	3.2	3.7	2.1	**2.9**
Total Number	3,546	4,148	7,694	5,567	6,477	12,044	9,113	10,625	19,738

3.10. Disabilities and Mines

A description of people interviewed for MICS and their disabilities and the problem of mines and explosive devices are elements of direct importance in public health terms, as they directly or indirectly affect the country's capacity to generate and manage human resources. The inclusion of physical and mental incapacity in the questionnaire was directly or indirectly related to the war, which the country has lived through for nearly 30 years.

In this context a group of essential tables illustrate the data on the prevalence of disabilities not only according to sex, age, and area of residence, but also some include graphic illustrations, not only on mines.

We have subdivided the reasons for disability amongst the most important causes, including the war and mines. However, it is important to stress that the presence or not of a disability was defined by those interviewed.

3.10.1. Prevalence of Disabilities for Sample

Of those interviewed 3% possess a disability. Sixty percent are male and 40% are female.

Table 3.10.1.1 represents the prevalence of disabilities in those people interviewed in extended age groups (on the one hand children and adolescents and on the other hand young people and adults) according to sex and area of residence.

The indicators in the table do not vary much in relation to areas of residence. The male sex has larger percentages in all residential areas. However, in general there is a slight increase almost 0.4%, in the number of disabled in rural as opposed to urban areas in the age group from 0-18. It rises to 1% in the 19 and older age group. In general, people of the male sex represent a larger proportion of the disabled in rural areas.

3.10.2 Type of Disability

The information on the type of disability or handicap was collected asking the people interviewed to say if they are disabled or not and indicate what their disability is. Seven types of disabilities were described, blind, deaf and dumb, paralysis of the arms and legs, mutilated arms, mutilated legs, and finally mental illness. There were other types of disabilities specified in the questionnaire by the respondents, but which were not categorised during the data processing, as they were not part of the initial list, not having been pre-defined.

Table 3.10.2.1. Types of Disabilities by Areas of Residence and by Sex

Type of Disability	Areas of Residence		Sex		Total
	Urban (%)	Rural (%)	Male	Fem	
Blind	6.8	**10.0**	**10.0**	7.0	8.9
Deaf/Dumb	**12.1**	6.2	8.0	8.9	8.4
Paralysed Arm	8.7	8.1	8.5	8.1	8.3
Paralysed Leg	**21.5**	**29.3**	**23.9**	**30.6**	**26.5**
Mutilated Arm	5.7	7.3	7.6	5.4	6.7
Mutilated Leg	**21.**5	**18.6**	**22.1**	**15.6**	**19.6**
Mental Illness	3.6	4.3	2.8	6.0	4.0
Others	20.1	16.2	17.1	18.4	17.6
Total	100	100	100	100	100
Total Number	177	335		512	

Comments on table 3.10.2.1 include a comparative analysis between areas of residence and distribution by sex in the total sample. In general two types of disabilities characterise those incapacitated, or with disabilities in the sample: they are paralysis from the waist down and mutilation of the same limbs. As many as 30% of the total female sample cite paralysis of the lower limbs. The fact that in the general table two of the disabilities predominate can be a result of the armed conflict, which the country has lived through, but also possibly the prevalence of diseases such as poliomyelitis. An analysis of the causes can clarify this.

The proportion attained by the category *others* is due to the fact that we were unable to draw any trend from this item. When processed the questionnaires of people who answered *others* presented results of the kind: finger chopped off, without an eye, dislocated arm, fractured skull, etc.

An attempt was made to find a way of reducing the respective percentage values using a class or category, which could include the most varied replies, but this was not possible.

3.10.3 Causes of Disability

The information on the causes of disability was collected by asking the disabled interviewed to indicate what the causes of their disabilities were within a previously defined pattern, established when the questionnaire was designed. Five causes were described: mines, war (not including

mines), disease, accident and birth. Those interviewed defined other causes for their handicaps but these had not been predefined by the questionnaire. In fact the item "others" was necessary, as the categories included by MICS did not include all possible causes of handicap.

Table 3.10.3.1. Causes of Disabilities by Areas of Residence and by Sex

Causes Of Disabilities	Areas of Residence		Sex		Total
	Urban (%)	Rural (%)	Male	Fem	
Mines	9.7	7.7	11	4.4	8.4
War (not mines)	**31.5**	19.7	**27.2**	**18.5**	**23.8**
Illness	**31.6**	**37.7**	26.8	**49.5**	**35.6**
Accident	9.6	14.1	**15.2**	8.3	**12.5**
Birth	11.0	13.9	13.0	**12.7**	**12.9**
Others	6.6	6.8	6.9	6.6	6.8
Total	100	100	100	100	100
Total Number	173	338	511		

The results in table 3.10.3.1 reflect several contrasts between the areas of residence and the total sample which reflect the trend for the country. In the first place, when comparing the countryside and the city different characteristics are involved in the causes of the disability. On the one hand, and in a general way, there is a high proportion of handicapped because of the war and disease, with figures very close to 31% (for each cause) in the urban area. On the other hand in the rural area there is a disparity between the two main causes (war and disease), the predominant factor is disease, 37.7% as against 19.7% for handicaps caused by the war.

In the total sample distribution by sex also shows disparities, which are interesting to comment on. Nearly 38% of men are mostly struck down by disability due to the war (mines and war together). In contrast women have handicaps more because of disease: percentage equal to 49.5%.

The percentages for women can be a result of the lack of existing sanitary conditions, which mostly affect women and children (vulnerable groups). It is normal for men to be war victims and suffer more from disabilities as a result, as they are the ones who mainly make up the ranks of the army, thus being more directly exposed to the direct dangers of combat.

In periods like those the country has seen and in the total sample the most often quoted cause is disease. One of the indirect causes is armed conflict. However, a relevant fact is that though in the total sample disease is the main cause, war and mines (the latter also are due to the war) together have figures which are close to those of disease, i.e. almost 32% of the total. This means that the war and mines have cost the Angolan population dear in terms of their physical motor faculties.

Another fact, which should be highlighted in this analysis, are the figures for disabilities caused by mines. Further on we will see how in real terms these percentage figures include important absolute values.

3.10.4 Estimates of the Number of People with Disabilities caused by |Mines and the War

The presentation of estimates, on the one hand of the total for the country in 1996, and on the other hand for those in the 0-18 and 19 and over age groups will give us an idea of the present

situation as regards the handicapped in general, and those whose disability is caused by mines, war or both together.

These results show that there is an estimated total of approximately 330,000 disabled, (mainly adults) in the country, nearly 100,000 of whom are disabled as a direct effect of the war. The results in table 3.10.4.2 are generally lower than those presented by various existing sources in the country. However, the estimated numbers provided by MICS show the cost of the war in terms of disability.

Table 3.10.4.1. Estimates of the Number of Disabled by Mines and War in the Angolan Population Predicted by INE in 1996

Age	Causes		Total
Groups	Mines	War	Mines and War
0-18	2,433 people	8,516 people	10,949 people
19 and over	24,967 people	68,959 people	93,926 people

Table 3.10.4.2. Estimates of the Number of Disabled in the Angolan Population in 1996

Number of Disabled	Causes			
Estimates in Total Population	All	Mines and War	Mines	War
Estimates	327,533	105,708	27,617	70,090
Intervals of Confidence	306,697-385,401	83,733-127,682	16,348-38,886	59,181-96,999

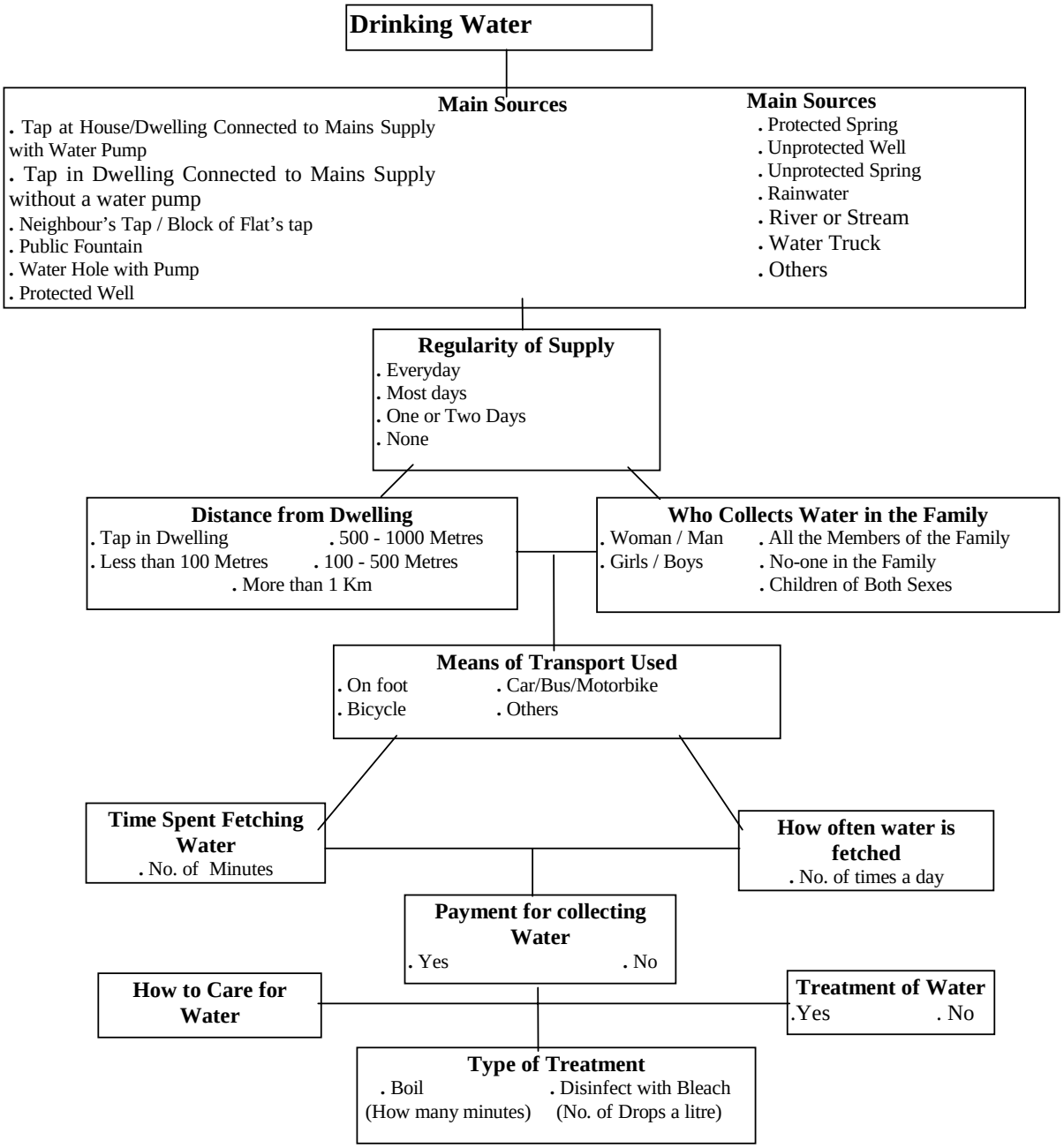
Box 3.10.4.1.

Calculation: END= (DS/NTS)*TPP

END: Estimates of the Number of Disabled People in the Country
DS: Disabled Sample
NTS: Number (of corresponding age group) in the Total Sample
TPP: Total Population Predicted by INE

4. ACCESS TO WATER AND BASIC SANITATION

The MICS analysis of safe water is done on the basis of the organigram structure below. We begin with the sources of water supply and include the treatment of drinking water.



Some of the sections illustrated will be assessed using differentials such as sex of head of household, area of residence and where possible region of residence.

The National Water Board (D.N.A) uses the following concepts:

- Raw Water: the water courses;
- Used Water: the water used at home or by industry and which is often reused for various services, such as washing clothes or cars, maintenance of buildings etc;
- Potential Drinking Water: water which can be retrieved and treated to be subsequently consumed;
- Drinking water: considered clean water and fit to drink.

4.1. The Main Sources of Drinking Water.

The respondents were asked the following question: What *are the main sources of drinking water that your family uses*? From the total sample we found which five of the thirteen sources indicated in the questionnaire are the most common, see table 4.1.1.

- Pond, River or stream for 39.6% of the households;
- Protected Well for 11.9% of the households;
- Unprotected Well for 8%;
- Public Water Fountain for 6.6%;
- A neighbour's/building's Tap for 6.2%.

The other sources of water supply together are used by 27.6% of the households, presenting similar and relatively low percentage values. Of the thirteen sources indicated in the MICS questionnaire four supply households through the piped water system, (tap in the house linked to the water network with water pump, tap in a house linked to the network without pump, tap at a neighbour's house or in a block of flats and the public water fountain). The others are considered to be alternative water resources.

The five main sources of drinking water are revealed by the fact that the most quoted source has rural characteristics, as it is recognised that only some of the country's provinces have urban areas with a river or a stream going through them, as in the case of Luena in the province of Moxico. For this reason this source is significant in the rural areas, and perhaps as a consequence of this, in the total sample its percentage figure is quite high.

In the total sample only 15.3% of households have a piped water supply. This means that almost 4/5 of the sample use alternative supplies of drinking water. Two point five percent of the 15.3% of households have a mains water supply. However, having a system of piped water at home does not necessarily mean drinking water is available all the time. The permanent cuts and repeated shortages in the water supply are such that the data could be distorted.

However, according to the Water Board, drinking water can be collected without risk (the without risk is relative as we know that tap water is very often improper for consumption) from five of the thirteen sources previously quoted namely:

House tap connected to the water supply network with a pump;
Tap in the house connected to the water supply network without a pump;

Tap of the neighbour/block of flats;
Public Water Fountain;
Protected Source.
Put together they make up 19.2% of the household sample.
We could include the waterhole with water pump and the protected well, 16.9% bringing the total to 36.1% of households with access to drinking water "without risk". But because we are not sure of the quality of water or that is to say contamination risk, it is thought better not to include them in the list of sources of safe water.

4.1.1. The Main Sources of Supply by Area of Residence

One of the first conclusions to be drawn is that the formal system of water supply from the State water companies is poor. This fact forces households to use other water sources, including the cities, where 35% of the households have piped water.

It is interesting to analyse the supply to areas of residence. As was previously said the water supply from pond, river or stream is without a shadow of doubt the most common source in the rural area; 53.3% of the households in these areas find water to drink in ponds, rivers or streams. In the urban area practically speaking, although there are only 5 main sources, they are equally distributed by the number of households. The number of households, which have piped water as a main source, is very important. In the urban area only 35% have this source (the four main sources in table 4.1.1.1.).

Table 4.1.1.1. Main Sources of Drinking Water according to Area of Residence

Main	Areas of Residence		Total
Sources	Urban (%)	Rural (%)	Total (%)
Residential Tap Connected to Mains with Pump	1.9	0.2	0.8
Residential Tap Connected to Mains without Pump	4.1	0.2	1.7
Neighbour/Block's Tap	**16.4**	0.2	**6.2**
Public Fountain	**12.3**	3.3	**6.6**
Water Hole with Pump	3.4	**6.4**	5.3
Protected Well	**11.9**	**11.9**	**11.9**
Protected Source	2.6	4.6	3.9
Unprotected Well	4.9	**9.9**	**8.0**
Unprotected Spring	3.0	**5.9**	4.8
Rain Water / Artificial Lakes or Chimpacas	1.1	3.1	2.4
Marsh, River or Stream	**16.4**	**53.3**	**39.6**
Water Cistern Truck	**11.2**	0.2	4.3
Others	10.8	0.7	4.4
Total	100	100	100
Total Number	1,493	2,839	4,332

One would expect the supply of water by lorries (cistern trucks) to be higher up the list in the table, but this is not so, which to a certain extent goes against the results of the Priority Survey on the Living Conditions of the Population, [10] where this source of water supply was quoted in

[10] "Profile of Poverty in Angola" National Statistics Office, GMCVP, Luanda, September, 1996, 96 p.

almost 39% of the households in four of the largest cities in the country (Luanda, Benguela-Lobito, Huila-Lubango and Luena).

To a large extent the trend in rural areas influences the trend for the sample as a whole. Ponds, rivers or streams have high percentage values in relation to other sources of supply. After seeing which main sources were quoted by households, it is quite interesting to find out the procedures families use to ensure secondary sources of supply. This is because the first source does not always have water. This question was put to respondents so that they would indicate the secondary sources of drinking water. (See table 4.1.1.2.) The sources are the same; what changes in the table below is the fact that the households have indicated these sources as secondary.

Table 4.1.1.2. Secondary Sources of Drinking Water Supply according to Area of Residence

Secondary Sources	Areas de Residence		
	Urban	Rural	Total
Residential Tap Connected to Mains	0.0	0.0	0.0
with Pump	2.0	0.0	1.1
Residential Tap Connected to Mains	10.2	0.0	5.3
without Pump	8.2	2.2	5.3
Neighbour/Block's Tap	2.0	6.5	4.2
Public Fountain	8.2	4.3	6.3
Water Hole with Pump	2.0	4.3	3.2
Protected Well	6.1	13.0	9.5
Protected Source	1.0	8.7	4.2
Unprotected Well	4.1	17.4	10.5
Unprotected Spring	20.4	39.1	29.5
Rain Water /Artificial Lake	24.5	0.0	12.6
Ponds, River or Stream	12.2	4.3	8.4
Water Cistern Truck			
Others			
Total	100	100	100
Total Number	252	374	626

If we look at the table above we note that piped water as a source is low in percentage terms. This means that households in general rarely use this as secondary source of supply.
As opposed to a piped water supply as such, for many households the pond, river or stream and the cistern truck are secondary sources of water supply. In this case the permanence of ponds, rivers and streams and the use in many cases of cistern trucks makes it easy to see why there is an increase in their percentages. They can be considered as emergency sources of water when the normal source fails.

4.1.2. Regularity of Supply, Distance from the Main Source to the Household, Time Spent Looking for Drinking Water.

In this subsection we analyse various key indicators in relation to access to drinking water. These indicators are to a certain extent, inter-connected, as when speaking in terms of regularity of supply we refer indirectly to the distance from the house to the main source, and as a consequence the time spent collecting water and the means used to do so. These parameters can all affect the means used to obtain water.

Even for those that have a piped water supply this only means that the said residence has a system of running water. Households quoted this as a main source, but in fact it is well-known that there is not always a regular supply of running water.

In the urban area 44.2% fetch water at least twice a day. In rural areas this percentage rises to 72.1%. Over very short distances members of households opt for the easy solution and collect water perhaps 2, 3 or more times a day.

Table 4.1.2.1 shows that in urban areas only about 62% of households state that their main source of supply provides them with water every day (heads of household). The respondents were asked to say how reliable their main water source had been during the whole of the previous week or in other words *everyday, most days, one or two days or none at all.* 81.6% of households stated that the supply had been constant (everyday) over the previous week. In the urban areas only 61.7% of the households said that they had had water everyday, this is because they depend on sources that are not very reliable, in this case sources linked to the mains water supply network.

Households where there was no tap at home were asked, "how many times a day they went to fetch water", see table 4.1.2.1. 32.3% go to get water once or less than once a day, 45.2% replied that they fetched water twice a day and 22.5% fetch it 3 or more times.
Table 4.1.2.2.shows that 41.5% of the households go less than 100 metres, i.e. this is the distance they carry drinking water from the main source to their homes. Most of the sources of water supply are less than 500 metres away. However, in 23.8% of the households people have to go more than 500 metres.

Almost 56% of the total number of households spend less than 30 minutes carrying out this domestic task, i.e. 60.3% in urban areas and 53.1% in rural areas take this amount of time.

Table 4.1.2.1. Proportion of Households by Number of Times a Day they Fetch Drinking Water According to Area of Residence

Reliability	Areas of Residence		Total
Of Sources	1,495	2,556	4,051
During the Last Week	Urban	Rural	Total
Everyday	61.7	93.4	81.6
Most Days	17.1	3.6	8.6
One or Two Days	20.9	3.0	9
No days	0.2	0.0	0.1
Total	100	100	100
N^{o} of Times Water is fetched a Day			
Less than Once	31.8	6.3	15.4

Once	15.7	17.6	16.9
Twice	28.5	54.5	45.2
3 Times	12.2	14.4	13.6
4 Times	4.9	4.2	4.5
More than 5 times	6.9	3.1	4.4
Total	100	100	100

Table 4.1.2.2 summarises the distance from the source of water and the time taken in collecting drinking water. From the equation time spent and number of times per week that each household fetches drinking water, we can calculate the time spent fetching water by household per week. Thus, for the majority of households who had collected water in the previous week, they had spent nearly 280 minutes, or that is to say 2 hours 40 minutes on this domestic chore.

Table 4.1.2.2. Basic Indicators of Search for Drinking Water by Area of Residence

Distance	Areas of Residence		Total		
Source	1481	2791	4272		
Residence	Urban (%)	Rural (%)	Sex (%) Total (%)		
			Male	Fem.	
Residential Tap	5.7	0.6	3.0	1.4	2.5
Less than 100 Metres	**47.3**	34.0	**39.5**	**37.8**	**39.0**
100 to 500 Metres	30.3	37.4	34.3	35.9	34.8
500 to 1000 Metres	12.2	18.4	15.8	16.6	16.1
More than 1Km	4.4	9.6	7.3	8.3	7.7
Average Time Spent	100	100	100	100	100
1 to 9 Minutes	15.5	13.8	14.2	14.8	14.4
10 to 19 Minutes	**27.9**	**24.4**	**26.3**	**24.3**	**25.7**
20 to 29 Minutes	16.9	14.9	15.8	15.1	15.6
30 to 39 Minutes	20.0	20.8	21.5	18.5	20.5
40 to 49 Minutes	4.2	6.1	4.9	6.5	5.4
50 to 59 Minutes	0.6	1.7	1.1	1.6	1.3
60 to 69 Minutes	10.6	12.1	10.8	13.2	11.5
70 Minutes and More	4.3	6.3	5.4	5.9	5.6
Total	100	100	100	100	100
Total Number	1,228	2,544	2,577	1,195	3,772

The previous equation between the distance and time spent in fetching drinking water emphasises the means used by households to fetch their water. For the indicator (means of transport used) in the total sample, 98.5% of the households go on foot. There is not any striking variation between the areas of residence i.e. urban or rural.

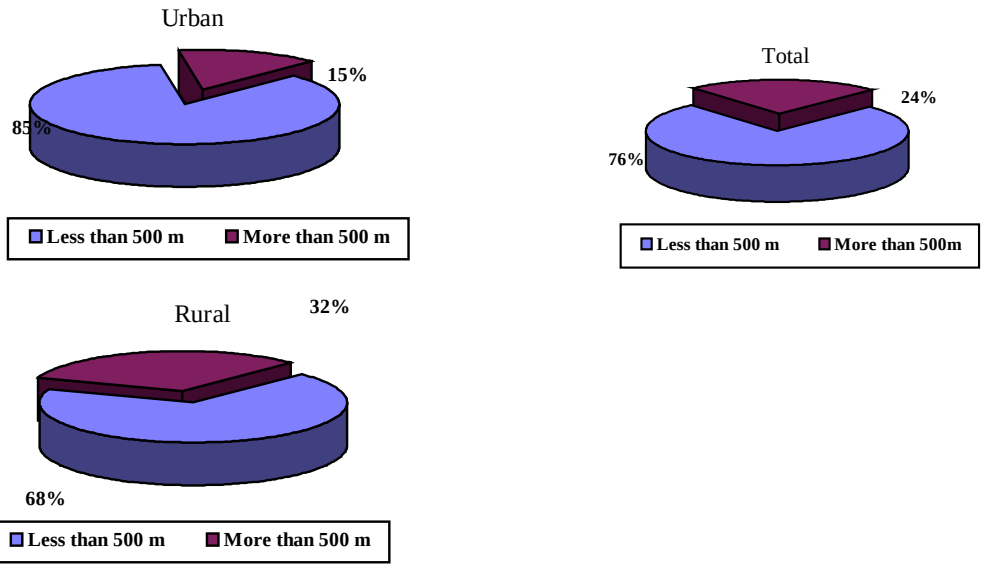
It is of interest to find out "who in the household fetches drinking water," so that we can see how the household organises its domestic chores.

In reference to this indicator the head of household/or caretaker was asked which members of the household (women, men, girls, boys, children of both sexes, all the members of the family, none of them or others) generally did the chores. The result for the total sample indicates that more than 3/5 of the people who fetch water within the household are women, and nearly 17% are girls. These results indicate that fetching drinking water in family households is a chore carried out by the female sex.

Proportions are higher in the countryside than in the city. In nearly 96% of households in rural areas it is the women who fetch water for the family.

In rural areas the household members go proportionally much further to fetch water, see figure 4.1.2.1. This implies, as a consequence, that the time spent on this task is greater than in urban areas.

Proportion of Households with Water More than 500 Metres Away



Note that in rural areas members of the households have to go somewhat further to fetch water, see table 4.1.2.1. This factor implies that time spent on this task in this area is greater than in the urban area.

Table 4.1.2.3. Payment for Water by Households according to Area of Residence

Payment	Areas of Residence		Total
For Water	Urban (%)	Rural (%)	Total (%)
Yes	52.5	3.1	20.8
No	47.5	96.9	79.2
Total	100	100	100
Total Number	1,382	2,811	4,193

It is extremely important to find out if the water acquired at the source of supply is bought. On the one hand it would be interesting to refer to the percentage of households that pay the State, and on the other hand, the proportion of households which pays for water in the informal sector, buying it at markets, from cisterns or paying a neighbour. Unfortunately, the question of payment was only put to households that did not have a tap at home. It is not possible to assume that households that have a piped water supply at home pay a water bill. This is because the State does not have absolute control over these consumers. In addition to this, there are the illegal connections to the mains, which, to a large extent, disrupt the formal system.

For the households which did not have a tap at home and who answered the survey, only 20.8% pay for the water they fetch. As it is not possible to know if the same people pay the state is likely that most of the households who pay for water do so through the informal system.

This fact, apart from worrying those bodies linked to the country's water supply, should also be a cause of concern for the sanitary authorities. The means used to keep water sold in the informal sector are not the most hygienic, meaning possible harm to the people who purchase it.

The other 79.2%, who do not pay for the water they fetch, manage to bypass both formal and informal payment systems.

As regards payment in residential areas the situation is balanced: in urban areas nearly 53% of households pay for their household water, see table 4.1.2.3. In contrast the other 47.5% manage to avoid any form of payment for water they fetch from main sources, whereas almost 97% of rural households obtain their water for free.

The analysis of the payment of water consumed specifying sources presents interesting results. Sixty-six percent (66%) of households that have piped water from the mains supply, with or without water pumps, say that they pay for the water they receive. Fifty-nine percent (59%)of households who say they get their water supply from public water fountains pay for this water. The most lucrative in terms of payment is the cistern truck; almost 88% of households getting water from this source i.e. as their main source have to pay.

In the rural areas, where 9/10 of households do not pay anything for the water they obtain the almost total non-payment for water can be considered normal, as their main water supply is from rivers or streams, protected wells and public water fountains. These sources mainly escape any formal control (public fountains and wells are subsidised by the state). In the case of fountains, a symbolic contribution is normally requested to ensure maintenance.

4.2. Treatment of Drinking Water

The problematic of drinking water treatment was taken into consideration by MICS using 3 questions:

1. *Is your DRINKING water kept in a recipient/closed place or is it covered?*
2. *Do you treat the water or boil it before drinking it?*
3. *Do you treat/ purify or boil your water, how do you purify your water?*

80.9% of households state that they conserve drinking water in a closed recipient/place, see table 4.2.1. This is a general trend in both residential areas, even if in rural areas the percentage of households who answer that they conserve their water is lower than in urban areas.

Table 4.2.1. Proportion of Households which Conserve their Drinking Water according to Area of Residence and the Sex of Head of Household

Protection	Areas of Residence		Sex		Total
Of Drinking Water	Urban (%)	Rural (%)	Male	Fem.	
Yes	**88.2**	**76.6**	**81.6**	**79.3**	**80.9**
No	11.8	23.4	18.4	20.7	19.1
Total	100	100	100	100	100
Total Number	1,487	2,831	2,973	1,345	4,318

These results can mean that interested bodies have managed to reach the families that make up the households and society as a whole using awareness-raising campaigns. These show satisfactory results for this indicator. Or this can simply mean a habit on the part of the population.

Table 4.2.2. Percentage of Households which Treat Water Before Drinking it by Areas of Residence and according to the Sex of the Head of Household

Treat / Boils Water before Drinking it	Areas of Residence		Sex		Total
	Urban (%)	Rural (%)	Male	Fem.	
Yes	28.9	9.6	18.0	13.5	16.6
No	**71.1**	**90.6**	82.0	86.5	**83.4**
Total	100	100	100	100	100
Total Number	1,496	2,841	2,988	1,349	4,337

As far as treating/purifying water before drinking it the situation is in general very worrying (see table 4.2.2.). More than 4/5 of the total sample (83.4%) do not purify their water in any way before drinking it. In rural areas the relative trend is over 90% of households. The sex of the head of household does not cause any great variation, although more women heads of household than men do not treat or purify their water.

Generally speaking the regional trend is for people not to treat or purify their water before drinking it. In the regions, differences occur in those areas on the coast, in particular the region of Cabinda Town which is greatly influenced by the Capital City of Luanda.

Table 4.2.3. Percentage of Households which Treat Water before Drinking it by Region

Treat / boil the Water Before Drinking	Regions						Total
	Cap. C.	North	East	West	South	C. South	Total
Yes	**38.2**	4.3	6.5	18.8	10.1	13.5	15.3
No	61.8	95.7	93.5	81.2	89.9	86.5	84.7
Total	100	100	100	100	100	100	100
Total Number	719	696	727	735	725	735	4,337

If the situation can generally be said to be worrying, the northern and eastern regions present critical results.

4.3. Access to Safe and Convenient Water

To conclude the analysis of drinking water we introduce the notion of safe and convenient drinking water.

Box 4.2.1.

These extremely negative figures can lead to certain conclusions. Is it already an acquired habit on the part of the population not to treat drinking water? Is the fact that people believe that because they conserve water in a "safe" place that they think it is not necessary to treat it before drinking? Perhaps there is a necessity to analyse the intended message (boil, bleach, iodine, etc) and if it really reaches the target population and why they do not pay attention to it.

The information that should worry the authorities resides in the fact that:

- ❖ Most people receive water from unsafe sources, or probably unsafe;

and

- ❖ Most people do not treat their water after obtaining it.

These facts imply that most people are drinking water that is not safe for consumption, running a great health risk.

To conclude the analysis of drinking water, the notion of safe and convenient drinking water is introduced. Clean water comes from a source that is relatively near to the household, notice however, that source of water is used as an approximate indicator for clean water. This approximation is not perfect, as we know that tap water is not always clean. The definition of a convenient source of supply includes the distance between the main source of water and the house, which as a general rule is defined as less than 500 metres.

Table 4.3.1. Percentage of Households with Clean Water by Different Differentials

Water Safe To Drink	Areas Of Residence		Sex of Head of Household		Categories of Education.	Level of		Total
	Urban (%)	Rural (%)	Male (%)	Fem (%)	Without/Primary (%)	Mod (%)	High (%)	Total (%)
No	53.6	77.8	68.2	70.1	79.5	72.1	55.1	68.8
Yes	46.4	22.2	31.8	29.9	20.5	27.9	44.9	**31.2**
Total	100	100	100	100	100	100	100	100
Total Number	1,493	2,839	2,984	1,348	1,257	1,615	1,393	4,332*

Safe Water To Drink	REGIONS OF RESIDENCE						TOTAL
	Cap. C.	North	East	West	South	Centre South	Total
No	50.4	92.4	89.5	62.7	71.4	62.3	68.8
Yes	49.6	7.6	10.5	37.3	28.6	37.7	**31.2**
Total	100	100	100	100	100	100	100
Total number	718	695	726	735	723	735	4,332

*This total does not include the categories of level of education that have a total equal to 4,265

Logically the trends reflected in table 4.3.1 confirm that city households are more likely to have access to water that is fit to drink and convenient. In the same way the higher the level of education of the households the more they benefit from having water fit to drink. In the regions, the region of Cabinda town is unique as nearly half of the respondents have water which is fit to drink and convenient. In the North in contrast 92.4% of the respondents report the absence of safe drinking water, a very high figure.

4.4. Basic Sanitation

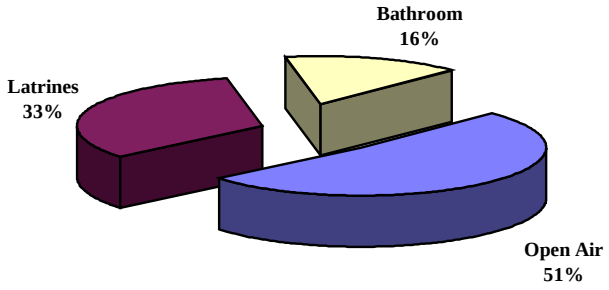
Apart from treating water before drinking it, another important factor of equal importance in the population's health, is basic sanitation within households. The existence of a source of water supply, which is suitable and accessible, is one of the most fundamental elements for good basic sanitation.

Basic sanitation also includes drainage and the real possibility of having a convenient way to dispose of house waste, as well as adequate and accessible infrastructures. MICS focussed on the problem of basic sanitation using six simple questions:

Where do members of the family pass excreta?
How far is the house from the place where this is done?
How is sewage drained away?
Which members of the family use this means?
How do you dispose of rubbish?
In your residence how does the drainage system get rid of domestic/dirty water?

4.4.1. Basic Sanitation and Infrastructures.

Figure 4.4.1.1. Place where People pass Excreta



Fifty-one percent (51%) of the households interviewed pass excreta in the open-air, 33% use latrines, whilst 15.4% replied that they use the bathroom for this purpose.
However, respondents had difficulty in understanding the notions of bathrooms and latrines. It was thought better to abandon global estimates in relation to these two notions in order not to have deviation in the information obtained. The estimates referring to the use of the open-air mean that households who use this means do not have a toilet facility, or it is not usable.

This means that 51% of households do not possess any type of sanitary infrastructure. The distribution of drainage systems for all households is by area of residence and by sex of head of household as indicated in table 4.4.1.

Table 4.4.1. Waste Drainage method according to Area of Residence and Sex of Head of Household

Drainage Method	Area of Residence		Sex of Head of Household		Total
	Urban (%)	Rural (%)	Male (%)	Female (%)	Total (%)
Open air (Without Infrastructures)	**30.4**	**63.5**	**50.1**	**53.5**	**51.2**
System of Drains	17.6	0.7	7.2	6.6	7.0
With Sceptic Tank and alternative	**25.0**	2.0	11.7	8.1	10.6
drainage system	6.9	4.4	6.1	3.7	5.3
Only artisan drains	20.0	**28.6**	**24.2**	**27.9**	**25.4**
Dry Latrine	0.1	0.8	0.7	0.2	0.6
Ditch/open	0.1	0.0	0.1	0.0	0.0
Others					
Total	100	100	100	100	100
Total number	1,495	2,835	2,985	1,345	4,330

Whether in urban or rural areas the proportion of households that say they pass excreta in the open air is high, especially in rural areas, where it is double that of urban areas. However, both figures are problematic. Figures for rural areas are very high. Although they are lower in urban

areas they are still quite considerable. In urban areas public health implications for those households are worse because of high population density. This means serious sanitary consequences for both areas.

These results lead us to conclude that the situation is worrying as a high proportion of households do not have any type of sanitary equipment, added to which most of the households do not have a drainage system.

For the households that have sanitary facilities or infrastructures the distribution of distances from residences is illustrated in table 4.4.2.

Table 4.4.2. Location of Sanitary Facility by Area of Residence and Sex of Head of Household

Location	Area of Residence		Sex of Head of Household		Total
Of Facility	Urban (%)	Rural (%)	Male (%)	Female (%)	Total (%)
In the Residence	**40.8**	**4.8**	25.2	21.0	24.0
Less than 25 Metres	47.7	68.8	56.8	59.5	57.6
outside	10.0	22.3	14.9	17.7	15.8
From 25 to 50 Metros	1.4	4.2	3.0	1.9	2.7
50 Metres or More					
Total	100	100	100	100	100
Total Number	1,072	920	1410	582	1,992

Logically the table above shows that in rural areas distances are greater. Only 4.8% of households have sanitary facilities. The sex of the head of household by itself does not significantly influence the existence or not of sanitary facilities in the dwelling or nearby. However, there is a slightly higher figure for male-headed households.

Nearly 19% of the households who have access to a sanitary facility have to go more than 25 metres to use it; this percentage is higher in rural areas (26.5%) than in urban areas (11.4%)

In table 4.4.3 we see the way members of households dispose of rubbish. This trend reflects the fact that there is no waste disposal system in Angola.

Table 4.4.3. Forms of Rubbish Disposal according to Area of Residence and Sex of Head of Household

Forms of	Areas of Residence		Sex of Head of Household		Total
Rubbish Disposal	Urban (%)	Rural (%)	Male (%)	Female (%)	Total (%)
Throw in a Rubbish Skip	7.7	0.1	3.1	2.5	2.9
Throw on the Rubbish Dump	**58.4**	**37.4**	**46.7**	**42.0**	**45.2**
Bury	15.7	17.7	18.1	14.6	17.0
Burn	6.2	6.3	6.1	6.4	6.2
Throw anywhere	**10.9**	**34.8**	**22.8**	**33.0**	**25.9**
Other	1.1	3.6	3.2	1.6	2.7
Total	100	100	100	100	100
Total Number	1,496	2,841	2,988	1,349	4,337

Almost 45% of households in the total sample contribute to an increase in the number of rubbish dumps. In urban areas the percentage increases significantly reaching almost 58% of

households, whilst in the rural area, it is 37.4%. In general the sex of the head of household has little influence on the total for rubbish disposal.

We take great care in defining rubbish dumps as well-defined sites, where people throw away household waste, and other things. However, it is possible that the respondents' interpretation is very limited, as it can be noted that most people, especially in the cities, dispose of rubbish in any place, which means that there are dumps that are neither hygienic nor aesthetic. It is evident that there is a big problem with rubbish disposal if we add the 26% who state that they throw their rubbish away anywhere.
However, in rural areas almost the same situation exists in the use of rubbish dumps. Nearly 35% of the households throw their rubbish away anywhere, whereas in the urban area the figure is 11%. Perhaps the factor open-air, is much more extensive and vast in rural areas than in urban areas and the disparity between the two becomes more striking.

However, the difference existing between rubbish tips or dumps and "anywhere" is intensified. The MICS questionnaire specifically distinguishes between them.

The poor drainage system contributes to the low level of basic sanitation for households and as a result for the population as a whole. Two essential factors engender the paucity in urban infrastructures; one is poor maintenance, the authorities are unable to maintain basic sanitation structures for the population, and also a very poor supply of safe water for public consumption.

To conclude the analysis of this issue it is useful to define when a drainage system can be considered adequate, and also what distance is considered convenient in relation to the dwelling. In this way one of the criteria chosen to define adequate and convenient drainage: all means except the open-air, ditches and those defined as others. In addition, drainage systems considered adequate and convenient should be less than 25 metres from the dwelling (distance considered convenient)

Table 4.4.5. Proportion of Households with Quality Sanitation by Different Differentials

Adequate	Areas of Residence		Sex of Head of household		Categories of Level of Instruction.			Total
Sanitation	Urban (%)	Rural (%)	Male (%)	Female (%)	Without Basic %	Mod. (%)	High (%)	Total (%)
No	38,5	73.4	59.2	62.9	73.7	66.1	41.3	60.4
Yes	**61.5**	26.6	40.8	37.1	26.3	33.9	**58.7**	39.6
Total	100	100	100	100	100	100	100	100
Total Number	1,493	2,828	2,981	1,340	1,249	1,613	1,393	4,393*

- This total does not include the categories of level of instruction which have a true figure equal to 4,255

In general terms, only 39.6% of households have access to adequate sanitation, which shows an appalling state of affairs in the quality of the sanitation service. The same table (4.4.5.) also indicates that in urban areas there is relatively better access to adequate sanitation than in rural areas where access is much more precarious. Level of education directly influences access to adequate sanitation.

In this part we aim to reflect on social indicators which we think could give the social picture, and to a certain extent an image of relative poverty of those households interviewed. Reference was made to the following indicators, calculated for the households:

- ❖ Average educational level of adults in the household;
- ❖ Rate of dependency in the household;
- ❖ Number of people per room;
- ❖ Access to information (radio and television)

They were analysed by sex of head of household and areas of residence.

Enormous deficits in basic sanitation and infrastructures in addition to a poor supply of safe water leads us to say that the population's social situation is alarming. In this part of the results we include a comparative illustration of certain indicators using some countries in the sub-region. We aim to demonstrate a preoccupation, which should be part of the authorities' decision making on the population's access to information. The position of Angola in the table below should cause alarm, even though it is placed in front of some other countries in the region and sub-regions of the world, in terms of access to basic sanitation, and the number of radios and televisions per 1,000 inhabitants. The situation is nonetheless bad and the problem of safe water is the worst.

Table I. Comparison of Indicators for Water, Sanitation and Access to Information in this Sub-region of the World

Countries or Regions	Comparative Indicators			
	% of People with Access to Safe Water for Drinking*	% of People with Access to Basic Sanitation**	Number of Sets per Thousand Inhabitants	
			Radio	Television
Countries or Regions	**Comparative % of People with Access to Safe Drinking Water**	**Indicators of % of the Population with Access to Basic Sanitation**	**No. of Radios**	**No. of TV sets per 1000 inhab.**
Angola (MICS)	**31 (7°)**	**40 (5°)**	**71 (6°)**	**19 (4°)**
Mozambique	63 (2°)	54 (2°)	48 (7°)	4 (6°)
Zaire/D.Rep. of Congo	42 (6°)	18 (7°)	97 (3°)	2 (7°)
Namibia	57 (3°)	51 (3°)	140 (2°)	23 (3°)
Zimbabwe	77 (1°)	66 (1°)	86 (5°)	27 (1°)
African Countries South of the Sahara	51 (5°)	44 (4°)	148 (1°)	24 (2°)
Less Developed Countries	55 (4°)	35 (6°)	96 (4°)	10 (5°)

NB. Except for ANGOLA for all the other countries in this table the data illustrated date from 1990-1996 for water and sanitation and 1993 for the number of sets/devices, published in the book "World Situation of Children *1997*", UNICEF, NY, USA.

* Clean Water in the sense of having water fit to drink

** Access to basic sanitation ie the existence of adequate sanitation

5. LEVEL OF EDUCATION AND THE EDUCATION SYSTEM

5.1. Introduction

"If you want to plan for a year plant a seed. If it is for 10 years, plant a tree. If it is for a 100 years educate the people. Planting a seed guarantees you only one harvest. The education of a people guarantees 100 harvests." ***(K'uan-tzu, 551-47 DC).***[1]

Angola and the Angolan people are facing a decisive period in their lives. After 30 long years of war, the country has not only stagnated, but its economic development and social well-being has declined. Hence there is great necessity for the country to rise from the ashes in which it has been buried for all this time and in the fastest way possible launch itself into effective and sustainable development.

In order to obtain "100 harvests," the process of learning should occur in the most diverse sectors of national life. Leaders should learn the political lessons that the world continues to offer. Managers should acquire skills and technology to improve productivity. Children should acquire knowledge and understanding.

Evidence that political reforms achieve better results when there is solid support for education is more and more evident these days. The most successful countries in the struggle against poverty are those that have effectively managed to accumulate the necessary knowledge to harness human capital, international credit and natural resources.

At this time of profound reflection and interchange of ideas amongst the different sectors of national life the present chapter is intended to provide some ideas on the present situation in the education sector, and thus contribute with pertinent data to the sustainable and generalised development of the nation.

Aspects like access to schools, school drop-out, school absorption and retention within the education system, the phenomenon of "informal" payment in schools will be discussed here, as far as possible situating the country in its regional and international context.

5.2. Education of the Adult Population

5.2.1. Level of Education achieved

Schooling in Angola today constitutes one of the most important issues at national level. In this chapter analysis will focus on those aged 19 and over and children from 5-18. It will enable us to understand the present educational system and how important it is for the country to restore the education system in order to ensure the population's social, economic and cultural development.

The part that deals specifically with issues related to education for the 5-18 age group presents results corresponding to the 5-14 age group for which education is compulsory. The subsection dealing specifically with issues linked to education for the 5 to 18 age group includes results applicable to the 5-14 group (compulsory schooling). The subsection to which the title refers

[1] "EDI FORUM", A Review Of Ideas And Experiences**,** Volume one, Number Two, Summer 1996.

will also make reference to questions linked to education, but in the global context or that is to say for the whole adult population, 19 and over that was surveyed. We will also deal, in particular, with the level of schooling of the population as a whole, by age groups, mother tongue, areas of residence and regions.

Information on the level of education reached refers to 8,320 men and women of 19 and over, who supplied precise answers to the question: *Which is the last grade you attended at school?*

Table 5.2.1.1 indicates that 32 people in every 100 did not have any education at the time the survey was carried out (1996), or that is to say almost a third of the population.

Box 5.2.1.1

- Population aged 19 or more: number equal to 8,436 -
Average Grade of Schooling: 3rd grade
Average level of Instruction: 1st Level
50% of the population surveyed have 3rd grade or less than this
Level most quoted: None

5.2.1.1. Last Grade of Schooling of the population 19 years of age or more by Area of Residence and by Sex

Level of Schooling	Urban			Rural			Total		
	Male.	Fem.	Total	Male.	Fem.	Total	Male.	Fem.	Total
Prim, Sec. Ad. Ed, Tech Ed. *.	2.3	3.8	3.1	1.8	2.1	2.0	2.0	2.7	2.4
	2.4	4.2	3.4	5.3	7.4	6.5	4.2	6.1	5.3
1st Grade	4.3	6.3	5.4	11.1	10.5	**10.8**	8.4	8.9	8.7
2nd Grade	6.2	9.6	8.1	12.5	9.8	**11.0**	10.0	9.7	9.8
3rd Grade	18.4	16.9	**17.6**	20.5	8.1	**13.4**	19.6	11.6	15.1
4th Grade	10.4	9.3	9.8	9.1	4.2	6.3	9.7	6.2	7.7
5th Grade	15.3	9.1	**11.9**	7.6	2.7	4.8	10.7	5.2	7.6
6th Grade	10.7	4.3	7.2	3.8	0.9	2.2	6.6	2.3	4.1
7th Grade	10.6	5.5	7.8	2.8	0.5	1.5	6.0	2.5	4.0
8th Grade	4.4	1.6	2.8	0.3	0.2	0.2	1.9	0.7	1.3
9th Grade	2.2	0.9	1.6	0.1	0.0	0.0	0.9	0.3	0.6
10th Grade	1.1	0.2	0.6	0.0	0.0	0.0	0.5	0.1	0.3
11th Grade	3.0	0.6	1.6	0.2	0.0	0.1	1.3	0.2	0.7
12th Grade	1.6	0.3	0.9	0.2	0.0	0.1	0.7	0.1	0.4
Higher Education	7.0	27.3	**18.4**	24.6	53.6	**41.2**	**17.5**	**43.3**	**32.1**
No Grade									
Total	1,351		1,743	2,253		2,973	3,604		4,716
	3,094			5,226			8,320		

* We consider adult education and technical vocational education as grades of schooling for practical reasons related to the design of the questionnaire

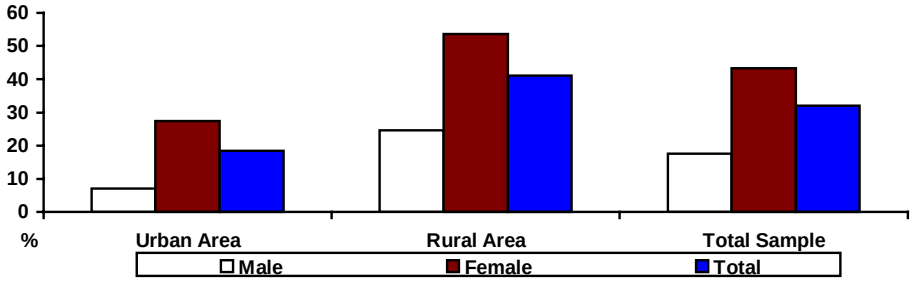
When the grade of schooling achieved by area of residence is considered cf. table 5.2.1.1, we note that in urban areas 53% reached fourth grade or grades below this i.e. more than half the population. In particular we focus on grades at the end of a level i.e. fourth and sixth grades with 17.6 and 11.9% respectively. In comparison in rural areas, 85% of the population only reached fourth grade or less. This did not happen in the rural areas as in this extract, the three last grades of the first level of schooling show higher figures i.e. with 10.8%, 11% and 13.4% respectively for 2nd, 3rd and 4th grades.

In other terms the most common level of schooling is the 1st level of Primary School. This is true for the total population and for the two areas of residence. The group considered here has few possibilities of continuing their formal education because they are too old.

There are more people excluded from the educational system in rural areas than in urban areas, almost twice as many, and more females are excluded than males. Disparities according to sex and area of residence together are considerable given that the percentage of women without formal schooling in the rural area is 7 times higher than for men with no formal education in the urban area.

In urban areas the percentage of women who have not completed a grade is 4 times higher than for men. In rural areas we find a difference to the advantage of the male sex. For every man who has never attended school there are two women in the same situation.

Figure 5.2.1.1. Proportion of those with No Grade by Sex and according to Area of Residence



In the analysis of education level by regions, the most relevant sector is the 1st level of primary school. In the East almost half the population (46.8%), has no formal schooling. The same thing happens in the north where the figure is nearly 41%. Table 5.2.1.2 reflects results from all the regions with analysis of percentage levels of schooling, as well as the figures for those without schooling by sex.

Table 5.2.1.2. Level of Schooling of those 19 and over by Region and by Area of Residence

Level of Schooling	Capital C. Region	Northern Region	Eastern Region	Western Region	Southern Region	Centre South Region	Total
Others	3.1	2.8	2.7	1.2	0.7	3.5	2.4
1st Level	**30.8**	**39.3**	**27.7**	**44.4**	**35.8**	**47.9**	**38.8**
2nd Level	21.3	11.4	11.6	16.8	16.9	10.7	15.3
3rd Level	16.9	4.6	8.3	7.2	7.1	2.7	8.1
Secondary	7.9	0.7	2.6	1.3	1.4	1.2	2.8
Level Schools	1.0	0.2	0.2	0.0	0.4	0.3	0.4
Higher Education	**19.0**	**41.1**	**46.8**	**29.0**	**37.8**	**21.7**	**32.1**
None							
Total	100	100	100	100	100	100	100
Sex	% No Grade Attended						
Male	19.6	17.0	9.0	16.2	15.3	23.0	100
Female	18.0	17.8	8.6	18.5	14.2	22.9	100

* The item "others", includes those who are only just beginning adult classes.
NB. Number Interviewed: 8,320 individuals / 2,827 for the last part of the table (sex)

The results shown above concisely illustrate the critical state of educational level of those resident in different regions of the country. In the second part of the table 5.2.1.2, "% No Level Attended", the percentage figure for women is alarming, in particular the number in region Capital C. This is due to the number of people involved in the informal economic market in general. The province of Luanda is a "mecca", attracting the least well-educated people, especially women, who think that they have more economic options there than in any other place in the country.

5.2.2. Level of Schooling and the Mother Tongue

Could it be that the use of a language other than Portuguese influences people's level of education?

We will try to demonstrate the weight of Portuguese in relation to other languages.

Table 5.2.2.1. Distribution of Level of Schooling according to Language Used By those of 19 and over

Mother Tongue	Others	1st Level	2nd Level	3rd Level	Secondary and Higher Education	No Level	Total
Portuguese	2,6	**40.3**	12.3	7.6	2.7	**34.4**	100
Kikongo	4.3	**40.2**	8.8	5.3	2.0	**39.2**	100
Umbundu	2.8	**47.3**	7.8	2.6	0.6	**38.9**	100
Kimbundu	3.0	**38.6**	11.7	6.6	2.6	**37.5**	100
Ganguela	11.3	**33.6**	5.9	2.0	0.5	**46.7**	100
Cunhama	4.7	**35.6**	6.3	1.9	0.4	**51.1**	100
Chokwue	3.8	**30.9**	8.8	5.7	2.3	**48.6**	100
Others	3.6	**35.0**	6.1	1.3	0.7	**53.3**	100
Total	3.3	**41.0**	9.6	4.8	1.7	**39.7**	100

The analysis of Angolan ethnic-linguistic groups through research into the use of the mother tongue and by level of schooling reveals the same trend as for the total sample in relation to adult

level of schooling. Generally speaking, the first level and the absence of any level are more common factors. However, it is evident that minority languages with fewer speakers, cf. table 2.5.3 (Fiote, Ngangela, Cuanhama, Chokwé and the others) are those with the highest percentages without any schooling. The possible influence of small numbers should be taken into account.

One striking fact is that languages, which can be considered more urban, and perhaps more "assimilated" (Portuguese and Kimbundu) have a higher proportion of students with schooling equal to or higher than 2nd. Level

Matters which are somewhat external to linguistic questions and perhaps more important are the stages of development of certain ethnic groups, which go beyond the use of this or that national language.

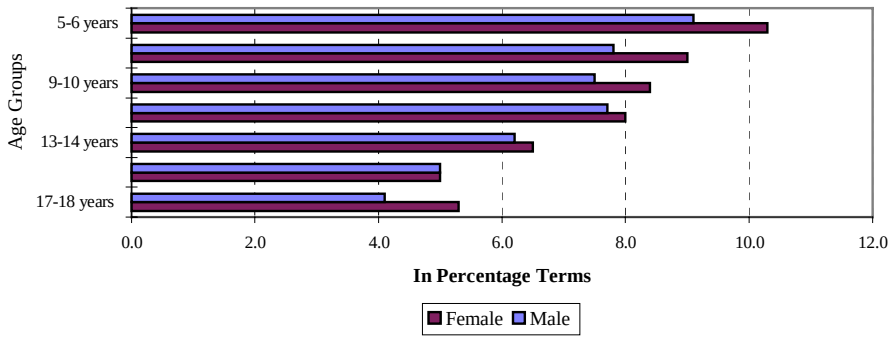
5.3. Basic Education/Primary

The population studied in this subsection is made up of children and adolescents aged between 5 and 18, representing almost 38% (almost 2/5) of the total population surveyed in this research.

Sample structure by sex (calculated at 7,360 people, of whom 3,862 are of the female sex) shows that there are slightly more girls, in the proportion of nearly 1:10. Figure 5.3.1.1 shows the distribution of this structure in 7 age groups with no significant changes to this figure.

Figure 5.3.1

Age Structure by Sex of those from 5-18



Other general data show that half of the total sample population surveyed for MICS is under 16 years of age, showing in this way that the population extract in question will have an important impact on the country's future.

The present chapter will focus exclusively on questions related to the process of educational training of this layer of the population. In order to add greater coherence to the information presented, this chapter has been divided into three main parts:

⇒ The first part includes those people that have never been to school; levels of exclusion are measured, as well as analysis of factors that directly or indirectly have led them to remain outside the education system. This analysis is important, as it enables us to

make some assumptions on constraints in the development of greater education coverage within the country.

⇒ The second part includes those, who in spite of having at some time or other been to school, had to leave for some reason. The study of this group is pertinent, as it will enable us to discover some of the main factors, which have led them to leave school and measure what impact this will have on the future development of the nation.

⇒ Lastly, the third part includes those people who continue inside the school system. The study of this group allows us to discover some of the factors that disrupt this group's systematic progress at school. A full understanding of its importance will enable us to project a better education for future generations.

5.3.1. Potentially Illiterate Population

"Illiteracy" is a population attribute used in social statistics. It is one of the main indicators of underdevelopment, on a level with other figures like child mortality and per capita income. One of the measures most disseminated for the identification of the stage of development of a country, is the proportion of illiterate adults and the volume of infant/juvenile population that the education system of the country manages to absorb and maintain until basic education is concluded.

Illiteracy is a synthetic indicator of bad living conditions. It is such that where it is present in high proportions, we generally find a low level of life expectancy, a high level of neonatal and child mortality, lack of skilled jobs, insufficient income to ensure essential nutritional needs, housing, transport and clothes etc."[2]

In general the illiterate are identified as being people who respond negatively to questions such as "*Do you know how to read and write?*" or "*Did you complete less than one year of schooling?*" However, the second question is somewhat problematic, as it is possible, although rare, for someone who has never been to school to know how to read and write. For this reason and given the specificity of the questionnaire used during analysis the term "*potentially illiterate*" is used.

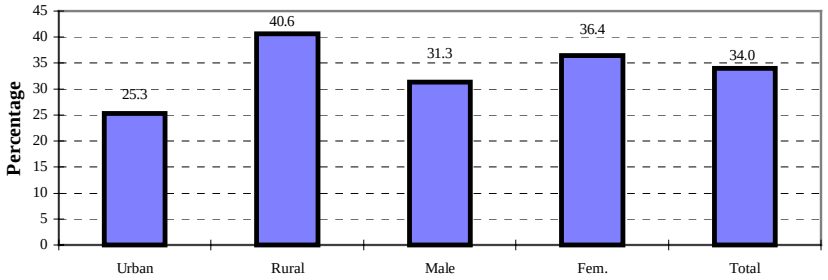
The first question introduced in Module C of the questionnaire used in the survey enabled us to measure the proportion of those who have never enrolled in the educational system, i.e. those in the 5-18 age group.

Figure 5.3.1.1 shows that for every 3 people in this age group, 1 is excluded from the education system and is therefore potentially illiterate, given that s/he runs the risk of becoming illiterate as an adult if he/she does not manage to enrol in school.

[2] Associação Brasileira de Estudos Populacionais (ABEP), "1990 VII Encontro Nacional De Estudos Populacionais, Anais, Volume 3" p. 20.

Figure 5.3.1.1

Percentage of Children (5-18) who have never been to School by Areas of Residence and by Sex



Analysing the urban/rural pattern, we see that in rural areas a higher percentage of children have never been to school (nearly 2 children in every 5 in the rural area as against 1 in every 4 in the urban areas). This pattern can be explained by the greater concentration of sector resources (schools, classrooms, and teachers) in the urban area.

In terms of gender, there is a greater tendency for female children not to go to school. The figure shows that whilst approximately 31% of boys of school age do not go to school, in the case of the girls the figure is about 36%.

Figure 5.3.1.2

Percentage of Children (5-18) who have never been to School by Geographic Regions

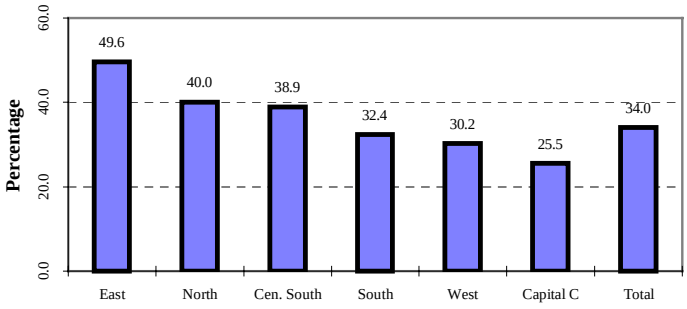
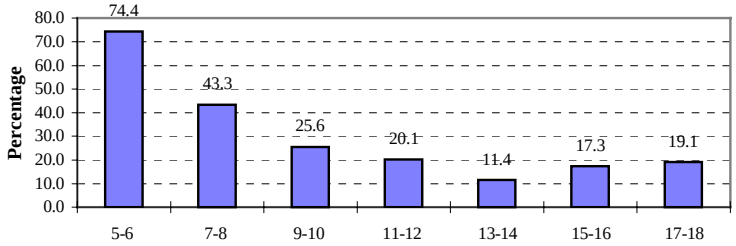


Figure 5.3.1.2 shows that the eastern region (made up of the provinces of Lunda Norte, Lunda Sul and Moxico), the north (provinces of Zaire, Uíge and Malanje) and centre south (provinces of Huambo, Bié and Kuando Kubango) are in descending order those that present the worst results (from nearly 2 children outside the school system in every 5, even 1in every 2).
The region Capital C (provinces of Luanda, Kwanza Norte, Bengo and Cabinda), seem to be a case apart, as it is the only region which presents a percentage much below the national level (almost 1 child in 4 children outside the school system), denoting as such the major influence of Luanda in this region, as Luanda continues to be the main educational centre within the country.

Figure 5.3.1.3

Percentage of Children who have never been to School
in Each Age-Group



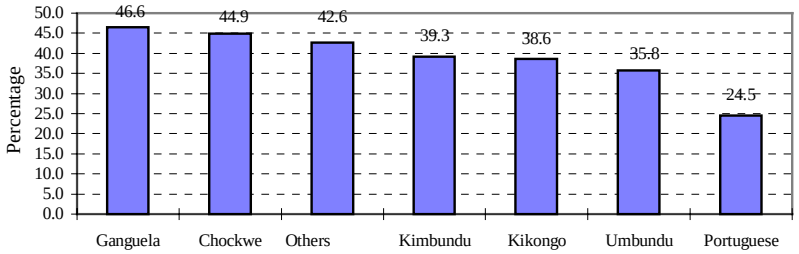
Analysis by age groups shows that there exists a high proportion of children who are not going to school in the first age groups. As a way of illustrating this, nearly 74% of the children between the ages of 5 and 6 have not been to school, whilst for the group between 7 to 8, the figure is 44%. These results demonstrate that the majority of children do not enrol in school at the correct age in Angola. (Figure 5.3.1.3)

The influence of social/economic, cultural factors, linguistic factors, such as the mother tongue, the level of dependency, the number of people in every room in the dwelling, and the average level of schooling of the adults in the household, on non-enrolment of the infant/juvenile population was studied and the results point to the following:

- The influence of the language spoken at home (mother tongue) does not seem to be significant. However, it is already possible to note that groups like the Ganguela and the Chockwe do not place their children in school as much as other groups like the Kimbundu, Kikongo and the Umbundu. What seems to be clear is the fact that the population that speaks Portuguese tends to place their children in school more than the others. It is apposite to remark here that the families who use Portuguese as their mother tongue are more urban than the others; this factor can influence this issue. (Figure 5.3.1.4)

Figure 5.3.1.4

Influence of Mother Tongue on the Percentage of Children Excluded from School



- For the other variables, such as dependency rate and the number of people by room, the explanation does not seem to be so explicit as for number one. For example, in spite of being clear in table 5.3.2.1 that a household with fewer dependants tends to place their children in school, this trend is not so clear for the moderate and high levels, these 2 groups making up almost 80% of the population between 5-18.

- The average level of education amongst the adults of the household also seems to heavily influence the decision whether to place children in school, as can be seen in the following table (table 5.3.1.1). With effect, we can see a disparity between the households with a low level of instruction and those with a high level.

Table 5.3.1.1- Percentage of Children who have never been to School in the 5-18 age range, by some Social and Economic Indicators

	Dependency Rate (In Categories)			
	Low	Moderate	High	
Percent	24.8	36.6	36.0	
Number	732	1,391	1,557	
	Number of People per Room			
	Less than 1	1-1,9	2-3,9	4 and +
Percent	29.0	35.0	29.4	40.4
Number	207	1,237	1,348	888
	Average Level of Adult Education			
	None/Low	Moderate	High	
Percent	49.6	35.7	20.2	
Number	855	1,536	1,289	

5.3.3. School Drop-out

School drop-out constitutes a worry for the educational authorities in developing countries. Various social and economic factors greatly influence this phenomenon. For example, a low income in a household leads almost invariably to the children and young adolescents abandoning school to go to work in order to create alternative sources of income for the household.

The analysis of this theme will be both qualitative and quantitative. On the qualitative side, we analyse the pattern recorded for this phenomenon for a predefined period. For the quantitative

approach we include the calculation of the different drop-out rates for the same period of time. To this effect the target population is split into 2 groups, defined as follows:

⇒ 1st group refers to those people who have dropped out of school over the last two school years (1994/95 and 1995/96). Or rather, they had enrolled in school in those years, but they did not attend classes. It is obtained by grouping all the individuals who responded respectively "*No*" to the questions "*Are you attending classes at present?*" and "*Last year did you attend classes?*". In the study of the evolution of drop-out in these two school years (1994/95 and 1995/96), it is appropriate to advise certain caution when studying the data, for the following reasons:

- It is difficult to make a comparison between the rates in the two periods because whilst the 1st was complete, being thus the data for this complete period, the 2nd was still incomplete at the time the data were collected. The comparison of these two periods means comparing 2 periods of different lengths.

- The beginning and end of the school year is not the same all over the country, for various reasons, amongst which the fact that there are two different administrations. However, regional differences do not necessarily imply that one region is better than another.

⇒ The second group refers to those pupils that abandon school in the transition from one year to another 1994/95 and 1995/96. It is obtained by grouping all those who replied "*Yes*" to the question "*Were you enrolled in school last year?*" and "*No*" to the question "*Are you enrolled in school this year?"*

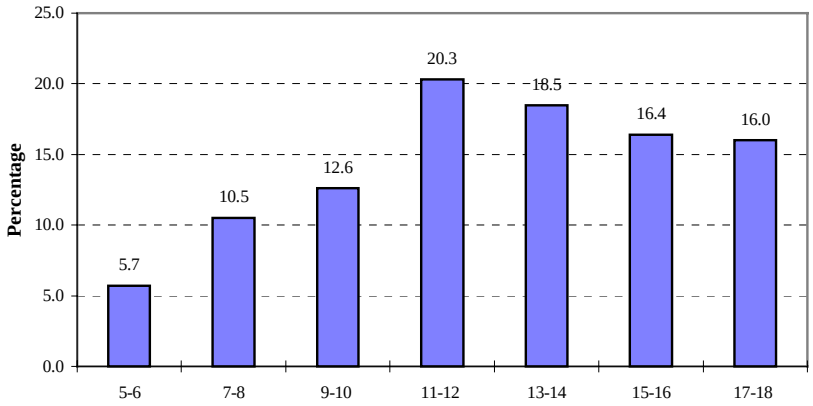
5.3.3.1. The Pattern of School Drop-out

For the analysis of the pattern of school drop-out the two defined groups are combined into one. The results of this analysis are presented as follows:

- There is a strong tendency for the number of drop-outs to increase as children get older, as the following figure indicates. Thus, almost 71% of the drop-outs in the last 2 years are pupils more than 10 years of age. (Number: 720, figure 5.3.3.1.1)

Figure 5.3.3.1.1

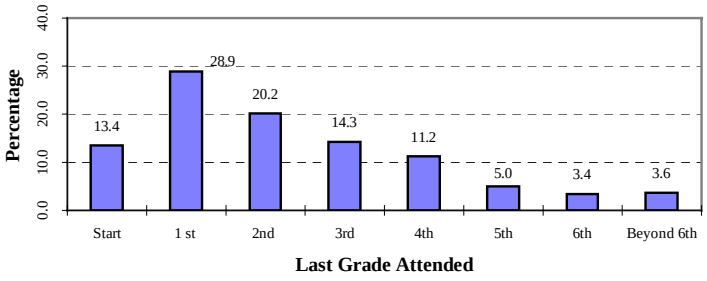
Distribution of School Drop out in School Years 1994/95 and 1995/96, by Present Age Categories



- In relation to the last grade attended the trend is the reverse. Or that is to say, school drop-out decreases dramatically with an increase in the last grade attended, as the following graph shows. Most drop-outs happen before the end of the first level of basic education (almost 88%), especially in the first grade (about 29%), stabilising later from the beginning of the 2nd level of basic education (figure 5.3.3.1.2).

Figure 5.3.3.1.2

Distribution of Drop-out between 1994/95 and 1995/96, according to Last Class Attended



5.3.3.2. Drop-out Rates

Table 5.3.3.2.1, presents the results of 2 types of drop-out, distributed by geographical regions, areas of residence and by sex.

Table 5.3.3.2.1 - Drop-out Rates in the Last Two years, distributed by Regions and Areas of Residence

School Year	Drop-out Rates throughout the School Year										
	Regions						Areas of Residence		Sex		Total
	Capital C	North	East	West	South	Centre South	Urban	Rural	Male.	Fem.	
1994/95	3.9	4.7	3.3	3.5	6.4	3.5	3.8	4.8	4.1	4.4	4.2
1995/96	3.0	13.7	4.8	3.2	3.3	11.8	3.0	9.7	5.2	7.2	6.2
Number (On Average):	976	390	316	672	698	456	1890	1654	1790	1754	3542
Global Drop-out Rates for Schools											
1994/95-1995/96	15.9	29.7	12.4	17.9	21.9	29.2	15.1	28.2	19.2	23.0	21.1
Number:	968	364	308	638	672	430	1856	1556	1716	1698	3408

In relation to the first rate, or rather the drop-out rate seen throughout the school years and taking into consideration all the limiting factors discussed above, we can see a certain positive evolution at almost all the levels of disaggregation, especially the large variations in the north and centre south.

In the case of the second rate, i.e. the global drop-out rate between 1994/95 and 1995/96, it was about 21%, which means that in this period, approximately 1 in 5 children dropped out of school. This rate increases when distributed by areas of residence, in the rural area rising to almost 1 in 4 children, whilst in the geographic regions, also in the north and centre south things continue to be more problematic, reaching similar rates to those prevalent in rural areas.

The analysis of this rate by sex shows the existence of a trend for girls to drop-out of school more than boys. The figures 5.3.3.2.1 and 5.3.3.2.2 best illustrate geographic disparities by gender related to school drop-out rate.

Figure 5.3.3.2.1

Global Rates of School Drop-out by Geographic Regions (1994/95 - 1995/96)

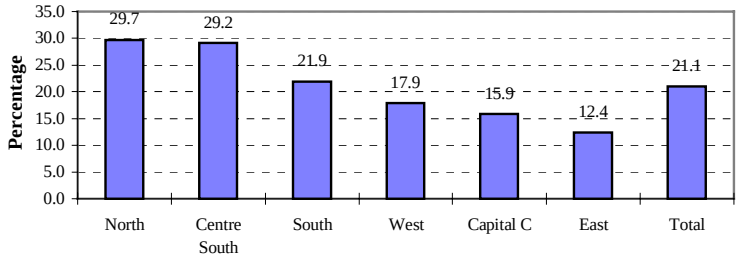
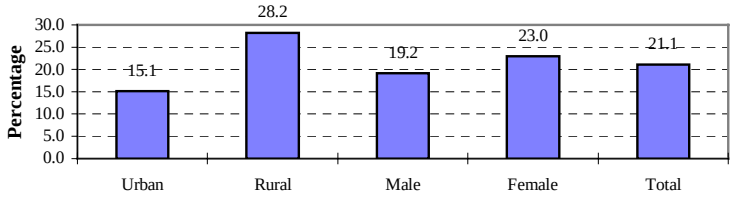


Figure 5.3.3.2.2

Global Rates of School Drop-out by Areas of Residence and Sex (1994/95 - 1995/96)



5.3.4. Main Reasons for not enrolling in School and Dropping-out

Faced with such a high proportion of children and adolescents excluded from the educational system (including those that systematically drop-out), questions will certainly be asked to justify this state of affairs. The survey anticipated these questions asking the parents/guardians "*Why is a given child not attending school this school year*?".

Table 5.3.4.1 shows that the reasons most often put forward by the respondents are linked, on the one hand to the non-availability of education resources (almost 34%), where we can pinpoint reasons like "*the school is closed*" (almost 15%), and the "*lack of teachers*" (almost 10%). The fact that rural areas are more underprivileged in relation to the allocation of sector resources is quite visible in the table. Nearly 20% of the responses in rural areas indicated that schools were closed, whilst the rate in urban areas is only 5%. The same happens in relation to the lack of teachers (nearly 14% as against 3%).

On the other hand, reasons connected to social and cultural questions, were also raised by the respondents (nearly 35%). It is pertinent to note that a lack of documents constitutes an important barrier to access to school for the population (nearly 9%), more often in the urban area (almost 15%). Some layers of the Angolan population still do not give due importance to education. Nearly 9% of the responses invoke the reason " *education is not important*". Another important issue is the fact that the population does not recognise (or know) the official age for school admission. It is thus that almost 15% of the reasons given refer to age " *is not yet old enough"*. It is appropriate, however, to point out that this estimate was obtained after analysing issues put forward in *"other reasons"*, confirming that about three quarters raised this question. If it is assumed that the same criterion is applicable to both urban and rural areas, then we can see that there would be a relatively higher percentage in the urban area (about 21% as against nearly 14.9%) in rural areas.

Although social and economic reasons are less important than the previous ones, they are also relevant, reaching almost 15% at the national level, 18% in urban areas and 13% in rural areas. Amongst these, the comment "lack of money" (about 9%) stands out, more so in the urban area (about 12%), and "necessity to work" (about 5%).

Table 5.3.4.1 - Main Reasons for non-enrolment in School and for Dropping Out given by the Respondents

Main Reasons for not enrolling in School	Urban	Rural	Total
Reasons linked to Availability of Sector Resources			
The school did not open	4.5	19.8	14.8
There are no teachers	2.6	13.5	10.0
The school is too far away	5.5	5.4	5.4
There is no room	8.6	1.9	4.1
Subtotal	**21.2**	**38.6**	**34.3**
Social and Cultural Reasons			
Education is not important	8.8	8.6	8.7
Lack of documentation	14.8	6.3	9.0
Not old enough	--	--	16.9
Subtotal	**12.6**	**14.9**	**34.6**
Social and Economic Reasons			
Because do not have money	12.2	7.5	9.0
Need to work (at home/outside the home)	4.0	5.6	5.1
Because the teacher asks for money	1.9	1.1	1.3
Subtotal	**18.1**	**13.2**	**15.4**
Reasons related to Health			
For health reasons	9.2	10.3	9.9
Subtotal	**9.2**	**10.3**	**9.9**
Other reasons	28.0	19.9	5.6 [*]
Total	100	100	100
Number of Responses	699	1457	2156

There must undoubtedly exist other reasons which can only be discovered indirectly. A brief discussion of some of the reasons is presented below:

1. For almost 5 centuries Angola was subjugated to a well-established colonial system, which used non-access to education on the part of Angolans as one of its main means

[*] We found that almost 75% of the reasons given in "Other reasons" corresponded to the reason "Not old enough", and as such in the table this proportion was subtracted.

to hold onto power. It was thus, that when Angola became independent in 1975 it had an illiteracy rate of about 85%. The population under analysis, enrolled (or should have enrolled) in school, at the latest about 9 years after national independence (1984), with inherent difficulties and problems.

2. Fundamentally due to the period of war that the country has lived through over the past 20 years, and on the other hand due to the type of centralised economy that existed until quite recently, the Angolan State prioritised certain sectors of the nation, especially defence, to the detriment of essential sectors like education and health.

3. Due to almost negligible investment in the education sector in this period, the expansion and maintenance of educational infrastructures did not keep abreast of the growth in student population, thus originating in congestion of the existing educational establishments, which in turn has meant a systematic deterioration in the quality of services provided by this sector.

4. The growing lack of motivation on the part of teachers, mainly because of low salaries and constant stoppages because of strikes, has worsened the quality of services provided by the sector.

To better illustrate the dynamism of factors presented above see table 5.4.2. which presents some indicators of available resources in the sector between 1992 and 1994, in the 6 provinces of the country for primary and secondary education.

Table 5.3.4.2. – Indicators of Available Resources, in Primary and Secondary Education[3]

Available Resources	School Year		
	1992/93	1993/94	Var. (%)
N.º of Schools	808	528	-34.7
N.º of Classrooms	5.644	5.332	-5.5
Pupils	58,6743	60,1486	2.5
Teachers	18,142	16,921	-6.7
Pupils/Classrooms	104.0	112.8	8.5
Pupils/Teacher	32.3	35.5	9.9

Source: INE, Social Statistics Unit

The results of this table clearly show a contraction in education infrastructures, although this data refers to only 2 school years. Thus, the number of schools available in these provinces fell in this period by about 35% (or that is to say 1 in every three schools closed), the same happened with the number of classrooms and teachers.

In contrast, the number of pupils grew substantially, leading in this way to a consequent increase in the pupil/teacher ratio and class sizes of nearly 90 to 100.

[3] This data refers to only 6 provinces of Angola namely Luanda, Benguela, Huíla, Malanje, Cabinda and Lunda Sul and therefore should not be interpreted as representative of the country as a whole.

5.3.5. The Education System

The analysis of factors connected to systematic pupil development within the educational system involves the analysis of the system's real-time ability to harness children's capacity to learn, retention of pupils within the system and its productivity and timely training of those going through the system.

The official and regular structure of education in Angola is made up at present of the following levels:

- *Initial year*. Due to the growing lack of sector resources, attendance at this level is not necessarily compulsory.

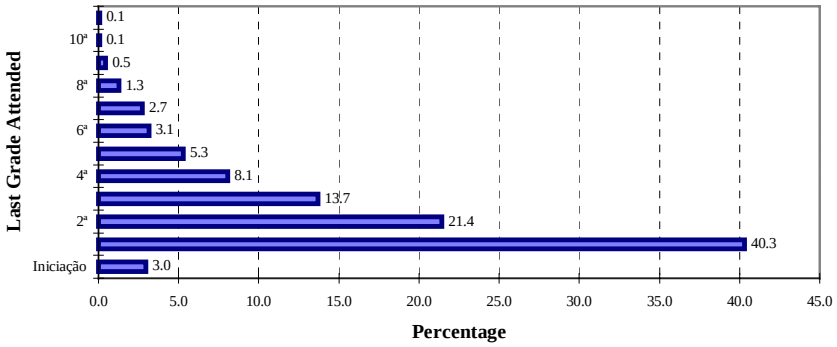
- *8 years Primary School, subdivided* into 3 levels: 1st level (from 1st - 4th grades), the second Level (from 5th -6th grades), and the 3rd level (from 7th to 8th grades).

- *4 years secondary level, or 3 years for pre-university schooling.*

Figure 5.3.5.1 presents the distribution of pupils presently enrolled in the educational system, in accordance with the last grade attended (in 1995/96). We gather that the vast majority of pupils in the education system this year were in the 1st Level of Primary School (almost 87%). At this level a gap is clearly visible between the 1st grade (with nearly 40% of pupils) and the 2nd grade (with nearly 21%). In this way the structure of this schooling pyramid is characterised by a very large base and a very fine peak, resulting in a limited level of schooling for those with access to the system.

Figure 5.3.5.1

Pupils (5-18) At Present within the Educational System,
Distributed by Last Grade Attended



5.3.5.1. Access to the System

Although child access to education is an internationally recognised right, this is far from being a fact in under-developed countries. Angola is no exception. The coverage capacity of the

education system is strongly influenced by 2 types of factors, not necessarily independent of one another:

1. External factors to the system itself, such as the well-being of the household, which is itself dependent on several social and economic variables.

2. Factors, which are internal to the education system, such as internal efficiency. If the system does not have the capacity to produce "graduates" in a minimum period of time and with minimum costs, its capacity to absorb new pupils will be low.

In order to discuss this theme three very important education indicators, in the measurement of absorption capacity of a given system of education will be used. These indicators are presented and defined as follows:

⇒ *Admission rate to the first level of schooling:* It is calculated by dividing the n. º of children presently attending classes at the official admission age (6 years old), by the total number of children at the right age for school admission. This indicator serves to measure the proportion of children who enter the school system at exactly the right age.

⇒ *The net rate of schooling:* It is calculated dividing the number of pupils that presently attend a given level of schooling who are at the correct age for this level (ex. the official age for primary school in Angola goes from 6 to 9 years of age), by the n. º of pupils who are at the official age for this level. Fundamentally this serves to measure the proportion of children at the official age for this level. In particular, it shows us the percentage of children in a given age group who are actually at school.

⇒ *The gross rate of schooling:* This is calculated by dividing the n. º of pupils who at present attend a given level of education, by the number of children at the official age for this level (whether they are studying or not). Basically this enables us to measure the percentage of pupils at this level who are over-age and those who are at the right age, but who are not studying. In this way we have an idea of the degree of delay in the production cycle of the education system at this level.

Table 5.3.5.1.1 presents these indicators, distributed by regions, areas of residence and by sex. The rates of schooling are calculated only for the 1st and 2nd levels of Primary School, as these make up more than 90% of those studied. (Figure 5.3.5.1)

The higher the rate of admission to the first level the lower is the volume of children enrolling late or never attending at all. In this way we can interpret the net rate of schooling. Or that is to say, the nearer to a 100 it is, the lower the number of pupils who never manage to enrol or enrol late, in this way reducing pupil delay at the end of a given educational level (see box 5.3.5.1.1. for a better illustration of the interpretation of this rate).

The third rate (gross rate of schooling) serves to compare the proportion of children who are over-age for the 1st and 2nd levels but who at present attend school at these levels (1995/96), with those at the official age for the levels in question and who are excluded from the system at the moment. Thus the nearer to a 100 the rate is, the greater parity will be between the two groups, which means that the number of pupils over 11 studying at these levels corresponds to approximately the number of children at the official age for these levels outside the school system. In this way when the rate is over 100, the number of those more than 11 years old who

are studying at the 1st and 2nd levels is higher than the n. º of 6-11 year olds who are presently outside the school. Or vice-versa, when the rate is less than 100, there are fewer over-age pupils than the number of children at the official age and outside the school system (see box 5.5.1.1. for a better illustration of the interpretation of this rate).

In the case of the 1ª rate (rate of admission at the 1st level of schooling), the table shows exactly the contrary. Or that is to say in global terms approximately I in every 3 begins to study at the correct age, which means that 2 in 3 people enrol late or never enter the education system. In terms of area of residence, this indicator continues to be low, going from nearly 2/5 in the urban area to nearly 1/4 in the rural area

The regional pattern is the same cf. map 5.3.5.1.1, in particular, as always the regions of the north, east, and centre south which are the worst, with rates varying from 1/5 to nearly 2/5.

Table 5.3.5.1.1 - Indicators of Access to Education (1st and 2nd Primary Levels), Distributed by Region and by Areas of Residence and Sex

	Regions						Areas of Residence		Sex		Total
Education Indicators	Capital C	North	East	West	South	Centre South	Urban	Rural	Male	Female	
Rate of Enrolment in the 1st level	33.8	23.0	19.0	37.0	43.6	27.9	40.0	25.1	32.8	28.6	30.5
Total	151	172	61	92	118	171	279	486	353	412	765
Net Rate of Schooling	62.1	38.4	31.9	58.8	49.3	43.4	63.7	39.6	51.8	48.0	49.7
Gross Rate of Schooling	105.4	73.8	58.5	106.0	89.9	80.1	109.5	75.0	97.7	82.1	89.4
Total	814	524	518	634	718	560	1,578	2,190	1,754	2,014	3,768

In the case of the net rate of schooling, the table shows that in national terms approximately half the population between 6 and 11 are not at present in school (school year of 1995/96). This indicator is lower still for the rural area, as nearly 60% in this area are not studying this academic year.

In regional terms, the worst continue to be the east, north and centre south regions with the proportion of children at the official age for the 1st and 2nd basic levels but are not at the moment studying varying from 51% (Centre South to 68% East).

Map 5.3.5.1.1. Net Rate of Schooling by Region of Residence

In the case of the gross rate of schooling, the table above shows that at the national level nearly 40% of the children studying at 1st and 2nd levels are already over-age for these levels, meaning therefore that Angolan children basically face 2 problems: *1) school delay, derived essentially from considerable congestion in the production process of "graduates" at these 2 levels of schooling and 2) a consequent lack of access to the education system.*

In relation to disparities in this rate, by areas of residence, geographical regions and gender, we also see that in rural areas, the east, north and centre south, and for the female sex the rate is low. For example, in the eastern region nearly 30% of pupils studying at the levels under analysis are over-age. In rural areas this proportion is near to 35%.

Box 5.5.1.1 – Interpretation of Schooling Rates for a Given Level (Using Venn Diagram)

Fig. 1-Net Rate of Schooling (NR)

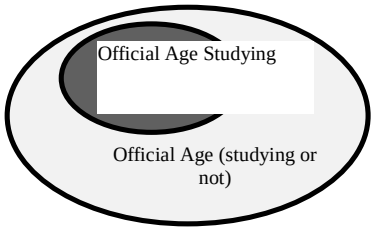
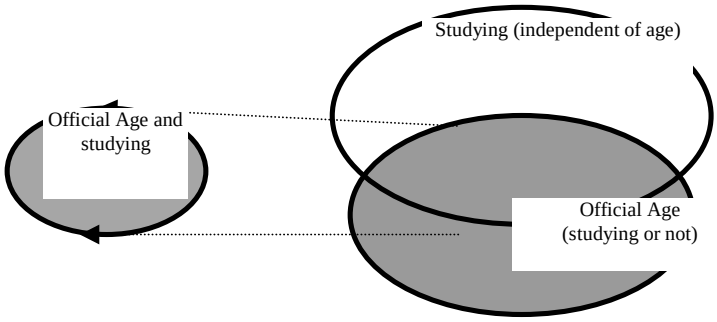


Fig. 2-Gross Rate of Schooling (GR)

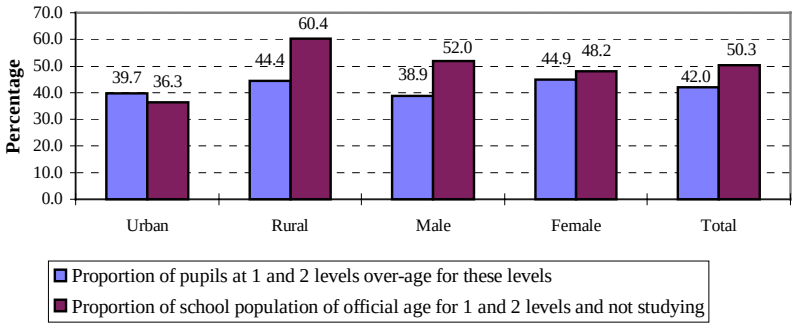


1- NR = 100%, all those of official age are studying.
2- When NR < 100%, the proportion of the school population at the official age but not studying = 100 - NR
3- When Gross Rate GR < 100%, the proportion of the school population at the age > the official age for study is less than the proportion of the population at the official age not studying. (GR - NR)
4- When GR > 100%, the proportion of the population at age > the official age studying is greater than the proportion of the population at the official age not studying. (GR - NR)

On the other hand, it is pertinent here to observe the gross rate is, with the exception of the urban area, always lower than a 100. This means that presently the percentage of over-age pupils in schools for these levels is lower than the number of pupils at the official age but outside the formal system.

Figure 5.3.5.1.1, which shows a comparison of those over-age pupils who study at 1st and 2nd levels with the percentage of pupils at the official age but not studying, confirms this fact.

Comparison between the Proportion of Pupils over-age for the I and II Levels studying, with the Proportion of Children and Adolescents at the official age for these levels, not studying by Areas and by Sex



This finding shows that it is not only congestion at enrolment and finishing the first two levels that explains why there are pupils of school age excluded from the education system, if that were the case, the two figures would be the same. There are hence other issues which influence the high number of children and adolescents of school age (1st and 2nd levels) who are not studying.

Figure 5.3.5.1.2

Net Rates of Schooling (First 6 years of Schooling) (%)

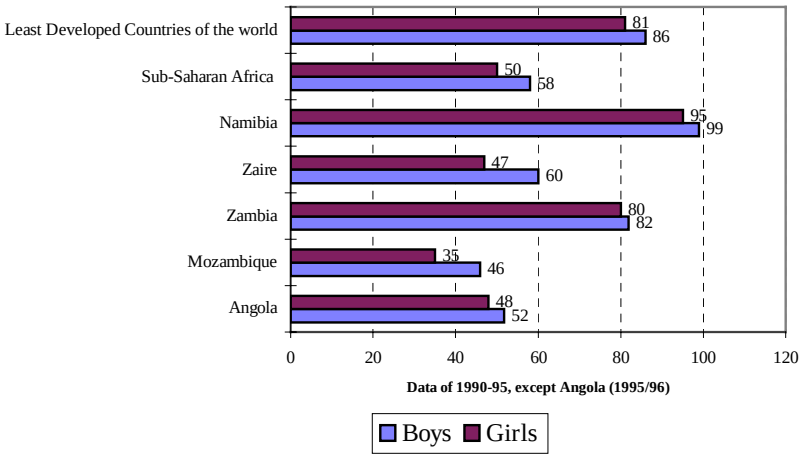
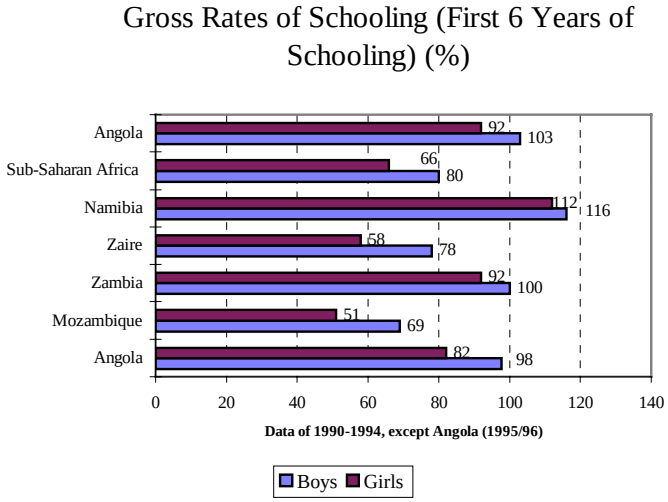


Figure 5.3.5.1.2 shows that in comparison with other countries with more or less the same level of development Angola has one of the worst net rates of education for boys (52%), only higher than the rate for Mozambique (46%). For example this rate is approximately twice as low as the rates for Namibia (99%) and Zambia (82%), bordering countries. For the female sex the Angolan rate is also one of the lowest (nearly 48%), ahead of Mozambique (35%), also being, approximately twice as low as the rates for Namibia and Zambia[4].

[4] UNICEF, "World Child Situation", 1997

Figure 5.3.5.1.3



The gross enrolment rates for Angola are not as bad as the net rates. Thus, the gross rate for boys (98%) is above rates prevalent in sub-Saharan Africa (80%), Zaire (78%) and Mozambique (69%). For girls the Angolan rate is still reasonable, in comparative terms in the region. It is also better than for the countries quoted above, figure 5.3.5.1.3)

5.3.5.2. Internal Efficiency of the System

Analysis of school drop-out pattern for the 2 years in question (1994/95 and 1995/96) reveals 2 important facts to be taken into account in the analysis of the degree of internal efficiency of the educational system. On the one hand it is known that most pupils drop out in the first level of primary school and that drop-out basically affects those who are over-age for the 1st level *(over 10 years of age).* These data show a certain delay in pupils finishing this level of education, which can be caused by a high number of failures or late enrolment. The following questions need to be answered: ***To what extent is the present education system efficient in retaining and training pupils in the time allowed? What factors affect the degree of efficiency of the system?***

"The objective of education can be analysed in different ways, basically depending on the analytic perspective or ideological framework being used. Educationalists, for example, would stress the acquisition of relevant knowledge, attitudes and talents, as the main objective. Economists would pay greater attention to development of human resources, profitable productivity, and higher and lasting gains as the main benefit to be drawn from this activity. There are others who insist on the transfer of cultural heritage, and the strengthening of cultural identity. Pupils, themselves, are more interested in passing the final exam with a minimum of time wasted.

This somewhat pragmatic point of view is also shared in the education planning sector. The planners consider the most important and immediate objective to be that the maximum number of pupils are enrolled in the system and that they complete their education successfully and within the time laid down"[5].

[5] "Basic concepts and techniques for educational planning: technical modules - B3 module 9 - Internal efficiency" - International Institute for Educational Planning.

The Result of a given educational cycle is defined in accordance with the educational planning perspective, as the number of pupils who complete their education successfully.

Y*ear-pupil* is defined as the set of resources (teachers, schools, classroom equipment, school furniture etc.), which an education system uses to maintain a pupil within a school for an academic year.

Investment used as pupils' progress through a given educational cycle- it is defined and measured in terms of "years-pupils".

The term "*internal efficiency*" derives from the link between investment and the result of gradual pupil progress through an educational cycle. Thus, within a given cycle for example four years, a pupil would need at least 4 pupil-years to go through the "*production process*" and pass the final exam. Eight pupil - years would be necessary to produce 2 graduates, 12 to produce 3, etc. If all goes to plan and no pupil drops out or repeats a year, the best ratio possible between investment and result would be (4/1) = 4 pupil -years per graduate.

The questionnaire used for MICS enables us to calculate the failure and drop-out rates over the last two years. This exercise basically consists in the systematic selection of pupils who reply to the question "*what grade were you enrolled in last year?*" and cross-match the information with the answer to the question "*what grade are you enrolled in this year?*" In this way we can find the proportion of pupils who moved up to the next grade, those who failed, as well as those who dropped out in this period. (Table 5.3.5.2.1).

Table 5.3.5.2.1 shows a high repetition rate right at the beginning of the school cycle (1st grade). Almost a third of the pupils who started 1st grade last year failed. For the other grades this rate varies from 15% (6th grade) to 24% (5th grade).

Not only is there a growing drop-out rate in 1st to 4th grades, but also the rate for every grade is at least about 14%. A fifth of pupils who studied 4th and 5th grades, respectively, abandoned school at these grades. The results for the 7th and 8th grades were calculated on the basis of a small number and are therefore not analysed. It is appropriate to underline here the rates calculated (drop-out and repetition) are generally lower than those calculated by the Ministry of Education.

Table 5.3.5.2.1 - Rates of Promotion, Repetition and Drop-out for Each Grade of Education of I and II Primary Levels 1994/95 - 1995/96

Rates	1st Grade	2nd Grade	3rd Grade	4th Grade	5th Grade	6th Grade
Promotion Rate	55.8	60.9	61.6	59.6	52.9	70.6
Repetition Rate	30.4	23.4	20.9	15.6	24.0	14.8
Drop-out Rate	13.8	15.7	17.5	24.8	23.1	14.6
Total:	1,010	614	410	214	160	112

In order to discuss this theme we will use some indicators, calculated by forming a synthetic cohort [6](see technical appendix, for more details) and described as follows:

1. *Survival Rate (or retention):* used to measure the capacity of the system to retain pupils until they reach the desired target level. It is calculated dividing the sum of the number of pupils moving up from one grade or desired level, by the number of pupils enrolled initially in this cycle (i.e., in the 1ª grade of the 1st level).

2. *Wastage Rate:* This is defined as the relation which exists between the minimum time necessary for 1,000 pupils to complete the study cycle and the time that the group really took to complete the cycle. The figures of this ratio are between 1 and the infinitive, in such a way that when it is equal to 1, it means that 1,000 pupils were produced at exactly the costs initially predicted.

3. *Average study time by graduate.* Refers to the average time necessary for a pupil to graduate from a given level. It is calculated adding each product of the number of graduates by the number of years needed to complete the study cycle. However, this indicator is not applicable to all pupils who entered the education cycle but only to those who completed it.

Please note, however, that these indicators were calculated in accordance with the official restriction on the number of times a pupil can fail (only 2 fails are allowed for the cycle that goes from 1st to 6th grade).

The following table presents the rate of school survival (or retention) for each grade of the 1st and 2nd primary levels, distributed by sex and areas of residence. It is important to state that a child is considered to have survived if he/she is enrolled in this grade.

In general we see a gradual reduction in the number of pupils who start the first level of primary school as they progress through the educational cycle. This fall is more accentuated in the first years and decreases as the pupil continues his/her education (see the incline in the curve figure 5.3.5.2.1). Thus, at the end of the first level, of those who started, the school system only managed to retain about 30% of pupils till 5th grade. At the end of the second level, this figure falls to about 15%. This means that for every 3 people who enrol 2 do not conclude the 1st level. This figure doubles if the cycle is extended by 2 years: of 6 pupils starting school, only one gets into 7th grade.

Gender disparities are not so striking as those between areas of residence. Table 5.3.5.2.2 shows that of 100 male children and 100 female children enrolled in school, only 17 male and 13 female get into 7th grade. In the case of areas of residence, and following the same train of thought, 21 urban children manage to get into this grade whilst in rural areas only 5 do so. (Cf. figure 5.3.5.2.2, for a better illustration).

[6] Through the analysis of a synthetic cohort, it is possible to keep abreast of the evolution of a group of pupils who started Grade 1 in a given educational cycle until it is completed, using the rates established in Table 5.3.5.2.1.

Table 5.3.5.2.2 - Survival Rates for each Grade of 1st and 2nd levels, Distributed by Sex and Areas of Residence

	Enrolled in 1st Grade	2nd Grade	3rd Grade	4th Grade	5th Grade	6th Grade	7th Grade
Sex							
Male	100	79.5	64.8	48.5	33.8	22.1	17.3
Female	100	76.3	54.9	40.6	26.8	16.9	13.4
Areas of Residence							
Urban	100	84.0	67.3	53.9	39.7	26.2	21.4
Rural	100	71.6	51.8	33.2	18.2	9.4	4.9
Total	100	77.9	59.7	44.4	30.2	19.4	15.2

Figure 5.3.5.2.1.

Survival Rates (Retention) for each Class of I and II levels, by Areas of Residence

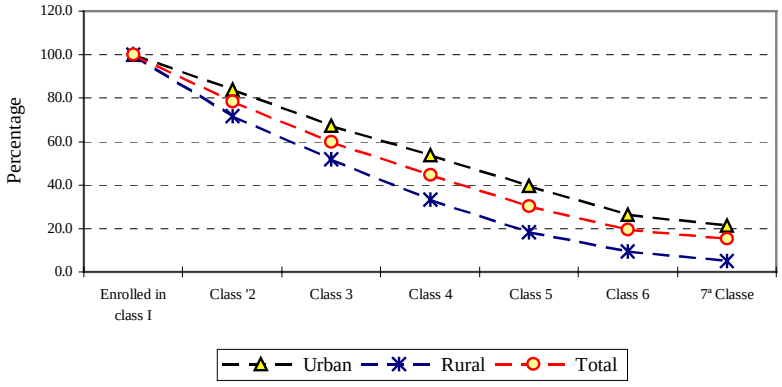
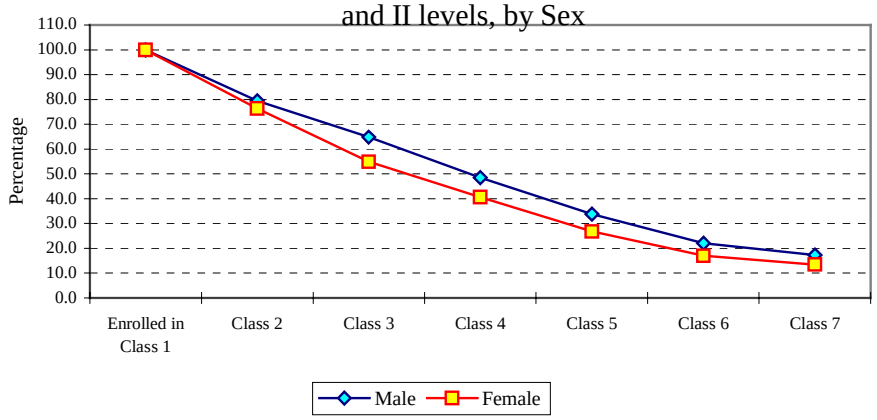


Figure 5.3.5.2.2 Survival Rates (Retention) for each Class of I and II levels, by Sex



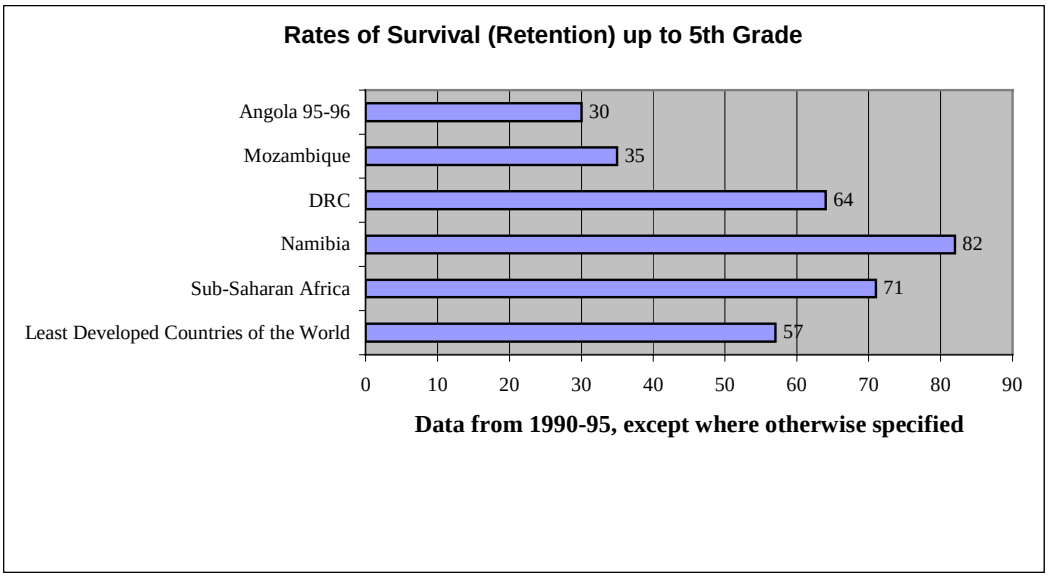


Figure 5.3.5.2.3 gives a comparative analysis of the survival rate between various countries and some regions of the world. Here again Angola is amongst the worst, only close to Mozambique. Countries bordering on Angola, as in the case of Namibia and Zambia are in a much better situation with rates 2 to 3 times higher[7].

The wastage rate indicates a degree of internal efficiency of the educational system, related to the minimum necessary time for a given group of pupils to complete a given school cycle (ideal time) with the real time taken by these same students to complete the cycle. Table 5.3.5.2.3 indicates the figures for this rate, distributed by levels of schooling.

[7] UNICEF, "World Child Situation";1997

Table 5.3.5.2.3 - Rates of School Wastage for 1st and 2nd Levels 1995/96

Sex	1st Level	1st & 2nd Levels
Male	2.2	4.2
Female	2.9	5.0
Areas of Residence		
Urban	2.2	3.7
Rural	3.0	12.3
Total	2.5	4.6

A wastage rate of 2.5 for the 1st level means that the education system in analysis educating 1,000 pupils at this level has to spend enough money to train 2,500 pupils. If this analysis is extended to the end of the 2nd basic level, the wastage rate grows, in such a way those training 1,000 pupils the system has failed to train another 3,600.

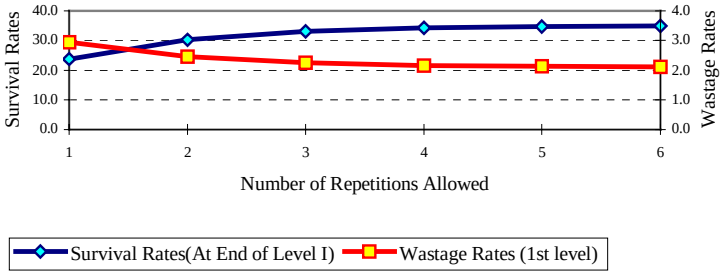
In terms of gender, we see that disparity hardly increases from one level to another, which means that the evolution of wastage (from 1st to 2nd levels) does not alter much between girls and boys. However, the data show that the training of one girl seems to be more expensive to the system than the education of one boy. In relation to areas of residence, there seem to have been serious problems in rural areas, where school wastage for the 2nd level of school reaches a figure 3 times higher than that for urban areas.

It is important, however, to be really clear on how restricting the number of failures allowed in a given school cycle affects the survival rate of the pupils, as well as the wastage rate. The following figure shows different rates of survival and wastage for the 1st level, assuming different levels of restriction on the number of failures. We see that the effect of the restriction level on these two rates is inverse. Or rather, the survival rate increases and the wastage rate falls when the restriction on the number of fails is lighter.

The logic of this inverse behaviour is the following: with a lighter restriction, a pupil is allowed a greater number of fails. In this way pupils are consequently allowed to stay longer within the system, in such a way reducing compulsive drop-out and consequently wastage of resources invested in the education of this pupil. On the other hand, staying longer inside the system implies higher costs, making the training of the pupil more expensive to the system. There is therefore a necessity to take the right decision, which would be to find the level of restriction which would enable, at the same time, the minimum expenditure of resources and the training of a higher number of pupils. The figure in analysis shows what this restriction is in allowing a maximum of 2 repeats (see the intersection of the 2 curves) (Figure 5.3.5.2.4)

Figure 5.3.5.2.4

Analysis of the Effect of the Level of Restriction on the School Retention and Wastage Rates for Level I



Another important indicator to measure the efficiency of the education system is the average time that each pupil spends in order to finish a given school level. The following table shows the numbers are very common at all levels of disaggregation. It shows that the few pupils who finish the first level do so with approximately one year's delay. This delay is maintained until the end of the second level.

Table 5.3.5.2.4 - Average Time Spent for Each Pupil Who Finished 1st and 2nd levels in 1995/96

	1st Level	2nd Level
Sex		
Male	5.0	7.0
Female	4.9	7.0
Areas of Residence		
Urban	4.9	7.0
Rural	5.0	7.1
Total	4.9	7.0

Box 5.3.5.2.1: Informal Payment for Education

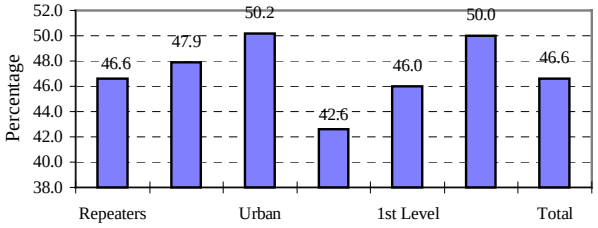
As a consequence of the high congestion in the flow of pupils who enter and leave the education system, there is a growing lack of availability of places in schools. Informal payment for education has become more and more common in the last few years.

MICS enables us to assess to what extent this phenomenon has developed. The figure below shows that approximately half (about 47%) of the 3,674 children enrolled in the school year 1995/96 had to pay or give something in order to enrol.

The following figure shows that there are no great differences between repeating and non-repeating students, which does not happen when we analyse the data by areas of residence and levels of schooling. In effect we begin to note that this practice is more urban and more visible amongst pupils of 2nd and 3rd Primary levels.

Figure 5.3.5.2.1.1

Proportion of Pupils who had to pay in order to Enrol (School Year 1995/96)



6. MORTALITY

A regular study of mortality requires a good system of information on life statistics. It is in that system that births and deaths should be registered immediately after they have happened. A good system of life statistics does not only depend on its operational capacity, but also on the sensibility of the population in registering these events.

At present in Angola, the system of life statistics does have wide enough coverage, and the registering of vital events, when carried out, involves a lot of delay. This even happens in urban areas. Births are often registered only when a child is old enough to go to school, or when s/he dies. In addition to this, there also exist situations of non-registering of deaths, people being buried on waste ground or in clandestine cemeteries.

In countries where there is an absence of registration of life statistics, indirect techniques can be used to assess mortality levels and trends.

During the MICS survey questions were asked in order to estimate child, maternal and adult mortality. Some differentials were studied, namely sex and area of residence. In this chapter about mortality, we will also present a life table for Angola, adjusted for 1986. It is important to notice that as estimates and given the use of indirect techniques the mortality levels obtained refer to some years ago and not to when the survey was carried out. Adjustment to the life table also dates from some years ago, in that it takes into account adult and child mortality for the same period of time. The mortality models used in the estimates are the South Tables/Coale and Demeny, level 14.

6.1. Child Mortality

Child mortality referred to here is the mortality of under 5s. It was estimated using the Brass technique. Mothers were asked questions regarding the number of children they have had and those that have survived. The proportion of dead children is later transformed using methods adapted to probabilities of death before completing 5 years of life, for which a point in time is determined.

Figure 6.1.1. represents the probability of dying before completing 5 years of age (q5), for the whole country. Child mortality in Angola can be described as very high, having varied between the 80s and 90s, from 250 in a thousand to 274 a thousand. This means that for every thousand live-born children 274 will probably die before they are 5 years of age. Infant mortality is equally high (deaths under a year of life) with about 166 for every thousand live babies, cf. subsection 6.4. As we can see from figure 6.1.1, there were no variations in child death probability, i.e. a decrease. Mortality has remained very high over the last decade. In about 1991 it reached 274 per thousand.

Figure 6.1.1

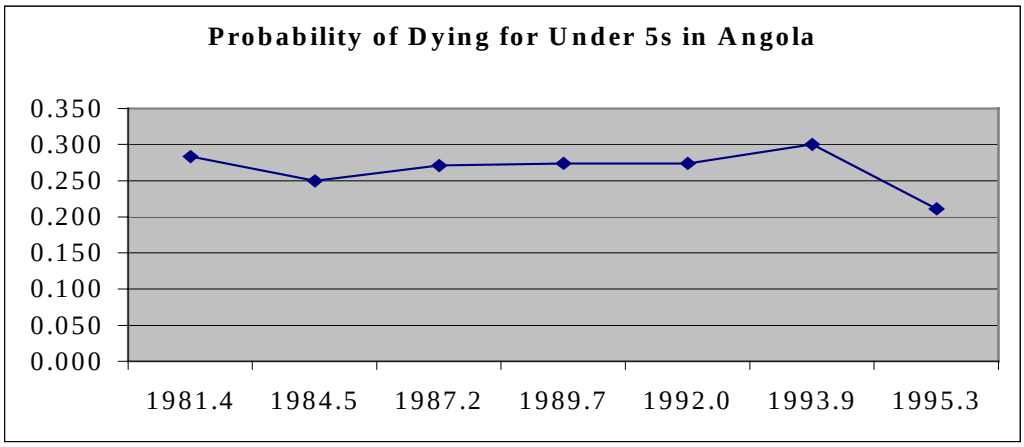

Probability of Dying for Under 5s in Angola
0.350
0.300
0.250
0.200
0.150
0.100
0.050
0.000
1981.4
1984.5
1987.2
1989.7
1992.0
1993.9
1995.3

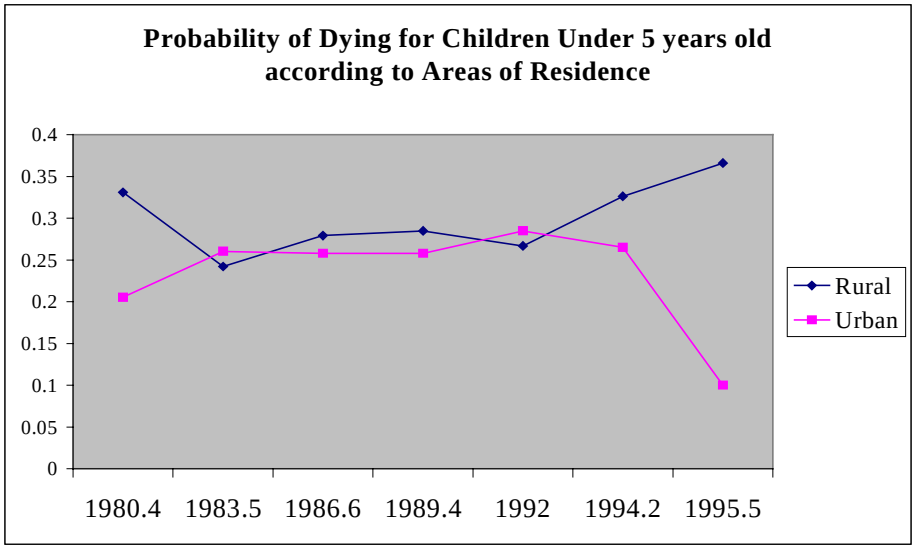
Table 6.1.1. Probability Trend of Child **Mortality according to Selected Characteristics**

	Age of Mothers	Average Parity	Proportion Dead Children	Mortality q (5)	Reference Data
The whole Country					
	15-19	0.35	0.145	0.211	1995.3
	20-24	1.70	0.253	0.300	1993.9
	25-29	3.33	0.254	0.274	1992.0
	30-34	4.50	0.270	0.274	1989.7
	35-39	5.72	0.279	0.271	1987.2
	40-44	6.77	0.273	0.250	1984.5
	45-49	6.77	0.328	0.284	1981.4
Rural					
	15-19	0.30	0.236	0.366	1995.5
	20-24	1.77	0.271	0.326	1994.2
	25-29	3.35	0.250	0.267	1992.0
	30-34	4.45	0.286	0.285	1989.4
	35-39	5.69	0.293	0.279	1986.6
	40-44	6.66	0.270	0.242	1983.5
	45-49	6.87	0.385	0.331	1980.4
Urban					
	15-19	0.41	0.079	0.100	1995.0
	20-24	1.61	0.226	0.265	1993.7
	25-29	3.30	0.261	0.285	1992.0
	30-34	4.58	0.249	0.258	1990.1
	35-39	5.78	0.260	0.258	1988.0
	40-44	6.92	0.278	0.260	1985.6
	45-49	6.61	0.237	0.205	1982.6
Female					
	15-19	0.18	0.144	0.204	1995.2
	20-24	0.84	0.257	0.303	1993.9
	25-29	1.65	0.251	0.271	1992.0
	30-34	2.23	0.247	0.252	1989.7
	35-39	2.91	0.267	0.259	1987.3
	40-44	3.52	0.268	0.245	1984.6
	45-49	3.41	0.298	0.257	1981.5
Male					
	15-19	0.17	0.145	0.211	1995.3
	20-24	0.86	0.249	0.295	1994.0
	25-29	1.68	0.257	0.276	1992.0
	30-34	2.28	0.292	0.296	1989.7
	35-39	2.81	0.292	0.283	1987.1
	40-44	3.24	0.279	0.256	1984.3
	45-49	3.36	0.359	0.314	1981.2

As regards figure 6.1.1 two points in the graph should not be considered during analysis. The last probability of child death shows information provided by very young mothers (15 - 19 years), an age group with low parity, and at times, higher risks for the children, as we are dealing with the first child. Notwithstanding the fact that the data present an apparent decrease in mortality when the last probability of dying is considered, this should not be taken into consideration. This is because the first probability of dying presented in the graph is information obtained from mothers between 45 and the 49, not normally considered very trustworthy.

By area of residence, child mortality maintains the same trend as for the total population. Even though the probability of child death it is very high, it is slightly lower for children living in urban zones. In about 1991 mortality rates were 276 per thousand in rural zones and 271 per thousand in urban zones. We usually expect that there will be a substantial difference between probability of death in urban areas compared to rural areas. This is because there is greater access to health care in urban zones, a concentration of health resources and preventive health care measures, and also mothers are more exposed to information on child health care. The rural/ urban divide is not significant in the case of Angola, probably for reasons linked to rural-urban migration, due to the war and the fact that access to health care is difficult even in urban areas.

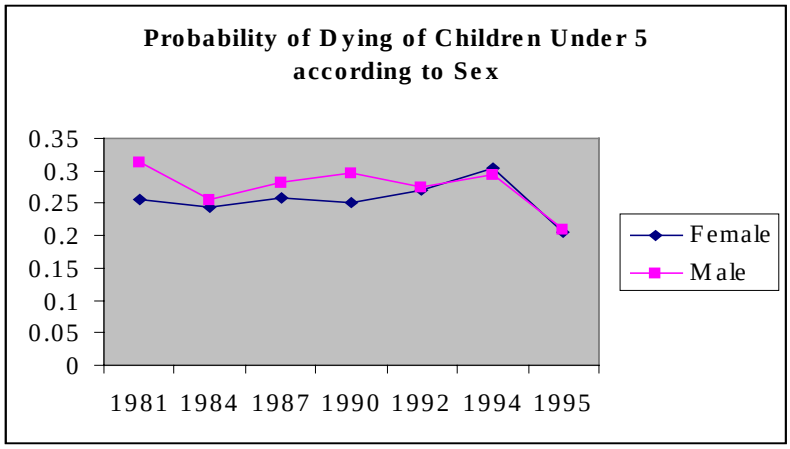
Figure 6.1.2



The probability of death before reaching 5 years of age by sex (figure 6.1.3) is revealed to be higher for the male sex. Similar to what was referred to above in figure 6.1.1 the first and last points of the graph should not be taken into consideration.

Generally, more males than females die, which is also the case in Angola. In 1991 the probability of death before completing 5 years of life is estimated to have been 261 per thousand for the female sex and 286 per thousand for the male sex. In the data no omission of evidence is detected on the part of the female sex. The proportion of deaths of the female sex by mothers' ages does not decrease with an increase in the mother's age as would be expected if data had been omitted. This leads us to believe that the difference in probability of child death according to sex is correct.

Figure 6.1.3

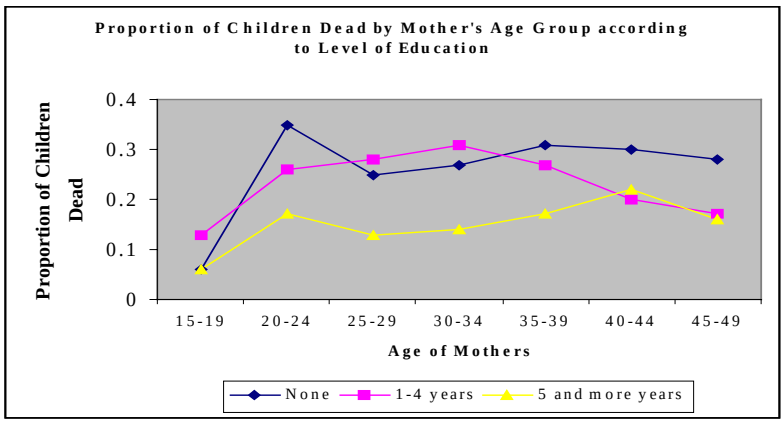


In literature there exist many studies trying to relate child mortality and the mothers' level of education. A mother's educational level has a positive effect on child mortality. The higher the level education of the mother, the lower the probability of child death.

Figure 6.1.4. presents the proportion of dead children by age group and according to the mother's level of education.

If we do not take into account the first point of the graph and the last, figure 6.1.4 clearly mirrors the great difference that exists in the proportion of dead children according to the mothers' education level.

Figure 6.1.4



Here once again the importance of the mother's educational level is clear in relation to her children's survival, namely for those under 5 years of age. Clearly in the mothers' group with a higher educational level we find those who are resident in urban areas with better social and economic conditions, and better and greater access to health services; clearly all this influences their children's survival. However, in the case of Angola the place of residence (urban/rural) does

not seem to play an important role, because as already described above, great differences do not exist between urban and rural mortality. The educational level in this case probably indicates relatively better social and economic well-being and a better use of available health services. It is important to notice that large differences in child mortality according to the mothers' educational level begin to appear when mothers have 5 or more years of education.

In Africa, Angola is in the group of countries that has the highest rates of infant-juvenile mortality. In the area, Zimbabwe has a mortality rate of 77 per thousand, Namibia 83 per thousand, Zambia 190 per thousand (Garenne, 1996). Mozambique, similar to Angola is one of the countries with a high rate of mortality for under 5s (380 per thousand in 1990-1991), (Garenne & al., 1996).
In a study on mortality in countries in the sub-Saharan Africa, Michel Garenne (1996) demonstrated that, contrary to what seemed obvious in respect to the link between child mortality and per capita GDP, countries that have been subjected to long periods of political crises/instability as in the case of Angola, Mozambique, Uganda and others, independently of the value of GDP, have suffered significant increases in child mortality. This shows that, notwithstanding the decreasing tendency in child mortality, in almost all developing countries an increase in mortality is noticeable in countries that have gone through prolonged political crises.

6.2. Adult mortality by Sex

Tables 6.2.1 and 6.2.2 present estimates respectively for female and male adult mortality, calculated using the method of maternal and paternal survival. Similar to what was already undertaken in the case of child mortality, this method allows us to find adult mortality rates for both sexes, independently of the cause of death. Through the proportion of mothers and/or surviving parents we can find the probability of an individual of either sex surviving the period between 15 and 60 years of age. The higher probability of survival is the lower mortality rate.

Generally female adult survival did not suffer significant alterations in the last decade, maintaining between 60% and the 63% of survivors between the 15 and the 60 years of age.

Table 6.2.1 Estimates of Female Adult Survival and Location in Time Using Maternal Survival Method

Age Groups	Total respondents	Mother alive	Proportion S(n)	Level (alfa)	l(60) l(15)	Date
5 – 9	1,768	1704	0.9638	-0.0425	0.7521	1992.9
10-14	1,382	1286	0.9305	0.0221	0.7328	1990.7
15-19	994	868	0.8732	0.1922	0.6808	1988.5
20-24	1,060	836	0.7887	0.4061	0.6167	1986.5
25-29	842	618	0.7340	0.3569	0.6310	1984.7
30-34	684	432	0.6316	0.4556	0.6026	1983.0
35-39	540	286	0.5296	0.4481	0.6047	1981.6

In table 6.2.1 we can see an increase in female survival starting from the end of the eighties. These data were excluded from fig. 6.2.1 on purpose. These are estimates based on statements

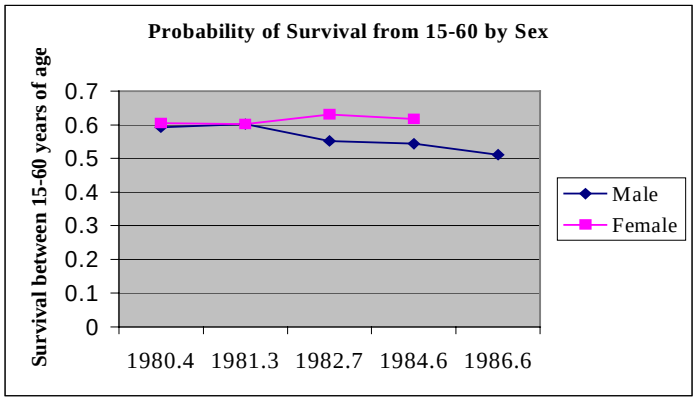
made by respondents between 5 and 19 years of age. It is common for these age groups to use a method of maternal survival through what is conventionally called " the phenomenon of adoption." They are probably children that became orphans very early, being brought up by women who they identify as their mothers, and who were alive at the time of the survey.

Table 6.2.2 Estimates of Male Adult Survival and Location in Time Using Paternal Survival Method

Age Groups	Total of respondents	Number Father alive	N	Proportion S(n)	l(60) l(15)	Date
15-19	994	716	20	0.7203	0.5115	1986.6
20-24	1,060	620	25	0.5849	0.5443	1984.6
25-29	842	458	30	0.5439	0.5515	1982.7
30-34	684	286	35	0.4181	0.6020	1981.3
35-39	540	186	40	0.3444	0.5926	1980.4
40-44	386	72		0.1865		

Contrary to what happens in relation to adult female survival, for males we find there is a slight downward tendency, meaning an increase in adult male mortality. At the beginning of the eighties the male survival rate was about 59%. However, by almost the end of the same decade the male survival rate had gone down to 51%. Figure 6.2.1 clearly reflects the adult survival trends by sex.

For the same period of time, the comparative analysis between the sexes shows that male survival rate is always lower, tending to increase over time (Figure 6.2.1.).



Compared according to area of residence, adult survival by sex presents the same trend, independently of being residents in rural or urban zones (See Figures 6.2.2 and 6.2.3). It is important to notice that area of residence mentioned here is the respondent's residence and not necessarily of someone who died. It is presumed, however, that death occurred in the respondent's place of residence.

Figure 6.22

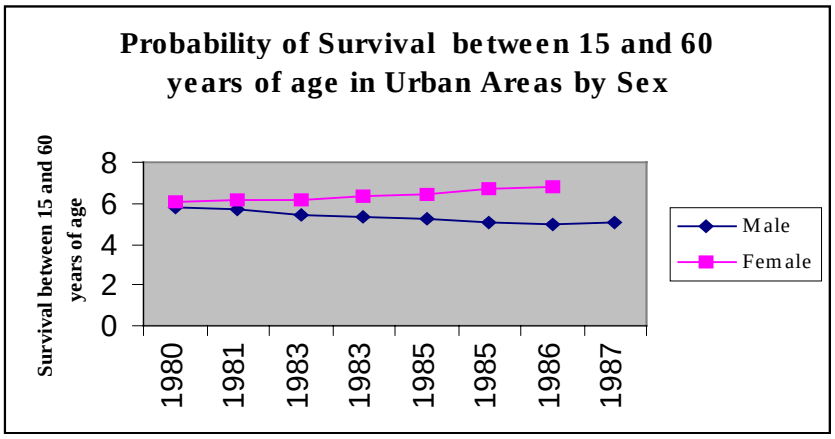
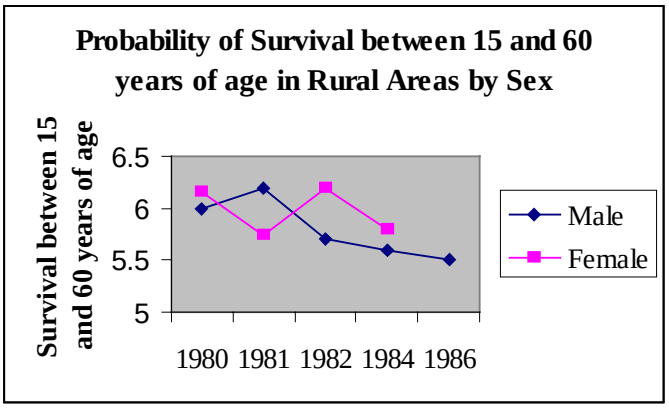


Figure 6.2.3.



Male and female survival by area of residence when compared, are always shown to be higher for the female sex. These differences, however, are more striking in urban areas. At the end of the eighties, in urban areas there seems to be a slight increase in female survival (figure 6.2.2.).

6.3. The Life Table

As was said at the beginning of this chapter, a life table for Angola was estimated, bringing together levels of mortality for under 5s and adults of both sexes separately. When joining the two mortality rates it was considered that the levels selected at the time were the most credible. 1986 is the most recent date for which we obtained credible adult mortality figures.

The table is reconstituted for each sex by joining the two mortality levels and using a mortality model, (tables 6.3.1. and 6.3.2). The model used here was the South Coale and Demeny tables, level 14. The life table was adjusted for the year 1986, taking into account exactly what was said

above. The table was reconstituted for both sexes (Table 6.3.3.), starting from female and male mortality in the life tables, using a cohort of 1,000,000 people.

For the female sex we estimate life expectancy at birth to be 44.2 years, for the male sex 40.7 years. The life expectancy of both sexes was estimated at 42.4 years (table 6.3.3.).

The difference between the two life expectancies is to be expected given that, generally speaking, men have relatively short longevity compared to women. However, as already mentioned the male sex presents higher mortality, in childhood as well as in adult life.

Table 6.3.1. Life Table for the Female Sex, Angola 1986

Age	lx	Dx	qx	px	Lx	Tx	ex
0	100000	14962	0.1496	0.8504	89526	4421198	44.21
1	85038	10584	0.1245	0.8755	314749	4331672	50.94
5	74454	2115	0.0284	0.9716	366982	4016923	53.95
10	72339	1236	0.0171	0.9829	358605	3649941	50.46
15	71103	1749	0.0246	0.9754	351142	3291335	46.29
20	69354	2195	0.0317	0.9683	341281	2940193	42.39
25	67159	2373	0.0353	0.9647	329860	2598913	38.70
30	64786	2436	0.0376	0.9624	317839	2269053	35.02
35	62350	2591	0.0416	0.9584	305271	1951214	31.29
40	59758	2797	0.0468	0.9532	291800	1645943	27.54
45	56962	3086	0.0542	0.9458	277093	1354143	23.77
50	53875	3964	0.0736	0.9264	259466	1077050	19.99
55	49911	5075	0.1017	0.8983	236867	817584	16.38
60	44836	7154	0.1596	0.8404	206296	580716	12.95
65	37682	9121	0.2421	0.7579	165608	374420	9.94
70	28561	10536	0.3689	0.6311	116465	208812	7.31
75	18025	9428	0.5231	0.4769	66556	92347	5.12
80+	8597	8597	1.0000	0.0000	25791	25791	3.00

Table 6.3.2. Life Table for Male Sex, Angola 1986

Age	lx	Dx	qx	px	Lx	Tx	ex
0	100000	18220	0.1822	0.8178	87246	4074276	40.74
1	81780	9240	0.1130	0.8870	304945	3987030	48.75
5	72540	1783	0.0246	0.9754	358243	3682085	50.76
10	70757	990	0.0140	0.9860	351311	3323842	46.98
15	69767	1458	0.0209	0.9791	345192	2972530	42.61
20	68309	2144	0.0314	0.9686	336187	2627338	38.46
25	66165	2064	0.0312	0.9688	325667	2291152	34.63
30	64101	2200	0.0343	0.9657	315007	1965484	30.66
35	61901	5260	0.0850	0.9150	296356	1650477	26.66
40	56641	3438	0.0607	0.9393	274609	1354121	23.91
45	53203	4355	0.0819	0.9181	255126	1079512	20.29
50	48848	5461	0.1118	0.8882	230585	824386	16.88
55	43386	6958	0.1604	0.8396	199537	593801	13.69

60	36429	8286	0.2275	0.7725	161428	394264	10.82
65	28142	9428	0.3350	0.6650	117142	232836	8.27
70	18714	9000	0.4809	0.5191	71071	115695	6.18
75	9714	6016	0.6193	0.3807	33530	44624	4.59
80+	3698	3698	1.0000	0.0000	11094	11094	3.00

Table 6.3.3. Life Table for Both Sexes, Angola 1986

Age	lx	Dx	qx	px	Lx	Tx	ex
0	1000000	166231	0.1662	0.8338	883638	42443360	42.44
1	833769	98986	0.1187	0.8813	3097511	41559722	49.85
5	734783	19458	0.0265	0.9735	3625271	38462211	52.34
10	715325	11103	0.0155	0.9845	3548867	34836940	48.70
15	704222	16009	0.0227	0.9773	3481086	31288073	44.43
20	688213	21690	0.0315	0.9685	3386838	27806987	40.40
25	666523	22154	0.0332	0.9668	3277228	24420149	36.64
30	644368	23156	0.0359	0.9641	3163952	21142922	32.81
35	621212	39521	0.0636	0.9364	3007260	17978970	28.94
40	581692	31239	0.0537	0.9463	2830361	14971710	25.74
45	550453	37330	0.0678	0.9322	2658939	12141348	22.06
50	513123	47276	0.0921	0.9079	2447424	9482409	18.48
55	465847	60348	0.1295	0.8705	2178364	7034985	15.10
60	405499	77311	0.1907	0.8093	1834218	4856621	11.98
65	328188	92777	0.2827	0.7173	1408998	3022402	9.21
70	235411	97529	0.4143	0.5857	933231	1613404	6.85
75	137882	76887	0.5576	0.4424	497190	680173	4.93
80+	60994	60994	1.0000	0.0000	182983	182983	3.00

6.4 Maternal mortality

Maternal mortality was estimated with MICS data using the indirect technique commonly known as the sisterhood method. This method is based on questions that women of childbearing age were asked about their sisters' mortality (of the same mother), by maternal cause. Maternal causes are commonly classified as deaths during pregnancy, childbirth, and abortion and in the period of “puerperium”. This method allows questions about sisters' maternal mortality to be made to men and women. In the case of MICS these questions were only put to women. In general maternal mortality shows two components, a component of time (time at which the death occurs) and a cause component (cause of death). The sisterhood method just uses the component of time, that is to say the woman's state at the time she died.

Table 6.4.1 presents the estimates for Angola, with a probability of maternal death during a woman's childbearing life of 0.024. This means to say that about 1 woman in every 40 dies from maternal causes, corresponding to a maternal mortality rate of about 352 for every 100,000 live births. This estimate is for 1985.

Notwithstanding the valid attempt to get to know the level of maternal mortality in Angola from a survey of family households, the results presented here are somewhat doubtful, as they seem to underestimate the problem. Unfortunately it is not possible to make comparisons as would be expected, as existing sources of information for Angola are limited. However, in 1994 a study on maternal death was carried out in Angola using the sisterhood method, based only on the city

of Luanda (Vaz Grave, 1994). In this study (1984) maternal mortality was estimated at 1,281 maternal deaths per 100,000 live births. We can also compare the results obtained here with other countries, namely Mozambique with 829 per 100,000; Gambia with 1,005 per 100,000 and the city of Lima with 223 per 100,000 (CELADE, 1988), all these values are from the 80s.

Table 6.4.1 Estimates of Maternal Mortality Using the Sisterhood Method

				Exposure to risk of dying		Death Quotient.	Prop. Of Deceased Sisters
Age	N.interv.	N.sisters	Maternal	Adj. Factor	p/ maternal death	maternal	p/maternal cause
(i)	x(i)	N(i)	Deaths r(i)	c(i)	B(i)	q(i)	P(i)
15-19	978	3,184	12	0.107	340	0.035	0.100
20-24	1,054	3,432	28	0.206	706	0.040	0.184
25-29	836	2,722	16	0.343	934	0.017	0.082
30-34	680	2,418	32	0.503	1,216	0.026	0.222
35-39	538	1,628	26	0.664	1,080	0.024	0.197
40-44	382	1,124	14	0.802	902	0.016	0.111
45-49	224	594	8	0.900	534	0.015	0.125
Total	4,692	15,102	136		5,714	0.024	0.146

Given the general situation of mortality in Angola, figures for maternal mortality lower than 500 per 100,000 live births can be considered as underestimated. At the root of this underestimation can be factors linked to the application of the method in itself, the form in which the questions asked were interpreted, and also to problems linked to memory lapses on the part of the respondents. It is important to point out, however, that according to the method's authors it is an ideal method for inclusion in censuses or surveys of family households. It requires about 3,000 to 6,000 interviewees, depending on the expected level of maternal mortality and of the number of sisters per each person of childbearing age surveyed (Graham, W. & al., 1988). However, the problem does not seem to reside in the size of the sample used but in the interpretation of the questions that are used as a basis for the estimates. We stress here that these are difficult subjects that were not properly interpreted, even after the standard questions had been simplified following the pilot test.

We can conclude that, in general, Angola shows very high mortality, reflected by the fact that life expectancy is one of the lowest in the world. The following countries also have very low life expectancy at birth: Guinea-Bissau - 43.7, Uganda - 44.7, Mozambique - 46.4 and Zambia - 48.6. Other African countries and those in the region have life expectancy at birth above those quoted e.g. Namibia with 59.1, Zimbabwe with 53.4, Kenya with 55.5 and Nigeria with 50.6.

It is well known that, in general, great alterations in life expectancy at birth occur when changes exist in child mortality, particularly infant mortality. All the countries previously mentioned with life expectancy over 50 years of age managed to achieve this result because of important reductions in under five mortality.

In the case of Angola, with infant mortality (deaths under 1 year of life) at about 166 per thousand live births, with no downward trend in under five mortality, it is very difficult to gain some years in life expectancy from birth, even if small alterations occur in adult mortality.

Important alterations in the child mortality can be achieved when programmes of maternal-infant health are effective and measures are taken to obtain those results, which have great impact on the population. These measures and programmes include vaccination, control of the most

frequent diseases, such as acute diarrhoeal diseases, acute respiratory diseases, malaria and malnutrition. Others of a more general nature include improvement of access to primary health care, mothers' schooling and all the measures that aim to reduce poverty and increase social and political stability.

In 1993 the United Nations' estimated life expectancy in Angola as 46.8. However, it seems rather unlikely that in a 7 year time span (between 1986 and 1993) that life expectancy has increased by 4.4 years, as there has been no reduction in child mortality, and the social and economic situation of the population in general has become worse with increases in poverty levels.

7. FERTILITY

Fertility, together with migration and mortality, influences the size and structure of the population. Before this report was written, fertility rates for Angola were based on census estimates carried out in the 70s, or on provincial censuses of the eighties. The latter mainly included the large urban centres in areas accessible to the Government.
Factors linked to fertility, its magnitude, differentials and determiners have great influence over child and maternal health. Key factors in maternal and child survival are family size, spacing between pregnancies, the mother's age and breast-feeding amongst others.

MICS provides information on fertility in Angola, for the first time since independence, not only for the country as a whole, but also in relation to the urban-rural differential and women's educational level.

For the study on fertility women between 14 and 49 were surveyed (module D of the questionnaire), analysing the responses of a total of 4,890 women. Of 2,026 (41.4%) lived in urban areas and 2, 864 (58.6%) are resident in rural areas.

In many of the tables in this chapter the number of women does not total those initially surveyed. This is due to missing information in relation to some variables, or also to cases where the questions are considered non-applicable to certain women.

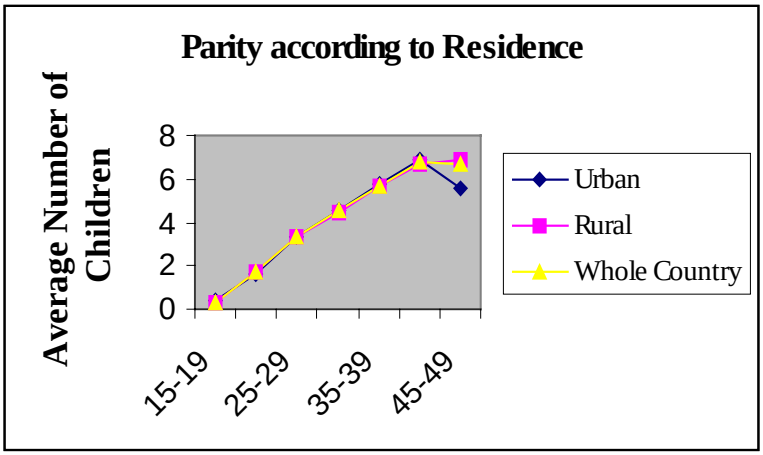
7.1. Live-born Children

The average number of live-born children also called parity increases in a general way with an increase in the mothers' age. This usually happens because the oldest women have already lived more time, and as such their exposure to the risk of becoming pregnant is longer.

Figure 7.1.1 shows the distribution of the average number of live-born children by mothers' age-groups. The average number of children increases lineally with the mothers' age. Women between 35 to 39 years of age in 1996, had on the average about 5 to 6 children, those from 40 to 44 had about 7 children. Women in the 45-49 age group, also usually have larger numbers of live-born children, although this is not very evident in fig. 7.1.1. This age group is usually more affected by omission of data, which seems to have happened here. They are older, had their children a long time ago, and are therefore more likely to forget live-born children born a long time ago, especially the ones that died a short time after birth. However, this type of omission affects older women with a higher educational level less, as can be seen from fig. 7.1.2.

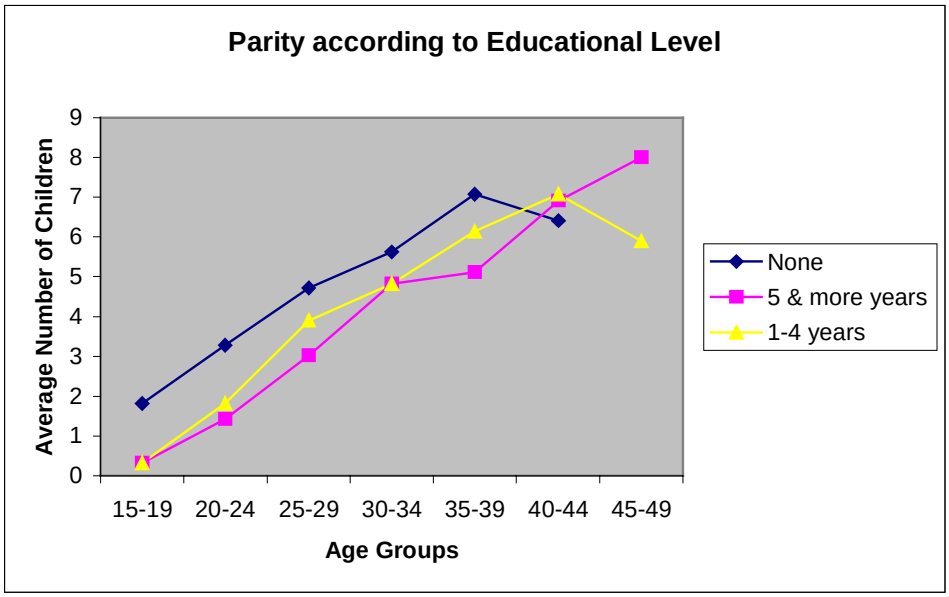
There is no great difference between the average number of live-born children by area of residence, however the situation is different if level of education is analysed.

Figure 7.1.1.



For the fertility study, level of education was divided into 3 categories. Those women with no schooling or a very low level; women with 1 to 4 years of education and the last group of women with 5 and more years of education.

Figure 7.1.2.



Generally speaking, the same trend by area of residence is also true for level of education. However, the average number of children born is slightly lower if education level is considered. Hence, women with 5 and more years of education stated having had on average fewer children than those with less education. The age groups from 15-19 and from 40-44 are the only exceptions. The former refers to very young women. The average number of children is low, as the number of women who began their reproductive life is small, compared to the other groups. To a certain extent the figures for the 40-44 age group are affected by the low number with 5 and more years of education, or even a different reproductive pattern from the youngest women, not

taking into account educational level. The parity for women between 25 and 45 with 1 to 4 years of schooling is higher than for women with no or little education.

7.2. Spacing Births

Table 7.2.1 shows spacing in months between the last two births prior to the survey. The measurement of the interval between births (interval/time between births) is an important factor to be taken into account when probability of child survival is assessed. Very often short intervals between births are associated with greater risks in child mortality. In table 7.2.1 we show the percentage of births that took place 24 months before, according to some social and demographic characteristics. This information was extracted from the case history of the last 3 pregnancies of women from 15 to 49.

Table 7.2.1. Distribution of the Last Two Births Previous to the Survey according to interval in months by Selected Characteristics

Characteristics	Nº months from previous birth			Nº
	< 12	12 - 23	24 & +	Births
Age				
15 - 19	0.0	23.8	76.2	46
20 - 24	7.4	21.6	70.9	451
25 - 29	1.6	17.9	80.4	593
30 - 34	3.7	15.7	80.5	480
35 - 39	4.4	13.2	82.4	375
40 - 44	3.8	12.1	84.1	275
45 - 49	4.3	14.5	81.2	144
Sex of penultimate child				
Male.	2.7	17.1	80.2	1,192
Fem.	5.2	16.3	78.4	1,169
Residence				
Urban	4.0	19.6	76.4	947
Rural	3.9	14.7	81.4	1,417
Level of Education				
None/low	3.6	13.9	82.4	863
1 – 4 years	3.9	18.4	77.6	981
5 and + years	4.5	17.8	77.6	498
Total	40	167	793	2,364

Generally speaking, almost 20% of the last births prior to the survey occurred before the youngest child was 2 years old. With the exception of younger women (15-19), an interval between births of less than 24 months was more frequent in women aged between 20 and 24. However, it is important to bear in mind that these are young women, who add greatly to the figures on fertility, with a tendency to allow less space between pregnancies, mainly the 2nd and 3rd births[20]. In relation to the sex of the penultimate child, women who gave birth to girls, more often had less of an interval than those who had boys (p=0.009). Although we cannot state for certain what is at the root this, it could be what is normally called in Angola, " looking for a boy". However, other data is needed to sustain this explanation, such as the order of births, the survival of the previous born child and many other social and cultural factors.

With the interval between births at less than 24 months, women that live in urban areas more often had children after they had acquired some education, i.e. over a year's schooling. In order to explain these ideas we postulate that they were women who already had some schooling,

[20] The survey does not enable us to know the order of births

probably reliant on urban centre systems, where breast-feeding time is shorter than for other women and less regular. In addition, on average they will be slightly younger. Women with a higher level of education, in general probably in urban areas, space their pregnancies slightly less than women with less education, who live in rural areas. We can call this the negative effect of education and urbanisation on the reproductive process.

7.3. Age at First Pregnancy

Age at the first pregnancy greatly influences fertility. The beginning of a woman's reproductive life can have consequences not only for her own life, given that it could be a risky pregnancy, but also for the lives of the children resulting from these pregnancies.

Table 7.3.1. Percentage Distribution of Women from 15-49 years of age according to age at the time of their first pregnancy

Present	Never	Age at first pregnancy						Total	N
Age	Pregnant.	< 15	15 - 17	18 - 19	20 - 21	22 - 24	25 e +		
15 - 19	72.6	3.6	NA	NA	NA	NA	NA	100	974
20 - 24	15.3	4.5	33.5	31.2	NA	NA	NA	100	1044
25 - 29	3.6	4.4	38.4	31.4	14.8	6.0	1.3	100	813
30 - 34	1.0	4.7	37.0	27.7	16.0	9.0	4.6	100	667
35 - 39	2.5	4.7	33.5	27.9	17.6	7.3	6.4	100	535
40 - 44	3.0	3.6	33.9	25.5	22.4	7.8	3.6	100	390
45 - 49	7.1	1.2	28.6	29.7	19.0	7.1	7.1	100	222
TOTAL	20.8	4.9	31.0	23.5	12.0	4.9	2.8	100	4645

NA= not applicable

Table 7.3.1 shows that when procreation begins does not seem to change very much through time in accordance with present age or cohort. However, it is necessary to take into account that the information contained in the table depends on the memory of the women.

In general terms a little more than a third of the women started their reproductive life before 18. This result can be influenced by age at marriage or the first union or even social and cultural factors connected to marriage and maternity.

7.4. Present Fertility

Present fertility rates by age were calculated (PFR), as well as total fertility rate (TFR). The PFR was calculated in a direct way, dividing the number of births in the 12 months prior to the survey by the number of women of different age groups. For the total fertility rate the TFR of the age groups was considered as being more credible and the figure obtained was adjusted using the Gompertz method.

The fertility rate for the whole country is estimated at 6.9 children per woman. This means that Angolan women have 6.9 children on average until the end of their reproductive lives, if present fertility rates by age are maintained and supposing that they survive until the end of that period.

Table 7.4.1. Total Fertility Rates of the Previous 12 Months to the Survey and the Proportion of Wanted Pregnancies by Selected Characteristics

Characteristics	(TTF)	% of wanted pregnancies*
Total country	6.9	93.0
Residence		
urban	6.8	90.7
rural	7.0	94.6
Level of Education		
none/low	6.9	95.5
1 - 4 years	7.3	93.2
5 and 5+ years	5.8	87.8

TFR= total fertility rate
* relative to last pregnancy

By area of residence, the women in rural areas have a fertility rate of (7.0) not much different from the women in urban areas (6.8).

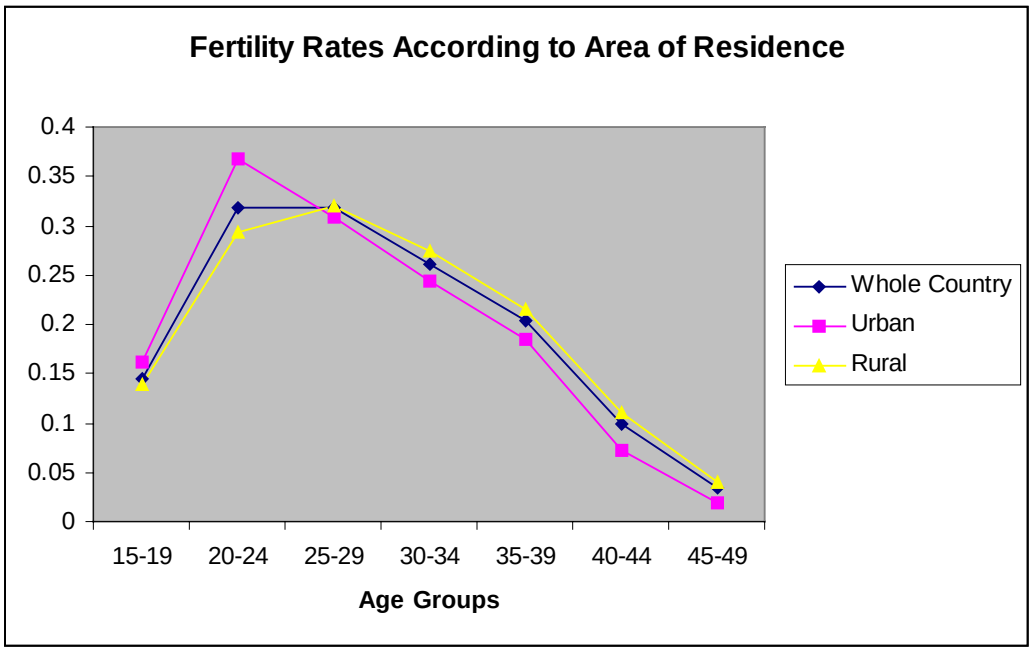
Table7.4.2. Fertility Rates by Age according to Area of Residence and Level of Education

Ages	Total	Urban	Rural	None/low	1 - 4 years	5 and 5+
15-19	0.1456	0.1621	0.1389	0.1570	0.1428	0.1325
20-24	0.3188	0.3681	0.2940	0.3020	0.3369	0.2773
25-29	0.3190	0.3090	0.3207	0.2955	0.3487	0.2771
30-34	0.2611	0.2440	0.2737	0.2789	0.2577	0.2317
35-39	0.2038	0.1856	0.2152	0.2292	0.2236	0.1388
40-44	0.0997	0.0733	0.1112	0.0921	0.1225	0.1041
45-49	0.0348	0.0194	0.0406	0.0372	0.0312	0.0000

It is a commonly known fact that in rural areas fertility is higher than in urban zones. The small difference between the rates in Angola could be due to migration from rural to urban areas, mainly over the last 20 years. Women can have taken the reproductive pattern prevalent in the rural areas with them to the towns. Generally the use of modern contraception methods is very low (see chapter 8), the wish to have large families still exists. However, more in-depth studies will be needed to give an exhaustive explanation of factors which lead to the high fertility rate in Angola.

According to area of residence, the fertility rates by age (Figure 7.4.1.) show some differences. The fertility of younger women (15 to 24) is higher in urban areas, reaching its peak between 20 and 24 years of age. From this age onwards, fertility is higher in rural areas till the end of women's reproductive life.

Figure 7.4.1.



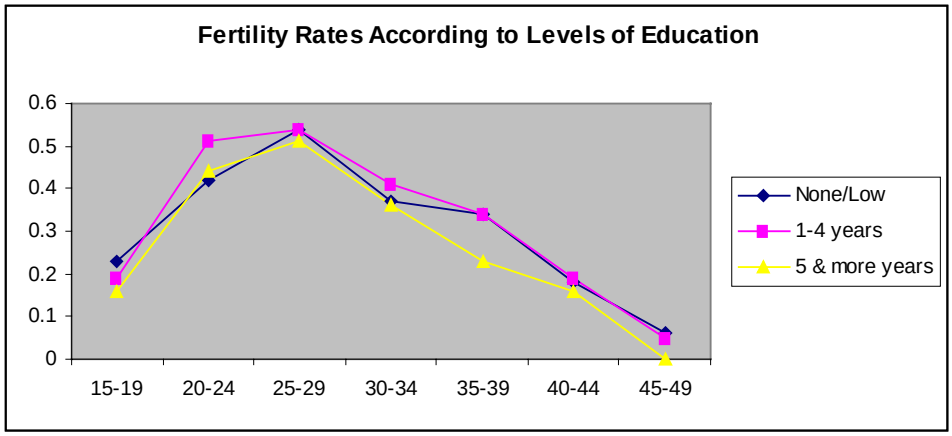
Apart from area of residence, women's level of education is also an important differential in the study of fertility.

Level of education generally influences level of fertility i.e. the higher the level of schooling the lower the fertility. To a certain extent education delays the start of reproductive life, influencing age, the first union and/or the first child. It also exerts influence, in such a way, that there is a greater spacing between pregnancies and also it influences the total number of children.

Even so, fertility rates by level of education in Angola can be considered high; women with a higher level of education (5 and more years) present a lower fertility rate than those in the other categories (tables 7.4.1 and 7.4.2).

Differences by age group can also be seen in Figure 7.4.2. In almost all the age groups, including the youngest women (15-19), the figure for women with 5 and more years of education is lower compared to that for women with little or no schooling. Initial survey results show that women with 5 and more years of education are more likely to use methods of contraception, in particular modern methods. The total number of children they want is low compared to women with less education (see sub-chapter 8.1 on contraceptive practices and reproductive intentions).

Figure7.4.2.



In table 7.4.1 we find that fertility rates for women with 1 to 4 years of education are slightly higher than for those with no/low level of schooling. This can happen in situations in which women with 1 to 4 years of education live in urban areas and are part of the workforce and subject to economic constraints. These and other facts can lead them to wean their children earlier, running greater risks of becoming pregnant, especially if use of modern contraceptive methods is infrequent. On the other hand, they can be a very heterogeneous group in which 1 to 4 years schooling does not seem to significantly influence fertility.

The last column of table 7.4.1 shows the percentage of women whose last pregnancy was wanted. We can conclude that fertility rates of above 90% mean pregnancies were wanted. This also means that present fertility rates are very near to what can be called desired fertility. The only exception is in women with 5 and more years of schooling, who have a lower fertility rate and a percentage of wanted pregnancies below 90% (87.8%).

It is clear that a question on if the last pregnancy was wanted/planned can lead to difficulties in interpretation. We should differentiate between a planned pregnancy and one that is wanted. Normally a planned pregnancy is wanted, but an unplanned pregnancy on being discovered can later become wanted. A question on the total number of wanted children was also asked in the survey. The responses to this question show a high total for wanted children (see chapter 8).

Table 7.4.3 Average Number of Children per Women (35-39), Percentage of Pregnant Women in the Population according to Selected Characteristics

Characteristics	MFT (35 - 39)	% Pregnant at the moment	Pregnant for the 1st time
Whole country	6.0	15.7	3.8
Residence			
Urban	6.1	15.6	4.3
Rural	6.0	15.8	3.5
Education Level			
nil/low	5.9	11.5	2.9
1 - 4 years	6.3	17.7	3.7
5 and + years	5.5	18.9	5.8

MFT= average number of children delivered

Table 7.4.3 shows the average number of children delivered by women from 35 to 39 years of age. This group was chosen to analyse the size of families at the end of the reproductive period. They are women very close to the end of their reproductive period, even though they could still have more children. This age group is less affected by lack of clarity in answers, not only because of their age, but also their memory.

Generally it can be concluded that this group has a higher than average number of children with little variation in differentials (between 5 and 7 children). The percentages of women pregnant at the moment and other indicators seen above indicate that the birth rate in Angola is high. Calculated directly using MICS data the birth rate is 51 per thousand.

7.5. Teenage Fertility

Teenage pregnancy is a phenomenon which most countries have to tackle these days. Table 7.5.1 shows the percentage of young people between the ages of 14 to 19 who have already started their reproductive life. About 27% of teenagers here have already begun their reproductive life and at the moment of the survey 5% were pregnant for the first time
As was to be expected the percentage of teenagers who already contribute to fertility increases with age. At 19, slightly more than half are mothers, 61 percent have at one time or another been pregnant. We considered adolescents who have had a live birth as mothers. The teenagers who have at one time or another been pregnant, represent all those who have been pregnant, whether the pregnancy was a live birth, a stillbirth or an abortion.

Table 7.5.1 Percentage of Teenage Pregnancies, Teenage Mothers and those Pregnant Now, according to Selected Characteristics

Characteristics	% already Mothers	% Pregnant. For 1st time	% Pregnant at some time	N
Age				
14	1.1	0.0	1.1	193
15	3.0	3.0	7.1	193
16	13.4	6.1	20.7	189
17	20.7	5.4	28.3	187
18	31.1	8.7	40.8	209
19	52.4	7.6	60.9	213
Residence				
Urban	22.3	6.2	29.5	549
Rural	20.4	3.9	25.4	635
Education Level				
none/low	22.1	4.6	26.7	230
1 - 4 years	21.5	4.4	27.4	666
5 and more years	20.0	6.1	26.0	288
The whole country	21.3	5.2	27.4	1184

By area of residence, the percentage of young women who have at some time been pregnant is higher in urban areas (29.5%) than in rural areas (25.4%). The proportion of adolescents already mothers by education level does not present significant differences.

Table 7.5.2. Percentage Distribution of Teenagers by Age according to the number of live-born Children

Age	% with live-born children		Average N° of Children born alive	N
(years)	1	2 & +		
14	0.0	0.0	0.0	193
15	2.0	1.0	1.1	193
16	13.1	0.0	0.9	189
17	18.5	3.3	1.2	187
18	26.2	4.9	1.1	209
19	32.4	20.0	1.4	213
Total	15.9	5.4	1.2	1184

Table 7.5.2. shows the distribution of teenagers from 14 to 19 years of age, according to the number of live-born children. In general from 15 years of age teenagers have on average one live-born child. At 19 years of age, two in every 10 young women have about 2 children.

In conclusion, we can say that the results regarding fertility in Angola described above are of great use in informational terms. However, more in-depth studies in this area will contribute significantly to greater understanding of the reproductive pattern of women, trends and determinant factors. The fertility estimates presented can now be compared with those obtained in the 80s census, where the fertility rate was 9 children per woman (INE, 1995). These two figures can again be compared with the fertility results of *"Priority Survey On the Population's Living Conditions"*, with a rate of 6.2 children per woman (Prata, N. 1996). In addition, "*Priority Survey"* carried out in 5 provinces of the country with a mainly urban sample should be taken into account. However, the census carried out in 16 provinces of Angola and the estimates presented appear very high to us.

In spite of the differences in figures from various sources, all the results point to high fertility for Angola. With 6.9 children by woman, Angola has higher rates compared to other countries in the region, such as Tanzania 6.5, Zambia 6.4 and Zimbabwe a relatively lower rate of 5.7. (DHS, 1994). Note that Zimbabwe shows significant improvement in rates of infant mortality (from 101 per thousand in 1969 to 83 per thousand in 1982), a factor that can lead to a reduction in the fertility rate. It was also in Zimbabwe that the use of family planning services rose from 14% in 1980 to 43% in 1988.

Of the differentials for fertility studied here, level of education seems to be the most important when analysed for the country as a whole. Most women start their reproductive life in the teenage years. Level of education as shown here does not appear to play the delaying role desired. Education seems to influence the total number of children mothers have during their reproductive life, but does not necessarily determine when it starts. The data illustrate too that teenage fertility is most influenced by those that live in urban areas.

Twenty per cent of the last births took place in a period less than 2 years after the previous one, whilst 40% of women become pregnant before they are 18 years of age. All these, allied to the high rate of fertility, are factors that point to eventual negative consequences for maternal and child health.

8. CONTRACEPTIVE PRACTICES AND REPRODUCTIVE INTENTIONS

8.1. Introduction

The use of contraception has a direct influence on fertility, as there exists a negative correlation between the two i.e. when the prevalence of contraception increases fertility rates decrease. For this to take place a correct use of contraceptive methods is also necessary in order to maximise their effectiveness. Contraceptive practices also bring health benefits to women and their children. Through contraceptive practice a woman can increase the gap between births thus reducing maternal and infant mortality.

In Angola, in 1984 the Ministry of Health introduced a Programme of Maternal/Infant Health, integrating family planning into the scheme. The Centre for Obstetric Services of Luanda (CAOL) was created in this department. It has drawn support from some international organisations amongst others. It plays a role in teaching, disseminating the advantages of family planning and the use of modern contraceptive methods. This centre also distributes contraceptives.

At present national policy is to adopt a more flexible approach to family planning, but financial resources are minimal and there is a certain dependence on non-governmental institutions. However, in the last few years other mother/child care centres have been established in some provincial capitals, integrating family planning services. There are in fact 70 service posts located in eight provincial capitals. In spite of the fact that from 1986 onwards there was a significant increase on the up-take of services of this nature, the resource limitations which institutions of this nature face mean that many women of their own initiative use contraceptive methods without consulting a doctor.

For the survey, information regarding contraceptive practices refers to all the women in the sample who were of childbearing age. The information on the prevalence of use was collected through questions on the use of some method of contraception so as not to become pregnant i.e. for women who were not pregnant at the time. Women were asked questions regarding their future intentions in relation to the use of contraceptives, whether they were pregnant or not.

8.2. Contraceptive Practices at the Time of the Survey

The use of contraceptives is low for the group of non-pregnant women surveyed. Only 8.1% stated that they used some form of contraception. Almost 13% of the women resident in the urban area use contraceptives as against 4% in the rural area. By regions of residence the prevalence is lower, as can be seen in the north and south.

Table 8.2.1 Percentage of Women who Use Contraceptives by Area of Residence

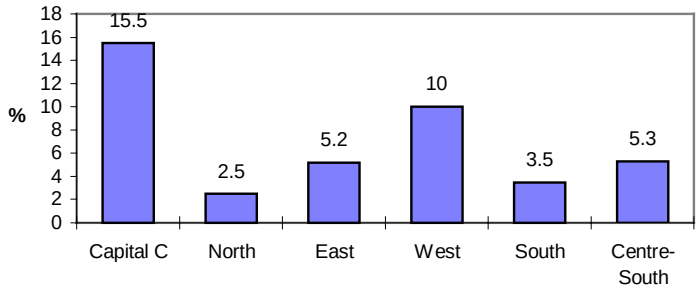
Present Use of Contraceptives	Total	Area of Residence	
		Urban	Rural
.Women that use contraceptives	8.1	13.1	4.3
. Women that Use Modern Methods	3.5	7.0	0.8
Total Number of Women	4,890	2,026	2,864

Table 8.2.2 Type of Contraceptive Method Used by Area of Residence (%)

Present Use of Contraceptives	Total	Area of Residence	
		Urban	Rural
In relation to Women who Practise:			
. Women that Use Traditional Methods	50.3	39.1	78.3
. Women that Use Modern Methods	49.7	60.9	21.7
Total Number of Women	350	248	102

Figure 8.2.1

Percentage of Women that Use Some Form of Contraception in order not to become pregnant by Regions



The main methods used are only four: breast-feeding (22.8%), the pill (22.9%), injectable contraceptives (14.9%) and the calendar (14.6%), corresponding to more than two thirds of the methods used.

The modern methods and the so-called traditional methods[8] have been used in the same proportion. On the other hand, as would be expected the modern methods are more used in the urban area. The pill is the method most frequently used, being used by 30% of the women interviewed. In rural areas we can see that more than 70% of contraception is practised using breast-feeding, the calendar method and plants/herbs. The use of condoms is very rare. This situation could have serious consequences in relation to AIDS.

Table 8.2.3. Type of Method Used by Area of Residence (%)

Type of Method Used	Total	Area of Residence	
		Urban	Rural
. Pill	**22.9**	**29.4**	6.6
. Breast-feeding	**22.8**	14.7	**43.0**
. Injections	**14.9**	16.6	10.8
. Calendar	14.6	12.0	21.1
. IUD/Spiral	8.1	9.7	4.2
. Herbs/Plants	4.7	1.6	12.2
. Abstinence	4.2	5.1	2.0
. Condom	3.3	4.6	0.1

[8] The methods at present available can be divided into two big groups, those of "traditional" and "modern" methods. The first includes withdrawal, sexual abstinence, breast-feeding, calendar and herbal remedies. The second includes the pill, injectable contraceptives, intra-uterine devices, condoms, and the diaphragm.

. Withdrawal	2.4	3.4	0
. Others	1.6	2.3	0
. Diaphragm//Foam/Jelly	0.4	0.6	0
Total (%)	100	100	100
Total No. of Women	350	248	102

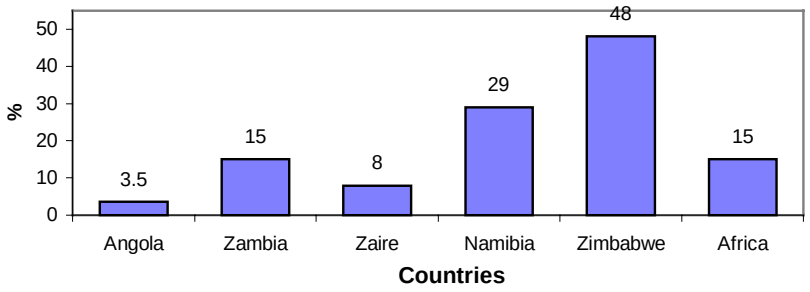
Table 8.2.4 Relation between Modern and Traditional Methods by Area of Residence

Present Use of Contraception	Total	Area of Residence	
		Urban	Rural
Relation between Modern and Traditional Methods (Modern/Traditional)	0.98	1.56	0.28

The figure for the use of contraceptive practices (modern and traditional methods) is around 40% for African countries like the Cameroon and Zimbabwe and 15% for Nigeria. If we make comparisons of which modern methods are most prevalent in some African countries for the period from 1990-96, we find that there is an enormous variation between the rates in countries of the region. The prevalence in use of contraceptives in Africa is 15%, very much lower than in other continents. The lowest rate is found in Angola, 3.5% of women use modern methods corresponding to 10 times less than the prevalent value in Zimbabwe. The low prevalence of modern methods in Angola reflects lack of availability and access to modern contraceptive methods and information services associated with family planning. In general, contraceptive practices are not likely to have much impact on fertility.

Figure 8.2.2

Prevalence of the Use of Modern Methods
Period of 1996



Source: World Child Situation, 1996

8.2.1. Differentials in the Use of Contraception

Table 8.2.1.1 shows the prevalence in use of contraceptive methods according to age, the number of children alive at the moment, the level of maternal education and the number of people per room.

The relation between contraceptive practice and age of the mother reaches a higher percentage in the 25-34 age group, where 11% of women practised some method at the time the survey took place. Lower percentages are seen in those age groups at the extremes of reproductive life. Modern methods are used more as age increases: 61% of women of 35 and over use modern methods as against 46% of women under 25. However, it is important to mention that women who are at the crest of their reproductive period, i.e. they are more than 35 years old tend to use contraceptive methods more.

In spite of the limited number of cases, which do not allow a more detailed analysis/breakdown in relation to each specific method by age groups, we find that the pill is used much more by younger generations, whilst, the IUD/Coil and breast-feeding are more often used by the older generations.

The use of contraception increases with the number of live children, with very low percentage values for women with fewer than 3 children. From then on figures are around 10%. If we compare the type of method used with the number of live births, women with large families use more modern methods of contraception.

Table 8.2.1.1. Differentials in Contraceptive Practice according to Selected Variables

Variables	% of Women who Practise Contraception	Contraceptive Methods			Number of Women
		Modern	Traditional	Total	
Age Group of Women					
. <25	7.7	46.1	53.9	100	2,385
. 25-34	10.8	47.6	52.4	100	1,343
. >35	6.9	60.5	39.5	100	1,162
Number of Live Children					
. 0	6.0	56.4	43.6	100	2,204
. 1-2	8.7	45.9	54.1	100	1,228
. 3-4	11.3	42.5	57.5	100	888
. 5 & +	10.5	54.4	45.6	100	570
Level of Education of Mother					
. None/Low	3.9	20.3	79.7	100	1,657
. 1-4 years	7.2	37.3	62.7	100	1,926
. 5-7 years	14.0	60.8	39.2	100	808
. 8 & + years	30.7	79.0	21.0	100	260
Number of People at Home					
. < 2	3.4	36.2	63.8	100	370
. 2-3	4.5	25.0	75.0	100	705
. 4-5	7.2	35.0	65.0	100	1,636
. 6-7	9.2	50.9	49.1	100	1,321
. 8 & +	12.7	70.9	29.1	100	858
Total	8.1	49.7	50.3	100	4,890

The mother's level of education is associated with the use of contraception. The higher the level of education, the higher the percentage of women using some kind of method. For those women of low or no education whatsoever or illiterates the use of contraception is 4%, whereas, the percentage for those with 8 or more than 8 years of education rises to 31%. We find that more

educated women use modern methods most, as high as 80% for women with 8 or more years of education.

The number of people in the home seems to influence the decision of women to have more children. As can be seen, contraceptive practice tends to increase when the number of people at home increases. The relation between the number of people in the home and the type of contraception used follows the same pattern as seen previously in relation to the number of children currently alive.

To better understand the complex relationship of determinant factors in the practice of contraception a multi-varied analysis was used. The results show some variations in the variable dependent (uses some method to prevent conceiving), which can be explained by the number of independent variables.

Table 8.2.1.2 below presents the results of linear logistic regression, some variables having been identified which are significant in their correlation with the dependent variable. The ownership of a radio, the area of residence and those children still alive has an effect on the contraceptive practice used. Level of education is one of the variables that most influences the probability of contraceptive practice. On the other hand the type of dwelling and the number of people at home do not demonstrate any association with the dependent variable when other variables are incorporated into the model.

Table 8.2.1.2 Results of Linear Regression for Contraceptive Practice

Explanatory Variables	Coefficient	Level of Significance
Children still alive	.0134*	.046
Age of Women	-.0017	.291
Level of Education	.0453***	**.003**
Size of Dwelling	-.0013	.786
Area of Residence	-.0395*	.084
Ownership of a Radio	-.0562*	.017
Type of Dwelling	-.0059	.700

*p<0.05
*** p<0.01

8.2.2. Intention to Use Contraception in the Future

It is important to study the future intentions of women regarding contraception to be able to forecast changes in trends in the prevalence of use. The table below shows that only 15% of the women who do not use contraception or are pregnant at the time of the survey wish to practise contraception in the next 12 months, 23% for women resident in the urban area and 10% for the rural area. This percentage is not high and gets lower with age: 17% for women less than 20 years of age and 13% for those 35 and over. The intention of women in urban areas is much firmer when compared with women in rural areas.

Table 8.2.2.1. Percentage of Women who intend to Use Contraception in the Next 12 Months by Area of Residence

Women who Intend to Practise Contraception in the Next 12 Months	Total	Area of Residence	
		Urban	Rural
Total	15.4	22.7	10.3
Age of Women			
. 15-19	17.4	24.9	10.0
. 20-29	16.3	24.0	11.3
. 30-35	13.8	21.5	9.0
. 35 and +	12.9	18.2	9.6
Number of Women	4890	2026	2864

* Includes women that do not practise contraception who were pregnant at the time of the survey

8. 3. Reproductive Intentions and Preferences Regarding Family Size

One of the objectives of family planning is to offer couples the possibility of deciding on the number of children they want and the spacing between them. Hence, it is of great importance for family planning programmes to obtain information on the number of children wanted, the proportion of women who do not wish to become pregnant, spacing between births and planning of the last birth.

These data together with information on contraceptive practices enable use to calculate the total demand and unsatisfied needs for contraception[9] and facilitate the identification of family planning policies. As these methods gradually become more available to the population, the impact on reproductive preferences and consequently on the impact on fertility become more and more visible. Studies have revealed that the wish to have more children has an impact on subsequent fertility (Bongaarts, 1990).

To a certain extent the information on a woman's preference concerning family size will serve to assess the degree of motivation to control family size. The intentions are assessed in terms of the number of children all the women would like to have in the future. In the case of the women who have already had children, they were asked if they would like more children. If women said they would, they were asked if they would like to become pregnant in the next 12 months. Those who were pregnant at the time were also asked how many children they would like to have in the future.

All the information on preferences in relation to the number of children they would like to have should be considered with caution because it presents some uncertainties, as it refers to hypothetical situations and not real behaviour. Given the personal nature of the question some women reply in an evasive manner, and others try to please the interviewer.

The proportion of women who do not wish to have more children is a good predictor of the population's future fertility level. On examining the preferences in table 8.3.1 we find that 51% of women surveyed replied that they would like to have more children, 26% were undecided and

[9] MICS data do not allow a calculation of this indicator. The question on women who get pregnant when they use modern methods was not asked.

23% said that they did not want more children. Even amongst the women who declared that they wished to have more children or who were undecided, nearly 60% said they did not want to become pregnant in the next 12 months.

In summary, the data indicate a certain demand for family planning, although the ideal number of children is high (see table 8.3.3).

Table 8.3.1. Estimate of Indicators on the Size of the Family By Area of Residence

Selected Indicators	Total	Area of Residence	
		Urban	Rural
Supplementary Children			
.% of Women who do not want more Children	22.7	25.5	20.5
.% of Women who want more Children	51.1	51.6	50.8
. % of undecided Women	26.2	22.9	28.8
Total	**100**	**100**	**100**
Number of Women	4,890	2,026	2,864
Average Number of Extra Children wanted*	3.3	2.7	3.8

*Excludes the undecided women

Table 8.3.2. Percentage of Women who would like to become Pregnant in the next 12 Months by Area of Residence

	Total	Area of Residence	
		Urban	Rural
. Percentage of Women who Would like to become Pregnant in the Next 12 Months	39.2	31.0	45.6
Number of Women	3250	1280	1970

* Excludes the women who do not wish to have more children and those who were pregnant at the time of the survey

In comparison with other African countries (table 8.3.3) the percentage of women who do not wish to have more children is closer to the percentage values for Namibia. However, these values are lower than for Cameroon and Nigeria. The comparison with other countries shows that the percentage of Angolan women who do not wish to have more children is high in relation to the ideal number of children wanted.

Table 8.3.3. Percentage of Women who do not want to have more Children according to Some Selected Countries

	Angola	Cameroon	Nigeria	Namibia	Zimbabwe
. Percentage of Women who do not wish to have more Children	22.7%	12.4%	15.1%	25.8%	35.6%
. Ideal Total Average Number of Children	6.3	6.8	5.8	5.0	4.3

The proportion of undecided women is higher in rural areas than in urban areas. Women, as a whole, wanted to have on average 3.3 more children, 6.3 being the ideal average total number of children. In terms of averages, the differences between urban and rural areas are not great; on average women in the urban area would rather have one less child than those in rural areas.

Regional variations are not very accentuated, with the exception of region Capital C which is 2.2 children, whereas for the other regions figures vary between 4.3 and 3. The figures for region Capital C, which include the capital, show a certain desire of women in that area to have a lower fertility rate. This region is influenced by better conditions of access to information, health, education, etc., i.e. mainly in the capital.

Table 8.3.4. Estimate of the Indicators on Family Size by Region of Residence

	Region of Residence					
	Capital C	North	East	West	South	Centre South
Additional Children						
.% of Women who do not want more Children	28.5	20.1	22.7	17.4	28.3	23.2
.% of Women who want more Children	47.8	47.7	63.1	78.9	42.6	37.4
. % of undecided Women	23.7	32.2	14.2	3.7	29.1	39.4
Total	**100**	**100**	**100**	**100**	**100**	**100**
Number of Women	**1,072**	**599**	**711**	**931**	**826**	**751**
. Average Number of Extra Children Wanted*	**2.2**	**3.7**	**3.4**	**4.3**	**3.5**	**3.0**

*Excludes the undecided women

The results of table 8.3.5 indicate that the majority of women would rather have a big family. Almost 45% of the women would like 4 more children. The differences in terms of numbers are significant when areas of residence are compared. The proportion of women who wish to have 9 or more extra children is three times higher in rural areas than in urban areas. Regional variations (see table 8.3.6.) follow the same trend: the highest number of children wanted is to be found in the west and south. Region Capital C has the lowest figure.

Table 8.3.5. Number of Additional Children Wanted by Area of Residence

Additional Children Wanted	Total	Area of Residence	
		Urban	Rural
None	27.9	30.3	26.0
1	6.5	6.4	6.5
2-3	21.1	25.7	17.2
4-6	28.7	27.7	29.6
7-9	8.3	6.6	9.7
10+	7.5	3.3	11.0
Total	100	100	100

* Excludes the undecided women

Table 8.3.6. Number of Additional Children Wanted by Region of Residence

Extra Children Wanted	Region of Residence					
	Capital C	North	East	West	South	Centre-South
None	33.6	27.8	24.8	15.9	36.3	33.4
1	8.1	8.8	6.3	3.7	5.9	7.0
2-3	29.9	15.0	26.3	19.8	14.7	16.2
4-6	22.7	28.3	27.7	39.6	21.5	26.8
7-9	2.8	10.8	7.7	9.9	10.5	10.9
9 &+	2.9	9.4	7.2	11.1	10.9	5.6
Total	100	100	100	100	100	100
Number of Women	826	395	527	889	549	462

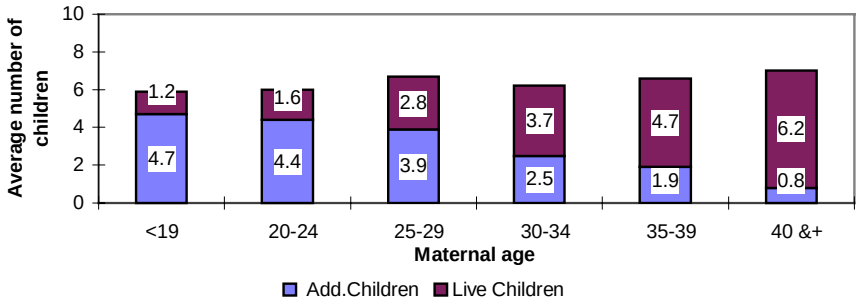
* Excludes those women who stated that they were undecided

8.3.1. Differentials in the Number of Additional Children Wanted

In classifying the number of additional children wanted with the age of the women (figure 8.3.1.1.) we clearly see that this number varies a lot with age. Its value is almost constant for women under 25 and diminishes in the other age groups. In comparing the total number of children wanted with age, the results show few differences: younger women wish on average to have slightly smaller families than older women (6 and 7 children respectively).

Figure 8.3.1.1

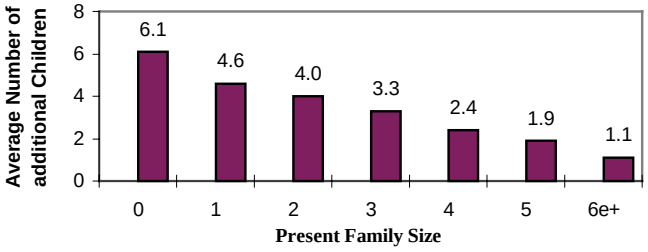
Ideal Total Number of Children by Maternal Age



Studies give little emphasis to the influence of a woman's age on the number of extra children wanted (Bongaarts, 1990) given the fact that age limits preferences, in the sense that if a woman who is 50 years of age should wish to have more children, she will not be able to. We can find the same thing on analysing the number of live children at the time of the survey. For women who have none, they wish on average to have 6.1 children, for those with two they wanted 4 more and for those with 6 or more they state they want one more child. Whatever the age group or the number of children still alive, the women always want to have more children than they already have.

Figure 8.3.1.2

Average Number of Additional Children According to the Present Size of the Family



On considering the ideal total number of children wanted by childless women can be an indication of future trends. We find that the women surveyed want big families (6.1). This figure differs little from the present figure of the Global Rate of Fertility (6.9 children per woman).

Geographically there is little variation in the ideal total number of children wanted by women. The West and North present preferences for a large size family. The data presented show clearly that in the region of Capital C there is the option to limit the number of children. Contraceptive practices, as well as the ideal number of children, point in this direction.

Figure 8.3.1.3

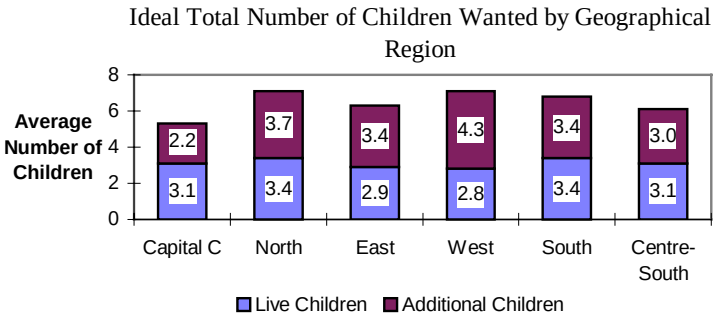
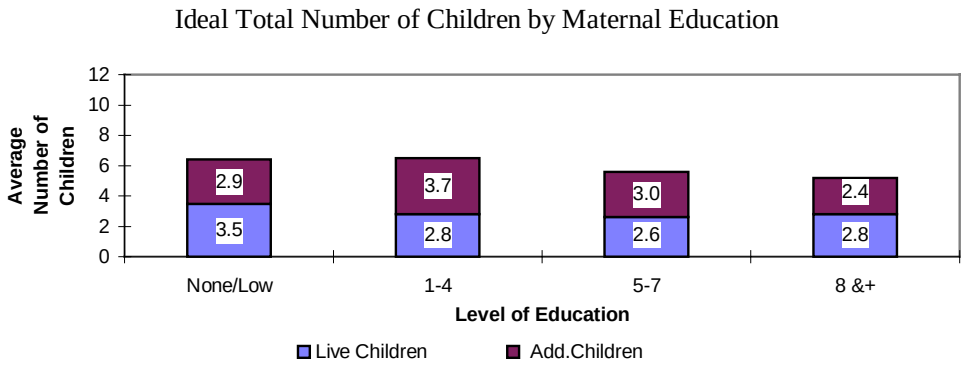


Table 8.3.7 and figure 8.3.1.4 show the existing relationship between the number of additional children wanted by women by maternal level of education and by area of residence taking into account the maternal age. Education in itself is a determiner even when considered in conjunction with maternal age. On analysing the differential by age group between the group of women with primary or less schooling and those with maximum schooling, the fact is that the desired number on the part of more educated women is still very high. We observe that the difference in extra children is not so high (3.7 to 2.4). This could be explained by other factors, e.g. cultural factors.

Figure 8.3.1.4



The average number of additional children wanted varies according to whether a women lives in an urban area or a rural area (2.7 and 3.8 respectively). For women under 25 years of age we note a sharp difference between those in urban and rural areas (this difference is almost 1.5 children).

Table 8.3.7. Average Number of Additional Children Wanted by Women According to Area of Residence and Present Maternal Age

Variables	Present Maternal Age				Total
	<25	25-34	35-44	>45 & +	Children Wanted
Level of Maternal Education					
None/low	5.4	3.5	1.5	0.6	2.9
1-4 years	4.8	3.3	1.5	1.2	3.7
5-7 years	3.5	2.5	1.0	0.0	3.0
8 and +	3.1	2.2	0.4	0.0	2.4
Area of Residence					
Urban	3.8	2.5	0.9	0.5	2.7
Rural	5.3	3.7	1.8	0.8	3.8
Total Number of Women	1558	875	703	194	3330

* Excludes undecided women

8.3. 2. Contraception and the Desire to Have More Children

We intend to find out if there is amongst the women surveyed a coherence between their wish to not have more children and contraceptive practices. Although the use of contraceptives is very low it is higher for women who do not want to have any more children (11.4%) and much lower for women who are undecided (4%). Almost 89% of the women who do not want to have more children do nothing to avoid becoming pregnant. Though there is a high preference for a large family, we note a high proportion of women who do not wish to have more children, or who do not intend to become pregnant in the next 12 months. However, at present these women do not use contraceptives.

Table 8.3.8 Comparison between Present Contraceptive Use and the Wish to have More Children

Wish to have More Children	Present Use of Contraceptives		
	No	Yes	Total
. Do not wish to have More Children	88.6	11.4	1022
. Wish to have More Children	91.1	9.0	2189
. Undecided	96.1	3.9	1028
Total	91.9	8.1	4239

It seems to us that to reverse this situation it is important that family planning programmes are run by governmental or private institutions, who should dedicate special attention to information and dissemination of other effective methods, such as: IUD the diaphragm and condoms. On the other hand, only information is not enough, it is also necessary to facilitate access to these methods for the population as a whole.

9. MATERNAL AND INFANT HEALTH CARE

9.1. Introduction

National and international health organisations are unanimous in recognising that maternal and infant care is a central and priority element of health care provision for any population. Various studies have demonstrated the positive impact of expansion and refinement of such care on a reduction in levels of infant and maternal mortality.

In Angola, efforts have been made to improve maternal/infant health. Pregnant health care and child health care services have been developed, including training programmes for traditional midwives, vaccination campaigns, and oral rehydration campaigns for the treatment of diarrhoea in children (ANGOLA. MINSA.1991). Nevertheless, such efforts have had little effect. The vast majority of the population does not possess or does not have access to adequate health services in their area of residence.

From interviews with women of childbearing age the coverage and the quality of maternal and infant care can be examined during the mother's last pregnancy. One of the main causes of child mortality during the first month of life is neonatal tetanus. Mothers were also asked if the mother had been vaccinated against toxoid tetanus during the last, or previous pregnancies, to find out if the last pregnancy was protected or not.

9.2. Maternal Care Coverage

MICS collected information on various maternal/infant health indicators, in order to determine and assess the use of services related to maternal/infant health. More precisely: I) the coverage of ante-natal care and the percentage of assisted births by trained personnel ii) the variation in coverage between the various sectors of the population iii) determinants in variation of use of Maternal-Infant health services.
The analysis of coverage of maternal health is based on a sub-sample of women who had had a child in the last 18 months previous to the survey. This sub-sample is of
1, 440 women within a group of 2, 820 women who had had a child in the last 5 years, making up 30% of the total number of women of child-bearing age interviewed. The social and demographic features of this sub-sample are very similar to the sample as a whole.

Table 9.2.1 presents individual and household characteristics in relation to the sub-sample. Most of these women live in rural areas (nearly 58%). Their educational levels are relatively low (31% of the women have a low level of education). The data also show the early age of the first pregnancy and the high fertility, which characterises the population in the study: 44% had their first child before they were 18 and 23% have 6 or more children.

Table 9.2.1. Main Individual and Household Characteristics in Relation to Women who have had a Child in the last 18 months

Characteristics	Category	%
Area of Residence		
	Urban	41.6
	Rural	58.4
Maternal Age		
	15-19	12.3
	20-24	29.9
	25-35	46.1
	35-50	11.7
Total Number of Children Born		
	1-2	36.8
	3-5	40.4
	6 and +	22.8
Age at First Pregnancy		
	<18	43.7
	18-20	38.4
	21and more	17.9
Level of Maternal Education		
	Low /none	30.9
	1-4 years	46.3
	5 and + years	22.6
Dependency Ratio		
	Weak	34.8
	Moderate to High	39.5
	Very High	25.7

Total Number of women 1,490

9.2.1. Ante-Natal Care

Table 9.2.1 indicates that nearly 64% of women interviewed received at least one ante-natal consultation during their last pregnancy. Forty-five percent of women who had had ante-natal care had 5 or more consultations during their pregnancy, within what is recommended by the Health Authorities and what is quantitatively adequate. However, only 32% of the women had had 5 or more consultations. The average number of ante-natal consultations is 4.5 for each sample set. In general, although the majority of women used ante-natal services, they did not do so in sufficient numbers.

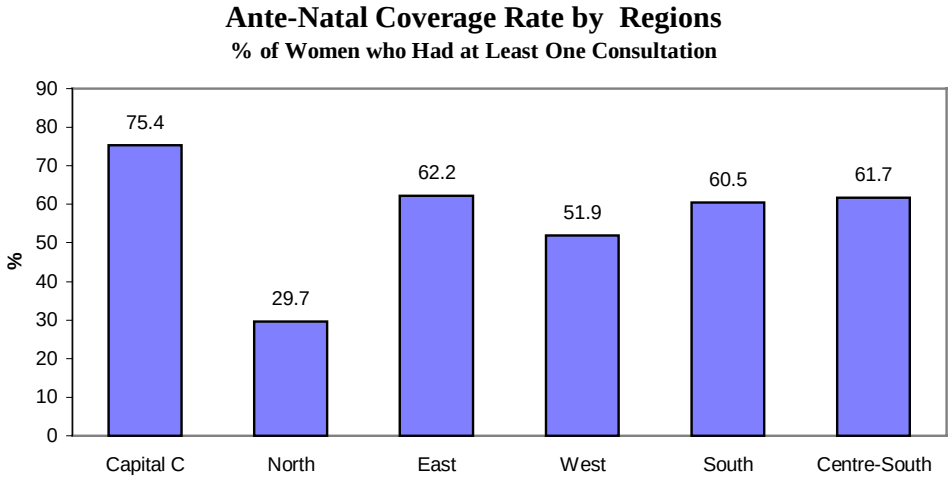
Table 9.2.1.1. Indicator Estimates of Maternal Care Coverage In Relation to the Last Pregnancy

Indicators	Total	Area of Residence	
		Urban	Rural
Ante-natal Care			
. % of Coverage	63.5	80.4	51.4
. Average Number of Consultations	4.5	5.0	4.0
. 5 or more Consultations	31.5	45.7	21.3
Place where Mother Gave Birth			
. % of Home Births	82.9	71.9	90.5
. % Hospital/Health Centre Births	15.7	26.0	8.5
. % Others	1.4	2.1	0.9
% Births attended by:			
. Doctors	1.6	3.4	0.3
. Nurse	20.9	31.9	13.1
. Traditional Midwife	12.3	7.9	15.5
. Relative/Friend/Neighbour	55.1	48.6	59.8
. No-one	9.2	7.2	10.6
. Other	0.8	1.0	0.6
Total	100	100	100
Number of Women	1,440	577	883

When place and region of maternal residence are considered the percentage of births where there had been at least one ante-natal visit varies enormously. In urban areas, for 80% of births there was at least one ante-natal control visit, while in rural areas only half the births occurring in the last 18 months had received this type of care.

For comparative purposes, in relation to regions and because of the size of the sample analysis will be by births that took place over the last 5 years (table 9.2.2.2). The region Capital C presents the highest percentage of births, which had ante-natal checks (78%). The north contrasts with the capital region in terms of inequality in access to care. Ante-natal checks had taken place in only 26% of births over the last five years.

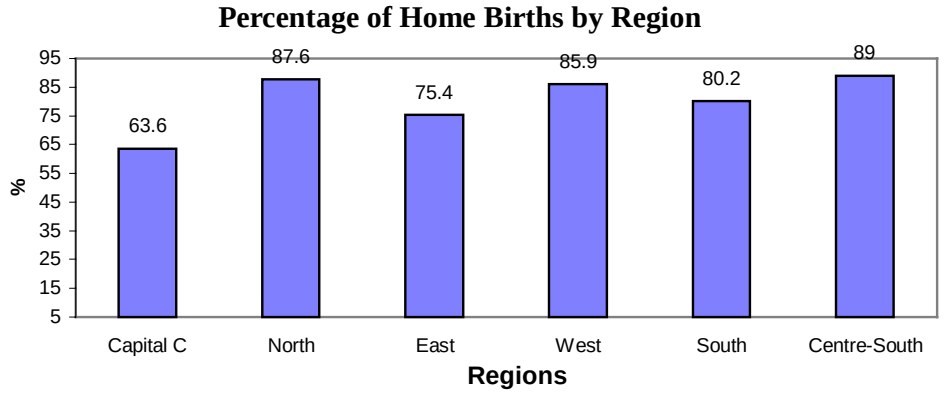
Figure 9.2.1.1



9.2.2. Place and Assisted Delivery

In relation to assistance at birth, the vast majority of mothers had their children at home (83%), in other health institutions or another place. In rural areas, 91% of births took place at home. There was also a high percentage of home births in urban areas. In Angola, in general, home birth is associated with the low availability of health provision, little ante-natal care and inadequate assistance at the time of birth. The figure below compares the percentage of home births by region. We find that there is no deviation from the sample as a whole; the figures are above 60%, although region Capital C has slightly lower figures in comparison to the other regions.

Figure 9.2.2.1



The vast majority of births were assisted by non-specialised personnel, 55% by a relative/friend/neighbour. The role of the nurse in urban areas is important, basically second preference in terms of medical assistance. The following tables present information on the type of maternal care that women received in accordance with the professional consulted. Health personnel supply better assistance, mainly in complicated cases.

Table 9.2.2.1. Health Care Received by Area of Residence

	Total	Area of Residence	
		Urban	Rural
. % of Births Assisted by Health Personnel	22.5	35.3	13.4
. % of Pregnancies with no Consultation	36.4	19.6	48.4
. % of Pregnancies with adequate Consultations*	45.5	53.8	36.1

* Includes only the women who had consultations

The percentage of births assisted by health personnel i.e. a skilled attendant is very low (22.5%). This low rate is also true for urban areas where health personnel assist only a third of births. The situation is worse in rural areas, where health personnel assisted only an eighth of births.

The information contained in table 9.2.2.2 shows the contrasts existing in the country, as regards health care. Once again, the northern and eastern regions present the lowest rates of ante-natal care and at births. The data indicate that health personnel assisted only 7% of births, which took place in these regions.

Table 9.2.2.2 Health Care Received by Region of Residence

	Region of Residence					
	Capital C	North	East	West	South	Centre-South
% of Births Assisted by Health Personnel	37.2	7.6	6.7	13.7	17.6	17.2
% of Pregnancies with no Consultation	21.6	73.6	31.9	38.5	30.0	31.7
% of Pregnancies with Adequate Consultation*	39.0	9.0	30.8	33.5	29.9	35.5

* Includes only the women who had consultations

Table 9.2.2.3. Illustrates the relationship between the person who assisted the birth and where the birth took place. In general, births which took place in health centres/maternity units are assisted mainly by a nurse (92%), whilst those births which take place at home are assisted by a friend or relative (66%). A traditional midwife assists almost 15% of home births.

Table 9.2.2.3. Comparison between the Person who assisted at the birth and the Place of Birth

Births assisted by:	Place of Birth	
	Home	Health Centre Hospital
Nurse	7.2	**92.3**
Relative/Neighbour/Friend	**65.6**	0.0
Traditional Midwife	15.0	0.0
No-one	10.9	0.0
Other	0.9	0.5
Doctor	0.4	7.3
Total (%)	100	100
Number of Women	1170	244

- Refers to the last pregnancy

Table 9.2.2.4 analyses the relationship between ante-natal care and the place where the birth took place. Ninety-seven percent of women, who did not have ante-natal care consultations, had their children at home. Even for women who had at least one ante-natal consultation, the proportion of home births is still high (75%). However, women who had ante-natal consultations are more likely to have their children at the maternity unit or health centre.

To sum up, in spite of contact with the health services during ante-natal visits and encouragement to have their children in health clinics or centres, it seems that the vast majority had their children at home. This perhaps means that in hospital conditions for assistance at birth are not the most adequate.

Table 9.2.2.4. Comparison between Ante-natal Care and the Place of Birth

Ante-natal Attention	Place of Birth (%)			
	House	Hospital/ Health Centre	Other	Total
No ante-natal consultation	97.2	2.3	0.5	100
Had at least one ante-natal consultation	74.6	23.5	1.9	100
Total	82.9	15.7	1.4	100

* Refers to the last pregnancy

9.2.3. Maternal Health Care Differentials

The data in Table 9.2.3.1 show that there is no difference between the younger and older generations in demand for health care at a health institution. Only 17% of women under 30 had their children in a health institution, compared to 13% of the older women. This situation can be due to less than positive medical attention, which does not have impact on generational behaviour. The hypothesis is that the younger generations seek out health services more because they are more educated.

Level of education has a positive and very strong influence on the number of births, which had ante-natal assistance. We observe that the higher the mother's level of education, the higher the percentage of births that were assisted. Amongst the women with a higher educational level, in

particular with 8 or more years education, births are mainly in hospital institutions. The interesting thing is that the majority of women with an average of 5 to 7 years education opt to have their child at home.

Table 9.2.3.1. Health Care Received during the Last Pregnancy according to Age, Parity and Maternal Education

Variable	N°of ante-natal consultations (%)				Place of Birth (%)			Number of
	0	1-4	5 and +	Total	Home	Health Centre Hospital	Other	Women
Maternal Age								
15-29	33.2	34.3	32.5	100	81.8	17.2	1.0	**986**
30-39	43.4	27.2	29.4	100	85.5	12.4	2.1	**385**
40-49	44.2	27.2	28.5	100	83.9	12.8	3.3	**69**
Present Number of Children								
1-2	34.5	32.9	32.7	100	76.9	22.3	0.8	**532**
3-5	38.8	32.4	32.8	100	85.4	12.5	2.0	**585**
6-8	43.8	28.5	28.1	100	87.4	12.1	0.5	**244**
9 and +	40.0	37.1	23.0	100	89.6	6.7	3.7	**79**
Level of Education of the Mother								
None/Low	57.2	22.9	19.9	100	91.4	7.1	1.5	**458**
1-4 years	32.7	35.2	32.2	100	86.1	12.3	1.6	**647**
5-7 years	19.0	38.9	42.1	100	69.5	29.7	0.8	**271**
8 and +	3.0	28.7	68.3	100	34.4	65.6	0.0	**64**
Total	36.4	32.1	31.5	100	82.9	15.7	1.4	1,440

9.3 Vaccination

Immunisation has a great impact on child health, in that it protects children against various preventable diseases by vaccine, like poliomyelitis, tuberculosis, diphtheria, whooping cough, tetanus, yellow fever and measles, amongst others. In Angola, though praiseworthy efforts have been made by the Extended Vaccination Campaign (PAV), rates of vaccination coverage are below the targets set. Data from PAV (1996) indicate that measles, one of the target diseases, continues to be responsible for a high proportion of deaths in the under-5 age group, maintaining high child mortality rates. In addition, there has been an increase in the number of cases of tuberculosis.

From 1991-95 this programme defined targets in terms of vaccination coverage. For example, for measles the target was 65%, whilst for Polio oral 3 doses it was 55%. Thus campaigns against measles and polio plus were intensified, fixed vaccination posts were strengthened, and DTP was included for children under a year. Apart from vaccination, mothers were given oral rehydration salts (ORT) to control diarrhoeal diseases, and Vitamin A was administered to children. These activities were mainly carried out in some cities in the country, namely Luanda, Lubango, Malange and Huambo, corresponding to 35% of the total population.

In the MICS survey the information on vaccination coverage refers to children under 5. Mothers were asked if they had a vaccination card for their children. If such was the case the interviewer noted the existing information. In the case of a child who did not have a vaccination card or if it

was incomplete, in conversation the mother supplied information on the vaccination history of the child. We should take into consideration that all estimates are based on the child population existing at a given moment. They are not applicable to that part of the child population which does not survive beyond the first five years of age.

9.3.1. Vaccination Coverage

Children from 12 to 23 months

The 12 to 23 months age group is the one which best expresses the vaccination coverage in a population. Only taking into consideration the children with vaccination cards [10] and those who have been vaccinated before their first year of life, the table shows that coverage for BCG is the highest. With the exception of yellow fever, the coverage rates for other vaccines are almost the same. Children who die in urban areas are more likely to be vaccinated than those in rural areas, showing how the sanitary network functions better in urban areas.

In relation to triple vaccines, on analysing the segment of children registered on the card (DTP3 and Polio3) we find that of those who took the first dose and who should have had the third dose, nearly 50% dropped-out. In other words of the children who had the first dose only half managed to complete the triple vaccination scheme.

Table 9.3.1.1 Percentage of Children from 12 to 23 months with Vaccination Card Before 12 months of Age by Area of Residence

Indicators	Area of Residence		
	Total	Urban	Rural
. BCG Coverage	27.2	36.6	19.3
. DTP3 Coverage	14.4	22.5	7.5
. Polio3 Coverage	14.1	22.3	7.1
. Measles Coverage	14.6	19.1	10.9
. Yellow Fever Coverage	6.5	8.4	4.9
Total Number of Children	398	183	215

The Denominator = All the children from 12 to 23 months

The mother (table 9.3.1.2) supplies the information on the card, almost 60% of the children from 12-23 months had the BCG vaccine, 46% had measles, 24% were vaccinated against triple (DTP3) and 28% against polio 3.

The national coverage rate (the percentage of children vaccinated against BCG. DTP3, Polio3 and Measles) was 17%, and in urban areas it was 26%. As expected, when all the children (with or without a card) are included in the analysis of the values, the rates of coverage are higher. This is due to the fact that many children are vaccinated but they do not have a card. The estimates including the mothers' statement are better than those only on the vaccination card, due to the high number of children who receive vaccines but who do not have a card. However, there is always a risk of unreliability in the information given by the mother. One of the forms of testing BCG Coverage is the presence of a vaccination scar. Data indicate that half the children

[10] The results of vaccination Coverage presented in Table are underestimated, as only children with vaccination cards were taken into account in the counting.

between 12 to 23 months had a BCG vaccination scar. This percentage was higher in urban areas.

Table 9.3.1.2. Percentage of Children from 12 to 23 months Vaccinated According to Information of the Mother or by card

Indicators	Total	Area of Residence	
		Urban	Rural
. BCG Coverage	59.5	74.2	47.0
. DTP3 Coverage	23.9	35.3	14.2
. Polio3 Coverage	27.5	36.6	19.8
. Measles Coverage	45.5	49.2	42.4
. Yellow fever Coverage	21.1	27.2	17.0
. Presence of BCG scar	51.0	63.1	42.0
Coverage Rate	16.7	25.6	9.5
Total Number of Children	782	339	443

The rate of Coverage includes the children vaccinated against BCG. Measles. DTP3 and polio3

There is great need to compare MICS data with administrative data. Given geographic limitations in coverage and the numerical definition of the target population it is important for the two sources to be consistent.

The Ministry of Health (MINSA, 1997) in its 'Evaluation Report on the Implementation of a Health Strategy for All in the Year 2000' analysed progress made in vaccination coverage from 1990 to 1995. This indicates that vaccination coverage for the country as a whole has gradually increased, mostly in the urban centres. For example, in the capital of the country for 1990, the coverage for BCG, Polio3, DTP3 and measles for children under a year old was over 70%. However, at the national level, coverage was only from 20-40%. It is possible to adjust the PAV coverage estimates to include people outside the vaccination system, assuming that they did not receive any vaccination (2^{nd} column in Table 9.3.1.3.) to compare with MICS data. Table 9.3.1.3 makes a comparison of the different sources of data in terms of national coverage, with the exception of BCG. The MICS estimates are in line with those made using PAV data.

Table 9.3.1.3 Rates of Vaccination Coverage in Children < 12 months

Indicators	Accessible Pop. [11]	Total Pop.[12]	Estimates of MICS
. BCG Coverage	74	43	59.5
. DTP3 Coverage	42	24	23.9
. Polio3 Coverage	41	24	27.5
. Measles Coverage	65	38	45.5
. Yellow Fever Coverage	28	16	21.2

Source: PAV-National

[11] Accessible Population is that which is in areas of easy access. These estimates are supplied by PAV.

[12] The total PAV calculation was made adjusting the estimates for Vaccination Coverage of the accessible population, using the percentage of accessible people and assuming zero coverage for inaccessible areas.

9.3.2. Differentials of Vaccination Coverage

Table 9.3.2.1 examines the rate of vaccination coverage for children from 24-59 months old and respective coverage differentials according to different types of vaccines. Almost 16% of children were vaccinated correctly, or that is to say they received the full vaccination. Taking each type of vaccine in turn, we find that BCG and measles coverage was over 50%, whilst yellow fever and vaccines with various doses were lower in coverage.

Urban areas present a rate of vaccination coverage[13] nearly 3 times higher than in rural areas, reflecting deficiencies in existing sanitary coverage in these areas. BCG coverage reaches 74% for urban areas as against 46% for rural areas. There are not significant differences by sex of the child in levels of coverage of each type of vaccine.

In relation to regions of residence, cf. maps 9.3.2.1 the highest rates of vaccination coverage can be seen in Capital C region and in the south (35% and 20% respectively). The capital region is one of the most favoured regions compared to others. The differences are 3 times higher in relation to less favoured regions (east and west). The low rates of coverage for these regions are mainly due to the inaccessibility of some municipalities. On analysing each type of vaccine specifically, the north presents the lowest levels of vaccination coverage.

[13] Includes children vaccinated against BCG, Measles, DTP3 and Polio3

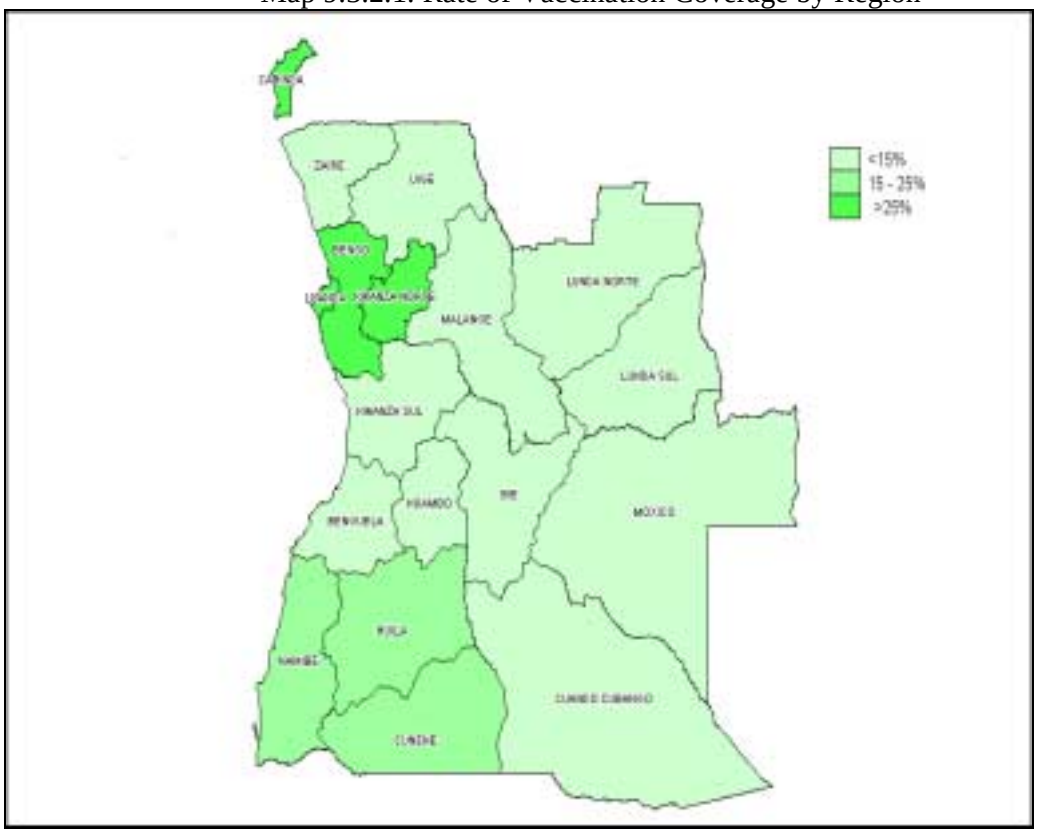
Table 9.3.2.1. Percentage of Children from 24-59 months Vaccinated with Card or Information supplied by Mother according to Selected Variables (%)

Characteristics		Percentage who have been vaccinated					
		BCG	DTP3	POLIO3	Measles	Yellow Fever	Rate of Coverage
		Children from 24 to 59 months					
Sex of Child	**Number of Children**						
. Male	1,011	56.8	19.8	24.9	57.5	33.5	15.7
. Female	1,059	57.8	22.7	28.6	55.8	28.6	16.7
Area of Residence							
. Urban	764	74.3	31.9	40.6	68.5	50.1	**27.1**
. Rural	1,306	45.8	14.0	17.4	48.6	18.0	8.8
Region of Residence							
. Capital C	383	74.4	38.6	46.8	64.4	52.9	**35.2**
. North	262	**28.1**	**12.7**	**16.9**	**42.6**	**23.6**	10.0
. East	285	59.6	13.8	18.7	48.8	26.7	9.1
. West	368	43.6	13.1	15.7	57.5	26.5	7.8
. South	425	61.2	22.5	28.2	46.5	31.5	20.3
. Centre-South	347	62.9	16.2	22.2	62.7	16.8	11.2
Average Level of Education of Adults	**Number of Children**						
. No schooling or low level	426	50.6	15.9	12.0	46.6	15.6	9.6
. Moderate or High	858	51.5	15.1	33.9	52.2	23.0	10.4
. Higher Level	786	70.9	33.7	53.2	70.4	51.0	28.5
Total	2,070	57.3	21.3	26.8	56.6	31.0	16.2

* The Rate of Coverage includes the children vaccinated against BCG, measles, DTP3 and polio3

The education variable, mainly for mothers has been pinpointed as an important determiner in the reduction of infant mortality. Mothers have greater understanding in relation to child health care. Given the absence of this variable in the vaccination module, we will use the average level of adult schooling. Thus, the rates of vaccination coverage are lower in children belonging to households whose head is not very educated or illiterate. The differences in the rate of coverage between the low and high education levels are high (9.6% and 28.5%. respectively).

Map 9.3.2.1. Rate of Vaccination Coverage by Region



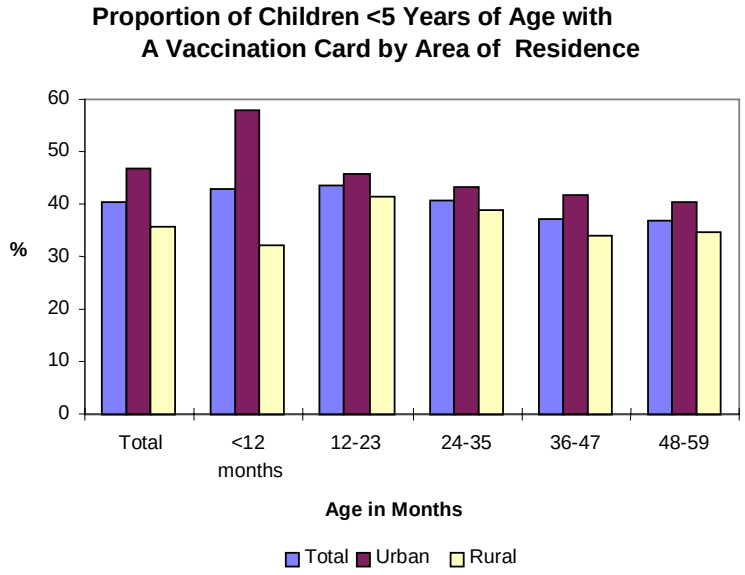
9.3.3. Payment for Vaccination

The demand for vaccination services is determined, not only by individual or household characteristics, but also by the availability and cost of these services. On asking the children's mothers if they had paid for vaccination for their children at any time, 5% of the mothers replied that they had. As an example, 7.8% of mothers declared having paid for BCG. Urban areas indicate higher percentages who pay for child vaccinations than in rural areas (9% as against 2.5%), reflecting not only mothers' greater access to the private health sector but also a greater prevalence of payment in the system which is supposed to be free.

9.3.4. Evaluation of the Quality of Data

On analysing the consistency of information on vaccination, in relation to incomplete vaccination cards, it was found that some women stated that their child had not had a specific type of vaccine, whilst on checking the card it was found to have been registered. In part this reflects poor understanding of the health care the child received, or the mothers' low level of schooling. Some women had difficulties, mainly in relation to triple vaccines, in being able to say correctly how many doses the child had had.
About 40% of the children under 5 had a vaccination card, but for 60% of the children, information was based only on the mother's word. The proportion of children with cards in the 12-23 month age group was higher at 43.4%, falling progressively with age. Urban regions indicate a higher number of children with vaccination cards. In part this reduction is perhaps due to the loss of vaccination cards, their unavailability at vaccination posts and the fact that they are not distributed during vaccination campaigns.

Figure 9.3.4.1



Even if children have vaccination cards, they can be quite incomplete. Forty-eight percent of the children had had other vaccinations, which had not been recorded on the card. The information contained on the cards is very often incomplete because the mothers lose them and replacement cards do not include the information from the previous card. Moreover, the distribution of vaccination cards is not always complete; a practical example is a vaccination campaign in which the distribution of cards does not include all the children vaccinated. With the exception of the triple vaccines[14], as can be seen in Table 9.3.4.1 the information supplied by the mother was more complete than that contained on the vaccination cards. Of all the vaccines, BCG is the best recorded, followed by measles.

Table 9.3.4.1. Percentage of Children with Vaccination Card or information provided by the Mother for Children Under Five

	BCG	DTP 3	POLIO	Measles	Yellow Fever
Vaccination Card	27.8	14.7	14.7	21.3	9.8
Data Provided by the Mother	37.4	5.9	10.5	29.0	15.7

Number of children = 3,814

Children under one constitute the priority group for PAV; however, because of epidemics the recommended deadline for vaccination has been extended. Evaluation of vaccination programmes can be broadened if we take into account the proportion of children vaccinated during the first year of life and those vaccinated according to the vaccination calendar. The Table below shows the calendar recommended by the Ministry of Health for vaccination at ideal ages.

[14] The children who took the 3 doses of the vaccine. It is not always easy for the mothers to remember the three doses, mainly if they happened some time before. On the other hand children can have had other injections which can be confused with vaccines.

The objective is to show the proportion of children vaccinated within the period of a year and in real time, thus enabling evaluation of the quality of assistance. The data from the vaccination card suggest that most children under 5 had vaccinations during the first year of life, as is recommended. Almost 53% and 43% of the children with a vaccination card had the polio vaccine and BCG during the first month of life and within a year 80% of the children were already vaccinated.

Table 9.3.4.2. Percentage of Children Vaccinated who received a Vaccine at the Age Limit Recommended

Vaccines	Vaccinated Children			
	Recommended Age	%	Acceptable Age	%
BCG	At Birth	43.3	0-11 months	79.7
Polio 0	At Birth	53.0	0-11 months	84.0
DTP1	2 months	30.0	2-11 months	70.7
DTP2	4 months	35.9	4-11 months	68.0
DTP3	6 months	38.7	6-11 months	69.3
Polio1	2 months	36.2	2-11 months	69.0
Polio2	4 months	34.0	4-11 months	67.0
Polio3	6 months	36.0	6-11 months	65.1
Measles	9 months	24.9	9-11 months	43.6

* Total number of children < 5 vaccinated and with vaccination card = 1,460

In relation to measles, 25% of the children were vaccinated in a period very close to 9 months; i.e. 43.6% of the children received the vaccine at an acceptable age. Vaccination within the time laid down for measles is less than for triple vaccines, as is demonstrated next. For the first doses of triple vaccinations, 30% of the children were vaccinated at the appropriate age. Children were vaccinated at the appropriate age for DTP1, 35.9% for DTP2 and 38.7% for DTP3, whilst, almost 69% of the children vaccinated received the complete triple dose during the first year of life. In summary, a large proportion of the children with a vaccination card were vaccinated within an acceptable period of time, however, this only represents the minority of children.

9.4. Toxoid Tetanus Vaccination for Women

The anti-tetanus vaccination during pregnancy prevents neonatal tetanus in the newly born. In Angola, neonatal tetanus is the most common cause of neonatal mortality. In a study carried out at the " Josina Machel" hospital in Luanda, Grudeborn (1987) verified that tetanus was responsible for 30% of neonatal deaths. Deaths from tetanus were concentrated in the first week of life, probably as a result of events during childbirth.

For the women of childbearing age, the programme foresees a calendar of 5 doses of toxoid anti-tetanus. In Angola, it is recommended that women be given at least the first 3 doses to protect them for at least a five-year period. The remaining doses prolong immunity from 10 and 20 years respectively.

The results of table 9.4 enable us to infer that around half the women were protected by the anti-tetanus vaccine during their last pregnancy. It is appropriate to point out that in order to calculate the vaccines received, previous pregnancies were also taken into account. This figure is not very different from that revealed when considering only mothers with children under 1 year of age.

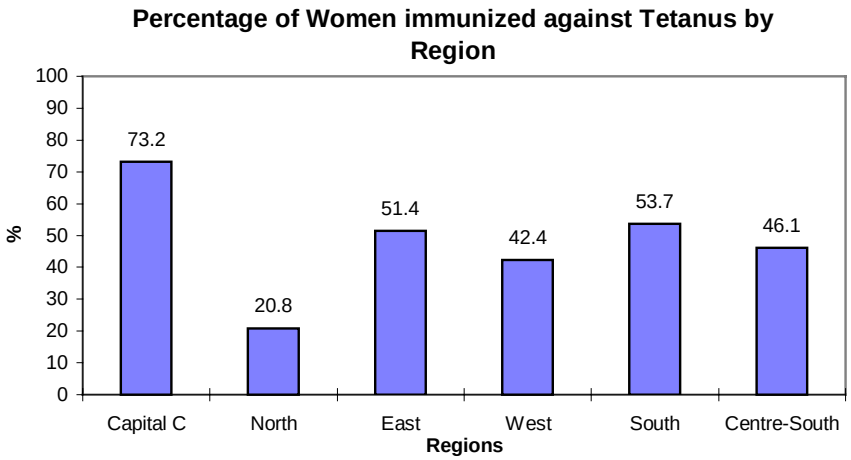
In African countries information on anti-tetanus coverage in pregnant women is at 39% from 1992-95. Countries like Namibia and Mozambique are higher at 60%, while the Congo's rate is 33% (Ex-Zaire), even lower than for Angola.

Table 9.4.1. Percentage of women immunized against Tetanus

		Area of Residence	
	Total	Urban	Rural
All the Women	49.2	69.3	35.6
Mothers with Children< 12 months	50.6	69.2	38.3
Number of Women	2,763	1,059	1,704

Urban areas present higher rates of vaccination against tetanus than rural areas. On the other hand, the largest percentages of coverage appear in the areas Capital C, south and east (73%. 54% and 51%. respectively). The lowest Coverage levels occur more in the north and west.

Figure 9.4.1



9.5. Vitamin A supplement

Vitamin A plays a fundamental role in vision and in optic health. The clinical signs of exophthalmia have been used to identify populations with Vitamin A deficiency. Besides this, recent studies suggest that the risk of contracting, and of dying of some infectious diseases increase for children with Vitamin A deficiency. WHO estimates for 1995 indicate that about 3 million children under 5 years of age are annually affected by exophthalmia, and an additional 251 million children are sub clinically deficient (WHO 1996).

Several nutritional surveys, carried out in Angola, have shown high rates of malnutrition and Vitamin A deficiency in children under 5. Vitamin A distribution constitutes a part of proposed actions for a decrease in Vitamin A nutritional deficiency.

Vitamin A is given every 6 months to children under 5 years of age. Priority is given to the children from 9 to 59 months. The under 6 months age group is not a target group to evaluate the Vitamin A deficiency, as the most of the Vitamin A supplement comes from human milk. However, there exist other target groups for the programs of Vitamin A supplement, mainly in areas where this deficiency is endemic: children of school age, pregnant women and women that breast-feed within preferably 4 to 6 months after the child's birth. Besides being available in health centres Vitamin A has also been made part of vaccination campaigns, particularly against the measles/plus. Vaccination campaigns against measles offer a first contact with Vitamin A.

MICS data enable us to keep track of Coverage for the Vitamin A supplement distribution program. It is not possible to evaluate the impact of the programme, as this requires the use of biological and clinical indicators.

For children that took the Vitamin A supplement, 35.8% only took it for 6 months prior to the survey, 16% had taken it one year before and 38% two years before the research. Information does not exist in MICS that enables us to assess the periodicity of the Vitamin A supplement,

however, most children took it at the height of the campaigns, which do not happen so regularly in Angola.

Starting from information on the card and in the mothers' statement, about 11% of the children from 9 to 59 months took the Vitamin A supplement in the last 6 months, while, for the vaccination cards this percentage is only 3. The Coverage rate attained for children living in urban areas is greater than the one for rural areas, 13.3% and 9.5% respectively.

Table 9.5.1. Percentage of Children who have taken Vitamin A during the Six months before the Research by Area of Residence

		Area of Residence	
	Total	Urban	Rural
Vitamin A (card)	4.5	2.7	5.9
Vitamin A (Med. History and card)	11.9	14.3	10.2
Number of Children	3012	1160	1852

* Children from 9-59 months

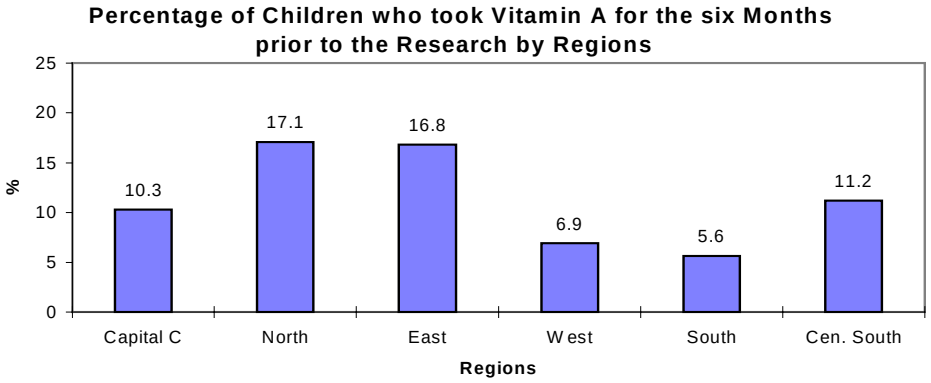
The Table below shows the percentage of children who took Vitamin A by age. From 9 to 12 months, the coverage of the supplement is lower (9.5%), increasing a little more from the first year of life, the figures being almost constant in relation to the age of the child.

Table 9.5.2 Percentage of Children who have taken Vitamin A by Age (card and med. history)

Age of child in months	Total
9-12	9.5
13-24	12.0
25-36	11.2
37-48	10.7
49-59	12.7
Total	11.9

The figure below indicates the coverage reached by Vitamin A Supplement in different regions of the Country. We see a great concentration of Vitamin A in the north and east. This highest concentration is mainly due to vaccination campaigns against measles. The lowest concentrations are recorded in the south and western regions.

Figure 9.5.1



In summary, with the data from MICS we do not intend to measure Vitamin A deficiency but coverage of the supplement programme. The conclusion is that the supplements are quite low, even using vaccination campaigns as additional means to reach those in need.

9.6. Diarrhoeas

9.6.1. Prevalence of Diarrhoea and Treatment Received

Information relative to child morbidity in Angola is scarce and not very reliable. The few data available come generally from hospital institutions, with the inconvenience that they do not represent the population as a whole. Basic information from the cemeteries of Luanda point to the fact that about 70% of infant deaths were due to exogenous causes and 51% of these corresponded to infectious and parasitic diseases (dependent largely on preventive measures), constituting the main cause of death in the city of Luanda. Malaria, diarrhoeal diseases and measles stand out within this group (Grave. 1994). Consequently, diarrhoea is seen as one of the main causes of child mortality in children under 5 years of age.

The Ministry of the Health (MINSA) implements a Programme of Combat against Diarrhoeal Diseases. The objective of this programme is to reduce morbidity and mortality due to diarrhoeal diseases through treatment with oral rehydration salts, and prevent malnutrition through continued feeding. The programme foresees other preventive components such as: hygiene and education, promotion of breast-feeding, basic sanitation etc. However, it works badly and inadequate funds have been allocated to it.

The mother answered questions in relation to the child. The survey measured the prevalence of diarrhoea during the two weeks before the survey, the type of treatment given and the mothers' knowledge of oral rehydration salts. The concept of a diarrhoea episode or bout adopted is used by WHO's International Center for Diarrhoea Control which defines the disease as the occurrence of three or more liquid stools daily. The interpretation of the data on diarrhoea requires caution given the seasonal nature of the disease. The interviews were carried out between August and December of 1996, a time of the year when diarrhoea levels vary between low to moderate. On the other hand, we must take into account the mothers' perception in

relation to diarrhoea. A lot of mothers consider diarrhoea as common and not as a health problem. This situation can influence the recording of cases.

Prevalence of Diarrhoea

Table 9.6.1.1 shows the proportion of children under five that had diarrhoea in the last two weeks, according to age and residence. The results indicate that 28.4% of the children had a diarrhoea episode during the two weeks prior to the research. From annual incidence data on prevalence an average length of 5 days, 7.8 diarrhoea episodes per child is recorded.

The prevalence of diarrhoea increases from six months of age and reaches a maximum value between the 6 and 23 months of age, thereafter decreasing. Starting from six months the children are in a process of developing their immune system. Some children are weaned and consequently they are more exposed to the pathogens in the environment in which they live. Many of them are crawling and subject to bacteria transmission.

Table 9.6.1.1 Proportion of Children < 5 who have had Diarrhoea in the Last 2 Weeks by Age and by Area of Residence and other Variables

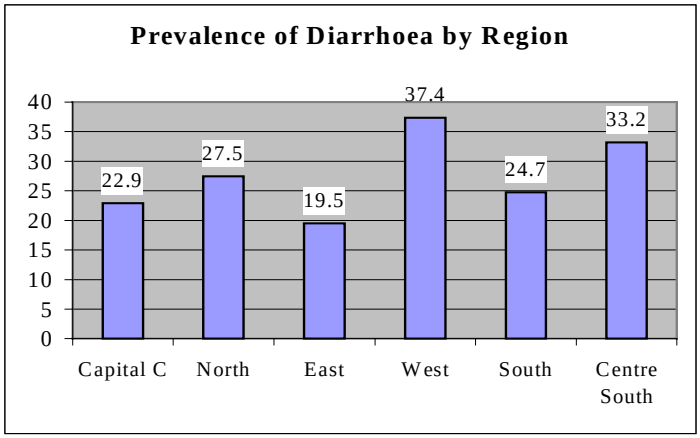
	Number o Children	% of Children with Diarrhoea
Age of the Child		
. <6 months	596	23.8
. 6-11	293	42.0
. 12-23	782	39.9
. 24-35	662	31.1
. > 36 months	1,497	23.4
Sex of the Child		
. Male	1,872	29.4
. Fem.	1,958	25.5
Area of Residence		
. Urban	1,445	29.4
. Rural	2,385	27.8
People by Room		
. < 2 people	283	27.1
. 2-3	1,399	27.9
. 3-4	1,262	29.2
. 4 and +	886	28.4
Treat or Boil Water		
. Yes	708	26.5
. No	3,122	28.5
Sanitary Facility		
. Bathroom	681	27.3
. Latrine	1,162	28.4
. Open Air	1,987	28.7
Total	3,830	28.4

Unexpectedly the prevalence of diarrhoea is slightly higher in urban areas than in rural areas. This situation can be explained by the lack of a water network, the precarious sewer system and environmental hygiene in urban areas.

The prevalence of diarrhoea can be associated to social and economic factors and the environment. It is surprising in our case not to find significant differences between the number of cases of diarrhoea and water treatment, the presence or absence of latrines in the home and the number of people per room.

Differences exist in the prevalence of diarrhoea by areas. In the west and centre-south the highest percentages for children were found, more than 30% in the case of diarrhoea. The most striking fact is the low prevalence of diarrhoea in this area, being lower than the national average. Other health indicators have demonstrated quite an unfavourable situation for this area. Future investigations are required.

Figure 9.6.1.1



9.6.2. Use of Oral Rehydration Therapy(ORT)

Diarrhoea is an important health problem. If a child is not treated on time one of the consequences is dehydration and its complications. Because of this the Ministry of the Health's Program of Combat against Diarrhoeal Diseases encourages parents to give oral rehydration therapy (ORT to children with diarrhoea), or homemade solutions of water and sugar and other liquids, in order to prevent dehydration.

The use of rehydration oral therapy (ORT) is defined as the percentage of diarrhoeal cases in children under 5 who report having received ORT and/or recommended homemade liquids. [15]

[15] However, this definition suffered some alterations emphasising the volume of fluids taken in by the child. The present definition of the use of ORT is the proportion of diarrhoea cases that reported an increase in fluid intake and continued to eat. All countries do not yet use this indicator.

Thirty-five percent received oral rehydration therapy and 81% received oral rehydration salts and/or other homemade liquids recommended. [16] Only 6% of the children did not take in any liquid during the last episode of diarrhoea.

Table 9.6.2.1 Percentage of Children with Diarrhoea in the last two weeks who Received ORT and Appropriate Solutions According to Area of Residence

		Area of Residence	
Treatment Received	Total	Urban	Rural
Only ORT	34.9	42.8	29.1
ORT and/or Recommended Home-made Solutions	81.4	86.9	77.5
Number of Children with diarrhoea	1,070	450	620

If we compare the use of oral rehydration therapy with some other regions of the world we find that the average rate of use of ORT is 73% for countries in sub-Saharan Africa. This figure is lower than that calculated for Angola. Moreover, those for developing countries are lower. This leads us to believe that with greater availability of health services a mother uses other types of treatment, which are sometimes more costly and sophisticated. In contrast in underdeveloped countries because of poor health provision mothers opt to use ORT or homemade solutions.

Table 9.6.2.2. Comparison of Regional Estimates in the Use of ORT (%)

Region	ORT (%)
. Africa	73
. Least Developed Countries	81
. Developing Countries	65
. Angola	81

9.6.4. Feeding During Diarrhoea

In cases of diarrhoea medical advice is to maintain normal feeding, especially mother's milk, not altering the amount or type of food, just increasing the frequency of food intake. MICS data reveal interesting practices in this sense, see 9.6.4 "Child Feeding during Diarrhoea."

Fluid and food intake figures reveal that 35% of children take in fewer liquids than usual, 26% for urban areas and 42% for rural areas. This behaviour can relate to cultural questions, diarrhoea is seen as a dysfunction of the digestive system, which can be interpreted by a lot of mothers to mean that the digestive system is in need of a rest. Only 36% of the children take in a higher than usual quantity of liquids. This situation reveals insufficiency mainly if the child has many bouts of the illness a day.

Regarding food intake, 67% of the children ate nothing or less than normal. There were no great differences by area of residence. Only 33% of the children consumed the same quantity of food or more than normal.

[16] Liquids recommended include : teas, mother's milk, porridge, soups, sugared water, other types of milk.

Table 9.6.4.1. Behaviour of Child with Diarrhoea in the Last 2 Weeks in Relation to Fluid and Food Intake by Area of Residence

	Total	Area of Residence	
		Urban	Rural
Intake of Fluids			
. Did not Drink Anything	5.7	6.0	5.4
. Less than Normal	29.9	20.0	36.3
. Normal	28.7	32.1	26.6
. More than Normal	35.7	41.9	31.7
Total	100	100	100
Food Intake			
. Did not Eat anything	13.7	13.5	13.9
. Less than Usual	53.2	49.9	55.4
. Normal	24.6	26.0	23.7
. More than Normal	8.5	10.7	7.0
Total	100	100	100
Number of Children with Diarrhoea	1,070	450	620

The analysis of maternal practices in relation to the age of the child indicates that mothers tend to change the quantity of food taken in independently of the child's age, demonstrating a clear tendency to reduce the quantity of food during bouts of diarrhoea (Table 9.6.4.2).

Table 9.6.4.2. Quantity of Food in Accordance with the Age of the Child (%)

Age of the Child	Quantity of Food				
	Nothing	Less	Normal	More	%
< 12 months	16.6	47.8	28.5	7.1	100
12-24	14.8	57	17.4	10.7	100
> 24 months	11.8	52.8	26.2	9.1	100

Table 9.6.4.3. Behaviour of Children with Diarrhoea in the Last 2 Weeks in relation to Fluid and Food Intake by Area of Residence

	Total	Area of Residence	
		Urban	Rural
Larger Intake of Liquids and Continued to Eat	35.2	41.7	30.5
Number of Children with Diarrhoea	1,070	450	620

9.6.5. Knowledge of Oral Rehydration Salts

In order to test the knowledge of mothers on oral rehydration salts a question was put concerning their use and how to prepare them. Table 9.6.5.1 shows that knowledge of ORT is almost universal, 86% of the mothers know how to use ORT and 76% know how to prepare it correctly. Mothers in urban areas possess greater understanding of how to prepare oral rehydration salts correctly.

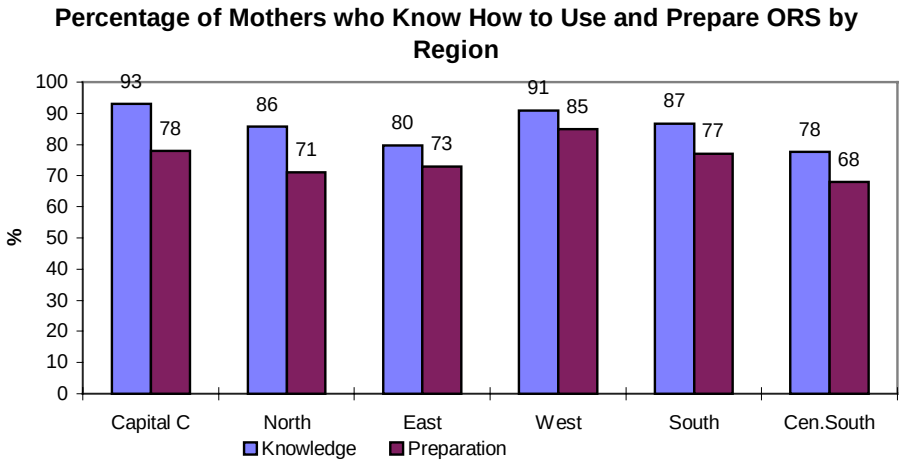
Table 9.6.5.1 Indicators On Oral Rehydration Salts (ORT)
By Area of Residence

	%	Area of Residence	
	Total	Urban	Rural
Knowledge of the Use of ORT			
% of Women who Know how to Use ORT	86.2	93.5	81.3
Method of Preparation			
% of Women who Say they Know how to prepare ORT	79.9	90.0	72.5
% of Women who Say they Know how to prepare ORT adequately	75.8	83.2	70.8
Number of Women	3623	1457	2166

* Women who have had at least one child

In geographical terms the regions that recorded the highest levels of knowledge were Capital C and the west. However, in these regions there is greater contact with health care services and personnel, meaning that mothers have greater possibilities of contacting those services. It is also probable that this is related to relatively greater access to mass media where many messages on ORT are transmitted.

Figure 9.6.5.1



Knowledge of the use and adequate preparation of ORT varies in relation to the mother's age and level of education. As such the younger mothers are in a slightly more advantageous situation than older women. In relation to educational level there is an inverse relationship regarding knowledge and preparation of ORT: the higher the level of education, the higher the number of mothers who know how to use and prepare ORT.

Table 9.6.5.2. Differentials in Knowledge of the Use of ORT according to Age And Level of Maternal Education

	% of Women who Stated	
	They knew how to Use ORT	They knew how to prepare ORT Adequately
Age of Mother		
. 15-19	87.1	76.0
. 20-24	87.4	77.0
. 25-39	85.8	76.0
. >40	84.0	70.0
Level of Education		
. Low/None	75.9	62.0
. 1-4 years	88.5	84.0
. 5-7 years	96.1	89.0
. 8 and more	99.2	93.0

* Women who had at least one child

9.6.6. Treatment Received

Generally speaking mothers only realise that their children have diarrhoea after 3 or more liquid stools during the day. Various actions are taken, from changing the diet to seeking medical help. Everything depends on the mother's distress. Many mothers think that they can solve the problem at home and very often wait for the problem to sort itself out, without any intervention.

MICS data indicate that only 47% of the children were taken to see a doctor. Mainly the local health post/centre is used. This percentage is low and demonstrates that mothers use various forms of treatment or have a “wait and see attitude” before asking for assistance from a health professional.

There are variations by area and region of residence in the proportion of women that had sought medical treatment during a recent bout of diarrhoea. In the regions between 35-56% of women asked for medical treatment. The lowest levels of treatment are reported in the north and Capital Centre regions.

9.7. Coughs or Colds

Respiratory infections are the fourth cause of infant mortality in children under 5 years of age in Angola. The high prevalence of respiratory infections shows the epidemiological importance of infant respiratory disease. Though scarce and with a different population base some studies carried out in Luanda (Grave.1994) Kwanza-Sul (Villamil & al. 1994) have also identified respiratory disease as one of the main causes of morbidity and mortality amongst the population under 5 years of age.

In MICS mothers were asked if the child had had a cough or a cold in the last two weeks. We must consider this question does not show what the situation is for respiratory infections as a whole and should be analysed with caution. Other questions were also asked regarding the type

of treatment sought, and in the case of coughs and colds what signs would lead the mother to ask for medical help.

The results of table 9.7.1 reveal that 48% of children under 5 years of age had had a cough or a cold in the last 15 days. Thirty-five percent reported breathing difficulties and a temperature, which could indicate a respiratory infection, although the percentage seems high, it could be a misunderstanding on the part of the mothers. Nearly 44% of the children who had a cough or a cold were seen because of their illness and mainly at the local health centre (64% of the cases).

Table 9.7.1. Prevalence of Coughs and Colds in Children Under 5 years of Age by Area of Residence

	Total	Area of Residence	
		Urban	Rural
. % of Children who have had a Cough or Cold in the last 15 Days	47.7	47.5	48.4
. % of Children who had medical consultation because of illness	44.3	49.5	40.7
Number of Children	3,830	1,445	2,385

In addition we do not see clear and well-defined tendencies in relation to the age group of the children. The age distribution of the illness shows that the illness affects all age groups, with relatively lower rates for older children. In the west and centre south there is greater incidence of coughs and colds, whilst it is less prevalent in the east.

Figure 9.7.1.

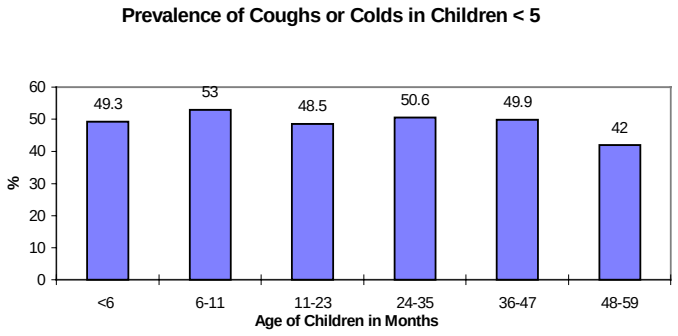
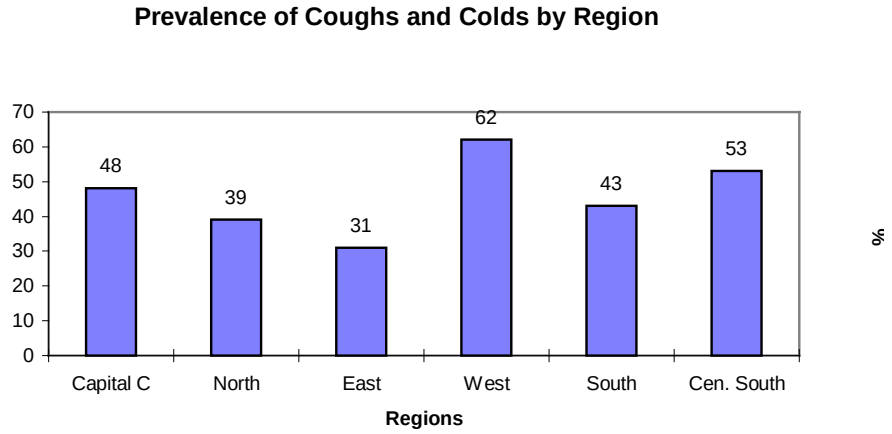


Figure 9.7.2



9.7.1. Knowledge of Symptoms of Coughs and Colds

We seek to test the knowledge of mothers regarding symptoms, which lead them to seek medical advice, if the child has a cough or a cold. The data indicate the percentage of mothers who identify each symptom. Thus, the most important symptoms that lead the mother to look for medical help are the following: having a temperature, a blocked nose and difficulties in breathing. We do not find differences when comparing urban and rural areas.

Table 9.7.1.1. Percentage of Mothers who Identified Signs of Illness By Area of Residence

Signs that led the Mother to look for Medical Assistance	% of Replies	Area of Residence	
		Urban	Rural
Has a blocked nose	42.4	40.9	43.4
Has difficulty in Eating	25.8	23.6	27.3
Has difficulty in Sleeping	13.2	12.3	13.9
Has a temperature	**86.3**	**83.6**	88.0
Breathes rapidly	14.1	15.2	13.4
Has difficulties in Breathing	**30.3**	**33.0**	28.5
Stays Ill for a Long Time	9.2	12.2	7.2

Women who have had a child in the last 5 years: 4,890

10. BREAST-FEEDING AND CHILD NUTRITION

10.1. Breast-feeding

Studies have demonstrated the advantages of children being breast-fed. Mother's milk has positive effects on the nutritional state of a child's growth and development and decreases morbidity and mortality. (Jelliffe & Jellife.1978)[17]. As a consequence, breast-feeding plays an important role in the reduction of infant mortality. Apart from being good for the health of the child, breast-feeding also is a natural contraceptive, benefiting maternal and infant health.

How long breast-feeding lasts depends on three important factors: 1) parent and community perception that it is good for the well-being of the child; 2) the availability of human milk substitutes and if parents can afford to buy them; 3) the convenience for the mother of breast-feeding the child. These factors are affected by education, residence, urban or rural and publicity on tinned milk, amongst others.

MICS data aims to establish breast-feeding behaviour. The women in the sample were surveyed as to when the breast-feeding started, if they were breast-feeding at the time of the research, the age at which children are weaned and if solid food and other liquids had been introduced into the child's diet in the 24 hours previous to the survey, and the use of the bottle. Some social and economic differentials will be analysed in relation to how long breast-feeding lasts using as indicators the level of education of the adults in the household and the area and region of residence.

10.1.1. Breast-feeding Indicators

MICS demonstrated that a high percentage of children i.e. 98% are breast-fed. The average length of time was 25 months[18]. Differences between how long children are breast-fed between urban and rural areas are slight. Children in urban areas are breast-fed for two months less.

Little more than 12% of the children are breast-fed exclusively (without the introduction of food, artificial milk or liquids into the diet) during the first 4 months of life. The practice of exclusive breast-feeding is more frequent in rural areas than in urban areas.

Half the children between 20-23 months received mother's milk. The vast majority of children are weaned during the second year of life (83%). The percentage of children who are being breast-fed from 20-23 months is twice as high in rural areas as in urban areas. Generally speaking urbanisation has had a negative effect on how long breast-feeding continues. This trend is also true in regional terms. The figures for Capital C region are very low compared to other regions. In part this can be explained by greater opportunities in education and work for women who live in this region, as well as a greater supply of human milk substitutes.

[17] Jelliffe. D. B. & Jelliffe. E.F.P.- Human milk in the modern world. 2nd ed. Oxford University Press

[18] An attempt was made to calculate the life table for breastfeeding. Its results were not very coherent. One of the limiting factors was the mothers'declaration of age.

Table 10.1.1.1. Indicators of Period of Time of breast-feeding by Area of Residence

Selected Indicators	Total	Area of Residence	
		Urban	Rural
. Average Length of Time of Breast-feeding (in months)	25.0	24.0	26.0
. Indice of Exclusive Breast-feeding (children < 4 months old) %	12.0	7.6	15.3
. % of Children from 20-23 Months who are still being breast-fed	48.6	38.0	61.0
. Indice of Predominance of Breast-feeding (children < 4 months) in %	57.6	55.9	59.0
Number of children	4020	1635	2385

Figure 10.1.1.1.

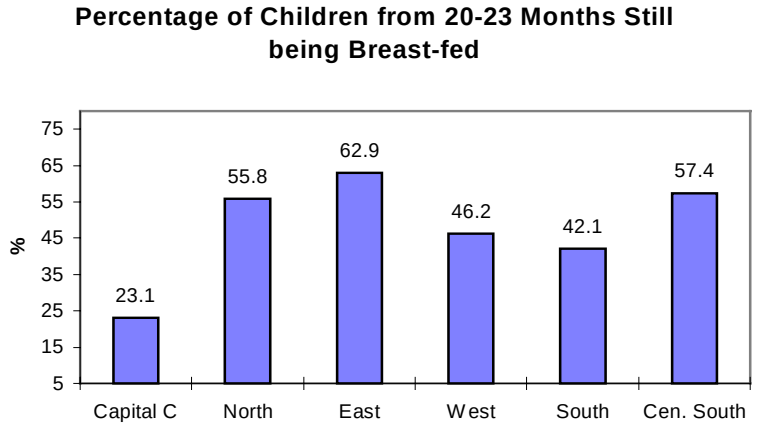
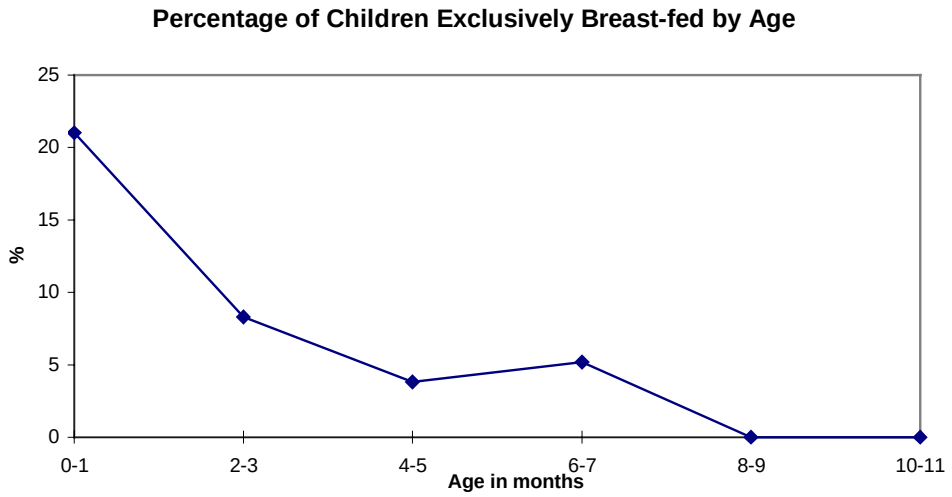


Figure 10.1.1.2 shows the curve that characterises the frequency of exclusive breast-feeding by age. We observe that although the majority of children start breast-feeding, the rate of abandoning exclusive breast-feeding is extremely high in the first months of life, with only 21% of the children from 0-1 months being exclusively breast-fed. Exclusive breast-feeding declines dramatically, at 4 months only 4% of the children depend totally on mother's milk. The pattern of exclusive breast-feeding is far from that recommended by WHO[19], as almost 86% of the children who are breast-fed also take in other fluids.

[19] WHO recommends that children be exclusively breastfed, during the first four to six months, and that they should be given solids only from the seventh month onwards.

Figure 10.1.1.2.



The rate of predominant breast-feeding was also calculated[20] at 57.6%. This means that half the children receive food, powdered milk or porridge before they are 4 months of age.

The sum of the exclusive breast-feeding rate and the predominant rate gives us the **complete breast-feeding rate**. This rate is 69.6%.

Another important indicator is timely supplementary food. It is applied to those children from 6 to 9 months of age who receive mother's milk and supplementary food. The rate of timely supplementary food is 68.6%.

The introduction of solid food is made prematurely: 70% of children already have a solid food supplement[21] around the 4th or 5th month of life. The solid food supplement was introduced into the diet for 11% of the children within the period recommended by WHO. The consumption of tinned milk is low over the first two years of life, only 3%. To sum up, although the majority of children are breast-fed for a long period of time, the introduction of solid or semi-solid food supplements is made extremely prematurely.

Table 10.1.1.2. compares several indicators on breast-feeding in a number of countries. In Angola half the children are still being breast-fed between 20-23 months, this figure is close to the average for African countries which is 48%. In the case of exclusive breast-feeding, the percentage is relatively low for Angola and Zambia compared to other African countries and in relation to the African average, meaning that mothers tend to introduce supplementary food into the child's diet very early. The premature introduction of food or liquids exposes children to the risk of infection, given hygiene conditions.

[20] Proportion of children under 4 months of age who are still breasfed and take in clear liquids (water, water with sugar, teas and fruit juices).
[21] These values refer to the last 24 hours.

Table 10.1.1.2. Indicators of Breast-feeding Practices by Selected Countries

Selected Indicators	Angola	Zambia	Zaire	Namibia	Zimbabwe	African Countries
. % of Children exclusively Breast-fed (children < 4 months of age)	12.0	13.0	32.0	22.0	16.0	29.0
. % of Children Breast-fed and fed a food supplement (children from 6 to 9 months)	69.6	88.0	40.0	65.0	93.0	64.0
. % of Children from 20-23 Months still being Breast-fed	48.0	34.0	64.0	23.0	26.0	48.0

Source: World Child Situation. 1996.

The continuation of breast-feeding is one of WHO's recommended indicators, the target group being from 12-15 months to 20-23 months. The indicators are favourable, as 90% of the children continue to be breast-fed after one year of age and approximately 48.6% are breast-fed into their second year of life.

Table 10.1.1.3. Continuation of Breast-feeding by Area of Residence

		Area of residence	
	Total	Urban	Rural
Continuation of Breast-feeding (12-15 months)	90.1	87.3	92.4
Continuation of Breast-feeding (20-23 months)	48.6	38.0	61.0

* Children who continue to be breast-fed

The percentage of children who have been reared on bottled milk is higher for those who live in urban areas, where 36% of the children had been given bottled milk in the last 24 hours.

Table 10.1.1.4. Percentage Use of Bottled milk by Area of Residence

		Area of residence	
	Total	Urban	Rural
Percentage Use of bottled milk (children < 6 months)	23.0	36.0	14.1
Percentage Use of Bottled Milk (children <12 months)	20.2	28.7	14.1

10.2 Nutritional State of Children

10.2.1 Introduction

The probability of dying of a given illness/disease can be two fold in the case of moderately malnourished children and triple in the case of acute malnutrition. Malnutrition represents an important factor in nearly a 1/3 of the 13 million deaths of under 5s in the world[22].

MICS provided anthropometrical data on children between 6 and 59 months, on the basis of variables such as age, sex, weight, height and the presence of oedemas, making it possible to

[22] UNICEF. "World Child Situation**".** 1994

characterise the nutritional state of the Angolan child and the global prevalence of malnutrition, distributed wherever possible by sex, age, social and economic characteristics and geographic areas.

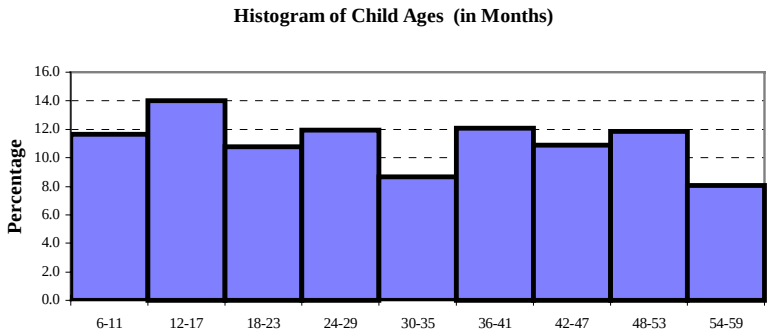
WHO recommends a comparison of anthropometrical data with data of an "international reference population" defined and ratified by the "*National Center for Health Statistics"* (NCHS) and by the "*Center for Disease Control and Prevention"* (CDC) of the United States of America, respectively. The use of this reference population is based on the fact that children who are well nourished in any population group follow a similar growth pattern (Martorell and Habitch. 1986). This population serves thus as a platform of comparison, facilitating the form of nutritional analysis between the subgroups of a given population and any change in the nutritional state over a period of time.

Three indicators of the nutritional state of the child (anthropometrical indices) were calculated using computer *software* EPI INFO 6.02. using the variables of height, weight, age, and sex of the child. These indicators are: *height by age (H/A), weight for height (W/H) and weight for age (W/A),* which can be expressed in terms of "*z-scores*" (ex. HAZ, WHZ and WAZ) percents (ex.: HAP, WHP and WAP) and median percent (ex.: HAM. WHM and WAM) based on the "reference population".

In a sufficiently large population the data on weight and height vary in such a way they tend to a normal distribution. As z-scores are based on levels of deviation from the pattern (DP) of the individual in relation to the median reference population, which allows these to be adjusted to take account of any variation in weight and height. They are generally preferred to other indices (Waterlow et al.1977). Therefore, from here onwards, we will only use indices expressed in z-scores.

The validity of nutritional indicators is determined by the coverage of the children in the study and by the standardisation of the measurement procedures. Thus, it is pertinent to add that data referring to the height of children under 24 months were collected while they were lying on a special measurement table, whilst those of older children were collected while standing. Only about 5% of the children were not measured and in about 2.4% of the cases the existence of extreme or missing figures was identified, and as a consequence they were excluded from the cases analysed, in accordance with the manual EPI INFO 6.02. In spite of the age histogram (in months) the children do not show up well due to an unclear statement of children's ages. The low frequency of positive values and extreme z-scores suggest that these problems are not too serious.

Figure 10.2.1.1



10.2.2 Anthropometrical Indices

The three anthropometrical indices referred to above are defined as follows in a conceptual framework for the approach to malnutrition presented in Box 10.2.2.1.

⇒ ***Height by Age (HAZ):*** Measures the linear growth of the child in relation to age. A deficit in this indicator relates to alterations accumulated over a long period of time in his/her nutritional state and health in general. Children with 2 or more deviations from the pattern below the median for the reference population (i.e. AIZ ≤ -2DP) are considered *short for their age and to be suffering from chronic malnutrition (nutritional stunted growth*). These children have been victims of inadequate nutrition for a long period of time, as well as resulting chronic illnesses.

⇒ ***Weight by height (WHZ):*** Measures the development of muscle mass in relation to the length of the body and describes the child's present nutritional state. Children with 2 or more deviations from the pattern below the median for the reference population (i.e. WHZ ≤ -2DP) suffer from infant marasmus, being considered *thin, weak and with acute malnutrition.* This situation would be the result of inadequate nutrition during the period immediately preceding the research and can be caused by illness recently suffered by this child, originating in loss of weight and the onset of a process of malnutrition. Acute malnutrition can also be the effect of extreme scarcity of food, as for example, food crises in war situations.

⇒ ***Weight by Age (WAZ):*** Reflects the relationship between present body weight and age. Thus, it is a combination of 2 indicators described above (HAZ and WHZ) taking account of chronic as well as acute malnutrition, thus constituting a useful instrument in a clinical environment to make continuous assessments of nutritional progress and growth. Children whose WAZ is higher than 2 deviations from the pattern below the median for the reference population are classified as underweight.

As we are dealing with a survey of a transversal type, which does not allow any continuous follow up of the population under study, we will pay particular attention to the first two indices.

In this study 4 levels of malnutrition are defined:

a) *Absence of malnutrition:* when one of the 3 indices reaches values higher or equal to -0.99. Or that is to say. when ($Z \geq -0.99$)

b) *Slight Malnutrition:* when any of the 3 indices reaches values less or equal to -1.0 and greater or equal to -1.99, or that is to say ($-1.0 \geq Z \geq -1.99$)

c) *Moderate Malnutrition:* for values less or equal to -2.0 and greater or equal to -2.99, that is ($-2.0 \geq Z \geq -2.99$).

d) *Severe Malnutrition,* for values less than -3.0 or when the presence of oedemas is found.

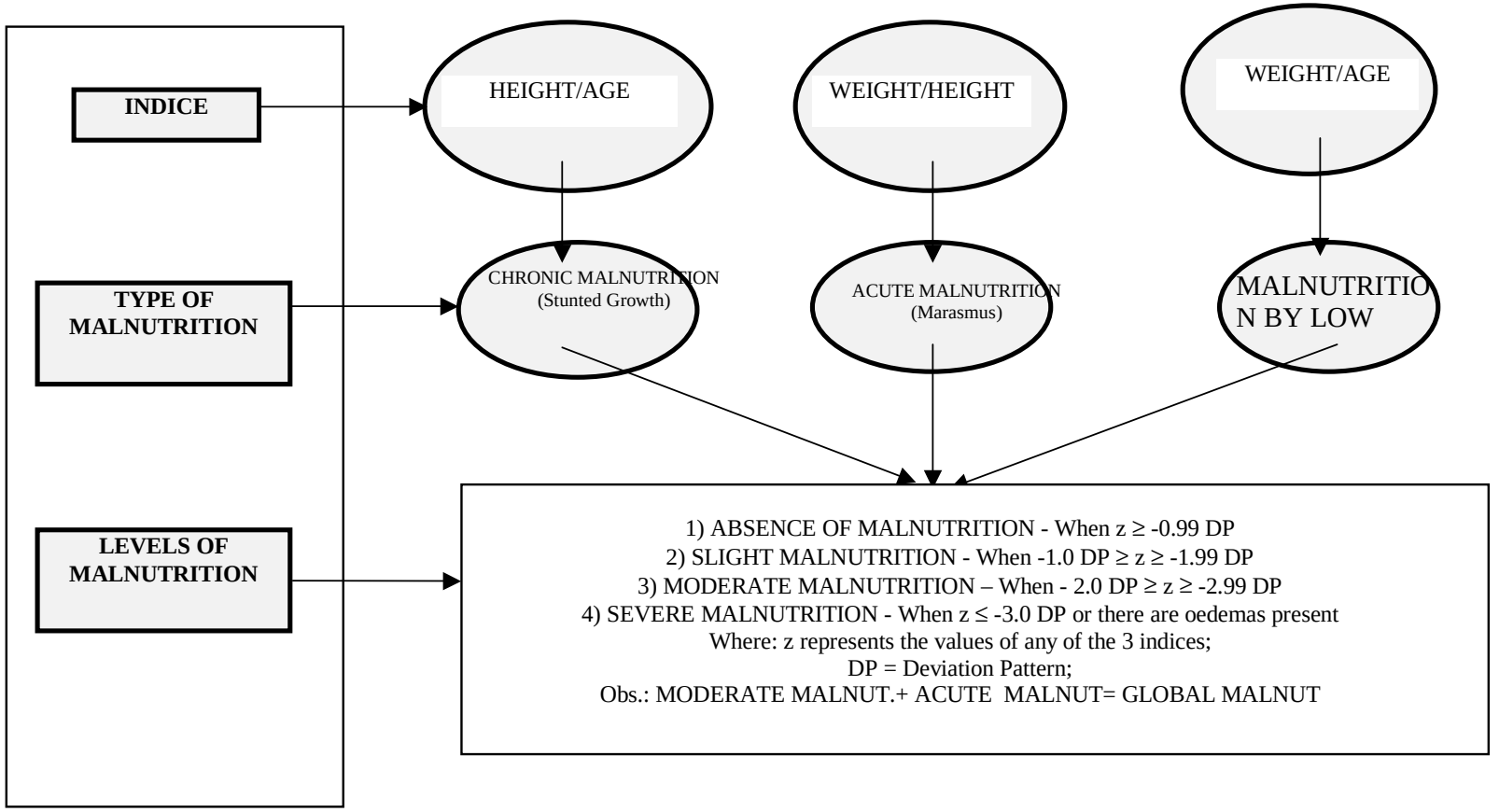
The grouping of the last two levels (moderate and severe malnutrition) constitutes what is generally referred to as *global malnutrition*. With a view to enabling an international comparison of the results, particular attention will be paid to these last two levels.

According to the manual of the program EPI INFO 6.02, the prevalence of global nutrition is considered high when:

- *The Height/Age Ratio reaches proportions between 30 to 39.9%;*
- *The Weight/Height Ratio reaches between 10 to 14.9%;*
- *The Weight/Age Ratio reaches between 20 to 29.9%.*

Percentages above these levels are considered very high.

Box 10.2.2.1: Conceptual Framework for Discussion of Malnutrition

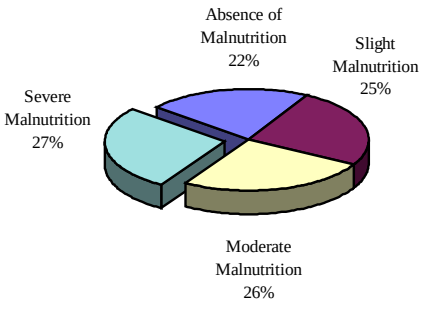


10.2.3 Prevalence of Malnutrition

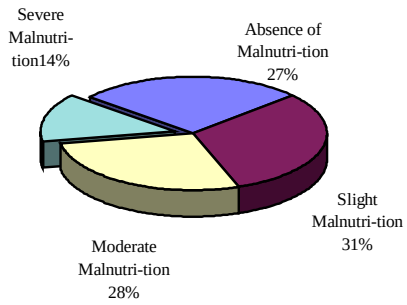
In the box below, we present the distribution of the population under study, according to 4 levels and defined previously for each type of malnutrition, using a total number of 3,030 children.

Box 10.2.3.1: Prevalence of Malnutrition by Levels

Chronic Malnutrition (Stunted Growth)



Malnutrition by Low Weight for Age



Acute Malnutrition (Marasmus)

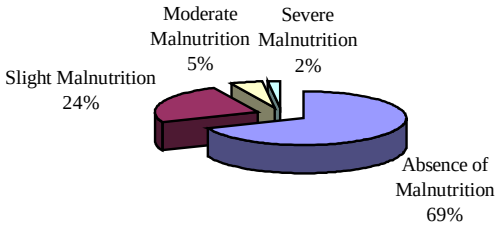


Figure 10.2.3.1

Prevalence of Global Malnutrition by Areas of Residence and by Sex

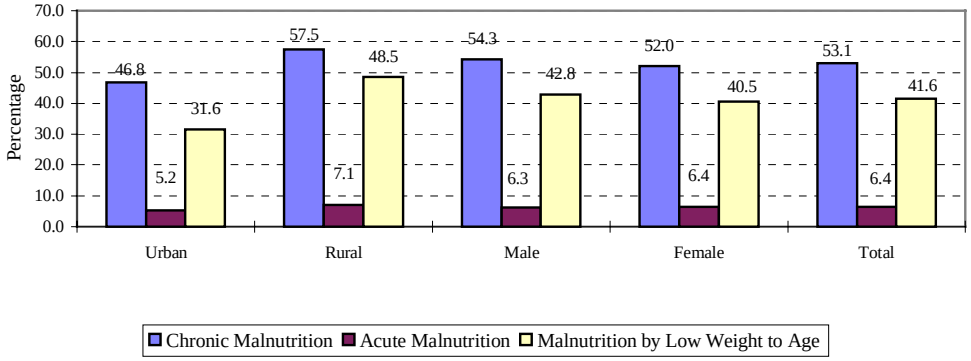


Figure 10.2.3.2.

Global Malnutrition by Geographic Regions

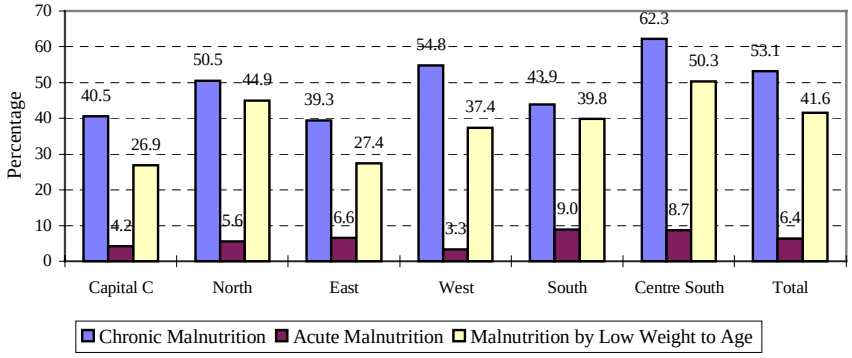


Table: 10.2.3.1. Prevalence of Malnutrition according to Regions, Areas of Residence and the Sex of the Child

		Chronic Malnutrition (Stunted Growth)			Acute Malnutrition (Marasmus)			Malnutrition Low weight in relation to age		
	No. Used	Mod.	Severe	Global	Mod.	Severe	Global	Mod.	Severe	Global
Geographic Regions										
Capital C	567	22.6	17.9	40.5	2.9	1.3	4.2	18.4	8.5	26.9
North	403	21.1	29.4	50.5	3.4	2.2	5.6	30.5	14.4	44.9
East	413	21.4	17.9	39.3	3.5	3.1	6.6	16.5	10.9	27.4
West	537	26.1	28.7	54.8	2.3	1.0	3.3	26.0	11.4	37.4
South	599	19.8	24.1	43.9	6.4	2.6	9.0	25.3	14.5	39.8
Centre South	511	27.5	34.8	62.3	7.7	1.0	8.7	32.5	17.8	50.3
Areas of Residence										
Urban	1224	27.2	19.6	46.8	3.9	1.3	5.2	21.6	10.0	31.6
Rural	1806	25.0	32.5	57.5	5.3	1.8	7.1	31.7	16.8	48.5
Sex										
Male	1498	25.6	28.7	54.3	5.1	1.2	6.3	29.7	13.1	42.8
Female	1532	26.2	25.8	52.0	4.5	1.9	6.4	25.6	14.9	40.5
Total	3030	25.9	27.2	53.1	4.8	1.6	6.4	27.6	14.0	41.6

Table: 10.2.3.2.- Prevalence of Malnutrition by Age Group

		Chronic Malnutrition (Stunted Growth)			Acute Malnutrition (Marasmus)			Malnutrition Low weight in relation to age		
Age Groups (in months)	No. Used	Mod.	Severe	Global	Mod.	Severe	Global	Mod.	Severe	Global
6-11	358	24.2	9.7	33.9	2.1	1.3	3.4	22.4	10.9	33.3
12-17	426	23.1	23.8	46.9	10.2	2.3	12.5	31.6	18.0	49.6
18-23	324	29.4	25.8	55.2	8.1	2.9	11.0	28.2	14.1	42.3
24-29	364	24.4	20.6	45.0	3.6	1.8	5.4	23.4	14.9	38.3
30-35	264	23.9	27.8	51.7	2.4	0.6	3.0	24.8	11.8	36.6
36-41	370	26.1	31.1	57.2	2.5	2.5	5.0	27.9	12.0	39.9
42-47	334	23.5	32.1	55.6	3.3	0.5	3.8	25.8	9.0	34.8
48-53	352	20.1	36.1	56.2	3.4	0.9	4.3	24.7	12.9	37.6
54-59	238	22.3	39.1	61.4	3.3	0.6	3.9	25.6	15.1	40.7
Total	3030	25.9	27.2	53.1	4.8	1.6	6.4	27.6	14.0	41.6

10.2.3.1 Chronic Malnutrition

Defined on the basis of the height:age ratio, chronic malnutrition refers to malnutrition resulting from accumulated distortions in the child's nutritional state throughout its growth. We are dealing with malnutrition in a more structural context Total recovery is generally very difficult.

The prevalence of this type of malnutrition raises a certain preoccupation regarding the future development of the country's population as a whole, as it has reached extremely high levels. Thus, about 53% of the infant population suffers from malnutrition and about 27% have attained a serious state (figure 10.2.3.1 and table 10.2.3.1.) Comparing this figure with those presented by countries in Sub-Saharan Africa (almost 41%), or to that of the least developed countries in the world (nearly 50%) it is still very high[23].

[23] Source: **"World Child Situation"**. UNICEF. 1997

Map 10.2.3.1. Prevalence of Chronic, Global Malnutrition by Region

At the level of the areas of residence we see an accentuated distortion in the urban/rural pattern only in relation to the proportion of serious cases (severe malnutrition), with the rural area reaching a proportion almost twice as high (i.e. 1.7) as the urban area (32.5% v/s 19.6%), showing clearly and unequivocally a major rural disadvantage (table 10.2.3.1.)

For the six geographical regions, the regions Capital C, East and South have relatively better figures, however, they reach (with a slight exception of the Eastern Region) considerably high proportions in terms of the global prevalence of chronic malnutrition, cf. map 10.2.3.1. Without a doubt it is alarming to see such a high incidence in the Centre South Regions (Huambo, Bié and K. Kubango), mainly because in all of the 3 ratios it is higher (table 10.2.3.1.).

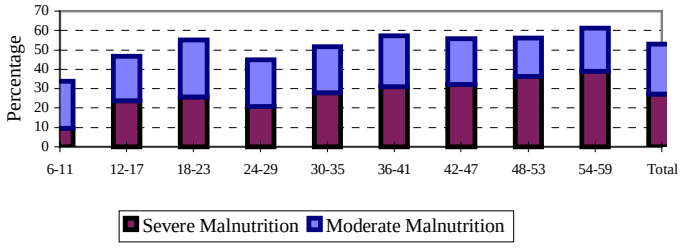
These geographic distortions are explicable in part by the vast diversity of regional food habits and patterns existing in Angola, as well as by some differences in food shortage levels in different regions. It is only in this way that it is possible to understand how the region constituted by provinces like Moxico, Lunda Norte and Sul (Eastern Region) present a global prevalence of chronic malnutrition very similar to that presented by the region which integrates the largest commercial centre of the country, the province of Luanda (Capital C region). However, in the case of the Eastern Region there exists a plausible explanation: i.e. during data collection, access to certain zones of the region was very difficult, which could have resulted in under-representation of relatively underprivileged areas (*see section on sampling in Chapter 1*).

During the post-electoral period there was a dramatic deterioration in the social and economic situation of Angolan society with differentiated impact at the level of various regions. If we consider that most of the children analysed were born in this period (1992-1996), such factors as the weak commercial interchange between the various provinces of the country, affected by difficulties in circulation of people and goods, low agricultural production, a deterioration

in Health Sector infrastructures, amongst other factors triggered by the intense war, into which the country was plunged in this period should be pinpointed as possible determiners of their present nutritional picture.
Distribution by age groups shows the prevalence of serious cases of chronic malnutrition increases greatly with the age of the child, as illustrated in the following figure, going from about 10% for children from 6 to 11 months to about 39% for children between 54 and 59 months. Moderate chronic malnutrition does not vary as much with the child's age (fig. 10.2.3.1.1. and table 10.2.3.2.). An increase in the prevalence of chronic malnutrition with the child's age seems to be to some extent obvious, being a type of malnutrition that is characterised by an accumulation of deficits in the nutritional process over a period of time.

Figure 10.2.3.1.1.

Prevalence of Chronic Malnutrition (Stunted Growth),
by Age Groups



10.2.3.2 Acute Malnutrition

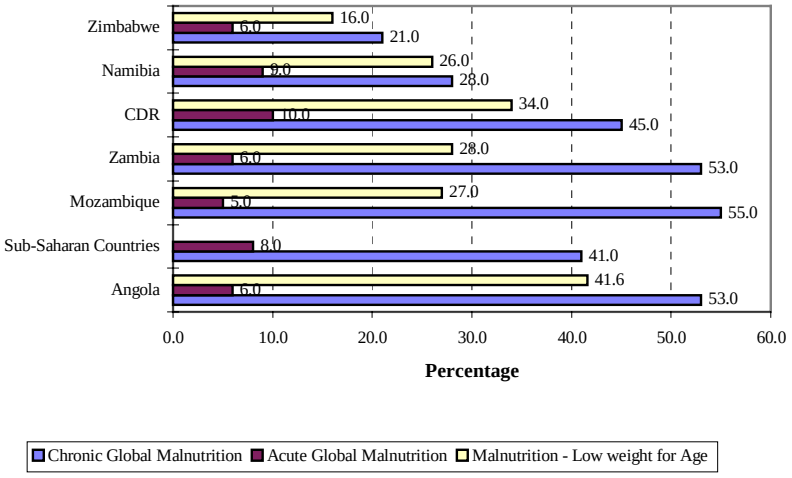
Acute malnutrition (marasmus) is defined by the Weight/Height ratio, measuring the development of body weight in relation to growth. It describes the present nutritional state, resulting from excessive loss of weight which occurred in a recent period. It is thus a measurement in line with the present predicament of the country.

The results of MICS show that this indicator is not high (about 6%), as it does not reach proportions considered high (10-14.9%). As an illustration we see that this is lower than data available for Sub-Saharan Africa (about 8%).[24] (Figure 10.2.3.2.1.)

[24] Source: **"World Child Situation"**. UNICEF. 1997

Figure 10.2.3.2.1

Malnutrition Rates in Some Sub-Saharan African Countries



These results prove that acute malnutrition is less serious in Angola than chronic malnutrition. However, relating the results of malnutrition obtained from the two indices (Height/Age and Weight/Height) it is important to take into consideration that they reflect different aspects of the nutritional state and, apart from this, they are virtually independent measurements (Keller. 1983). Thus, inconsistencies between the 2 ratios in a given geographical area should be interpreted, for example, as an indication of the situation being at present reasonable (weight/height), although generally it is bad in terms of (height/age).

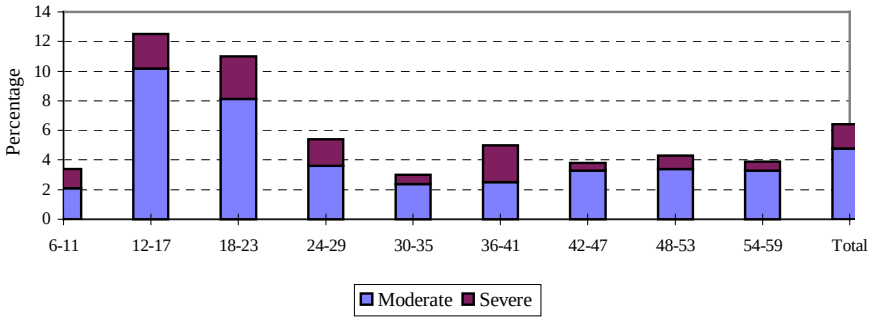
The analysis of the ratio weight/height, by regions shows that acute malnutrition is worst in the South, Centre South and Eastern Regions reaching proportions more than double the proportion for the Western Region, which here is the best. (Figure 10.2.3.2. and table 10.2.3.1.)

In the analysis of acute malnutrition by age groups we discover large distortions in the groups (12-17 months) and the (18-23 months) in relation to malnutrition, as can be seen from the following graph. In these groups the proportion of children suffering from moderate acute malnutrition is very high, from about 2% (6-11 months) to about 10% (12-17 months) with a relative fall to about 8% (18-23 months), stabilising in the following months. (Figure 10.2.3.2.1. and table 10.2.3.2.)

The fact is that it is more or less from this period that children begin to crawl, increasing contact with the soil itself, which is very often not cemented (mainly in rural areas). This means easier access to dirty objects, premature weaning and the introduction of solids, the prevalence of diarrhoeal diseases, measles and malaria - all these factors could account for the high rate of acute malnutrition in these age groups.

Figure 10.2.3.2.1

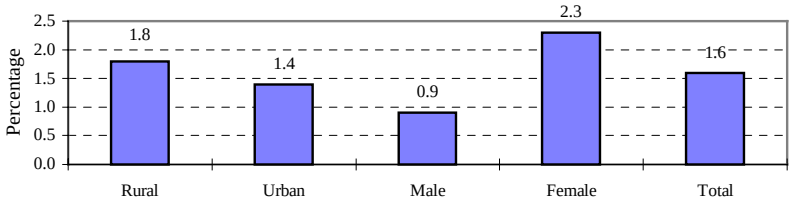
Prevalence of Acute Malnutrition (Stunted Growth), by Age Groups



Box 10.2.3.2.1: Presence of Oedemas

The presence of oedemas is found in about 2% of the 3,030 children between 6 and 59 months of age observed. In gender terms there exists a greater risk of finding the presence of oedemas in children of the female sex. Although a difference was also evident in relation to areas of residence, the difference was not so striking. (See Figure below)

Proportion of Children with Oedemas by Areas of Residence and by Sex



10.2.4. Malnutrition and Some Social and Economic Indicators

The social and economic conditions of a household are to a great extent determined by a macro environment rather than a micro one. Such social organisation and cultural systems in the community fall into this category. Malnutrition is generally the result of a complex inter-relationship between poverty and underdevelopment. Whilst family circumstances are intimately related to the availability of food, community conditions frequently seem to be more important than family characteristics in the prediction of malnutrition. The supply of

water, disposal of waste (rubbish), the existence of educational and sanitary facilities are more relevant to the "*status*" of the community. External forces to the local structure, such as government policies and economic pressures can significantly alter the conditions of the social and economic environment.

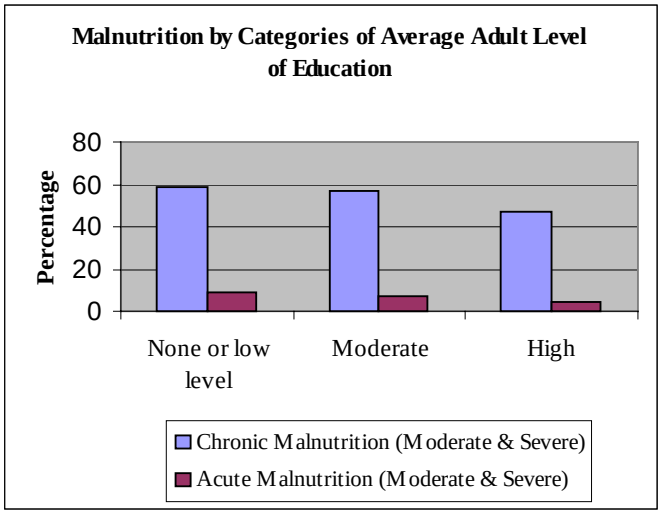
Some social economic indicators, namely the dependency rate, the average level of schooling of adults in the household, the number of people per room in the dwelling and the sex of the head of household were studied within the scope of "*malnutrition*". The results are presented in the table below.

Table 10.2.5.4.1. Prevalence of Malnutrition by Some Social and Economic Indicators

		Chronic Malnutrition (Stunted Growth)			Acute Malnutrition (Marasmus)			Malnutrition by Low Weight for Age		
	No. Used	Mod.	Severe	Global	Mod.	Severe	Global	Mod.	Severe	Global
Rate of Dependency (categorised)										
Weak	504	28.1	27.7	55.8	6.0	1.2	7.2	31.9	13.1	45.0
Moderate	1346	26.2	25.4	51.6	5.4	1.5	6.9	26.0	14.3	40.3
High	1180	24.6	29.1	53.7	3.8	1.7	5.5	27.7	14.2	41.9
Average Level of Education of Adults										
With or without low level	518	26.6	31.9	58.5	5.9	2.8	8.7	29.6	17.8	47.4
Moderate	1353	26.9	30.0	56.9	5.5	1.8	7.3	30.8	15.8	46.6
High	1159	24.8	21.9	46.7	3.5	0.9	4.4	22.9	10.5	33.4
No. of people/room										
Fewer than 1	213	21.4	22.3	43.7	4.8	1.9	6.7	31.4	13.3	44.7
1-1.9	1140	28.2	26.0	54.2	4.2	1.4	5.6	28.9	12.9	41.8
2-3.9	1034	25.9	26.5	52.4	4.1	2.1	6.2	26.2	13.4	39.6
4 and +	643	23.0	31.9	54.9	6.6	0.9	7.5	26.7	17.3	44.0
Sex of Head										
Male	2226	26.5	26.6	53.1	4.9	1.5	6.4	26.9	13.7	40.6
Female	804	24.4	28.9	53.3	4.4	1.6	6.0	29.7	15.0	44.6
Total	3030	25.9	27.2	53.1	4.8	1.6	6.4	27.6	14.0	41.6

There does not seem to be any relationship between the majority of these variables and the prevalence of malnutrition. However, in the following figure we note the prevalence of malnutrition is influenced by the adult level of education in the household. The lower their level of schooling in a given household, the higher the prevalence of malnutrition.

Figure 10.2.4.2



BIBLIOGRAPHY

Amado. F.. Cruz e Hakkert. R.. 1992.” A urbanização e desurbanização em Angola”. Cadernos de População e Desenvolvimento. Ano 1. Nr.1. Ministério do Plano e FNUAP. Luanda

Associação Brasileira de Estudos Populacionais (ABEP). “1990 VII Encontro Nacional de Estudos Populacionais”. Anais. Volume 3

BEMFAM (Sociedade Civil Bem-Estar Familiar no Brasil) e DHS (Programa de Pesquisas de Demografia e Saúde Macro Internacional Inc.). “Brasil Pesquisa Nacional Sobre Demografia e Saúde 1996”. 1997

Bender. W. e Hunt.S. 1991.” Poverty and food insecurity in Luanda”. Resultados do inquérito sobre as despesas e receitas dos agregados familiares em Luanda. Paper 1. Ministério do Plano. UNICEF e FSG-Universidade de Oxford

Bernardino. L. e al.”. Rede sanitária em Angola e resposta aos problemas de saúde da criança. Ministério da Saúde. Luanda. 1993

Boletim Demograph nº 9. “Projecção da população do país por províncias e grupos quinquenais de idade para o período 1985/2010”. INE. Luanda. 1991. 55 p.

Direcção Nacional de Águas. 1995” Dia mundial da água”. Boletim 1. DNA. Luanda

Economic Development Institute. World Bank. “Edi Forum - A review of ideas and Experiences”. Volume one

Fas/Ceed/Ine. 1996.” Principais resultados do inquérito sobre as condições de vida da população no Kwanza-Sul”. Luanda

Grave. J.. Ribeiro.G. e Ceita. C.. 1997.” A pobreza urbana e peri-urbana”. Workshop sobre comunidades e instituições na perspectiva de pós-guerra. ADRA. Luanda

Henry S. Shryock. Jacob S. Siegel and Associates. “The Methods and Materials of Demography”. Academic Press. London. UK. 1976. 565 p.

Instituto Nacional de Estatística. “ Dados preliminares sobre a mortalidade na cidade de Luanda. 1994

Instituto Nacional de Estatística. “Perfil Estatístico Económico e Social de Angola”. Período de 1991-1994. 1995

Instituto Nacional de Estatística. Perfis estatísticos sobre o ensino de base e médio em nove províncias”. 1995

Instituto Nacional de Estatística - GMCVP. “Perfil da pobreza em Angola”. Luanda.1996

Instituto Nacional de Estatística - GMCVP. “Inquérito Sócio-demograph à População Deslocada”. Relatório Final. Luanda. 1996 70 p.

Instituto Nacional de Estatística. “Perfil Estatístico Económico e Social (1989-1993)”. Luanda

Instituto Nacional de Estatística. “Perfil Estatístico Económico e Social (1991-1994)”. Luanda

International Institute for Educational Planning. “Basic Concepts and Techniques for Educational Planning: Technical Modules-B3 module 9-Internal efficiency”

Keller W. “Choice of Indicators of Nutricional Status”. In: Evaluation of Nutrition Education in Third World Communities. 1983

Ministério da Saúde (MINSA). “Relatório de Avaliação da Implementação da Estratégia de Saúde para no Ano 2000”. Período de 1990-95. Luanda. 1996

Ministério do Planeamento. “Estudos Sobre a Economia Angolana”. Boletim Trimestral. Projecto ANG/92/001/UNDP/DDSMS. 1996

Ministério da Saúde (MINSA). “Saúde dos Adolescentes: Comportamentos de Risco”. Janeiro 1997

National Center For Health Statistics (NCHS) and Center For Desease Control (CDC). “A Word Processing. Database. and Statistical System for Epidemiology On Microcomputers”. Epi Info - version 6. 1995

Neto. F. e al..” Abastecimento de água e saneamento em Angola”. Simpósio Nacional sobre a Criança. Luanda. 1993

One World Action.” Luanda water programme in Angola”. Report to Overseas Development Administration Joint Funding Scheme. London. 1997

Rui. P. Fortes. F. e Grave. J.. “ Acessibilidade da população à medicação. Luanda. 1994

The Johns Hopkins University School of Hygiene And Public Health. “American Journal Of Epidemiology”. 1987

Training Handbook. Statistical Institute For Asia And Pacific. Centre For Population Studies. “Estimation of Demographic Parameters From Census Data” . London. 1994. 111 p.

UNICEF e CICV”. Minas anti-pessoal: uma perspectiva geral”. Documento apresentado ao seminário para parlamentares angolanos sobre o impacto das minas anti-pessoal. Palácio dos Congressos. Luanda. 1997

UNICEF. “Situação Mundial da Infância”. 1994

UNICEF. “Situação Mundial da Infância”. 1997

UNICEF. Unidade Técnica de Coordenação das Ajudas (UTCA). “Directório das ONGs”. ANGOLA. 1994

Unidade de Análise Demográfica. “Boletim Demograph nº18”. INE. Luanda. 1994. 40 p.

Waterlow J.C.. Buzina R.. Keller W.. Lane J.M.. Nichaman M.Z. & Tanner J.M.. “The presentation and Use of Height and Weight Data for Comparing the Nutricional Status of Groups of Children Under the Age of 10 years”. 1977

Zoran Roca. “Education for Poor Children and Young Adolescents in Angola”. Luanda. October

ANNEXES

Intervals of Confidence of the Main MICS Indicators

Sector	Indicator	Domain	Statistics					
						Intervals of Confidence		
			No. observed.	Prop.(%)	Pattern Error(%)	Lower Limit (%)	Higher Limit (%)	Deff
Education	% of Population (5-18) who have never been to school	Urban	3,186	25.3	2.3	20.9	29.8	8.2
		Rural	4,174	40.6	2.6	35.5	45.7	12.2
		Total	7,360	34.0	1.9	30.2	37.7	12.1
	% of population (19 and +) who have never been to school	Urban	3,094	17.8	1.9	14.1	21.6	1.8
		Rural	5,226	41.0	2.3	36.5	45.5	1.9
		Total	8,320	31.7	1.9	27.9	35.4	2.2
	Admission Rate to First Level at 6 years of age	Urban	279	40.2	4.2	32.0	48.4	1.9
		Rural	486	25.5	3.5	18.7	32.2	3.1
		Total	765	30.8	3.1	24.9	36.8	3.3
	Net Rate of Schooling (1 and 2 levels)	Urban	2,190	63.7	2.6	58.6	68.8	4.4
		Rural	1,578	39.7	3.4	33.1	46.2	10.9
		Total	3,768	49.7	2.5	44.9	54.6	9.3
Nutrition	Chronic Global Malnutrition (Height/Age)	Urban	1,224	46.6	2.3	42.1	51.1	1.2
		Rural	1,806	56.8	2.0	52.9	60.8	2.4
		Total	3,030	52.7	1.5	49.7	55.6	2.2
Water and Basic Sanitation	% of the Population with access to safe water	Urban	1,493	46.4	4.3	37.8	54.8	11.3
		Rural	2,839	22.2	4.0	14.3	30.1	26.7
		Total	4,332	31.2	3.3	24.7	37.7	22.3
	% of the population with access to Basic Sanitation	Urban	1,493	61.4	4.9	51.8	71.0	0.9
		Rural	2,839	26.4	3.3	19.9	32.8	3.1
		Total	4,332	39.4	3.1	33.4	45.4	3.1
Maternal Health	% ante-natal coverage	Urban	577	80.2	3.2	74.0	86.4	1.0
		Rural	883	51.5	5.6	40.4	62.5	--
		Total	1,440	63.4	4.1	55.5	71.4	1.1
	% of home deliveries	Urban	536	71.9	4.1	63.8	80.0	1.5
		Rural	874	90.4	1.7	87.0	93.8	1.6
		Total	1,411	82.2	2.2	78.0	86.5	1.8
Contraception/Reproduction	% of women practising contraception	Urban	2,026	13.1	1.6	10.1	16.1	2.7
		Rural	2,864	4.3	0.7	3.0	5.6	1.7
		Total	4,890	8.1	0.8	6.4	9.8	2.1
	% of women who do not want more children	Urban	2,026	25.5	1.5	22.5	28.5	2.5
		Rural	2,864	20.5	1.1	18.2	22.7	2.3
		Total	4,890	22.7	1.0	20.8	24.5	2.6
Diarrhoea	% of children <=5 years old who had diarrhoea in the last 2 weeks	Urban	1,445	29.4	1.7	26.0	32.8	1.9
		Rural	2,385	27.6	1.3	25.1	30.1	1.5
		Total	3,830	28.0	1.0	26.1	30.0	2.1
Vaccination	% of children (12-23 months) fully vaccinated	Urban	339	25.3	3.7	17.9	32.6	1.2
		Rural	443	9.5	2.3	5.0	13.9	0.8
		Total	782	16.7	2.3	12.1	21.3	1.0